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Reshaping Professional Boundaries and Organizational Forms in American Dentistry: A Case Study of Registered Dental Hygienists in Alternative Practice

by

Elizabeth Ann Mertz

DISSERTATION

Submitted in partial satisfaction of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

Sociology

in the

GRADUATE DIVISION

of the

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO
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Reshaping Professional Boundaries and Organizational Forms in American Dentistry: A Case Study of Registered Dental Hygienists in Alternative Practice

Elizabeth A. Mertz

ABSTRACT

During the past century the field of dental care has evolved to be stable, mature, and highly oriented to a set of institutional logics, particularly entrepreneurship and autonomy, that support the traditional organizational archetype (ideal type model) of solo private-practice dentistry. Since the 1970s, dental hygienists have been working to realign the occupational structure in oral health by challenging both the professional dominance of dentistry and the traditional organization of dental care services.

The study combines insights from the sociology of the professions on the agency of emerging occupations seeking to advance a professional project with insights from organization theory on institutional entrepreneurship to explore a case study of the development of Registered Dental Hygienists in Alternative Practice (RDHAP) in California. This mixed-method case study was developed from qualitative data, including key informant interviews, archival data, media analyses, and two quantitative surveys examining the RDHAP work force. A theoretical model for understanding the institutional agency of emerging professions was developed that provides a link between the study of professions and the study of organizations in health care.

This study explores the movement for independent hygiene practice, which entailed a politicized battle between organized dentistry and dental hygiene that played out in their respective professional associations, the legislature, the courts, the business community, and the media. This conflict led to the development of a new category of
hygienists who are allowed to work independently in underserved areas and to the introduction of an alternative practice archetype that now co-exists in the field and is underpinned by a unique interpretive scheme (values and beliefs), structures, and systems. The alternative archetype is built on providing mobile preventive dental hygiene care in a collaborative manner within underserved communities and institutions. This new organizational form has not yet been fully institutionalized as it does not yet have the resources and legitimacy of the traditional model. Expansion of the specific model is hampered by a regulatory structure that inhibits the diffusion of innovation across state lines; however, similar efforts are underway in other states, contributing to the wider adoption of this general practice model.
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CHAPTER 1: INTRODUCTION AND BACKGROUND

Oral health is an important component of people’s overall health and well-being (U.S. Department of Health and Human Services, 2000). Yet a significant percentage of the population, sometimes estimated to be as high as 40%, does not have access to affordable and quality dental care services (B. Mertz, Manuel-Barkin, Isman, & O'Neil, 2000). The burden of oral disease is disproportionately born by lower-income and rural populations, racial and ethnic minorities, medically compromised or disabled populations, and increasingly, young children (U.S. Department of Health and Human Services, 2000). Having good teeth is one of the most obvious signs of social status; the disproportionate burden of poor oral health on already disadvantaged groups further stigmatizes and stratifies this portion of American society (Horton & Barker, 2009; Picard, 2009).

Lack of access to dental care and oral health disparities are two of the most significant policy issues facing the field of dentistry today. After decades of unsuccessful attempts to improve access to care, policy makers and the professions are considering workforce redesign as a primary strategy for improving access to care, with the hope that it could lead to reduced disparities in both utilization and oral health outcomes. This strategy is regarded as a radical move away from the traditional organization of dental services, yet for the past 30 years an effort has been underway to reconfigure the workforce in California. This effort has resulted in the development of a nascent organizational form in dentistry, alternative dental hygiene practice.
**Contextual Background**

American dentistry is a well-established institution within the health care system. It has a unique set of identifiers: standardized educational pathways, delineated scopes of practice, licensing and accreditation processes, and a clearly recognizable form of practice. The market-based dental care delivery model in the United States has been remarkably resilient in retaining its traditional private practice form. Dental care in the United States is primarily composed of solo private practice dentists funded by employer-based dental benefits and out-of-pocket payments by individuals seeking care (American Dental Association, 2009). Medicaid and the State Children’s Health Insurance Program (SCHIP) cover dental services for low-income children and, depending on state laws, low-income, aged, blind, and disabled adults—but utilization, quality, and outcomes under these programs are problematic (Burt Edelstein, Schneider, & Laughlin, 2007).

Alternative models of care delivery focusing on specific populations not served by the private market are employed by organizations such as the Indian Health Service (IHS), Community Health Centers (CHC), the Department of Veteran Affairs (VA), the military, and the prison system. But in all cases, dentists are the professional agents of the institution, virtually having complete control over the various components of the system—including the occupational structure, which includes dental hygienists, dental assistants, and dental technicians.

Since the 1970s, dental hygienists in the United States have been in a struggle to realign this occupational structure, primarily by breaking free from the controls imposed on their occupation, through the process of professionalization. Earlier studies in the literature have shown how dental hygiene developed as an occupation and how
contemporary dental hygienists have sought to professionalize their occupation. These data indicate that the professionalization “project” of hygienists over the latter half of the twentieth century made significant organizational progress (creation of strong professional associations, standardized educational pathways, and areas of dental hygiene research) but accomplished only modest gains in legal status and “direct access” to provide services to the public. Dental hygienists have faced significant barriers to developing new practice models, even as evidence of an overwhelming need for preventive dental care for underserved populations has accumulated.

Hygiene’s professional project has played out differently in each state; some states have seen significant progress for dental hygienists while other states retain fairly restrictive laws. In California, dental hygienists are allowed independent practice (with limitations), unsupervised public health practice, and a new licensure category (Registered Dental Hygienists in Alternative Practice [RDHAP]) as well as self-regulation. These achievements put California’s hygienists at the forefront of the wider professional project in dental hygiene. The impact of this professional challenge reaches far beyond the status aspirations of a single occupational group. The multifaceted, contested, and highly political process of professional advancement of hygienists exposed the significant failings of the current system to deliver results. For more than three decades, dental hygienists have challenged the dominance of solo private practice dentistry’s “cottage industry” model of dental care, successfully instituting an alternative model of preventive dental care. RDHAPs have developed innovative new practice models centered around disenfranchised patients in various organizational and
community settings, a niche not well served by the office-based practice model of dentists.

**Research Problem**

A recent Institute of Medicine workshop highlighted the large number of problems in the current dental care delivery system, including lack of coordination among dental care delivery systems or between dental and medical systems, low reimbursement levels in public programs, perverse payment incentives, and very few metrics of value, access, or quality (Institute of Medicine, 2009). This workshop’s focus followed on the Surgeon General’s report *National Call to Action to Promote Oral Health*, which suggested that the improvement of workforce diversity, flexibility, and capacity was of central importance to improving oral health (U.S. Department of Health and Human Services, 2003).

New forms of organizing care are needed to address these system issues; however, achieving organizational change in a highly institutionalized field without major external impetus is rare. The institutional environment in dentistry is relatively stable and strong, and the organizational field is mature. External forces have left the professional field mostly unchallenged, allowing for a long institutional incubation period of values and beliefs about appropriate ways of delivering dental care, and a strong set of organizations, policies, and payment systems that support the traditional organizational form. The field is dominated by a single powerful profession, dentistry. Through social and economic closure, dentists have legitimated and codified their jurisdiction over oral health and policed these boundaries with relative success for almost 100 years. The research problem explored in this study is centrally a question of organizational change:
if a field is highly mature, stable, and dominated by one powerful interest, how can innovation and organizational change occur?

**Purpose and Significance of the Study**

The purpose of the case study of Registered Dental Hygienists in Alternative Practice (RDHAPs) is to begin to understand how efforts in one particular case challenged this field domination, resulting in the development of a nascent organizational form in the institutional field of American dentistry. The institutional challenge that led to the development of a potentially new organizational form came from the institutional entrepreneurship of dental hygienists. This entrepreneurship took the form of professionalization -- the pursuit of professional status by an emerging occupation. Specifically, the study seeks to track a change in organizational form using the concept of organizational archetypes.

**Theoretical Approaches**

Changes in the health care environment, whether exogenous or endogenous, create tensions within and between individual health care professions and the organizations that compose the current model of care delivery. These tensions in the institutional landscape of health care play out within particular disciplines and practice models in different but somewhat predictable ways. In some cases the existing care delivery institutions remain resilient against the pressures, in many cases adaptation takes place, and in yet other cases the institutions themselves have to change. These processes are important as changes at the institutional, organizational, and professional levels have an impact on how effectively care is delivered to individuals and communities.
The sociological study of professions and organizations has a rich history of examining these processes and tensions. The case study of an emerging profession and its organizational form within a highly institutionalized field is situated at the nexus of the theoretical streams of professions and organizations. The health care workforce is highly professionalized; very few health care services can be legally provided outside the codified system of health occupations and professions. Professions have been studied as an organizational form as well as an occupational category that has special privileges and responsibilities and has social and economic powers (Evetts, 2006; Freidson, 2001). Professionalization has been studied as a historical process of groups working toward social status and economic power, and as a discourse used to align and control group members (Evetts, 2003a; Leicht & Fennell, 2008). Yet little work within the sociology of the professions has examined the impact professions have on creating new organizational forms.

Extensive theoretical development examining the dynamics of organizational form has been done within the field of institutional theory (Leicht & Fennell, 2008). Organizational change over time can be studied through archetypes—ideal type organizations underpinned by an interpretive scheme, structures, and systems (Greenwood & Hinings, 1993). While organizational scholars have theorized institutional maintenance and change at the structural level, until recently they have neglected the issue of agency in these processes. To rectify this omission within institutional theory, professions have been theorized as agents of institutional maintenance and as institutional entrepreneurs (IE) of change (Hwang & Powell, 2005; W. R. Scott, 2008).
A central and ongoing issue in these studies, as also within sociology broadly, is to understand the power and limits of individual agency within broader social and organizational structures. This study traces the process of dental hygienists’ attempts to reshape the occupational control and organizational form of preventive dental care as an effort of institutional entrepreneurship. The case study highlights the many field level tensions that this process created and, importantly, how these tensions are contributing to the process of reshaping the practice model and core institutional beliefs that guide the wider field of dentistry.

Specific Aims

The following are the specific aims of this study:

1. To describe the organizational field of dental care in the United States and the institutional dimensions of this field
2. To empirically trace the historical development of independent dental hygiene practice in California and the processes RDHAPs are using to develop their practices within this institutionalized field
3. To analyze the development of the RDHAP as a process of creating a new organizational form within dentistry
4. To discuss the policy implications for the organization of dental care and health care broadly

Implications of the Study

The current dental care environment is on the verge of potentially rapid change; faced with ongoing problems of access to care, increasing health disparities, advances in
science and technology, and changing economic and political conditions, the professions and policy makers are actively searching out new solutions. A central question being raised within this context concerns the sufficiency of the oral health care workforce to meet the population’s needs (Institute of Medicine, 2009). New workforce models are being sought, particularly for alternative delivery systems in which dental workforce innovations are seen as a solution to managing high levels of need with limited resources (Blahut, 2009; Holloway, 2003; Spadaro, Luciano, & Jennings, 2004).

The following in-depth sociological case study of the history of dental hygiene’s professional project and its impact on the dental care delivery system has implications for understanding the role health care professions play in the processes of maintaining or challenging organizational forms in an institutionalized field. In addition, this case adds to the literature examining emerging professions and the processes they use to advance their professional projects. The case is one of the first to examine the relationship among professionalization, institutional entrepreneurship, and the development of new organizational forms in an institutionalized field. This relationship is critical to an understanding of the ability of the health care system to adapt and innovate in the face of enormous cost, quality, and access pressures. Finally, the study informs workforce policy concerned with improving health care and provides the foundation for future studies examining workforce developments and organizational change in dentistry.

Organization of Dissertation

This study is organized in the following manner. Chapter 1 provides an introduction, the background, and the purpose of the study. Chapter 2 reviews the literature and presents the conceptual framework for the study. The theoretical focus is on
current developments and intersections in institutional theory and the sociology of the professions, and the empirical focus is on the sociology and organization of dentistry and the professionalization of dental hygiene. Chapter 3 provides an in-depth explanation of the research methods used for this study. Chapter 4 describes the institution and organization of dental care delivery in the United States, with a particular focus on the organizational field, the changing field logics, and the history of dental hygiene. Chapter 5 traces the historical development of independent practice through a case study of the RDHAP and examines current RDHAP practice. Chapter 6 presents the analysis of the case study, examining the genesis, process, and outcomes of the case. Chapter 7 examines the policy and practice implications of this reconfiguration of the professional workforce and implementation of a new organization of dental care.
CHAPTER 2: REVIEW OF THE LITERATURE

The dental care field is facing challenges by the occupational advancement of dental hygienists, the development and implementation of alternative care delivery systems, an increasing focus on public health approaches, and academic changes to dental education processes and curricula—all of which are contributing to efforts to restructure the workforce and the delivery of oral health. The purpose of the case study of Registered Dental Hygienists in Alternative Practice (RDHAPs) is to understand change efforts in one particular case that resulted in the development of a new organizational form in the institutional field of American dentistry. Specifically, the study seeks to track a change in organizational form using the concept of organizational archetypes. The institutional challenge that led to the development of this organizational form came from the institutional entrepreneurship of dental hygienists. This entrepreneurship took and continues to take the form of professionalization, or an emerging occupation’s pursuit of professional status.

The conceptual framework used in this study was developed through a review of the current institutional theory literature on organizational change, fields, archetypes, and institutional entrepreneurship as well as a review of the sociology of professions literature on the process of professionalization. The literature review also provides information on the institutional form of dentistry and the professional dynamics in the dental care field, situating the current case study in the specific historical context of American dentistry.
Theoretical Frameworks

This study is grounded in two complementary theoretical frameworks: institutional theory and the sociology of the professions. In contemporary form, these theoretical streams both examine their respective topics (organizations and professions) as historically contingent and socially constructed, and draw heavily from the interactionist tradition.

Institutional Theory

The roots of organizational studies cross the disciplinary boundaries of management studies, economics, political science, and social psychology as well as those of sociology, and the subsequent ideas and foci of these inquires is quite diverse with regards to units of study, levels of comparison, intended application of results, connection to broader social issues and trends, definitions, goals, and systems of technology (W. Richard Scott, 1998). Theorists of organizations are primarily interested in the organization as the unit of analysis, and organizational institutionalists apply the specific genre of institutional theory to this study (Greenwood, Oliver, Sahlin, & Suddaby, 2008). Organizations are differentiated from individuals or groups of individuals that may make up organizations as well as from fields that organizations may populate.

In a comprehensive review of organizational institutionalism, Greenwood (2008) reports that the general consensus of institutional theorists is that a sociological institutional perspective was established with six groundbreaking works by the following authors: Meyer & Rowan (1977), Zucker (1977), Meyer & Rowan (1983), DiMaggio & Powell (1983), Tolbert & Zucker (1983), and Meyer & Scott (1983). Building upon the foundational works of Max Weber, Meyer and Rowan (1977) were “interested in the
rationalization and diffusion of formal bureaucracies in modern society, which they saw as arising from two conditions: ‘the complexity of networks of social organization and exchange, and the institutional context’” (Greenwood, et al., 2008, p. 3). Prior work, such as resource dependency theory, examined organizations’ response to the external environment in terms of rational response to managing resource needs. Beyond, and even contradicting, market or bureaucratic pressures in influencing organizational behavior, institutions embody “the widespread social understanding (rationalized myths) that define what it is to be rational” (Greenwood, et al., 2008, p. 3). The following are the core concepts subsequently employed by these authors to explain organizations from an institutionalist perspective: institutional context, rationalized myths, isomorphism, decoupling, diffusion, ceremonial conformance, legitimacy, and institutional logics. Each of these concepts will be briefly described in the following section as they lay the groundwork for the use of an institutionalist framework.

In institutional theory, institutions are defined as “more-or-less taken for granted repetitive social behavior that is underpinned by normative systems and cognitive understandings that give meaning to social exchange and thus enable self-reproducing social order” (Greenwood, et al., 2008). Not all organizations are institutions, but most organizations must contend with some institutional forces, which are primarily cognitive. “Meyer and Rowan (1983: 84) referred to the institutional context as “the rules, norms, and ideologies of wider society”’. Zucker (1983: 105) looked to ‘common understandings of what is appropriate, and fundamentally, meaningful behavior.’ And Scott (1983:163) offered normative and cognitive belief systems”’ (Greenwood, et al., 2008, p. 3). These cognitive understandings are known as rationalized myths, or prescriptions of what
appropriate conduct is among organizations (Meyer & Rowan, 1977). These myths affect organizations differently, and organizations with more difficult-to-evaluate outcomes (unclear technologies or outputs) tend to be more susceptible to institutional forces (Meyer & Rowan, 1977).

Institutional theorists hypothesize that as social norms and values become embodied in organizational practices, a process of institutionalization occurs. In studying this process, researchers examine how organizations come to appear similar or dissimilar. Isomorphism has become a central indicator of institutionalization as similarity in organizational form is theorized to stem from organizations’ conforming to rationalized myths (DiMaggio & Powell, 1983). The diffusion of ideas and practices that are institutionalized is thought to result in isomorphism. Investigating this process of isomorphism, DiMaggio and Powell (1983) have suggested that there are three mechanisms of institutional diffusion and that each mechanism stems from a different issue: coercive isomorphism from political influence and the problem of legitimacy, mimetic isomorphism resulting from uncertainty, and normative isomorphism associated with professionalization.

The exploration of isomorphism has had significant influence in theory building. For example, W. R. Scott (W. R. Scott, 1995) builds upon these three categories in his three defining elements, or pillars, of an institutional order: regulative, normative, and cultural-cognitive. Yet in a review of the literature on isomorphism, Boxenbaum and Jonsson (2008) find that “there has been little empirical work with isomorphism as the outcome of diffusion, while there is a wealth of empirical studies that invoke institutional isomorphism as the cause of diffusion” (p. 78). The issue of diffusion is an area that is
perceived to need more empirical work, perhaps utilizing network theory to aid in understanding processes of diffusion (Owen-Smith & Powell, 2008).

Another central claim about organizations’ response to institutional pressures is that they “decouple their formal structure from their production activities when institutional and task environments are in conflict, or when there are conflicting institutional pressures” (Boxenbaum & Jonsson, 2008, p. 79). In these cases (ones in which the rationalized myth runs counter to the technical efficiency that an organization may need to achieve to remain viable), the decoupling allows for ceremonial conformance—that is, an organization’s balancing the appearance of following institutional rules while achieving technical and organizational efficiency. This appearance of conformance is important for organizational survival as it deters close inspection and prevents the organization’s being discovered to be a fraud (Boxenbaum & Jonsson, 2008).

Organizations within an institutional order seek legitimacy to survive and align their behavior with the institutional logics that permeate an organizational field (Deephouse & Suchman, 2008). Current definitions of legitimacy revolve around the cognitive support for a particular organization. Scott notes that “‘legitimacy is not a commodity to be possessed . . . but a condition reflecting cultural alignment.’” Suchman, however, is more inclusive in his definition, maintaining that “legitimacy is a general perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs and definitions.” (Deephouse & Suchman, 2008, p. 52).
When organizations react in manners that are similar to those of an institutional environment, they are aligning with a set of beliefs and practices in that environment that are referred to as institutional logics. The idea of logics was first developed by Friedland and Alfred (1991) in relation to modern institutions of the state bureaucracy, capitalism, and democracy. Many modern institutions have incompatible logics; when actors find themselves at the point of tension between logics, there is a space opened to create change (Freidland & Alfred, 1991). Thornton and Ocasio (2008) propose a definition of institutional logics that integrates structural, normative, and symbolic dimensions, linking individual agency and cognition with socially constructed institutional practices. They contend that institutional logics are “the socially constructed, historical patterns of material practices, assumptions, values, beliefs and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality” (Thornton & Ocasio, 2008, p. 101). Various definitions of institutional logics have evolved through different empirical works, and despite differences, they all presuppose a core “meta-theory on how institutions, through their underlying actions, shape heterogeneity, stability and change in individuals and organizations” (Thornton & Ocasio, 2008, p. 103). Five principles underlie this meta-theory: embedded agency, society as an inter-institutional system, a material and cultural foundation for institutions, the multiple levels of institutions, and historical contingency (Thornton & Ocasio, 2008).

A criticism leveled at institutional theory is that it has not paid enough analytic attention to the process of how institutions are formed (Phillips & Malhotra, 2008). This critique builds from concerns with the foundation of social constructionism and its
attendant concern with the cognitive nature of institutions (versus their regulatory or normative nature). (Phillips & Malhotra, 2008) maintain, “In the past couple of decades institutional theory has predominantly provided insights into processes that explain institutional stability rather than change[,] and the emphasis has been on how institutional pressures force organizations to converge on a standard set of practices . . . There has been little attention toward unpacking processes of how institutions are socially constructed. This question becomes crucial . . . in regard to how new institutions are created and existing ones changed” (Phillips & Malhotra, 2008, p. 714). W. R. Scott (2008) provides two accounts of how institutions are created. The first, the naturalistic account, is akin to an evolutionary view—involving slow, instinctive, habitual processes over time—while the second, an agent-based view, emphasizes intentionality and power (W. R. Scott, 2008). Alternatively, little work has looked at the destruction of institutions. Oliver (Oliver, 1992) examines this process, theorizing a number of conditions (political, functional, and social) that lead to pressures (entropy, dissipation, inertia) that would lead to deinstitutionalization. This theory has not been fully tested, but it is noted in the growing body of work examining institutional change.

To summarize, institutional theory provides a number of useful constructs for studying the dynamics of organizational behavior within an institutional context. Much of this work was developed and applied in the context of studying health care, but no studies to date have examined American dentistry. Early institutionalism focused on defining the institutional context and examining the impact of the institutional context on organizations. Contemporary work on institutions has turned to examining the processes of organizational and institutional change (Greenwood, et al., 2008).
Organizational Change

The central research problem in the RDHAP case study is that of how organizational change occurs in a highly institutionalized field. The institutional perspective has examined organizational change as a result of adaptation to field logics. Isomorphic change tends to be adaptive over a long period of time and happens through a process of diffusion of ideas and practices through normative, mimetic, and regulatory mechanisms (DiMaggio & Powell, 1983). Nonisomorphic change is generally predicted to be caused by a “frame breaking” incident, or “a precipitation jolt” in the institutional context (Greenwood & Hinings, 1993; Greenwood, Suddaby, & Hinings, 2002). These jolts can be social, technological, or regulatory and can “disturb the socially constructed field level consensus by introducing new ideas and thus the possibility of change” (Greenwood, et al., 2002, p. 60).

W. Richard Scott’s (2000) study of Bay Area hospitals is emblematic of this approach, examining the nature and extent of changes in the medical care delivery system over a 50-year period. This study focused on organizations as the central unit of analysis, with external forces stratified into material and institutional environments (W. Richard Scott, 2000). The study was able to examine the institutional environment and organizational responses at various levels over time, providing a rich look at the processes and conflicts of destructuration and restructuration in the organizational field of health care. The study identified three “eras” of health care (professional dominance, federal involvement, and managerial control and market mechanisms), each associated with a different institutional logic (W. Richard Scott, 2000). The study concludes “that the past half century has witnessed a large erosion of physician hegemony across a
spectrum of traditionally clinical realms, notably quality of care, and attributes much of this change to a declining institutional presence that has successfully been challenged by public and private controls, all couched within a triumphant ‘managerial logic’ (Mick & Wytenbach, 2003, p. 13).

One of the recent shifts in focus in institutional theory is from institutional stability to institutional change, incorporating ideas on structuration that bridges the agent-structure divide (W. Richard Scott, 2008). Patterns of work, once institutionalized, have been shown to be highly resistant to change; this situation is the reason that organizational changes have generally been shown to come from exogenous sources, leaving little room for human agency (Reay, Golden-Biddle, & Germann, 2006). Yet studies of individual action and organizational responses call for agency to be accounted for. At the organizational level, reactions to both a changing environment and institutional logics have been shown to be variable in spite of institutional forces, bringing organizational agency into play (Hasse & Krucken, 2008). At the individual level, organizational change has been investigated through microstudies examining internal agents’ impact on organizational responses (Hardy & Maguire, 2008). Phillips and Malhotra (2008) argue that using discourse analysis rooted strongly in social constructionism, studying microprocesses of institutionalization at the macro-organizational level, helps answer the questions around institutional formation. (Phillips & Malhotra, 2008).

In summary, whether isomorphic or nonisomorphic, change in organizational form is thought to follow a change or challenge to the institutional logics that guide the
field. These challenges can be endogenous, but they are usually shown to be exogenous “shocks.” (W. R. Scott, 1995).

**Organizational Fields**

The *organizational field* is an important site for studying the creation and dissemination of institutional logics and the dynamics of organizational behavior (W. R. Scott, 1995). The organizational field concept was developed from research concerned with organizational response to the environment and with interorganizational behavior (R. Warren, 1967). Since the outset, the organizational field has been a central concept in institutional theory; it has also been discussed as a sphere, a sector, and an environment (Pfeffer & Salancik, 1982a; Wooten & Hoffman, 2008). Scott (1995) offers this definition of the term: “a community of organizations that partakes of a common meaning system and whose participants interact more frequently and fatefuly with one another than with actors outside the field” (p. 56). Institutional processes, organizational behavior, and outcomes for organizations are primarily studied at this level (Greenwood, et al., 2008).

Early explorations of *institutionalization processes* followed two pathways within institutional theory. This development was due to a distinction in theoretical approaches between examination of the environment as an institution and examination of the organization as an institution (Zucker, 1987). The basic process within the environment as an institution “is reproduction or copying of system-wide (or sector-wide) social facts on the organizational level, while organization as an institution assumes that the central process is generation (meaning creation of new cultural elements) at the organizational level” (Zucker, 1987, p. 444). This contradiction points to the methodological challenges
of examining processes rather than outcomes and shows a tension between examinations of processes at the macro and the micro level. Moving away from the tendency of examining a field as a container for a community of organizations and toward understanding the field as a relational space allowed theorists to examine field-level interactions in the creation of collective meaning (Wooten & Hoffman, 2008).

In early institutional work, the focus on organizational behavior was to explain similarity of organizational forms (or isomorphism) within a field while more recent work has examined the dynamics of organizational fields and the role of agency and change (Wooten & Hoffman, 2008). Organizational field research has evolved from looking at normative or regulative field rules to examining the ways in which processes at the field level “guide the behavior of field members in unconscious ways” (Wooten & Hoffman, 2008, p. 132). The heterogeneity of institutional pressures and organizational responses has led to an opening up of the debate about whether institutions can be fully internalized in actors or whether actors can comprehend, and hence manipulate, the system (Boxenbaum & Jonsson, 2008). This agentic versus nonagentic debate about institutions is one of the major concerns in the field, both theoretically and empirically, and has implications for how to understand organizational change.

The study of field-level outcomes for a set of organizations depends on the conception of how institutional processes work within the field and the resultant organizational behavior. Hinings (2008) suggests that locating organizational fields within a specific societal context allows for examination of how they shape and are shaped by the historical context. Ultimately, theorists have moved toward a model of institutional pressures in a organizational field that can be understood as impacting actors
while simultaneously being impacted by them (Wooten & Hoffman, 2008). Methodologically, qualitative research and the use of ideal types are central to the exploration of logics within institutional theory (Thornton & Ocasio, 2008). Archetypes are one such “ideal type” that provides a framework for studying the emergence of new organizational forms, or archetypes, within an organizational field. The exploration of the organizational field in dentistry and of ideal organizational types will provide the context for the case study of organizational change in the field of American dentistry.

**Archetypes**

The development of archetypes has been an important contribution to the study of organizational change over time as it helps to understand organizational diversity through providing classifications for comparison (Greenwood & Hinings, 1993). Greenwood and Hinings (1993) describe the basis for archetype classification as the interpretive scheme, or set of beliefs and values, and its relationship to an organization’s structures and systems. As such, “an archetype is thus a set of structures and systems that consistently embodies a single interpretive scheme . . . Archetypal coherence comes from the consistent relationship between an interpretive scheme and an organization’s structures and systems” (Greenwood & Hinings, 1993). Archetypes are institutionally specific; the interpretive scheme is linked to context-specific values and beliefs as well as to actors’ ability to exert influence over the political and economic resources needed to support the archetype (Greenwood & Hinings, 1993). While organizational diversity exists in all fields, it is likely that only a small number of archetypes can coexist, particularly in heavily institutionalized fields (Greenwood & Hinings, 1993). In testing these concepts in a longitudinal study of 24 organizations, Greenwood and Hinings
(1993) found that “the dynamics of stability and change can best be understood through a framework dealing with the situational context, interpretive schemes, interests, dependencies of power, and organizational capability” (p. 1075). The dynamics of change, in particular, can be classified along the lines of four “tracks of change”: a) inertia (no change), b) aborted excursion (attempted, but not successful, change), c) transformational (change), and d) unresolved excursions (too early to tell if there has been change) (Greenwood & Hinings, 1993; Kitchener, 1998).

A central institutional research task at the field level is to examine what organizational types are legitimated; this has been done in a number of studies after Greenwood and Hinings’s initial development of the concepts (Greenwood & Hinings, 1993). Kitchener (1998) uses this model in a study of organizational change in the United Kingdom hospital system, noting that it has “the ability to describe continuity and change, an awareness of both existing and emergent sets of values and attitudes, and a means of assessing overall patterns of change” (p. 75). Studying innovations in new organizational forms, Kitchener and Harrington (2004) examined organizational change and inertia in the long-term care field. In this study, the contest between two organizational archetypes with different interpretive schemes is examined over the twentieth century. The authors found that due to struggles for legitimacy and resource support for an alternative model to the nursing home archetype, a new archetype, home and community-based services, has been established. However, the old archetype of the nursing home still remains, dividing the field and indicating inertia as well as change (Kitchener & Harrington, 2004).
The concept of archetypes and interpretive schemes is examined in depth specifically in relation to professional work in the book *Restructuring the Professional Organization: Accounting, Health Care and Law* (Powell, Brock, & Hinings, 1999). Powell, Brock, and Hinings (1999) argue that the organizational fields within which professional service firms operate have undergone radical change, as has health care. They contend that professional organizations are emblematic of knowledge-based services, and so studying what happens in this arena will have implications for trends across all of professional work. In the professions, the traditional archetype has been the autonomous professional working with relatively high levels of discretion. This archetype has been challenged and has been changed to a model of professions being employed within large corporations and bureaucracies. This change has been spurred by deregulation, competition, technology, and globalization (Powell, et al., 1999).

Throughout the case studies of law, accounting, and health care, Brock, Powell, and Hinings (1999) attempt to develop a theory of archetypal change that incorporates the reflexive relationship between external drivers and the internal activities of professionals themselves. This theory blends resource-dependency tenants to explain agentic actions and institutional theory to explore archetypes and interpretive schemes. The exploration is centered around three questions:

1. What have been the causes of change?
2. How has change occurred?
3. What have been the structural consequences of these changes? (Brock, Powell, & Hinings, 1999). The authors find significant evidence of environmental factors that challenge the legitimacy of the professional bureaucracy/P
archetype but less evidence as to who the agents of this change are. With regards to the processes, they find the importance of power and professional boundaries and evidence of sedimentation, or imposing new ideas on top of old, rather than radical change. Finally, they find structural consequences in the shape of a new professional firm archetype, the managed professional business, or quasimarket form, as an emerging type but not the only type, indicating that one new archetype is perhaps not yet dominant (Brock, et al., 1999). Finally, they develop a typology of professional organizations based on the current trends shaping change in the field, allowing themselves to continue to watch for a particular form coming to dominance. Whichever type comes out, they expect it to have a distinctly professional character (Brock, et al., 1999).

This research shows that organizational change over time can be studied using a theory of archetypal change that explores the genesis, process, and outcomes of organizational change. This approach has been shown to be suitable to the highly professionalized organizational fields within health care. Areas for further exploration within this model are the specific processes of change and the agents that cause change to occur. Recent work within institutional theory has focused on how to reintroduce agency; however, the agency theorized, whether organizational or individual, is not rational-actor agency but rather embedded agency, and hence it is a constructivist term, not an agentic one (Hasse & Krucken, 2008).

*Embedded Agents and Institutional Entrepreneurs*

The paradox of embedded agency has become a central issue in understanding processes of institutional and organizational change. If the institutional context is taken for granted it is not clear how individuals or organizations embedded within the
institutional context would be able to envision new practices, and if they were able to do so, how they would be able to get others to adopt them (Hardy & Maguire, 2008). In a review of embeddedness, Reay (2006) finds that most studies frame embeddedness as a constraint on action, thereby suggesting that “agency (or purposeful change activity) occurs when some actors are less embedded than others in a field, or alternatively, when actors become less embedded because of particular events” (Reay, et al., 2006, p. 977). Yet in this study of the microprocesses of nurse practitioners’ legitimating new practices the authors find that embeddedness can provide an opportunity and a positive foundation for change (Reay, et al., 2006).

Institutional theorists’ response to addressing embedded agency has come in the concept of an institutional entrepreneur (IE), referring to the “activities of actors who have an interest in particular institutional arrangements and who leverage resources to create new institutions or transform existing ones’ (Hardy & Maguire, 2008, p. 198). The concept grew from institutional studies examining the issues of organizational agency, in particular in topics of strategy by professions, standards setters, and social movements (Hasse & Krucken, 2008). The institutional entrepreneur has become “almost synonymous with institutional change . . . through the construction and legitimation of new practices” (Greenwood, et al., 2008, p. 19). Some work has examined the destruction or transformative work of these entrepreneurs, but most work contains agent-centric examples of building new institutions (Hardy & Maguire, 2008).

Studies employing the IE concept have noted that tensions within a field—defined as “a network of actors within a contingently stable alignment of material, organizational, and discursive forces” ((Levy & Scully, 2007, p. 985)— opens up space for strategic
agency, a development that challenges incumbent actors and stable fields. These tensions can result in competing logics in a field; the outcome of this situation may be a shift toward one dominant logic, or the competing logics may find an ability to coexist, as is shown in a study of collaborative practices emerging in Canadian health care (Reay & Hinings, 2009). A study of child-minding in England showed how the entrepreneurial activities of individuals in a primarily female occupation overcame the dominant market-based logic through behaviors that introduced subversive rules and norms into child-minding practice (Greener, 2009). A study of active money management in the United States showed how the professionalization of money managers challenged incumbents and resulted in significant changes to these practices in the field (Lounsbury & Crumley, 2007). Institutional entrepreneurship has been studied in the health care field as well. A study within the United Kingdom health system compared the ability of actors located in different subject positions to develop new roles and found that IEs required both normative and structural legitimacy to successfully enact change (Lockett, Currie, Finn, & Martin, 2009).

Hardy and Maguire (2008) provide a comprehensive review of the literature on institutional entrepreneurs and find that the work covers a number of dimensions in answering the questions of how these actors envision new practices and get others to adopt these new practices. These dimensions include the properties of IEs (special characteristics or subject positions), field conditions (for example, mature, stable), interpretive struggles, and intervention strategies (resources, rationales, relations) (Hardy & Maguire, 2008). Hardy and Maguire (Hardy & Maguire, 2008) find that the greater
potential for future work in this area concerns process-centric narratives and, in particular, work looking at resistance to IEs and unintended outcomes of IE work.

These studies provide a foundation for the RDHAP case study in examining how actions of IEs may result in competing logics; how IEs may be less powerful, all-female occupations; and how IEs are connected to professionalized and health care fields. No study to date has specifically looked at an emerging professional group that is regulated as a formal occupation (such as dental hygiene) as institutional entrepreneurship. Yet professions have played a central role in institutionalism.

*Professions in Institutionalism*

A short review of the nexus of professions and institutions is discussed next. Much of the empirical work on institutions has been rooted in studies related to the impact of professions on institutions as well as to the impact of institutional forces on professional work. W. R. Scott traces studies of the professions in medicine as one of the sources of institutional theory’s development (W. Richard Scott & Backman, 1990). Earlier studies focused on the professional mode of work, jurisdictional disputes, and incongruence, or resistance to bureaucracy. It was not until theorists moved away from a focus on the specific professions toward issues of the wider environment that this framework shifted to more organizational and institutional levels of analysis. By doing this, they provided a richer context for the professions, particularly with relation to state and regulatory powers. This broader work expanded the notions of professional power by dissecting the technical and institutional aspects of professional work. Scott (1990) concludes from this review that a new area for examination is discourse on professional ethics as a “strategic topic for organizational theorists interested in reasserting the
importance of cultural values as factors affecting organizational structures, activities and change” (p. 46).

Models of medical work have been a central component of institutional analyses of the health sector. In a study of English general practice, Kitchener and Exworthy (in press) elaborate on W.R. Scott’s three modes of incorporation of professions into organizations (autonomous, heteronomous, and conjoint) and introduce a new typology of four models: autonomous, custodial, heteronomous, and post-bureaucratic. These four models are compared by their underpinning logics, governance systems, and aligned actors, creating a revised heuristic device to track control systems of medical work (Kitchener & Exworthy, In Press ). The authors contend that one reason professions are losing dominance in health care is that managerial logics are replacing more bureaucratic forms of work. Professionals have been called upon to have more transparency in their work; the responses to this request have been colonization by a managerial logic or decoupling of auditing and professional practice (Levay & Waks, 2009). In a study of responses to calls for transparency, Levay and Waks (2009) identify a third form, one in which professions get involved in their own monitoring, which the authors call soft autonomy.

The behavior of health professions, their practice patterns, and their choices have been linked to professional practice models in health care (Andersen, 2009). In a study attempting to integrate institutional, organizational, and individual levels of analysis, Currie, Finn and Martin examined the impact of new organizational forms (networks) on work and employment relations in the area of genetics in health care (2008). They found that genetic nurses who were supposed to work across boundaries in coordinating roles
had difficulty enacting these roles due to their traditionally less powerful status. This situation played out for nurses at the organizational level, at the policy level due to professional institutions’ work to sustain hierarchy and power differentials (Currie, Finn, & Martin, 2008).

The changing fortunes of professions, particularly those in the medical field, over time have been of great interest to institutional scholars studying the changing organizational fields and the institutional norms that impact professional practice (Leicht & Fennell, 2008). Not surprisingly, themes examining the dominance of and concern about professions within organizations, fields, and institutions can be found throughout the applied work on in health care. As well, many of the studies combine or contrast classic institutional frameworks with other frameworks (in economics in particular) for studying change within the very complex system of health care. Finally, much of institutional theory was born out of empirical work in the health care setting, and the tension of the embedded agency of professions is clear throughout these works. Greenwood (2008) sees professions within organizations as a central element in institutional studies as they turn toward more of a focus on how actors shape their contexts, both knowingly and self-servingly. The professional infrastructure is what he calls the “referees of the system,” the “acknowledged power centers in modern society.” He maintains that “without them[,] the market could not function” (Greenwood, 2008, p. 154). Most of this work has focused on the changing status of professions within institutionalized fields, the integration of professions into organizations, and the impact of professional associations on development and enforcement of institutional logics. To
date, no study has focused on the process of organizational change through a challenge by an emerging health profession to the organizational field.

*Professions as Agents and Entrepreneurs*

The specific interplay of professions and the institutions that they inhabit has been evident throughout the literature on both professions and institutions, coming to a nexus today in some of the most recent institutional theory that examines professions as institutional agents and institutional entrepreneurs (IEs) (Hardy & Maguire, 2008; W. R. Scott, 2008). Professions as institutional agents have been primarily seen as contributing toward institution building and maintenance. Professions as agents define, interpret, and apply institutional elements; understanding them as doing so directs attention away from the individual cases and toward organizational field-level dynamics and the structures and systems that impact professional authority (W. R. Scott, 2008). W. R. Scott (1987) notes that “the professions are expected to rely primarily on normative and or mimetic influences and to attempt to create cultural forms consistent with their own aims and beliefs. Of course, to the extent possible, they will enlist the backing of state authorities for their models . . . The examination of these struggles and alliances is an important analytic key to understanding the shaping of contemporary institutional environments” (W. Richard Scott, 1987, p. 509).

Institutions regulate organizational behavior through *rationalized myths*—beliefs and schemas that are primarily a response to values and beliefs, not to market efficiencies. These underlying belief systems can be studied through *archetypes*—coherent patterns of organizing in response to institutional pressures (Leicht & Fennell,
Enforcement of institutional configurations is an essential link between the institutions and the organizational archetypes. Professions are central to the enforcement of institutional pressures through regulative, normative, and mimetic pathways (Leicht & Fennell, 2008; W. R. Scott, 2008). Yet institutions change as well, and professions are implicated in this change as leaders and catalysts in developing new organizational fields and institutional logics, either from internal divisions or in their responses to external pressures (Leicht & Fennell, 2008).

Professions are seen to remake institutions as entrepreneurs by reshaping the landscape through jurisdiction expansion, creation of standards, and development of formal rules and laws (Hwang & Powell, 2005). New or emerging professions are particularly relevant when one looks at these processes; “semi-professionals, who are unconstrained by professional orthodoxy and occupy marginal positions in the organizational field, are much more entrepreneurial” (Hwang & Powell, 2005, p. 207). This process is a dynamic one in which activities are often purposive but not necessarily intentional, in which institutional change may lead to environmental change, or likewise, in which changes in the institutional environment may bring about new ways of organizing (Hwang & Powell, 2005).

Professions have been shown to be part of the transformation of institutionalized fields through the role that they play in legitimating change (Greenwood, et al., 2002). In a study of professional associations, Greenwood et al. (2002) propose that theorization is a key stage of institutional change. This stage combines the suggestion that theorization involves the specification of an organizational failing for which a local innovation is a solution, and a justification for that innovation, which further requires either moral and/or
pragmatic legitimacy to be successful (Greenwood, et al., 2002; Tolbert & Zucker, 1996). Lounsbury and Crumley (2007) also posit that theorization is an essential step in institutional entrepreneurial innovation through the creation of new practices. In these studies, the theorization happened within a profession, not between two professions, raising the question of how interprofessional challenges, normally seen as jurisdictional disputes, lead to challenges of institutional logics and to creation of new organizational forms. Professional jurisdictional battles have a strong institutional element since the “dynamics of change in the status of professions [are] linked to a profession’s location in a field of institutional and cultural actors” (Leicht & Fennell, 2008, p. 433)

In summary, professions have been theorized as agents of institution building and as entrepreneurs of institutional change. The embedded agency of professions may work not only to limit but also to empower their ability to enact change. Professions and their organizations have a unique role in the process of theorizing the need for and the appropriate venues for change. Insights from the sociology of the professions may help to further understand the context of professionalization as an important framework professions use as they pursue maintenance or change of institutional logics and organizational forms.

*Sociology of the Professions*

The sociology of the professions combines insights from the sociology of knowledge as well as from the sociology of work and occupations to examine modern professions as occupational categories, processes, and discourses (Evetts, 2006; Freidson, 2001). Freidson traces the history of American medicine as a profession within the division of labor and within the historical context of modern society, and he develops a
model for the analysis of professions from this work. In a study of the medical care system, he found that the behavior of a professions’ member is a product of the structural relations that are shaped by each occupation’s knowledge, politics, and ideology (Freidson, 1970b). Central to a profession’s power is its autonomy—the marker of the ability to maintain dominance within that structure through 1) legal and political privilege, 2) control of the production and application of knowledge, and 3) self-regulation via a code of ethics. He postulated that if the structural relations change, then so will the behavior of the professions (Freidson, 1970b, p. 56).

The central distinction Freidson (1970b) makes between a profession and an occupation is the right to control one’s own work. The core characteristics of a profession are a member’s extended training in abstract knowledge and a service orientation (Freidson, 1970a). These characteristics, while disputed, are still the standard to which emerging professions in U.S. health care must adhere, never being deemed fully “professional” until individuals have control over their own work. Most definitions of professions today are multidimensional, as is this one:

Occupational incumbents [are those] a) whose work is defined by the application of theoretical and scientific knowledge to tasks tied to core societal values, b) where terms and conditions of work traditionally command considerable autonomy and freedom from oversight, except by peer representatives of the professional occupation, and c) where claims to exclusive or nearly exclusive control over a task domain are linked to the application of the knowledge imparted to professionals as part of their training” (Leicht & Fennell, 2008, p.431).

Once professional status has been achieved, the organized profession may take on new activities to maintain and protect this status as “autonomy is the critical outcome of the interaction between political and economic power, and occupational representation” (Freidson, 1970a). Yet given the changing environment and organization of professional
work, Evetts (Evetts, 2002) suggests that professional discretion (representing the important aspect of judgment and decision making), not autonomy, needs to be preserved in the interest of clients and the public. Autonomy as the marker of the pinnacle of professional status has been thoroughly challenged, brought to an end by empirical studies of the complexity of professions and by theoretical advances beyond definitions (D. W. Light, 2005). New, modified forms of power can exist for a profession through accountability, but this accountability comes at the expense of individual practitioner autonomy (D. W. Light, 2005).

Regardless of the changing markers for professional status, professionalization and the professional project remain central, and contested, processes of gaining social and occupational control that professions undertake in the social, political, and economic realms of society (Freidson, 1986; D. W. Light, 2005; Macdonald, 1995). Much of the recent literature on professionalization focuses on the discourse of professionalism as used by emerging professions to gain status and create identity (Evetts, 2003c). Yet the core of any professional project is the development, codification, and protection of its jurisdiction (Abbott, 1988; Macdonald, 1995). Moving away from a formal organizational and regulatory narrative of the development of professions, newer theorizing expands the process model by examining dual-directed networking dynamics in the creation of social boundaries (Montgomery & Oliver, 2007).

It is notable that in the literature, research on the evolution of professions addresses issues that are generally unseen within dentistry. Issues such as the incorporation of professions into bureaucratic organizations; the actions of professions to address pressure from government regulators, payers, and consumer groups for more
accountability and transparency; and the ongoing specialization and fragmentation of professions generally do not apply in dentistry, a field that has been somewhat isolated and much less impacted by transformative external institutional forces.

The sociology of professions theorizes the professional control of work as an alternative to market or bureaucratic forms, and it has historically focused more on how to get and keep this type of control, to the neglect of a deeper examination of the forms and functions of this professionally organized work. In summary, the contribution of the sociology of professions theory to this case is to frame the strategic of actions that professional groups undertake; this frame requires a comprehension of how professions understand themselves, and how they interact with their social, political, and cultural environments. The motivation of professions as an occupational group is important as it is the framework within which they can be understood as embedded actors. Given that this study is about the professions and organizations within American dentistry, it is to these topics this review now turns.

**American Dentistry**

The previous section explored the theoretical basis for this study. The following section examines the literature specific to the organization or professions of dentistry, providing a historical, topical, and contextual background for this particular case study.

*The Sociology of Dental Professions*

A large body of literature examines the basic trends (supply, demand, distribution, practice data, and others) and issues (education, regulation, changing roles, job
satisfaction, and others) surrounding the dental workforce, including dentists, specialists, and allied dental providers. The vast majority of this work is not framed within a sociological perspective. The dental literature is full of “rational actor” discussions about the professions of dentistry and dental hygiene; however, there have been very few authors who have applied professional dominance or professionalization theory to the rise of dentistry and its current professional conflicts. What has been written is not a coherent body of work but rather a disparate set of individual studies, reviewed in brief here.

Freidson and Feldman (1958) examined the topic of dental care in early work through analysis of a survey of public attitudes toward dental care. They examined basic variables of perceptions of dentists (their prestige was just below that of a physician), cost, and utilization of care (25% thought costs were too high). They did some of the earliest social segmentation of this data by race, income, and gender, documenting some of the earliest disparities in health and access to care. Their conclusion, clearly influenced by interactionist theory, is that individuals’ “definition of the situation,” or overall assessment, determines the likelihood of their service use (Freidson & Feldman, 1958).

The history and evolution of dentistry as a profession is the area that has received some attention from scholars. These studies vary in their focus, with some examining specific instances and others doing cross-national studies (Ingle, Blair, Institute of Medicine (U.S.), & Pan American Health Organization., 1978). In Europe, the rise of “professions” followed a different trajectory than they did in the United States due to the different relations between professions and the state (Kocka, 1990). Amark (1990) traces the evolution of the open cartel of dentists in Sweden and their strategies for market closure. Interestingly, he highlights the conflict between the market closure and social
closure strategies and the economic consequences (in 1882 dental fees were so high that few could afford them) of the “closing” of a profession (Amark, 1990). In the United States, the history of the American Dental Association and various specialties has been well documented as has the rise of women in dentistry (Boquist, 1977; Grossman, 1976; Jackson & Jackson, 1964; McCluggage, 1959). Most of these studies are not sociological, and some of them are more promotional material than history. A key exception is a recent historical look at dentists and hygienist development in relation to public health and citizenship that provides a rich history of early dentists’ thoughts and behavior as they developed in a particularly twentieth-century American context (Picard, 2009).

The topic of the professionalization of dentistry and dental hygiene and issues of gender dynamics in the dental professions have been studied from a sociological viewpoint, but not in the United States. Tracey Adams (1999) has examined the professionalization of dentistry in Ontario, Canada, in relation to medical dominance. She found that four factors led to the legitimate separation of dentistry from medicine, unlike many other professions that medicine has sought to dominate. She notes, “First, dentistry and medicine pursued their professional projects at the same time. Second, from the beginning, dentistry pursued a separate sphere of competence or jurisdiction than did medicine. Third, both medicine and dentistry claimed professional status and expertise by drawing on the precepts of medical science. . . . Fourth, similarities in the gender and class background of professional leaders encouraged positive relations between the two professions” (T. Adams, 1999, pp. 417–418). Her conclusion is related to Abbott’s claim that jurisdiction is the central defining element of a profession, finding that professions
Adams has studied the issue of gender and health professions in depth (T. L. Adams & Bourgeault, 2003a). This work is explicit in its position that professions are gendered institutions, so women are “faced with a dilemma: how can they achieve professional status if full professions, virtually by definition, are the province of men?” (T. L. Adams, 2003). This dilemma is explored using the professionalization projects of dental hygiene as the site of empirical investigation, providing insight into women’s professional projects more generally (T. L. Adams, 2003). She explores gender conflicts between dentists and dental hygienists as they evolved throughout the process of professionalization, exploring the scope of practice battles and legitimacy battles over who should be the primary oral care provider (T. L. Adams, 2004a, 2004b).

Lautar (1996) examines the professional project of dental hygienists in Alberta, Canada, and focuses on the perceptions of progress toward professional status. She identifies hygienists’ tensions with dentists who contest hygienists’ professional status in an attempt to retain economic control over dental hygiene services as well as a tension within dental hygiene between those working in more traditional settings and those working in alternative settings. She concludes that although dental hygienists have formal legal status (the 1990 Dental Disciplines Act in Canada granted self-regulation to dental hygienists), they are still not fully recognized as a profession (Lautar, 1996).

Further work examines the specific tensions between dentists’ and dental hygienists’ associations in Ontario, outlining the interprofessional conflicts over
“professional autonomy, expertise, [and] professional status and specifically over who should be ‘the’ primary oral health care provider” (Adams 2004b: 2243). This study highlights the importance of appeals to third parties in jurisdictional conflicts, the role of the state as the primary third party in dental jurisdictional disputes, and the centrality of status to competing professional projects (T. L. Adams, 2004b). Adams contends that in Ontario an inter-professional struggle is occurring over who provide primary oral health care for the public (T. L. Adams, 2004b). Following Abbott’s jurisdictional dispute model, Adams examines the history of these disputes, which track very similarly to the U.S. situation. She concludes that where professionalization of dental hygiene has been most successful, the jurisdictional disputes have been the most intense (T. L. Adams, 2004b). From the very early days of hygiene, three overlapping jurisdictions have been contested: economic, professional, and gender (Picard, 2009; Richardson, 2005).

Finally, in a more postmodern tradition stemming from Foucault, Sarah Nettleton (1989) examines dentistry’s history through the way in which knowledge has been reconstituted in the modern period rather than through its power struggles (Macdonald, 1995). In her examination of the discourse of dentistry in relation to the understanding of pain and the associated concept of fear, she finds that “the functioning of power/knowledge transcends professional and disciplinary boundaries and is a process which is far more subtle and fundamental than one of political maneuverings by interested groups or individuals or the accumulations of an increasingly sophisticated knowledge” (Nettleton, 1989, p.1183). Nettleton goes on to examine the “dentist’s gaze” as extended through epidemiological research, contending that those who resisted dentistry (feared the most) are now in the gaze due to their nonattendance to a dental
office, thus restructuring the experience of pain from anatomical origins to one of social relations (Nettleton, 1989).

These studies provide some basic historical context for understanding the dental professions. Given that the histories of dentistry and dental hygiene in the United States and Canada are intertwined, these studies also highlight the major tensions created by the dental hygiene professional project, including status, gender, and professional power.

*The Organization and Institutional Forms of Dentistry*

There have been a number of sociological studies of the organization of work in dental care (Mueller, Boyer, & Price, 1994). None of these studies is explicitly “organizational institutional”; rather, they take a social constructionist approach to the dental care system. They are a good starting point for moving toward an institutional perspective on the dental delivery system as “various kinds of social constructionism have played a central role in institutional theory from its earliest development[,] and . . . this constructionism points directly to the cognitive nature of institutions” (Phillips & Malhotra, 2008, p. 705).

The early work on dental organization was less explicitly sociological than later work was. This work is exemplified by an issue of the 1971 *Milbank Memorial Fund Quarterly*, “Toward a Sociology of Dentistry.” The purpose of the work was “to make dentistry, and more importantly, dental health, a salient object for social scientific study” so that “the dental community will better understand what sociologists do in the dental domain, how they think, and what they might contribute toward improving the oral health of a population” (O'Shea & Cohen, 1971, p. 9). The contributions in the issue looked at a range of social and behavioral studies in the dental realm that had been conducted up
until 1970. The contributions included a macrosociological examination of dentistry as an institution with a particular focus on the organizational roles in a historical context (O'Shea, 1971). Cohen (1971) notes that this is the first work attempting this analytic approach about American dentistry.

A study on the dental labor force focuses on the trends in the workforce from the 1950s to the 1970s and challenges the supply-based predictions for meeting dental care needs (Cole & Cohen, 1971). Another study on women in dentistry was one of the first to explore the introduction of women to dental school and the mixed reception it received from various social communities (Linn, 1971). The exploration of social organization and the networking of colleagues in dentistry in a small town was undertaken in another groundbreaking study on the causes and consequences of professional networks (Wolock & Welling, 1971). Finally, a study on the dental care system in Britain provides a cross-cultural comparison of system issues (Richards, 1971). These studies provide a rich history of thought on the dental care system as an institution and provide a starting point for comparisons with current arrangements and discourses around the system of care, yet they are also very outdated.

A study of the application of behavioral health to improve dentistry (rather than a constructionist approach about dentistry) comes in a 1980 study that examines the relations of society, culture, personality, and institutions to dentistry (Fredericks, Lobene, & Mundy, 1980). This book examines the American construction of the family, class, and race in an attempt to help dental practitioners better understand the dynamics of the patient population and the variations necessary for adequate interaction with different contingents of American society. It outlines particular issues with social
structure and segments of communities, such as the elderly, that need special care. 

Finally, and tellingly, the book discusses social change theory and dentistry (circa 1979), calling for dentistry to stop resisting government payment, to extend care into underserved communities, to focus on expansion of the dental workforce (allied dental providers), and to embrace changes for the betterment of the public. The book calls for a twenty-first-century age of stomatology and a surrendering of the mechanical aspects of dental therapy to technicians (Fredericks, et al., 1980). This seemingly endemic debate is highlighted even further in a passage from an 1872 dental editorial:

To refuse to see that great changes are at hand, as concerns the standing and practice of dental professions, is simply to shut one’s eyes. Of no one thing are we more assured that that dentistry of today must either advance or give place: to attempt to confine it to its present limits is to seek to control progress which is itself evolution” (Fredericks, et al., 1980, p. 145).

Peter Davis (1980, 1987) has written two books on the sociology of dental care. The first examines the social context of dentistry; this book traces the historical evolution of the profession, the emergence of organized dentistry, the social organization of dental care, the use of epidemiology, public health and social psychology within dentistry, and finally, the culture of dentistry and its clinical models (P. B. Davis, 1980). Davis traces the history not as a logical organizational outcome but as a product of its historical context. The professional culture, or logic of dentistry, as he calls it, is seen as unique and as reflecting a number of wider entrepreneurial professional ideals that remain in the profession today. The institutional context of the development of early dental practices included changes in technology and business practices (especially attacks on competitors) and the influence of food manufacturers and the dental supply industry, which further shaped the logic of dentistry (P. B. Davis, 1980). Using a cultural
approach, Davis (1980) discusses much about the meanings and symbolic functions of many of the rituals in dentistry. He notes, “The profession was so eager for the trappings of scientific status that it was tempted to bypass the time-consuming business of actually establishing a range of well-tested and validated procedures based on scientific research” (p.120). He maintains that a key flaw in dentistry is the focus on the mechanisms of disease rather than its etiology as this approach handicaps thinking and policy around the range of possible options for intervention. Following from this point, Davis (1980) proposes that a social analysis from an institutional framework has much potential for furthering knowledge about oral health care. He concludes:

Much more than just the payment system will require modification. The key to future change is probably the clinical model itself since it encapsulates so much of contemporary dentistry. . . . At present we are expected to accept the fiction that what goes on in dental practice can in large measure be traced to a specific body of theory and expertise applied to the everyday problems of oral health. The influence of economic incentives, clientele, the organization of work, community context, commercial interest groups, colleague pressure, the availability of resources, and customary practices and traditions all go entirely unacknowledged in such a fictional view of the world (P. B. Davis, 1980, p. 150).

In his second book on the sociology of dentistry, Davis (1987) employs a sociological perspective to the examination of understandings of dental health and disease, the social context for dental care, and the system of oral health care. His take is explicitly social constructionist, and he spends quite a bit of time discussing the institutional structures around dental care, which he views as professionally dominated structures (P. B. Davis, 1987). This study is motivated by the contrasting trends of increasing caries in the developing world and decreasing caries in the developed world and by the concern that modern dentists may run out of work. Davis uses data from the first WHO Collaborative study on oral health care patterns, but he frames the data in
common sociological perspectives on risk, compliance, deviance, stigma, and labeling. In examining the social context for care, he looks at trends in social group distinctions and at the implications these variations have for predicting both the future etiology of disease as well as popular definition of oral health. Finally, he examines the “system,” or oral health care as a human and social institution within which dental providers are embedded (P. B. Davis, 1987).

Finally, dental hygiene work is the subject of a study of coercive versus noncoercive conditions of work (Mueller, et al., 1994). This case study examined the impact of indirect structural control of work (versus direct coercive corporate measures) on employee attachment. (Mueller, et al., 1994) found that work group integration and legitimacy-producing features (workload, variety, pay, and distributive justice) were critical as was job satisfaction. This finding contrasted with those of studies arguing that organizational commitment was a better concept than job satisfaction for examining job turnover. In addition, they found that autonomy had no effect on job satisfaction, commitment, intent to stay, or turnover (Mueller, et al., 1994).

While no previous studies of the dental care system and professions have been done from an institutional perspective, one recent study in medicine models this approach. A study based in historical data utilizing both professional dominance and institutional field frameworks examines the forging of the occupational identity of OB-GYNs (Zetka, 2008). This study shows how a specialty within a profession sought to defend itself from outsiders as well to create a higher status niche for itself within its own profession, and it identifies the tensions that these efforts caused in the form of paradoxes between professional and organizational agendas. The study “illustrates the importance of
integrating insights from both the macro-institutional and intra-occupational explanatory frameworks in accounting for significant developments in medicine” (Zetka 2008: 335).

Trends in the dental workforce, education, policy, and financing are well documented in the dental literature, yet research on the dental workforce or on the environment and organization of dental care are rarely framed within sociological theory or practice. The few sociological studies of dentistry that exist, while informative, are considerably out of date (L. K. Cohen, 1981; P. B. Davis, 1980, 1987; O'Shea, 1971). The richest sociological literature comes from studies of the professionalization of dental hygiene (T. L. Adams, 2003, 2004a, 2004b; T. L. Adams & Bourgeault, 2003a; Lautar, 1995, 1996; Picard, 2009). Yet this literature is primarily based on Canadian dental hygienists’ experiences. In summary, the topic of dentistry has received little attention in the sociological literature generally, and no studies have examined dentistry from an organizational theory perspective.

**Summary**

There are a number of foundational works upon which this study rests, and there is a strong theoretical basis for examining the institutional dynamics of organizational change in dental care through the action of professions that inhabit the field. Examinations of institutional and organizational change are well established within institutional theory, but few of these studies examine the change as being initiated from an actor within the institutional field. Change in organizational form over time can be examined using the concept of organizational archetypes. This approach has been successful at identifying the emergence of new organizational forms, but it has been less able to identify actors who contribute to that emergence. Institutional entrepreneurship
provides a framework for understanding how agency is connected to challenges to institutional logics that may result in new organizational forms. Yet no study of institutional entrepreneurship has examined the pursuit of an emerging occupation for professional status as a specific type of entrepreneurship. The contemporary professionalization of dental hygiene has been examined, but no previous study has examined the topic of independent hygiene from the perspective of institutional entrepreneurship. This study intends to examine the development of a new organizational archetype through the strategic challenge of an emergent occupation within an institutionalized field.

Very few sociological studies have focused on the topic of dentistry, and those that have are considerably outdated. The vast majority of literature on dental care and the dental professions is explicitly atheoretical, yet implicitly within these studies are a standard market economic or policy analysis framework, assumptions of rational-actors, and little attention to larger social processes. Likewise, medical sociology, a field rich with theory and application within almost all facets of medicine, health and illness, and care delivery systems, has paid scant attention to the topics of dental care, dental delivery systems, or dental professions. Like dentistry itself, the topic of dental care has remained separate and apart from the bulk of sociological theory’s application to health care.

Conceptual Framework

The purpose of the case study of Registered Dental Hygienists in Alternative Practice (RDHAPs) is to understand the development of a new organizational form in the institutional field of American dentistry. The conceptual framework has been developed from the literature review and will guide the study design. Following the theory of
archetypal change, the case study exploration is centered on the following three questions:

1. What have been the causes of change?
2. How has change occurred?
3. What have been the structural consequences of these changes? (Brock, et al., 1999).

This conceptual framework is connected to the study aims as follows:

Aim 1: To describe the organizational field of dental care in the United States and the institutional dimensions of this field, including the organizational field, the organizational archetype(s), and the context of professionalization of American dental hygiene. This aim will be achieved by applying the basic tenants of institutional theory to the topic of dentistry. It provides the baseline field data against which the initiation of change can be understood, the process of change can be tracked, and the outcome change in the form of a new organizational archetype can be measured.

Aim 2: To empirically trace the historical development of independent dental hygiene practice in California and the processes that RDHAPs are using to develop their practices within this institutionalized field. The focus is to explore how the development of independent dental hygiene came about, how it challenged dental professional dominance, the impact of the challenge on the institutional field, and how the changes resulted in a new organizational form.

Aim 3: To analyze the development of the RDHAP as a process of creating a new organizational form within dentistry. This analysis combines the conceptual frameworks
of institutional entrepreneurship and the professional project in seeking to understand the
genesis and process of the transformation. This combined model is central to the analysis on three levels. First, it provides insight into the embeddedness of the dental hygiene agency within a professionally controlled field while still allowing for the impact of exogenous forces. Second, it frames the understanding of an interprofessional conflict as an important site of theorizing as well as a site of strategic power. Finally, it frames the structural consequences of the change as a result of competing professional logics that now inhabit in the field. The outcomes of the case will be determined by examining the interpretive schemes, systems, and structures of the resultant organizational forms.

Aim 4: To discuss the policy implications for the organization of dental care and health care broadly. The study highlights changes in the institutional field of dental care initiated by the professional project and by the institutional entrepreneurship of dental hygienists and the broad implications for health care policy in the areas of system and practice redesign.
CHAPTER 3: RESEARCH METHODS

This study is a mixed-method case study of an emerging profession and its impact on an institutional field. The case study draws from four separate qualitative and quantitative data sources and spans a 30-year time frame. Two different theoretical approaches are employed in analyzing the case study, the process of professionalization and institutional entrepreneurship.

Research Design: Mixed-Method Case Study

Case studies are “a detailed investigation, often with data collected over a period of time, of phenomena, within their context. The aim is to provide an analysis of the context and processes which illuminate the theoretical issues being studied. . . . The case study is particularly suited to research questions which require a detailed understanding of social or organizational processes because of the rich data collected in context“ (J. Hartley, 2004, p. 323). The intent of a case study is to produce new models or theories for understanding phenomena, not to create generalized empirical data. Data used for case studies can be compiled from a variety of sources such as participant observation, archival documents, and qualitative interviews (Dick, 2004; N. King, 2004; Prior, 2003; Waddington, 2004). This case study of the Registered Dental Hygienists in Alternative Practice (RDHAP) was developed from a literature review; participant observation; individual, stakeholder, and focus group interviews; analysis of historical and archival documents; and a quantitative analysis of longitudinal data on RDHAP practices. Each of these data sources will be discussed in the next section.
Research Data Collection and Sampling Methods

Literature Review

The literature reviewed for this study provided the empirical and theoretical basis for the study design. The review of academic literature on dental sociology included work on dental professions, dental hygiene professionalization, and the history and institution of dentistry. Theoretical literature on the sociology of the professions, institutional theory, organizational change, and institutional entrepreneurship were examined with a particular eye to any studies specific to the field of dental care or health care. Sources for the literature review included PubMed and the Social Science database within CSA Illumina and the Business database available through the UCSF library. Literature sources included journal articles, books, book chapters, and Internet resources. A large number of nonsociological publications on dentistry were reviewed, however much of this literature is case study data and is not included in the literature review section. Articles that applied a sociological framework to the dental care system were included in the literature review, along with the theoretical literature used to develop the conceptual framework. Chapter 2 provides a summary of the literature reviewed.

Qualitative Data Sources

The qualitative data for this study came from observations and interviews collected in a previous study of RDHAPs in California (Elizabeth Mertz, 2008).\(^1\) Participant observation was conducted at numerous dental policy meetings in California, but in particular at three alumni meetings of RDHAPs held in 2007, 2008, and 2009. Numerous individuals involved in the development and regulation of the RDHAP
profession were interviewed over a three-year time frame (2007–2009). Those individuals included Health Manpower Pilot Project (HMPP) participants, practicing RDHAPs, faculty from educational institutions, professional association representatives, and others involved in dental care policy. The interview guides (Appendix A) were developed to understand the motivations, practice realities, and public policy issues surrounding the development and implementation of RDHAPs in California.

Interviews were conducted with a total of 22 individuals, broken down as follows: one focus group interview consisting of seven RDHAPs (five in practice, one graduate currently developing her practice, and one student); five additional RDHAPs (two of whom were original HMPP participants); two HMPP evaluators; and nine other stakeholders. The other stakeholders were representatives of key organizations connected to the development of RDHAPs: the California Dental Hygienists’ Association (CDHA), the American Dental Hygienists’ Association (ADHA), the California Dental Association (CDA), the Committee on Dental Auxiliaries (COMDA), the California Dental Board (CDB), the University of the Pacific (UOP), and West Los Angeles College (WLAC).

In addition, qualitative data were provided from the open-ended portion of the 2005 statewide sample survey of RDHAPs (described in the next section). Fifty-two percent of the RDHAP respondents to that survey provided open-ended comments on their practices and experiences. Qualitative data from the 2009 RDHAP survey were also included, with 31% of respondents providing open-ended comments.

Archival and Historical Data 1979–2009

Archival and historical and data for this study came from six sources: California legislative records on regulations connected to the development of the RDHAP (1979–

The legislative history was conducted as part of an earlier study, detailed elsewhere (Elizabeth Mertz, 2008).2 OSHPD supplied the HMPP journal on request. The journal covers the history of the HMPP program, including project summaries from all applications submitted. The RDHAP archive contains 394 items related to the development of the RDHAP, including press clippings and other media coverage, journal articles, newsletters, meeting notes, advocacy letters, legislative notes, and association communications. CDA historical data sources include tables of contents from the CDA journal from 1978 to 2009, selected articles on dental workforce and policy issues (including any article related to dental hygiene), and CDA update articles on dental hygiene or the RDHAP. ADHA historical data sources include only specific articles on the dental hygiene association history, coverage of the RDHAP development, and current items from the association webpage on the professional agenda of dental hygiene.

Finally, print media was analyzed to see what level of coverage the specific issue received for the general public both in California and nationally as well as to see what type of coverage dental hygiene generally receives and around what issues. Results in the
“newspaper,” “aggregate news source,” and “health care news” categories were included from a search of LexisNexis academic under “major U.S. news and wires.” The latter category is for the general health care audience, rounding out types of media coverage.

The search terms included “dental hygienist AND”

1. supervision
2. independent practice
3. licensure
4. Health Manpower Pilot Project
5. scope of practice
6. self regulation
7. alternative practice

These search term combinations returned in a total of 872 articles in LexisNexis, 691 (79%) in major news, and 181 (21%) in health care news. Figure 1 shows the breakdown of relevant articles.

Figure 1 Flow Chart of Media Sources

872 Total Articles Returned Using All Search Terms

691 (79%) Major News Newspaper

181 (21%) Health Care News

426 (62%) Newspapers

28 (4%) Aggregate News

635 Total Articles Scanned

316 (50%) Dental Hygiene Relevant

44 (14%) RDHAP Relevant

23 (52%) Unique RDHAP Relevant

237 (26%) Not Included
Of the 691 articles, 426 (62%) were in the newspaper category while 28 (4%) were in the aggregate news category; the other 26% were not included in the study. The 454 articles from major news sources, in addition to all 181 health care news returns, were scanned for relevance. Of these 635 scanned articles, 316 (50%) were relevant to the topic of dental hygiene included in the search term. Of these, only 44 (14%) pertained specifically to RDHAPs.

The category with the highest percentage of relevant RDHAP articles was “supervision,” followed by “alternative practice.” A number of articles were duplicated in each category. Once the duplicates had been removed, 23 that were RDHAP specific remained. Articles were published in 31 of the 50 states, with the majority published in Washington, California, Pennsylvania, and Wisconsin—all states where hygiene initiatives had been launched. There were very few articles year by year until the period 1995–2007, when there was a spike in coverage. There were additional peaks in 2001, 2004, and the period 2007–2009 that represented press coverage of specific legislative initiatives around the country.

The media articles specific to the RDHAP, CDA sources, and ADHA sources were added to the index of the RDHAP archive, creating a final combined archive of 564 items from all sources, distributed over the years 1972–2009. Figure 2 shows the count of sources by year.
Figure 2 Total Count of Indexed Sources by Year

Total Number of Indexed Text Sources
1972-2009
(Excludes interview and survey data sources)

Figure 3 displays the distribution of original sources across the archival data. The legislative history was not included as a separate source but was instead imbedded in the RDHAP archive. This figure only represents the original source of the archive materials, not the actual distribution of material type.

Figure 3 Distribution of Original Sources of Archive Materials
Quantitative data: 2005 and 2009 Surveys of RDHAPs

The final set of data used for the case study is longitudinal data on RDHAP demographics, practices patterns, and professional opinions. Baseline data from 2005 were collected as part of a statewide sample survey of registered dental hygienists in California, the results of which have been previously published (E Mertz & Bates, 2008). Follow-up data were collected from a census survey of RDHAPs conducted in 2009. These survey instruments are included as Appendix B.

The 2005 sample survey was developed from information gathered from a literature review as well as from interviews with an expert group of stakeholders, including researchers, policy makers, dental professionals, and educators. A draft version was piloted with a random selection of 30 licensed hygienists stratified into two groups by whether they were in an urban setting, San Francisco, (15 for an in-person focus group) or in a rural or frontier community (15 for individual phone interviews). The final stratified sample was pulled from a license file of all dental hygienists obtained from the California Department of Consumer Affairs in August 2005. This file include registered dental hygienists (RDHs), registered dental hygienists in alternative practice (RDHAPs), and registered dental hygienists in extended function (RDHEFs). For RDHs, only those with a California address were included. Duplicate RDHAP and RDHEF listings in the RDH file were removed. The names of those chosen for the pilot were removed prior to pulling the final sample. All RDHAPs and RDHEFs were surveyed. The RDH file was geocoded and matched to rural-urban commuting codes (RUCAs) to stratify the sample of RDHs. It was possible to match 98% of the records to a RUCA by zip code. Of those, 91% were in urban RUCAs while 9% were in rural RUCAs. Every RDH with an address
in a small town or rural RUCA (codes 4–11) was sampled while 20% of the RDHs with an urban address (RUCA code 1–3) or a missing RUCA were randomly sampled.

The final sample selection resulted in 3,802 records. Survey follow-up verified that 51 people were ineligible, so their names were removed. The final eligible sample selection was composed of 3,751 licensed hygienists. The overall response of 2,776 returned surveys translates into a response rate of 74%. Within the RDHAPs sampled, 119 responded, producing a 92% response rate. After cleaning and identifying response bias issues, the data were weighted in order to match the responses most closely to the population sampled. The final data were weighted to adjust for sampling and response bias, poststratification issues, regional variation, graduation date, and association membership status. Only RDHAP responses from the 2005 survey were included in this study.

The second set of data are from a follow-up survey of RDHAPs conducted in 2009 regarding their demographics, educational experiences, current practices, and professional concerns. All RDHAPs licensed as of June 2009 were surveyed. Approximately one-third of the survey items were identical to those in the 2005 survey, with the rest of the questions having been modified to collect information specific to RDHAP practice. The draft survey was piloted in July 2009 with five volunteers. Adjustments were made, and the final survey was launched online in August 2009. Letters were sent to individuals asking them to log on and participate, and email and association marketing of the survey supported this effort. However, after two follow-up letters had been sent to prospective participants, the survey still had only achieved a response rate of 25%. Conversations with experts in the field led us to believe that the
online format was a barrier to completing the survey, so a hard copy version was sent out in September 2009, followed by one reminder letter, and a second hard copy in October 2009. The online option for completing the survey remained open until the survey closed in November 2009 with a 72% response rate. Survey data were weighted by license data and school attended to adjust for response bias.

**Applying the Theoretical Frameworks**

Once the archival evidence had been compiled into a single index that documented the source, author, date, title, and year and contained a brief summary, each of the 564 items was coded along the three dimensions detailed below. The first dimension is simply the bias or orientation to the topic of RDHAPs and independent dental hygiene. The second dimension draws from the sociology of the professions and correlates to stages of the process of professionalization while the third dimension draws from institutional theory and correlates to attributes of institutional entrepreneurship. These codes served primarily to help sort and locate empirical evidence within the vast archive as well as to understand how the theoretical dimensions worked together.

The first set of codes represent the primary orientation to the RDHAP topic (pro, con, neutral, or unrelated). Figure 4 shows the distribution of orientation of sources, with about 49% being positive toward independent dental hygiene, 19% being negative, and 23% being neutral. The 9% of sources unrelated were contextual and environmental sources that did not address the RDHAP issue directly.
Second, items were coded (1–6) as to what type of evidence was contained within the framework of a traditional professional project (Macdonald, 1995). This framework examines the processes within the economic and social orders that lead to social closure for a profession. Table 1 displays the stages/components and resultant count of items.

Table 1 Professional Project Categories and Archive Count

<table>
<thead>
<tr>
<th></th>
<th>Starting point—stage of occupational distinction</th>
<th>10</th>
<th>1.8%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Overall objective of the project—status, monopoly, social closure</td>
<td>12</td>
<td>2.1%</td>
</tr>
<tr>
<td>3</td>
<td>Subgoals—development of unity (jurisdiction, education, knowledge domains, respectability)</td>
<td>152</td>
<td>27.0%</td>
</tr>
<tr>
<td>4</td>
<td>Relations with other actors—the state, other occupations, educational institutions, the public</td>
<td>204</td>
<td>36.2%</td>
</tr>
<tr>
<td>5</td>
<td>Relationship to the social/cultural/political context</td>
<td>34</td>
<td>6.0%</td>
</tr>
<tr>
<td>6</td>
<td>Jurisdictional maintenance and vigilance (from policy to individual conduct)</td>
<td>152</td>
<td>27.0%</td>
</tr>
</tbody>
</table>

(Macdonald, 1995).

Third, items were coded to indicate what perspectives they might lend to understanding RDHAPs within an institutional entrepreneurship framework. This entailed examining the items to see if they contained evidence of special characteristics, positions hygienists held in the field (during and after the project), hygiene subject
positions (social positions possible), dental field conditions (uncertainty, problems, tensions, contradictions), interpretive struggles (discourse and framing), and finally, intervention strategies (Hardy & Maguire, 2008). The counts of archive materials as coded along these dimensions are displayed in Table 2.

**Table 2 Institutional Entrepreneurship Categories and Archive Count**

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Special Characteristics *</td>
<td>-</td>
<td>0%</td>
</tr>
<tr>
<td>2. Positions in Field</td>
<td>16</td>
<td>2.8%</td>
</tr>
<tr>
<td>3. Subject Positions</td>
<td>58</td>
<td>10.3%</td>
</tr>
<tr>
<td>4. Field Conditions</td>
<td>134</td>
<td>23.8%</td>
</tr>
<tr>
<td>5. Interpretive Struggles</td>
<td>262</td>
<td>46.5%</td>
</tr>
<tr>
<td>6. Intervention Strategies</td>
<td>93</td>
<td>16.5%</td>
</tr>
</tbody>
</table>

*The quantitative and interview data not included in the archive index provided the data on special characteristics as well as much of the detail in the other categories.*

Two additional models were examined but were not included in the study. The first was a networking model of how professions take shape that proposed four stages of development in the creation of a new profession (Montgomery & Oliver, 2007). The second was a process model of new practice creation that emphasized theorization and field-level negotiations, both central to a professional challenge in an organizational field (Lounsbury & Crumley, 2007).

Identification of the primary indication of each piece of data along the lines of each theoretical model allowed evaluation of the fit of the data within each theory and compilation of the empirical description and the analysis of the case study. Interview and quantitative data were not included in the archive counts. Rather, these were coded separately using grounded theory and situational analysis, and they subsequently were incorporated into the case study based on their connection to issues identified in the archival analysis (A. Clarke, 2005; Lansisalmi, Peiro, & Kivimaki, 2004). Standard statistical analyses were conducted on the 2005–2006 California Survey of Registered
Dental Hygienists and the 2009 Survey of RDHAPs, providing complementary data on the RDHAP work force today.

**Research Protocol**

The previous section identified the data sources, sampling methods, and theoretical coding strategy used to compile and organize the information collected to develop this case study. What follows is a detailed description of the research protocol, data sources, and analytic methods for each research aim. The approach taken for this study is explicitly social constructionist (as are both theoretical streams within which the study is situated) and historically based in the United States circa 1979–2009.

*Methodology by Specific Research Aims*

**Research Aim 1:** Describe the organizational field of dental care in the United States and the institutional dimensions of this field, including the organizational field, the archetype(s) at the initiation of the RDHAPs, and the context of professionalization of American dental hygiene. This research aim is fulfilled in Chapter 4 and is primarily descriptive in nature. Data to describe the organizational field were collected from published literature and American Dental Association and American Dental Hygienists’ Association historical documents, and they are summarized within an institutional framework. Specifically, this chapter describes the institutional context, the organizational field, sources of institutional legitimacy, and indications of isomorphism in the field. It lays out the primary institutional logics (practices and beliefs) found in the field through a discourse analysis of positioning, framing, and documented behavior of the various actors. These elements are combined to enable understanding of the primary
organizational archetype, including the interpretive scheme, structures, and systems. As well, the chapter provides a brief history of the professional project of dental hygiene in the United States, with some current indicators of the status of this project.

This study uses an open systems perspective approach to the dynamics of the dental organizational field. Under this frame, organizations are seen as “coalitions of shifting interest groups that develop goals by negotiation; the structure of the coalition, its activities, and its outcomes are strongly influenced by environmental factors” (W. Richard Scott, 1998, p. 25). The examination of various organizational and institutional players in the field of dentistry contextualizes the position of dental hygiene within this field and sets the organizational stage for the case study of the RDHAPs.

**Research Aim 2:** *Empirically trace the historical development of independent dental hygiene practice in California and the processes RDHAPs are using to develop their practices within this institutionalized field.* This research aim seeks to provide an in-depth description of the various processes and dynamics that make up the core of the case study of RDHAPs. This goal is largely met through a document analysis of archival data on the development of RDHAPs in California. This analysis incorporates all available data elements and was compiled first in chronological order and then within subthemes that arose, thereby creating the structure for Chapter 5. The archival data were systematically analyzed to determine the actions, statements, and responses to key events in the RDHAP development over time by the professions, the policy makers, and the public. Next, the 2005 and 2009 data were used to explain how, after becoming legal, RDHAPs have gone about developing a new organizational form. These data were
complemented by the in-depth interview data with RDHAPs and stakeholders, which helped to fill in the meaning surrounding many of the statistics.

**Research Aim 3: Analyze the development of the RDHAP as a process of creating a new organizational form within dentistry.** This analysis is based on the theory of archetypal change, which examines why organizational change occurs, what the process entails, and what the outcomes of change are (Brock, et al., 1999). The analysis combines the conceptual frameworks of institutional entrepreneurship and the professional project in seeking to understand the genesis and process of the case. According to Hardy and Maguire (2008), there have been a number of approaches to studying institutional entrepreneurship; those that show most promise use a narrative that is “process centric and emphasizes the struggle that accompanies processes of institutional entrepreneurship” (p. 199). As well, current trends in the sociology of the professions are focused on examining the process of professionalization and the discourse and interpretive struggles that accompany that process (Evetts, 2003b, 2006). The central analytic strategy used to address this research aim is to examine the tensions and struggles that shaped the process of RDHAP development and to examine not only the specific outcomes of those struggles but also their broader impact on the field. The analytic framework is diagrammed in Figure 5 below.
Each of the four theoretical coding schemes was examined to see how well the empirical data fit each theory, and theoretical codes were cross-tabulated to see how these schemes meshed. Alignment and nonalignment were noted. The analysis was then distilled down to the two most robust analytic parts, the process of professionalization and a process of new practice creation through institutional entrepreneurship. Evidence of competing logics was evaluated to highlight tensions, areas of agreement, and areas of compromise throughout the process. The final analysis shows how the empirical evidence provides insight into activation of agency within institutionalized fields, professional interpretive struggles as institutional work, and the contested creation of a new practice model (organizational form) in the organizational field.
Research Aim 4: Discuss the policy implications for the organization of dental care and health care broadly. The study highlights changes in the institutional field of dental care initiated by the professional project and institutional entrepreneurship of dental hygienists and the broad implications for health care policy in the areas of system and practice redesign. This research aim is addressed though analysis and discussion of the data presented in relation to current policy discussions around health care reform as well as to dental policy discussions held at a conference in 2009, the Institute of Medicine Workshop on the Sufficiency of the Oral Health Workforce.

Data and Study Limitations

The primary limitation to this study is the author’s significant involvement in the field, which had an impact on her access to and analysis and interpretation of the data. As with any qualitative study, reflexivity about the situatedness of the author was necessary. Additionally, archival data was likely incomplete. The primary source of this data is from the dental hygiene association, indicating that some bias exists in the content. I have sought to balance out this initial bias with additional examinations of dental journal content during the study period as well as through a separate media content search of major newspapers’ coverage of the issue during the study period. As well, interview data is primarily from the perspective of alternative practice hygienists. I have sought to balance this information with interviews with various stakeholders (e.g., dental association representatives, educators, and foundation representatives) as well as with the individual practitioners.
CHAPTER 4: THE INSTITUTION AND ORGANIZATION OF DENTAL CARE DELIVERY IN AMERICA

This chapter sets the stage for the case study of the Registered Dental Hygienist in Alternative Practice (RDHAP) by describing the organizational field of dental care in the United States, the institutional dimensions of this field, and the traditional archetypal organizational form of private dental practice. This is the environment in which individuals and organizations involved in the movement for independent dental hygiene practice were, and continue to be, embedded. Dentistry is a mature and highly institutionalized field centered on the solo independent practice dentist. As an organizational form, this archetype is in alignment with four key interrelated forces in the institutional context: 1) entrepreneurship, 2) American exceptionalism, 3) professional autonomy and control, and 4) individually focused action. The relative impact of these forces has shifted over the past century due to challenges from both internal and external sources, but the basic systems and structures that support the traditional organizational archetype remain intact. Dental hygienists’ professionalization process exists at the nexus of tensions among these institutional forces, allowing them to capitalize on the tensions within the organizational field in their pursuit of professional advancement.

The chapter is organized as follows. First, it describes the organizational field of American dental care. Next, it highlights evidence of isomorphism in the field, an indicator of institutionalization. The institutional environment, including key elements of the institutional context, is then explored. Next, the organizational archetype, including the interpretive scheme as well as supporting systems and structures, is described. Following is an examination of the evolution of the institutional logics, or practices and
beliefs, guiding the organizational field and of the institutional actors who carry or challenge these logics. The chapter concludes with an examination of the development of dental hygiene during the twentieth century that shows how this development has been situated within broader debates in the dental care field. Data for this chapter were collected from four main sources: (1) published literature, (2) organized dentistry’s historical documents, (3) personal communication with dentists, and (4) observations collected during a decade of research activity in the field.

**American Dentistry as an Institution**

Institutions can be understood in various ways, from broad social concepts like *the family* to specific organizational forms such as mental hospitals. In institutional theory, *institutions* are defined as “more-or-less taken for granted repetitive social behavior that is underpinned by normative systems and cognitive understandings that give meaning to social exchange and thus enable self-reproducing social order” (Greenwood, et al., 2008, p. 5). American dentistry can be understood as an institution; the six-month checkup and the expectation of daily brushing and flossing are well established social patterns, with the solo private practice dentist’s office as the normative system within which the social exchange of receiving dental care takes place.6 This ritual is widely understood and adhered to; hence, it remains relatively unchallenged by America’s culture of individual responsibility. One’s participation in this social exchange is intricately tied to one’s social status; therefore, the exchange is tied to reproduction of social order (P. B. Davis, 1980). In American society “the dentist” is synonymous with “the dental office” as the core organizational form. However, the dental care field is made
up of a number of other organizations that interact to produce the set of products and services related to dental care.

**Organizational Field of American Dentistry**

An organizational field can be described as a “community of organizations that partakes of a common meaning system and whose participants interact more frequently and fatefuly with one another than with actors outside the field” (W. R. Scott, 1995, p. 56). The organizations involved in delivering dental care services and products revolve primarily around the needs of individuals seeking dental care and of the dentists and their staff members who provide a professional service. Unlike the broader health care field, in which hospitals, clinics, health plans, and physician groups abound, there are few organizations in the dental care field that have the power to mediate the patient-provider relationship through bureaucratic or managerial means. 7

**The Field Suppliers**

The inputs to the dental care delivery system are personnel, research and development, technology, and personal care products. The U.S. dental education system generates all the clinical providers of dental care. Dental education, broadly defined, consists of 58 dental schools that annually produce almost 5,000 dental school graduates, 293 dental hygiene programs that produce close to 7,000 graduates, and about 270 dental assisting programs that produce more than 6,000 graduates. 8 Upward trends in programs and graduates can be found in all three occupations, although growth in dentists is not keeping pace with population growth. By contrast, dental technicians, whose work is
being outsourced or computerized, show a downward trend in both education programs and graduates, currently estimated at 20 programs and about 250 graduates annually.9

Dentists are trained in postgraduate education programs three or four years in length. Although not all programs are the same, all curricula must meet standards set by the accreditation and licensing process, leading to many similarities in the programs. Recently, a number of dental schools have begun providing clinical rotations for their students in underserved community settings; however, traditionally clinical experience has come from supervised experience in dental school clinics. Hygienists are trained primarily in associate degree programs (although baccalaureate and master’s degrees exist) and are required to complete clinical hours. Dental technology is primarily taught at the associate degree level, and dental assisting, if regulated, primarily requires a diploma or certificate.10 Much of the scientific research and training that supplies the knowledge base for the practice of dentistry comes from dental schools within academic medical centers while dental product and supply companies as well as pharmaceutical companies do research and development that contribute new products and technology to the field.

Dental supply companies make up a network of vendors and wholesalers that provide specialized products and technology for dental offices such as chairs, drills, hand instrumentation, and x-ray machines. As the business of dental practice has evolved, companies have branched into an array of supportive services such as office design, leasing and financing services, practice and patient financing services, and practice management design.11 With the advent of computers, dental electronic records and billing systems have been added to the supply chain product lines. Finally, corporate and
pharmaceutical production of oral health products such as mouth rinse, toothpaste, and dental floss supplies the consumer with a range of over-the-counter products for home care and supplies the professional with prescription products such as chlorhexidine rinse and fluoride varnish.

Dental education provides a dentist’s initial preparation for practice; however, the vendors and colleagues with whom an individual dentist works have ongoing influence on the daily dental practice through the technologies and products sold to the provider while corporate advertising and professional advice influence patient habits and products that patients will demand.

Resource and Product Consumers

Individuals consume organizational outputs of dentistry in two ways: through their basic use of home care dental products and through receipt of a directly delivered dental service, usually in a visit to a dental office but also in other settings such as a school-based sealant program. Until recently, there has been no dental care (aside from home selfcare) to which consumers have had access outside of an interaction with a dentist. This situation has been the case because dentists have historically chosen to perform all but the most basic technical tasks, which they delegate to their staff members. Advanced technology (e.g., digital radiographs, dental implants), products (e.g., chlorhexidine rinse, dental materials), and equipment (e.g., drills, suction) are inputs to professional care delivery, regardless of the status of the care delivery organization (public versus private) or source of payment for services (third party versus direct). Therefore, dentists are actually the primary consumers of most of the higher-level resources and products available in the organizational field of dentistry—utilizing these
products in dental offices and clinics as part of service provision—and hence the market in which suppliers are most invested.

While dental professionals are organized through their professional associations, the members of the general public, as consumers, are very poorly represented by any organized entity working on their behalf. There are a number of general advocacy groups (e.g., Children Now!) that address the issue of dental care as part of a broader agenda. However, dental advocacy groups that lobby the government about dental policy, such as the Children’s Dental Health Project or Oral Health America, are primarily made up of dentists.

*Regulatory Agencies*

Like the rest of the health care field, the dental care field is bounded by a set of regulatory agencies and bodies that determine what professionals, businesses, and educators can do (all basic examples of institutionalization). Most regulation is at the state level. Boards of dental examiners determine qualifications for entry into each occupational level, and dental boards regulate the licensure of providers and enforce disciplinary action when state practice acts or other laws created through legislative actions have been violated. In addition, the dental care field is regulated by the Occupational Safety and Health Administration (OSHA) because materials such as mercury are regularly used in dental offices. As small businesses, dental offices must obey employment, business, and tax laws and regulations. Product vendors must assure the quality of their products and usually interact with many of the same agencies that individual dental providers do.
Federal regulations may apply to dental practice as well, particularly to rules pertaining to policy on the required provision of services (such as regulations that mandate dental services as part of nursing home care) and pertaining to federally administered health systems (Indian Health Service, Veterans Administration). In addition, rules made by bodies such as the Federal Trade Commission, which guides policy on interstate commerce and trade, or the Food and Drug Administration, which regulates both the products and the technology used in dentistry, affect dental practice. The regulatory oversight of dentistry is thus multifaceted and implemented at different levels of government.

Although most regulatory administration is formally part of the state bureaucracy, the American Dental Association, technically the trade group for dentists, houses the Council on Dental Accreditation (CODA), which accredits dental, hygiene, assisting, and technology education programs based on the scope of practice laws and requirements set by states (although professional groups often have much influence in state lawmaking as well). Therefore, dental practices, as the primary organization of dental care, are formally regulated through both the professional and the business aspects of dentistry. In addition, the professions (dentistry, hygiene) themselves apply normative forces through educational standards and professional association policy, but they have few formalized care guidelines or evidence-based treatment protocols.

Purchasers and Intermediaries

Only a few organizations play a mediating role between dentists and patients in the field, including purchasers such as private dental benefit plans or government (Dental-Cal, SCHIP) and malpractice insurance providers such as The Dental Insurance Company
Individuals, employers (via dental plans), and the government are the three primary purchasers of dental services within the care delivery system. Payment for care delivered in private practices is primarily made from private insurance (64%), out of pocket (31%), and from government sources (5%), with practice income running 51%, 43%, and 6% from these sources respectively (Wall & Brown, 2003; Wendling, 2009). The dental benefit market in the United States is fragmented; dental coverage is segmented from the medical insurance market and provides lower population coverage (with 50.4% of the population covered in 2006) than does medical insurance (Guay, 2006). Yet out-of-pocket payments have decreased with the advent of dental benefit plans. In comparison to the 31% spent out of pocket today, in 1970, 95% of all dental care (regardless of setting) was paid for out of pocket (Wall & Brown, 2003).

Dental insurance plans pay dentists primarily on a fee-for-service basis, and if they have adequate market share, they can negotiate fee discounts for their beneficiaries (L. J. Brown, Guay, & House, 2009). Dental managed care has made limited inroads in dentistry compared with those made by managed care in medicine, although they have followed a similar trajectory (Hernandez, Coulter, Goldman, Freed, & Marcus, 1999). Dental insurers require few quality measures, outcome data, or other reporting from contract dentists. However, they do require minimum standards of office safety and infection control and preauthorization for some treatments, and they will inspect a practice if there is a complaint.12 Public programs have started to require more quality data and have started to report on the plans they contract with regarding basic performance measures (California Managed Risk Medical Insurance Board Benefits and Quality Monitoring Division, 2009). Government payment comes primarily through
Medicaid as Medicare does not cover dental services except in very specific cases connected to medical diagnoses. States participating in Medicaid are required to provide dental coverage for children; however, low payment levels and treatment restrictions (i.e., requirements for Treatment Authorization Requests, or TARs) mean that the program has little influence on the private practice market and has a difficult time engaging providers (R. C. Warren, 1999). As an alternative to paying the private market to care for beneficiaries of public programs, the government has generated different care delivery models (Indian Health Service, Community Health Centers, and Department of Veterans Affairs) designed for specific segments of the population, thereby bridging the payer mediating role with the actual care delivery role. These comprehensive care delivery systems allocate somewhere between 1 and 3% of their budgets to dental care (National Association of Community Health Centers, 2008; Weaver, 2009). If possible, the systems employ dentists on salary; if not, the care is contracted to private providers.

Organized dentistry has bemoaned the rise of dental insurance plans over the past 30 years as inhibiting the autonomy of their practices through coverage levels, preauthorization requirements, and set fees; nevertheless, the payment standard, Usual and Customary Rates (UCRs), is derived from traditional fee-for-service dental care delivery models. Alternative payment systems (such as cost-based systems or those connected to quality standards) are less profitable compared with those utilizing the UCR standard, and since health outcomes are almost impossible to measure in dentistry in connection with care delivery, profit remains the primary motivator for the fee-for-service system. Malpractice insurance is carried by all dentists as a protection against clinical errors and consumer dissatisfaction with care, but malpractice claim rates are
relatively low, and even those suits that do get settled are settled for relatively small amounts.\textsuperscript{14}

\textit{Governing Bodies}

The professions in dentistry are governed by tripartite associations that work at the local, state, and national level. The American Dental Association (ADA) is the oldest and by far the largest and most influential association, representing 71.2\% of all dentists nationwide.\textsuperscript{15} The Academy of General Dentists (AGD), formed in 1952, represents only general practice dental providers. The AGD removed its formal membership connections to the ADA in the mid 1980s, causing quite a rift in organized dentistry. Regardless, most of the dozens of specialty associations (for dentistry’s nine specialties and for minority and gender-based associations) retain some level of connection to the ADA.\textsuperscript{16,17}

Dental hygienists similarly have their own tripartite association structure, but unlike dentistry, they do not have specialty associations. However, dental hygienists can join dental specialty associations; for example, the Association of Public Health Dentistry accepts members from any clinical or nonclinical background. Dental assisting, primarily an entry-level occupation, is represented by a more loosely affiliated set of state dental assisting associations. Dental educators (including those teaching hygienists, assistants, and technicians) are represented by the American Dental Education Association, which focuses on standards, curriculum, and trends relevant to educating all levels of dental providers. Finally, dental researchers have an international system through the International Association for Dental Research, which connects with national-level associations such as the American Association of Dental Research. The research groups
are heavily focused on advancing dental science, particularly as it relates to new materials and clinical interventions.

Organized dentistry is broad when construed in all of these forms and has vast influence over the organizational field. The term *organized dentistry* usually refers only to the ADA and its reach; many specialty associations are affiliated with the ADA, the official policies and agendas of the ADA and state components being aligned with well-funded political action committees. State boards are made up of a majority of dentists, and the ADA administers CODA, which accredits dental schools as well as hygiene and assisting programs. Payers exert little influence on the delivery system through quality or access imperatives, and consumer advocacy groups are rare. Alternative care delivery systems do exist, but to date they have not been well funded and have had little influence in determining field rules. Nondentist organizations have historically been peripheral within the field when it comes to influencing policy and practice.

The organizations that make up the dental care field are heavily dominated by dentists and provide the *institutional pillars*, or the unique set of identifiers (normative, regulatory, and cognitive), that make up an institutional order (W. R. Scott, 1995). The standardized educational pathways and dental supply chain make up the normative pillar; delineated scopes of practice, licensing, and accreditation processes make up the regulatory pillar; and the clearly recognizable form of fee-for-service private practice makes up the mimetic pillar. Over time, these pillars may undergo change, reshaping the organization of dental care. Given that the predominant force in the field of dentistry is the dental profession itself, it is not surprising that the private practice model of dental care is so widespread and relatively unchallenged. The institutional pillars in dentistry
have remained surprisingly resilient to change, indicating a highly stable and mature field.

_Isomorphic Tendencies_

Diffusion of institutionalized ideas and practices results in *isomorphism*, or similarity in organizational forms (DiMaggio & Powell, 1983). Today, dentistry retains a highly individualistic and disaggregated model of care delivery. Data collected and reported by ADA track *only* this model of care, which from an organizational standpoint is a small business in an open cartel of services (Amark, 1990). Most private practitioners (85%) are in solo private practice; the rest have partners or associates (Wendling, 2009). New graduates tend to go into associate positions first, then move up to ownership of a solo practice later once their educational loans have been paid and their income has increased (Wendling, 2009). There are approximately 165,000 dentists working in a private practice, with an additional 15,000 (8.3%) professionally active in a different capacity (Wendling, 2009). The percentage of dentists who are specialists has remained relatively steady at about 20%; these are split between nine specialties, the largest of which is orthodontics (Wendling, 2009). Just under 20% of private practitioners are women, and the minority makeup of the dentist population (3.4% Hispanic, 3.4% African American, 6.9% Asian, and 0.12% Native American) is not reflective of the overall population (American Dental Education Association, 2009; Wendling, 2009).

Most dentists (92.3%) have only one office location; this office contains on average 4 chairs and on average 4.7 nondentist staff members (assistants, secretaries, hygienists, managers, and others) (Wendling, 2009). Appointments are 50 minutes long on average, and an average practice can accommodate about 4,000 patient visits per year.
(inclusive of both dental and hygiene visits). An average dental patient visits a dental professional 3.7 times a year (Wendling, 2009). Over time, nominal net income of dentists has risen significantly (from $60,000 per year in 1982 to more than $180,000 per year in 2000) while the hours and weeks worked and the number of patient visits have remained fairly steady. Some authors conclude that the rise in income is due to increases in office production as fees have risen in accordance with the Consumer Price Index (CPI) while others argue that dental costs are exceeding the CPI (Guay, 2005).

Once a field has been institutionalized, legitimacy for any organization within the field becomes influenced by the institutional context. Current definitions of *legitimacy* revolve around cognitive support for a particular organization. “Scott notes [that] ‘legitimacy is not a commodity to be possessed . . . but a condition reflecting cultural alignment . . . ’ while Suchman is more inclusive in his definition[:] ‘legitimacy is a general perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs and definitions’” (Deephouse & Suchman, 2008, p. 52). In dentistry the clinical model itself provides the legitimacy and rationale for the arrangement of services (P. B. Davis, 1980). This predominant organizational model is reinforced by actors within the field as well as by the wider social and economic context.

**The Institutional Environment in Dental Care**

The institutional environment is created, reinforced, and abided by among organizations external to any one organization as well as general cultural and social forces. Defined broadly, “Meyer and Rowan (1983) referred to the institutional context as ‘the rules, norms, and ideologies of wider society’ (p. 84). Zucker (1983) looked to
common understandings of what is appropriate, and fundamentally, meaningful behavior’ (p.105). And Scott (1983) offered ‘normative and cognitive belief systems’ (p. 163)” (Greenwood, et al., 2008, p. 3). As social norms and values become embodied in organizational practices, the process of institutionalization occurs in the organizational field. When organizations act in a routinized way within an institutional environment, these behaviors create a set of beliefs and practices, referred to as institutional logics, that legitimize the organizational structure.

The Institutional Context of Dentistry

The components of the institutional context have persisted over time to create a relatively strong institutional environment for American dentistry. The institutional context of American dentistry is imbued with an entrepreneurial spirit and the value of American exceptionalism, which combine to promote above all else the ideal of independent business and professional autonomy. This ideal is obtained along a standardized professional pathway of higher education and state licensure. Professions’ authority is exercised through the application of specialized knowledge; for dentists, professional identity is tied tightly to the technical components of the work. Social and economic closure of a profession requires state sanction; for organized dentistry, any other role for the state is an affront, particularly any state action inhibiting the practice of individual providers. These values are intricately connected to the current organizational form of solo private practice, which is based on a notion of individual action and responsibility rather than on collective action. However, the institutional context contains internal contradictions; in theory, it is in these places that challengers are able to
make inroads, supporting or legitimating alternative organizational forms and reshaping institutional logics. Table 3 outlines the key elements of this institutional context.

Table 3 Key Elements of the Institutional Context of Dentistry

<table>
<thead>
<tr>
<th>Values and Beliefs/Logics</th>
<th>Key Elements</th>
<th>Tensions with Environment</th>
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<tbody>
<tr>
<td>1. Entrepreneurship</td>
<td>Independent business</td>
<td>Professional regulation</td>
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<td></td>
<td>Innovation</td>
<td>State regulation</td>
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<td></td>
<td>Maleness</td>
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<td>2. Reformed Autonomous</td>
<td>Legitimated by education, state and social</td>
<td>Advanced training limits provider pool and</td>
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<tr>
<td>Professional Pathway</td>
<td>institutions</td>
<td>drives up costs</td>
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<td>(Flexner 1911/Gies 1926)</td>
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<tr>
<td>3. American Exceptionalism</td>
<td>Teeth as social and moral indicators</td>
<td>Small and nontransparent evidence base for</td>
</tr>
<tr>
<td></td>
<td>Esthetics /hygiene as indicator of health</td>
<td>“science” of oral health</td>
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<tr>
<td>4. Autonomous Professional</td>
<td>Independence in all areas beyond sanction</td>
<td>Business versus professional identity</td>
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<td></td>
<td>Loose guidance by organized profession</td>
<td>State’s desire to assure access and quality</td>
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<tr>
<td>5. Individual (Not</td>
<td>Patient–provider interaction in dental office</td>
<td>Prevention aspects of oral health delivered</td>
</tr>
<tr>
<td>Collective) Action</td>
<td></td>
<td>in population-based programs</td>
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</table>

American dentistry’s entrepreneurial spirit arises from early practitioners whose focus was on delivering personal services as a “free” profession (P. B. Davis, 1980). The barbers and surgeons from whom dentistry evolved in America were from various social backgrounds, not necessarily from traditional guilds as found in European history (O'Shea, 1971). Like their European and physician counterparts, the American dental profession has been male dominated, a trend that has persisted by combining with the ideals of self-made Americanism into a rugged individualism that has allowed maleness to be taken for granted as part of dentistry’s nature (T. L. Adams & Bourgeault, 2003b; American Dental Education Association, 2009; Linn, 1971). In 2008 only 20% of professionally active dentists were women, and only within the past few years has female
enrollment in dental school increased to its current rate of 45% (American Dental Education Association, 2009).

The pathway to professionalization from these early roots was conflicted within dentistry. Dentists seeking to raise the status of the profession fought over which of the following three avenues would best serve their interests. The stomatology route would have created dentistry as a medical specialty, providing for very high status, but medicine rejected this option (O'Shea, 1971). A second considered strategy was to develop dentistry as a field in which a technician would work under the direction of a medically trained dentist, but this approach would have divided the profession. The chosen strategy, the third considered, was what we know today: the “reformed autonomous” path in which a dentist receives a liberal arts degree, followed by a professional education (Picard, 2009). This path provides the dentist with status by mimicking medicine’s requirements and with autonomy by allowing dentistry to follow medicine’s path uncontested, perhaps as the last “free profession” arising from the nineteenth century (O'Shea, 1971).

The Carnegie Foundation’s publication of the William Gies report in 1926 did for dentistry what the 1911 Flexner report did for medicine; it standardized educational and practice requirements (solidifying the reformed autonomous standard) and drove charlatans out of practice (Picard, 2009). Since then, technology and materials have improved, but the basic solo practice model has not changed drastically in the past century, making relevant earlier observations that “dentistry, more than most other professions[,] still retains a work setting that reinforces the spirit of the personal service entrepreneur” (P. B. Davis, 1980, p. 38). Dentistry retains a pride in its difference from medicine born from this early separation, yet the relationship is tenuous at times. Oral
health is clinically and scientifically legitimated through its connection to biomedicine and overall health and well-being, yet the identity of dental providers is based on their separation.

Jurisdictional arguments over scope of practice between dentistry and medicine are much less common than are those within the dental professions over technical procedures and supervision requirements (T.L. Adams, 1999). When it was first proposed that dentists be involved in diagnosing the soft-tissue lesions of oral cancer, most dentists were reluctant to do so since the procedure did not fit with the focus of their training or their professional identity (Dworkin, 1999; O'Shea, 1971). Yet suggestions to delegate basic technical skills to allied or nondental providers have created near hysteria among general practitioners. Retaining autonomy and control over all aspects of patient-centered dental care has and continues to be been central to dentists’ sense of ethics and professionalism to a greater degree than does being part of the wider community of medicine (Dolan, 2007).

Dentistry has a connection to the historical values of American exceptionalism. Early American dentists were actively involved through their traveling, writing, and missionary work in propagating the American approach to dentistry as part of a wider propagation of American values and culture, thereby “facilitating the symmetry of American identity with a positive vision of dental practice and patienthood” (Picard, 2009, p. 98). Despite the dismal oral health of Americans during the early part of the twentieth century, American dentistry was promoted then, as it is now, as the gold standard of care (O'Shea, 1971; Picard, 2009). However, this definition relied more on what American dentistry was not (i.e., not like dentistry in less-developed countries) than
by what it actually was or had accomplished in terms of clinical standards or oral health outcomes. Although a scientific body of specialized knowledge is a key component of a profession’s claim to its domain, the biological, social, and psychological components of dental science have less connection to dentistry’s self-identification than does the technical work (Dworkin, 1999; O’Shea, 1971). Studies of the cost effectiveness and the efficacy of alternative technical procedures abound; however, there is surprisingly little research on and evidence of the actual efficacy of dental procedures or rituals (such as tooth brushing) on the etiology of dental diseases (P. B. Davis, 1987). This is an important point in the institutional field since there is not a culture of accountability in dentistry like the one that has evolved in medicine around the science of practice (Leicht & Fennell, 2008). Today attention to evidence-based dentistry is increasing, but it still remains decades behind medicine’s lead.19

The independence and autonomy of individual practitioners are held up as the most honored traits of the dental profession, the very core of its professional ideal (P. B. Davis, 1980; O’Shea, 1971). These traits are embodied in the current practice of dentistry. The fee-for-service private practice form reinforces the dentist’s small businessperson identity, although it is by no means the only practice modality. Yet anything other than the private dental practice is referred to as “alternative,” demoting it to a secondary option of questionable quality in function and form. Changes facing the field, whether new payment systems, changes to allied provider scopes of practice, or new care delivery settings, seem to challenge the core identity of what it means to be a dentist if they cannot be accommodated within the solo practice model. Unlike medical practices, which have experienced a significant social transformation from the individual private practice model
into one in which people work in larger, more organized, and more integrated systems, the dental care system remains almost entirely composed of solo practitioners and remains siloed within the overall health care system (American Dental Association, 2000; E. Mertz & O'Neil, 2002; Shortell, 2004; Starr, 1982).

Any external influence on dentistry’s “business” or “practice” has been received by the profession with ambivalence and often with outright fear. Not only does external interference challenge professional autonomy; it also challenges the ideals of individual action and personal responsibility, two assumptions upon which the primary organizational form of solo practice as personal care rests. The application of techniques that represent advances in restorative materials and pain control, an issue central to the experience of patients, has also figured prominently in the evolution of this individually focused practice model of dentists (Nettleton, 1989; O'Shea, 1971). By keeping an individual rather than collective action as the focus, dentists are able to integrate their identities as primary care and advanced surgical providers.

Dentists participated in collective action during the expansion of water fluoridation and federal involvement in dental public health as a way to promote hygiene and prevent disease as well as a way to earn public trust (Dolan, 2007). However, these approaches came with the price of government intervention, and by the early 1970s, organized dentistry was strongly opposed to community-level approaches (such as publicly funded, school-based dental care) that threatened dentists’ autonomy (Picard, 2009). The professional ideal of free enterprise regulated only by the profession itself, with limited government involvement except to sanction the licensing of providers, remains a strong influence on the activities of the professional organization in advocating
for the private practitioner. Although entrepreneurial activity is essentially a market-generating activity, the idea of free market competition among service providers has been strongly resisted (for example, through limiting a dentist’s ability to advertise) as have attempts to control practice through third-party payment mechanisms (with varying success). 21 The Federal Trade Commission’s (FTC) actions against organized dentistry for its advertising rules and restrictions on dental hygienists fueled rampant antigovernment rhetoric in the literature in the 1980s and 1990s (Higginbotham, 1980). The advent of new payment mechanisms and Preferred Provider Organizations (PPOs) was labeled an attempt at “total domination” of American dentistry (Riley, 1984). 22 The values of entrepreneurship, advanced education, exceptionalism, autonomy, and individual action combine to create a set of logics that undergird solo private practitioners as the dominant organizational form.

Traditional Dental Archetype

An archetype is an ideal form of an organization in a field. Greenwood and Hinings (1993) describe the basis for archetype classification as the interpretive scheme, or set of beliefs and values, and its relationship to an organization’s structures and systems. The values and beliefs just described are part of the interpretive scheme underpinning the traditional dental archetype. The basic components of the archetype are outlined in Table 4. This interpretive scheme includes a domain of operation, principles of organizing, and methods of evaluation that are embodied in the structures and systems of the organizational field (Greenwood & Hinings, 1993).
The archetypal organizational form of traditional dentistry is the solo private practitioner who competes in a professionally controlled marketplace. The location, staffing, and clientele of the office are entirely at the discretion of the individual provider, allowing for entrepreneurial freedom and autonomy. The organizational form is capital intensive, leading to a fixed nature; patients are expected to come to the dental office, where the male doctor, female assistants, and technical and surgical equipment reside. The rise of PPOs mediates payment structures today; however, fee scales and contracting are at the dentist’s discretion. Legitimate evaluation of the organization’s performance is professional judgment about the technical competence of services provided. Organizational diversity does exist in the field; however, few solo practices delivering clinical care differ radically from this archetype.

One notably different form of organizing exists in government-run delivery systems such as the Veterans Administration. The archetype for organizations under a government system is outlined as a public dentistry archetype in Table 5.
Table 5 Public Health Dental Archetype

<table>
<thead>
<tr>
<th>Interpretive Scheme:</th>
<th>Public Sector Dentistry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain of Operation</td>
<td>Public sector</td>
</tr>
<tr>
<td>Principles of Organizing</td>
<td>Public service</td>
</tr>
<tr>
<td></td>
<td>Professional autonomy</td>
</tr>
<tr>
<td></td>
<td>Employer</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Intraprofessional judgment</td>
</tr>
<tr>
<td></td>
<td>American exceptionalism</td>
</tr>
<tr>
<td></td>
<td>Technical competence</td>
</tr>
<tr>
<td></td>
<td>Ethical standards</td>
</tr>
<tr>
<td>Structures</td>
<td>Solo or group, surgical, fixed, male</td>
</tr>
<tr>
<td>Systems</td>
<td>Self-pay, fee for service, public insurance</td>
</tr>
<tr>
<td>Aligned Actors</td>
<td>Public payers, educators, regulators</td>
</tr>
</tbody>
</table>

The public health dental archetype is primarily distinguished from the traditional dental archetype by a different domain of operation and different payment sources and perhaps by a more public service orientation of clinical providers. However, the remaining principles of organizing, structures, and systems are for the most part identical to the traditional archetype. The public-private split in the organizational form has resulted in variation in organization scale and mission, but these tensions have not undermined the core values supporting professional control nor resulted in a significant change in the dominant organizational form, or archetype. These two archetypes have coexisted in the field, with the traditional archetype as the dominant frame attracting the vast majority of field-level resources. The public sector archetype requires a different resource base (work force, clients, payment streams), so it has not challenged the traditional archetype except at the margins.
Shifting Institutional Logics

Institutional logics are “the socially constructed, historical patterns of material practices, assumptions, values, beliefs and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality” (Thornton & Ocasio, 2008, p. 101). Tensions in the environment between the institutional order and the organization of care can be conceptualized as falling into eras with different prevailing logics. Dentistry experienced shifts in the environment of care similar to those that Scott (2000) identified for American medicine, as shown in Table 6 below, but the environmental shift had very different impacts on dentistry than it did on medicine because of two key issues: the isolation of dental care and its lack of government payers (W. Richard Scott, 2000).

Table 6 Evolution of Logics in American Health Care and Dentistry

<table>
<thead>
<tr>
<th>Medical Care Eras (Scott et al., 2000)</th>
<th>Dental Care Eras (Proposed)</th>
</tr>
</thead>
</table>

Early in the last century when dentistry was creating its formal structures, the identity of dentists was highly connected to raising the status of Americans through dentistry, and there were strong connections to public health and immigrant acculturation (Picard, 2009). With the advent of new materials and formal sanction, dentistry moved into an era of professional dominance that would outlast the same era in medicine by 20 years, as dentistry went unchallenged by the federal involvement of Medicare and Medicaid. The market reorientation of the 1980s (including a recession and the focus on deregulation of markets and corporations) brought the first big challenge to the
institutional logics of dental care, but it had very different outcomes than those seen in medicine. In dentistry the predominant organizational form remained as the ideal of the independent entrepreneur aligned with this elevated market focus (only resisting when competition was proposed to lower costs), unlike the impact of the introduction of third-party payers, which challenged physician autonomy in medicine.

Finally, the logics of American exceptionalism and individual action have been challenged recently. The 2000 Surgeon General’s Report on Oral Health brought renewed government attention to the problems of access, disparities, and quality as well as broadening the policy discussion from dentistry to oral health. As care delivery alternatives to improve access are being sought, policy makers increasingly are looking to successful models from other countries for guidance. And the government, in search of value for investment, is calling for more evidence-based practice and community-based interventions, in fundamental contradiction to the dominant logics that have evolved over the past century. Regardless of this most recent challenge, organized dentistry remains committed to the traditional institutional logics and activated to protect the solo practitioner organizational form.

**Institutional Agents**

*Institutional actors* are carriers and creators of institutional logics; they can exercise power; they create, embody, and enact logics through structures, capacities, and rights (W. R. Scott, 2008). Dentists, through individual and collective means, have been the professional agents of maintaining the current institutional form with virtually complete control over the various components of the system—including the occupational structure, which includes dental hygienists, dental assistants, and dental technicians. Yet
dentists themselves have been, and continue to be, divided. Dental providers working in public health or alternative delivery systems have long called for significant changes to the status quo as it limits their ability to stem the tide of dental disease in underserved populations. Allied dental providers likewise are divided; many are content with their role in the private delivery system while others are frustrated by an inability to work differently to address the needs they perceive.

Dental hygiene has evolved in the nexus of this tension between providers and systems. On the one hand, hygienists have mimicked dentistry in their pursuit of professional status, and their economic gains have come primarily from placement in profitable, private-practice dental offices. On the other hand, hygienists are philosophically connected to improving public health through prevention and education. On both fronts, they have been professional agents seeking to change or modify the field— in the first case by challenging the dental hierarchy, in the second case by challenging the dominant organizational form.

**Dental Hygiene History in the Field of American Dental Care**

The evolution of the dental hygiene occupation can be understood within the historical framework of dental practice issues and concerns as well as through trends within the larger health care and social environment. Formally training women to focus on the hygiene aspects of dentistry was controversial from the beginning. Dentistry’s own professionalization became a roadmap for hygiene’s development, and the fear dentists expressed of the potential challenge from hygienists’ desire for advancement became a self-fulfilling prophecy. Just as dentists struggled to resolve the tension between the preventive and surgical aspects of their practice within one identity, hygienists have
struggled to stay true to their prevention and public health beginnings in a field of employment opportunities that exist primarily in solo private-practice dental offices.

Controversial Beginnings—Dr. Fones (1913–1920)

Early in the twentieth century, dentists began to explore ways to prevent dental disease and promote oral hygiene. In an extension of the nursing concept, it was seen as reasonable for women to be trained to scale and polish teeth and to assist the male dentists in educating their patients in oral hygiene (Motley, 1982). Women were seen as naturally able to manage children and to soothe and instruct patients. Dr. Alfred C. Fones, as a demonstration, taught the first class of hygienists to work with schoolchildren in Bridgeport Connecticut, in 1913. He stated that “a man would not limit himself to this specialty, but a woman would. A woman would . . . be conscientious and painstaking in her work, and would be honest and reliable” (Motley, 1982, p. 4). Women’s assistance in the dental office was not new, but the formalization of a training program and occupation for hygienists was highly controversial given that dentists themselves were still fighting for professional status (Picard, 2009). Prior to the emergence of hygienists, dental assistants had been constructed as a sort of office wife and mother, serving the dentist’s interests and greeting patients and making them feel welcome (Picard, 2009). Picard (2009) noted:

The hygienist on the other hand was something of an unknown quantity. . . . From the hygienists’ first appearance on the scene, however, dentists feared the effect that the existence of trained women hygienists would have on their own professional fortunes. Some doubted that truly intelligent, well-trained hygienists
would be happy being restrained from performing more complicated operations that were technically within the province of the dentist himself. (p. 32)

Fones was convinced that hygienists could be trained to fulfill this new role and that doing so was appropriate; dentists were overtrained for basic scaling, and there would never be enough dentists to meet the population’s needs for hygiene (Picard, 2009). In 1915 Connecticut became the first state to amend its dental practice act to include the regulation of dental hygienists, and in 1917 the first dental hygiene license was granted (Motley, 1982). Other states soon followed suit.

_Devlopment in Public Health and Private Practice (1920–1945)_

The hygiene profession grew slowly until World War II. By 1923 regional dental hygienists’ associations had come together as the American Dental Hygienists’ Association (ADHA). By 1925 ADHA had elected its first officers and held a national meeting. The three primary agenda items for the association early on were expanding the formal structures of association governance, passing registration laws in every state, and developing educational standards and an associated body of science. States during this time did not have uniform laws regulating dental hygiene, if they had these laws at all. With the support of the ADA, the hygienists worked with states to develop practice requirements and regulations (Motley, 1982).

Following the Gies report in 1926, the nascent dental hygiene association put much effort into standardizing the educational curriculum and ensuring that it matched the role and aspirations of the newly developed profession (Picard, 2009). In 1927 the first issue of the _Journal of the American Dental Hygienists’ Association_ was produced.
Using the ADA as a model, hygienists pursued the standardization and formalization of their profession through the ADHA. However, dentists were slow to begin employing dental hygienists, and in the earlier years hygienists often worked in public health, particularly in school-based programs. This situation would change with the increase in the private sector’s demand for hygiene services during the economic boom that followed World War II (Picard, 2009).

Post–World War II Expansion and Formalization (1945–1979)

Between the 1950s and the 1970s, the dental hygiene profession solidly established itself in practice and education. The postwar expansion of health insurance and disposable income contributed to a large increase in demand for dental services, spurring federal investment in educational capacity and the broad adoption of assistants and hygienists in the private sector. In the 1950s the ADHA policy was that hygienists were “ancillary to the profession of dentistry in every respect”; this view would soon change with the influence of the civil rights and women’s movements of the 1960s (Motley, 1988).

By the mid 1970s, the leadership within hygiene was pushing ADHA to think broadly about the possibilities of what it might become, viewing professionalism as a goal and a solid strategic plan as the means to achieve it (Motley, 1988). However, the increased demand for hygienists had created a tension between hygienists’ professional desires and dentists’ need for adequate auxiliary staff. Meanwhile, graduation rates had increased extensively between 1970 and 1980, with most of the growth coming in community college associate degree programs (Solomon, 1991). Professionalization requires increasing standards in education and practice while expanding capacity quickly
requires easier pathways to workforce production. ADHA was confronted with the need to represent the rank-and-file members and to manage the association’s relationship with organized dentistry (also their employer and regulator) while also advancing their profession.

Contemporary Dental Hygiene (1979–2009)

During the last 30 years the key issues for organized hygiene have been improving employment conditions in public and private settings, advancing professional status, and expanding the independence and scope of dental hygiene practice. These issues are intertwined and emblematic of the activities of an emerging profession (T. L. Adams, 2003).

Following nursing’s lead and spurred by changing social and economic roles for women, hygienists turned to examining how to better position themselves in the field. The poor economic situation in dental offices in the 1980s coincided with a sharp decline in enrollment in hygiene programs, raising recruitment and retention as key issues for the profession (DeAngelis, Dean, & Pace, 2003). ADHA found that changes in the salary structure and employment environment of dental hygiene were necessary for greater workforce retention and that legal and practice restrictions were related to job satisfaction (American Dental Hygienists' Association, 1992). Independence, autonomy, and respect, all formerly the domain of the professionally trained dentist, were promoted as essential to hygiene job satisfaction, yet these agenda items remained controversial within organized hygiene (Ayers, Meldrum, Thomson, & Newton, 2006; Boyer, 1990; Elizabeth Mertz, 2007; Yee, Crawford, & Harber, 2005). While these continue to be
issues, a turnaround came in the late 1990s when the economic situation drastically changed, and dental offices were increasing their demand for hygiene labor.

Dentists were worried about a shortage of assistants and hygienists, and they actively encouraged the opening of new education programs (T. T. Brown, Finlayson, & Scheffler, 2007). In the early 2000s, dental hygienists were graduating in record numbers and were being encouraged to seek employment in public health, academia, community health, and government leadership positions as part of the efforts to advance the hygiene agenda generally and independent and extended function practice in particular (Brian & Cooper, 1997; Palmer, 2002; Ring, 2002). Many of the hygienists seeking leadership positions in their professional association had followed these alternative career paths. Dental hygienists’ attitudes toward self-regulation and expanded and independent practice had started to change, and dental hygiene associations (particularly in the West) began more actively pursuing expanded practice rights through political action (T. L. Adams, 2004a; L. A. Cohen, 1978; Differding-Beatty & Boyer, 1994).

Although access to dental services has been problematic throughout American history, in the health care market turmoil of the late 1980s and 1990s, the issue of access to dental care emerged as the primary rationale for expanding the scope of practice of allied dental providers. The shift in focus in dental care policy toward inequities was further bolstered by the 2000 Surgeon General’s report, which cast a national eye to oral health disparities as a major political issue in dental policy (U.S. Department of Health and Human Services, 2000). These drivers were utilized by an increasingly more sophisticated ADHA, which, while working through its state components, has turned the political tide toward direct access to dental hygiene, a more politically neutral term used
now in place of *independent practice.*\textsuperscript{23} Today a large number of states make exceptions for dental hygiene practice in public health settings allowing hygiene providers to work unsupervised or under standing orders in programs that provide basic preventive care and screenings. Although there are only a few states that have drastically modified their practice acts to allow independent or alternative dental hygiene practice, many have made incremental moves toward increasing the scope and independence of hygienists’ practice (McKinnon, Luke, Bresch, Moss, & Valachovic, 2007).

Today ADHA positions dental hygiene as a fully formed profession and continues to push for the rights and responsibilities that come with that status. In a report laying out the association’s future directions, it asks, “What would the future of dental hygiene be if it were written by dental hygienists with the freedom to envision, to aspire, and to accomplish?” (American Dental Hygienists' Association, 2005b). The language used by the hygiene leadership clearly places these representatives as experts with a specialty in prevention who understand the broad social problems associated with oral health and who are focused on improving care (American Dental Hygienists' Association, 2003). In 2007 the ADHA solidified this work in a strategic plan for the organization that focused on 1) increasing membership, 2) branding the organization, 3) developing an advocacy plan, 4) building strategic alliances and partnerships, and 5) operational excellence (American Dental Hygienists' Association, 2007b). The next agenda item for the ADHA is the implementation of its template for an Advanced Dental Hygiene Practitioner (ADHP (modeled after the template of nurse practitioners) working under collaborative practice agreements and doing basic restorative care as well as preventive care, moving
firmly in the direction of a primary dental care provider (American Dental Hygienists' Association, 2006; Connor, 2007; McKinnon, et al., 2007).

A number of forces continue to counteract the professionalization trend of hygiene, including a lack of autonomy, a limited body of knowledge, a lack of self-regulation, a lack of practice diversity, educational restrictions, payment policies, and philosophical disputes with dentists (Gillis & Praker, 1996). Despite evidence of the need for more training to address special populations, the movement of hygiene education has been toward the associate level and away from the baccalaureate level, counteracting international trends and creating tension within hygiene (L. Cohen, LaBelle, & Singer, 1985; Johnson, 2003). The percentage of the hygiene work force who are members of their professional association (in California it is only 35%), while on the rise, still remains low, and many dental associations have created allied memberships for hygienists and assistants to compete with the professional hygiene association’s membership status. Some progress has been made in advancing master’s level training (e.g, the proposed program at UCSF) focused on developing faculty, but few of these programs exist (National Center for Education Statistics, 2000-2007). Finally, most dentists still have a very negative attitude toward working in collaboration with hygienists rather than as their employers; an exception are dentists who had exposure to independent hygienists who were generally positive about them, but these were a small percentage of providers (T. L. Adams, 2004a; Hopcraft, et al., 2008; Jones, Devalia, & Hunter, 2007).

The organizational field and the interrelations among various sectors are important to contextualize the case study of the development of independent hygiene.
The nascent group of RDHAPs, examined in detail in the next chapter, can be seen as situated within a number of overlapping domains where dominant institutional forces play out but also where many conflicts among organizational mandates, professional agendas, and population needs exist.

Summary

Dentistry is a mature and highly institutionalized field centered on the solo independent practice dentist. As an archetypal organizational form, this practice model is in alignment with four key interrelated forces in the institutional context: 1) entrepreneurship, 2) American exceptionalism, 3) professional autonomy and control, and 4) individual focused action. The relative impact of these forces has shifted during the past century due to challenges from both internal and external sources. In particular, challenges from market forces have led to realignment around payment mechanisms, and pressures by policy makers to address issues of access to care and oral health disparities have begun to legitimize the public sector organizational form of care delivery. Yet the traditional archetype remains dominant in its ability to garner social and economic resources.

Dental hygienists’ professionalization process exists at the nexus of these various challenges. As members of a female-dominated occupation, dental hygienists are seen by dentists as a profitable and controllable element of dental offices. At the national and state association level, however, dentists view them as a group that represents potential competition and organizational ruin and challenges the control, autonomy, and authority of dentists. As an aspiring professional group, hygienists legitimize the ideal of
entrepreneurialism and professionalism by seeking their own practice domain, knowledge base, self-regulation, higher educational standards, and state-sanctioned social and economic closure. Yet this legitimation is also fundamentally a challenge to any dominant profession in the same field that achieved its status by the same means. Therefore, hygienists are viewed by dentists as a threat rather than an asset. Hygienists are economically aligned with private practice but philosophically aligned with public health for professional advancement and social support. Organized dentistry’s intense resistance to the advancement of dental hygiene highlights the ideological split between a government-supported public health approach to prevention and education and the ruling logic of privately funded, individually oriented care delivery.

Nowhere has this been made more apparent than in California, where the development of a Registered Dental Hygienist in Alternative Practice classification, exemplifying the evolution of a prevention specialist within a highly individualized and surgically focused delivery system, placed hygienists physically, professionally, and ideologically at the nexus point of the central institutional tensions within the broader field of American dentistry.
CHAPTER 5: DEVELOPMENT OF THE REGISTERED DENTAL HYGIENIST IN ALTERNATIVE PRACTICE (RDHAP)

The previous chapter provided an institutional and organizational framework for understanding the broad field of American dentistry and the history of dental hygiene within that field. This chapter documents the development and implementation of the Registered Dental Hygienist in Alternative Practice (RDHAP) as a case study of the process of developing a new type of dental care provider situated within this field. Policy makers, professionals, and educators seeking improvements in access to care and reductions in oral health disparities through more effective models of delivering preventive and restorative dental care can benefit from an understanding of the motivations, experiences, and social and political processes that spur, mediate, and stymie new practice model creation among the professions in an established system within a heavily institutionalized field.

This case study is situated in California and spans a 30-year period from 1979 to 2009. This chapter describes the dental care environment in California during this period and explores the origins and formalization of the project. The politics of the case are explained in three parallel narratives: the actions of the professional associations, the media perspective and influence, and the legal and legislative actions. Next, the chapter explores the impact of the project’s completion and the published evaluation that led to the alternative hygienists gaining legislative authority and establishing educational capacity. Finally, this chapter examines the characteristics of the first hundred licensees, their practices and perspectives, and their experiences as they develop this new
profession and practice, concluding with current data on the success of and challenges facing this new professional group as its ranks swell (to 244 licensees as of June 2009).

The historical data for this chapter come from the California Dental Hygienists’ Association RDHAP Archive, the *CDA Journal*, and a search of major U.S. newspapers and wires. The data on current practices come from in-depth interviews with RDHAPs and other stakeholders, the 2005 Survey of Dental Hygiene, and the 2009 Survey of RDHAPs.

**Beginnings**

The movement in California for independent dental hygiene that culminated in the development of the RDHAP was born within the confluence of three key trends in the late 1970s and early 1980s: the extended functions training projects for dental auxiliaries, the economy’s impact on dental practices, and the influence of the women’s movement on organized dental hygiene.

*Extended Function Demonstration Projects*

The 1970s were a time of much experimentation with the education and scope of practice for dental auxiliary personnel across the country. This experimentation focused on expanding the capacity and efficiency of the dental office. The Robert Wood Johnson Foundation and the W. K. Kellogg Foundation both invested in “dental nurse” pilot programs in the early 1970s (Heckman, 2003). At this time a new approach, the Training Expanded Auxiliary Management (TEAM) model was developed whereby educational institutions taught a team approach to dentistry, including the training and management
of dental auxiliaries in extended functions (Heckman, 2003). In California this and a number of other pilot projects were made possible by the 1972 passage of AB1503 (Duffy), which enacted the Health Manpower Pilot Project Act (HMPP) into the Health and Safety Code (Robertson, 2003). The HMPP program allows for demonstration of the effectiveness and safety of new or expanded roles for health care professionals through a formal pilot project involving didactic and clinical training as well as a period of utilization in the work setting. The results of the pilots can be used to inform the legislature when it is deciding on new laws that seek to change professional practice laws and licensure board rules. The HMPP program has been used extensively in California for various health professions, most notably in nursing and dentistry (Robertson, 2003).

In the first decade of the HMPP, there were 27 dental auxiliary pilots proposed; 21 were completed, three were denied, and three were withdrawn due to lack of funding (Robertson, 2003). Almost all of the projects were undertaken by faculty at the state’s dental schools or community colleges. The pilot projects impacted dental auxiliary regulation. In 1976 the Board of Dental Examiners (BDE) adopted regulations allowing auxiliaries trained in the pilot programs to practice extended functions (advanced procedures not formerly in their scope of practice). In 1981 the accreditation laws were changed to allow for educational preparation of Expanded Duty Dental Assistants (EDDAs), and by 1984 a number of educational programs for teaching expanded duties to dental assistants and hygienists were in place (Robertson, 2003).

**Economic Trends and Dental Practice**

The efficiency gains demonstrated by these projects were of little help to dentists in the early 1980s since this period’s recession created what became known as the
“busyness” problem (T. Davis & Feiner, 1982). This situation was partially due to the influx of members of the baby boom generation who were beginning to graduate in greater numbers from an expanded number of dental schools. At the same time, dentists began to advertise, a practice previously regarded as unethical, and the California Dental Association (CDA) became very concerned about policing the professional image of dentistry and ensuring the ethical practices of its members. In addition to dealing with the relative oversupply of dentists in comparison with the number of patients seeking care, a situation that resulted in empty waiting rooms and economic distress for its members, the CDA was struggling with a number of external threats to the control of dental practice just as the issue of independent hygiene was surfacing. Professional boundaries were being encroached upon through efforts to train and develop denturists and by a move for self-regulation of dental laboratories (Blair, 1978a; Brucia, 1981; The CDA on denturism: A position paper.," 1979; Taylor, 1981).

Most egregious of all, in the CDA’s opinion, were the actions by the Federal Trade Commission alleging collusion (with a specific focus on CDA’s advertising restrictions) and challenging current practice by questioning whether the requirements of direct supervision of hygienists created unnecessary limitations on access to preventive care (Poupard, 1980). The FTC’s actions were perceived as “unfair” government attacks and as a “blitzkrieg” upon licensed professionals (Higginbotham, 1980). Table 7 tracks the frequency of these key concerns over the last 31 years in the Tables of Contents of issues of the CDA Journal.
The economic situation impacted dental hygienists in a number of destabilizing ways. In 1976 the law on supervision of hygienists in California changed to only require “general” supervision, not “direct” supervision (meaning that the dentist did not have to be physically present), and the BDE at that time determined it was not within its duty to provide regulations as to the method of compensation (Board of Dental Examiniers [BDE], 1979). Subsequently dentists began exploring new employment terms for their auxiliary staff, in particular paying hygienists as independent contractors instead of as employees. Linda Krol controversially became the first hygienist to “set out her own shingle,” attempting to become a sole proprietor in 1978 by opening an office next door to the dentists under whose general supervision she practiced (Billiter, 1978; Blair,
The court case that ensued between Krol and the BDE was dropped when she agreed to put the names of the dentists she worked for on her office door above her name and to provide the BDE with the names of dentists for whom she rendered services.

Cartoon by Barton, 1987, reprinted from new article ("Everyone's talking about independent practice,") 1987).

In 1979 the BDE clarified the matter by stating that dental hygienists were authorized to work in a number of alternative settings (e.g., hospitals, clinics, schools, correctional institutions, and mobile vans); however, independent offices were not approved as appropriate work settings (Board of Dental Examiners [BDE], 1979). In 1984 the Employment Development Department (EDD) of California began auditing dental offices and requiring dentists using these independent contractor arrangements to pay fines, back employment taxes, and other state-mandated fees (CDA Council on Legislation, 1985). The legal definition of independent contractor requires that to meet this condition for the IRS, a contractor must have complete control over her or his work.
Even under general supervision, a dentist still exercised considerable control over a hygienist’s working conditions, terms, and procedures; therefore, in all disputed cases, the EDD ruling and fines were upheld (Burns, 1984, January 25).

Looking for other ways to reduce costs, dentists who had set up Keogh plans began to scale back dental hygienists’ work hours to part-time, thereby eliminating the need to pay for employee benefits (L. King, 1990, January). Dental hygiene employment had generally been full-time prior to the changes in labor laws. Hygienists were increasingly feeling pinched economically just as more and more women were looking to hygiene as a lifelong career rather than as short-term employment prior to marriage (Helm, 1993).

_Feminism and Economic Justice_

The women’s movement was influential in hygienists’ responses to these economic pressures by providing the empowerment framework needed to fight for status as autonomous, self-employed professionals. Until the 1960s, hygienists, like members of other female occupations, had been regarded as employable only while young and single. Once married, young women were expected to resign. If they did not, they could be fired, and those who stayed on suffered the stigma of being working mothers (Helm, 1993). As women’s roles in the workplace changed, hygienists began looking for more long-term stability in their employment. The issue of having a right to work under fair and just conditions was central to the feminist movement, and this perspective influenced hygiene. A current leader notes: “The issue at that point became the right to own my own business. Historically we saw women rise in so many ways and say, ‘Why can’t I own my own practice? Try to stop me!’” Newspaper articles about hygienists seeking
independence in Torrence, California; Kingston, Pennsylvania; and Winston-Salem, North Carolina, frame these instances in relation to the struggles of working women in other professions such as nursing, to civil and economic rights, and to the basic civil liberty of economic self-determination (Alsop, 1980; Billiter, 1978; J. King & Castleman, 1984; Zorn, 1984).

As discussed in detail in the previous chapter, dental hygienists had struggled for status and respect from the start of their occupational history, encountering hostility and suspicion from dentists as they pursued the symbolic and organizational markers of an equivalent but different profession: a tripartite association, a journal, a research agenda, and political representation (Motley, 1982; Picard, 2009). Autonomy as a professional group had yet to be attempted.

Although much had been achieved by organized hygiene in the late 1970s, particularly in the realm of educational standards, independent practice was still very controversial. Dental hygiene then, as now, was a primarily female occupation controlled by a primarily male profession. Up until 1980, the CDA Journal ran an annual piece on the newly elected leadership called “The Men at the Top,” and it was not until 2004 that the first woman was elected association president. Yet when the original group of Southern California women decided to pursue independent practice, they saw that the effort was for the good of the hygienists who would come after them, not for their own personal gain (L. King, 1990, January). A founder recalled:

Those of us who started this, it wasn’t for us. We kept telling them, but people didn’t believe it—that we weren’t doing it for ourselves. It was something we were driven to do because it was the right thing. The truth is, we were right. If you want to get religious, you can think God was on our side. And the truth was we were pure. Our intentions were pure.
In summary, the grassroots movement in California to study the feasibility of independent dental hygiene was started in an environment that was politically and economically tumultuous for the field of dentistry. The project was spurred primarily by a desire to find new practices that would provide more opportunities and economic stability for dental hygienists, but it was emboldened by feminist desires for freedom and equality.

**Launching the Demonstration Project**

From its inception to its completion, the independent hygiene HMPP demonstration project in California lasted 18 years, from 1980 to 1998. It was born of economic frustrations but grew to be emblematic of the professionalization of dental hygiene as well as of the state of the delivery system, ultimately taking on much wider significance as it evolved. Organized dentistry would muster all the force it had to fight the state’s approval of the demonstration project and all legislative attempts to change the practice laws. Yet the dentists found themselves up against an unlikely alliance that the hygienists had assembled around a multitude of interests that would ultimately be served by the demonstration project.

**Desire for Freedom**

Following a “future’s conference” that focused on the evolving role of the hygienist, the vice president of Education for the Southern California Dental Hygienists’ Association (SCDHA) was tasked by her group’s president to “think up something we could study in education that would be the best thing for hygiene.” (L. King, 1990, January). She and three other women created a task force, sat down and began to brainstorm, and “decided there wasn’t anything as important to dental hygiene as independent practice.” After
preparing a project proposal, they met with the HMPP staff and decided to pursue independent practice even thought it didn’t quite fit into the HMPP process, which was more focused on expanding the scope of practice. The women first reached out to local dental schools that were involved in pilot projects on Extended Function Dental Assistants (EFDA), but they could not garner support. Finally, a health administration professor at California State University–Northridge (CSUN) agreed to take on the project of helping hygienists learn business and management. With the help of a lawyer, the group set up a nonprofit organization, Dental Hygiene Association Incorporated (DHAI), and raised money for almost five years in order to fund a study of the demonstration. The ultimate goal of the group was legislative change. One participant explained:

If we could get material that was academically sound, then we could use that to change the law to get us what we wanted. We wanted to prove that hygienists could practice independently safely—it had to be safely—without supervision because the supervision was what was holding us back. We were very much controlled, and especially in those days. We just really wanted to be able to get free.38

HMPP No. 139

The group submitted HMPP application No. 139, titled “Dental Hygiene Independent Practice,” in June of 1981, and it was approved in October of that year; however, the project’s implementation did not begin until 1986 (Robertson, 2003). The project required 118 hours of classroom training in management and business as well as an update on dental hygiene procedures and practices, 300 hours of a supervised residency, and finally, 52 hours of in-service management practice done primarily from a DHAI office that was set up in Reseda, California (Seliger, 1986). The final employment or utilization phase was meant to test and evaluate the concept of independent practice in a variety of settings (Robertson, 2003).
The women who participated in HMPP No. 139 were recruited through word of mouth and through outreach by state and local dental hygiene components (Perry, Freed, & Kushman, 1994). The women were all licensed hygienists in California with between 5 and 20 years of practice experience (Robertson, 2003). About 60 hygienists applied for the course, and two classes were trained, 18 in 1986 and 16 in 1987 (L. King, 1990, January). Ultimately, 16 of the 34 women went on to operate independent practices (Perry, et al., 1994). Several women—Judy Boothby in Sacramento; Laurelyn Borst in San Francisco; and Toni Ebner, Nikki Smith, and Teresa Eslinger in Los Banos—received local press coverage of their efforts and were mentioned in national coverage of the issue as well.

The pilot participants were encouraged to try a wide variety of practice modalities once they were on their own in order to test the model extensively (Perry, et al., 1994). The only proposed modality not approved was in a beauty salon. The evaluation was done by a team consisting of two dentists responsible for the on-site quality assurance, a dental hygiene educator, a dental school faculty member, and a health economist who managed and published the full HMPP No. 139 evaluation (L. King, 1990, January). The evaluators published a short history of the demonstration project that documented the trainee selection, training phases, site selection, monitoring services provided, payment sources, media coverage, and legal challenges to the demonstration project (Perry, et al., 1994). At this time, the legislation that would create the RDHAP had not yet passed. The evaluators concluded that “the events surrounding a trial of alternative dental hygiene care through independent practice [emphasize] the difficulty of pioneering efforts, even through [the demonstration project] designed to provide information to decision–makers.
Dental hygienists in other states should take note of the commitment to professional dental hygiene which may be demanded of them in their efforts to expand practice options.” (Perry, et al., 1994, p. 141)

A Convenient Alliance

A commitment to the demonstration project from the various parties came from an alliance of groups, all pursuing self-interested goals. The four women in the SCDHA association who had started the project were supported by their own association but certainly not by all of its members, some of whom feared the economic and political consequences of pursuing independence. However, not long after the project had started, the Northern and Southern California Dental Hygiene Associations merged, and the new leadership provided the financial support for the required lobbying firm and attorneys. Regardless, the majority of the $500,000 that was ultimately raised came from individual hygienists’ fundraising efforts while $50,000 came from a grant from the American Dental Hygienists’ Association (ADHA) (Hager, 1989; Reif, 1986). The ADHA provided much in-kind support as well. The executive director put the full resources of the ADHA behind the grassroots efforts, including help with lobbying, fundraising, strategizing, and networking with health officials in Washington, D.C. The ADHA leadership understood how this effort, if successful, would advance the national dental hygiene professional agenda. The public health dentists in the Federal Health Bureau actually offered to take on the project after meeting with the group; however, the hygienists refused to give it up because they feared that their goals would be co-opted and thus never achieved.
The state had an interest in pursuing the means to provide dental care to the approximately 50% of the population who didn’t have it, and local representatives in the districts where these projects existed took a positive interest in them. As well, the staff at OSHPD who ran the HMPP were nurses who had been embroiled in the fight for nurse practitioners during the past decade. The HMPP program was most utilized for the expansion of nursing practice, which was similarly controversial with doctors. Feeling affinity for the cause, nurses were cheerleaders for the hygienists throughout the process and kept encouraging them, even during the most difficult times. Although the dental school faculty who had originally been approached would not participate, the faculty at CSNU who were not involved in dental professional politics willingly agreed to serve as sponsors for the project, seeing an opportunity to expand business and management teaching. As the project progressed to formality, the evaluators from UCLA, UCSF, and UCD were retained and remained committed to the project as part of their academic mission of new knowledge creation. The academics involved in the demonstration project often served as a buffer between the pilot project participants and the detractors, protecting the hygienists’ ability to continue the demonstration.

Interviews with HMPP participants revealed other allies. Dental supply companies supported the effort, donating equipment in the hope that new markets would open up. There were countless local dentists who showed silent support by donating equipment and providing other resources to the project. Few of these individuals ever spoke out formally in support of the effort for fear of backlash from their colleagues, but they benefited from the referrals they were getting from the hygiene clinics. And finally, the public was generally supportive of the project, as shown by the many letters to the
editor published in local newspapers in support of the demonstration project efforts, by
donations made to DHAI, and by the patronage of new clients to the independent dental
hygiene clinics.47

In summary, what started as a grassroots movement by just a few hygienists
involved in their association’s leadership circle slowly developed into a full-blown
demonstration project with support from organized hygiene, public health dentists, state
agencies and representatives, academic institutions, dental supply companies, local
dentists, and the general public. What followed was a battle fought on three fronts—in
the realm of professional associations, in the legal and legislative realm, and in the media.

War of the Dental Associations (1979–1997)

From the first failed attempt in 1979 to pass legislation in California allowing
unsupervised practice of dental hygiene (Dugoni, 1980), the CDA and the American
Dental Association (ADA) came to arms against the ADHA and the California Dental
Hygienists’ Association (CDHA). What followed was a protracted debate between
organized dentistry and organized hygiene, with both using their organizational
resolutions and policies, along with official rhetoric, to draw the battle lines. At every
advance by hygiene, such as the HMPP No. 139 demonstration project, organized
dentistry employed state and national association resources to the fullest extent possible
to thwart the effort; it filed lawsuits, lobbied against legislation, and used direct
intimidation when all else failed. The CDHA defended and advanced the project with the
ADHA at its back, but it had far fewer organizational resources (particularly funding),
relying instead on the support of its members, its allies, and ultimately, the public. The
California demonstration project played out as one of several hygiene initiatives across the country that became emblematic of the national “war” between organized hygiene and dentistry over control of dental practice.

Organizational Politics

Local, state, and national dental and dental hygiene associations were engaged in political maneuvering around the issue of independent practice for more than two decades. Between the years 1980 and 1985, the CDA was also occupied with other threats, such as stopping the denturists, fighting off the FTC, regulating member advertising, maintaining control of the state board, and dealing with new PPO payment systems.48 During that same time frame, the DHAI was busy raising funds and garnering support from hygiene members across the country and did not begin to engage with organized dentistry in California until after the project had begun.49 At the national level, however, the issue of hygiene supervision had been brewing for a decade.

In 1977 the ADA adopted a resolution that hygienists must only work under the control of dentists; that same year the ADHA and SCDHA adopted resolutions calling for expanded duties and alternative settings where hygienists could work as primary care providers and sole proprietors (Mayuga, 1980; Poupard, 1980). In 1979 the ADHA resolved that hygienists were primary care providers of dental hygiene services; in the same year a sunset legislative review (a process in which the legislature reviews the performance of a dental board) in Colorado allowed unsupervised hygiene in a number of settings ("Hygienists' policy accepts treatment without supervision.,” 1981; Motley, 1982). By 1985 the CDHA policy manual contained statements supporting a wide range of public health activities in community settings, educational opportunities for alternative
careers in the university environment, a separate and unique identity for hygienists as a *profession* (as distinct from being an *auxiliary*), and the concept of independent practice and ownership of a hygiene practice (California Dental Hygienists' Association, 1985). In response to national trends toward general supervision, in 1985 the ADA adopted a stringent new policy on direct supervision of auxiliaries ("House takes firm stand. [Newsclipping]," 1986). The ADA cried foul when in 1986 the ADHA sent out a video encouraging “regular hygiene visits” with no mention of the dentist and reiterated its strong stand that the dentist was ultimately in charge (J. F. Conley, 1987a; House takes firm stand. [Newsclipping]," 1986). Every new policy or resolution by one body was met with a stronger or more resolute call for the opposite action by the other.

This back and forth was hotly debated and supported on each side by a number of surveys about the topic. The CDA fielded a survey early on showing that 85% of dentists opposed independent hygiene while 60% of hygienists supported it (Poupard, 1980). In a small survey (n = 200) asking dentists about their potential actions if independent practice became a reality, only 25% said they might refer patients to a hygiene independent practice (National-International Market and Opinion Research, 1986). An RDH magazine survey found that only 6% of hygienists trusted dentistry to take care of them, 80% felt hygiene needed more opportunities, and 73% agreed that dental hygienists should be free to set up independent offices ("RDH magazine polls its readers.," 1986). The CDHA fielded a survey in 1986 that showed that 83% of respondents supported independent hygiene, 84% felt patient care would not be compromised by it, and 87% felt more people would seek care if independent hygiene were an option ("Everyone's talking about independent practice.," 1987). Although there were supporters and detractors
within both associations, independent practice was viewed as a progressive agenda for organized hygiene whereas organized dentistry’s agenda was to maintain the current structure.

The independent practice issue not only was creating fissures between dentistry and hygiene but also was causing distress within the national tripartite system of organized dentistry. The American Association of Public Health Dentists produced a position paper in 1981 that strongly supported expanded roles for dental hygienists as preventive periodontal therapists, “free from unnecessarily restrictive provisions on dental practice acts. . . . [It maintained that] dental hygienists are even more appropriately trained to provide preventive periodontal therapy than dentists” are (Subcommittee on Preventive Periodontics, 1981). A conflict also developed within the public health sector, where auxiliary staff had worked under less restrictive supervisions and even independently (through public sector exemptions to state laws) for years without incident (Easley, 1987).

The strict policy on direct supervision put the dentists in California in conflict with the ADA since hygienists in California had practiced for nine years under general supervision, allowing dentists much greater freedom from time-consuming supervision requirements and the ability to earn revenue while not on site ("House takes firm stand. [Newsclipping]," 1986). To mediate the conflict between ADA policy and California state law, the CDA developed a position paper and resolution stating that delegation of tasks to auxiliary personnel was only for efficiency in the office and that the dentist was ultimately in charge and responsible (California Dental Association Council on Education and Membership and the Board of Trustees, 1988; Frazer, 1989). The backlash also
pushed the CDA to pressure its own members to take on such issues as dentistry for the aging population and to chastise any members who served as dentists of record for nursing homes without actually providing care. The CDA saw this neglect as fueling independent hygiene (J. F. Conley, 1986). After a decade of fighting over the issue, the California delegation finally expressed its concern about the backward movement in policy making and restrictions on supervision at the ADA national meeting, and it was met with much hostility from within the national ranks for taking this position (J. F. Conley, 1996).

There were very few organizations within the dental field that were left unscathed by the controversy. The ADA Commission on Dental Education, caught between upholding high standards for education and ADA politics, officially stated that hygienists were not educated to independently judge or assess patients. This statement enraged hygiene educators who had worked for decades to improve the standards for hygiene education and licensure (Motley, 1982; Woodall, 1987). The ADHA saw this position as a formal threat to the reputation of hygienists, urged hygienists to fight any reduction in standards, and even threatened to develop its own accrediting body (Woodall, 1987). Some vocal dental educators, particularly those concerned with periodontal disease, were similarly outraged at the dental association’s and state dental board’s attempts to lower standards (Carlson, 1987). Dental educators were wedged between their desire to generate new knowledge and new practices and association policy, which prohibited any changes to the status quo (Mumma, 1987).

Both sides continued to push their agendas, yet the reality was that the vast majority of dentists and hygienists worked well together as a team. The ADA, unable to
sway hygiene leadership to change its course, resolved to allow a new category of membership in order to bring auxiliary staff into the fold of the ADA (Martin, 1987). This category was never approved nationally (today there is a nondentist associate membership category available by board approval); the CDA eventually did institute an allied provider category, but not until 2007 (Belt, 2006). Hygienists saw the effort to bring auxiliary staff into formal membership as a further attempt to co-opt them and thus reduce their threat. The CDA’s stance was to used to promote membership in organized hygiene instead (California Dental Hygienists' Association, ca.1993).

The debate about auxiliary duties spilled into state dental board meetings, where regulations for existing laws were decided. In California, this issue came as a debate about who could be a “patient of record” and who had “diagnosis” responsibilities (A Concerned Hygienist, 1988; Payne, 1988). The BDE, which was charged with regulating all licensed dental occupations, was caught between agendas, yet the board was almost entirely made up of dentists. This bias showed in its rule making. It issued a statement clarifying regulations that required a dentist to examine a new patient prior to a hygienist’s providing treatment (reversing what had been regarded as standard practice for the hygienist to provide the cleaning prior to the dentist’s examination and diagnosis), only to be challenged by the Office of Administrative Law on a rule-making technicality that essentially said that the current law did not specifically prohibit the standard practice (Brewer, February 19, 1990; Schnitt, 1989).

The debate around independent practice heated up again in 1992 when the ADHA officially supported self-regulation of dental hygiene education, licensure, and practice, spurring the CDA to reinstate its Task Force on Unsupervised Practice to help the dental
organization fight the legislative battles it saw on the horizon (Farnsworth, 1992b, 1992c). By this time both associations were heavily involved in lobbying efforts for and against new proposals and were raising funds for these efforts (Farnsworth, January 22, 1992). All discussions between organized dentistry and hygiene broke down in 1993, not to resume again until the early 2000s, long after alternative practice hygiene legislation had been passed (Baurfeind, 1993, September 21).

The use of official resolutions and position papers as well as organizational policy changes by both dentistry and dental hygiene is the main type of organizational posturing found throughout this period of the debate, and this activity continues into the present. These positions influenced individual practitioners’ perceptions and relationships, and the organizational policies impacted the functions and relations of the associations. Yet the official positions were only made enforceable when state laws supported them; therefore, it was critical that the positions be supported by law.

Lawsuits and Countersuits

The year 1986 marked the official undertaking of the hygiene demonstration project as well as the beginning of a series of lawsuits in California aimed at stopping independent dental hygiene practice. Arguably the political climate was favorable to the hygienists’ cause. In 1986 the American Association of Retired Persons (AARP) released research showing that professional regulation costs consumers millions; it charged legislative bodies with contributing to this professional self-interest ("AARP says unreasonable regulation = unreasonable prices. [News Clipping]," 1986; Licensing rules cost consumers plenty, study finds.," 1986). In 1987 the FTC released a report that found that restricting the number of hygienists that a dentist could employ increased consumer
costs by 7%, or $300 million, and federal legislation was passed expanding the number of
providers eligible for direct reimbursement, setting a precedent for dental hygiene
("Limiting hygienists," 1987; Senate bill on direct reimbursement to include hygienists,"
1987).

Lawsuits had been recently used to challenge changes in scope of practice and
supervision rules in Colorado (a state whose regulatory agencies and legislature favored
limited government regulation and free trade), and the state government had just
legalized independent practice for all settings after seven years of independent hygiene
practice in limited settings (Colorado Dental Hygienists' Association, Ca. 1986). The
plaintiffs (the ADA Commission on Dental Accreditation and two individual patients)
argued that the accreditation process did not support independent practice, so independent
practice should not be allowed and that current hygiene training did not prepare
hygienists to treat medically compromised individuals ("A courtroom scene: Transcript
of the Colorado unsupervised practice case," 1987; Editorial: The time for action is
now," 1986). The suit and a subsequent appeal were dismissed by the judge, who
asserted that the accreditation process follows the legislative process, not the reverse. He
also declared that, regarding the patients’ concerns, nothing requires a dental hygienist to
practice independently nor requires that a patient see an independent hygienist, so there is
no public harm ("A courtroom scene: Transcript of the Colorado unsupervised practice

The CDA’s lawsuit received similar treatment in the California courts. Filed in
1987 against the trustees of CSUN, OSHPD, and the 15 dental hygienists in the pilot
project, it sought to halt the demonstration program. The judge denied the request for a
temporary stay order, stating there had not been sufficient evidence of irreparable harm presented by the petitioners (CDA) (Gualco, 1987). A request that OSHPD show that it had followed rules and regulations in approving the pilot program, however, was granted (Revkin, 1987, February 14). In August 1987, after reviewing materials to determine whether OSHPD had followed the correct procedure, Superior Court Judge Rothwell Mason refused to stop the demonstration project. Judge Mason said he was “underwhelmed” by the evidence but also said that the program was “a radical social experiment” with “room for abuse,” thus giving both sides further ammunition in the fight (Thome, 1987). The hygienists felt that they had won a major victory while the CDA vowed to appeal the ruling, claiming that “thanks to the court hearings and news coverage, this experimental program [was] now out in the open” (Varnum, 1987).

Drawing by unknown artist, 1987, reproduced from ("Brushing big brother away.," 1987)

Four months later, and just a few days after meeting with the CDHA to attempt to mend fences, the CDA filed another suit, this time against the CDHA, accusing it of participating in a conspiracy to fix prices for dental hygiene services (Russell, 1987). The basis for the suit was a series of employment seminars in which the results of salary
surveys were presented to CDHA members. The CDA called the practice “a conspiracy to eliminate free marketplace competition in hygienists’ salaries” and asked for a permanent injunction to stop the CDHA and its agents from attending seminars where salaries were discussed and from collecting salary information ("CDA files suit against dental hygienist association.," 1988; Russell, 1987).

Organized hygiene was being forced to use association resources to help build and defend the case, with CDHA alone donating $25,000 (Greenwalt, 1987). In response to the price-fixing lawsuit, the CDHA filed a countersuit against the CDA, claiming that the legal actions by the CDA were a sham and were only being used to exhaust the smaller group’s resources (Peterson, 1988). The CDHA sought a permanent injunction to stop the dentists from engaging in sham proceedings and monopolistic and anticompetitive practices (Kendall, 1988). The court ultimately threw out the CDA lawsuit, finding that no antitrust laws were being broken (California Dental Hygienists' Association, 1988). The CDHA countersuit stayed in the courts awaiting further evidence until 1989, when it was ultimately withdrawn (Frey & Gottschalk, 1989).

The lawsuits were receiving media attention, and CDA used this opportunity to step up its public relations campaign against the demonstration project. In interviews and editorials the executive director accused the women in the project of working illegally and putting patients in harm’s way (Hollitz, 1987). One of the HMPP participants and defendants in the original lawsuit then filed a countersuit against the CDA, claiming that it had tried to force her from the experimental program and that her mobile dental hygiene business, which served nursing homes, was damaged by the libelous and slanderous comments of the CDA representatives (Peterson, 1988). In 1988 a superior
court judge granted the CDA’s request to dismiss all claims by the HMPP participant and denied any injunction against the CDA. The HMPP participant amended her claim three times before eventually dropping her libel case in a mutual agreement of nonpayment ("Boothby settles libel case against CDA,\" 1989).

In the same week that this case was settled, the court, in a reversal of its earlier decisions, ordered OSHPD to vacate its approval of HMPP No. 139 and to halt the demonstration project based on a finding that the required public hearing had not been conducted ("Court tells OSHPD to halt program,\" 1989). By this time, most of the data for the evaluation of the demonstration project had already been collected; however, OSHPD still appealed the decision. Ultimately, the decision was upheld in the California Supreme Court, and OSHPD was forced to close the project in February of 1990. OSHPD subsequently received a second application from CSNU, which it approved as HMPP No. 155 after following all procedures accurately in August of that year (Robertson, 2003). This application ran until January 1, 1998, allowing all participants of the pilot project to continue to run their businesses until legislation had been passed legalizing the RDHAP classification. No subsequent lawsuits were filed.

_Cowboys and Indians_

The tactics employed by both dentistry and hygiene during two decades of battling over independent dental hygiene practice ranged from the mundane to the downright underhanded: association fundraising and lobbying, legislative and legal challenges, public relations and media campaigns, misinformation, intimidation, blacklisting, and boycotts. Up until the early 1980s, the topic was hushed by a divided hygiene association that feared that speaking of it openly would bring negative
ramifications. But each small victory and frustrating setback emboldened organized
groomed hygiene, and as its members became more vocal and garnered more public support,
organized dentistry, and individual dentists, responded with more attempts to quell the
uprising of “militant” and “renegade” hygienists (Blair, 1980; Devine on dentistry: One
man makes a difference.," 1987). Strong words were the main weapon, but behind the
words came a series of intimidation tactics—some formally sanctioned by organized
dentistry, others not, but all focused at getting dental hygiene back under control.

At the 1981 annual ADHA session in Chicago, the keynote speaker, the ADA
president-elect, made it clear that the ADA would accept nothing short of ADHA’s
formal commitment to cease seeking independent practice ("Portfolio: Toby Segal,
RDHAP.," 1999). Toby Segal, RDHAP, recalls, “Dr. Griffiths actually waggled his
finger and told us, ‘You remember what happened to the Indians when they rose up
against the colonists!’” ("Portfolio: Toby Segal, RDHAP.," 1999, p. 34). These threats
were made real by local dentists who blacklisted and fired hygienists who spoke out or
were active politically on the issue. After Alice DeLancey in Winston-Salem, North
Carolina, became politically active about hygienists’ rights, she could no longer find
work, so she hung out her own shingle—openly challenging the dental establishment—
only to have her licensed revoked by the state board and to end up in multiple legal
battles (Zorn, 1984). In Washington State, Lee Roll was fired by her dentist employer the
same day she appeared on a TV news show about Ballot Initiative 678, Support
Hygienists and Oppose Unequal Treatment (SHOUT) (McCoy, 1997).

In California stories of firings, alienation by local dentists and dental components,
and sham lawsuits were repeated in interviews with RDHAPs and in the press (Rundle,
1987). In one case the business plan a hygienist developed for a dentist employer regarding their nursing home practice was turned over to the BDE and used in a lawsuit against her as proof that she was illegally practicing dentistry. By the end of the decade, civil discourse between the associations had completely broken down. When the ADA president was asked in a 1987 interview if any attempts had been made to come to terms with the national hygiene leadership, he responded:

No, you just can’t trust them. It’s that simple. It’s like talking to the Japanese the day before they bombed Pearl Harbor. Their leaders will say they’re not interested in pursuing independent practice the day before a new legislative bill is introduced. Based on what is currently going on, I think we’re going to kill each other. ("Devine on dentistry: One man makes a difference," 1987, p. 3).

The architects of the demonstration project faced a number of challenges, but none more critical than raising the funds for the study. They had approached a number of large foundations seeking funding, but ADA representatives had stepped in and persuaded the funders that the project was too controversial. The ADHA ultimately made a grant to DHAI to support the demonstration in 1986, which helped to finally get the project started (Reif, 1986). Individual ADA members, outraged at the ADHA’s actions, sought ways to limit the ADHA’s financial ability of to support such projects. Dental supply companies known to be supporters of the ADHA were pressured to stop providing financial support and told that the ADHA was using the money to finance a controversial and dangerous dental hygiene legislative agenda. In once instance, a company that was listed on the ADHA honor roll for having provided a grant to ADHA faced boycotts of its products by the ADA membership and was compelled to write to both associations complaining of the pressure being put upon the company and vowing that if good relations with both were to continue, the company needed to be out of the
crossfire (Tarrison, 1987, March 23, 1987) The ADHA replied that it was “shocked that the ADA would resort to blatant economic coercion apparently predicated upon dishonest, if not malicious, representations concerning ADHA policies as well as unconscionable efforts to interfere with the important dental health programs of AHDA” (Tussing, April 30, 1987). The ADA sent a letter to all the ADA constituencies strongly urging against any activity of this sort by members because of the significant legal actions that could be taken against an association for this type of collusion (Ginley, April 24, 1987). These issues did not go unnoticed by other suppliers, such as the Orange County dental equipment supplier who said, “It’s a political hot potato. There’s potential that dentists would put pressure on suppliers not to deal with hygienists” (Vranizan, 1987).

In California the CDA stepped up the intimidation tactics against organized hygiene and anyone whom they perceived as supporting hygiene. In a 1987 letter to CDA’s members, the executive director proclaimed:

> CDA has monitored statewide efforts by dental hygienists to promote and legitimize the delivery of dental hygiene services without the supervision of a dentist. The association continues to believe that a well-coordinated campaign is underway . . . to displace the dentist as primary care provider. . . . HMPP No. 139 was apparently kept secret. . . . [T]he project is a sham. . . . We intend to oppose that goal in every legally possible way. (Redig, 1987, August 31)

Hygienists involved in the demonstration project knew they would be opposed by dentistry and for the most part kept it “under the radar” to avoid confrontation. This strategy was interpreted as secrecy by the CDA, which in turn framed hygiene’s actions as a conspiracy. However, once the project had begun, there would be no more hiding. One participant explained,
They [the CDA] wanted total control. We would go into meetings and—they were the kind of men who were snide, you know. They weren’t professional men. They treated us like bad little girls, as if we did not have the right to even propose something so outrageous. So there was always an atmosphere anytime you were in their company that you had to be careful of what you said. . . . It was nasty, just plain nasty. We were just strong enough to say “Hello [to you], and your other henchmen” and go on about our business.55

After the CDA filed suit against OSHPD and the participants, the next targets were the university professors who were running and evaluating the demonstration project. CDA’s executive director wrote a letter to the CSUN President James Cleary, copying the CSUN dean, chair of Research and Grants, director of the NIH Office of Research Protection, and the California Deputy Attorney General, saying it was “to call to your attention the existence of a research program that is being carried on under the auspices of your university and which may have been initiated in violation of federal regulations” (Redig, 1987, August 31). The complaint was that the project leader at CSUN had not submitted a research protocol for the project, and the letter implied that being out of compliance would threaten the university’s federal funding (Redig, 1987, June 15). The message was clear: The CDA was watching. The CDA also sent representatives to speak with the dean of the dental school at UCLA, where two of the evaluators worked. The goal of the meeting was to stop the evaluation and to have both professors involved fired.56 As one evaluator recalled, “The dean listened to them and then explained the mission of a university and showed them the door.”57

In 1989, as the pilot project gained momentum, a new battle arose over the right to advertise in the Yellow Pages (Frey & Gottschalk, 1989). A number of the HMPP participants had started placing advertisements under the category “dental hygienist,” which had been in place for a number of years (Borst, April 29, 1989). After a single
unidentified dentist had complained, Pacific Bell Directory representatives asked the CDA about the issue and were told that what these hygienists were doing was potentially illegal and that no one except a dentist should advertise dental services (Russell, 1989).\(^58\)

Further discussions with the California Attorney General’s office and the BDE provided enough doubt for Pacific Bell that it removed the directory heading (Miller, December 2, 1988). A letter-writing campaign was directed at Pacific Bell Directory complaining about the removal of the heading; however, the company did not reinstate it until after the legal counsel from OSHPD wrote it a strongly worded letter and the CDHA threatened to file a suit against Pacific Bell ("Hygienists threaten Pac Bell.," 1989; Isely, May 10, 1989; Rosskopf, 1989). Although this particular issue was resolved in the hygienists’ favor, it was emblematic of how far the CDA was willing to go to ensure that independent dental hygiene practice was stopped.

Ironically, the harder dentistry fought to stop the project, the more resolve hygienists and their allies found to work harder to make the alternative possibilities a reality. One of the project’s founders noted, “the project was one way to get us thinking in the right direction—that dental hygiene was not a handmaiden to dentistry” ("Portfolio: Toby Segal, RDHAP,", 1999, p. 34). Adding fuel to the fire was the press coverage of dentistry’s activities, which from both liberal and conservative sectors was modestly to fully in support of hygiene (J. F. Conley, 1987b).


The debates in the dental and dental hygiene journal articles and editorials by professionals and spokespersons on each side of the issue had been solidly framed by the time the demonstration project was launched. Dentistry had been publishing opinions on
the proper role of hygienists since the beginning of dental hygiene (Picard, 2009). The *CDA Journal* had published a number of articles and editorials between 1980 and 1997 solidifying its case against independent dental hygiene practice. These arguments were often echoed in ADA news and communications as well as in state and national media coverage, impacting the wider dialogue. Organized hygiene published updates in association newsletters and articles in response to dentistry’s concerns. The general public’s perceptions of the demonstration project and the issue of independent practice were heavily influenced by the press coverage of the issues, which was primarily in local media. This coverage tended to tell both sides of the story; however, the tone and framing could often be seen as supportive of the hygienists, and letters to the editor (which were published) were almost entirely in support of the concept of and legislation for independent hygiene practice. The official positions of each side translated into press coverage that depicted an entrenched and greedy dental monopoly trying to squash and intimidate hygienists, who were often depicted as “hometown heroes” who were just trying to help the poor and elderly. In the end, organized dentistry was up against dental hygiene, public health professionals, legislators, consumer groups, and free market capitalism.

*Dental “Full Court” Press*

Concerns about auxiliary staffing issues were voiced in the *CDA Journal* throughout the 1970s; however, direct accusations against hygiene were first levied in a 1980 editorial titled “The Dental Hygienist Problem,” which warned that “the leadership of the two California dental hygienist associations has been on a deliberate collision course with dentistry . . . ” and questioned whether most dentists were aware of the
“militant, anti-dentistry posture that the dental hygiene leadership has proclaimed” (Blair, 1980, p. 15). The CDA’s vice president—in “Let’s Hear It for the Dental Team!”—noted that relationships in the offices were generally fine but that it was the association relationships that were in trouble. He goes on to explain in no uncertain terms why independent dental hygiene would be detrimental to dentistry, harmful to the public, and simply would not work (Dugoni, 1980). In “Dental Hygiene Revisited” the editor notes legitimate gripes by hygienists concerning working terms and conditions but maintains that there is no philosophical justification for independent hygiene (Sachs, 1982).

The association was silent on the issue in 1983 and 1984, having also been confronted with the ongoing recession, busyness concerns, denturism, state board issues, the AIDS outbreak, and the advent of new payment mechanisms—Preferred Provider Organizations (PPO)—which were seen as attempts by external forces for “total domination” of American dentistry (Riley, 1984). The 1985 introduction of AB844 and AB845 (Waters), which would have allowed dental hygiene practice without supervision, brought the issue renewed attention. A female dentist (formerly a hygienist) accused hygienists of pushing for unsupervised practice and self-regulation as part of a plan to become the primary care provider and the entry point for all of dentistry. She used her former status as a hygienist to make the case that hygienists simply were not trained to work independently (B. Light, 1985). The two bills were defeated, but the CDA, reeling from the regulatory and financial changes being imposed on dentistry, saw this as another dark cloud in the storm hovering over the profession (Jack F Conley, 1985).
During the year in which the demonstration project began, 1986, organized dentistry’s rhetoric against independent hygiene intensified. Articles and editorials expressing anger and distress and containing dire warnings of public harm came in response to Colorado hygienists’ achieving independent practice and were also directed against hygienists in Washington and Florida who were mounting legislative efforts in this direction ("Editorial: The time for action is now.," 1986; M. Hartley, 1986). In California this rhetoric was extended into a full-blown war analogy by the executive director of the CDA in an editorial in the *CDA Journal* that was reprinted in the ADA news and other association communications:

There is a war going on in our profession, between dentist and hygienists, and it has been going on for some time. . . . Hygienists developed a national master plan more than 15 years ago, with the ultimate purpose to achieve total independence from the dentist. Some believe the plan started innocently enough. . . . [I]t addressed the concerns of those who [had] expressed a real need to work for long-term financial security. . . . [O]ver time the national plan evolved. . . . [T]he Phase I goal was to achieve general supervision. . . . Phase II, while carefully planned, has not been so easy to achieve. It did, and does, involve legislative change to allow practice, without supervision by the dentist, in certain settings. Phase III, with the goal of achieving unsupervised practice in any setting of the hygienist’s choice, without control by the dentist, succeeded in gaining the attention of a substantial number of dentists. . . . The hygienists’ goal for Phase IV, is to achieve . . . the status of primary dental care provider. Once achieved, this status is to include provision of such services as sealants, “simple” restorations, etc. I ask: “Which side of this war are you on?” First we as dentists must understand that this issue has become a war. . . . We must look to our personal ethics and responsibility to patients and get on the right side of this war. Today is not early, but thankfully, it is not too late, either. (Redig, 1986)

The editorial mirrored the anger and fear that many dentists felt about the demonstration project: that it was setting a dangerous precedent and was a harbinger of things to come ("Editorial: The time for action is now.," 1986). However, the tone of the editorial also angered those dentists who were supportive of hygienists or who at least did
not feel the hygiene issue was a threat to them, and these dentists started to speak out (M. Clarke, 1987, April). A Colorado dentist noted, “This has nothing to do with quality of care. It’s economics and money out of dentist pockets” while another dentist viewed the whole thing as a “paper tiger” (Accola, 1986). Others saw the ADA’s efforts as damaging real progress by “maintaining the status quo, which has existed since 1923” (Carlson, 1987). The harshest words came in a review of a debate held at the Harvard School of Dental Medicine between Dale Redig and Michelle Darby in 1987 titled “Dental Hygienists—Friend or Foe?” Summarizing this debate, Hein reframes the “war” as a “revolution,” and argues that the fundamental cause of the problem was a failure of technology transfer to anyone with lesser training than dentists (Hein, 1987). Hein maintains that dentistry’s stance was “suicidal” for dentistry as it was based on falsehoods, and he casts the profession in an antisocial light (1987). He advocates for a laissez-faire approach to the issue, allowing independent hygiene to be put to the test, stating “fear and distrust often lead to hysterical, irrational, and violent behavior[,] which is how I would characterize the current behavior of organized dentistry toward dental hygiene” (1987, p. 5).

Regardless of the support for hygiene from within dentistry, the official statements from organized dentistry continued to oppose independent or advanced practice hygiene and do so even today. The rhetoric directed toward hygiene has softened over the years, with more calls for collaboration, but in all official statements the control of dental practice in the United States is still seen as the purview of dentists and dentists only (California Dental Association, 2009; Nijjar, 2009; RDHAP policy:  Hygiene services authorized by medical or dental prescription., 2009).
Hygiene Responds

Until 1986 organized hygiene had not published or received much media coverage justifying the demonstration project, although *Access* (ADHA’s news magazine) has published half a dozen articles on the topic since that time ("Portfolio: Toby Segal, RDHAP.,” 1999). After the “war” commentary there was an immediate attempt among hygiene leadership to quell fears among its own members and to maintain good working relationships with their employers. Hygienists wrote responses in many component newsletters and hygiene journals denying that there was a war, reframing the issue by countering it with alternative perspectives (Shannon, 1987).

The president of the dental hygiene educators’ association responded to Redig’s accusations noting “I did not realize that I was a leading member of a conspiracy against the dental health of all Americans” (Perry, 1987). The president of CDHA responded, “Let’s wage war on dental disease, not on each other” (Shannon, 1987). Another editorial stated, “Most wars in human history have been fought over real estate. Our war is no different. We have been distracted by the concept of ‘supervision.’ The real problems finally surfacing between dentists and hygienists revolve around practice sites, money and power.” (Rand, 1986). Rand reframed the war as having been “created by the evolution of dentistry[,] which changed the focus of the dental health needs of this country to prevention,” concluding that hygienists “cannot deny the changes and let dentists make all the decisions for [their] profession” (1986). In addition to a review of the commentaries, an analysis of the dental hygiene publications covering the RDHAP issue in California reveals an emphasis on “just the facts” of the case with little hyperbole, stressing the professionalism of hygienists, the benefits of their efforts, and
their commitment to the patients and public ("California upholds independent practice study.," 1987, October; Congratulations to California's RDHAPs.," 1999, February; Court reverses HMPP ruling.," 1989, November; Dentists lose court bid to halt hygienists' project.," 1987; Health manpower pilot project No.139.," 1993, November; HMPP results positive.," 1993, January; L. King, 1990, January; Scaramucci, 1987; State line.," 1993, November).

By 1987, once the local press had taken an interest in it, the issue of access to care had been solidified as the central rationale for independent practice, although each side had a long list of reasons for and against the project. A general outline of the framing of the issue between organized dentistry and hygiene is provided in Table 8. While dentistry’s approach focused on developing consistent messaging about the safety issues and the responsibility of dentists for advocating comprehensive diagnosis and treatment planning, hygiene’s main press tactic was to highlight the good work these hygienists were doing and the benefit of it to the public and to collect evidence of support from a broad base of allies to refute the dentists’ claims and to frame independent practice for the greater good it would do (California Dental Hygienists' Association, ca. 1990; J. F. Conley, 1987b). The broad base of support hygiene was able to garner was critical to the media’s framing of the issue.
### Table 8 Framing the Issue of Independent Practice

<table>
<thead>
<tr>
<th>CDA/ADA</th>
<th>CDHA/ADHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would be “Undiagnosed Care”—Patient safety at risk. Hygienists can miss oral cancer.</td>
<td>Current law allows cleanings prior to diagnosis. Dental hygiene thinks diagnosis is a skill required for licensure. Focus is on prevention only.</td>
</tr>
<tr>
<td>“Unsupervised Care” creates a patient safety risk.</td>
<td>Hygienists educated and licensed by state to ensure safety; they do not need supervision.</td>
</tr>
<tr>
<td>Public at risk of not knowing when to see dentist, might be misled by getting teeth cleaned and think that they are healthy.</td>
<td>Many unmet needs to be filled. Fifty percent of population doesn’t ever see a dentist. Hygiene care can be entry point for access for these patients. Hygienists can help people with fear of dentists.</td>
</tr>
<tr>
<td>The demonstration project is using patients as guinea pigs in an ‘experiment that is not under control of dentists for quality (discredits dentists participating as not licensed in CA).</td>
<td>Demonstration project is legitimate science monitored by experts doing data collection and testing new models with evaluation. Experienced providers know what they are doing; participants are supervised.</td>
</tr>
<tr>
<td>Illegal practices</td>
<td>Not illegal practices, sanctioned by HMPP</td>
</tr>
<tr>
<td>Fragmentation of dental team</td>
<td>Hygienists deserve independence, freedom, choice, not indentured servitude or legal slavery</td>
</tr>
<tr>
<td>Independent practice is a “divorce” in dentistry.</td>
<td>Hygienists not only housewives of the 1950s anymore.</td>
</tr>
<tr>
<td>Hygienists not educated except to function under dentist’s supervision</td>
<td>Demonstrating what education is needed, change system and accreditation to support, provide upward career mobility</td>
</tr>
<tr>
<td>Independent hygiene creates a two-tiered care delivery system.</td>
<td>Independent hygiene preventive care delivery and access to care. Adjunct to, not replacement of, dentistry; would increase business in regular dental offices via referrals</td>
</tr>
<tr>
<td>Disrupts “best” system of dentistry in world</td>
<td>Natural, inevitable progress for women</td>
</tr>
<tr>
<td>A war against dental hygiene’s master plan to become the primary dental care provider, selfishness of hygiene, effort not good for consumers</td>
<td>Economics with recession is a restructuring of fees/ free trade. Better working conditions for hygienists, monopoly by dentists not good for consumers</td>
</tr>
<tr>
<td>Undiagnosed care is especially inappropriate for institutionalized and homebound patients</td>
<td>Notes the overwhelming support by seniors and the disabled for this service.</td>
</tr>
<tr>
<td>It just won’t work. Our data says so.</td>
<td>Let us try. Our data says so.</td>
</tr>
<tr>
<td>New law won’t improve access to care because no hygienists will work independently. Need federal requirements for nursing home dental care and better reimbursements for dentists</td>
<td>Resistance to independent practice is all about money. Nursing home practice is not economically viable for dentists but is for mobile hygienist. HMPP showed it is safe.</td>
</tr>
<tr>
<td>Renegade, militant hygienists</td>
<td>Responsible, professional leadership</td>
</tr>
<tr>
<td>Hygienists have made independent practice a feminist issue; it isn’t.</td>
<td>Dentists have made it a quality issue, it isn’t.</td>
</tr>
<tr>
<td>Hygienists want to be dentists. They want to be the primary dental provider for the public.</td>
<td>Hygienists only want to do dental hygiene. Want to be the primary dental hygiene provider for the public.</td>
</tr>
</tbody>
</table>

*(Source: Compiled from dental and dental hygiene journals and media coverage from 1979 –2009.)*
Hometown Heroes

The media coverage of hygienists’ attempts to have an independent practice goes back as far as the late 1970s, when local papers covered the controversies over hygienists’ working as independent contractors (Alsop, 1980; Billiter, 1978; Olson, 1978). However, the national press (major U.S. newspapers) did not start to cover the issue with any frequency until various hygiene initiatives (such as the RDHAP) around the country started to gain momentum. In 1980 The Wall Street Journal first covered the fight for independent practice, giving the California situation national media coverage (Alsop, 1980).

The Chicago Tribune coverage of the issue, which included the graphic above, was headlined “Dental Hygienists Aching For Independence” and mentioned the
California HMPP. It was typical of the type of coverage the issue received in the media—essentially neutral on the topic but employing language that alluded to the source’s sympathy for the hygienists’ cause (Zorn, 1984). Few other major papers covered the story until 1997, when Washington State hygienists promoted a ballot initiative. Figure 6 shows the frequency of coverage of hygiene issues in major newspapers between 1980 and 2009. The coverage came from 31 states; the most came from Washington State (28), with California second (15) and Pennsylvania (14) and Wisconsin (13) close behind. The press coverage after 2000 reflects both the increase in hygiene activity nationally and the ADHA’s increased sophistication in tracking the issues and managing press releases.

*Figure 6 Media Coverage of Independent Hygiene*

![Dental Hygiene Articles Related to Independent or Alternative Practice In National Newspapers](image)

The local and state press in California began covering the issue, which included the lawsuits and countersuits between the CDA and CDHA, between 1987 and 1990. During this time, not a single news article was released that was negative toward hygiene; about
half of the available articles and editorials were neutral while the other half were clearly focused positively on hygiene.\textsuperscript{60} The neutral coverage clearly delineated both sides of the debate, generally highlighting the CDA’s concerns about the demonstration project while also covering the rationale for the project and the safeguards hygiene had in place. During this time frame the story was the legal fight over the demonstration project, and many articles covered this issue as a professional battle, often likening it to turf battles in nursing, optometry, and the paralegal field (Lochhead, 1988).\textsuperscript{61} The positive coverage tended to be editorial support, but it also came in the form of articles that covered the debate with sympathy for the hygienists’ plight, and some coverage portrayed the CDA as outright bullies ("Editorial: Dental floss," 1990). Many of these were human interest stories, tales of the embattled entrepreneur, the David against a Goliath, or the caring hygienist who just wanted to help poor old people in nursing homes (Hollitz, 1987; Murrieta, 1987). When the CDA’s attempt to stop the pilot project failed, the media portrayed this result as a victory for hygiene and for the public that needed dental care.\textsuperscript{62} The media coverage was not well received by organized dentistry, which complained in its own journals as well as in letters to the editor about the media’s misrepresentation of the facts and other unfair treatment (J. F. Conley, 1987b; Harris, 1987; M. Hartley, 1987).

Media coverage of the issue ramped up again around Representative Rusty Areias’s introduction of AB2353 (1992) and AB221 (1993), with no press coverage explicitly against either bill; the only negative responses were in letters to the editor from dentists (Koster, 1992, April 13). By this time, the legal battles had been settled, the demonstration project had graduated two classes, and the evaluators were just finishing up, so the story was now the proposed legislation. Editorial support for both bills was
very strong across the state, framing the issue as a win for consumers needing lower-cost
dental care and a win for hygienists who had garnered the evidence to demonstrate that
independent practice was safe. The media coverage was complemented by a letter-
writing campaign to assemblymen and committee members that supported the
legislation. After AB2353 stalled in committee, AB221 was introduced with
amendments that restricted alternative practice hygienists to certain settings ("We
listened to all concerned [Memo]," 1993). This development focused the media even
more on the issue of access to care for neglected populations, resulting in more editorial
support for the new bill. The CDA continued to oppose the bill, eliciting scathing
comments in the press from critics about the monopoly dentists’ held, its fear of
competition, and the amount of lobbying money it was contributing toward fighting
access to care. The CDA was acutely aware of its public relations problems, yet it
continued to maintain that “undiagnosed” care would threaten the accountability of the
profession (J. F. Conley, 1995).

The press coverage in support of AB221 extended through the 1994 legislative
session, where the bill ultimately languished, trailing off in 1995 and 1996. It was not
until 1997 that AB560, which created the RDHAP classification, was finally passed.
According the Sacramento, California, Business Wire, “a strong suggestion from
Assemblymember Don Perata (D-Oakland) and Senator Jim Brulte (R-San Bernardino)
that the CDA and the CDHA work out their differences” initiated a compromise between
the groups that resulted in “a bill that [was] sensible and fair” (McHale, 1997). In later
years some of the ongoing skirmishes around the prescription requirement (AB1334 in
2006) and the self-regulation of dental hygiene (SB853 in 2008) received minor press
attention. The battle that had occupied the two groups for almost two decades ended with surprisingly little press coverage and no public fanfare.

However, the year in which the RDHAP became legal, 1997, was the start of increased media coverage of dental hygiene’s professional issues in national papers. In 1997 significant coverage was provided for the Washington State ballot initiative, and between 2006 and 2007 hygiene initiatives in Pennsylvania, Wisconsin, and Massachusetts received national press coverage, echoing arguments from the battle in California. In 2008 Minnesota began pushing legislation for an Oral Health Practitioner designation, which was essentially an advanced dental hygiene practitioner (ADHP), creating a firestorm and also garnering media coverage. In all these cases the same framing of the issues—ensuring safety and quality versus improving access and reducing costs—was used in the news stories. In cases across the country, the media coverage played a part in the public battle for changes in the laws that addressed the supervision of practices and the scope of practice restrictions on hygienists. In California the media’s role had waxed and waned during the legislative and court battles fought over a 37-year span.

Creation of a New Profession (1972–2009)

Turning back to 1972, AB1503 (Duffy) created the authority to run Health Manpower Pilot Projects (HMPP), and this development set the stage for a long legislative battle over the scope of practice and the supervision of dental auxiliary personnel. Almost immediately a series of pilot projects began to test new duties and educational models. The first legislation came in 1974 when AB1455 established five categories of dental
auxiliaries and directed the BDE to regulate them (J. F. Conley & Steinberg, 1978). During these early years the focus was simply on educating dentists as to how regulation of auxiliaries worked and what the various categories of providers could do in the dental practice.

*Early Legislative Attempts*

Four years after the HMPP projects began, legislation to advance auxiliary duties began to appear. In 1978 Assemblyman Rosenthal introduced three bills; AB973 would have removed the Committee on Dental Auxiliaries (COMDA) from BDE authority; AB974 would have allowed dental auxiliaries to condense, carve, and finish amalgam restorations; and AB 975 would have authorized a dental hygienist to perform specified functions in her own treatment facility without supervision. All three were opposed by the CDA and failed to pass (Kingsbury & Mahoney, 1979).

In 1985, prior to the start of the demonstration project, the hygienists’ association worked with Assemblywoman Maxine Waters to introduce AB844 and AB845, both of which would have supported the demonstration project. The first bill would have allowed RDHs with two years of experience to work unsupervised in certain settings, while the second would have allowed RDHs with five years of experience to have a separate facility upon agreement with their supervising dentist(s) (Joint Government Relations Committee, 1985a, 1985b). Both of these bills were opposed by the CDA and died in committee. Resolving to wait until data from HMPP No. 139 was available, the hygienists decided that no more scope of practice or supervision legislation should be proposed, and none was until 1992. However, as the demonstration project got underway, the issue of payment for services became important. The CDHA worked with
Assemblyman Frizzell to craft AB968, which would have allowed dental hygienists to bill independently for Medi-Cal payments. However, it was strongly opposed by the CDA and died on the floor for lack of motion, not to be finally implemented until passage of the bill enacting the RDHAP ("Independent billing.," 1987).

_Pilot Results — “Legislative Ammunition”_

All attempts to legislate changes to the required supervision of dental hygienists failed prior to the availability of the data from the HMPP evaluation in 1992 (Office of Statewide Health Planning and Development [CA], 1992). That year Rusty Areias, the assemblyman from Los Banos, where one of the more prominent independent practices was located, introduced AB2353, which would create a new category of provider—the dental hygienist certified in alternative practice ("CDHA declares independence.," 1992). This bill was based on the positive results of the HMPP No. 139 evaluation and garnered a large amount of press and editorial support. The following were the HMPP’s key evaluation conclusions:

1. Independent practice by dental hygienists provided access to dental care, satisfied customers, and encouraged visits to the dentist (Perry, Freed, & Kushman, 1997).

2. The HMPP 139 practices consistently attracted new patients, charged lower fees, and preventive services were more available to Medicaid patients than they would be in a dental office (Kushman, Perry, & Freed, 1996).

3. The demonstration project produced outcomes in both structural and process aspects of care that in many cases surpassed those available in
dental offices in quality, achieved high patient satisfaction, and showed no increased risk to the health and safety of the public (Freed, Perry, & Kushman, 1997).

That same year, the CDA ramped up its lobbying efforts through its political action committee (CalDPAC) by launching a newsletter, *Newsrack*, that focused outreach and fundraising on fighting any attempts by hygienists to establish an independent practice (Farnsworth, 1992a, 1992b, 1992c, January 22, 1992). At the same time, organized hygiene was becoming more sophisticated in its efforts through direct lobbying of representatives, letter-writing campaigns, and a public relations campaign that garnered wide support across the state. Ultimately, the CDA was able to kill Areias’s bill in committee by heavily lobbying Assemblyman Statham, who changed his vote at the last minute ("AB2353: One vote short.,” 1992; Editorial: Dental floss.,” 1990).

Areias returned in 1993 with AB221, now named the “Dental Care Access Bill,” and the CDHA renewed its public relations campaign to support the bill, focusing on access for the 50% of the population who couldn’t get dental care (California Dental Hygienists' Association, 1993). The media were now fully behind these efforts; a review of the more than 50 news items collected during the debate showed that all were in favor of the bill and that 33 newspapers provided editorial support. In addition, Areias had a long list of endorsements from interested groups across the state (Areias, 1993). This bill’s goal now was establishing modified independent hygienist practice; the bill had been amended to limit the locations in which RDHAPs could practice, to require a doctor’s authorization for treatment, and to require a referral to a dentist after treatment
("We listened to all concerned [Memo]," 1993). However, despite widespread public and media support and the passage of the bill by the assembly, CalDPAC’s ability to outspend the hygienists’ efforts by a 10 to 1 ratio helped the CDA again defeat the bill in the state Senate Appropriations Committee (Matthews, 1993).

In 1995, AB560 (Rosenthal/Perata) was introduced to establish alternative practice hygiene. After becoming a two-year bill, it was signed into law in 1997. By this time the positive evaluation results of HMPP No.139 had been widely published and had provided the data needed for supporters to continue to make the case for independent practice (Freed, et al., 1997; Kushman, et al., 1996; Perry, et al., 1994, 1997). This time around, two influential legislators—one assemblyperson and one senator, one Republican and one Democrat—banded together and strongly pressured the two associations to compromise (McHale, 1997). The bill amended the Business and Professions Code to extend the scope of practice for hygienists and created a new category of provider, the Registered Dental Hygienist in Alternative Practice (RDHAP).

For Want of an Education

The second HMPP No. 155 had been active since 1990, allowing the HMPP participants to continue to work. It was terminated on January 1, 1998, the same date that hygienists could legally be licensed as RDHAPs, and the HMPP participants were grandfathered in and allowed to continue their practices without application of the restrictions that would placed on the licensees who would come after them. Yet it would be five years before any new RDHAP licenses would be granted since no institution would establish an education program until 2003. The legislative hurdle had been overcome; however, the politics were far from over.
One of the faculty members and evaluators of the HMPP was a hygienist who had also taught the dental hygiene sections in the demonstration project. When the bill finally passed in 1997, she had adapted the HMPP training into a fully developed curriculum for the RDHAP ready to be approved. She recalls:

I had faculty lined up[,] and I was on my way to Sacramento on the day I was to present it to the California Dental Board when the Dean called me at home. He kept me on the phone for over an hour trying to get me to say that I would not propose the course so that he did not have to tell me to withdraw it. He was very worried about political fallout. I withdrew it on the very day I was to have presented it. It was a tremendous amount of work[,] and no one else stepped up to do anything for quite a while. I offered the curriculum I [had] developed, for free, to anyone who wanted it. Finally[,] West LA College, in fact a friend of mine, put together a curriculum that was approved.70

The West Los Angeles College Program (WLAC) already had a fully functioning dental hygiene program and enrolled its first RDHAP class in 2003. The program provides the 150 hours of continuing education required for licensure. The WLAC program originally required in-person meetings every three weeks, but it has evolved over time to require only four in-person meetings.71

In response to demands from interested hygienists for more of a distance education program, the CDHA put out a request for proposals to support the development of an online education program. The University of the Pacific (UOP) developed such a course and has been graduating RDHAPs since 2004. UOP based its program within its Pacific Center for Special Care, which focuses on providing dental care for older adults and people with special needs72 Both programs cover the required curriculum but have slightly different emphases; the UOP program focuses on preparing RDHAPs who can work with special needs patients while the WLAC program focuses more on ensuring that RDHAPs have a business plan so that they will be ready to start their practices when
they graduate. The licensing exam is run by an independent education group that offers exams regularly, making the qualifying process relatively smooth. Informational seminars are held several times a year for prospective students to educate them about the types of RDHAP practices possible, and both schools have alumni network meetings that serve as ongoing networking and educational opportunities for practicing RDHAPs.

*Off to a Slow Trickle*

In the first years of the program, enrollment was around 25 to 30 students per class since a number of hygienists had been anxiously waiting for this opportunity. After the first years, the enrollment dropped to between 8 and 10 students per class, and it stayed in that range until the economic downturn of 2009, when it jumped back up to the 25 to 30 range. However, the increase in the current class size is not reflected in the licensure numbers in Figure 7.

*Figure 7  RDHAPs Licensed by Year (1998–2009)*

Source: California Department of Consumer Affairs, License File, June 2009.
Still, the total number of licensees to date, 244 as of June 2009, is dwarfed by the almost 15,000 licensed dental hygienists in the state (E Mertz & Bates, 2008). Many of the individuals who go through the RDHAP program do not go on to get a license, and not all those who do get licensed go on to practice as RDHAPs. In addition, because many RDHs go into the RDHAP program later in their careers, RDHAPs are already starting to retire, slowing the growth of the number of these providers in overall terms.

Registered Dental Hygienists in Alternative Practice (2003–2009)

By 2005 the RDHAP ranks had risen to 119 statewide, and by 2009 this number had doubled to 244 licensed RDHAPs. The legal battle had been won, educational programs had started, and a licensure process had been developed. The early graduates tended to be experienced hygienists, many of whom had been part of the fight for independent practice and had been waiting for the opportunity for licensure. Although the HMPP participants were the advance scouts, the first cohorts of RDHAPs had to be just as pioneering and faced many struggles in their communities. As RDHAPs gained visibility and even official support from the CDA and the state, organizational systems to support their practice began to take shape. Ironically, after years of progress, the economic downturn that had started in 2008 placed RDHAPs right back in the situation from which the RDHs who had started the movement for independent practice had been trying to escape: struggling with economic instability. The landscape of dental professional political battles, however, has shifted to issues of advanced practice hygiene and to a new emerging occupation, the dental therapist. Today, the political situation for
RDHAPs is relatively stable; their struggle has shifted from the legality of their practice to the actual creation of practice sites, systems, and processes.

*Pioneers and Entrepreneurs*

Data from the 2005–2006 Survey of Dental Hygienists showed that the Registered Dental Hygienists (RDHs) who pursued an RDHAP license have some unique characteristics in comparison with those of the rank-and-file hygienists (Elizabeth Mertz, 2008). RDHAPs were more likely to speak a foreign language and be from an underrepresented minority group than RDHs, although the two groups were of very similar age, gender, and marital status. Like most hygienists, the members of the RDHAP work force are primarily female and married and have children, although RDHAPs are less likely to have children living at home (41% versus 55%). Another area in which RDHAPs are distinguishable from RDHs is in what makes them satisfied with their work. RDHAPs were more likely than RDHs to cite professional growth, autonomy, opportunity for advancement, and variety of responsibilities as important factors.

Although the RDHAP is licensed separately from the RDH, they essentially have the same scope of practice; the only differences are in the settings and supervision requirements for their work. The average RDHAPs’ opinions about their work and the profession differ from those of the average RDH. RDHAPs are more likely to want to work with disadvantaged patients (89% versus 32%) and in underserved communities (77% versus 30%) and are more likely to be aware of and concerned about access-to-care issues (95% versus 67%). The RDHAPs are much more likely to participate in their professional association (79%) versus 36%) and to support self-regulation more strongly (95% versus 57%) than RDHs do.
As would be expected given the practice requirements, RDHAPs are much more likely to report that they work in a setting outside a dental office than RDHs are (25% versus 3%). Both RDHAPs and RDHs report personal satisfaction as their primary reason for choosing to work in a nontraditional setting, yet RDHAPs were more likely than RDHs to feel that the alternative setting provides a challenging, flexible, better paying, and higher status practice. Interviews conducted between 2007 and 2009 reinforced the findings of the earlier data, with many RDHAPs noting that the work was challenging but very rewarding. As shown in the following examples of responses, they view themselves as both pioneers and entrepreneurs:

To do things well takes much effort and hard work. This whole vision takes a special person. Not all hygienists would do this work.78

I think you really need to be a dynamic dental hygienist—a go-getter, seasoned, able to handle any situation.79

RDHAPs are motivated by both a personal desire to work with the populations they serve and a professional desire to stretch beyond the dental office (Elizabeth Mertz, 2008). One respondent explained:

We are there to provide services and to make these people have a sense of dignity and care because they basically [have been] forgotten. Nobody wants to take care of their dental needs. Some of these people have been going to a dentist for years, and they’re in a nursing home and all of that is gone.80

This motivation is often reportedly what has sustained the RDHAPs against the many challenges they have come up against since 2003. In the 2009 follow-up survey, the four factors that were reported as being the most important for pursuing the RDHAP license were personal satisfaction (80%), the improved ability to serve special needs patients (72%), the desire for independence (70.3%), and a passion for working with vulnerable
clients (65%). In 2009, 53% of RDHAPs reported being “very satisfied” while 36% reported being “somewhat satisfied”; in 2005, RDHAPs had reported their job satisfaction as 4.16 on a scale of 1 to 5 (with 5 being the highest level of satisfaction).

The passion to serve the underserved is not just a motivator for those already doing such work; only 41% of RDHAPs had been working with underserved patients prior to becoming licensed. RDHAPs report working with diverse patient populations (on average the patient pool is 28% Hispanic, 11% African American, and 3% American Indian) spanning the full lifespan (3% of patients are under age 1 while 34% of patients are over age 80) and a range of socioeconomic positions (61% are on public assistance). This focus has played out in the organization of the care that RDHAPs provide; 59% report working in residential care facilities, 58% in nursing homes, and 61% in residences of the homebound. Another 21% work in schools. Although there previously were some mobile dental vans that provided full-service dental care outside a traditional dental clinic or office, this focus on preventive care through an almost entirely mobile modality is not a business model that was formerly implemented in the field of dentistry.

On average, 69% of RDHAPs’ patients are medically compromised, 52% are physically disabled, and 29% are developmentally disabled. Only the most focused special needs dental clinic would have a patient population such as this; the statistics reveal a very specific niche that is being filled. Although this orientation of care to underserved clients is remarkable, it also comes with a number of significant challenges.
Struggles and Successes

In the 2005 and 2009 surveys and in the in-depth interviews, RDHAPs commented on the many different struggles they faced in opening up their practices. The challenges ranged from issues of individual capacity and knowledge to issues in the environment that were completely beyond an individual’s control. Some of these challenges have been overcome in the intervening years while others have remained or even worsened.

One of the ongoing challenges for RDHAPs is the business aspect of becoming an independent provider. Although the original pilot project was almost entirely devoted to creating a model of practice that would be financially sustainable, the current legislation requires that no more than 25% of the curriculum can be devoted to business development. The development of a business plan is part of both education programs, yet implementing it is consistently rated as one of the most frustrating aspects of practice.

The 2009 survey asked what additional training RDHAPs desired. The top issues reported were all business related: billing insurance companies or Denti-Cal (68.2%), marketing (51.7%), general business planning (46.0%), and financial practice management (39.7%). Aside from the expected difficulties of starting a small business (which reportedly requires a loan of approximately $25,000 for mobile equipment, computers, and handpieces), the matters of gaining acceptance from third-party payers, developing fee schedules, building relationships with local care delivery systems, and raising awareness of the services RDHAPs can provide through marketing have all been challenging aspects of RDHAP practice (Elizabeth Mertz, 2008). In 2009 the difficulty of getting reimbursed for services was rated as the top barrier to practicing as an RDHAP.
The difficulty of starting a business keeps many RDHAPs working in traditional dental practices. Eighty-two percent of the respondents to the 2009 survey reported that they work as an RDH, and 86% of those were employed in a private dental practice. Remaining in private practice provides economic stability; RDHAPs working as RDHs averaged 24 hours of work a week, their average wages were $50 per hour, and 45% reported receiving benefits. Yet there are other reasons that keep RDHAPs working as RDHs; many of the RDHAP settings require use of mobile equipment, and the ergonomics can be very poor, making full-time work in alternative practice unmanageable.81

As RDHAPs began to practice, many encountered hostility and even harassment from unsupportive colleagues in their own communities, an indication that although the legal battle had been won, the perspective of many dentists had not changed. RDHAPs reported being alienated from former colleagues, fired from their jobs, sued, and barred from facilities by helpless administrators when dentists complained about them.82 In one case a dentist sued a hygienist who had left his practice to start her own for stealing his patients. The case was dismissed, but the dentist sent a mailer to every one of his patients “warning” them not to go to her new practice.83 These kinds of experiences have led to a continuation of the RDHAP mindset and actions of “staying under the radar” whenever possible. Skilled nursing homes in particular have become the location of a turf war between dentists who develop contracts with facilities so that they are in compliance with state requirements and RDHAPs who are seeking to provide services in the facilities. One RDHAP reported:

And we're seeing this [harassment by dentists] on a daily basis, and new dentists are coming into the facilities or wherever we are, and they're threatening the
facilities and saying, “If you let that RDHAP come in, I will go away, and you will not be able to fulfill your state requirement.” So I think a lot of RDHAPs are not willing to walk away from that safety home of a dental office and employment to risk their whole, entire — everything they’ve built for their twenty years in dentistry—to have some guy come in and put them out of business after they’ve already invested $25,000 in equipment.⁸⁴

Beyond having an impact on the RDHAPs’ financial viability, the hostility from local dentists has implications for patients in that RDHAPs often have a hard time finding someone to care for their patients when they need dental care. Even in communities in which RDHAPs have good relationships with a local dentist, dealing with referrals can be challenging. One RDHAP explained:

The way I refer . . . There's one gentleman in there [the skilled nursing facility]. He had his last extraction . . . He's had pain for the last two years. I went to my office and talked to my dentist about it—my private office. He gave me a referral to the oral surgeon. I gave it back to nursing—I made him an appointment. I went back to the social worker and said, “Okay, I've got an appointment for him on this day.” They gave the referral to his physician, who has to write a referral. So he [the patient] got to the oral surgeon. So I had to go a long way around. . . . Some of these people aren't able to travel. They're bed bound. To get them in a wheelchair and to get them on the bus and get them to a dental office and then just sit there for hours on end—because they're Medi-Cal, they're Denti-Cal. They're not going to . . . They'll filter them in with the rest of their patients. Somebody needs to come in.⁸⁵

The CDA now actively promotes the notion that dentists should work with RDHAPs and view them as partners in care and has committed to intervene if any of their members do not act professionally in their communities (Gold, 2005).⁸⁶ Increasingly, dentists have been willing to work with RDHAPs; in cases in which this type of collaborative practice is happening, it has been reported to be financially successful for both providers. One interviewee said,

I think it has a long way to go, but more and more dentists and the dentist communities in the different counties that I'm in are treating me more as a
colleague rather than an auxiliary person. And I think once that is established, it's just a matter of time.  

In the 2009 survey, RDHAPs reported working collaboratively with a wide variety of providers: dentists (54%), physicians (49%), social or case workers (51%), agency or program staff (42%), and nurses (33%). Yet providing outreach to facilities and the public about what an RDHAP is and can do is rated the top challenge for RDHAPS in their day-to-day work. As one RDHAP stated:

I believe the biggest barrier in building my practice is the general lack of knowledge and value placed on the services an RDHAP provides by both the public and the health care community.  

RDHAPs report that other things are getting easier as well. Several legislative victories helped by removing a prescription requirement prior to administering services (AB1334, Salinas) and by allowing Federally Qualified Health Centers to bill for a dental hygiene encounter (SB238, Aanestad). The creation of a Committee on Dental Hygiene in August of 2009 means that California is now the first state in the nation to allow dental hygiene to self-regulate. This development may prove significant in advancing the ability of hygiene to be successful in alternative practice. However, given the very dynamic nature of the economic and health care environments and the small number of RDHAPs, it is likely that the group will continue to face challenges for some time to come.

Adapting to a Changing Environment

Since the first class of RDHAPs was licensed in 2003, much has changed in the environment in which they work. In the early 2000s, there was a shortage of dental hygienists and assistants, a situation that drove wages higher and spurred the opening of
several new dental hygiene education programs (E Mertz & Bates, 2008). In addition, more federal dollars were being put into safety-net dental institutions, providing more work opportunities for RDHAPs (National Association of Community Health Centers, 2009). Beginning in 2008, the economic recession, combined with the increasing number of hygiene graduations put pressure on the traditional hygiene labor market as work opportunities declined. Dental assisting in California has been reworked into five levels, and skirmishes between hygiene and assisting over scope of practice are ongoing. Attempting to deal with deficits in the billions of dollars, California eliminated adult Denti-Cal benefits (except for residents of skilled nursing facilities). This funding had been the primary source of coverage for many RDHAP patients.

The 2009 survey respondents reported having increasing difficulty getting third-party payers to pay the bills they had submitted, and many have had to modify or entirely rethink their practices because of the elimination of Denti-Cal benefits that had provided coverage for many of their patients. Poor economic conditions and high unemployment are reasons that many people delay getting dental treatment and forgo regular dental cleanings. RDHAPs have already had to modify their nascent practices to adjust to these new economic realities. These ongoing economic struggles may stifle further innovation or may spur new political battles. As one RDHAP laments:

Considering the economical difficulties and low Denti-Cal reimbursement level, I now, more than ever, believe that RDHAPs need to be allowed to have their own independent practices (not just in shortage areas). After all, the meaning of population in need, in my opinion, goes beyond [those who are] medically compromised. I think it includes our everyday friends, neighbors, associates, and others who are struggling to meet their needs. This way (without any politics!!) people can have access to more affordable preventative dental services, and RDHAPs can make a living to support their families as well.
Changing the Dental Care Field

The success that hygiene groups such as RDHAPs have had in increasing the awareness of, and concern for the need to provide access to care has led to political openings for other work force solutions, in particular in the development of a dental health aide therapist (DHAT) classification in Alaska within the Alaska Native Tribal Health Consortium (ANTHC). This new provider can work under remote supervision performing all basic education and prevention services as well as basic restorative care. The response of organized dentistry to this development was quick and predictable; it spent millions of dollars on a lawsuit against ANTHC, only to be defeated in court. Reeling from this public relations disaster, the ADA then put together a work group on work force issues and is now piloting what it considers an acceptable new provider—an entry-level Community Dental Health Coordinator (CDHC) classification based on the concept of a community health worker. The ADHA had been developing the idea of a master’s trained advanced dental hygiene practitioner (ADHP) for years, but when a variant of advanced hygiene (Oral Health Practitioner) was suggested as a solution in Minnesota by a work group tasked with addressing the state’s access problems, the proposal was resisted by organized dentistry. The Minnesota Dental Association, desperate to fight the hygiene issue, ironically put forth a competing proposal for a dental therapist. Legislation enacting the classifications of dental therapist and advanced dental therapist passed in 2008 and was seen as a win by both sides since hygienists who become advanced therapists essentially have the scope proposed in the ADHP (E Mertz & Mouradian, 2009).
Today hygienists seeking to expand their scope of practice or to gain direct access to the public may come into conflict not only with organized dentistry but also with a number of other stakeholders who are promoting a variety of alternative work force models (Burton Edelstein, 2009). The advances that hygiene groups such as the RDHAPs made during the past several decades by challenging organized dentistry and initiating actions to change laws have widened the field of possibilities for those seeking to enhance the dental work force at several levels. In California a CDA work group is pondering proposing new dental work force models that may directly challenge a number of the practice niches that RDHAPs are currently seeking. Regardless of the ultimate success of the RDHAP as a new profession, it is clear that the field has changed. What remains to be seen is whether any of these work force innovations will translate into improvements in patients’ access to appropriate services, the quality of dental care, or the reduction in oral health care disparities.

Summary of Findings

1) A confluence of three key environmental trends (allied dental work force demonstrations, economic instability, and feminism) created the conditions of possibility under which the push for independent hygiene began.

2) The initial project was a grassroots effort aimed at “freeing hygienists” from the economic control of dentists. The effort found support in a variety of self-interested stakeholders aligned by a desire for alternative practice options who enabled the project to proceed.

3) The backlash from organized dentistry fed into a national debate between organized dentistry and hygiene that played out in the political and legal arenas.
Organized dentistry sought to reverse supervision and scope of practice trends while organized hygiene fought to sustain and continue the gains that they had achieved. Over time hygiene has made additional sustained gains in direct access to consumers.

4) Media coverage of the HMPP demonstration project, the CDA and CDHA lawsuits, and the multiple legislative attempts to create the RDHAP classification was overwhelmingly sympathetic to the hygienists’ cause and damaging to the image of the dental profession. The sympathy came from both the right (free enterprise) and the left (gender equality), with dentistry being framed as a monopolistic bully and hygienists being framed as hometown heroes.

5) The program evaluation provided scientific evidence that independent dental hygiene practice was safe and effective. Combined with increasing public support for independent hygiene and advocacy by powerful state legislators, the necessary components were in place to pass a bill enacting a new dental provider, the RDHAP.

6) RDHAP numbers have been slowly growing, although practitioners still face many cultural, organizational, and environmental challenges to their developing successful practices. They have devised a new way of organizing and delivering preventive services in order to serve their unique patient population. Most RDHAPs also maintain a part-time traditional hygiene practice in a private dental office for economic stability.

7) The current environment is extraordinarily challenging for all dental providers, casting doubt upon the economic and political sustainability of current endeavors.
Unlike the situation in 1979, at the present time the RDHAP is one of many new models being debated. It is no longer considered a controversial approach though implementation remains challenging.

In some ways, the RDHAPs have come full circle from 1979. Today, just as then, a large percentage of the California population does not have access to dental care. Today, just as then, new work force models are being proposed to address the access-to-care problems and to alleviate the stark disparities in oral health status among segments of the population. Today, just as then, the economy is putting pressure on the care delivery system, and providers are struggling to maintain their practices in the face of changing consumer demands. The fears and frustrations of this change today, like then, is creating conflict among dental professionals, yet this time the controversy is focused on a number of new models: the dental therapist, the community dental health coordinator, and the advanced practice dental hygienist. In the intervening 30 years of change, a large number of new care delivery options for addressing the oral health of the population have come about as well as significant advances in diagnostic and preventive technology. The question remains as to what level of professional activism among its proponents and political will among decision makers exists to take on this new agenda. Looming even larger is the question of whether these work force innovations and new organizational forms can have a lasting impact on improving the oral health of the U.S. population.
CHAPTER 6: INDEPENDENT DENTAL HYGIENE PRACTICE: THE LOGIC OF PROFESSIONS IN INSTITUTIONAL MAINTENANCE AND CHANGE

Introduction

The case study in Chapter 5 showed that what started as a local demonstration project to prove that independent dental hygiene practice could be safe, effective, and economically viable turned into a protracted political battle between organized dentistry and dental hygiene over control of the organization of dental care services. Despite widespread public and political support, dental hygienists were not successful in gaining full independent practice rights. Rather, a political compromise created a new type of dental hygiene practitioner, the Registered Dental Hygienist in Alternative Practice (RDHAP) who was allowed to work independently but only in certain settings where access to care has been problematic.

A dental hygienist licensed in California with a baccalaureate degree (or the equivalent) can, after completing a board-approved continuing education course and passing a state licensure examination, practice independently in underserved settings. These settings are defined as Dental Health Professional Shortage Areas, residences of the homebound, nursing homes, hospitals, residential care facilities, and other public health settings. Although the setting restrictions ensure that practicing RDHAPs are expanding dental hygiene care options for underserved populations in California, as a professional group they are struggling for acceptance within the field and as business owners they are struggling to make their new practices economically viable. In order to meet the social and economic demands of the job, RDHAPs have had to arrange and deliver their services differently. In doing so, they have created a nascent organizational form of preventive dental care.
Research Purpose and Chapter Organization

The purpose of the case study is to understand the development of a new organizational form in the institutional field of American dentistry as created through the occupational advancement of an emerging profession. To recap, the following are the specific aims of this study:

5. To describe the organizational field of dental care in the United States and the institutional dimensions of this field (Chapter 4)

6. To empirically trace the historical development of independent dental hygiene practice in California and the processes that RDHAPs are using to develop their practices within this institutionalized field (Chapter 5)

7. To analyze the development of the RDHAP as a process of creating a new organizational form within dentistry (Chapter 6, this chapter)

8. To discuss the policy implications for the organization of dental care and health care broadly (Chapter 7)

The present chapter addresses aim 3 and is organized in two parts. The first section starts with a review of the empirical findings from the previous chapter, then describes the development and application of the analytic framework. The second section provides a discussion of the analysis organized along three analytical categories used to track change in organizational archetypes. A synthesis of the findings is presented in the concluding section.

Analytical Process

The goal of this analysis is to use the concept of organizational archetypes to understand 1) the impetus for change, 2) the process of change, and 3) the consequences
of change (Brock, et al., 1999; Greenwood & Hinings, 1993). The analytical approach to answering each of these questions combines insights on field-level change from institutional theory with insights about strategic actions of occupations from the sociology of the professions.

An examination of why change occurred entails understanding the dynamics of the institutional context, the behavior of organizations in the field, and the actors who were involved in the change. This change initiated by RDHAPs was situated in a highly institutionalized organizational field that at a particular historical time was subject to political, social, and cultural forces. Understanding the impetus for change requires connecting these broader forces to the transformative agency of an emerging profession.

The process of organizational change within the archetype framework has been examined through tracing the competition for resources and legitimacy along one or more of the “tracks of change” within an organizational field resulting from a changing institutional environment (Kitchener & Harrington, 2004). Yet the archetype framework does not provide any specific guidance as to how to understand the actors’ role in the process of organizational change (Brock, et al., 1999). Within institutional theory, agent-initiated institutional change has been theorized as institutional entrepreneurship, but this agency has not been linked to actions precipitated by the professionalization of an emerging occupation. Therefore, understanding the process underlying the contested development of this new archetype in this case requires a model for understanding the institutional entrepreneurship of an emerging profession. This model is outlined in the next section and then applied in the analysis that follows.
Finally, the examination of the structural consequences of change involves identifying the outcomes of the field-level process just described, including whether a new organizational archetype emerged, and if it did, the interpretive scheme, structures, and systems that support it. Central also is an examination of changes to the professional dynamics in the field that may provide insight into field-level stability or additional changes to come.

Modeling Institutional Entrepreneurship of Emerging Professions

The research findings in the empirical chapter were developed from the archival and interview data using a timeline and key themes that arose from the data summaries as well as the professional stage of development codes that generally follow a linear path. The empirical findings show that the movement for independent practice was a component of the professionalization of dental hygiene and hence a challenge to the jurisdictional control dentists held over the field. The data showed that in focusing on underserved populations, RDHAPs developed a new practice model (organizational form) for delivering preventive dental care, challenging the traditional archetype of dental practice. Based on these findings, a framework for understanding the institutional agency of emerging professions was developed using the concepts of the professional project and institutional entrepreneurship (Hardy & Maguire, 2008; Macdonald, 1995). These two concepts are outlined in Table 9 below. The following sections will briefly outline how the movement for independent dental hygiene generally and for the RDHAP specifically are situated within each perspective, followed by a description of the combined model applied in this study.
Table 9 Components of the Professional Project and Institutional Entrepreneurship

<table>
<thead>
<tr>
<th>Professional Project</th>
<th>Institutional Entrepreneurship</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP-1 Starting Point: Occupational Distinction</td>
<td>IE-1 Special Characteristics</td>
</tr>
<tr>
<td>PP-2 Overall Objective</td>
<td>IE-2 Positions in Field</td>
</tr>
<tr>
<td>PP-3 Sub-goals</td>
<td>IE-3 Subject Positions</td>
</tr>
<tr>
<td>PP-4 Relations with Other Actors Relationship to Social/Cultural/Political Context</td>
<td>IE4 Field Conditions</td>
</tr>
<tr>
<td>PP-5 Jurisdictional Maintenance</td>
<td>IE-5 Interpretive Struggles</td>
</tr>
<tr>
<td>PP-6</td>
<td>IE-6 Intervention Strategies</td>
</tr>
</tbody>
</table>

The Professional Project of Dental Hygiene

The brief history of dental hygiene in the United States presented in Chapter 4 shows that a process of professionalization is underway for this occupation. This finding is consistent with those of the sociological and other academic literature examining dental hygiene issues in the United States and Canada as well as internationally that have shown steady advancement of the profession in numbers, scope of practice, and legal entitlements (T. L. Adams, 2003, 2004a, 2004b; Cobban, Edgington, & Compton, 2007; Health Resources and Services Administration [HRSA], 2004; Motley, 1982; Wing, Langelier, Continelli, & Battrell, 2005). Macdonald (1995), building from Larson (1977), conceptually outlines the professional project as a model for understanding “how those knowledge-based occupations that aspire to be accepted in society as professions set about achieving their goal” (p. 34). This section reviews this framework in relation to dental hygiene and specifically in relation to the development of the RDHAP. Table 10 details the stages of the professional project and how the RDHAP is aligned with dental hygiene’s professional project and shows where there are tensions.
**Table 10 Alignment and Tensions with the Professional Project of Dental Hygiene**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Sub-issue</th>
<th>RDHAP Alignment</th>
<th>RDHAP Tensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Starting Point</td>
<td>Occupational Distinction</td>
<td>Dental Hygiene was a distinct occupation from start. RDHAP furthers distinction with a focus on preventive care services.</td>
<td>By creating a specialty within dental hygiene, independent practice creates a division within hygiene</td>
</tr>
<tr>
<td>2 Overall Objective</td>
<td>Status</td>
<td>RDHAP increases the status of hygiene</td>
<td>Unclear the status hygiene has with dentistry or public</td>
</tr>
<tr>
<td></td>
<td>Monopoly</td>
<td>Independent practice breaks dental monopoly</td>
<td>RDHAPs do not have a monopoly on service</td>
</tr>
<tr>
<td></td>
<td>Social Closure</td>
<td>RDHAP advances the possibility of social closure</td>
<td>Hygiene has not successfully achieved full social closure, but this is not the goal</td>
</tr>
<tr>
<td>3 Sub-Goals</td>
<td>Jurisdiction</td>
<td>RDHAP creates a new jurisdiction for hygiene in underserved communities</td>
<td>RDHAP jurisdiction is not exclusive</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>RDHAP requires a higher level of education than dental hygiene</td>
<td>RDHAP does not require an advanced degree, only continuing education credits</td>
</tr>
<tr>
<td></td>
<td>Knowledge Domains</td>
<td>Clearly delineated, but not solely the domain of hygienists</td>
<td>RDHAPs are developing new knowledge domains with underserved populations</td>
</tr>
<tr>
<td></td>
<td>Respectability</td>
<td>RDHAPs are highly respected by clientele, administrators</td>
<td>RDHAPs are building professional recognition, many others do not know about them</td>
</tr>
<tr>
<td>4 Relations with other actors</td>
<td>State</td>
<td>RDHAPs received state sanction for licensure</td>
<td>RDHAPs have tensions with state over payment (Denti-cal)</td>
</tr>
<tr>
<td></td>
<td>Other Occupations</td>
<td>RDHAPs create good relationships with non-dental providers</td>
<td>RDHAPs have had continued animosity with organized dentistry, particularly at the local and national level.</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>RDHAP increases educational standards</td>
<td>Does not require an advanced degree, only continuing education credits</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td>RDHAP advances social contract through improving access to care for underserved populations</td>
<td>Public generally unaware of RDHAPs</td>
</tr>
<tr>
<td>5 Relations to Environment</td>
<td>Social Context</td>
<td>Independent practice is aligned with women's economic opportunities, more market competition in health care</td>
<td>Female profession remains secondary, or 'emerging'</td>
</tr>
<tr>
<td></td>
<td>Cultural Context</td>
<td>Women's movement, health care reform, preventive health services, focus on esthetics</td>
<td>General public lack of understanding of health care delivery systems, health care reform opposition</td>
</tr>
<tr>
<td></td>
<td>Political Context</td>
<td>Access to care, oral health disparities</td>
<td>Legislative scope of practice battles</td>
</tr>
</tbody>
</table>
The professional project, as Macdonald outlines it, has six dimensions. First is a starting point, which is simply a distinct occupation emerging as a social entity seeking economic, social, and political rewards (Macdonald, 1995). From its contested beginnings in 1913, dental hygiene has been a distinct occupation with a focus on preventive services and patient education (Helm, 1993; Motley, 1982; Picard, 2009). The RDHAP is an occupation legally distinct from dental hygiene based on a limited practice setting and independence from supervision; however, in terms of clinical scope of practice, RDHAPs are identical to regular hygienists. In this way the RDHAP creates a tension in the occupational distinction of hygiene, advancing it through independence but also splintering it within the legal system and through the creation of a “specialty” of hygiene.

The second component of a professional project is the overall objective, or the occupational project. With social closure as the ultimate goal, an occupation seeks both a monopoly in the market and status in the social order in order to become a profession (Macdonald, 1995). Dental hygienists have made some progress toward closing the market on dental hygiene work in terms of setting the educational and licensure standards and scope of practice laws required to practice hygiene, thereby shutting out dental assistants or others wishing to provide hygiene care.94 However, dental hygienists do not
have a monopoly on the market as they have not challenged dentists’ right to perform
dental hygiene work, nor do they have a monopoly on the knowledge base as the science
of prevention comes primarily from academic dentistry. In terms of status, the hygienists
in the demonstration project were shown to have strong patient satisfaction and to be
trusted by the individuals seeking their care (Freed, et al., 1997). However, it is unclear
what social standing RDHAPs have with the general public as most RDHAPs lament a
lack of awareness about their profession. RDHAPs’ social closure is only slightly more
advanced along economic lines than that of traditional hygienists because they can be
sole proprietors. However, achieving full social closure (in the traditional sense of the
professional project) was never a goal of the RDHAPs; rather, they sought to redefine
themselves as professionals based on their desire to fulfill the social contract.95 These
findings are consistent with the literature on emerging female professions as well as the
literature on dental hygienists, which finds that emerging female professions tend to
create a professional project consistent with the attributes of the work they do (T. L.
Adams, 2003; American Dental Hygienists' Association, 2005b; Witz, 1992).

The third component of the project is its subgoals (Macdonald, 1995). These are
both strategies for the occupational distinction as well as goals in themselves and include
producing the producers (education), monopolizing professional knowledge, creating and
maintaining a jurisdiction, and attaining respectability. Organized hygiene has worked for
almost a century on developing the dental hygiene educational system and standards, and
in the last several decades it has devoted much more time to the dental hygiene
knowledge base (American Dental Hygienists' Association, 2001a, 2007a, 2007b;
Motley, 1982). In assessing progress toward these goals in Canadian dental hygiene,
Lautar (1995) finds mixed progress, concluding that furthering the goals will require establishing political will and stronger jurisdiction. A central component of professionalization of dental hygiene has been the desire for expanded roles and opportunities for hygienists both within the existing dental establishment and as independent providers of dental hygiene care (T. L. Adams, 2003; American Dental Hygienists' Association, 2005b; Cobban, et al., 2007; Lautar, 1995). The advent of providers such as the Registered Dental Hygienist in Alternative Practice (RDHAP) is central to this broader project. In the case of the RDHAP, the jurisdicion challenge was not to increase the scope of practice (the specific hygiene tasks) but to remove the supervision requirements to allow for economic self-determination.

The fourth component of the professional project is the occupation’s relationship with other actors, including the state, other occupations, educational institutions, the public, and its clientele (Macdonald, 1995). The RDHAPs’ negotiations with other actors may determine the relative success of the project. Much of dental hygiene’s history finds it following in the footsteps of dentistry, not only in private practice but also organizationally and politically (Motley, 1982). The RDHAP represents a continuation of this pattern, with the exception that unlike many other advances of dental hygiene, most of organized dentistry was (and still is) opposed to independent dental hygiene practice. The changes in dental hygiene’s relationships with other actors are central to RDHAPs’ influence on the overall professional project of hygiene.96

The fifth component of the professional project is the social, cultural, and political context in which the project occurs. The advancement of dental hygiene, as read through ADHA historians, is indistinguishable from the general advancement of women
throughout the twentieth century. The RDHAP in some sense is the “radical” phase of that advancement, breaking entirely free from the traditional confines of male dominance and control. Quoted statements from both dentists (“a radical social experiment”) and hygienists (“a natural Darwinian evolution of the profession”) frame the issue this way, albeit with opposite connotations. It was not until the late 1970s that the social, cultural, and political milieus coincided to create an opening for women to take this professional step.

The final component of the project is what Macdonald (1995) calls “eternal vigilance” (p. 204). This is the work that must continue indefinitely in order to maintain and improve the jurisdiction, continually advance the knowledge, and ensure continued social standing. The ADHA’s strategic plan clearly outlines the fronts (membership, brand, advocacy, partnership, operational excellence) on which organized hygiene is remaining vigilance (American Dental Hygienists' Association, 2007b). Here, the RDHAP is a “success story” used by the national organization to advance the professional agenda of greater professional control (American Dental Hygienists' Association, 2005a; Helm, 1993; L. King, 1990, January). Yet the RDHAPs also served as an agenda changer; seeing the political hornet’s nests caused by “independent” practice movements, the profession turned instead to promoting direct access to hygiene services. RDHAPs in California now are caught between protecting and advancing the hard-fought independent practice rights and working within the hygiene association simply to maintain the standards of traditional dental hygiene.

In conclusion, the movement for independent practice and the ultimate development of the RDHAP have been components of dental hygiene’s professional
project. Significant alignment with hygiene’s wider goals are evident—the desire for economic rights (practice ownership, billing), direct access to patients, protection of its jurisdiction, and improvement of its professional standing. Yet there are a number of issues that contradict professionalization as the sole explanation for the RDHAP, such as the alignment with public health and public health dentistry (not autonomous but collaborative relationships), no scope of practice challenge (usually the case in jurisdictional challenges), lack of push for sole jurisdiction (no full market closure), strong internal disagreements within the profession about the independent pathway (no unified agenda), the separation of the profession into two license categories (specialization rather than universal advancement), and additional but not advanced educational requirements (RDHAP training is a continuing education [CE] program of courses, not an advanced degree). The impact of RDHAPs on advancing the overall profession of hygiene has been mixed, and the question remains as to what impact the advent of the RDHAP has had on the field of dental care. Has, as one RDHAP notes, “the advent of the RDHAP opened a can of worms”?97

*Hygienists as Institutional Entrepreneurs*

Institutional theory has examined how organizations are influenced by their institutional and network contexts (in particular those with outcomes that are hard to evaluate) and how they may become isomorphic in order to secure social legitimacy, thereby developing ceremonial practices that are widely taken for granted and considered change resistant (Greenwood, et al., 2008). Agency has been difficult to address in this top-down framework. To rectify this situation while seeking to understand organizational and institutional change, theorists have increasingly turned to the concept of institutional
entrepreneurship (Hardy & Maguire, 2008). “The term refers to the ‘activities of actors who have an interest in particular institutional arrangements and who leverage resources to create new institutions or to transform existing ones’” (Maguire, Hardy & Lawrence, 2004:657)(Hardy & Maguire, 2008). Applying this perspective to the case of RDHAPs allows an understanding not only of how activities of individuals and organizations transformed organizations and institutions but also of how these wider forces shaped the activities and choices of the dental hygienists.

Hardy and Maguire (2008) review the multiple dimensions of research on institutional entrepreneurs (IEs) and identify six themes and subthemes underlying the concept of institutional entrepreneurship. The first theme examines the special characteristics of IEs, with subthemes of specific properties of actors or specific positions within an organizational field. Data on the HMPP founders show that they are distinguishable from traditional hygienists by the leadership roles that they have held in the profession. Current RDHAPs are unique in their level of experience, motivations, professional orientation, and demographics (Elizabeth Mertz, 2008). The traditional position of hygiene in the field, as a female employee and assistant to the dentists, is a subject position, or “legitimated identity currently available in a field” (Hardy & Maguire, 2008, p. 201). Dental hygiene circa 1979 was limited in its ability to change its practices by laws, customs, and its gendered social position. Motivated by the economic instability that hygienists experience as less dominant actors in the field of dentistry and fueled by a desire to serve underserved patients, RDHAPs were compelled to find new ways to practice in order to reach those populations. A shift in identity from handmaiden to pioneer was necessary to gain the status and legitimacy they needed to overcome their
domination, and the HMPP program gave them the means to test out change. This finding is consistent with findings that IEs are distinguishable by their ability to “envision a different way to get things done” and by their ability to break free from their embedded agency within an institutional field by seeing a “window of opportunity” connected to “their interests, skills and stock of knowledge” (Hardy & Maguire, 2008, p. 202).

The second theme examines field conditions, with particular attention paid to how these field conditions create opportunities or openings for entrepreneurship (Hardy & Maguire, 2008). In the case of the RDHAPs, the confluence of feminism, expansions of allied health roles, and economic crisis for dental practices created field conditions of possibility while the lack of access to care for 50% of the population remained the problem to solve. This finding is consistent with the finding that “institutional entrepreneurship is associated with solving problems that have been identified in a field” (Hardy & Maguire, 2008, p. 203).

The third theme within institutional entrepreneurship literature “examines interpretation and explains institutional change with reference to complex, ongoing struggles over meaning among numerous actors, the outcomes of which are not necessarily predictable or controllable” (Hardy & Maguire, 2008, p. 205). The vast majority of historical and archival data on the movement for independent hygiene reflects an intense interpretive struggle not only between the dental and dental hygiene professions over jurisdictional control but also over the orientation of delivery systems (public versus private and preventive versus treatment) and between the state and professional groups over control of field conditions (especially over payment and
regulation). This interpretive struggle is active and ongoing in the field today, placing actors such as the RDHAP as agents of institutional change within this wider context.

The final theme within institutional entrepreneurship literature examines the intervention strategies that are used by IEs (Hardy & Maguire, 2008). For RDHAPs, the Health Manpower Pilot Project was clearly the primary intervention strategy, supported by local, state, and national association activities. RDHAPs were successful in creating a new type of practice, but the field dynamics did not change radically. Institutional entrepreneurship has been shown to be a process of emergent activities that may or may not provide the foundation for new practices or innovations (Lounsbury & Crumley, 2007). At this early stage of the institutionalization of new practices, the ultimate impact of RDHAP activities for patients, organizations, and broader system dynamics is still unknown.

*Combined Process Model*

Combining these models provides a way to examine how the institutional entrepreneurship of an emerging profession is initiated, how its trajectory is connected to field dynamics, and how challenges to field logics can lead to a revised interpretive scheme and ultimately to a new organizational archetype. Table 11 outlines how the professional project framework (second column) (Macdonald, 1995) can be matched to categories associated with institutional entrepreneurship (first column) (Hardy & Maguire, 2008). Finally, the third column provides the empirical evidence from the RDHAP case study as the historically specific examples of how these two concepts, in a combined way, make the change process more clear.
<table>
<thead>
<tr>
<th>Institutional Entrepreneurship</th>
<th>Professional Project</th>
<th>RDHAP Case Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE-1 Special characteristics</td>
<td>PP-1 Occupational distinction</td>
<td>A. Dental hygienists Institutional agents were experienced leaders, entrepreneurs, pioneers, and held a concerned for underserved and vulnerable populations. C. Independent dental hygiene practice was seen as the next step in achieving full professional status as it would afford autonomy.</td>
</tr>
<tr>
<td>IE-1a Positions in field</td>
<td>PP-2 Overall objective of social closure: includes pursuit of economic monopoly of knowledge based services granted by state and status and respectability granted by society</td>
<td>B.</td>
</tr>
<tr>
<td>IE-1b Subject positions</td>
<td>PP-4 Relations with other actors (market and status consequences)</td>
<td>A. Dental hygiene was a non-dominant, female occupation. Hygienists were economically dependent on dentists so had no market closure. Hygienists were regulated by dentists so had weak social closure.</td>
</tr>
<tr>
<td>IE2 Field conditions</td>
<td>PP-5 Relationship to social, cultural &amp; political context</td>
<td>A. Feminism. B. Civil rights. C. Free enterprise.</td>
</tr>
<tr>
<td>IE-3 Interpretive struggles</td>
<td>PP-4 Relations with other actors (jurisdictional conflicts)</td>
<td>A. Challenge to professional dominance of dentists. B. Alliance with public health dentistry and dental education (research). C. Challenge to existing field logics. D. Aligned with advancement women and free enterprise (media).</td>
</tr>
<tr>
<td>IE-4 Intervention strategies</td>
<td>PP-6 Jurisdictional maintenance</td>
<td></td>
</tr>
</tbody>
</table>

Sources: Macdonald, 1995; Hardy and Maguire, 2008; Mertz, 2009.
The special characteristic of these professional entrepreneurs is the occupational distinction of being dental hygienists. The occupational characteristics of being all female and nondominant provide clues to the field positionality of the entrepreneurial activities while the relation of hygienists as a social group to the social, political, and economic context (the field conditions) informs the understanding of their subject positions. The intervention strategies within the field can be directly connected to the advancement of the subgoals of the occupational project as well as jurisdictional maintenance. These strategies are framed and influenced by their interpretive struggles with other field actors, primarily organized dentistry, as RDHAPs sought to challenge the existing field logics and undermine the professional dominance of dentists.

**Case Study Discussion**

The following discussion of the organizational change process in the case study will follow the key questions provided by the archetype conceptual framework, including 1) the impetus for change, 2) the process of change, and 3) the consequences of change (Brock, et al., 1999; Greenwood & Hinings, 1993). Table 12 provides an overview of the key events in the case study of the RDHAP. A complete timeline of related historical events from the mid 1800s to present is available in Appendix C.

As this timeline shows, the process of change studied in this case took more than 30 years. The key events marking progress were the demonstration project, legislative efforts, lawsuits, and countersuits. Behind these formal strategies lay the actions of
individual and groups that were committed to very different conceptions of what the organizational field of dentistry should be.

Table 12 Timeline of Key Events in the RDHAP Development

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972</td>
<td>Health Manpower Pilot Project Program (HMPP) enacted (AB1503–Duffy).</td>
</tr>
<tr>
<td>1976</td>
<td>California Dental Practice Act changes to require only general supervision of dental hygienists.</td>
</tr>
<tr>
<td>1978</td>
<td>Hygienists in Pennsylvania, California, and Kansas start financially independent practices.</td>
</tr>
<tr>
<td>1979</td>
<td>Three bills introduced (AB973, AB974, AB97) allowing independent dental hygiene practice. All are defeated.</td>
</tr>
<tr>
<td>1981</td>
<td>HMPP No. 139 Approved—Demonstration Project for Independent Practice Hygiene</td>
</tr>
<tr>
<td>1985</td>
<td>Two bills introduced (AB844 and AB845) allowing dental hygiene practice without supervision. Both are defeated.</td>
</tr>
<tr>
<td>1986</td>
<td>Denti-Cal begins allowing hygienists to bill for services under pilot project.</td>
</tr>
<tr>
<td>1987</td>
<td>CDA Files lawsuit and request for injunction. Injunction denied. AB968 to allow hygienists to be billable providers is introduced and defeated. CDA lawsuit defeated and HMPP upheld.</td>
</tr>
<tr>
<td>1988</td>
<td>AB4583 introduced and defeated, allowing hygienists to bill Denti-Cal.</td>
</tr>
<tr>
<td>1989</td>
<td>Yellow Pages removes “dental hygienists” heading, then rescinds decision. Court rules against HMPP on technicality of not holding proper hearing. OSHPD appeals.</td>
</tr>
<tr>
<td>1990</td>
<td>California Supreme Court upholds ruling. HMPP No. 139 is closed. HMPP No. 155 started with CSUN.</td>
</tr>
<tr>
<td>1992</td>
<td>AB2353 to allow independent dental hygiene practice is introduced and defeated.</td>
</tr>
<tr>
<td>1993</td>
<td>AB221 to allow a modified alternative practice hygiene is introduced and defeated.</td>
</tr>
<tr>
<td>1995</td>
<td>AB560 to create the RDHAP is introduced and becomes 2-year bill.</td>
</tr>
<tr>
<td>1997</td>
<td>AB560 approved; RDHAP becomes legal.</td>
</tr>
<tr>
<td>2002</td>
<td>AB1589 allows RDHAPs to work in clinics.</td>
</tr>
<tr>
<td>2002</td>
<td>SB2022 restricts nonhygienists from doing hygiene procedures.</td>
</tr>
<tr>
<td>2003</td>
<td>First RDHAP training program opens at West Los Angeles College (WLAC).</td>
</tr>
<tr>
<td>2004</td>
<td>Second RDHAP training program opens at the University of the Pacific (UOP).</td>
</tr>
<tr>
<td>2005</td>
<td>119 RDHAPs in practice, UCSF Survey No. 1.</td>
</tr>
<tr>
<td>2006</td>
<td>AB1334 removes prescription requirement.</td>
</tr>
<tr>
<td>2007</td>
<td>SB238 allows clinics to bill for RDH and AP encounters.</td>
</tr>
<tr>
<td>2008</td>
<td>SB853 enacted, creating a separate regulatory dental hygiene committee.</td>
</tr>
<tr>
<td>2009</td>
<td>Adult Denti-Cal cut from state benefits.</td>
</tr>
<tr>
<td>2002</td>
<td>250 RDHAPs in practice, UCSF Survey No. 2.</td>
</tr>
</tbody>
</table>
Activation of Agency in an Institutional Field

The first question this case study seeks to answer is how the movement for independent practice that culminated in the development of a new profession came about. The “origin story” is informative to understanding the context of organizational change efforts for several reasons. First, it provides insight into comprehending under what circumstances occupational groups that are embedded in highly institutionalized contexts seek and are able to create change. Second, it provides insight into understanding how the organizational field conditions impact change efforts. Third, it provides insight into understanding whether and how the historical context contributed to institutional change.

Professional Agency

Sociology of professions and institutional theory differ in their perspectives about the agency of professions as actors. Professions theory sees actors as highly strategic; occupational groups have ongoing political, social, and economic projects that require constant vigilance and attention to ensure ongoing control over all aspects of the professional domain of work (Freidson, 1986, 1994, 2001; Macdonald, 1995). Institutional theory focuses on the institutional context and organizational practices that restrict professional agency through normative, mimetic, and regulatory pressures, creating a paradox of embedded agency (Hardy & Maguire, 2008). The agency exhibited in the movement for independent hygiene was, and continues to be, thoroughly infused with an ideological commitment to professionalism. This motivation both enables and constrains the choices and actions of emerging professions.

The motivations of the individuals who began the movement for independent dental hygiene were intimately interconnected with their professional positions. The
founders were a group of close friends in leadership positions in their hygiene association. After attending a “futures conference” focused on dental hygiene held in Southern California, they were pushed to action through an enhanced understanding of the potential impact of independence on increasing economic stability and status for dental hygiene as a profession. Although organized hygiene had not yet formally advocated independent practice, the groundwork had been laid by the group’s professional activities that had standardized hygiene’s scope of practice, developed educational standards, and promoted a strong orientation and identity as prevention specialists.

The move for independent practice was primarily about gaining economic control over hygiene practice; it was not intended to expand the scope of practice or to supplant restorative services provided by dentists. In this way it followed dentistry’s professional ideal of practicing as an autonomous small business. However, dentistry interpreted hygiene’s move as a fundamental challenge to both the economic control and the dentist-led model of dental practice that embody American dentistry’s uniquely entrepreneurial and fiercely autonomous version of professionalism. Organized dentistry’s immediate response was to declare war on the professional status of hygienists. Hygienists responded by defending and promoting the advancement of their professional status as it was the only legitimate construct (legally and normatively) under which the innovations they were proposing could be advanced. In addition to occupational control issues—creating career ladders and expansions of employment options—an explicit commitment to fulfillment of the social contract through improving access to preventive care became an essential element of the type of professionalism that would lead to the RDHAP. As
one survey respondent explained, “It’s an altruistic, public health . . . a bonding to a
greater purpose as a dental hygienist that ultimately I think creates the entrepreneurial
spirit.” The professional agency of hygienists was then, in its embedded form, limited
by the normative dimension of professionalization as to what a profession does while
simultaneously being enabled by its ideological dimension of what a profession should
be.

*Organizational Field Conditions*

At the time that the movement for independent practice was initiated, the
organizational field of dentistry, including all aspects of dental hygiene work, was highly
controlled by dentists. The regulation of hygiene, control over educational accreditation,
and all terms of employment were determined by dentists. Work on institutional
entrepreneurship shows that “field-level contradictions provide space for alternative
social norms to be articulated or negotiated” (Delbridge & Edwards, 2007, p. 200). The
conditions at the organizational field level that led to institutional entrepreneurship of
hygiene came from two issues: 1) the newly introduced HMPP program and subsequent
experimentation with dental team roles and 2) an economic environment that spurred
dentists’ experimentation with new employment terms for hygienists, advertising and
competition among providers, and a focus on creating more demand for dental care.

The employment of dental hygienists, and even dental assistants, has been
contested from within dentistry since the beginning of the century (Picard, 2009). Yet the
1970s were a time when the professional environment was supportive of experimentation
with allied dental roles and configurations. In California the HMPP program led to 27
allied dental work force demonstration projects and numerous changes to education and
laws governing dental professions in California in the decade following its introduction (Robertson, 2003). These academic and professionally led experimentations with work force configuration were controversial, pitting dentists in favor of expanding roles against those desiring the traditional division of labor (Labelle, 1978). Dentists had no experience managing an expanded work force, and several of the pilots focused specifically on how to train dentists for these changes, seeking to alleviate their fears about employing trained assistants (Dugoni, 1980; Robertson, 2003). Hygienists were aware of these experiments and changes to allied provider roles and scopes, and they used this particular program as the key vehicle to propose changes of their own. One respondent explained:

This HMPP thing was pretty new, . . . so we sent [her] to Sacramento to talk to the Health Manpower ladies, and she came back with lots of material and lots of encouragement that we should do this [the HMPP]. She brought us forms, and our idea didn’t fit into their format because it [the HMPP] was basically for a new level of training. We were all experienced hygienists. So we thought the best thing to study would be how to manage a practice and how to deal with the business. Health Manpower says right up front that it is intended to change the law, so that’s the direction we went [in].  

The economic conditions of the late 1970s (an ample supply of dental providers, a recession, and the advent of new payment systems) disrupted the resource environment of the organizational field. As dentists sought ways to reduce labor costs, they began to employ hygienists part-time as independent contractors, creating economic instability for hygienists. One hygienist said:

[Dentists] were starting into the Keogh retirement plans, and they would have had to cover their full-time employees. So they decided that we wouldn’t be full-time employees anymore. And then they introduced the idea of our being independent contractors, which, of course, we never were. 

This push into new, unfavorable employment terms combined with the instability of hours of employment was just enough to motivate entrepreneurs who pushed legal
limits such as Linda Krol, a hygienist who had started her own business next door to the dentist who had supervised her prior to the launching of HMPP No. 139 (Billiter, 1978). One hygienist explained:

Linda was brave. She went to a lawyer and said, “If I’m going to be an independent contractor, I’m going to be an independent contractor for myself.” She managed to set up an office.103

Women such as Krol, few as they were, received attention for creating a new vision of what a dental hygiene practice could be, inspiring others and creating a precedent for them to follow.

This breaking of the mold of what a practice might be was not just happening in terms of dental hygiene. The poor economic conditions had created a “busyness” problem in dentistry that resulted in the organizational field’s moving toward a more competitive market orientation.104 Advertising for dental services, while highly controversial, was being pursued in order to create more demand for dental care (California Dental Association, 1982). Dentists in some cases were very creative in developing practices that might distinguish themselves from others. For example, one dentist advertised his practice as Joe’s Bar and Drill, where you could enjoy a beverage while you waited for your filling ("Unique offices,"
1982). This shift set a precedent for hygienists—when the HMPP No. 139 was finally launched, hygienists were encouraged to try many different types of practices and to be creative about ways to set up their businesses.105

Finally, the economic situation compelled the entire dental community to find ways to reach out to new markets of people who were not currently using professional dental care. Estimating that 50% of the population did not see a dentist regularly, dentists sought to convince individuals that seeking professional care was essential while
hygienists, noting that many people could not afford care or were afraid of the dentist, saw their preventive services as a potential pathway for bringing more people into the care system. Abbott’s (1988) theory of a system of professions predicts that unfulfilled market niches, or an overly broad scope of practice held by one profession, will lead to jurisdictional challenges. In this case, the market niche’s not being filled was translated into a social problem of access to care to be solved by independent dental hygiene.

The development of independent hygiene may not have occurred if any of the field conditions had been different. The RDHAP development was path dependent on organizational innovations and changes that coincided to make space for the possibility of this option. Further supporting the activation of hygienists’ agency for change were trends in the institutional environment.

**Institutional Context**

The institutional context is described as the “rules, norms and ideologies of wider society” (Zucker 1983, p. 105) that contribute to “widespread social understandings that define what it means to be rational” (Greenwood, 2008, p. 3). Historical trends in the external environment created tensions in the institutional context of dental care. It is at the site of these tensions that the agency of certain actors in the field was activated. Delbridge and Edwards (2007) note, “Agency can be understood in terms of orientations to past, present and future. How agents connect with their environment is informed by perceptions of the historical and local realities at a given moment” (p. 201).

The cultural environment of the 1970s was strongly influenced by feminism and the civil rights movement, which supported women’s desire for independence. Many of the quotations and articles during the time were framed within either an advancement
paradigm or an emancipation paradigm. The changing cultural norms emboldened women to consider demanding more respect, equality, and rights within the realm of paid work. Independent practice was consistent with the broader movement for advancement of women. As well, it was consistent with the right to free enterprise that is a basic part of being an American citizen.

Experimentation with wider use of allied care providers was also occurring in the broader realm of health care. Expansions of nursing’s role to nurse practitioners in particular and the development of physician’s assistants created a broader sense of legitimacy of a differentiation of the medical work force and acceptability of empowering nondoctors in this environment. Hygienists saw that being completely controlled by their employer was in conflict with trends in other emerging and female professions in the broader health care system.

Summary

Dental hygiene had been controversial for its subversive potential since its inception in 1913, yet it had taken few “radical” steps in the 80 years prior to its applying for the HMPP No. 139. Specific circumstances in the organizational and institutional environment created conditions of possibility for the independent hygiene movement to develop. This situation is consistent with recent theorizing on organizational change that states, “Shifts in the institutional environment create opportunities for individuals and organizations to seize upon recombined tools or constructs to subvert existing ways and bring about new forms of organizing” (Hwang & Powell, 2005, p. 202). The shifts created from role experimentation, economic pressures, and changing cultural norms provided enough of a challenge to the institutional context to create space for hygienists
to re-envision themselves. Yet the move for independence conformed to an ideal of professionalization that hygienists believed would enable them to be successful. Emerging professions then can be seen as both embedded and strategic agents, marginalized and waiting for a window of opportunity but willing to exert more agency toward change due to their disadvantaged position and their having less to lose.

The opening for these emerging professional agents to pursue independent dental hygiene was not created by a single “shock” but rather by the confluence of changing exogenous and endogenous trends. Delbridge and Edwards (2007) point out, “The relational aspect of agency and structure is historically circumscribed such that the malleability of institutions is best understood at the moment when agents ‘collide’ with existing structures; the outcome of this cannot be predicted but reveals the intersection of localized events, the power of those making choices and the wider social context which frames an agent’s assessment of what might be possible.” (p.200) In the case of RDHAPs, the collision came when the possibilities from evolving field conditions and subject positions were expanding, yet the structural restrictions on their occupational position restricted them from benefiting from the changing environment.

*Professions and Institutional Work*

The dynamics of the process that unfolded in the case study of RDHAPs can be understood contextually as a dispute over professional identity and power. A sociology of the professions framework is employed to explain the normative and ideological perspectives advanced in the interpretive struggle that ensured in the battle over independent practice. Within a broader organizational field perspective, professions have
been shown to play a key role in the stage of institutional change called *theorization* (Greenwood, et al., 2002). Theorization for professions is a process of legitimating change and entails the specification of an organizational failing as well as the justification of a solution for that failing (Greenwood, et al., 2002).

The actions resulting from the theorization can be considered institutional work, processes of institutional maintenance (professions as agents), and change (institutional entrepreneurship). Institutional work involves both interpretive struggles and intervention strategies embedded within organizational field dynamics. The institutional context was both reinforced and challenged through the field-level negotiations over independent dental hygiene practice.

*Professional Interpretive Struggles*

The interpretive struggle at the heart of the disputes over independent practice can be understood as a struggle within dentistry to define and defend the appropriate nature of professional identity and organizational control. For advocates of independent hygiene, this reorganization of care delivery was the central issue—professional status of hygiene was the rationale—while the detractors’ primary issue was fighting claims of hygiene’s professional status in order to maintain professional control over the organization of care.

The debate revolved around professionalism, specifically issues of jurisdiction, legitimacy, identity, progress, trust, and economics. Each side promoted a different version of professionalism, summarized in Table 13. Jurisdictional maintenance is central to any professional project as a profession’s jurisdiction is what defines it (Abbott, 1988). Independence (from supervision) was the jurisdictional challenge by hygienists—they were not making incursions into restorative dentistry. Professional monopoly rests on
<table>
<thead>
<tr>
<th>Professional Challenge</th>
<th>Pro-Independent Hygiene</th>
<th>Con-Independent Hygiene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jurisdiction</td>
<td>Hygienists are educated and licensed as preventive care professionals. Supervision is not required.</td>
<td>Care provided by independent hygienists is undiagnosed, fragmented, unsupervised and hence a potential risk to patients. Dentist oversight is needed for all aspects of dental care.</td>
</tr>
<tr>
<td>Identity</td>
<td>Hygienists are not 1950's housewives. They are trained professionals and should be treated as such.</td>
<td>Independent dental hygiene will &quot;break up&quot; the dental family and team. Hygienists are not professionals, they are meant to assist the professional.</td>
</tr>
<tr>
<td>Progress</td>
<td>Independent hygiene is the natural, evolutionary next step for women in this profession. No longer should they be handmaidens, indentured servants, or legal slaves. Freedom, independence, and choice represent progress.</td>
<td>Independent hygiene is promoted by militant, renegade, radical feminists. This is a selfish move by an occupation to become primary care providers. This will undermine best system of dentistry in the world.</td>
</tr>
<tr>
<td>Legitimacy</td>
<td>Independent hygiene is legitimate: state sanctioned scientific study is being conducted to collect objective proof of concept. Seeking to advance social contract and scientific knowledge</td>
<td>Independent hygiene is illegitimate: the HMPP is illegal, hygienists are not equipped to do what they propose, and the demonstration project is using the public as guinea pigs.</td>
</tr>
<tr>
<td>Trust</td>
<td>Independent hygienists will reach out to consumers who cannot afford, reach or are scared of dental services, building trust.</td>
<td>Independent hygiene will be unsafe and lower quality; will provide consumers false sense of security, hence will degrade trust.</td>
</tr>
<tr>
<td>Monopoly</td>
<td>Independent hygiene gives consumers choice, will allow for competitive rates, and costs less than dental care. Should be allowed to try this.</td>
<td>Independent hygiene offices make system fragmented which will cost consumers more. It won't work, so shouldn't be allowed to be tried.</td>
</tr>
</tbody>
</table>
systems of standardized education and regulated licensure, and it was on the basis of having obtained both of these that hygienists argued for their right to practice independently. The counterarguments that followed did not dispute the basis of professional monopoly but rather focused on proving that the education and licenses granted to hygienists were not intended to warrant their ability to practice their trade independently.¹⁰⁸

The idea of “independence” was also central to a highly gendered debate about professional identity. In the 1970s American women were initiating efforts to redefine their workplace roles. Gaining independent practice was as much a part of occupational advancement as it was a part of the advancement of women. Different notions of “progress” infused the debate and further aligned different takes on professionalism with different perspectives on Americanism. Advocates, building on feminism and professionalization as natural, evolutionary processes, argued that it was the professional’s role to ensure ongoing progress such as was indicated by independent practice hygiene. Detractors argued that independent hygiene would undermine the progress dentistry had already achieved in creating the best system of dental care in the world. Both sides promoted progress in terms they could control and use to advance their own professional agendas.

Likewise, the rhetoric stressed two sides of professional legitimacy; proponents stressed their commitment to science while opponents stressed that they were upholding current laws and regulations that protected the public. Proponents advanced public trust through an appeal to fulfilling the social contract by advancing access to care while opponents dismissed this argument as opportunistic and reinforced their belief that the
proper way to maintain public trust is through the highest level of professional expertise. Finally, the right to a monopoly was simultaneously reinforced and disputed, with advocates for independent hygiene arguing that choice and competition could come from hygienists’ having their own monopoly rights while detractors argued that fundamentally independent hygiene could not be economically successful and that consumers would pay more, not less.

In the end, both sides elevated the stakes of obtaining professional status, even as they advanced somewhat competing ideas about what that process entailed. The dispute between dentistry and dental hygiene played out publicly along professional lines, but the organizational dynamics underlying each side did not adhere strictly to professional borders. There were two parallel rationales for independent practice—professional advancement of dental hygiene and improvement of access to dental care for the general population—neither of which was possible under the traditional structure of hygiene. Of these two issues, it was access to care, and later, oral health disparities, that was central to the institutional entrepreneurship of hygienists in that it helped them articulate a rationale for change that appealed to a broader audience.

**Theorization**

Greenwood et al. (2002) find that “professional associations play an important role in theorizing change, endorsing local innovations, and shaping their diffusion” (p. 58). Theorization is a stage in institutional change processes (as well as a stage in the creation of new practices in an institutionalized field) and involves the identification of organization problems and potential solutions (Greenwood, et al., 2002; Lounsbury & Crumley, 2007). Hygienists and their allies theorized that access to care was the social
problem that new practice models such as independent hygiene would help solve. This argument had some moral legitimacy based on the social contract of professions. Yet it had no pragmatic legitimacy as hygienists could not legally prove the case without first changing the laws. The HMPP gave them a way to provide the legitimate proof that the new model was safe and effective, and they used it to test out a new organizational form of independent dental hygiene practice.

Organized dentistry approached the situation from a very different perspective. Access to care was not viewed as an organizational failing; it was perceived as a problem of society’s apathy to oral health. The problem as articulated by dentistry was, simply, the actions of dental hygienists. The solution to this problem was to stop independent practice. The arguments used to argue against independent practice asserted both the moral and the pragmatic legitimacy of the status quo, thereby seeking to maintain the current organizational form.

Scott (2008) argues that the professions have leading roles in the creation and tending of institutions. From an institutional perspective, this situation is what “distinguishes them as occupations. Some create cultural-cognitive frameworks, others devise normative prescriptions for behavior, and still others exercise coercive authority” (W. R. Scott, 2008, p. 219). The theorization by two competing professional groups led directly to the strategies employed by each: one side was seeking institutional change; the other was seeking institutional maintenance.

*Institutional Work*

The case study of RDHAPs highlights actions and strategies that were employed by dentists to defend the existing institutional logics and also highlights the actions and
strategies of hygienists working as institutional entrepreneurs seeking to supplant the existing logics with new ones. “Lawrence and Suddaby’s (2006) conceptualization of ‘institutional work’ recognizes the ongoing and active construction of institutional domains over time and space” (Delbridge & Edwards, 2007, p. 201). The institutional work progressed over the 30-year time frame of the case (1979–2009) and can be understood by looking at the mobilization and defensive activities of the proponents and detractors of independent hygiene. These activities played out within professional associations, the government (legislation), and the public (media), with implications for the professional payment systems, organizational structure, and institutional logics. Table 14 tracks the progression of the contested development along these dimensions during the past four decades.

The primary strategy used by hygienists to advance independent practice was the application and subsequent implementation of HMPP No. 139 and HMPP No. 155. Almost all the other activities that ensued during the next 30 years were related to either advancing or deterring the success of the pilot and the translation of the HMPP into a permanent change in the laws regulating dental hygiene.

The mobilization tactics of the late 1970s started off as a small group of women trying to implement a pilot study in a field entirely dominated by the dental profession. The group was inspired by unique individuals brave enough to break the mold, but it met quietly and privately, slowly building enough support to put in an application. Legislation to allow hygienists to work in their own facilities was introduced in 1979 along with a bill to advance the dental assisting scope of practice, but all were easily defeated.
<table>
<thead>
<tr>
<th>Field Focus</th>
<th>1970s</th>
<th>1980s</th>
<th>1990s</th>
<th>2000s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logics</td>
<td>Professional Control</td>
<td>Professional Control</td>
<td>Access to Care</td>
<td>Access to Care</td>
</tr>
<tr>
<td></td>
<td>Professional autonomy, entrepreneurship, American exceptionalism</td>
<td>Professional autonomy, entrepreneurship, American exceptionalism</td>
<td>Public health, professional autonomy, entrepreneurship</td>
<td>Public health, professional autonomy, entrepreneurship, collaboration and integration</td>
</tr>
<tr>
<td>Structures</td>
<td>Solo, Private Practice, Male</td>
<td>Solo, Private Practice, Male</td>
<td>Solo, Private Practice, Public Health, Mobile Services</td>
<td>Collaborative, Private Practice, Public Health, Mobile Services</td>
</tr>
<tr>
<td>Dental Practice Systems</td>
<td>FFS, For-Profit</td>
<td>FFS, For-Profit</td>
<td>FFS, Salary, For-Profit</td>
<td>FFS, Salary, Non-Profit, For-Profit</td>
</tr>
<tr>
<td>Hygiene Practice Systems</td>
<td>Salary, Wage</td>
<td>Salary, Wage</td>
<td>FFS, Salary, Non-Profit</td>
<td>FFS, Salary, Non-Profit, For-Profit</td>
</tr>
<tr>
<td>Press Coverage</td>
<td>Press of Pioneers (NC, S.CAL, PA)</td>
<td>Neutral to positive coverage of HMPP, coverage of lawsuits and association positions</td>
<td>Press support of 2353 and 221, huge campaign in support of independent hygiene</td>
<td>Continued coverage of scuffles over prescription requirement, self regulation. More national coverage of hygiene initiatives, especially in Minnesota</td>
</tr>
<tr>
<td>Legislation</td>
<td>Expanded Function Assisting, Three bills introduced (AB973, AB974, AB97) allowing independent dental hygiene practice. All are defeated</td>
<td>AB844, AB845, AB968, AB4583</td>
<td>AB2353, AB221, AB560, AB4583</td>
<td>AB1334, AB1589, SB238, SB2022, SB853</td>
</tr>
<tr>
<td>Mobilization activity</td>
<td>Pioneering Challenges, Behind Closed Door Meeting</td>
<td>Fundraising, HMPP #139, public outreach to improve access and choice, perseverance, legislation, counterlawsuits, rhetoric</td>
<td>HMPP #155, Legislation, Association Policy, Public Relations Campaigns</td>
<td>Legislation, Association Policy, Outreach and Alliance Building, Staying under radar</td>
</tr>
<tr>
<td>Defensive activity</td>
<td>Association Policy, Rhetoric</td>
<td>Rhetorical attacks, lawsuits, intimidation, boycotts, law revisions, dental board manipulation,</td>
<td>Rhetorical Attacks, Association Policy, Legislation</td>
<td>Association Policy, Legislation, Local Intimidation, Harassment and Competition</td>
</tr>
</tbody>
</table>

The dental board reinforced this defeat with a ruling that hygienists could not work in their own private offices (Board of Dental Examiniers [BDE], 1979). These efforts brought the issue to the attention of the dental association, but aside from a few editorials, there was little done except to chide the renegade hygienists, reinforcing professional control (Blair, 1980).
During the first half of the 1980s, the mobilization activities focused on fundraising, pilot design, and expansion of support for the pilot. Two pieces of legislation advancing independent dental hygiene practice were introduced in 1985 (AB844, AB845), followed by a launch of the HMPP No. 139 in 1986. The defensive activities undertaken by organized dentistry first focused on undermining the legitimacy of the HMPP, but they quickly evolved into a widespread attack on the legitimacy of dental hygiene. The defensive activities garnered considerable media attention (lawsuits and countersuits, in particular), which began to engage the public on the topic. This coverage tended to be neutral early on, discussing both sides of the “turf battle.” Up until this point, there had been little substantive change in the field in terms of the logic, structure, or systems that were in place.

In the mid 1980s the dental field was struggling with changes in the market and in the regulation of dentistry, including the increasing power of Preferred Provider Organizations (PPOs), accusations by the FTC and AARP that the monopoly status of dentists was harming consumers, and ongoing concerns about dental manpower ("AARP says unreasonable regulation = unreasonable prices. [News Clipping]," 1986; Higginbotham, 1980). The defensive activities were at their height during this period, and advocates spent a good amount of energy during this time fending off dental association attacks and ensuring that the study had the resources it needed to finish. The argument that independent hygiene could improve consumer choice and improve access garnered support for the HMPP demonstration project from both conservative and liberal constituencies. This development was the start of a turning point for the hygiene
movement; by adding access to care as a key issue, its proponents were better able to engage legislators, the public, educators, and the professions.

By the early 1990s, the demonstration project had shown positive outcomes; quality was high, patients were satisfied, and hygienists could run successful businesses (Freed, et al., 1997; Kushman, et al., 1996; Perry, et al., 1997). The mobilization effort then shifted from legitimizing the pilot to changing the laws. Three legislative attempts to pass new laws were launched; each successive attempt moved further away from “independence” toward “access.” It was during this period that the public became much more engaged through media coverage and supportive of hygienists’ legislative efforts. Hwang and Powell (2005) note, “The main task for institutional entrepreneurs is to force shared frames that bring together actors with disparate interests in institution building process” (p. 225). The 1990s saw the height of the alliance focused on creating a new legal status for hygiene, ultimately overcoming the dentists’ defensive activities that sought to prevent independent practice in California.

Throughout the 2000s the contested development of alternative practice models wound down in California but ramped up at the national level. After the law establishing the RDHAP had been passed in 1997 and the education program had been established in 2003, the RDHAP mobilization activities turned to actions deemed necessary for RDHAP practice success. These activities included the cleanup legislation ensuring that hygienists could be billable providers, the removal of the prescription requirement in the original law, and the development of a dental hygiene board so that the profession could be self-regulating. Today interested individual RDHAPs and allied organizations continue to advance the broader hygiene agenda, but most RDHAPs simply try to stay “under the
radar” and advance their businesses one patient at time. This strategy is in response to the perceived ongoing defensive activities such as those of individual dentists or local dental groups that seek to undermine the businesses of RDHAPs and use what leverage they can to limit any incursions into their markets.

This case clearly delineates the institutional work done through the actions of professions within an institutionalized field. These field-level negotiations were highly contested, and the outcome was the result of a political process that is, arguably, ongoing. Strategic actions of professions on both sides were central to this process, reinforcing Levy and Scully’s (2007) argument that “one implication of viewing institutional entrepreneurship as an ongoing strategic contest is that success or failure is difficult to assess in absolute terms at any specific juncture, given the indeterminacy of field dynamics and the fallibility of strategy” (p. 986).

**Summary**

Understanding the process of change in this case is achieved by examining the interpretive struggles over the nature of professionalism, the theorization of each professional group as to problems and solutions, and ultimately the strategic action, or field-level negotiations undertaken by both proponents and opponents within the field. This process involved challenges over the nature of professionalism as well as the traditional organizational form. The case highlights how institutional work was conceptualized and enacted by professions seeking to maintain as well as to change the field. This institutional work is ongoing; although the RDHAPS are now legal, the field is still contested.
Alternative Practice: A New Profession and Organizational Archetype

The outcomes of change within the organizational field of dental care can be understood on several levels. First, changes at the organizational level can be examined through archetypes. RDHAPs developed a new interpretive scheme, structures, and systems for their preferred organizational form that can be compared with the traditional and public health archetypes that exist in the field. Second, changes within the field may have resulted in new occupational powers and institutional logics. Finally, this particular change effort has had an impact in the institutional field, yet in any such effort conclusions that are drawn will be contingent on a particular historical time and space.

A New Archetype

The legal enactment of the RDHAP was seen as a win for both its supporters and detractors. Hygienists are allowed to practice independently, yet a political compromise meant that RDHAPs are limited to working in very specific settings in which dentists generally do not desire to work and therefore are rarely found. Thus, the interpretive scheme underlying the alternative practice hygiene archetype starts with a very specific domain of operation (see Table 15), one that is separate from either traditional or public sector dentistry.

Organizational forms that entail a fixed, fee-for-service model are unlikely to work for individuals in community-based settings. Those who are not mobile (e.g., in nursing homes or hospitals) cannot get to the office or clinic. Those who can’t afford care or who have not been socialized or incentivized into regular preventive visits don’t seek care. Those who have special medical or behavioral needs (e.g., people with
developmental disabilities or complex medical conditions) require case management in order to make basic treatment even possible.

Table 15 Organizational Archetypes in California

<table>
<thead>
<tr>
<th>Interpretive Scheme: Domain of Operation</th>
<th>Traditional Dentistry</th>
<th>Public Sector Dentistry</th>
<th>Alternative Practice Hygiene</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Private Professional Market Full scope</td>
<td>Public sector systems Full scope</td>
<td>Community health settings Preventive care</td>
</tr>
<tr>
<td>Principles of Organizing</td>
<td>Entrepreneurship Professional autonomy Employer</td>
<td>Public service Professional autonomy Employer</td>
<td>Public service, Professional collaboration, Entrepreneurship</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Intraprofessional judgment American exceptionalism Technical competence Ethical standards</td>
<td>Intraprofessional judgment American exceptionalism Technical competence Ethical standards</td>
<td>Interprofessional judgment Health outcomes and quality of life Partnerships Ethical standards</td>
</tr>
<tr>
<td>Structures</td>
<td>Solo, private practice, surgical, fixed, male</td>
<td>Solo or Group, surgical, fixed, male</td>
<td>Solo or partnership, sole proprietorship, mobile, integrated, female, government systems</td>
</tr>
<tr>
<td>Systems</td>
<td>Self-pay, Fee for service</td>
<td>Self-pay, Fee for service, Public insurance</td>
<td>Public insurance, Fee for service, Salary, Self-pay</td>
</tr>
<tr>
<td>Aligned Actors</td>
<td>Dentists, Private payers, Educators, Regulators</td>
<td>Public payers, Educators, Regulators</td>
<td>Hygienists, public health officials, public health dentists, special needs patients</td>
</tr>
</tbody>
</table>

RDHAPs therefore have used a different set of organizing principles in order to design and implement a new set of practices that could accommodate these realities as well as be economically viable. Hygienists considering RDHAP practice are often highly motivated by a desire to work with these underserved patients, leading to a strong public service orientation. Although RDHAPs maintain that they are very entrepreneurial and
often work as solo providers (a few even have their own practices), these attributes speak more to the type of individual who is willing to work in a highly contested arena than to the actual organization of care that has been highly collaborative and integrated. RDHAPs collaborate extensively with medical providers, social services coordinators, and health-care system administrators (e.g., nursing homes and public health and regional centers) as well as with dentists when their patients need referrals and restorative care. This collaboration has led to alternative practice hygiene’s often being loosely joined within systems of medical care for patients that already exist, and in some cases hygienists have developed entirely new care pathways that previously did not exist.

Standards for the evaluation of alternative practice hygiene are similar to those for evaluating traditional dentistry; there are few quality or outcome measures, so evaluation is left to professional judgment. However, alternative practice hygiene’s being integrated with other care providers and systems means that perspectives external to dental professionals on the outcomes of care (patient satisfaction, improvements in quality of life, overall health improvements) are incorporated into the organizational evaluation. As well, the model can be evaluated on the strength and success of the provider partnerships and boundary-bridging activities that enable patients previously excluded from care systems to gain access to the basic preventive services. These types of evaluation are not found in traditional or public sector archetypes.

Many of the structures and systems are similar across archetypes, although the relative importance of each may be different. This situation is likely because the alternative organizational forms developed in the field have not directly challenged the traditional archetype; rather, they have sought to serve patients who exist at its margins.
A number of RDHAPs work within government public health programs, and about two-thirds of the payment sources for RDHAPs services come from public insurance, a stark difference from the traditional dental archetype, which is almost entirely private sector and private pay. The structural element that is most unique for alternative practice hygiene is the mobility of its services. Almost all RDHAPs use mobile equipment and go to patients rather than having patients come to them. The focus on preventive care allows them to practice this way, but it also limits their ability to provide for the full scope of needs of many of their patients. To address such needs, they must align with care providers willing to work collaboratively and within public sector systems. Providers of this nature are difficult to find in the traditional sector; this situation explains why many RDHAPs refer patients to community clinics and report having extreme difficulty in arranging for the restorative care needs of their clients.

This new archetype is still taking shape. The budgetary cycles of the state of California have led to severe cutbacks in the amount of public financing available for dental care, health care reform legislation may or may not change the landscape within which RDHAPs work, and the dynamics within the dental care field continue to evolve and change due to the economic recession. Given these circumstances, it is unclear if the “track of change” is yet complete to the point of full transformation to a new, fully institutionalized archetype. Rather, the archetype seems to be a stable but somewhat still unresolved excursion toward the moral and pragmatic legitimation of this new organizational form. The current archetype is prone to instability but also has great potential; developing the RDHAP’s further legitimacy in the field and the diffusion of these practices will be central to its evolution. Consistent with other studies of new
practices, this study shows the central importance of the “emergent, multilevel nature of how new kinds of activities emerge and provide the foundation for a new practice” (Lounsbury & Crumley, 2007, p. 993). The current form may continue to evolve as it interacts with and transforms the institutional and professional environment.

Changing Professional Status and Institutional Logics

The legal enactment of a new profession is the legislative marker of the end of one long process, yet the organizational change process is ongoing. RDHAPs have developed a new form of organizing services, the specific success of which has yet to be determined. The interpretive scheme of alternative practice hygiene borrows some of the underpinning logics from traditional and public sector dentistry but transforms them through the process of reaching out to underserved patients and providing new services in new settings. The systems and structures that are largely in place in the field do not yet fully support this new organizational form, as evidenced by the financial and logistical struggles that RDHAPs report as ongoing critical issues for their practices. Yet there have been significant changes in field-level dynamics as a result of this process.

At the professional level, the outcome has been a change in the structural relations between dentistry and hygiene, particularly in California. The status of the RDHAP six years after the first education program opened can be categorized as struggling at best. Yet the CDHA has more status and has been able to exert more power than it previously did, although it is still significantly less resourced than the CDA. For example, the CDHA was able to advance the professional project of hygiene further through attainment of self-regulation, making California one of the first states in the country to allow hygienists to have their own regulatory board. The CDA has now changed course
and is supportive of RDHAPs and encourages its members to work with them, further legitimating these new forms of care delivery.

At the field level, the RDHAP has furthered a challenge to the institutional logics that have dominated dentistry for the better part of a century. This challenge can be seen along a variety of different axes. First, the significant involvement of RDHAPs with public payment systems and as employees within public sector programs challenges the logic of individualism that is central to the private market delivery of services. Second, the focus on preventive care ties into broader efforts of disease management and public health, challenging the logic of professional control that has led to full-scope dental care being promoted as the only and best way to deliver services. Third, bringing care to communities, integrating with other delivery systems, working collaboratively, and making mobility a central feature challenge the logic of autonomy that has perpetuated the solo practitioner dental office as the primary organizational form. Finally, studying the new model and seeking to evaluate its effectiveness through more than just financial measures challenge the logic of American exceptionalism that has perpetuated the lack of transparency in the measurement or reporting of dental care system effectiveness and quality.

The changing status of emerging professions and the challenges to institutional logics are intertwined in the field of dental care. Although new interpretive schemes may undergird the new organizational form, there are significant challenges to modifying the structures and systems necessary to ensure the model’s success. Ongoing strategic action by hygienists and aligned actors is probably necessary to continue to move alternative practice hygiene, or any alternative to the traditional archetype, forward. This strategic
action is likely to continue to take the form of professional advancement and is likely to continue to be contested.

The status of RDHAPs in California is as a small but growing contingency of hygienists. The group is not politically active except in the context of CDHA, and for the most part individual practitioners stay under the radar. They may be building bridges with individual dentists and medical providers community by community, but it remains unclear whether this strategy will lead to sustainable changes in the broader system. Alliances with more powerful actors in the field are mixed for RDHAPs. Several university groups and funders are seeking to leverage the RDHAPs into broader system changes, expanding tele-dentistry in the Virtual Dental Home project and as part of comparative effectiveness research on fluoride varnish trials. Yet the state budget shortfalls in 2008, 2009, and 2010 have resulted in cutbacks to many of the public programs and services that functioned as key collaborators for the RDHAPs. Both the status of this new provider and the development of a sustainable organization for care are continuing to evolve in California; whether these new forms will become fully institutionalized is still unclear.

**National Implications and Uptake**

The RDHAP is one of many different hygiene projects that were advanced between the mid 1980s and today and have become part of a larger dynamic of forces within the organizational field of dentistry debating who should deliver care, in what settings, and for what patients. At the national level, building from the experiences of California RDHAPs and hygienists in other states, the ADA continues to push for expansions of direct access and advanced practice. The data collected on the safety and
efficacy of independent practice and on resultant positive population health outcomes have had mixed effects as ammunition used against the highly paid lobbies of the ADA and its state affiliates, who continue to raise concerns about “patient safety” and “two tiers of care.” 110 Yet coverage of dental hygiene professional issues in the media rose during the 2006–2008 time frame, with increasing national coverage given to state-level hygiene initiatives.

The ADHA has ramped up its research agenda for the profession, noting that “professions, by definition, draw on a well-defined and well-organized body of knowledge that serves as a foundation for education, practice, and research“ (Gadbury-Amyot, et al., 2002, p. 157). This call has been echoed internationally, connecting the research agenda with the development of the discipline of hygiene (Cobban, et al., 2007). This agenda has included scientific reviews of current preventive dental treatments and procedures, promoting the further development and testing of these issues as being within the purview of the “profession” of hygiene (Gurenlian, 2001, Spring). As well, ADHA has begun to stake out positions on various hot-button issues such as educational standards, diagnoses, and access to care and has promoted an advanced dental hygiene practitioner (American Dental Hygienists' Association, 2001a, 2001b, 2005a, 2006). Preliminary evidence does not seem to indicate that the RDHAPs in practice are tightly aligned with this work, although they may be supportive of it.

The movement for a more community or public health focus has broadened in the 2000s. Inspired by the Surgeon General’s Report on Oral Health and bolstered by increased resources to Federally Qualified Health Centers (FQHC) dental services through the 2002 Safety Net Improvement Act, a number of groups have turned their
attention to programmatic efforts to improve access to care and research on oral health disparities. Public health dentistry groups (AAPHD, ASTDD, NOHAA) have grown and diversified (a large percentage of the membership is hygiene) while dental educators have changed their focus to community-based training, indicating that the challenge to individualistic, autonomous logic that was central to the RDHAP development has been taken up by wider forces.

Alternatively, the American Dental Association has not budged on policy, retaining a strict defensive stance against not only hygiene but also all proponents of any change to the professional dominance of dentists. The 2010 *Policy Manual of the American Dental Association* states that "supervision and coordination of treatment by a dentist are essential to comprehensive oral health care. Unsupervised practice by allied dental personnel reduces the quality of oral health care, fails to protect the dental health of the public, and is opposed by the American Dental Association." As well, it states, "General supervision is not acceptable to the American Dental Association because it fails to protect the health of the public." The ADA now acknowledges that access to care is a problem in the country, but rather than supporting the alternatives put forth by hygiene or public health groups, it has advanced solutions that it regards as consistent with maintaining professional control, such as the Community Dental Health Coordinator.

There is a widespread debate today about the appropriateness of the dental delivery system and the roles of various providers within this system. Groups such as the Institute of Medicine, the Health Resources and Services Administration, and the Pew Charitable Trusts are leveraging substantial resources to study the system and propose
policy changes. Following on challenges brought to the field by the entrepreneurship of an emerging profession, the lines demarcating the traditional system and the new innovations have been taken up by stronger players.

**Summary**

In summary, the change process that occurred during the past 30 years in California has resulted in the development of a new organizational archetype, one underpinned by a different interpretive scheme, systems, and structures. This alternative practice archetype is in a nascent form and continues to face challenges in the organizational field. The structures and systems are not well developed, and the professional dynamics are still unstable, leading to the conclusion that currently the transformation to a new archetype is yet unresolved.

Both in California and nationally, the RDHAP effort has been leveraged by more powerful actors seeking to continue advancing challenges to the dominant logics of the institutional field. In this way the RDHAP effort continues to be loosely coupled with dental public health efforts and the professionalization of dental hygiene. There seem to be three fairly distinct archetypes of organizational practice that now exist in the field, segmented at the broadest level by the populations they serve. Yet many Californians still have significant barriers to accessing dental care, and widespread disparities in oral health status remain (Dental Health Foundation, 2006). The organizational field remains in flux, with new work force and care delivery models being proposed from competing stakeholders. It is likely that this field will continue to be marked by major contention over professional control as well as organizational resources and legitimacy.
Conclusion

The analysis of the RDHAP case study has shown how the institutional entrepreneurship of an emerging profession was able to challenge institutional logics that had ruled an organizational field for almost a century. This challenge resulted in the legal enactment of a new type of dental hygienist, the Registered Dental Hygienist in Alternative Practice (RDHAP). As RDHAPs began to practice, they developed a nascent organizational form of dental hygiene practice in California. The institutionalization of this organizational form remains in an unresolved state while the issues and challenges raised by the advancement of independent practice hygiene remain contested within the wider field of American dentistry.

The change process was illuminated using a combination of archival and environmental data to place the case in a specific historical context. It is only within such a context that the issue of embedded agency of actors, in this case dental hygienists, can be understood (Hardy & Maguire, 2008). The change process occurred when an occupation seeking to advance its social and economic standing in a highly institutionalized field found motivation, inspiration, and support for its efforts within the organizational field and institutional context. This finding is consistent with studies examining institutional entrepreneurship of marginal or less powerful actors in a field (Hardy & Maguire, 2008; Levy & Scully, 2007). The change efforts were part of a process of professionalization; this was the framework in which the agency of dental hygienists was situated. This embedded agency was both limited and enabled by the normative and ideological components of professionalization, a finding consistent with
previous studies that have found that the professional context provides opportunities for change as well as structural limitations (Reay & Hinings, 2009).

The process was analyzed using the combined model of the institutional entrepreneurship of emerging professions that linked the agency inherent in professionalization to the wider impact of institutional entrepreneurship. The process of change entailed an interpretive struggle between two professions in a field, the theorization of change by each, and the intervention strategies aligned with that theorization. Together, the interpretation, theorization, and interventions constituted the work of institutional maintenance and change. Two tracks of change were identified: inertia and a transformational effort that may still be an unresolved excursion. Dentists as institutional agents sought to maintain the existing arrangements in the organizational field and aligned their rhetoric and strategies to this effort. Dental hygienists as institutional entrepreneurs sought to change the existing arrangements in the organizational field and aligned their rhetoric and strategies to this change effort.

This analysis is consistent with work that has shown theorization to be a central element of professional organizations’ role in the transformation of institutionalized fields (Greenwood, et al., 2002). The insights from this study advance the understanding of specific types of theorization used by professional organizations and how they connect to tracks of organizational change, providing a previously unavailable link between these theories. Less dominant professions may be more likely to theorize field-level failings to advance their professional status while more dominant professions may be more likely to theorize the threats by less dominant professions to maintain professional control.
The institutional entrepreneurship of dental hygienists was shown to take a specific form in relation to the professional project they were advancing. A model of institutional entrepreneurship of emerging professions is advanced that combines insights from the sociology of the professions into the theory of organizational change. Professions are uniquely situated within their institutional fields and have very specific perceptions about their roles, responsibilities, and the actions appropriate for professional groups. These perceptions may lead to very different types of professional agency, both of which are inhibited in some ways by the structural conditions of their existence. These profession-specific insights are crucial for understanding how challenges are advanced in institutional fields.

The change efforts in this case led to debates about the nature of professionalism itself, exposing contradictions between institutional logics (supporting professional dominance) and organizational arrangements (ensuring access to dental care). Hygienists were able, through exposing this failing, to gain relatively widespread support for the change efforts, although the result was not what they had originally intended. In this case the findings are consistent with work that proposes that institutional entrepreneurs have potential strategic power to transform fields, albeit in a way constrained by their inability to comprehend or control field-level complexity (Levy & Scully, 2007).

The outcome of the change is, contingently, a nascent yet unresolved organizational archetype for alternative practice dental hygiene. This archetype is underpinned by an interpretive scheme differing from the traditional dental archetype in its domain of operation, principles of organizing, and methods of evaluation. The new archetype is community-based prevention that is organized collaboratively and evaluated
by external actors and consumers. The structures and systems to support this archetype are not well formed, leading to the conclusion that the track of change so far has been an unresolved excursion. It is unclear what additional institutional entrepreneurship or professional agency will be necessary to move the nascent archetype to a fully institutionalized model, nor what level of structural uptake will be necessary to deem the transformation complete.

RDHAPs, as a legitimate profession, are now making a transition from an insurgent occupation to an incumbent group vying for resources and legitimacy. Organizational field-level issues of access to care, new work force solutions, and the new organizational forms that have been highlighted in this case in California are playing out nationally amongst more powerful contingents. RDHAPs are very loosely coupled with these larger efforts; predictions of outcomes on either level will be the result of ongoing political, professional, and organizational dynamics in the institutionalized field of American dentistry.
CHAPTER 7: CONCLUSIONS AND CONSIDERATIONS FOR POLICY AND PRACTICE

This study has examined the process of organizational change in the institutionalized field of American dental care. It is the first study that has explicitly theorized the relationship among professionalization, institutional entrepreneurship, and the development of new organizational archetypes in an institutionalized field.

The literature review in Chapter 2 showed that examinations of institutional and organizational change over time are well established within institutional theory but that few of these studies have examined this change as having been initiated by an actor within an institutionalized field. Institutional entrepreneurship provides a framework for understanding how the agency (purposive action) of actors is connected to challenges to institutional logics that result in a new organizational form. Yet no study of institutional entrepreneurship has examined an emerging occupation’s pursuit of professional status as a specific type of entrepreneurship, leaving a void in the theory. The contemporary professionalization of dental hygiene has been examined, but no previous study has examined the topic of independent practice from an institutional perspective, and very little sociological analysis has focused on the field of dentistry.

The case study of Registered Dental Hygienists in Alternative Practice (RDHAPs) has shown how an emerging occupation, through the process of professionalization, was able to envision and enact changes within the dental field. Although it was a single case study, it was assembled using a mixture of methods and a large number of data sources that were triangulated in order to create a comprehensive and multidimensional case that spanned a 30-year time frame. These data, described in detail in Chapter 3, allowed for
exploration of all aspects of this particular case, from idea inception to pilot implementation to efforts to bring the new practice model to full scale.

This study explored the movement for independent hygiene practice that entailed a politicized battle between organized dentistry and dental hygiene that played out in their respective professional associations, the legislature, the courts, the business community, and the media. Professionals in the field acted as institutional agents; dentists worked to defend the existing institutional logics (beliefs and practices), and dental hygienists worked to challenge them through institutional entrepreneurship (the process of actors working to transform institutions). This institutional work led to the development of a new profession in dentistry, the RDHAP. Once in practice, RDHAPs were able to create the nascent organizational form of alternative practice hygiene. This new form can be understood as an unresolved archetype tentatively co-existing in the field. The alternative practice archetype is underpinned by a different interpretive scheme (values and beliefs) and by different structures and systems than those supporting the traditional dental archetype of solo private-practice dentistry. The outcome of this organizational change process has been the availability of preventive dental hygiene care in underserved communities in which RDHAPs work, changing the professional dynamics surrounding care delivered in these settings and establishing the legitimacy of a new interpretive scheme. RDHAP practices have not yet been fully institutionalized as the group is still struggling for resources and legitimacy, leaving open the question of the ultimate success of this community based prevention model.
Case Study Conclusions

The organizational field analysis of U.S. dentistry provided the baseline against which to measure change and an understanding of the environment in which change occurred. Chapter 4 showed that during the past century the field of dental care has evolved to become stable, mature, and highly oriented to a set of institutional logics, particularly entrepreneurship and autonomy that support the traditional archetype (ideal type model) of solo private-practice dentistry. Dental care has become physically and economically isolated from the rest of health care and has been dominated by a single profession (dentistry) that remains relatively cohesive due to low levels of specialization.

Few external influences exert power over the field. Government regulations provide a monopoly and ask little in return; most laws are concerned with the business aspects of dentistry, not the clinical aspects of quality of care that are left to the professions to self-police. Payers arguably have changed the resource environment through preferred provider organization (PPO) models during the past 30 years and have demanded some concessions in payment rates and quality oversight, yet these developments have not caused the basic organizational form to change. Technology has improved significantly, (perhaps driving up the cost of business) while science has advanced clinicians’ understanding of disease processes. However, these external changes have been adapted to practice within the traditional model; they have not transformed it. Finally, the public is divided; those well served by the private-practice model remain relatively passive and supportive while underserved populations are, by definition, disempowered. Considering the massive transformation of the health care field that occurred in the same time frame as this case study (1979-2009), it is truly remarkable
that dentistry has been able to maintain such control and stability in the field. And yet *change did occur*.

Looking back to the late 1970s, dental hygienists were the only actors at the time both adequately positioned within the field, motivated, and supported by the environment to challenge the institutional logics of dentistry. Hygienists as an occupation have been on the pathway of professionalization yet have remained marginalized as an occupation, meaning that they were not as tightly tied to the status quo as were the incumbent dentists. The group of hygienists that promoted the change held leadership positions that afforded them a broader view of the environment, sufficient insight into the inner workings of clinical practice that enabled them to envision a different arrangement of care, and legitimacy with the state due to their licensure, which allowed them to apply for a Health Manpower Pilot Project (HMPP). As women and entrepreneurs, they were bolstered by supportive trends of feminism and free markets in the social environment, and as an occupation, they had the driving motivation of self-preservation needed to launch a challenge to the status quo and venture into independent practice. These findings are consistent with previous work on professionalization, which shows that professions uphold autonomy as the final goal, or marker, of true professional status (Freidson, 1986, 2001). As well, it is consistent with work on institutional entrepreneurship that has shown that marginal actors and those with less powerful subject positions within the institutional environment have been more likely to advance change projects (Hardy & Maguire, 2008; Hwang & Powell, 2005; Levy & Scully, 2007).

The professional advancement of dental hygiene spurred the *process of change* that occurred in the organizational field. This challenge had a strong jurisdictional
element in a field heavily dominated by one profession, a scenario hypothesized when one profession’s scope is overly broad or when unfilled market niches exist (Abbott, 1988). Hygienists challenged the core institutional logics in order to create a legitimate space for new forms of care delivery. Ultimately, the change process entailed two competing professions advancing fundamentally different perspectives about the nature of professionalism and the problems facing the dental field. This difference in theorization, or problem definition and solution proposal, is consistent with literature on the activities of professional organizations in relationship to institutional change (Greenwood, et al., 2002).

In this case, the theorization aligned with the interpretive schemes underpinning the alternative forms of care delivery; hygienists theorized access to care as the problem to be solved and community-based preventive care delivered by independent dental hygienists as the solution. Dentists, on the other hand, theorized the breakup of the traditional office form as the problem and reinforced the view of the private, professionally managed care system as the solution. The primacy of this conflict in the professional arena reinforces the finding that no major external shock to the delivery system instigated the change; rather, the professions within dentistry were left to themselves to debate appropriate forms of care delivery. Professional legitimacy is essential in the health care environment for both normative and regulatory reasons, so although these debates may push new concepts within professionalism, they are unlikely to challenge the ideology of professional control.

Finally, the vast majority of the conflict that occurred over this process concerned the legitimacy of testing out new modes of care delivery. The success of this testing
process was paramount, as it has further legitimated piloting new models and opened the door further for other actors seeking to exercise power in the field. The process of trying new forms of care delivery is likely to continue, particularly since the organizational field dynamics have shifted away from hegemonic to more contested dynamics of field control. Currently, new proposals in the dental policy arena are focused on developing midlevel dental providers. This focus is a pathway that this case study has shown to require extensive political maneuvering and resources, highlighting the limitations of organizational change processes that are tightly tied to models of professional control.

The outcome of this process has been the development of a new profession and a new organizational form. Although it is clear that a transformation to a new alternative practice archetype has occurred in California, this new archetype is likely still an unresolved excursion in terms of the three “tracks of change” predicted in the archetype framework. There are several reasons that this new archetype remains unresolved. RDHAPs fill a small niche (e.g., long-term care, underserved communities) that is segmented from the traditional office-based dental care market. Although the new providers are legal, their marginal position has limited their ability to address structural impediments to the full institutionalization of their practice model. Therefore, dentists have maintained their traditional organizational form, and this traditional form garners the vast majority of field-level resources.

This analysis of the impetus, process, and outcomes of change points to a contradiction between the potential for innovation and the sustainability of change efforts at the margins of a system. In this case, innovation by RDHAPs has led to flexibility in care delivery, insights into the drawbacks of the current financing system, and exposure
of vast quantities of uncared-for dental disease and has opened new collaborative pathways between health care and dental care systems. Since this care delivery model is filling a previously unmet need for individuals with dental disease, it has great potential to expand. However, the limitation of this particular model to California means that there is little potential for its national acceptance and growth unless all 49 other states legislate the exact same professional model. Although similar dental hygiene efforts in other states exist, they are not in the same legal form, nor do they use the same educational process. These similar efforts contribute to the overall strength of the alternative archetype in theory, but in practical terms the division of each individual regulatory model of this type of hygiene practice keeps the efforts segmented and underresourced.

The case has shown how field incumbents with a profitable monopoly have little incentive to change, even if challengers at the margins are developing new pathways to make innovation possible. Many of these patients in the margins need restorative care but are still unable to get it either because dental providers are unwilling to collaborate with RDHAPs (or unaware of how to do so) or because patients simply are unable to afford or attain care as delivered in the traditional organizational form. As hygiene transitions to become a more established profession and begins to command more legitimacy and resources, hygienists become field incumbents bringing into question their ability to continue to act as institutional entrepreneurs.

**Ongoing Considerations**

The current dental care environment, like the broader health care environment, is on the verge of potentially rapid change. Faced with ongoing access-to-care problems, increasing health disparities, advances in science and technology, and changing economic
and political conditions, the professions and policy makers are actively searching out new oral health care solutions. A central question being raised within this context concerns the sufficiency of the current oral health care work force to meet population’s needs. A question not being asked is what type of organization of care can be most effective for addressing the field-level problems.

Dental hygiene as a profession has advanced significantly since 1979. The challenges launched and the new organizational forms advanced as part of the professionalization process arguably have resulted in improvements in underserved patients’ access to preventive care. However, the potential for furthering innovative organizational forms only through the professionalization efforts is likely to be relatively limited given its highly political nature. Although similar expansions have occurred for the roles of nurses, allied health providers, and mental health professionals, much of these changes have come through a shift to bureaucratic or managerial logics and have not come solely from interprofessional battles (W. Richard Scott, 2000). Other possible avenues of innovation and improvement may be feasible to enhance access to care, improve quality, and ensure affordability. These options would require that professions stop fighting about who does what and start working together to redesign the practice model for dental care.

First, the existing delivery system must be studied more closely in light of current standards for professional health care services: What are clinical standards and quality of care? How are these measured and reported? What are the health outcomes that these standards produce? A focus solely on improving access to care for underserved populations has led to an overemphasis on utilization to the detriment of studying the
basic effectiveness of care provided for the average consumer. As the analysis of the archetype shows, intraprofessional judgment remains the standard for evaluation, making quality and effectiveness reporting almost nonexistent for the public. Comparative effectiveness research among organizational models of care, an area in which the federal government is investing heavily, cannot be done if there is no basic effectiveness research to compare. Payers and consumers have little data from which to make demands or coverage decisions in the current system of care. And finally, suggestions for new models become overly politicized because they are viewed only as jurisdictional incursions and not as improvements in organizational design.

Second, when one is designing potential system improvements, there needs to be a shift of focus to putting patients’ needs and realities at the center of the change process. The practice models designed by RDHAPs have had to do this out of necessity. The result has been a new organizational form that is a radical departure from even the one envisioned by the original group of hygienists who sought independent practice. American society has become increasingly diverse and will require a diverse set of solutions to address all the oral health needs of individuals. The alternative practice organizational form points to some avenues that may be ripe for further exploration in developing new models of professional care delivery, developing new strategies for collaboration and care management between health and social service providers, and using technological innovations in mobile equipment and electronic dental records to reach out to patients. Models such as these may be best tested in community health centers, health commons, or organizations functioning as a health care home (Beetstra, et al., 2002). Finally, new systems must empower consumers to gain more understanding of
their oral health and their dental care options. RDHAPs spend extensive time providing patient and caregiver education, an effort that is essential for equipping patients with tools for disease prevention.

Third, experimentation with new organizational forms should be encouraged and evaluated on the ability to improve access, affordability, quality of care, and production of health outcomes, not just economic sustainability. Incumbent providers’ philosophical disagreement about new delivery models is an inappropriate reason for restricting innovation. The regulatory system only licenses and monitors professions for the safety of the public, not for these broader goals, regardless of the potential for innovations. Gaining legal status is the large first hurdle for any emerging profession to overcome, after which the real work of improving health care services can begin. The HMPP program is available to enable groups seeking to launch these projects, at least in California. Yet the long history of successful pilot projects has not resulted in significant care delivery system improvements. Academic dentistry could help with this “technology transfer” by leading the way in designing the science, systems, and work force to support new organizational forms. Finally, the logic of American exceptionalism that permeates organized dentistry has led to payment systems that align with the dentists’ prerogative regardless of the effectiveness of care. This logic has been recreated in the alternative practice archetype, perpetuating the lack of transparency around the quality and effectiveness of dental care. Payers should align their benefit packages with models that produce the most overall health, not simply the most treatment.

The ability to implement the recommended changes is unlikely to come about without ongoing debates and differences of opinion about the appropriate role of the
professions in relation to regulators, consumers, payers, and policy makers. Unlike when the movement for independent practice began, in 2010, a number of powerful actors have taken up the issue of oral health. In addition, the recently passed historic federal health care reform legislation, *The Patient Protection and Affordable Care Act of 2010*, contains a host of provisions that will impact the dental delivery system. These external influences may be necessary to spur innovation within the organization of dental care as it is highly unlikely that innovations will play out in private practice due to the isolation and inertia of this organizational form. The RDHAP experience has shown the field that alignment with other actors, a social imperative, and integration with broader systems of care are underpinning logics that can motivate, enable, and garner resources to enact meaningful organizational change.

In the health care arena, where many of the tasks of practitioners are legislated, innovation and improvements in the practice model are muted by professional prerogative and adherence to tradition as much as they are limited by regulation, financing, technology, or consumer preferences (O'Neil, 2010). Less politicization of innovation is necessary if we are to improve the health of the public and meet our nation’s health care goals. This study has shown, in one small case, a situation in which the data on the effectiveness of a new practice model prevailed, and now many individuals are being afforded dental care that they otherwise would have gone without.

**Contributions and Next Steps**

This study makes several contributions to medical sociology. First, the roles of professions in society have been studied from a number of angles, as have the organizational dynamics in the field of health care. However, very little sociological work
on professions or organizations has focused on the topic of dentistry or oral health. Oral health is an essential component of overall health and well-being. The fact that so many people suffer untreated dental disease is just one reason that this social arena is an important site for sociological work.

Second, the traditional framework of the sociology of professions helps us understand the jurisdictional battles for control and power over care delivery but not the structure of the care delivery model. This case study has shown that the professional dynamics in the dental field have played a major role in determining the organizational outcomes of dental care. This study is one of the first to examine the professional dynamics in the organizational field of dentistry from within an institutional framework, identifying change over time in professional dominance, institutional logics, and archetypal organizational forms. This conceptual model may prove fruitful to those looking at other emerging professions in health care such as nursing, mental health, and social work.

Third, studies of organizational change have grappled with trying to understand the embedded agency of actors within institutional fields. This study is the first to explicitly look at the professionalization of an emerging occupation as a process of institutional entrepreneurship. This study contributes a new conceptual model for understanding this process that may be tested in other fields and cases. In doing so, the actions of emerging professions can be linked to changes in organizational form. Finally, the study examines the emergence of a new organizational form in dental care and its connection to wider dynamics in the institutional field of American dentistry. The full
institutionalization of this new form has not yet been accomplished, so ongoing study of the field may help to further illuminate this continuing process.

This study has demonstrated that using the concepts of archetypes, the tracking of change, and institutional entrepreneurship can be used to study ongoing organizational change as initiated externally or internally by emerging actors in a field. The case examines dentistry; however, it also has relevance to many other sectors of health and social life in which the professions dominate. Great potential exists for the future use of this model both in California with respect to the RDHAP and nationally with respect to broader change efforts underway in the field. A number of questions and areas for consideration have been raised in this study and are briefly outlined below.

1. What are the dynamics of organizational change processes in dentistry initiated by actors other than an emerging profession?
2. What have been the outcomes of new organizational forms for patients and communities in which these changes have occurred?
3. What are the levels of resources and legitimacy needed for a new organizational form to become fully institutionalized?
4. What is the implication of the 50-state regulatory structure of the institutional field for ongoing adaptation and adoption of new work force or organizational forms across the United States?
5. How has the nature of professionalism changed in dentistry (or has it?) in comparison with changing perceptions of professional accountability and transparency in society?
6. What of the monopoly of dental education and its influence over the training and supply of alternative dental care providers?

Looking Forward

Future change efforts in the oral health care field may come from different factions and may have different potential impacts. They may come from the ongoing actions of RDHAPs, from the wider field of dental hygiene or other dental professions, or from external forces. This case has demonstrated a way to understand the dynamics of change based on the fluctuating economic and political contexts of these efforts, the position of the change advocates in the field, the resources and strategies those advocates can bring to bear, and the tensions among the proposals, organizational adaptation, and ability to measure outcomes.

Further institutionalization of this model could occur along a number of pathways. One possible scenario is for independent practice to become unrestricted, allowing for full competition between hygienists and dentists in the professional marketplace. This development would involve another significant legislative battle but not an HMPP as the current practice data has already demonstrated the safety of independent practice hygiene. A second possible scenario is for RDHAPs to move away from the entrepreneurial model and become employed by health care organizations that seek to better serve the oral health needs of their patient populations. These could be public health organizations, community health centers, or integrated medical systems like Kaiser Permanente. These two possible scenarios would differ in their impact on the professional project of hygiene but would each continue to challenge the traditional logics and archetype of U.S. dentistry.
The California political battle for independent hygiene practice contributed to the legitimacy and sophistication of the broader dental hygiene movement, which in turn has supported similar, but disjointed, efforts around the nation. Continued challenges from organized dental hygiene are likely to remain one of the more significant internal drivers of change in the field. As well, change may come from the efforts of public and community health dentists seeking legitimacy and resources for public sector care. The large investments coming to the Federally Qualified Health Center system from the 2010 health reform bill combined with the earlier 2002 mandate for new health centers or health center expansions to include dental services will provide a large set of structures and systems to support this alternative public model, making this scenario increasingly likely.

Meanwhile, organized dentistry continues to play a very significant role in the field and is advancing new workforce and system design proposals of its own. Some of these dentists, challenged by the current economic environment, are developing alternatives to the private practice delivery model such as through the creation of mobile dental service companies. It is unlikely that other emerging occupations in the field (denturists, assistants, technicians) will be able to repeat the challenge presented by hygienists as these groups are not undergoing a process of professionalization. It is unclear as to how new professionally driven changes will play out for RDHAPs; ultimately it may depend on whether these innovations leverage the RDHAP model or seek to displace it.

Potential avenues of institutional change, as in this case, may be spurred from inside the organizational and professional fields, yet pressures from external factors may
also play a role in future change. There are a number of external actors seeking to impact the organizational field today that were less active when the RDHAP was launched, including the National Institute of Dental and Craniofacial Research (NIDCR) in the realm of science, the Health Resources and Services Administration (HRSA) in the realm of public sector practice, academic dentistry in the realm of training, and a number of large philanthropic organizations in the realm of access to care and general system design and performance. These groups are some of the forces in a rapidly changing health care environment that, given the new reform legislation, are likely to continue. The current pressures for change coming both internally and externally in the field portend the continuation of professional debates and the evolution of new organizational forms.

The organizational field of dental care sits at the precipice between the past and future. Professional control over the field is still judged by the providers’ level of autonomy, a standard that is increasingly disconnected from modern conceptions of professionalism in health care (Evetts, 2006). The internal field challenges, such as those waged by dental hygienists, have created breaks in the institutional logics but have only found success in the margins. The importance of oral health is increasingly tied to its impact on overall health and well-being, yet the tools and transparency needed for organizations to make those connections and garner legitimacy and resources are unavailable. The ability of the current care system to be innovative within current organizational forms, much less to solve the intractable problems of access to care and oral health disparities, is far from clear. This study explores one case that produced limited but positive results and outlined a framework for examining the impact of future changes, many of which are sure to be realized.
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We listened to all concerned [Memo] (1993). CDHA RDHAP Archive, Glendale, CA.


NOTES

1. I was the principal investigator on the original study completed in 2008. It was funded by the California Program on Access to Care (CPAC), a program of the California Policy Research Council, which is a division of the Office of the President, University of California, and was approved by the UCSF Committee on Human Research.

2. I was the principal investigator on the original study completed in 2008. It was funded by the California Program on Access to Care (CPAC), a program of the California Policy Research Council, which is a division of the Office of the President, University of California, and was approved by the UCSF Committee on Human Research.

3. I was a coprincipal investigator in 2005–2006 on this study, which was funded by the California Dental Association and approved by the UCSF Committee on Human Research.

4. I was a principal investigator in 2009 on this study, which was funded by the University of the Pacific Center for Special Care and was approved by the UCSF Committee on Human Research.

5. RUCAs, rural-urban commuting area codes, are a new census tract–based classification scheme that utilizes the standard Bureau of the Census urbanized area and urban cluster definitions in combination with work commuting information to characterize all of the nation's census tracts regarding their rural and urban status and relationships. In addition, a ZIP Code RUCA approximation was developed. For more information, see http://depts.washington.edu/uwruca/

6. A 1988 commentary in the Journal of Public Health Dentistry (Vol.48, number 2) notes that “Americans have been socialized to rank the provision of personal dental
services as most important, while dentists recognize the validity of other individual behaviors and environmental contributions to oral health” (p. 82).

7. Organizational administrators and bureaucrats found in health care who have the power to mediate the patient-provider relationship through setting policy are, for example, hospital executives, group plan leadership, or physician executives. With the exception of payment-plan administrators for dental benefits, there are not generally organizational bureaucrats found in private practice dentistry, dentistry’s predominant form. In community health centers, the Indian Health Service, the military, and the Veterans Health Administration are exceptions in which bureaucratic or nondenrist administration may have power or sway over dental service delivery.

14. Personal Communication, Howard Pollick (2009). Other sources for information are The Dental Insurance Company (TDIC) and http://www.thedentists.com
16. Some specialty associations require membership in the ADA while others do not.
19. This point was highlighted at a 2009 Conference on Quality in Oral Health hosted in San Jose by the Institute for Oral Health. The consensus was that few quality measures were available or used and that as a clinical science the field was decades behind the rest of medicine in being able to show quality and outcomes of clinical interventions. Of particular note is the fact that there are no diagnostic codes in dentistry—hence no ability to do basic outcomes research.


24. Dental hygiene’s body of knowledge is limited by four factors: 1) it is not generated by its own membership, 2) it lacks depth and breadth, 3) it is unable to actually address the outcome of oral health, and 4) it has more of a focus on technical skill than on broad epistemic knowledge.

25. This term is found in various articles throughout the CDA Journal from 1978 to 1985, and refers to the downturn in dental demand that led to dentists not being “busy” enough. For example, see the editorial “Demand vs. Need” (April 1978); K. Follmar, “The Busyness Problem: Can CDA Solve It?” (1981); or Davis and Feiner, “Dental Manpower Survey Results” (1982).

26. Various articles, editorials, and news updates throughout the CDA Journal attest to these issues in the timeframe 1978–1985. For example, see “Professional Ethics, A challenge for the 1980s” (February 1982).

28. Denturists (1982) are specialty technicians whose sole focus is the measurement, fabrication, and fitting of dentures. They are legal in a handful of states, yet they have been fought by organized dentistry, which prefers to do the diagnosis, measurement, and fitting of dentures as part of regular dental visits.

29. Krol’s case was highlighted as an exception—she was not seen as practicing in an independent office since she had met the conditions of the court settlement. CDA repeatedly mentions in its publications that she is not really independent and that she is not setting any precedent; rather, it feels that she is stretching the rules. The rules are clarified in subsequent articles on the changing status of auxiliary employees.

30. A tax-deferred pension plan available to self-employed individuals or unincorporated businesses for retirement purposes. A Keogh plan can be set up as either a defined-benefit or a defined-contribution plan, although most plans are defined contribution. Contributions are generally tax deductible. Keogh plans were established through legislation by Congress in 1962. As with other qualified retirement accounts, funds can be accessed by a person as early as age 59.5, and withdrawals must begin by age 70.5.


32. Interview #11 (2009).

33. Interview #10 (2009).

34. Interview #11 (2009).

35. Interview #11 (2009).


37. Interview #11 (2009).


41. Interview #11 (2009).

42. Interview #11 (2009).

43. Assemblyman Rusty Areias took an interest in the three women who were part of the pilot in his district, and he ultimately wrote many letters of support and sponsored several rounds of legislation to make independent practice legal. Multiple sources: CDHA RDHAP Archive.

44. Interview #11 (2009).

45. At the time when this study was being conducted, the Institute of Medicine had released “Allied Health Services: Avoiding Crises,” which argued that in dentistry neither a body of evidence nor informed judgments of disinterested parties were available for guidance on cost, quality, and access-to-care issues. This report was a major impetus for researchers to participate in this evaluation as it would be one of the first to provide sound evidence to be used in legislative decisions.

46. Interview #11 (2009).

47. The RDHAP Archive and newspaper search revealed primarily articles and letters to the editor that express the public’s support of the project. The letters and articles against the project were primarily from dentists and organized dentistry.


49. Interview #11 (2009).

50. In early 1987 the ADHA requested information from the dental boards of every state about the status of hygienists in their states and asked whether there had been any cases
of public complaint or disciplinary action against hygienists. None of the state boards that responded (14 letters are in the archive) reported any complaints against hygienists working under general supervision (ADHA, letter to Laurelyn Borst, August 27, 1987).

51. This change hinged on the court’s definition of CSNU as a public institution. Originally the court had ruled that since CSNU was not a state institution, it did not have to hold a public hearing. Later the court ruled that it was in fact a public institution and did have to hold the hearing.

52. Interview #7 (2007).


54. In almost every single interview conducted with RDHAPs between 2005 and 2009, this term (under the radar) was used to describe how they function. The key to success was regarded as being seen and heard as little as possible.

55. Interview #11 (2009).

56. Personal communication, Dorothy Perry, 2009.

57. Interview #13 (2007).

58. Except in cases in which a letter to the editor was signed or an association representative was interviewed, very few dentists who spoke out against hygienists would reveal their identities.


60. Of the articles in the archive and search for the year 1987, 24 were “neutral” on the topic while 25 were positive toward the dental hygiene side of the story.

61. Examples of 1987–1990 news article titles: “Hygienists for freedom taste victory,” “Hygienists win right to work on their own,” “Dentists, hygienists fight tooth and nail
over new program,” “Groups bare fangs over tooth care,” and “Dentists gnash teeth over program.”


64. RDHAP Archive Section AB2352 contains multiple examples of letters of support.

65. RDHAP Archive Section AB221.


67. Personal communication, Robert Isman (2010). W&I Code Sec 14132(q)(2). "All dental hygiene services provided by a registered dental hygienist in alternative practice pursuant to Sections 1768 and 1770 of the Business and Professions Code may be covered as long as they are within the scope of Denti-Cal benefits and they are necessary services provided by a registered dental hygienist in alternative practice."

68. RDHAP Archive section on AB2353 contains supportive press from most major newspapers in the state.

69. RDHAP Archive section on AB2353 contains 18 examples of supportive press, editorials, and copies of letters sent to committee members supporting the bill. The only negative press the bill received came in response letters to supportive editorials by local
dentists. The press was generally very negative toward dentists and framed the issue as a free enterprise issue and one of social justice and freedom for hygienists.

70. Personal communication, Dorothy Perry, November 24, 2009.

71. Interview #9 (2008).

72. http://dental.pacific.edu/Community_Involvement/Pacific_Center_for_Special_Care.html


74. Personal communication, Maureen Harrington, 2009.

75. Differences reported are all statistically significant at the P<0.05 level.

76. RDHAPs may perform any procedures that require only general supervision as an RDH. Procedures such as administering anesthesia, which requires direct supervision of RDHs, may not be performed by an RDHAP.

77. The 2005 survey was administered prior to RDHs’ being allowed self-regulation by the dental hygiene committee of California.

78. Interview #1 (2007).

79. Interview #1 (2007).


83. Interview #6 (2007).

84. Interview #1 (2007).

85. Interview #3 (2007).
86. Interview #5 (2007).
87. Interview #3 (2007).
88. Comment provided on 2009 RDHAP survey.
89. http://www.dhcc.ca.gov/
90. Interview #2 (2007).
91. 2009 RDHAP survey comments.
92. Comment provided on 2009 RDHAP survey.
94. Just as dental hygiene has worked to expand its own standards and scope of practice, it has also supported laws restricting dental assistants, denturists, and dental students from encroaching into its defined jurisdiction. CDHA and ADHA Policies. See SB2022 (2008) in California as example of jurisdictional protection against assisting.
95. Interview #11, 2009.
96. Interview #10, 2009.
98. Interview #11, 2009.
100. Interview #10, 2009.
102. Interview #11, 2009.
103. Interview #11, 2009.
105. Interviews #11 and #13, 2009.
106. CDHA RDHAP Archive sources.


108. In a number of the archival documents, hygiene education was framed regarding the dentists’ intention, which was that hygienists were to be educated to work under supervision only.


110. See testimony of the ADA president regarding dental therapists.


APPENDIX A: INTERVIEW GUIDES

RDHAP interview guide

Overview: This focus group/individual interview is part of a study of RDHAPs that is concerned with how current education, payment systems, and public policy is contributing to or detracting from RDHAPs ability to increase access to dental services.

Topic: General Experience

1. What has been your general experience becoming and practicing as an AP?

Topic: Motivators for RDHAP

2. What originally drew you to be dental hygienist?

3. What motivated you to get an AP license? What is your vision for the future of your RDHAP practice?

Topic: Current Practice

4. Are you currently working as an RDHAP full time? Why or why not?

5. How is your time doing RDHAP work spent?

6. How did you find (or create) your AP job? What are easy vs. difficult areas/settings to find RDHAP work in?

7. Are you practicing within your full scope of practice, or are there certain activities you tend to do more or less? Is this correlated with your location/patients? Do you have interest expanding your scope? If so, how?

8. What, if any, collaborations have you formed in service of patient care and why?
Topic: Financial Issues

9. What is the financial status of your RDHAP practice?

10. How do the salary and benefits compare to working as an RDH in a private practice?

What are the pros and cons financially of RDHAP practice?

11. (If the financial outlook is negative) What suggestions do you have for improving the financial outlook of RDHAP practice?

Topic: Access to Care/Patient Population

12. Can you provide a general description of your patient population? (demographic, socioeconomic, insurance status, health status) How do you feel about working with these patients?

13. Is your current patient population different than your patient population prior to becoming an RDHAP? If so, how? If not, why not?

14. Do you feel that RDHAP practice is increasing access to care for underserved populations? Why or why not?

Topic: Professional Issues

15. How do you feel the work the RDHAPs are doing fits into the overall national movement to increase access?

16. How do you see the RDHAPs impacting the future of dental hygiene?

17. Do you think the dominance of women in dental hygiene has an impact on public policy and processes?

18. How do you see public policy (broadly defined as laws, regulations, administrative issues and payment mechanisms) supporting or detracting from RDHAP practice?

19. Are there any specific policies that enhance or detract from your ability to:
a. Practice as an RDHAP  
b. Increase access to care  
c. Work in certain settings  
d. Provide quality services

Topic: RDHAP Education

20. Which RDHAP program did you graduate from?

21. How would you describe your experience in the RDHAP education program?

22. Do you feel your RDHAP education prepared you for AP practice? How or how not?

23. What kinds of opportunities do you feel that you have with an AP degree?

Interview guide – Education programs

Program

1. Why did your school decide to host the RHDAP program?

2. What factors played into the role for it to be (in person, distance learning) and how does that distinguish you from the other program?

3. What do the participants go away with? A certificate? Degree? Why is this the case?

4. How was the content developed?

5. Has the content evolved?

Applicants

1. Who is coming to the program?

2. What are their motivators?

3. How do they do in the program? What strengths and weaknesses do they bring – how does this translate to coursework?
Graduates

1. What are your graduates doing?
2. How do they find their jobs?
3. What role does the school play in placement?
4. Do you provide CE?
5. What types of policies (in education or practice) would help RDHAPs advance?

**Interview guide – Key informants and historical players**

These will be unstructured and open ended interviews starting from:

1. Tell me about your personal or organizational involvement in the development of the RDHAP
2. What do you see as the successes?
3. What do you see as the failures?
4. What do you see as the potential for future contributions to improving oral health?

**Interview guide – organizations employing or collaborating with RDHAPs**

These will be unstructured and open ended interviews

1. Tell me about your personal or organizational involvement working with RDHAPs
2. What do you see as the successes of this work?
3. What do you see as the challenges of this work?
4. What kinds of outcomes are you finding for your patients?
5. What do you see as the potential for future contributions to improving oral health?
APPENDIX B: SURVEY INSTRUMENTS

UCSF Center for California Health Workforce Studies
2005 Survey of Dental Hygiene Practice

UNLESS OTHERWISE SPECIFIED, PLEASE CHECK THE SINGLE BEST ANSWER FOR EACH QUESTION
To fill the survey out online please go to http://futurehealth.ucsf.edu/RDH/
You will need to enter the code attached on the back cover.

A. Personal Background Information

1. Year of birth ________________

2. Gender □ Female □ Male

3. Are you of Hispanic origin? □ Yes □ No

4. Race: □ American Indian / Alaska Native □ Asian □ African American
   (Check all that apply) □ Native Hawaiian / Pacific Islander □ White □ Other __________

5. Marital status: □ Divorced / Separated □ Married / Partner □ Single □ Widowed

6. Do you have dependent children in your household? □ Yes □ No
   If yes, how many are:
   0-5 years ______ 6-12 years ______ 13-18 years ______ 18+ ______

7. In what languages besides English can you functionally communicate with patients? ________________

B. Education and Licensure

1. What is your highest level of formal education attained (hygiene or other)?
   □ Certificate □ Associate □ Bacaleuate □ Masters □ Doctoral

2. In what year and state were you first licensed as a dental hygienist? ________ Year ________ State

3. Are you currently enrolled in a degree or certificate granting program in the health care field?
   □ No □ Yes → If Yes, which category below best describes the education you are pursuing?
   □ RDHAP / RDHEF □ DDS □ MPH □ Other (Please specify ________________________)

4. How likely is it that in the next five years you will pursue education and licensure as a Registered Dental Hygienist in Extended Function (RDHEF)?
   Not likely Somewhat unlikely Somewhat likely Very likely Not sure what RDHEF licensure is
   □ 1 □ 2 □ 3 □ 4 □ 5

5. Are you currently practicing as a Registered Dental Hygienist in Alternative Practice (RDHAP)?
   □ Yes → in what setting(s)? □ Schools □ Dental Health Professional Shortage Area
   □ No □ Residential facility □ Other institution
   □ Private practice □ Residents of the homebound
   □ Other (specify): ___________________________
C. Employment in Dental Hygiene

1. Are you currently practicing any dental hygiene in California?

☐: Yes (if yes, please specify your primary practice activity below)

☐: My primary dental hygiene activity is clinical practice ➤ PLEASE SKIP TO SECTION D BELOW

☐: My primary dental hygiene activity is non-clinical (i.e., administrative, teaching, research)

➤ PLEASE SKIP TO SECTION H ON PAGE 7

☐: No, I no longer practice dental hygiene.

Why? (Please rank your top 3 reasons: 1=Highest 3=Lowest)

   _a) Change of career within dentistry _l) Lack of decision-making authority
   _b) Change of career outside of dentistry _m) Lack of opportunities to advance
   _c) Family responsibilities-children _n) Lack of respect from employer
   _d) Family responsibilities-other than children _o) Personal dissatisfaction with career choice
   _e) Fear of infectious disease _p) Return to school / studies
   _f) Inadequate salary _q) Physical/ergonomic reasons
   _g) Inconvenient location of work _r) Other(specify)_____________________________
   _h) Job-related injury or disability
   _i) Lack of benefits

2. If you are NOT currently practicing dental hygiene, do you plan to return to dental hygiene practice within the next 5 years?

☐: Yes ☐: No

IF YOU ARE NOT CURRENTLY PRACTICING DENTAL HYGIENE PLEASE STOP HERE AND RETURN THE SURVEY IN THE ENVELOPE ENCLOSED. IF YOU WOULD LIKE TO MAKE ADDITIONAL COMMENTS OR SIGN UP FOR NOTIFICATION OF THE SURVEY RESULT YOU CAN DO SO ON PAGE 11. THANK YOU FOR YOUR TIME AND CANDOR!

D. Clinical Dental Hygiene Practice

1. Of the 52 weeks in the past 12 months, how many weeks did you actually work? ___________ weeks

2. On average, in the past 12 months, how many days per week did you work? ___________ days per week

3. Are you actively looking for additional clinical dental hygiene work?

☐: Yes – How many additional hours per week? ___________ hours

☐: No

4. How long ago did you last actively seek a clinical dental hygiene position? _______ months (or) _______ years

5. How long did it take you to find a dental hygiene job the last time you searched?

   #_________ months (or) #_________ weeks (or) #_________ days

6. Rate your difficulty finding a position when you last sought employment as a clinical dental hygienist.

   No Difficulty Some Difficulty Difficult Extremely Difficult

   ☐, ☐, ☐, ☐,
7. What kind(s) of difficulty (if any) did you have when you last sought employment as a clinical dental hygienist? (Check all that apply)
   □ None
   □ Looking only for full-time employment and couldn’t find it
   □ Looking only for part-time employment and couldn’t find it
   □ The day I needed was unavailable
   □ Inadequate salary
   □ Inadequate benefits
   □ Unsatisfactory work environment
   □ Travel time / distance too great
   □ Other (specify ____________________________ )

8. What is your opinion about the number of dental hygienists in your community?
   □ Too many  □ Adequate number  □ Not enough

9. How many more years do you plan to continue practicing clinical dental hygiene?
   □ Less than 2 years  □ 2-5 years  □ 6-10 years  □ 10+ years

E. Patient Characteristics

1. On average, how many patients do you see in a typical eight hour day? _____

2. Please estimate, of the total patients you see in your chairs, what percent do you have difficulty communicating with due to language barriers? _____%

3. Please estimate, of the total patients you see in your chair(s), what percent are: (Answer A & B)
   A. 1) African American _____ %             B. 1) Children age 0-1 _____ %
       2) American Indian _____ %            2) Children age 2-5 _____ %
       3) Asian/Pacific Islander _____ %      3) Children age 6-17 _____ %
       4) Hispanic/Latino _____ %            4) Adults age 18-64 _____ %
       5) White _____ %                     5) Adults age 65+ _____ %
       6) Other _____ %                     TOTAL 100%

4. Please estimate, of the total patients you see in your chair(s), what percent are:
   A. Medically compromised _____ %
   B. Developmentally disabled _____ %
   C. Mentally ill _____ %
   D. A severe behavior management challenge _____ %

F. Practice Characteristics

On the next two pages please respond for your main practice site(s).
For each location in which you currently work as a dental hygienist please complete the following:

<table>
<thead>
<tr>
<th>Practice Location 1</th>
</tr>
</thead>
</table>
| a. Address of each practice  
(as with all survey information, this information will remain confidential) |
<p>| Street: ____________________________ |
| City: _____________________________ |
| State: ____________________________ |
| Zip: _____________________________ |
| b. How many hours/week do you work in each location? |
| __________________ hours / week |
| c. Type of work setting for each location (choose only one) |
| Private office |
| Hospital |
| Indian Health Service |
| Military / VA |
| Nursing home / Long term care facility |
| Prison |
| Public / community health / rural clinic |
| School |
| Teaching / Research |
| Other non-clinical setting |
| Other __________________ |
| d. What type of practice is each location? |
| General Practice |
| Periodontic Practice |
| Pediatric Practice |
| Other __________________ |
| e. How many RDHs (including you) are employed in this setting? |
| (#) Full-time positions (32+ hours / week) |
| (#) Part-time positions (Less than 32 hours / week) |
| Don't Know |
| f. How many RDH vacancies is this organization currently recruiting for? |
| (#) Full-time vacancies (32+ hours / week) |
| (#) Part-time vacancies (Less than 32 hours / week) |
| Don't Know |
| g. Are you employed directly or through a third party such as a temporary service or contract agency? |
| a. [ ] Employed directly |
| [ ] Employed through a third party |
| [ ] Don't Know |
| h. What type of benefits do you receive with this position? (Check all that apply) |
| [ ] Continuing Ed. support |
| [ ] Dental care/coverage |
| [ ] Disability insurance |
| [ ] Medical insurance |
| [ ] Paid liability/malpractice insurance |
| [ ] Paid sick leave |
| [ ] Paid vacation |
| [ ] Production bonus |
| [ ] Paid professional dues |
| [ ] Retirement/pension plan |
| [ ] Other __________________ |
| i. What is your hourly wage? |
| $ _______ per hour |
| j. How many of each type of dentist work in the practice? |
| [ ] General Dentist |
| [ ] Specialist (type): |
| [ ] No Dentist |
| k. Do you consult with any health care providers outside your primary team in your patient's care? (Check all that apply) |
| [ ] Dental Specialist |
| [ ] Physician |
| [ ] Physician Assistant |
| [ ] Nurse Practitioner |
| [ ] Registered Nurse |
| [ ] Nutritionist |
| [ ] Other __________________ |
| [ ] None |
| l. How long have you worked at this location? |
| ________ years ________ months |</p>
<table>
<thead>
<tr>
<th>Practice Location 2</th>
<th>Practice Location 3</th>
</tr>
</thead>
<tbody>
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<td><strong>Street:</strong></td>
<td><strong>Street:</strong></td>
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<td><strong>City:</strong></td>
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<td><strong>State:</strong></td>
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<td><strong>Zip:</strong></td>
<td><strong>Zip:</strong></td>
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<td><strong>Hours / week</strong></td>
<td><strong>Hours / week</strong></td>
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<td>□ Private office</td>
<td>□ Private office</td>
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<td>□ Hospital</td>
<td>□ Hospital</td>
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<td>□ Indian Health Service</td>
<td>□ Indian Health Service</td>
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<td>□ Military / VA</td>
<td>□ Military / VA</td>
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<td>□ Nursing home / Long term care facility</td>
<td>□ Nursing home / Long term care facility</td>
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<td>□ Prison</td>
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<td>□ General Practice</td>
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<td>□ Pediatric Practice</td>
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<td>□ Periodontal Practice</td>
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<td>□ Other</td>
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<td>(#) Full-time positions</td>
<td>(#) Full-time positions</td>
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<td>(#) Part-time positions</td>
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<td>□ Don't Know</td>
<td>□ Don't Know</td>
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<tr>
<td>a. □ Employed Directly</td>
<td>□ Employed Directly</td>
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<tr>
<td>b. Do you have a written contract? □ Yes □ No</td>
<td>□ Employed through a third Party</td>
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<td>□ Yes □ No</td>
<td>□ Yes □ No</td>
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<tr>
<td>□ Continuing Ed. support</td>
<td>□ Continuing Ed. support</td>
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<td>□ Dental care/coverage</td>
<td>□ Dental care/coverage</td>
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<td>□ Disability insurance</td>
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<td>□ Medical insurance</td>
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<td>□ Paid liability/malpractice insurance</td>
<td>□ Paid liability/malpractice insurance</td>
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<td>□ Paid sick leave</td>
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<td>□ Paid vacation</td>
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<td>□ Production bonus</td>
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<td>□ Paid professional dues</td>
<td>□ Paid professional dues</td>
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<td>□ Retirement/pension plan</td>
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<td>□ Other:___________</td>
<td>□ Other:___________</td>
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<td>□ General Dentist</td>
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<td>□ Specialist (type):</td>
<td>□ Specialist (type):</td>
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<td>□ No Dentist</td>
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<td>□ Nurse Practitioner</td>
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<td>□ Registered Nurse</td>
<td>□ Registered Nurse</td>
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<tr>
<td>□ Nutritionist</td>
<td>□ Nutritionist</td>
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<td>□ Other:___________</td>
<td>□ Other:___________</td>
</tr>
<tr>
<td>□ None</td>
<td>□ None</td>
</tr>
<tr>
<td>_______ years _______ months</td>
<td>_______ years _______ months</td>
</tr>
</tbody>
</table>
### G. Scope of work

1. In your dental hygiene practice, do you personally do the following procedures?

<table>
<thead>
<tr>
<th>Category</th>
<th>Procedure</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic</td>
<td>Dental hygiene exam</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Periodontal charting</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oral cancer screening</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impressions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dental hygiene treatment planning</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X-rays – standard</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intra-oral cameras &amp; photography</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brush biopsy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Take blood pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Review medical history of patient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preventive</td>
<td>General education and counseling</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nutritional education and counseling</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tobacco education and counseling</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prophylaxis (can include therapeutic)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fluoride treatment (varnish, rinse or traditional)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sealant applications</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anti-microbial placements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Therapeutic</td>
<td>Scaling and root planing</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Apply de-sensitizing agents</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Periodontal soft tissue curettage</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ultrasonic scaler</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restorative</td>
<td>Polishing restorations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Curing restorations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Temporary restorations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Crown sizing / temporary cementing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgical</td>
<td>Administer anesthesia</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Administer nitrous oxide</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remove sutures</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Surgical assisting</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Place and remove dressings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cosmetic</td>
<td>Fabricating impressions for whitening / bleaching trays</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Light activation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Do you currently apply sealants and/or fluoride in public health or school-based programs?
   - Yes
   - No

3. Do you do provide clinical dental hygiene services in a volunteer capacity?
   - Yes
   - No

   If yes, where? ___________________________  Hours per month __________
H. Work Hours and Activities

1. During a typical practice week, how many hours do you spend in the following activities?
   a) Direct patient care
   b) Administration (office management, other administrative activities)
   c) Public health activities (community-based, not direct patient care)
   d) Teaching (in an academic setting)
   e) Research (in an academic or government setting)
   f) Other professional activities (please describe:______________________)

   TOTAL (add above items, this should be your weekly average hours of work)

I. Job Satisfaction

1. On a scale of 1-5 (1 lowest importance, 5 highest importance), please rate the importance of each of the following factors to your overall job satisfaction:
   - Intelectual stimulation
   - Autonomy
   - Variety of responsibility
   - Income
   - Benefits
   - Professional growth
   - Respect for professional abilities
   - Type of practice
   - Working with people
   - Physical demands
   - Emotional demands
   - Opportunity for advancement
   - Sense of accomplishment
   - Schedule flexibility

2. Please rate your “current” job satisfaction on a scale of 1-5 (1 lowest, 5 highest):
   1. __________ 2. __________ 3. __________ 4. __________ 5

J. Dental Hygiene Professional Issues

1. Are you a member of the American Dental Hygienists’ Association? ☐ Yes ☐ No
2. Are you a member of the California Dental Hygienists’ Association? ☐ Yes ☐ No

Please indicate your level of agreement with the following statements:

As a dental hygienist:

3. I would like to be a self-employed dental hygienist in a setting of my choice working without any supervision requirements by a dentist (e.g. - my own dental hygiene practice, either in an independent office or by contract with another organization such as a school, nursing home, medical office, where I am responsible for all billing & liability).

   Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
As a dental hygienist:

4. In my current practice I would prefer that all procedures I am trained for, including those currently requiring direct supervision, (local anesthesia, nitrous oxide, and periodontal soft tissue curettage) only require general supervision.  
   - Strongly Disagree [ ]  
   - Disagree [ ]  
   - Agree [ ]  
   - Strongly Agree [ ]

5. I would like to have prescriptive authority so that I can prescribe appropriate treatments for my patients directly.  
   - Strongly Disagree [ ]  
   - Disagree [ ]  
   - Agree [ ]  
   - Strongly Agree [ ]

6. I would like to do basic restorative procedures such as placing amalgams or composites and I would be interested in pursing the education necessary to learn and be certified in these skills if this were available to me.  
   - Strongly Disagree [ ]  
   - Disagree [ ]  
   - Agree [ ]  
   - Strongly Agree [ ]

7. I am not practicing to the full extent of my training. In my day-to-day dental hygiene practice I am not using all the skills and/or doing all the procedures I was trained to do in school.  
   - Strongly Disagree [ ]  
   - Disagree [ ]  
   - Agree [ ]  
   - Strongly Agree [ ]

8. I would like to practice dental hygiene in settings outside of a dental office (e.g., nursing homes, schools, public health clinics, medical offices, etc.).  
   - Strongly Disagree [ ]  
   - Disagree [ ]  
   - Agree [ ]  
   - Strongly Agree [ ]

9. I would prefer to be reimbursed for my services directly by insurers or Denti-Cal/Healthy Families rather than using the dentist or another third party to bill.  
   - Strongly Disagree [ ]  
   - Disagree [ ]  
   - Agree [ ]  
   - Strongly Agree [ ]

As a dental hygienist:

10. I am interested in working with disadvantaged patients (i.e., poor, indigent, homebound, medically compromised, developmentally disabled, elderly) although I know this work may pay less than my traditional practice.  
    - Strongly Disagree [ ]  
    - Disagree [ ]  
    - Agree [ ]  
    - Strongly Agree [ ]

11. I am interested in working in a practice in an underserved community (i.e., inner city, rural, migrant) although I know this work may pay less than my traditional practice.  
    - Strongly Disagree [ ]  
    - Disagree [ ]  
    - Agree [ ]  
    - Strongly Agree [ ]

12. I feel that my current work environment is a good fit for my skills and interests.  
    - Strongly Disagree [ ]  
    - Disagree [ ]  
    - Agree [ ]  
    - Strongly Agree [ ]

13. Improving access to dental care for those who have trouble getting services is an important issue that I feel responsible to address in my community.  
    - Strongly Disagree [ ]  
    - Disagree [ ]  
    - Agree [ ]  
    - Strongly Agree [ ]

14. I am happy with the current regulatory structure of the Dental Board of California administering the Committee on Dental Auxiliaries (COMDA).  
    - Strongly Disagree [ ]  
    - Disagree [ ]  
    - Agree [ ]  
    - Strongly Agree [ ]

15. I would agree to increased licensure renewal fees (up to 4 times the current fee of $35 every two years) if this allowed my profession to be regulated by an independent dental hygiene board or bureau instead of by the Dental Board of California.  
    - Strongly Disagree [ ]  
    - Disagree [ ]  
    - Agree [ ]  
    - Strongly Agree [ ]
As a dental hygienist

16. I would like to practice dental hygiene in a setting where I have interaction with other non-dental health professionals (physicians, nurses, nutritionists, etc)  
   - Strongly Disagree  
   - Disagree  
   - Agree  
   - Strongly Agree

17. A loan repayment program is one in which your student loans are partially repaid in return for working for an organization that serves disadvantaged patients or is located in an underserved community. If I had been aware of this opportunity at the time of my graduation I would have agreed to work for 2-4 years in an organization such as this in exchange for this benefit.  
   - Strongly Disagree  
   - Disagree  
   - Agree  
   - Strongly Agree

18. I am interested in becoming part of a volunteer registry for healthcare professionals that would be activated for local, state and/or federal emergency response.  
   - Strongly Disagree  
   - Disagree  
   - Agree  
   - Strongly Agree

19. I am interested in working in a health care administration or education position that utilizes my dental hygiene background and training.  
   - Strongly Disagree  
   - Disagree  
   - Agree  
   - Strongly Agree

K. RDH Practice in Non-Traditional Settings

In this section we are interested in the practice of dental hygiene as it exists outside of a private practice dental office or private dental clinic – in any non-traditional/alternative setting.

1. Do you spend any of your time providing dental hygiene services in a non-traditional/alternative setting (e.g., community clinic, private home, nursing home, school, or other setting for patients who can not make it to the dental office) under the general supervision of a dentist or organization which employs you?  
   - Yes  
   - No
   - In what setting(s)? Select all that apply
   - Hospital  
   - Community/migrant health clinic  
   - Home health agency  
   - Schools  
   - Local public health clinic  
   - Federal/state/tribal institution  
   - Community centers  
   - Residences of the homebound  
   - Nursing home/assisted living/group home  
   - Other (specify): ________________________________

2. Are you currently practicing dental hygiene unsupervised in a public health program created by federal, state or local law, or administered by a federal, state, county or local government entity (Dental Practice Act and California Code of Regulations, Title 16, Division 2, Article 7, Section. 1763)?  
   - Yes  
   - No
   - In what setting(s)?  
   - Hospital  
   - Community/migrant health clinic  
   - Home health agency  
   - Schools  
   - Local public health clinic  
   - Federal/state/tribal institution  
   - Nursing home/assisted living/group home  
   - Other (specify): ________________________________

3. If you were to seek dental hygiene employment in the future, how likely would it be in a non-traditional practice setting (outside a private dental office or private dental clinic)?  
   - Very Unlikely  
   - Unlikely  
   - Likely  
   - Very Likely
4. Do you believe the following issues are barriers to dental hygienists working outside the private practice setting?
(Please rate on 1-5 scale, 1 = Low barrier, 5 = High barrier)

a) Lack of interest on the part of dental hygienists ............................................. 1 2 3 4 5
b) Current scope of dental hygiene practice ...................................................... 1 2 3 4 5
c) Reimbursement/payment requirements (administrative hassle) ... 1 2 3 4 5
d) Lack of dental hygienists' awareness of employment opportunities in non-traditional settings ............................................. 1 2 3 4 5
e) Lack of education and exposure during RDH training to working in non-traditional settings ............................................. 1 2 3 4 5
f) High and complex dental needs of populations seeking care outside of a dental office ............................................. 1 2 3 4 5
g) Inability to practice high quality of care in non-traditional settings .................. 1 2 3 4 5
h) Poor environment or location of non-traditional settings .................. 1 2 3 4 5
i) Lower pay for dental hygiene practice in non-traditional settings ... 1 2 3 4 5
j) Poor ergonomic conditions of non-traditional settings .................. 1 2 3 4 5

5. Do you ever practice clinical dental hygiene in any setting that is NOT a private dental office or private dental clinic?
   □ Yes
   □ No ➤ IF NO, YOU HAVE COMPLETED THE SURVEY, STOP AND PLEASE RETURN IN THE ENVELOPE PROVIDED. IF YOU WOULD LIKE TO MAKE ADDITIONAL COMMENTS YOU CAN DO SO ON PAGE 11. THANK YOU!

6. If you answered YES to Q5 above, who compensates you for the services you provide?
   (check all that apply)
   □ My employer (hourly or annual salary)
   □ Federal/state/local institution reimbursement for services
   □ Patient (insurer or self-pay)

7. Of the following factors, which were important in your decision to work in a non-traditional (non-private practice) setting? (check all that apply)
   □ Personal satisfaction
   □ Improvement of professional standing
   □ Greater job security
   □ Moving to a new community
   □ Only job available
   □ Community service
   □ More interaction with other health care professionals
   □ Desire for more challenging position
   □ Increased job flexibility
   □ Better salary
   □ Better benefits
   □ Better hours/schedule
   □ Other: ____________________________

8. In which of the following content areas do you believe additional training during your basic/ core dental hygiene education would have been useful to prepare you to work in a non-traditional setting? (check all that apply)
   □ Communication/interpersonal skills
   □ Financial management
   □ Program planning and evaluation
   □ Interdisciplinary health team interactions
   □ Patient assessment
   □ Health education
   □ Cultural competency
   □ Adaptation of procedures or services to non-traditional settings
   □ Behavior modification/patient compliance
   □ Personnel management
   □ Pathophysiology
   □ Medical emergency training
   □ Other: ____________________________
   □ No additional training would have been helpful
9. How did you first learn of the availability of your present job at the non-traditional setting? (check only ONE)
   ☐ Through a school placement office  ☐ Through a private placement office
   ☐ Through a newspaper advertisement  ☐ Through an advertisement in a professional journal
   ☐ Through a friend / relative / colleague  ☐ Referred through previous employer
   ☐ Interned at setting  ☐ Through a job flyer
   ☐ Through a private dentist  ☐ Through a dental hygiene referral source
   ☐ Other: __________________________

10. When patients require dental treatment not available at the non-traditional setting, how easy is it to refer the patient to a dentist who is willing to see them?

   Easy                Somewhat Easy                Somewhat Difficult                Difficult                N/A
   ☐ 1                ☐ 2                ☐ 3                ☐ 4                ☐ 5

Comments

We welcome your comments. Please add anything you think would be helpful to this study. Feel free to use the back of this page; staple separate pages (if any) to the survey.

________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

THANK YOU FOR YOUR TIME AND CANDOR!

***************************************************************************

If you would like to be notified of the overall results of the survey please give us your email address.

   We will add you to the distribution list.

   Email Address _______________________________________________________

   (Your email will be kept in strict confidence and used only for the purposes of notifying you of the survey results.)
## A. Education and Licensure

1. What is your highest level of formal education attained (hygiene or other)?
   - [ ] Certificate
   - [ ] Associate
   - [ ] Baccalaureate
   - [ ] Masters
   - [ ] Doctoral

2. Which training program did you attend for your RDHP education?
   - [ ] University of the Pacific
   - [ ] West Los Angeles College
   - [ ] HMPP Pilot Project Training Program

3. How did you find out about the RDHP program training program you attended?
   - [ ] Word of mouth / peer
   - [ ] A dentist I work for or know
   - [ ] Dental hygiene training program
   - [ ] Dental Hygiene Association
   - [ ] RDHP program website
   - [ ] A dental professional meeting
   - [ ] Professional journal advertisement
   - [ ] Other: ______________________________

4. If you attended UOP or WLAC, why did you choose the particular RDHP program you did?
   ________________________________________
   ________________________________________
   ________________________________________

5. How satisfied are you with your RDHP education?
   
<table>
<thead>
<tr>
<th>Very Satisfied</th>
<th>Somewhat Satisfied</th>
<th>Somewhat Unsatisfied</th>
<th>Very Unsatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
   

6. In which of the following content areas do you believe additional training during your RDHP education would have been useful to prepare you to work as an RDHP? (check all that apply)
   - [ ] Communication / interpersonal skills
   - [ ] Behavior modification / patient compliance
   - [ ] Financial practice management
   - [ ] Personnel management
   - [ ] Program planning and evaluation
   - [ ] Patho-physiology
   - [ ] Interdisciplinary health team interactions
   - [ ] Medical emergency training
   - [ ] Patient assessment
   - [ ] Billing insurance and/or Deni-Cal
   - [ ] Health education
   - [ ] Mobile equipment
   - [ ] Cognitive Assessment
   - [ ] Infection control in alternative settings
   - [ ] Cultural competency
   - [ ] General business planning
   - [ ] Additional field work / shadowing
   - [ ] No additional training would have been helpful
   - [ ] Adaptation of procedures or services to non-traditional settings
   - [ ] Marketing and outreach
   - [ ] Other: ______________________________
7. Please provide any additional comments you would like to share about your RDHAP educational experience.

________________________________________________________________________

________________________________________________________________________

B. Employment in Dental Hygiene

1. Are you currently practicing dental hygiene in any capacity in California (e.g. clinical, public health, teaching, AP, etc.)?
   - ☐ Yes  (If Yes, skip to Q3 below)
   - ☐ No, I no longer practice dental hygiene in any capacity. Please tell us why. (only check primary reason)
     a) Change of career
     b) Family responsibilities
     c) Job-related injury or disability
     d) Health or physical reasons (not job related)
     e) Retirement
     f) Inadequate salary / benefits
     g) Lack of employment opportunities
     h) Lack of a suitable work environment
     i) Dissatisfaction with career choice
     j) Other (specify) ______________________________________________________________________________

2. If you are NOT currently practicing dental hygiene, do you plan to return to dental hygiene practice within the next 5 years?
   - ☐ Yes
   - ☐ No

   *IF YOU ARE NOT CURRENTLY PRACTICING DENTAL HYGIENE PLEASE SKIP TO SECTION E ON PAGE 10.*

3. How many more years do you plan to continue practicing any dental hygiene?
   - ☐ Less than 2 years
   - ☐ 2-5 years
   - ☐ 6-10 years
   - ☐ 10+ years

4. Do you work as a Registered Dental Hygienist (RDH) in a dental office or clinic?
   - ☐ Yes
   - ☐ No (If No, skip to Section C on the next page)

5. If Yes, please answer the following questions about your traditional RDH employment:
   a. How many hours per week do you work as an RDH? ______ Hrs/week
   b. What is your average hourly wage as an RDH? ______$/hour
   c. Does your employer provide any type of benefit package in addition to your monetary salary?
      - ☐ Yes
      - ☐ No
   d. What is your primary practice setting when you are working as an RDH? (If you work in more than one setting as an RDH, chose the one where you spend the most time)
      - ☐ Private Practice / Office
      - ☐ Community Clinic / Community Health Center / Rural or IHS Clinic
      - ☐ Public Health Program or State/Federal Agency
      - ☐ Teaching / Research Institution
      - ☐ Other (__________________________)
   e. How long have you worked at this location? ______ years ______ months
   f. Were you employed at this location prior to becoming licensed as an RDHAP?  ☐ Yes  ☐ No
   g. Is a dentist you work for as an RDH the “dentist of record” on your licensure paperwork?
      - ☐ Yes
      - ☐ No
C. Your RDHAP Practice Characteristics

Licensed RDHAPs practice in a wide variety of settings and under a number of arrangements: For example, as an employee of another RDHAP, as an independent contractor, as a sole proprietor of an RDHAP practice, as an employee of a primary care or specialty clinic, as an employee of a public hospital or public health system, or as an employee of a dentist. As well, RDHAPs are often employed by public health and social services agencies, in positions which may include clinical and/or non-clinical duties or services. Please think about your work as an RDHAP very broadly when answering the next question.

1. Are you working as an RDHAP in any capacity? □ Yes □ No (If No, skip to section E on page 10)

In the following set of questions we will ask you about your RDHAP practice. Unless otherwise specified, please consider ALL the activities you do as an RDHAP as your “practice”. Do not include activities you have reported as part of your traditional RDH practice. If a question is not applicable to your situation, just skip over it. Thank you.

2. Do you employ anyone in your RDHAP practice?
   □ No
   □ Yes  □ RDHAP(s) □ Dental Assistant (s) □ Clerical Assistant(s) □ Other__________

3. Are you employed by somebody else as an RDHAP?
   □ No
   □ Yes  □ Dentist(s) □ Another RDHAP □ An agency or organization

4. Please mark all settings you work in as an RDHAP, and for each of the setting you work in please tell us about the hours and patients you see:

<table>
<thead>
<tr>
<th>Setting</th>
<th>Days per week worked in setting</th>
<th>Hours worked per day in setting</th>
<th>Patients seen per day in setting</th>
<th>Percent of patients in this setting who have no other usual source of dental care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools</td>
<td>#</td>
<td>#</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Residential facility/assisted living</td>
<td>#</td>
<td>#</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Home health agency</td>
<td>#</td>
<td>#</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Federal/state/tribal institution</td>
<td>#</td>
<td>#</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Local public health clinic</td>
<td>#</td>
<td>#</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Community centers</td>
<td>#</td>
<td>#</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Nursing home/skilled nursing facility</td>
<td>#</td>
<td>#</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Community/migrant health clinic</td>
<td>#</td>
<td>#</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Independent office-based practice in a Dental Health Professional Shortage Area</td>
<td>#</td>
<td>#</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Hospital</td>
<td>#</td>
<td>#</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Residences of the homebound</td>
<td>#</td>
<td>#</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Other institution</td>
<td>#</td>
<td>#</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
<td></td>
<td>%</td>
</tr>
</tbody>
</table>
5. During a typical practice week, how many hours do you spend in your RDHAP practice on the following activities?
   a) Direct patient care (dental hygiene services)  
   b) Patient behavior management (desensitization)  
   c) Patient case management  
   d) Administration (office management, other administrative activities)  
   e) Public health activities (community-based, not direct patient care, caregiver in-service)  
   f) Teaching (in an academic setting)  
   g) Research (in an academic or government setting)  
   h) Other professional activities (please describe: __________________________)

   TOTAL (add above items, this should be your weekly average hours of work as an RDHAP)

6. Is there anything else you’d like us to know about the settings you practice in?

   _____________________________________________________________

   _____________________________________________________________

   _____________________________________________________________

7. Please estimate, of the total number of patients you see in your RDHAP practice, what percent do you have difficulty communicating with due to language barriers? _____%

8. Please estimate, of the total patients you see in your RDHAP practice, what percent are:
   (Total may be over 100% because some patients may be in more than one category.)
   a. _____% Medically compromised
   b. _____% Developmentally disabled
   c. _____% A severe behavior management challenge
   d. _____% Mentally ill
   e. _____% Physically disabled

9. Please estimate, of the total number of patients you see in your RDHAP practice, what percent are:
   (Answer both a & b)
   a. 1) _____% African American        b. 1) _____% Children age 0-1
      2) _____% American Indian        2) _____% Children age 2-5
      3) _____% Asian/Pacific Islander  3) _____% Children age 5-17
      4) _____% Hispanic/Latino        4) _____% Adults age 18-64
      5) _____% White                  5) _____% Adults age 65-79
      6) _____% Other                  6) _____% Adults age 80+
   100%  TOTAL   100%  TOTAL
10. Approximately what percentage of all patients you see in your RDHAP practice are:
   a) Covered by a private insurance program that pays for all or some of their dental care (e.g. Delta Dental) .............................................. ___% Don’t Know □
   b) Covered by a public assistance program that pays for all or some of their dental care (e.g. Denti-Cal) .............................................. ___% Don’t Know □
   c) Not covered by a dental insurance program and/or paying out of pocket ................................................................. ___% Don’t Know □
   TOTAL 100%

11. Prior to becoming an RDHAP, were you working with the populations you currently serve?
   □: Yes    □: No

12. Is there anything else you’d like us to know about the patients you see?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

The following questions will ask you about your practice financials. We realize that Denti-Cal has significantly changed their eligibility rules as of July 1, 2009. We would appreciate your answers to the following questions based on the general trends you have been experiencing up until July 1, 2009. We will then ask you to share with us what changes you may need to make going forward.

13. Have you paid off your RDHAP business start up expenses yet? □: Yes   □: No   □: Did not have any start up expenses

14. Please estimate your annual RDHAP income. (e.g., if employed, your annual salary. If self-employed, your net income after expenses. If both, sum of salary and net income.) _________________________ $

15. Did you file (or intend to file) a tax return for 2008 reporting the gross receipts collected by your RDHAP practice in the 2008 tax year? □: Yes   □: No (If No, skip to Q17)

16. Of the gross receipts collected in the 2008 tax year by your RDHAP practice, what percentage was received as:
   a. ___% Direct payment or self pay
   b. ___% Payment from government programs such as Denti-Cal, Medicare or other public sources
   c. ___% Direct payment from private insurance carriers
   d. ___% Direct payment from managed care insurance carriers such as capitation plans
   e. ___% From other sources of payment
   100% TOTAL
17. Do you (or the program or agency you work for as an RDHAP) provide discounted fees (e.g. sliding scale) for patients who are uninsured or unable to pay for services?
   ☐ Yes  ☐ No
   a. If yes, what percent of your patients fall under this (discounted fee) category? ________%

18. Do you have a standard fee schedule you use when billing for your services?
   ☐ Yes  ☐ No (If No, skip to Q19)
   a. Is your fee schedule primarily based on ☐ flat fee or ☐ procedures?
   b. Is your fee schedule ☐ greater ☐ the same ☐ less than what a private dental office would charge?
   c. Do you bill patients the same fees you bill insurance companies? ☐ Yes ☐ No

19. What is the average or standard fee your charge patients for:
   a. Initial Patient Evaluation / Assessment ..................... $________
   b. Prophylaxis ..................................................................... $________
   c. Root Planing (One Quadrant) .......................... $________
   d. Fluoride application / varnish ............................................ $________
   e. Periodontal maintenance ..................................................... $________
   f. Travel time / costs ................................................................. $________
   g. Facility visit fee ................................................................. $________

20. Is there anything else you'd like us to know about your practice income, fees or billings?


21. What changes have you had to make to your practice in response to the elimination of benefits for most adults under Denti-Cal?


22. When you need to refer a patient from your RDHAP practice for dental treatment, what percent go to:
   a) _____% your “dentist of record” (the one that signed the RDHAP licensure paperwork)
   b) _____% a local private practice dentist with whom they are already established
   c) _____% a local private practice dentist with whom they are not yet established
   d) _____% a local community dental clinic
   e) _____% can't get a referral or can't get needed care
   f) _____% Other ____________________
   ☐ I don't know

   100%
23. What interactions do you have with the "dentist of record" (who signed your licensure paperwork)? Check all that apply:

- Consultations when needed
- Regular and ongoing referrals
- Emergency referrals
- I am employed by the dentist
- Other _______________________
- I do not interact with this dentist

If you do not interact with your 'dentist of record', why not?

________________________________________________________________________

________________________________________________________________________

24. When patients require dental treatment beyond what you can provide, how easy is it to refer the patient to a dentist who is willing to see them?

<table>
<thead>
<tr>
<th></th>
<th>Easy</th>
<th>Somewhat Easy</th>
<th>Somewhat Difficult</th>
<th>Difficult</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

25. What types of other health care and social service providers do you interact with in your RDHAP practice, and what is the nature of those relationships?

<table>
<thead>
<tr>
<th>Type of Professional</th>
<th>I refer my patients to this provider</th>
<th>I get referrals from this provider</th>
<th>I collaborate or coordinate with this provider in my patient’s care</th>
<th>I interact with this provider in an administrative capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Dental Specialist</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b. Physician</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c. Physician Assistant</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d. Nurse Practitioner</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e. Registered Nurse</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>f. Nutritionist</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>g. Health Aid or Assistants</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>h. Social Workers / Case Managers</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>i. Pharmacists</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>j. Agency manager or program staff</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

26. After 18 months of allowable services, what level of difficulty do you have getting a prescription for the continuation of dental hygiene services for your clients?

<table>
<thead>
<tr>
<th></th>
<th>Easy</th>
<th>Somewhat Easy</th>
<th>Somewhat Difficult</th>
<th>Difficult</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
27. Is there anything else you’d like us to know about your interactions with other health care and social service providers?


D. RDHAP Professional Development and Advancement

1. What motivated you to pursue an RDHAP license and practice?


2. Of the following factors, which were important in your decision to pursue an RDHAP practice? (check all that apply)

- Personal satisfaction
- Improvement of professional standing
- Greater job security
- Improved ability to serve special needs patients
- My passion to work with vulnerable populations
- Only job available
- Community service
- Desire for independence / autonomy
- Desire for more challenging position
- Increased job flexibility
- Better salary / benefits
- More interaction with other health care professionals
- Better hours / schedule
- Other:_______________________

3. Please rate your job satisfaction as an RDHAP on a scale of 1-5 (1=lowest, 5=highest):

1 2 3 4 5

4. Rate the level of ease you encountered in establishing your RDHAP practice (1=not difficult 5=very difficult):

1 2 3 4 5

5. Do you believe the following issues are barriers to dental hygienists choosing to work as an RDHAP? (Please rate on 1-5 scale, 1 = Low barrier, 5 = High barrier)

<table>
<thead>
<tr>
<th>Issue</th>
<th>Low Barrier</th>
<th>High Barrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Lack of interest on the part of dental hygienists</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>b. Current scope of RDHAP practice</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>c. Reimbursement / payment requirements (administrative hassle)</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>d. Lack of dental hygienists’ awareness of employment opportunities as an RDHAP</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>e. Difficulty of obtaining RDHAP education</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>f. High and complex dental needs of populations needing care outside of a dental office</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>g. Inability to practice high quality of care in non-traditional settings</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>h. Poor environment or location of non-traditional settings</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>i. Lower pay for dental hygiene practice in non-traditional settings</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>j. Poor ergonomic conditions of non-traditional settings</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>
Please indicate to what degree the following issues impact your decisions and activities in the day-to-day operations of your RDHAP practice.

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty getting payments from third party payors</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Low Dental reimbursement levels</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Changing regulations within Denti-Cal</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>State laws or regulations on RDHAP scope of practice</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>State laws or regulations impacting the sites you work in (i.e. Title 22)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Hostility from local dentists or dental societies</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Policies of local partner institutions such as nursing homes, schools,</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>public health programs, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A general lack of awareness about your profession and services you</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>offer by the public/clients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A general lack of awareness about your profession and services you</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>offer by staff in organizations you work in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information from your state dental hygiene professional association</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Knowledge of how other RDHAPs are doing business</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Competition from dentists in your community</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Competition from RDHAPs in your community</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>State regulators oversight of your practice</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Available technology for RDHAP practice (mobile kits, patient record</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>management, business software)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RDHAP list-serve and/or RDHAP meetings for sharing information and</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>practices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Availability of jobs in local health care organizations</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>The clinical needs of your patient population</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Difficulty staffing your practice (hiring, human resources activities,</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>providing salary and benefits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty working with local institutions and agencies</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Ergonomic issues</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Malpractice insurance cost increases</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

28. Is there anything else you’d like us to know about issues affecting RDHAPs professional development and advancement?
E. Personal Background Information

1. Year of birth _______________________

2. Gender  ☐ Female  ☐ Male

3. Are you of Hispanic origin?  ☐ Yes  ☐ No

4. Race: (Check all that apply)  ☐ African American  ☐ American Indian / Alaska Native  ☐ Asian  ☐ Native Hawaiian / Pacific Islander  ☐ White  ☐ Other__________

5. In what language(s) besides English can you functionally communicate with patients? ________________

Additional Comments

We welcome your comments. Please add anything you think would be helpful to this study. Feel free to use the back of this page; staple separate pages (if any) to the survey.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

THANK YOU FOR YOUR TIME AND CANDOR!

________________________________________________________________________

We will be conducting some targeted phone interviews with individual RDHAPs to discuss more in-depth some of the issues this survey. If you would be willing to be interviewed by phone please provide your email address here. Thank you for your participation!

Email Address ________________

(Your email will be kept in strict confidence and used only for the purposes of contacting you for a confidential interview)
<table>
<thead>
<tr>
<th>Year</th>
<th>State/Federal Government</th>
<th>Dentistry</th>
<th>Dental Hygiene</th>
<th>Alternative/Independent Practice Movement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1840</td>
<td></td>
<td>First dental school at Baltimore College</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1945</td>
<td></td>
<td>American Journal of Dental Science published editorial deploring the lack of attention to dental hygiene rather to mechanical dentistry and surgery</td>
<td></td>
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<tr>
<td>1870</td>
<td></td>
<td>San Francisco Dental Association calls for California state dental association</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1885</td>
<td></td>
<td>CA becomes 18th state to regulate dentistry (updated 1901)</td>
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<tr>
<td>1910</td>
<td></td>
<td>Flexner Report on medical education</td>
<td></td>
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</tr>
<tr>
<td>1913</td>
<td></td>
<td>Dr. Fones establishes first dental hygiene program, first class graduates in 1914, Bridgeport CT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1914</td>
<td></td>
<td>Dental Nurse Program, Colorado College of Dental Surgery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1915</td>
<td></td>
<td>California educational requirements enacted into law for dentistry (in 1918 a high school diploma would be required)</td>
<td></td>
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</tr>
<tr>
<td>1917</td>
<td></td>
<td>Connecticut issues first dental hygiene license to Irene Newman</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1918</td>
<td></td>
<td>First dental hygiene training program in CA – one year, at UCSF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1920</td>
<td></td>
<td>Women gain right to vote</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1921</td>
<td></td>
<td>State law amended to include use of dental hygienists</td>
<td></td>
<td></td>
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<tr>
<td>1923</td>
<td></td>
<td>ADHA organizes as a national association</td>
<td></td>
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<tr>
<td>1926</td>
<td></td>
<td>Gies report of 1926, Dental Education in the United States and Canada;</td>
<td></td>
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<tr>
<td>1927</td>
<td></td>
<td>Journal of American Dental Hygienists Association founded - First Issue</td>
<td></td>
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<tr>
<td>1929</td>
<td></td>
<td>USC instituted Dental Hygiene program</td>
<td></td>
<td></td>
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<tr>
<td>1937</td>
<td></td>
<td>Fluoridation experiments begin</td>
<td></td>
<td></td>
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<tr>
<td>1939</td>
<td></td>
<td>Modern Dental Practice Act is passed. (repealed 1885./1915 laws)</td>
<td>University of Michigan offers first baccalaureate degree in dental hygiene</td>
<td></td>
</tr>
<tr>
<td>1941</td>
<td></td>
<td>1st baccalaureate program in hygiene at Univ. of California</td>
<td></td>
<td></td>
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<tr>
<td>1945</td>
<td></td>
<td>16 Dental Hygiene education programs - 13 are in dental schools</td>
<td></td>
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<tr>
<td>1947</td>
<td></td>
<td>Francis Stolle presents position paper that dental hygiene should be a BA or BA degree</td>
<td></td>
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<tr>
<td>1959</td>
<td></td>
<td>Loma Linda instituted dental hygiene program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960s</td>
<td></td>
<td>Civil Rights laws enacted</td>
<td>Graduate dental hygiene program Initiated</td>
<td></td>
</tr>
<tr>
<td>1961</td>
<td></td>
<td>Public member added to dental board</td>
<td></td>
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<tr>
<td>Year</td>
<td>State/Federal Government</td>
<td>Dentistry</td>
<td>Dental Hygiene</td>
<td>Alternative/Independent Practice Movement</td>
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<tr>
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<td>------------------------------------------</td>
</tr>
<tr>
<td>1963</td>
<td>Health Professions Education Assistance Act funnels money into dental school construction and expansion</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1964-1965</td>
<td>Medicaid and Medicare do not include dental benefits</td>
<td>First community college opens dental hygiene program in CA - Diablo Valley College</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1966</td>
<td>Allied health professions personnel training Act (1966)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1968</td>
<td>MLK Assassination</td>
<td>67 Dental hygiene education programs nationally, 27 are in dental schools</td>
<td></td>
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<tr>
<td>1970</td>
<td>Health Manpower Act</td>
<td></td>
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<tr>
<td>1970-1973</td>
<td>Forsyth Dental Nurse program, closed in 1974 due to political pressure</td>
<td></td>
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<tr>
<td>1971-1976</td>
<td>Dental nurse pilot at university of Iowa funded by Kellogg foundation</td>
<td></td>
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</tr>
<tr>
<td>1971</td>
<td>Dental Board starts examining foreign graduates for licensure</td>
<td></td>
<td>Dental Auxiliary Utilization Expanded Service Demonstration Projects (8 states)</td>
<td></td>
</tr>
<tr>
<td>1972</td>
<td>10 member dental board examining committee instated (6 DDS, 4 RDH)</td>
<td></td>
<td>Proposal for dental nurse at USC, visit to New Zealand – rhetoric of ‘second class care’ kills program, not funded</td>
<td></td>
</tr>
<tr>
<td>1972-1974</td>
<td>AB1503 (Duffy) Creates Health Manpower Pilot Project Program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1973</td>
<td>AB1455-Duffy - ‘Dental Auxiliary Act’ - Establishes five categories of dental auxiliary personnel and directs BDE to establish reg's for them.</td>
<td>Northern and Southern California Dental Associations merge</td>
<td></td>
<td>Dental Nurse pilot at Univ. of Kentucky – RWJ funded</td>
</tr>
<tr>
<td>1976</td>
<td></td>
<td>Hygienists scope of practice expanded based on committees recommendations, includes all Dental Assistant duties as well as anesthesia and nitrous oxide (formerly called RDHEF) - Dental Hygienists move to general supervision</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1977</td>
<td>FTC begins investigation of trade restrictions in dentistry in California and other states- notes that direct supervision of hygienists is problematic – creates an unnecessary limitation on access to preventive care</td>
<td>ADA adopts resolution that hygienists should only work under the control and supervision of a dentist as a component of overall care delivery.</td>
<td></td>
<td>Linda Krol opens independent contractor hygiene office in Torrance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dental hygiene programs start teaching expanded duties</td>
<td></td>
<td>ADHA and SCDHA both adopt resolutions calling for expanded duties and alternative settings where hygienists can work as primary care providers and sole proprietors</td>
</tr>
<tr>
<td>Year</td>
<td>State/Federal Government</td>
<td>Dentistry</td>
<td>Dental Hygiene</td>
<td>Alternative/Independent Practice Movement</td>
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<tr>
<td>------</td>
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<td>------------------------------------------</td>
</tr>
<tr>
<td>1978</td>
<td>Dental board specified settings in which RDHs can do expanded duties</td>
<td></td>
<td></td>
<td>Hygienists in Pennsylvania, California and Kansas start financially independent practices: Krol wins legal battle to be independent contractor</td>
</tr>
<tr>
<td>1979</td>
<td>IRS legally recognized Krol as business person</td>
<td></td>
<td></td>
<td>1979 ADHA resolves to recognize that dental hygienists as a primary care provider of dental hygiene services</td>
</tr>
<tr>
<td></td>
<td>AB973 would have removed COMDA from BDE authority - failed</td>
<td></td>
<td></td>
<td>CDA opposes adding public member to boards - supports auxiliary membership</td>
</tr>
<tr>
<td></td>
<td>AB974 would have allowed dental auxiliaries to condense, carve and finish amalgam restorations - failed</td>
<td></td>
<td></td>
<td>AB 921 introduced to license and regulate denturism in CA - defeated</td>
</tr>
<tr>
<td></td>
<td>AB 975 would have authorized a dental hygienist to perform specified functions in her own treatment facility without supervision - failed</td>
<td></td>
<td></td>
<td>BDE clarifies RDH can work in alternative care settings but not in an independent office</td>
</tr>
<tr>
<td>1980</td>
<td>Survey of attitudes in CA on independent dental hygiene shows 85% of dentists opposed, and 60% of hygienists favored it.</td>
<td></td>
<td></td>
<td>TDIC Launched</td>
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<td>Last year that CDA journal runs “The men at the top” column</td>
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<td></td>
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<td></td>
<td>Dental journal covers problem of business and activities of FTC as threats to the profession</td>
</tr>
<tr>
<td>1981</td>
<td>CA state board of dental examiners major battle between governor and CDA over board issues and control</td>
<td>Proposal for self-regulation of dental laboratories and dental technicians</td>
<td></td>
<td>HMPP # 139 Approved, not started due to lack of funds</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>AB844 &amp; Ab845 in California introduced to allow independent dental hygiene - defeated</td>
</tr>
<tr>
<td>1982</td>
<td>FTC actions regarding professions continue to outrage dentistry – threaten self-policing and reporting of mis-conduct.</td>
<td>CDA in fight with denturists to keep them out of state</td>
<td></td>
<td>Busyness’ problem a major concern for dentists</td>
</tr>
<tr>
<td>1983</td>
<td>AB3480 Allows insurers to contract with groups – PPOs are born, retail dentistry is expanding</td>
<td></td>
<td></td>
<td>ADA House of Delegates adopts resolution noting manpower surplus</td>
</tr>
<tr>
<td>1984</td>
<td>EDD conducts audits of dentists employing hygienists as independent contractors and levy’s fines</td>
<td>ADA House of Delegates adopts resolution noting manpower surplus</td>
<td></td>
<td>AB 844 &amp; 845 (M.Waters, allowed practice without supervision) introduced and defeated</td>
</tr>
<tr>
<td>1985</td>
<td>CDA struggling to contend with alternative delivery systems(PPOs), intrusions of third parties, auxiliary issues etc.</td>
<td></td>
<td></td>
<td>AB 844 &amp; 845 (M.Waters, allowed practice without supervision) introduced and defeated</td>
</tr>
<tr>
<td>Year</td>
<td>State/Federal Government</td>
<td>Dentistry</td>
<td>Dental Hygiene</td>
<td>Alternative/Independent Practice Movement</td>
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<tr>
<td>1986</td>
<td>ADA adopts new stringent policy on direct supervision of hygienists by dentists</td>
<td>ADA resolution that dentist must be in treatment area or facility at all times when any patient is being treated</td>
<td>ADA fund $50,000 to start HMPP (rest of money, about $150K total, came from ongoing fundraising)</td>
<td>HMPP #139 Started with CSUN</td>
</tr>
<tr>
<td></td>
<td>California law continues to allow for general supervision, causes conflict with CDA policy</td>
<td>Redig-War Commentary</td>
<td>First dental hygiene faculty member at UCSF gains tenure</td>
<td>Dentist-Cal begins allowing hygienists to bill for services</td>
</tr>
<tr>
<td></td>
<td>ADA tells people in nursing homes don't need hygiene care</td>
<td>HMPP #155 Approved for Continuation</td>
<td>ADHA media distribution about seeing your hygienist – no mention of dentist</td>
<td>Colorado enacts independent dental hygiene (1986)</td>
</tr>
<tr>
<td>1987</td>
<td>FTC notes that restricting the number of hygienists a dentist can employ increases consumer costs by 7%, or 300 million</td>
<td>CDA Lawsuit #1 – HMPP Upheld – press about it was contentious</td>
<td>ADHA takes no position on independent dental hygiene</td>
<td>ADA and two women file suit against Colorado laws - thrown out, appealed, rejected by state supreme court, lost</td>
</tr>
<tr>
<td></td>
<td>Federal legislations (s 1162 / hr 382) to allow direct reimbursement to more practitioners under the federal employees health benefits program</td>
<td>CDA still concerned about oversupply of dentists and quality of applicants</td>
<td>CDHA countersues to price-fixing claim CDA is trying to bankrupt them through sham lawsuits</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AB 968 Introduced and defeated-allowed for hygienists to bill Denti-cal independently for in-home services</td>
<td>CDA files lawsuit against CDHA accusing price fixing</td>
<td>CDHA wins in court on HMPP and on price fixing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COMDA restricts / BDE overturns and calls for hearings on definition of patient of record</td>
<td>CDA Law suit #2</td>
<td>Dentists oversupply seems to abate</td>
<td>AB 4583 Introduced and Defeated - allowing pilot project participants to bill Medi-cal</td>
</tr>
<tr>
<td>1988</td>
<td>CDA lawsuit on price fixing thrown out</td>
<td>CDA publishes 'evidence' that CDHA is violating anti-trust laws by doing salary surveys and teaching hygienists how to negotiate for salaries</td>
<td>Judy Boothby sues CDA &amp; others (Peterson Article)</td>
<td></td>
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<tr>
<td></td>
<td>Dentists oversupply seems to abate</td>
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<td>AB 4583 Introduced and Defeated - allowing pilot project participants to bill Medi-cal</td>
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<td></td>
<td>State ruling setback - court stops OSHPD project</td>
<td>CDA concerned with severe shortage of hygienists and assistant</td>
<td>Yellow Pages removes 'dental hygienists’ heading, then rescinds decision several months later</td>
<td>Boothby settles libel case in a settlement of non-payment</td>
</tr>
<tr>
<td>1989</td>
<td>Court rules against HMPP on technicality</td>
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<td></td>
<td>CDA concerned with severe shortage of hygienists and assistant</td>
<td>Yellow Pages removes 'dental hygienists’ heading, then rescinds decision several months later</td>
<td>Boothby settles libel case in a settlement of non-payment</td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td>Direct reimbursement hailed as perfect payment system</td>
<td>Highlight history of women in the profession of dentistry</td>
<td>Supreme court upholds ruling against HMPP</td>
<td>HMPP #155 Approved for Continuation</td>
</tr>
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<td></td>
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<td>CDA starts to deal with freedom of movement issues within dentistry - licensure by credential</td>
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<tr>
<td>1991</td>
<td>In preparation for CDHA’s move to push independent practice, CDA reconstitutes its taskforce on unsupervised practice to fight the efforts</td>
<td></td>
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<tr>
<td>1992</td>
<td>Image war between ADHA and ADA at national level</td>
<td>AB2353 introduced and defeated</td>
<td></td>
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<tr>
<td>Year</td>
<td>State/Federal Government</td>
<td>Dentistry</td>
<td>Dental Hygiene</td>
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<tr>
<td>1993</td>
<td>Federal Health Care Reform Efforts under Clinton</td>
<td>Dental economics turning around</td>
<td>CDA refuses to meet with CDHA citing negative results from prior meetings</td>
<td>AB221 Introduced</td>
</tr>
<tr>
<td>1994</td>
<td></td>
<td>A new day for dentistry - not cottage industry anymore - must pursue economics in context of service and professionalism</td>
<td>WA state legalizes denturism through ballot initiative process</td>
<td>AB221 defeated</td>
</tr>
<tr>
<td>1995</td>
<td></td>
<td>WA state legalizes denturism through ballot initiative process</td>
<td>Reframe debate as 'undiagnosed care'</td>
<td>AB560 was introduced – becomes 2 year bill</td>
</tr>
<tr>
<td>1996</td>
<td></td>
<td></td>
<td>MASSIVE press campaign to support AB221</td>
<td></td>
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<tr>
<td>1997</td>
<td></td>
<td>Denti-Cal reaction to lawsuit is to institute mandated manage care</td>
<td>IOM Report - Dental Education at the Crossroads</td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td></td>
<td>CDA Dentistry is seen to be threatened by denturism, hygiene, and manage care</td>
<td>AB1116 – allows for foreign license dentist to use title of DDS, but eliminated bench test for entry by 2003, requiring graduation from accredited school</td>
<td>AB560 approved – RDHAP become legal</td>
</tr>
<tr>
<td>1999</td>
<td></td>
<td>Northwestern Dental School Closes</td>
<td>CDA supports AB1116 - many members are outraged at prospect of foreigners coming in</td>
<td>FTC vs. CDA in supreme court – re antitrust guidelines on CDA marketing rules- cda loses – FTC jurisdiction over associations held up</td>
</tr>
<tr>
<td>2000</td>
<td>Surgeon General’s Report on Oral Health</td>
<td>Access to care issue is central for next decade</td>
<td>FTC told to drop case against advertising restrictions by CDA, drops the case in 2001</td>
<td>FTC battle with CDA ends</td>
</tr>
<tr>
<td>2001</td>
<td>FTC battle with CDA ends</td>
<td>CDA continues to be concerned regarding shortages of dental assistants and hygienists</td>
<td>CDA adopts supportive resolution on licensure by credential, starts to take a conciliatory tone to independent hygiene</td>
<td>FTC with CDA in supreme court – re antitrust guidelines on CDA marketing rules- cda loses – FTC jurisdiction over associations held up</td>
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<tr>
<td>2002</td>
<td>CDA Foundation Formed</td>
<td>CDA Foundation Formed</td>
<td>SB2022 restricts non-hygienists from doing hygiene procedures</td>
<td>CDA Foundation Formed</td>
</tr>
<tr>
<td>2003</td>
<td>TCE/RWI Pipeline Programs in California</td>
<td>266 dental hygiene education programs, 24 are in dental schools</td>
<td>First RDHAP Training program opens (WLAC)</td>
<td>State licensure exam comes under scrutiny</td>
</tr>
<tr>
<td>Year</td>
<td>State/Federal Government</td>
<td>Dentistry</td>
<td>Dental Hygiene</td>
<td>Alternative/Independent Practice Movement</td>
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<td>2004</td>
<td>First woman president of CDA, and a hygienist – CDA meets with CDHA leadership for first time</td>
<td>ADHA passes resolution promoting the Advanced Dental Hygiene Practitioner</td>
<td>Second RDHAP training program opens (UOP) in response to CDHA grant request for proposals for distance education program</td>
<td></td>
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<tr>
<td>2005</td>
<td>Three CDA articles in support of RDHAP - urging to learn about them and work with them</td>
<td>119 RDHAPs in practice, UCSF Survey #1</td>
<td>Oral and Maxo Surgeons win right to do some plastic surgery in CA after four year battle</td>
<td>Dental Health Aide Therapist program begins and is sued in Alaska</td>
</tr>
<tr>
<td>2006</td>
<td>ADA proposes the Community Dental Health Coordinator</td>
<td>Studies show allied dental shortages abating</td>
<td>AB1334 Removes prescription requirement</td>
<td></td>
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<td>2007</td>
<td>AB1433 Requires dental assessment for kindergarteners</td>
<td>CDA Allows allied dental providers to become CDA members (RDHAPs resist, noting attempts at co-optation)</td>
<td>AB1589 allows RDHAPs to work in clinics (year check)</td>
<td>SB238 Allows clinics to bill for RDH and AP encounters (year check)</td>
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<tr>
<td>2008</td>
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<tr>
<td>2009</td>
<td>Adult Denti-Cal cut from State benefits</td>
<td>CDA explores alternative workforce models</td>
<td>SB853 - RDHs gain own regulatory board in CA</td>
<td>RDHAPs encounter difficulty with Denti-Cal rules and regulations</td>
</tr>
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<td></td>
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<td></td>
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<td>CDA resolves that dentists are primary oral health care provider</td>
</tr>
<tr>
<td>2010</td>
<td>Patient Protection and Affordability Act Passed</td>
<td>Several new dental schools opening with more planned</td>
<td>250 RDHAPs in practice, UCSF Survey #2</td>
<td></td>
</tr>
</tbody>
</table>
**APPENDIX D: GLOSSARY OF TERMS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ADHP</td>
<td>Advanced Dental Hygiene Practitioner</td>
</tr>
<tr>
<td>AGD</td>
<td>The Academy of General Dentists</td>
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<tr>
<td>ADHA</td>
<td>American Dental Hygienists’ Association</td>
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<tr>
<td>ANTHC</td>
<td>Alaska Native Tribal Health Consortium</td>
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<tr>
<td>BDE</td>
<td>Board of Dental Examiners</td>
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<tr>
<td>CalDPAC</td>
<td>CDA’s political action committee</td>
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<tr>
<td>CDA</td>
<td>California Dental Association</td>
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<tr>
<td>CDB</td>
<td>California Dental Board</td>
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<tr>
<td>CDHA</td>
<td>California Dental Hygienists’ Association</td>
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<tr>
<td>CDHC</td>
<td>Community Dental Health Coordinator</td>
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<tr>
<td>CE</td>
<td>continuing education (course)</td>
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<tr>
<td>CODA</td>
<td>Council on Dental Accreditation</td>
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<tr>
<td>COMDA</td>
<td>Committee on Dental Auxiliaries</td>
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<tr>
<td>CPAC</td>
<td>California Program on Access to Care</td>
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<tr>
<td>CPI</td>
<td>Consumer Price Index</td>
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<tr>
<td>CSUN</td>
<td>California State University–Northridge</td>
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<tr>
<td>DHAI</td>
<td>Dental Hygiene Association Incorporated</td>
</tr>
<tr>
<td>DHAT</td>
<td>Dental Health Aide Therapist</td>
</tr>
<tr>
<td>EDD</td>
<td>Employment Development Department (of California)</td>
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<tr>
<td>EDDA</td>
<td>Expanded Duty Dental Assistant</td>
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<tr>
<td>FTC</td>
<td>Federal Trade Commission</td>
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<tr>
<td>HRSA</td>
<td>Health Resources and Services Administration</td>
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<tr>
<td>HMPP</td>
<td>Health Manpower Pilot Projects (Act)</td>
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<tr>
<td>IE</td>
<td>Institutional Entrepreneurs</td>
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<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
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<tr>
<td>OSHPD</td>
<td>Office of Statewide Health Planning and Development</td>
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<tr>
<td>NIDCR</td>
<td>National Institute of Dental and Craniofacial Research</td>
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<tr>
<td>PPO</td>
<td>Preferred Provider Organization</td>
</tr>
<tr>
<td>RDHAP</td>
<td>Registered Dental Hygienist in Alternative Practice</td>
</tr>
<tr>
<td>RDHEF</td>
<td>Registered Dental Hygienist in Extended Function</td>
</tr>
<tr>
<td>RDH</td>
<td>Registered Dental Hygienist</td>
</tr>
<tr>
<td>RUCA</td>
<td>Rural-Urban Commuting Area (U.S. Census)</td>
</tr>
<tr>
<td>SCHIP</td>
<td>State Children’s Health Insurance Program</td>
</tr>
<tr>
<td>SCDHA</td>
<td>Southern California Dental Hygienists’ Association</td>
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<tr>
<td>SHOUT</td>
<td>Support Hygienists and Oppose Unequal Treatment (Ballot Initiative 678, Washington State)</td>
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<tr>
<td>TAR</td>
<td>Treatment Authorization Requests</td>
</tr>
<tr>
<td>TDIC</td>
<td>The Dental Insurance Company</td>
</tr>
<tr>
<td>TEAM</td>
<td>Training Expanded Auxiliary Management (model)</td>
</tr>
<tr>
<td>UOP</td>
<td>University of the Pacific</td>
</tr>
<tr>
<td>UCR</td>
<td>Usual and Customary Rates</td>
</tr>
<tr>
<td>USDHHS</td>
<td>United States Department of Health and Human Services</td>
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<tr>
<td>WLAC</td>
<td>West Los Angeles College</td>
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