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Parental Attitudes Toward Children's Involvement in Pediatric Healthcare

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in

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by

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Dedication

To Chi C. Tran
(1960-2014)

ABSTRACT OF THE DISSERTATION

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by

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Effective healthcare communication represents a complex and dynamic process that unfolds over time characterizing the interaction between a myriad of contextual and individual difference factors to promote positive patient health and well-being outcomes Although significant advancements have been made toward the delivery of patient-centered care, studies of healthcare communication to date predominantly consider the adult patient-provider archetype, with substantially less known about communication involving non-dyadic patient-units including pediatric healthcare visits involving a child patient and accompanying parent. Understanding the unique dynamics of communication involving pediatric triads is a crucial step toward evaluating and optimizing the provision of pediatric care healthcare. Thus, two studies are presented below exploring novel complexities of triadic healthcare communication involving pediatric patients receiving asthma and allergy care (Study 1) followed by an investigation of potential mechanisms

and antecedents of parental behavior and conversational dynamics during pediatric healthcare visits (Study 2). In Study 1, audio-recorded consultations involving pediatric triads were transcribed and analyzed to reveal distinct patterns in the use of technical language, interruptions, and flow of information exchange between the triad that may create or hinder opportunities for children to participate in their own care visit (i.e., gatekeeping). Study 2 builds upon these findings to investigate how differences in parenting and family dynamics may motivate positive or negative parental gatekeeping behaviors during pediatric care visits (e.g., encouraging their child to share their symptoms experience with the provider versus interrupting their child to volunteer their own opinion). Findings from these studies highlight distinct nuances of triadic communication involving pediatric patients relative to dyadic norms to reveal potential mechanisms underlying effective communication involving pediatric triads.

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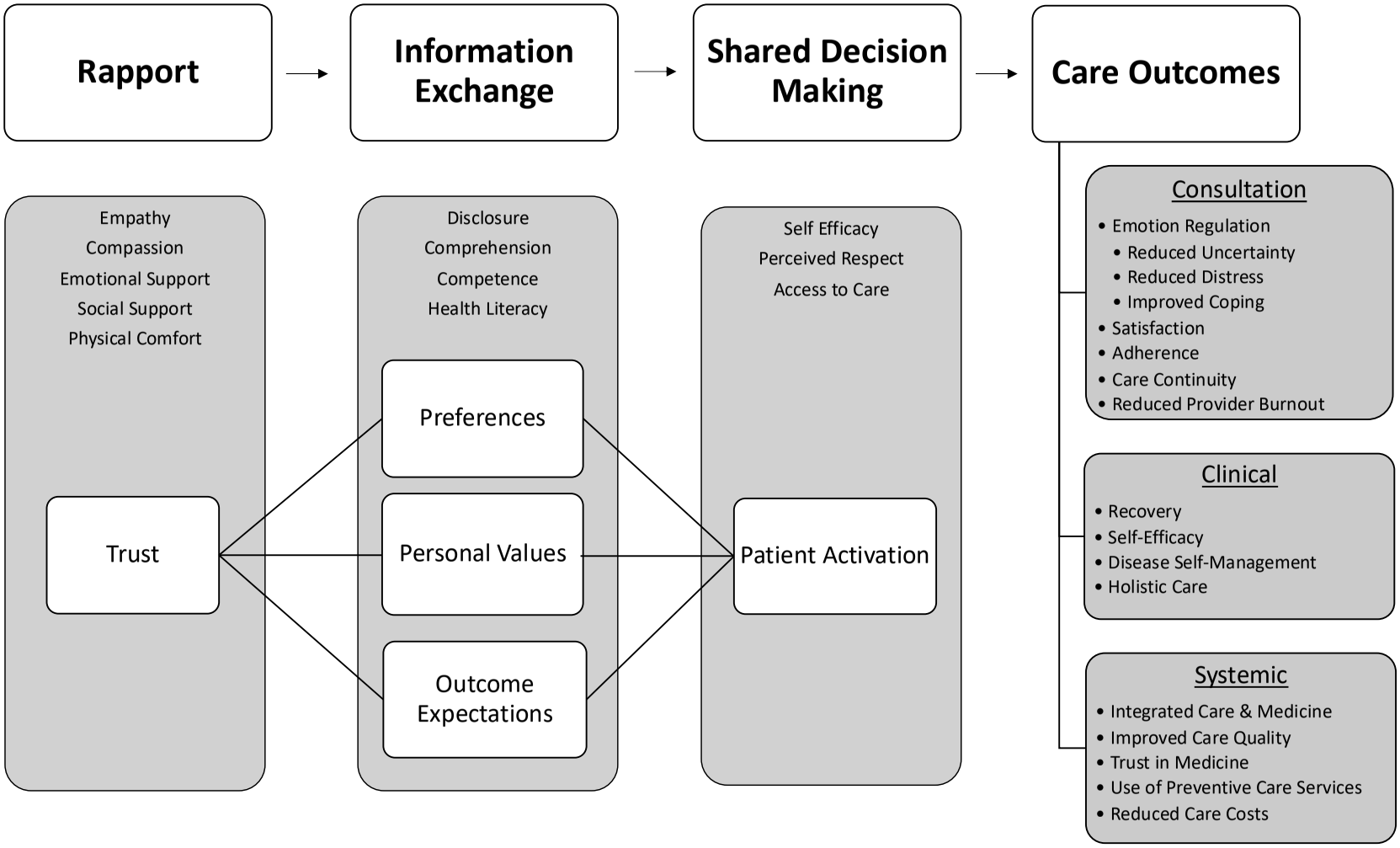
Substantial advancements in medicine and health technology have fundamentally restructured the dynamics of the medical encounter and redefined the roles of patients and healthcare providers. While clinicians once provided primary oversight of diagnostic information and medical decision-making, novel insights into the interpretation of illness and emergent principles like patient-centeredness and holistic care have drastically broadened our understanding of health communication and the patient-provider relationship. Modern approaches in healthcare delivery have substantially evolved from early paternalistic approaches involving an authoritative provider and passive patient toward a continuum of care capturing patients' and providers' dynamic roles and the interpretation of health as holistic (Emanuel & Emanuel, 1992; Timmermans, 2020; Tran et al., 2020; Van Liew et al., 2018). For example, efforts by medical providers to create a comfortable atmosphere, offer social support and empathy, cultivate trust, and foster strong interpersonal relationships with their patients have been linked to improved patient management of uncertainty and distress, disclosure of healthcare preferences, and greater involvement in healthcare (Koirala, 2020; Maskrey, 2019; Rodriguez & Pellegrini, 2019; Street, 2013; Street et al., 2009).

Health communication and the quality of the patient-provider relationship predict healthcare outcomes through a complex array of direct and indirect pathways affecting critical aspects of the medical visit itself, namely the dyad's ability to exchange medically relevant information and make informed decisions about treatment (Hemmerich et al., 2018; Rathert et al., 2012; Street et al., 2009). Effective communication also bolsters intermediate pathways predictive of long-term health outcomes including patients'

comprehension of medical information, trust in medicine, and access to healthcare services (Hillen et al., 2011; Street, 2013; Street et al., 2009; Wei et al., 2019). In fact, even seemingly minute aspects of the medical encounter like the intensity of ambient light or noise, presence of nature photos in the waiting area, layout of the examination room, type of chair the patient or provider is seated in, and type of language used during the conversation (e.g., pronouns, word tense, word complexity) have been linked to healthcare outcomes including patient satisfaction and, notably, adherence to healthcare recommendations several months later (Falkenstein et al., 2016; Jiwa et al., 2019; Morse & Sweeny, 2020; Morse et al., 2015; Tran & Sweeny, 2020; Zamani & Harper, 2019).

Contextualizing these facets, the Person-Centered Care Model of Communication (PCCMC; Tran, 2020) operationalizes healthcare communication as a dynamic and interactive process that unfolds over time and may be bolstered or hindered by providers' efforts to employ person-centered care strategies when interacting with patients, thereby predicting outcomes across multiple levels of healthcare (see Figure 1). According to the PCCMC, effective communication reflects the degree to which patients and providers can establish rapport, characterized by building a strong interpersonal relationship on a foundation of trust. Rapport then promotes engagement in information exchange as patients feel comfortable disclosing their healthcare preferences, values, and expectations while providers ensure patients are adequately informed about their health status. Finally, rapport and information exchange facilitate the dyad's ability to engage in shared decision making, with providers using patients' disclosed preferences and expectations to navigate available treatment options and collaboratively reach decisions about healthcare.

Figure 1. The Person-Centered Care Model of Communication (PCCMC); Tran (2020).



The PCCMC also highlights the interdependent ties between health communication (i.e., rapport, information exchange, shared decision making) and proximal and distal healthcare outcomes, emphasizing the centrality of effective communication for promoting healthcare continuity and offering an integrative framework of communication as a dynamic process that unfolds over time.

Recent technological innovations in healthcare have also bolstered efforts to provide tailored care, with tools such as the electronic health record (EHR), telemedicine, and "eHealth" communication (e.g., online patient health summaries and the ability to message providers directly) now practically universal features of the modern medical encounter and essential tools during the COVID-19 pandemic, increasing the availability of personalized health information and safe access to healthcare services (Bashshur et al., 2020; Kichloo et al., 2020; Lee et al., 2019; Portnoy et al., 2020; Wagg et al., 2018). However, technological integration and the provision of holistic care have also posed new challenges for health communication and the patient-provider dynamic. For example, the need to chart information into the EHR during appointments is a frequent "pain point" for providers, burdening them with additional administrative tasks and increasing feelings of burnout – characterized by a lack of accomplishment, feelings of cynicism and depersonalization, and a general loss of enthusiasm for practicing medicine (Alexander & Ballou, 2018; Antoun et al., 2019; Jha et al., 2019; Shachak & Reis, 2009).

Exacerbating these issues is the scarcity of time available during most healthcare appointments, with an average of less than 15 minutes to discuss symptoms, diagnoses, treatment options, and prognoses while also managing the EHR (e.g., Drossman &

Ruddy, 2020; Joseph-Williams et al., 2014; Peckham, 2016; Reese, 2011). Shifts toward the provision of holistic care have also sparked growing emphasis on patient empowerment and self-advocacy, with patients employing extensive strategic preparations to navigate these hurdles and effectively communicate with their providers (e.g., Koopman et al., 2021; Sieck et al., 2019). Taken together, these findings reveal the complex pathways through which communication affects healthcare outcomes and how these mechanisms may be further complicated by the broader situational context in which communication unfolds.

Triadic Healthcare Communication

Effective healthcare communication entails the interactive process through which patients and providers strive to establish rapport, exchange information about the patients' unique health context and preferences for healthcare, and then use these preferences to navigate available treatment options together to reach a shared decision for healthcare (Callon et al., 2018; Maskrey, 2019; Tran, 2020). Despite substantial evidence touting strategies for and benefits of communicating effectively, most investigations of healthcare interactions and person-centered care approaches only consider dynamics of the dyadic patient-provider archetype, or two-party interactions between a healthcare provider and adult patient (e.g., Rathert et al., 2012; Van Liew et al., 2018; Willis & O'Donohue, 2018). A comparatively small amount of empirical work to date has considered how these dynamics unfold within non-dyadic healthcare interactions, particularly among medical triads (e.g., Tates & Meeuwesen, 2001; Tran et al., 2022).

Distinct from the relatively straightforward nature of dyadic communication, medical triads are much more sophisticated as participants encounter and navigate complex power dynamics, three-way exchanges of information, and the potential for coalitions, or distinct two-member dyads, to form that exclude the third member (Gabe et al., 2004; Greene & Adelman, 2013). It remains unclear whether dynamics of adult patient-provider dyads extend to medical triads despite triads being relatively common in healthcare practice—including pediatric patients accompanied by a parent, geriatric patients with a caretaker, or adult patients with a language translator (Greene & Adelman, 2013; Laidsaar-Powell et al., 2013; Shah et al., 2020). For example, information exchange in triadic interactions poses unique challenges absent from dyadic healthcare and requires providers to elicit (and navigate between) preferences from patients and their accompanying caretaker or parent (Tran, 2020). Triadic communication also introduces novel interpersonal factors including parental dominance and authority within pediatric triads, healthcare power of attorney within geriatric triads, and uncertainty on behalf of providers regarding how to prioritize and incorporate conflicting preferences between the patient and their caretaker in treatment decision-making (Coyne & Harder, 2011; Laidsaar-Powell et al., 2013; LeBlanc et al., 2018; Zwaanswijk et al., 2011).

Interactive Features Within Pediatric Triads

Novelties and nuances of triadic communication are further complicated in pediatric healthcare, which often requires different styles of communication to elicit, navigate, and address varying beliefs about children, parents, and healthcare providers' respective roles during the medical encounter and how these beliefs may differ across

pediatric age groups (see Shah et al., 2020 for a review). Pediatric healthcare also poses unique challenges for healthcare providers, requiring them to be mindful of parental preferences for authority and attentive toward the flow of information between the triad (i.e., speakers-targets; Tran et al., 2022). Moreover, investigations of medical interactions involving pediatric triads consistently reveal that children's participation in their own healthcare visits is minimal. For example, a review of 12 studies exploring children's roles within triadic consultations concluded that children's contributions accounted for only 2-12% of the entire healthcare interaction, compared to upwards of 40% and 60% by parents and healthcare providers, respectively (Tates & Meeuwesen, 2001). A study in the mid-1990s compared video recordings of pediatric visits from 15 years earlier up to current day (at that time) found that children's participation in those visits had increased significantly (Meeuwesen & Kaptein, 1996), presumably with the advent of shifts toward more patient-centered care. However, it remains unclear whether processes of effective dyadic communication function identically within pediatric triads or whether other distinct, nuanced, and novel mechanisms may be involved.

Parental Authority and Gatekeeping

Within pediatric triads, evidence suggests that parents (or guardians, referred to hereafter as parents) may behave in ways that restrict children's participation during healthcare visits by speaking on behalf of their child or excluding them from discussions of treatment planning. Likewise, healthcare providers may also discourage children's involvement by directing questions exclusively to the parent (e.g., Carpenter et al., 2013; van Dulmen, 1998) or failing to use age-appropriate language (e.g., Tates et al., 2002;

Worobey et al., 1987). Parents and providers may also bolster their relative authority by restricting pediatric patients' contributions to non-substantive inquiries (e.g., small talk about school, jokes) rather than discussing instrumental topics pertinent to the child's health or treatment plan (e.g., Coyne, 2008; Coyne & Gallagher, 2011; Tates & Meeuwesen, 2001). Whether intentional or subconscious, these instances exemplify various ways parents and healthcare providers may engage in the act of "gatekeeping," employing behaviors that moderate opportunities for children to meaningfully contribute and engage with their health during pediatric healthcare visits such as parents answering despite the provider inquiring directly with the child.

Importantly, children's involvement during medical interactions from an early age predicts greater self-efficacy, motivation to manage their illness, long-term continuity of care, more realistic and sustainable treatment plans, and better health outcomes (Dixon-Woods et al., 1999; Gabe et al., 2004; Miller, 2018). Children as young as two years old may be capable of participating in health communication, providing more relevant health information than their parents by age seven, self-managing their own medication by age eight, and demonstrating competence comparable to adult patients by age fourteen (Coyne & Gallagher, 2011; Coyne & Harder, 2011; Levetown & Committee of Bioethics, 2008). With asthma and allergies in particular, pediatric patients are often capable of providing unique insights into how their illness affects their daily life (e.g., how asthma restricts their ability to perform daily activities at school), whereas parental reports are often limited to observations within the household (Callery & Milnes, 2012; Callery et al., 2003).

To be clear, parents and providers might be well-intentioned while nonetheless hampering children's contributions to their healthcare through gatekeeping, with parental concerns that their child's participation may be less efficient or detract from other goals of the medical visit being likely unfounded. For example, one study found that asthma consultations in which pediatric patients asked questions were only 4 minutes longer than visits where children did not ask questions (Sleath et al., 2011). Ironically, parental efforts to act in (what they perceive to be) their child's "best interests" may disrupt opportunities for children to cultivate treatment self-efficacy and long-term disease management, particularly with chronic conditions like asthma and allergies (Alexander et al., 2016; Coyne, 2008; Coyne & Harder, 2011). Thus, the tendency to minimize children's participation during medical interactions may arise from parental perceptions that children lack the competence to meaningfully contribute to discussions of medical care (Cahill & Papageorgiou, 2007; Coyne & Harder, 2011; Nova et al., 2005).

Overview of the Present Studies

Despite evidence indicating that children's participation during healthcare visits is often minimal, relatively little is known about the extent to which individual differences and situational factors may interact to motivate parental gatekeeping. A recent descriptive analysis of small sample data by Tran et al. (2022) highlights the need for additional examinations of health communication involving pediatric triads. Their analysis of 28 audio-recorded pediatric asthma and allergy healthcare consultations—a healthcare context that is particularly common among pediatric patients who begin to self-manage their illness at a fairly early age—suggested that gatekeeping behavior may be detectable

within objective features of the interaction, specifically the prevalence of speech interruptions and the flow of information exchange (i.e., speakers-targets) through requests for input (e.g., diagnostic inquiries) and instances of unsolicited feedback (e.g., unprompted comments; Tran et al., 2022).

Although informative regarding the utility of mixed method approaches for examining health communication, the descriptive nature of the Tran et al. (2022) study showcases the need for further investigation into the complex mechanisms and processes through which parental gatekeeping may moderate children's participation during pediatric healthcare visits. Thus, two studies are presented below that build on those initial findings and examine how parental attitudes and beliefs relate to parental gatekeeping behavior and children's participation during pediatric healthcare visits. By exploring the extent to which individual differences and situational factors may relate to parental gatekeeping, these studies aimed to reveal the interactive complexities of parent-child role dynamics and authority in pediatric healthcare to inform future interventions supporting child engagement and long-term health outcomes.

From these reports, it was hypothesized that parental perceptions of children's general health competence would be linearly and positively associated with the child's age, such that younger children will be perceived to be the least competent while older children and adolescents will be perceived to be the most competent (*Hypothesis 1*). Second, it was suspected that parental endorsement of negative gatekeeping would be associated with stronger preferences for authority and control over their child (*Hypothesis 2a*). Furthermore, it was hypothesized that stronger preferences for authority and control

over one's child would *predict* greater parental endorsement of negative gatekeeping even after controlling for their child's age (*Hypothesis 2b*).Third, parental endorsements of gatekeeping will be associated with children's age and perceived competence, such that parents of older children or children perceived to be more competent will report stronger endorsements of positive gatekeeping and weaker endorsements of negative gatekeeping (*Hypothesis 3a*). Alternatively, it is speculated that parents of adolescent-aged children will more strongly endorse negative gatekeeping, independent of their child's perceived competency (*Hypothesis 3b – Parent-Teen Conflict Hypothesis*[1]). Finally, it was hypothesized that perceived time available during healthcare visits will moderate parental preferences and endorsement of gatekeeping behaviors, such that parents will more strongly endorse negative gatekeeping (e.g., interrupting or speaking for their child) when time with the provider is perceived to be limited and positive gatekeeping (e.g., encouraging their child to speak) when time is perceived to be available (*Hypothesis 4*).

Study 1

Study 1 sought to replicate and extend the findings of Tran et al. (2022), employing an in-depth, descriptive approach to examine features of healthcare interactions involving pediatric patients, parents, and healthcare providers in asthma and allergy care. Understanding the unique dynamics of communication involving pediatric

[1] *Hypothesis 3b* was an exploratory hypothesis informed by anecdotal triadic care experiences reported by the four HCPs included in Study 1. It is anticipated that a Parent-Teen Conflict effect may be related to spillover from idiosyncratic parent-adolescent relationship and family dynamics. However, no study to date (to the author's knowledge) has specifically examined potential mechanisms of parent-teen conflict during care interactions involving pediatric triads.

triads is an essential first step toward evaluating and optimizing the provision of healthcare. Thus, Study 1 explored healthcare providers' use of *technical language*, the prevalence of *interruptions*, and the flow of *information exchange* between the triad through requests for input (e.g., diagnostic inquiries) and unsolicited feedback (e.g., unprompted comments).

Although a target sample of 150 pediatric interactions was proposed for Study 1, data collection came to a halt due to a combination of COVID-19 limitations and a change in the circumstances of our healthcare collaborator. As a result, hypothesis testing was tabled for Study 1; limited descriptive findings ($N = 10$) are presented below.

Method

Participants

We recruited healthcare providers at the collaborating clinic ($N = 3$; 66% female) and pediatric outpatients between 4 and 17 years of age ($N = 10$, each accompanied by a parent) who were scheduled for a consultation between September 2020 and June 2021 at either of two pediatric asthma and immunology clinics in Southern California. All study materials and procedures were approved by the author's university Institutional Review Board prior to data collection. Healthcare providers and parents provided written consent and children verbal assent, if deemed capable, to participate in the study and to have their healthcare consultation audio-recorded and transcribed.

Pediatric patients were mostly male (60%), and ethnically diverse (see Table 1 for sample characteristics), ranging in age from ten to seventeen ($M_{age} = 14$, $SD_{age} = 2.16$), and diagnosed with asthma and/or allergies. Children were mostly returning patients,

with 70% having been seen by the provider before, and accompanied by their mother in 7 consultations (70%), their father in 2 consultations (20%), and an unspecified caregiver in 1 consultation (10%). The male provider (a medical doctor) was present in 5 interactions (50%), and one of the two female providers (nurse practitioners) was present in 5 interactions (50%). Participation was entirely voluntary, though parents were offered the opportunity to be entered into a raffle to win a $100 gift card to Amazon.com for their consideration regardless of whether they consented or participated in the study.

Table 1
Study 1 Sample Characteristics

Patient Characteristics	(n = 10)
% Female	60%
Age	
Mean (*SD*)	14 (2.2)
Range	10 to 17
Mean (*SD*) male patients	15.75 (0.9)
Mean (*SD*) female patients	12.8 (1.9)
Ethnicity	
Hispanic/Latinx	70%
Race	
White/Caucasian	40%
Black/African American	10%
Other/multiple	50%
Diagnoses	
Allergies & asthma	60%
Allergies only	40%
Asthma only	0%
Not specified	0%

Procedures

Pediatric patients and parents were introduced to the study by trained clinic staff members at each facility during appointment check-in. All study materials and consent procedures were conducted using printed hard-copies (versus a digital tablet) to minimize COVID-19 exposure risks. Following consent procedures, staff verbally guided parents through a brief pre-consultation questionnaire while waiting to be invited into the examination room, which assessed the pediatric patient's and household's demographic information, parents' perceptions of their child's overall health, asthma symptoms and management, health competence, and parenting style.

After completing the pre-consultation questionnaire, consenting parents and capable pediatric patients verbally assented to have their interaction with the healthcare provider audio recorded. Following the consultation, the recorder was turned off and both the parent and healthcare provider completed a brief post-consultation questionnaire evaluating the quality of the healthcare visit. For the purposes of this manuscript, only demographic (Table 1) and descriptive results (Tables 2-4) are presented below.

Analyses

Audio-recordings were closely reviewed and deidentified by a set of five trained coders to remove any identifying information disclosed during the interaction. Following thorough deidentification, recordings were transcribed using a cloud-based automated transcription service, Otter.ai (https://otter.ai). Once transcribed, full transcripts were independently analyzed by the five trained coders for the following features of the interaction: healthcare providers' use of *technical language*, the prevalence of

interruptions, and the flow of *information exchange* between the triad through requests for input (RQI; e.g., diagnostic inquiries), requests for clarification (RQC; i.e., teach-back), requests for engagement (RQE; e.g., small-talk), and instances of unsolicited feedback (UFB; e.g., unprompted comments).

Features of the Interaction

First, coders closely reviewed the deidentified transcripts and recordings simultaneously, listening to the audio recording in real time while reading the transcript. They noted the flow of information exchange (i.e., speakers-targets) and directionality of various features of the interaction (e.g., who interrupted whom). Regarding technical language used by healthcare providers (e.g., histamine, post-nasal drip, lung spirometry), coders noted to whom the language was directed (i.e., pediatric patient, parent, or both), whether parents or the pediatric patient were familiar with the term (i.e., used already in the conversation), and whether healthcare providers proactively offered clarification of novel technical terms or if they were prompted by the patient or parent to clarify their language (Table 2). For example, the healthcare provider (HCP) in the following excerpt introduces the term "exercise induced bronchospasm" when inquiring about the pediatric patients' (C) asthma symptoms, proactively clarifying that it is a symptom that can emerge during physical activity and may align with the patients' reported use of their inhaler:

> *"**C:** The only time I use my rescue inhaler is when I get on the treadmill. Uh when, like, I exercise, I need to use it.*
>
> ***HCP:** Okay. Umm…*

C: *And I think that's, one, because of asthma and, two, I'm out of shape.*

HCP: *Yeah. But did I ever tell you about exercise induced bronchospasm? Have you ever heard me say that? It's when you will-, might, have more flare up during exercise.*

C: *Mhmm.*

HCP: *They don't know if it's because of the volume of air you're breathing is just faster, and it's just causing some inflammation or if it's, like, the temperature, um, could be causing the inflammation as well."*

Second, coders identified *interruptions* that occurred during the consultation, operationalized as any type of disruption to a speaker's complete statement (excluding backchannels or verbal cues of attentiveness, e.g., "mhmm"; Menz & Al-Roubaie, 2008), including the directionality of the interruption attempt (i.e., who interrupted whom) and whether the interruption successfully redirected the flow of conversation (Table 3). For example, the pediatric patient (C), parent (P), and healthcare provider (HCP) in the following excerpt talk over one another to try and take the floor, characterized by a series of successful and unsuccessful interruption attempts first from the patient interrupting the parent, followed by the HCP attempting to talk over the parent:

*"**HCP:** And in the picture I saw significant swelling, but was there redness also?*

P: *I don't think there was- [successful interruption by C]*

C: *No, there wasn't any redness, inside or out.*

P: *Yeah, I… [cross-talk]*

HCP: *Okay because it didn't look real red to me.*

P: *I mean, it looks reddening but- [unsuccessful interruption by HCP]*

HCP: *It looks, yeah… but as far as the surrounding- [unsuccessful interruption by P]*

P: *The surrounding, no.*

HCP: *… face, the redness. Yeah okay. Okay. Alright."*

Finally, coders identified the prevalence and directionality of *information exchange*, operationalized as requests for input (RQI; i.e., direct inquiries, for instance the provider asking for the patient's or parent's opinion on a specific treatment), requests for confirmation (RQC; e.g., teach-back or restating an inquiry to confirm understanding), requests for engagement (e.g., small-talk with pediatric patients not directly related to diagnostic information), and instances of unsolicited feedback (UFB; e.g., parents answering for their child or volunteering an opinion about treatment; see Tables 4 and 5). For example, the following excerpt captures the pediatric patient (C) requesting input from the healthcare provider (HCP), followed by a multiple request for clarification between the two discussing immunotherapy treatment procedures:

*"**HCP:** I tell people it may take six to twelve months before we start to notice benefit.*

C: *And would it be multiple allergic reactions, or just one-at-a-time? [RQI]*

HCP: *You mean as far as the injections? [RQC]*

C: *Yeah, like, would it be one thing that I'm allergic to? [RQC] Like, the main thing… like the… the… [unsuccessful interruption by HCP]*

HCP: *Great question, great question.*

C: *Like the grass. The most allergic that I am, it's like Edward's Grass or something?*

HCP: *Great question. [second unsuccessful interruption by HCP]*

C: *Would I be injected with that? [RQC]*

D: *So what we do is we take everything you're allergic to and we mix them all together."*

Regarding unsolicited feedback (UFB), coders also identified the prevalence of instances where triad members spoke out of turn or offered information without being explicitly prompted to do so, often while attempting to interrupt another speaker (i.e., interjection). For example, the following excerpt captures a healthcare provider and parent using unsolicited feedback to successfully interrupt the other and interject information (coded as both an interruption and instance of unsolicited feedback):

*"**HCP:*** *Get them vaccinated because it will probably help with slowing the spread. And because they don't really show symptoms.*

P: *I think so too, especially at their age. We know some kids are still gathering some, you know- [successful interruption by HCP]*

HCP: *Oh, they are. It's- it's a part of their development group to- [UFB - interjection] You-, they-, you should not be having adolescents isolate themselves. It causes- I've had several patients who are in therapy because of social learning, social distance learning. Like, it's not… [successful interruption by P]*

P: *She sees her friends here and there. We're just very careful about it. [UFB -*

interjection]

HCP: *Yeah, that's good.*

Results

Technical Language

Coders identified 81 instances of technical language used by healthcare providers across interactions, with an average of about eight jargon terms per interaction ($M = 8.1$, $SD = 5.28$). Providers varied in their use of jargon across interactions, with three technical terms used in one interaction and a maximum of 19 technical terms used in another. When speaking to parents directly, providers tended to use familiar and proactively clarified jargon, such that about a third of all technical terms were either explicitly clarified or already known to the parent (see Table 2). When speaking to pediatric patients directly, providers also used relatively more familiar jargon such that HCPs used over twice as much known jargon than novel terms. All explicit requests for clarification were fulfilled by the healthcare provider.

Table 2

Frequency and Directionality of Providers' Use of Medical Jargon

	% Familiar (*n*)	% Clarified (*n*)	% Unclarified (*n*)	Total Jargon (*n*)
HCP to Parent/guardian	30.8% (25)	36% (29)	7.4% (6)	60
HCP to Pediatric patient	13.6% (11)	5% (4)	1.2% (1)	16
HCP to Both	3.7% (3)	2.5% (2)	--	5
Total	**39**	**35**	**7**	**81**

Note: Percentages are relative to the total jargon identified.

Interruptions

A total of 254 interruptions were recorded across interactions (see Table 3), with an average of about twenty-five interruption attempts identified per interaction (M = 25.3, SD = 20.69). The frequency of interruptions ranged widely from as few as three to upwards of 56 and 65 interruptions recorded in two consultations. Healthcare providers most frequently interrupted parents, accounting for 45.3% of all interruptions identified, followed by parents interrupting the provider (28.3%), and pediatric patients interrupting parents (9%). Efforts to interrupt another member of the triad were often successful, with over 80% of attempted interruptions successfully redirecting the conversation.

Table 3
Frequency and Directionality of Interruptions Between Triad Members

	Interruptions (*n*)	Proportion of Total Interruptions (%)	Successful Interruptions (%)
HCP interrupting Parent	115	45.3%	83%
HCP interrupting Pediatric Patient	14	5.5%	93%
Parent interrupting HCP	72	28.3%	82%
Parent interrupting Pediatric Patient	14	5.5%	71%
Pediatric Patient interrupting HCP	16	6.3%	88%
Pediatric Patient interrupting Parent	23	9%	83%
Total	**254**		***M* = 83% successful**

Information Exchange

A total of 427 instances of information exchange were recorded across interactions (see Table 4), including 321 requests for input (RQI; e.g., diagnostic information; $M = 32.1$ per interaction, $SD = 11.9$), 58 requests for confirmation (RQC; e.g., teach-back; $M = 5.8$ per interaction, $SD = 1.5$), and 48 requests for engagement (RQE; e.g., small talk; $M = 4.8$ per interaction, $SD = 6.6$). RQI were most frequently made by healthcare providers seeking input from the pediatric patient, accounting for 38% of all requests for input, followed by healthcare providers seeking input from parents (37.4%). Interestingly, RQC were most often made by healthcare providers seeking confirmation of pediatric patients' understanding, accounting for nearly half of all requests for confirmation (46.6%). RQE most often involved the healthcare provider conducting small talk with parents, accounting for the majority (71%) of all identified requests for engagement, reflecting the samples' continuity of care and rapport associated with returning patients.

Table 4

Frequency and Directionality of Requests Between Triad Members

		n (% total)
Information Exchange: Requests for Input		
HCP from Parent		120 (37.4%)
HCP from Pediatric Patient		122 (38%)
Parent from HCP		63 (19.6%)
Parent from Pediatric Patient		6 (1.9%)
Pediatric Patient from HCP		10 (3.1%)
Pediatric Patient from Parent		--
	Total	**321**
Information Exchange: Request for Confirmation		
HCP to Parent		16 (27.7%)
HCP to Pediatric Patient		27 (46.6%)
Parent to HCP		7 (12%)
Parent to Pediatric Patient		4 (7%)
Pediatric Patient to HCP		3 (5%)
Pediatric Patient to Parent		1 (1.7%)
	Total	**58**
Information Exchange: Request for Engagement		
HCP to Parent		34 (71%)
HCP to Pediatric Patient		13 (27%)
Parent to HCP		1 (2%)
Parent to Pediatric Patient		--
Pediatric Patient to HCP		--
Pediatric Patient to Parent		--
	Total	**48**

Finally, a total of 153 instances of unsolicited feedback (UFB) were identified (see Table 5), most frequently involving parents volunteering information to the provider (57.5%), followed by pediatric patients offering feedback to the provider (23.5%), and

providers making suggestions to parents (12.4%). Interjections were also relatively common and a novel contributing feature of Study 1 relative to Tran et al. (2022), with nearly 1 in 4 of all interruptions involving a member of the triad attempting to interrupt another speaker (i.e., interject) with an instance of unsolicited feedback (63 interruptions; 24.8% of total interruptions) or a request for information (39 interruptions; 15.2% of total interruptions).

Table 5
Frequency and Directionality of Unsolicited Feedback Between Triad Members

	n (% total)
Information Exchange: Unsolicited Feedback	
HCP to Parent	19 (12.4%)
HCP to Pediatric Patient	6 (4%)
Parent to HCP	88 (57.5%)
Parent to Pediatric Patient	1 (0.6%)
Pediatric Patient to HCP	36 (23.5%)
Pediatric Patient to Parent	3 (2%)
Total	**153**

Study 1 Discussion

Study 1 aimed to examine the complex dynamics of medical interactions involving pediatric triads, particularly within the context of asthma and allergy care. Originally designed to replicate and extend the descriptive approach of Tran et al. (2022), these limited results offer a glimpse into the nuances of communication involving pediatric triads and the potent utility of in-depth descriptive approaches for examining healthcare communication as a process. Study 1 builds upon Tran et al. (2022) by also considering how various types of information exchange may be leveraged toward a

particular goal like parents interrupting their child with unsolicited feedback to interject and regain the conversational floor. However, due to challenges with data collection, hypothesis tests were not conducted and patterns of descriptive findings should be interpreted with a degree of caution but also optimism as a starting point for additional analyses of triadic communication.

Replicating patterns identified in Tran et al. (2022), interruptions most often occurred between parents and providers and accounted for similar proportions of total interruptions. Likewise, parents offered the most unsolicited feedback during pediatric healthcare visits across both studies, with about half of total instances directed to the healthcare provider. Children also offered unsolicited feedback to healthcare providers to as similar degree across both studies, accounting for about a quarter of all instances of unsolicited feedback identified in Tran et al. (2022) and Study 1. Deviating from Tran et al. (2022), however, healthcare providers in Study 1 used more technical language overall (i.e., frequency) that was often directed to either the parent or child, versus both simultaneously as observed in Tran et al. (2022). Providers in Study 1 also sought input from pediatric patients substantially more often, accounting for a larger proportion of total requests for input than were identified in Tran et al. (2022).

Altogether, the prevalence of interruptions and interjections predominantly between healthcare providers and parents across both Tran et al. (2022) and Study 1's replication effort suggests the formation of parent-provider dyadic coalitions or challenges on behalf of parents to disclose their primary concerns (e.g., Gabe et al., 2004; Greene & Adelman, 2013; Menz & Al-Roubaie, 2008). Providers also seemed to

demonstrate reasonable efforts to cultivate pediatric patients' engagement by most frequently soliciting input from the child directly, albeit only slightly more so than from parents. However, interpretations of these findings should be tempered by the fact that children sampled in Tran et al. (2022) and Study 1 were demographically distinct from one another in age of the included samples, with Study 1 sampling predominantly adolescents while Tran et al., (2022) included a more diverse sample across pediatric age groups. As outlined above, age may moderate perceptions of children's health competence and, while informative, it remains unclear from these results how interpersonal factors, such as parenting style and situational constraints may relate to use of gatekeeping behaviors during triadic healthcare visits (e.g., Cahill & Papageorgiou, 2007; Coyne & Harder, 2011; Shah et al., 2020).

Given the challenges associated with data collection in Study 1, we sought to collect data from a much larger sample in Study 2, albeit in a retrospective rather than observational design. Study 2 aimed to examine how individual differences in parental preferences, family dynamics, and contextual factors may interact to motivate endorsements of gatekeeping behavior during pediatric healthcare visits.

Study 2

Study 2 aimed to identify the process and motives underlying parental gatekeeping behaviors identified by Tran et al. (2022) and in Study 1 by examining how individual differences and situational factors may relate to parental endorsement and utilization of positive and negative gatekeeping during pediatric healthcare visits. Study 2 tested the hypotheses outlined earlier in the paper.

Method

Participants and Procedures

Participants (N = 301; see Table 6 for sample characteristics) currently providing healthcare for pediatric-aged children (i.e., 4-17 years of age) were recruited online through Prolific (https://www.prolific.co) in March of 2022. Eligible Prolific users were identified to participate in the study based on their self-reported responses to the "About You: Family and Relationships" group of questions submitted upon creation of their Prolific user account. Specifically, the "Number of Children" and "Year of Birth of Youngest Child" items were used to identify eligible parents currently caring for pediatric-aged children.

All study materials and procedures were approved by the primary author's university Institutional Review Board (IRB) prior to beginning data collection. Consent was obtained from all participants via an online document (participants selected "continue" if they consented to participate in the study). Participants (n = 183; 60.7% of total N) who self-identified as being located within the European Union (EU) or European Economic Area (EEA) also reviewed and consented to the General Data Protection Regulation (GDPR) Notice and Consent in compliance with EU regulations prior to participating in the study. All consenting participants were compensated $2.50 for their participation in the study, regardless of survey completion status.

Table 6
Study 2 Parent Demographics

Sample Characteristics	Parents (*n* = 301)
% Female	63.8%
Age	
Mean (*SD*)	38.9 (7.9)
Range	21 to 66
Race	
White/Caucasian	69.8%
Black	13.6%
Latino/a/x	8.3%
Multiracial	3%
Other	5.3%
Parental Role	
Mothers	63.5%
Fathers	34.2%
Caretaker/Other	2.4%
Education	
Did not complete high school	1.3%
High school diploma/GE	14.3%
Some college	16.9%
Completed college (2- or 4-year degree)	41.6%
Some graduate training	4.3%
Graduate degree or beyond	21.6%
Household Income	
Less than $30,000	33%
$30,000 - $60,000	28%
$60,000 - $100,000	21%
$100,000 - $150,000	9.3%
Above $150,000	5%
Prefer not to answer	3.7%

Measures

Household Demographics

Participants, henceforth referred to as "parents," were asked to provide information about themselves and their household, including their age, education, household income, self-identified sex, race, and parental role (see Table 6). Parents were also asked to provide information about their country of residence, overall household size, and the number of pediatric-aged children (i.e., age 4-17) within the home (see Table 7). Parents caring for multiple children were asked to select one child to focus on for the purposes of the study, ideally a child who had received healthcare recently. Parents were then asked to provide information about their selected child, including the child's age, education, and self-identified sex and race.

Table 7
Study 2 Household Characteristics

Sample Characteristics	Households (n = 301)
Country of Residence	
United Kingdom	44.5%
Europe	26%
South Africa	11.3%
North America	10%
United States of America	4.3%
Australia/Oceania	2.3%
South America	1%
Middle East	0.3%
N/A	0.3%
Household Size	
Zero children	2.7%
One child	41.5%
Two children	43.2%
Three children	10.3%
Four children	2%
Five Children	0.3%

Children about whom participants answered questions (Table 8) ranged across age groups, with over half considered "School Aged" (5-12 years) followed by a relatively large proportion of "Young Children" (3-5 years) and "Adolescents" (12-17 years).

Table 8
Study 2 Child Demographics

	Children (n = 301)
% Female	46.8%
Age	
Mean (*SD*)	9.04 (3.85)
Range	2 to 27
Child Education	
Not yet enrolled	1.7%
Preschool	10.6%
Kindergarten	10.3%
Elementary school	42.2%
Middle school	18.6%
High school	14%
Some college	1.3%
Other	1.3%
Age Groups	
Infants (0-18mo)	--
Toddlers (18mo-3yrs)	0.3%
Young Children (3-5yrs)	22.6%
School Children (5-12yrs)	58.5%
Adolescents (12-17yrs)	18%
Adults (18yrs or older)	0.6%

General Parental Attitudes

Parents' general attitudes and perceptions of children's health competence and expected role were assessed using a combination of validated parenting scales and face-valid measures developed specifically to evaluate the extent to which parents endorse creating or limiting opportunities for children to participate during pediatric healthcare visits (i.e., "gatekeeping").

Perceived Competence Across Age Groups. Parents indicated at what age they felt that children were sufficiently capable of participating during healthcare visits with a single item ("At what age do you feel that children are sufficiently competent and able to participate in their own doctor's appointments?"; $M = 10.03$, $SD = 0.72$). Parents also indicated the extent to which they felt children across five pediatric age groups were able to participate during healthcare visits (*1 = not at all capable, 10 = completely capable*; Infants [0-18 months], $M = 0.43$, $SD = 0.72$; Toddlers [18 months-3 years], $M = 1.5$, $SD = 1.48$); Young Children [3-5 years], $M = 3.26$, $SD = 2.23$; School Children [5-12 years], $M = 6.15$, $SD = 2.58$); Adolescents [12-17 years], $M = 8.75$, $SD = 1.75$).

Role Expectations and Gatekeeping Endorsement. Parental attitudes toward children's health competence, expected role, behavior, and conduct during pediatric healthcare visits were assessed using 21 items developed for the purposes of this study (*1 = strongly disagree, 4 = strongly agree*). An exploratory factor analysis (EFA) was conducted in IBM SPSS v.27 using principal axis factoring and an oblique rotation to account for collinearity across all items. Inter-item correlations ranged from $r = -.38$ to .49, and four factors were extracted through inspection of the scree plot and eigenvalues,

accounting for 47.35% of total variance (see factor loadings in Table 9). Based on the factor loadings, the four extracted factors were interpreted as parental endorsements of positive gatekeeping (*Child Empowerment* and *Healthcare Partnerships*) and negative gatekeeping (*Parental Authority* and *Child Incompetence*). Note that item 12 ("During children's care appointments, doctors hold the most power") did not load onto any factor and was excluded from the interpretation of parental gatekeeping endorsements.

Regarding positive gatekeeping, *Child Empowerment* captures parental support and encouragement for children to engage in their own care (7 items, e.g., "It is clearly beneficial for children to be involved in their own healthcare," "Good healthcare providers are committed to engaging children in their own care"; $M = 3.30$, $SD = 0.42$, Cronbach's $\alpha = .75$). *Healthcare Partnerships* captures benefits of the triads' mutual engagement (4 items, e.g., "Parents, the child, and doctors all play an equal role during children's care appointments," "During children's care appointments, the child holds the most power"; $M = 2.91$, $SD = 0.52$, Cronbach's $\alpha = .63$). Regarding negative gatekeeping, *Parental Authority* captures the degree to which parents endorse retaining authority and control during pediatric healthcare visits (7 items, e.g., "During children's care appointments, parents hold the most power," "Parents are essential for clarifying their child's health situation to the doctor"; $M = 3.25$, $SD = 0.40$, Cronbach's $\alpha = .71$). *Child Incompetence* captures parental beliefs that children are incapable of making meaningful contributions during healthcare visits (2 items, i.e., "Children often disrupt communication between parents and doctors," "Children are often distracted during their care appointments"; $M = 2.62$, $SD = 0.63$, Cronbach's $\alpha = .56$).

Table 9

Factor Loadings from the Exploratory Factor Analysis (Role Expectations & Gatekeeping)

	Factor 1 (Child Empowerment)	Factor 2 (Parental Authority)	Factor 3 (Partnership)	Factor 4 (Child Incompetence)
1. Children often disrupt communication between parents and doctors.	.05	.03	-.03	**.60**
2. It is clearly beneficial for children to be involved in their own healthcare.	**.55**	.002	.17	.02
3. During children's care appointments, parents hold the most power.	.01	**.47**	-.17	-.14
4. Children are often distracted during their care appointments.	-.13	-.01	.01	**.70**
5. Parents, the child, and doctors all play an equal role during children's care appointments.	.03	.16	**.52**	.08
6. Children often provide valuable information to their doctors.	.34	-.04	**.44**	.03

7. Good doctors are committed to addressing parents' concerns during appointments about their child's health.	.33	**.42**	.10	.03
8. During children's care appointments, the child holds the most power.	-.22	-.12	**.68**	-.11
9. Parents are essential for clarifying their child's health situation to the doctor.	.18	**.56**	.06	.04
10. Parents and doctors are the main contributors during children's care appointments.	-.02	**.64**	-.19	.05
11. Children play an important role in their own healthcare.	.32	-.20	**.45**	.02
12. During children's care appointments, doctors hold the most power.	-.03	.23	.03	-.16
13. Parents should speak for their child during care appointments.	-.16	**.51**	-.03	.06

14. It wastes the doctor's time if children are encouraged to participate in their care appointments.[a]	**.61**	.16	-.02	.25
15. Good healthcare providers are committed to engaging children in their own care.	**.47**	.07	.29	-.05
16. Children should be encouraged to not interfere during their care appointments.[a]	**.67**	-.14	-.10	-.01
17. Children's care appointments are essentially a conversation between parents and the doctor.[a]	**.40**	-.32	.09	.16
18. Parents can provide more accurate information than their child during care appointments.	-.17	**.54**	-.05	-.17
19. Children should play a minimal role during their care appointments.[a]	**.49**	-.20	.06	.19

20. It is important for parents to always be involved in their child's healthcare, regardless of their age.	.05	**.39**	.11	-.03
21. As children get older, they should be more involved in their own health and medical care.	**.40**	.09	-.08	-.08

Note: Factor loadings are standardized regression coefficients; the coefficients in bold represent the factor on which the item loaded most strongly. [a]Reverse-scored.

All extracted gatekeeping factors demonstrate theoretically consistent associations with one another (see Table 10), with *Child Empowerment* and *Healthcare Partnerships* strongly correlated, $r = .40$, $p < .01$, endorsements of negative gatekeeping *Parental Authority* and *Child Incompetence* correlated, $r = .19$, $p < .01$, and positive and negative gatekeeping inversely related to one another, with inter-item correlations ranging from $r = -.24$ to $-.14$, $ps < .05$.

Table 10
Correlations between Positive and Negative Gatekeeping

	Child Empowerment (N = 301)	Healthcare Partnership (N = 301)	Parental Authority (N = 301)	Child Incompetence (N = 301)
Child Empowerment	--			
Healthcare Partnership	**.40****	--		
Parental Authority	**-.14***	**-.15***	--	
Child Incompetence	**-.24****	-.06	**.19****	--

Note: Significant associations have been bolded. $^{\dagger}p < .10$, $*p < .05$, $**p < .01$.

Personal Parental Attitudes

Parents next completed a variety of measures about their personal role as a parent, their child's health, and the relationship they have with their child.

Parental Sense of Control. Parents completed a validated 12-item Sense of Control scale (Lachman & Weaver, 1998; *1 = strongly disagree, 6 = strongly agree*) comprised of two subscales assessing parents' perceived mastery (4 items summed, e.g., "I can do just about anything I really set my mind to," "Whether or not I am able to get

what I want is in my own hands"; *M* = 17.61, *SD* = 3.07, Cronbach's α = .77) and constraints in life (8 items summed, e.g., "There is little I can do to change many of the important things in my life," "I often feel helpless in dealing with the problems of life"; *M* = 25.72, *SD* = 5.54, Cronbach's α = .75).

Child's Current Health. Parents completed the 4-item current health subscale of the Health Perceptions Questionnaire (HPQ, Davies & Ware, 1981; Hooker et al., 1992), adapted to be used with parents of children (e.g., "In general, how is your child's health?" *1 = very poor, 5 = excellent*; *"*Do you think that your child is in better or worse health, or the same, compared to most children their age?" *1 = much worse, 5 = much better; M* = 3.95, *SD* = 0.68, Cronbach's α = .67).

Parent Protection Scale. Parents completed the 25-item Parent Protection Scale (PPS, Thomasgard et al., 1995; *0 = never, 3 = always*) assessing parents' relationship with their child across four subscales including supervision (7 items, e.g., "I keep a close watch on my child," "I know exactly what my child is doing"; *M* = 1.73, *SD* = 0.47, Cronbach's α = .68), separation problems (6 items, e.g., *"*I blame myself when my child gets hurt," "I have difficulty leaving my child with a babysitter"; *M* = 0.99, *SD* = 0.42, Cronbach's α = .56), dependence (4 items, e.g., "I let my child make their own decisions," "I let my child choose what they wear"; *M* = 2.5, *SD* = 0.45, Cronbach's α = .51), and control (8 items, e.g., "I decide when my child eats," "I dress my child even if they can do it alone"; *M* = 0.87, *SD* = 0.35, Cronbach's α = .59).

Child Vulnerability Scale. Parents completed the 8-item Child Vulnerability Scale (CVS, Forsynth et al., 1996; Spurrier et al., 2000; *1 = strongly disagree, 4 =*

strongly agree) assessing parent's perceptions of their child's health risk relative to other children (8 items summed, e.g., "In general, my child seems less healthy than other children," "Sometimes I get concerned that my child doesn't look as healthy as they should"; $M = 14.55$, $SD = 4.02$, Cronbach's $\alpha = .79$).

Parental Acceptance-Rejection Questionnaire. Parents completed the parental control subscale of the Parental Acceptance-Rejection Questionnaire (PARQ, Rohner & Khaleque, 2003; *1 = never true, 4 = often true*) assessing parental preferences for control over their child (5 items summed, e.g., "I see to it that my child knows exactly what they may or may not do," "I always tell my child how they should behave"; $M = 13.47$, $SD = 2.07$, Cronbach's $\alpha = .61$).

Parenting Sense of Competence. Parents completed the 17-item Parenting Sense of Competence scale (PSOC, Gibaud-Wallston & Wandersman, 1978; Johnston & Mash, 1989; *1 = strongly disagree, 4 = strongly agree*) comprised of two subscales assessing parents' own satisfaction with parenting (10 items summed, e.g., "Being a good parent is a reward in itself," "Even though being a parent could be rewarding, I am frustrated now while my child is at their current age (reverse-scored)"; $M = 28.79$, $SD = 4.80$, Cronbach's $\alpha = .77$) and perceived efficacy (7 items summed, e.g., "Being a parent is manageable and any problems are easily solved," "I honestly believe I have all the skills necessary to be a good parent to my child"; $M = 20.35$, $SD = 3.23$, Cronbach's $\alpha = .75$).

Prior Visit Information

After assessing their general healthcare preferences and personal dynamics with their child, parents were asked to recall their child's most recent pediatric healthcare visit.

Parents were asked if their child had previously been seen by that provider (68% prior patients) and to indicate how long ago their child's most recent healthcare visit was, with 22% of parents reporting their child having seen a provider within the past 30 days, 51% within the past 6 months, and 15% indicating it had been over a year since their child's last appointment. Parents were also asked to indicate the purpose of their child's most recent healthcare visit as either routine (55%), specialist (23.6%), urgent (13.6%), or emergency care (8%).

Time. Parents were asked to recall and report, to the best of their ability, approximately how long they and their child waited in total *before* seeing the healthcare provider, including the time spent in the waiting room and exam room prior to formally beginning the consultation, with 46.2% of parents reportedly waiting less than 15 minutes to see the provider, 37.8% waiting between 15 to 30 minutes, 10% waiting 30-60 minutes, and 6% reportedly waiting over an hour. Parents were also asked to report approximately how much time they and their child had face-to-face with the provider, with 63.8% of parents reportedly having less than 15 minutes with the provider, 29.6% having between 15-30 minutes, and 6.6% having more than 30 minutes.

Triadic Contributions. Parents were asked to report the proportion (%) they felt each member of the triad contributed to the conversation during their child's most recent pediatric healthcare visit, with healthcare providers reportedly contributing the most (M = 44%, SD = 11.48, Range [15, 75]), followed by parents, (M = 35.6%, SD = 12.67, Range [0, 80]), and children (M = 20.4%, SD = 19.94, Range [0, 75]).

Retrospective Healthcare Experience. Parental experiences of their child's most

recent healthcare visit were assessed using 15-items developed for the purposes of this study (*1 = strongly disagree, 5 = strongly agree*). An exploratory factor analysis (EFA) was conducted in SPSS v.27 using principal axis factoring and an oblique rotation to account for item collinearity across all items. Inter-item correlations ranged from r = -.48 to .70 and three factors were extracted through inspection of the scree plot and eigenvalues, accounting for 55.94% of total variance explained, with factor loadings for the three-factor EFA solution reported in Table 11. Based on the item loadings, the three extracted factors were interpreted as outcome measures of the consultation pertaining to *Child Engagement* (5 items, e.g., "The doctor spent most of their effort interacting with my child directly rather than speaking to me," "My child had no trouble communicating with their doctor"; M = 3.55, SD = 0.75, Cronbach's α = .78), *Parental Challenges* (5 items, e.g., "I often had to clarify what my child meant when speaking to the doctor," "The doctor often used technical medical terms that were difficult to understand"; M = 2.39, SD = 0.65, Cronbach's α = .64), and *Provider Inclusivity* (5 items, e.g., "The doctor communicated clearly to ensure my child and I understood," "The doctor equally divided their attention between my child and I during the appointment"; M = 4.02, SD = 0.68, Cronbach's α = .83).

Table 11

Factor Loadings from the Exploratory Factor Analysis (Retrospective Care Experience)

	Factor 1 (Child Engagement)	Factor 2 (Parental Challenges)	Factor 3 (Provider Inclusivity)
1. I wish I had more time to speak with my child's doctor.	.22	**.60**	-.02
2. I often had to clarify what my child meant when speaking to the doctor.	-.204	**.54**	.16
3. I encouraged my child to stay quiet while I spoke with the doctor.	-.24	**.31**	-.04
4. My child contributed very little during the appointment.[a]	**.77**	-.15	-.09
5. The doctor spent most of their effort interacting with my child directly rather than speaking to me.	**.49**	.06	.11
6. The doctor communicated clearly to ensure my child and I understood.	.05	-.06	**.78**
7. The doctor provided clarification of technical medical terms so my child and I could understand	-.04	.01	**.82**
8. The doctor did not include my child in the conversation. [a]	.26	-.22	**.45**
9. The doctor could not adequately address my concerns due to time constraints.	.003	**.43**	-.37
10. The doctor equally divided their attention between my child and I during the appointment.	.04	.03	**.49**
11. The doctor made an effort to ensure that my child understood everything.	.35	.03	**.62**

12. The doctor often used technical medical terms that were difficult to understand.	-.01	**.55**	-.28
13. My child had no trouble communicating with their doctor.	**.45**	-.16	.21
14. My child participated a lot during the appointment.	**.86**	.06	.01
15. I encouraged my child to speak up during the appointment.	**.46**	.13	.19

Note: Factor loadings are standardized regression coefficients; the coefficients in bold represent the factor on which the item loaded most strongly. [a]Reverse-scored.

The three extracted retrospective experience factors demonstrate theoretically consistent associations with one another, with reported endorsements of *Child Engagement* during the previous healthcare visit strongly and positively associated with *Provider Inclusivity* efforts, $r = .58$, $p < .01$, and negatively associated with *Parental Challenges*, $r = -.31$, $p < .01$. Reports of *Parental Challenges* were also negatively linked to *Provider Inclusivity* efforts, $r = -.39$, $p < .01$.

Retrospective Child Behavior. Parents were asked about their child's behavior during the most recent pediatric healthcare visit using 8-items developed for the purposes of this study (*1 = strongly disagree, 4 = strongly agree*) that were aggregated to create positive (4 items, e.g., "My child was well-behaved with the doctor," "I was happy with my child's behavior during the visit"; $M = 3.32$, $SD = 0.45$, Cronbach's $\alpha = .53$) and negative behavior composites (4 items, e.g., "I found myself apologizing for my child during the visit," "My child was difficult to control during the visit"; $M = 1.29$, $SD = 0.48$, Cronbach's $\alpha = .81$).

Adherence. Parents reported their child's post-consultation treatment adherence using a 4-item composite developed for the purposes of this study (*1 = never, 5 = always*, e.g., "My child found it easy to do the things the doctor suggested they do," "My child had a hard time doing what the doctor suggested they do (reverse-scored)"; $M = 4.02$, $SD = 0.73$, Cronbach's $\alpha = .76$).

Experience of Service Questionnaire. Finally, parents completed an 11-item experience of service questionnaire adapted to assess overall satisfaction with their child's most recent pediatric healthcare visit (Brown et al., 2014; *1 = strongly disagree, 5*

= *strongly agree*; e.g., "Overall, the service my child and I received was excellent," "I felt that the doctor listened to me"; $M = 4.21$, $SD = 0.56$, Cronbach's $\alpha = .90$).

Results

Child Age and Perceived Competence

Regarding perceptions of children's health competence, parents reported steadily increasing levels of competency across five ascending pediatric age groups, such that Infants (0-18 months; $M = .43$, $SD = .72$) were perceived to be the least competent and Adolescents (12-17 years; $M = 8.75$, $SD = 1.75$) to be the most competent. Paired contrasts were performed to determine whether mean-level differences in perceived competence between age groups were statistically significant. Consistent with *Hypothesis 1*, all paired samples *t*-tests were significant at the level of $p < .01$, with *t*-scores for paired contrasts ranging from $t_{300} = [-80.57$ (Infants-Adolescents), -15.73 (Infants-Toddlers)], far exceeding the critical $t_{300} = 2.59$ to conclude two-tailed significance at the level of $p < .01$.

Parental Attitudes and Gatekeeping Endorsements

To examine links between individual differences in parental attitudes and gatekeeping endorsements, bivariate correlations were conducted between measures of parents' general approaches to parenting, their personal relationship with their child, and endorsement of positive (*Child Empowerment* and *Healthcare Partnerships*) and negative gatekeeping (*Parental Authority* and *Child Incompetence*; Table 12). Regarding positive gatekeeping, endorsement of *Child Empowerment* was associated with parents reporting lower age thresholds at which children can participate in healthcare, marginally greater

mastery in life and fewer constraints, more satisfaction with parenting, weaker preferences for control over their child (i.e., PARQ-Control and PPS Control), fewer problems separating and being less dependent on their child, and perceiving their child to be in better health and less vulnerable than other children. Endorsement of *Healthcare Partnerships* was associated with parents reporting lower age thresholds at which children can participate in healthcare, greater mastery in life, and being marginally less dependent on their child.

Table 12
Correlations between Parental Attitudes & Gatekeeping Endorsements

	Child Empowerment	Healthcare Partnership	Parental Authority	Child Incompetence
Age Threshold	**-.38****	**-.13***	**.14***	**.16***
Sense of Control – Mastery	.10† (p = .08)	**.12***	**.17****	.03
Sense of Control – Constraints	**-.18****	-.06	-.02	.11
Parenting Efficacy	-.05	.10	**.24****	**.14***
Parenting Satisfaction	**.22****	.07	.01	**-.17****
PARQ – Control	**-.19****	.01	**.30****	**.16****
Parental Supervision	-.019	.03	**.28****	.05
Parental Separation Problems	**-.26****	-.01	.08	.10
Parental Dependence	**.31****	.10† (p = .08)	**-.12***	**-.18****
Parental Control	**-.18****	-.03	**.22****	.10
Child Vulnerability	**-.17****	.003	.03	**.12***
Child Current Health	**.19****	.06	-.06	**-.12***

Note: Significant associations have been bolded. †$p < .10$, *$p < .05$, **$p < .01$.

Regarding negative gatekeeping, endorsement of *Parental Authority* was associated with parents reporting higher age thresholds at which children can participate in healthcare, greater mastery in life, greater perceived parenting efficacy, stronger preferences for control and supervision over their child (i.e., PARQ-Control, PPS Supervision, PPS Control), and more problems separating from their child. Endorsement of *Child Incompetence* was associated with parents reporting higher age thresholds at which children can participate in healthcare, greater perceived parenting efficacy, less satisfaction with parenting, stronger preferences for control over their child (i.e., PARQ-Control), more problems separating from their child, and perceiving their child to be in worse health and more vulnerable than other children.

Consistent with *Hypothesis 2a*, parental endorsement of negative gatekeeping, *Parental Authority* and *Child Incompetence*, were significantly linked to stronger parental preferences for control and supervision over their child. Although not hypothesized a priori, Table 12 also offers evidence of convergent validity such that endorsement of positive gatekeeping, *Child Empowerment* and *Healthcare Partnerships*, demonstrate relatively opposite patterns of effects to negative gatekeeping, *Parental Authority* and *Child Incompetence*—consistent with the inverse relationships between positive and negative gatekeeping endorsements (see Table 10).

Perceived Competence Across Age Groups & Gatekeeping Endorsements

To examine links between parents' perceptions of children's competence and their endorsement of gatekeeping during pediatric healthcare visits, bivariate correlations were conducted between parental gatekeeping endorsements and children's perceived

competency, as assessed by the extent to which parents rated children across pediatric age groups as capable of participating the healthcare visit (Table 13). As hypothesized, increases in perceived competence across age groups were positively associated with greater endorsements of *Child Empowerment* and *Healthcare Partnerships* across all age groups, and negative endorsements of *Parental Authority* and *Child Incompetence* among older children (*Hypothesis 3a*).

However, contrary to *Hypothesis 3a*, parental endorsement of both positive and negative gatekeeping were unrelated to their personal child's age. Notably, the magnitude of associations between parental gatekeeping endorsements and perceived competence of adolescents demonstrate a unique and precipitous decline for *Child Empowerment* and *Healthcare Partnerships* relative to the steady increase across younger age groups and a change in the direction of the association with *Parental Authority* (albeit nonsignificant).

Table 13
Correlations between Perceived Competence across Age Groups & Gatekeeping Endorsements

	Child Empowerment	Healthcare Partnership	Parental Authority	Child Incompetence
Child Age	-.07	.011	-.07	-.01
Infants (0-18mo)	**.23****	**.17****	-.05	-.01
Toddlers (18mo-3yrs)	**.31****	**.17****	**-.14***	.02
Young Children (3-5yrs)	**.32****	**.16****	-.06	-.03
School Children (5-12yrs)	**.39****	**.16****	-.02	**-.16****
Adolescents (12-17yrs)	**.31****	**.13****	.06	**-.12***

Note: Significant associations have been bolded. $^{\dagger}p < .10$, $*p < .05$, $**p < .01$.

Parental Preferences for Control & Negative Gatekeeping Endorsements

To more conservatively test associations between parental attitudes and endorsement of negative gatekeeping, a series of simultaneous multiple regression analyses followed by stepwise regressions were conducted. First, simultaneous regressions were used to test whether parental preferences for control significantly predicted endorsements of negative gatekeeping, controlling for all other parental attitude measures and positive gatekeeping. Second, stepwise regressions were used to identify the relative magnitude of each predictor, with models increasing in complexity with each added variable to identify core antecedents of negative gatekeeping based on model fit. For the purpose of this manuscript, only predictors from the best-fitting stepwise regressions are presented below, offering the most robust and clear evidence of the relationships between parental individual difference variables and negative gatekeeping endorsements.

Regarding negative gatekeeping, a stepwise multiple regression reveals that endorsement of *Parental Authority* was predicted by greater parental preferences for control (i.e., PARQ-Control), $\beta = .22$, $p < .01$, supervision (i.e., PPS Supervision), $\beta = .16$, $p < .01$, perceived parenting efficacy, $\beta = .16$, $p < .01$, and weaker endorsement of *Healthcare Partnerships*, $\beta = -.17$, $p < .01$, controlling for all other individual difference factors including child's age, Adjusted $R^2 = .16$, $F(4, 292) = 15.55$, $p < .01$.

Endorsement of *Child Incompetence* was predicted by greater perceived parenting efficacy, $\beta = .20$, $p < .01$, being less satisfied with parenting, $\beta = -.20$, $p < .01$, and weaker endorsement of *Child Empowerment*, $\beta = -.19$, $p < .01$, controlling for all other individual

difference factors including child's age, Adjusted $R^2 = .10$, $F(3, 293) = 11.79$, $p < .01$.

In sum, consistent with *Hypothesis 2b*, endorsement of negative gatekeeping, particularly *Parental Authority*, was predicted by stronger parental preferences for control and authority over their child even after controlling for their child's age and other parental attitudes. However, endorsements of *Child Incompetence* were not predicted by preferences for control as expected but rather by perceived parenting effectiveness and weaker endorsements of *Child Empowerment*, controlling for other parental attitude measures.

Parent-Teen Conflict Hypothesis

To further explore associations between perceived competence of adolescent-aged children and endorsement of negative gatekeeping, a series of simultaneous multiple regression analyses were conducted, followed by stepwise regressions, to control for child's age, perceived competence of other age groups, and positive gatekeeping endorsement. Aligning with the decline in the magnitude of associations between positive gatekeeping endorsement across age groups (see Table 13), a stepwise multiple regression revealed that endorsement of *Parental Authority* was predicted by perceiving higher age thresholds at which children can participate in healthcare, $\beta = .34$, $p < .01$, perceived competence of adolescent-aged children, $\beta = .26$, $p < .01$, weaker endorsement of *Healthcare Partnerships*, $\beta = -.13$, $p = .02$, and having a younger child, $\beta = -.14$, $p = .02$, controlling for perceived competence of all other pediatric age groups and positive gatekeeping endorsements, Adjusted $R^2 = .08$, $F(4, 292) = 7.53$, $p < .01$. Thus, consistent

the *Parent-Teen Conflict Hypothesis* (*Hypothesis 3b*), endorsement of *Parental Authority* was predicted by perceiving adolescent-aged children to be more competent.

Gatekeeping Endorsements & the Retrospective Healthcare Experience

To assess the potential benefits, consequences, and moderators of parental gatekeeping endorsements during healthcare visits involving pediatric triads, bivariate correlations were conducted between endorsement of gatekeeping and retrospective pediatric healthcare experiences (see Table 14). Regarding positive gatekeeping, endorsement of *Child Empowerment* was associated with a variety of beneficial outcomes including greater child engagement and contributions during the healthcare visit, efforts on behalf of the provider to be inclusive of both the parent and child, child treatment adherence, fewer parental challenges, and greater overall visit satisfaction. Endorsement of *Healthcare Partnerships* was associated with greater child engagement and contributions, provider inclusivity efforts, child treatment adherence, and overall visit satisfaction.

Regarding negative gatekeeping, endorsement of *Parental Authority* was associated with less child engagement and contributions during the healthcare visit, greater provider inclusivity efforts (though weaker in magnitude than the association with positive gatekeeping), greater overall visit satisfaction, and trends toward greater parent and provider contributions. Endorsement of *Child Incompetence* was associated with greater parental challenges during the healthcare visit and marginally longer wait times and less reported child treatment adherence. Contrary to *Hypothesis 4*, neither positive or

negative gatekeeping endorsements were related to total wait duration or the amount of time parents and their child spent with the provider.

Table 14
Correlations between Retrospective Care Experience and Gatekeeping Endorsements

	Child Empowerment	Healthcare Partnership	Parental Authority	Child Incompetence
Total Wait	-.003	-.02	-.02	.10† (p = .08)
Time Seen	-.07	.02	.06	.08
Child Engagement	**.31****	**.22****	**-.12***	-.05
Parental Challenges	**-.38****	-.06	.01	**.27****
Provider Inclusivity	**.28****	**.21****	**.12***	-.06
Child Adherence	**.20****	**.12***	.08	-.11† (p = .06)
Overall Visit Satisfaction	**.16****	**.24****	**.23****	-.05
Parental Contributions (%)	**-.14***	-.07	.10† (p = .10)	-.01
Child Contributions (%)	**.28****	**.19****	**-.19****	.001
Provider Contributions (%)	**-.15****	**-.13***	.11† (p = .07)	.004

Note: Significant associations have been bolded. †$p < .10$, *$p < .05$, **$p < .01$.

Study 2 Discussion

Complementing Study 1's preliminary evidence of parental gatekeeping in real time, Study 2 explored how individual differences and situational factors may motivate parental behaviors that create or thwart opportunities for children to engage during

pediatric healthcare appointments. Specifically, Study 2 explored potential antecedents and consequences of endorsing positive versus negative gatekeeping. These relationships were examined in an international and socioeconomically diverse sample of parents with pediatric-aged children who recently received pediatric healthcare. While this endeavor was exploratory, the analyses were guided by multiple hypotheses that received mixed support.

Starting with healthcare outcomes, parental endorsement of positive gatekeeping was associated with an array of benefits for pediatric patients, including greater engagement and contributions during healthcare appointments, treatment adherence, and parents' overall visit satisfaction. In contrast, parental endorsement of negative gatekeeping was linked to immediate and potential distal consequences, notably less child engagement and opportunities to cultivate self-efficacy. Furthermore, negative gatekeeping was associated with greater parent and provider contributions, which may suggest links between parental preferences for authority and the formation of dyadic coalitions during healthcare interactions involving pediatric triads (e.g., Callery & Milnes, 2012; Gabe et al., 2004; Green & Adelman, 2013; Tran et al., 2022).

Although not significant by traditional standards, this pattern of effects might suggest that parents who more strongly endorse negative gatekeeping either consciously or unconsciously behave in ways that evoke the formation of dyadic coalitions with providers and exclude children. Alternatively, the emergence of dyadic coalitions during pediatric healthcare visits may lead parents to more strongly endorse negative gatekeeping after the interaction based on their communication experience if the

healthcare provider predominantly interacted with them rather than their child, "designating" them to a position of relative power. Future studies should consider the temporal order and stability of negative gatekeeping endorsements over time (e.g., among new parents) to identify clues about the directionality of the relationship between negative gatekeeping, parental contributions, and prevalence of dyadic coalitions over multiple healthcare interactions.

Surprisingly, neither the duration of the wait for healthcare services or the amount of time children and parents reportedly had with the provider related to gatekeeping endorsements (*Hypothesis 4 not supported*) despite time constraints often emerging as a barrier to children's participation in healthcare appointments (e.g., Butz et al., 2007; Coyne, 2008; Gabe et al., 2004; Shah et al., 2020). We suspected that parents would more strongly endorse negative gatekeeping when faced with perceived time constraints, manifesting as interruptions and interjections to more efficiently disclose or clarify information about their child's health. However, it remains unclear whether time will emerge as a moderator of negative gatekeeping endorsement and behaviors in studies observing triadic healthcare interactions in real time. Thus, future studies should attempt to measure and test whether objective assessments of time (versus subjective reports) demonstrate similar null-associations with parental endorsements of negative gatekeeping and behavior during pediatric healthcare visits.

Regarding mechanisms underlying parental gatekeeping endorsements, parental perceptions of children's health competence were intertwined with age in the present study as anticipated (*Hypothesis 1* supported). Stronger parental preferences for

supervision and control over their child were also found to both relate to parental endorsement of negative gatekeeping (*Hypothesis 2a* and *Hypothesis 2b* partially supported), though only endorsement of *Parental Authority* negative gatekeeping retained an association after accounting for personal attitudes and parenting preferences. Interestingly, parents' perceptions of their parenting effectiveness significantly predicted endorsement of *Child Incompetence* negative gatekeeping after accounting for other parenting preferences and positive gatekeeping endorsements, suggesting that parents may believe effective parenting is inherently characterized by retaining responsibility and authority over their child.

Moreover, the trajectory of parental preferences, attitudes, and endorsement of gatekeeping over time and their child's development cannot be determined from these results. As anticipated, parents generally perceived children to be more competent across ascending age groups and endorsed both more positive and less negative gatekeeping, with age group moderating the association (*Hypothesis 3a* partially supported). Parent's general perceptions of children's health competence in adolescence seems to also demonstrate a unique pattern with endorsement of positive gatekeeping, consistent with prior studies documenting distinct differences in patterns of communication involving adolescents (*Hypothesis 3b - Teen Conflict Hypothesis* supported). Despite demonstrating preferences for involvement, adolescents' participation is often not requested or encouraged during healthcare interactions while parents tend to prefer more thorough explanations and greater participation, even when providers attempt to focus on the

patient and particularly with adolescent patients (Shah et al. 2020; van Staa & On Your Own Feet Research Group, 2011).

Although this pattern of parent-teen conflict has been documented, no clear or consistent mechanism of action has emerged within the literature. Though, it could be speculated that this phenomenon during healthcare interactions represents spillover effects from broader parenting or family domains. For example, compared to younger children, adolescent-parent relationships are distinguished by a distinct developmental period as children begin to crave and cultivate a sense of independence from their parent, often manifesting in negative interactions and conflict (see Smetana & Rote, 2019 for a review). The potential for adolescent-parent conflicts to manifest through weaker endorsement of positive gatekeeping compared to younger children may ultimately hamstring opportunities for adolescent patients to share (and providers to thus address) their unique illness experience, request additional assistance, or confirm their understanding with the provider (Clemente et al., 2012; Cottrell et al., 2006; Hunter et al., 2015).

Finally, despite the prevalence of time constraints cited as a barrier to effective pediatric communication and engagement in shared decision-making (e.g., Coyne, 2008; Runeson et al., 2001; Shah et al., 2020), time measures did not relate to parental endorsements of either positive or negative gatekeeping in Study 2 (*Hypothesis 4* not supported). However, the lack of a significant link between time and gatekeeping endorsements may be attributable to the retrospective nature of Study 2 rather than the absence of a true effect, with over 70% of parents reporting that their child's most recent

healthcare appointment occurred over 30 days prior to completing the survey. Subjective perceptions of time may be distorted by a variety of individual and contextual factors including state affect and physiological arousal (e.g., Droit-Volet, 2018; Rankin et al., 2019). Thus, interpretations of the null associations between gatekeeping endorsements and time should be considered with a degree of caution and may not be generalizable to other healthcare contexts beyond Study 2.

General Discussion

Based on the Person-Centered Communication Model of Care (PCCMC, Figure 1; Tran, 2020), health communication represents a dynamic process that unfolds over time, characterized by the cultivation of rapport and trust facilitating comfort and disclosure via information exchange, offering providers insight about patients' healthcare preferences and expectations that can be used to navigate available treatment options to reach a shared decision. However, it was unclear how establishing rapport, information exchange, and shared decision making demonstrate parallel processes within pediatric triads compared to adult dyad. Healthcare involving pediatric triads requires providers to consider parents and children as a "dual patient unit" and reconcile conflicting expectations (e.g., Greene & Adelman, 2013; Shah et al., 2020). Thus, Studies 1 and 2 contribute novel insights to the limited evidence to date, highlighting dynamics of pediatric healthcare communication.

Most notably, these studies offer evidence for the utility of mixed method approaches for decoding the "black box" underlying the provision of life saving care each day across the globe. These findings also point to an array of potential mechanisms that

future researchers can consider when evaluating triadic communication, including gatekeeping endorsements and the prevalence, directionality, and flow of information exchange, interruptions, and interjections during pediatric healthcare interactions.

Limitations and Future Directions

Despite these contributions, it is essential to acknowledge limitations of these studies. Regarding Study 1's in-person observational design, significant challenges with data collection arose due to circumstances out of our control. Despite the small sample size limiting analytic options, closer examination of the data reveals a heavily skewed sampling bias towards adolescent age children. Importantly, this sampling bias towards older children may be the result of variable timelines and uncertainty surrounding access to COVID-19 vaccines for pediatric age groups. For example, U.S. emergency use authorization of the Pfizer-BioNTech vaccine for children aged 5-11 was only announced in late October of 2021, four months after data collection for Study 1 was halted (U.S. Food & Drug Administration, 2021). The lack of FDA approval compounded by vaccine hesitancy and uncertainty about the pandemic's forecast at the time of data collection may have discouraged an already limited number of eligible parents from participating in our study (e.g., Olusanya et al., 2021; Puri et al., 2020; Troiano & Nardi, 2021). Therefore, features of the interaction and communication patterns identified in Study 1 may be limited in their generalizability to non-adolescent pediatric age groups given the lack of a representative sample. However, the high prevalence of interruptions identified between adolescent pediatric patients and parents further highlights the potential for a parent-teen conflict effect.

In Study 2, the decision to adopt a retrospective questionnaire was made to circumvent the logistical challenges of collecting in-person data from healthcare institutions amid the uncertainty of an ongoing global pandemic. Study 2 became as a unique opportunity to examine mechanisms underlying patterns of pediatric communication observed in Study 1 and previously by Tran et al. (2022). Along with the retrospective design limitations discussed above, no study to date has critically evaluated (versus qualitatively documenting) communication patterns among pediatric triads. Study 2 required operationalization, item-development, and use of face-valid measures for evaluating positive and negative parental gatekeeping endorsements. Although the EFAs for the parental gatekeeping and care experience offer reasonable preliminary evidence for the factor structure of these phenomena, a degree of caution should still be exercised when interpreting these novel measures. Specifically, interpretating associations related to *Child Incompetence* negative gatekeeping should be tempered relative to other gatekeeping endorsements given it had the weakest factor loadings and was comprised of the fewest number of items.

Despite these limitations, findings from Studies 1 and 2 highlight a variety of unanswered questions remaining in the health communication literature, particularly concerning nuances of non-dyadic healthcare interactions. Study 1 built upon limited work examining communication involving pediatric triads. The sampling "limitations" experienced may, alternatively, be interpreted as lending further evidence for the unique depth, utility, and need for qualitative and mixed method approaches in assessments of triadic health communication (see Tran et al., 2022 for a review). Future studies should

consider whether features of the interaction identified in Study 1 (i.e., technical language, interruptions, and flow of information exchange) vary across pediatric age groups and track how aspects of the interaction may shift in real time over the course of the consultation to identify threshold and moderator effects for children's engagement. For example, the prevalence of successful parental interruptions early in the interaction may prompt fewer attempts to participate and steadily less engagement from the child over the course of the visit, implicating how interruptions may be leveraged as a tool or requisite for the formation of dyadic coalitions (Gabe et al., 2004; Greene & Adelman, 2013; Tran et al., 2022).

Study 2 was the first to operationalize a data-derived conceptual framework of gatekeeping in pediatric healthcare. Future studies should integrate our two approaches to evaluate the replicability and generalizability of positive and negative gatekeeping endorsements for motivating parental behaviors in real-time healthcare interactions. For example, a longitudinal study of pediatric healthcare patients and their parents over the continuity of care may elucidate how parental attitudes toward gatekeeping evolve over time to contextualize mechanisms and conditions conducive for child engagement and the stability of the parent-teen conflict hypothesis. Similarly, studies incorporating pre- and post-consultation surveys along with real-time data collection during the healthcare visit may directly address the retrospective limitations of Study 2 to evaluate parental attitudes at the time of service, explore how individual differences may manifest during the interaction, and test the replicability of these results.

Conclusion

Taken together, the findings of Studies 1 and 2 reveal distinct conversational patterns and dynamics of triadic healthcare communication involving pediatric patients. As advances in health-related technology and digitally integrated healthcare continue to be made, it is imperative to understand the rapidly evolving context in which modern children will learn to understand and engage with their personal health and well-being. Shifts in the field from paternalistic to more patient-centered healthcare approaches, widespread technological advancements in medicine and healthcare delivery, variable attitudes and trust in healthcare institutions, and parental protection stemming from the omnipresence of the COVID-19 pandemic across all domains of life may have solidified a generational divide and uncertainty in understanding patient attitudes toward healthcare moving forward (Bashshur et al., 2020; Kichloo et al., 2020; Portnoy et al., 2020; Tran, 2020). Contextualizing these findings within broader social norms and dynamics, the profound impact of the COVID-19 pandemic should not be understated – rather, researchers should anticipate the potential for far-reaching consequences within the fields of medicine, health, and healthcare delivery that may only be realized in time.

The experience of many parents having to confront their own limitations in protecting their children during the pandemic, namely having to cope with shortages in personal protective equipment (e.g., masks), lack of vaccine availability, and challenges with employment, childcare, and safe schooling may leave a lasting impact on how parents today choose to interact with their children. For example, one interpretation may be that some parents choose to strengthen their endorsements of negative gatekeeping in

a compensatory effort to retain as much control to protect their (now even more vulnerable) child. Alternatively, enduring the challenges of the pandemic may lead some parents to acknowledge the limits of their control as parents and instead more strongly endorse positive gatekeeping with the aim of cultivating their child's own health autonomy and self-efficacy. Thus, our studies offer valuable insight into a variety of potential methods and mechanisms to consider when investigating pediatric communication, demonstrating how the field of health communication may be on the precipice of a new era.

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