

UC Irvine

UC Irvine Previously Published Works

Title

Alternatives to Care in Physician Offices: Patients' Expectations and Satisfaction

Permalink

<https://escholarship.org/uc/item/6g48d4rn>

Journal

Journal of General Internal Medicine, 33(10)

ISSN

0884-8734

Authors

Mukamel, Dana B

Amin, Alpesh

Shi, Yuxi

et al.

Publication Date

2018-10-01

DOI

10.1007/s11606-018-4520-9

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

## LETTERS

## Concise Research Reports

## Alternatives to Care in Physician Offices: Patients' Expectations and Satisfaction

Dana B. Mukamel, PhD<sup>1</sup>, Alpesh Amin, MD<sup>2</sup>, Yuxi Shi, MS<sup>1</sup>, Heather Ladd, MS<sup>1</sup>, and Dara H. Sorkin, PhD<sup>1</sup>

<sup>1</sup>Department of Medicine, Division of General Internal Medicine; iTEQC Research Program, University of California, Irvine, Irvine, CA, USA;

<sup>2</sup>Department of Medicine, University of California, Irvine, Orange, CA, USA.

**KEY WORDS:** ambulatory care settings; patient satisfaction; patient expectations; virtual physicians; retail clinics; urgent care

J Gen Intern Med 33(10):1598–600

DOI: 10.1007/s11606-018-4520-9

© Society of General Internal Medicine 2018

## INTRODUCTION

Patients have several choices besides physicians' offices or emergency rooms (ERs) when seeking care for minor illnesses, including urgent care, retail clinics, and virtual physicians. The limited literature assessing costs and quality offered in these settings has mixed findings, concluding that they are attractive to patients when costs are lower while quality may not be comparable.<sup>1–3</sup> Our goal is to provide the patient's perspective, missing from the extant literature.

## METHODS

We surveyed all employees of the University of California, Irvine (UCI), which resembles a “mini-city” because of its diverse spectrum of employment types and socio-economic strata.

In addition to questions about demographics, education, income, insurance, and health status, we asked questions about actual experience with care in physicians' offices, ERs, urgent care, retail clinics, and virtual physicians. Respondents were asked about their expectations and satisfaction with each of four attributes: out-of-pocket costs, wait time, quality, and overall experience. The expectation questions were “How was the [attribute, e.g. wait time] at the [setting] compared to what you expected it to be?” “Answers were on a 1–9 Likert scale with 1 = “Much worse than I expected,” 5 = “Neither worse nor better than I expected,” and 9 = “Much better than I expected.” The satisfaction

questions were “How satisfied were you with your [attribute] at the [setting]?” Answers were on a 1–9 Likert scale with 1 = “Very dissatisfied,” 5 = “Neither dissatisfied nor satisfied,” and 9 = “Very satisfied.”

We calculated average expectation and satisfaction scores by setting and compared them to physicians' offices using *t* tests.

To understand what predicts patients' satisfaction, we estimated separate linear regression models for each setting and attribute. Dependent variables were the satisfaction scores. We added groups of independent variables successively in the following order: expectation scores for all settings, patient demographics, health status, family composition, socio-economics, and health insurance. We measured the increase in variation explained as variable groups were added by the incremental adjusted *R*<sup>2</sup>.

## RESULTS

Of the 21,037 employees surveyed, 5451 responded (26%). Respondent characteristics are in Table 1. Most (81.6%) had at least one medical encounter. Among those seen at least once in each setting, the average number of visits in the previous 12 months were physician's office, 4.1 visits; ER, 1.4; urgent care, 1.8; retail clinic, 2.0; and virtual physician, 1.6.

Patient expectations were least likely to be met for costs and most likely to be met for quality and overall experience (Fig. 1a). Patients were most disappointed with respect to physicians' offices' (score of 4.95) and ERs' (4.60) costs. Virtual physicians exceeded expectations (score of 6.10) and had the best scores in all categories, tying with physicians' offices (*p* > 0.05) for quality and overall experience.

Patients were satisfied with care in all settings and for all attributes (Fig. 1b). They were least satisfied with ER costs

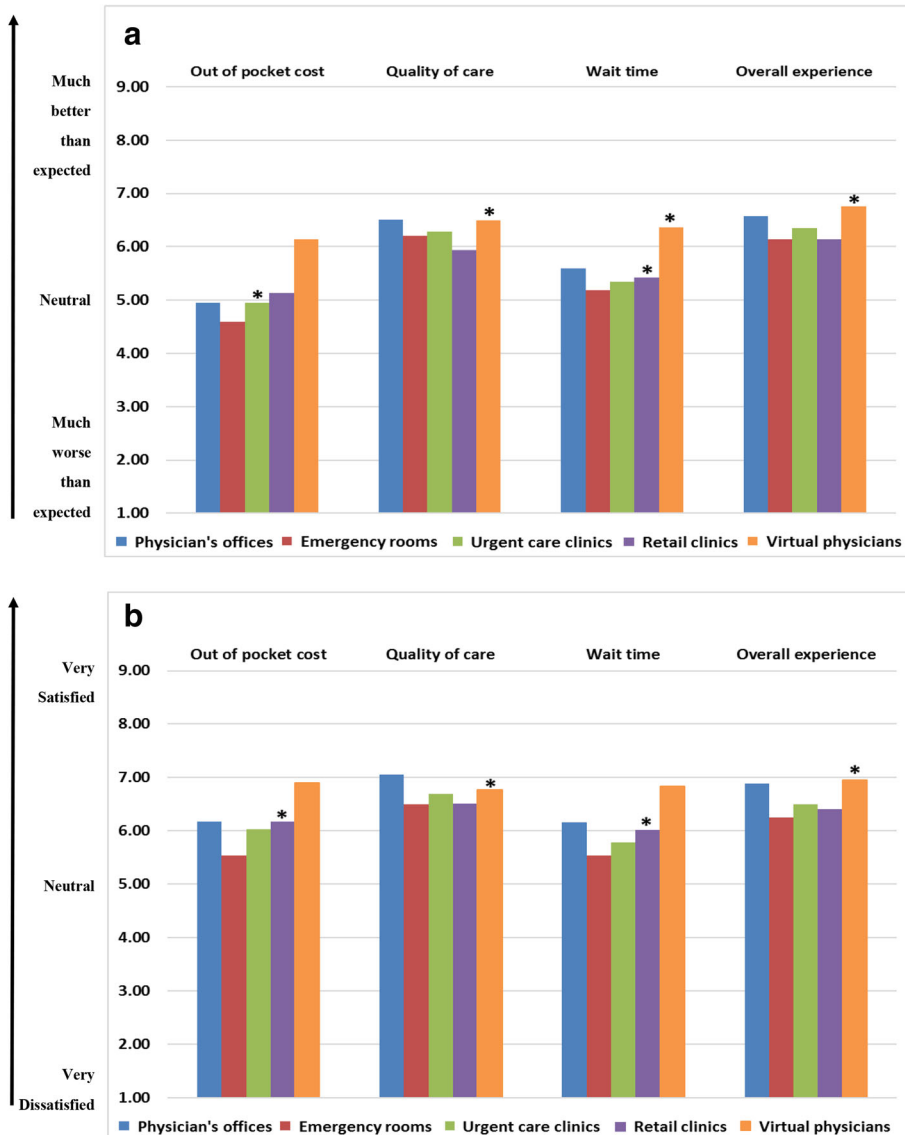


Figure 1 Expectation and satisfaction scores (\* = not significantly different from physician's office  $p > 0.05$ ). a Expectation scores by care setting b Satisfaction scores by care setting.

and wait time (scored at 5.5). When compared within attributes, ERs also had the lowest scores, at 6.5 for quality and 6.3 for overall experience. As with expectations, patients reported the most satisfaction with virtual physicians in all attributes, and they tied with physicians' offices in quality and overall experience ( $p > 0.05$ ).

In our multivariable models, the first model (including only expectations for out-of-pocket cost, quality of care, wait time, and overall experience) had the largest predictive power of variation (largest incremental  $R^2$ ). Other models, successively adding demographics, health status, number of medical con-

ditions and encounters, family composition, socio-economics, and health insurance, added very little to our model's predictive power.

### DISCUSSION

Virtual physicians performed best in our study in meeting patients' expectations and satisfaction. This is a relatively new modality. It has been growing fast but is yet to reach parity among consumers, as the relatively small number of

**Table 1 Descriptive Statistics (Percent of Respondents in Parentheses)**

Respondents	5451
Number of medical encounters in the past 12 months by care setting (% of total encounters)	
Physician's office	4279 (62%)
Emergency room	580 (9%)
Urgent care clinic	1336 (20%)
Retail clinic	508 (7%)
Virtual physician (through video chat/phone)	155 (2%)
Total encounters	6858
Average age	39.8
Gender	
Male, (%)	1836 (34%)
Female, (%)	3591 (66%)
Race	
White	2032 (37%)
Asian or Pacific Islander	1471 (27%)
Hispanic	969 (18%)
African American	116 (2%)
Other	299 (6%)
Marital status	
Married or living with a partner	3220 (59%)
Widowed/divorced/separated	527 (10%)
Never married	1666 (31%)
Having children	
No	2642 (49%)
Yes	2759 (51%)
University employment status	
Faculty	665 (12%)
Staff	3199 (59%)
Student	856 (16%)
Retired	155 (3%)
Other	498 (9%)
Education	
High school or less	379 (7%)
Associate degree or some college	1311 (24%)
College or some graduate school	1722 (32%)
Graduate degree	2020 (37%)
Income	
< \$25,000	406 (8%)
\$25,000–\$50,000	801 (15%)
\$50,000–\$75,000	658 (12%)
\$75,000–\$100,000	655 (12%)
\$100,000–\$150,000	937 (17%)
\$150,000–\$200,000	403 (7%)
> \$200,000	547 (10%)
Do not know/missing but < \$50,000	83 (2%)
Do not know/missing but > \$50,000	171 (3%)
Do not know	268 (5%)
Health status	
Excellent	1219 (22%)
Very good	2367 (43%)
Good	1501 (28%)
Fair/poor	282 (5%)
Having chronic conditions	
No	4047 (74%)
Yes	1295 (24%)
Health insurance	
PPO/POS	1288 (24%)
HMO	2462 (45%)
Health saving account	218 (4%)
None	24 (0%)
Other	973 (18%)

Percentages may not sum to 100 in a category due to missing data

encounters among our responders suggests. Other studies suggest that even substantially lower prices may not be sufficient to convince patients to change decades' long healthcare seeking habits.<sup>4</sup> Substantial price differential<sup>5</sup> coupled with higher satisfaction might make for faster adoption.

Our other interesting finding suggests that the most important thing providers can do to increase patient satisfaction, irrespective of the patient population they serve and the type of setting they manage, is to meet their patients' expectations, similar to prior findings.<sup>5, 6</sup>

**Acknowledgements:** We wish to thank Dr. Howard Federoff, Vice Chancellor, Health Affairs/CEO, UCI Health System, and Ms. Susan Pihl, Specialized Services Director-Campus Human Resources, of the University of California, Irvine, who made this study possible and provided important insights.

**Corresponding Author:** Dana B. Mukamel, PhD; Department of Medicine, Division of General Internal Medicine; iTEQC Research Program University of California, Irvine, Irvine, CA, USA (e-mail: dmukamel@uci.edu).

**Funders** Support for this article was provided by the Robert Wood Johnson Foundation grant #73053.

#### Compliance with Ethical Standards:

**Conflict of Interest:** The authors declare that they do not have a conflict of interest.

**Prior Presentations:** None.

**Disclaimer:** The views expressed here do not necessarily reflect the views of the Robert Wood Johnson Foundation.

## REFERENCES

1. Mehrotra A, Liu H, Adams JL, et al. Comparing costs and quality of care at retail clinics with that of other medical settings for 3 common illnesses. *Ann Intern Med.* 2009;151(5):321–328.
2. Wang MC, Ryan G, McGlynn EA, Mehrotra A. Why do patients seek care at retail clinics, and what alternatives did they consider? *Am J Med Qual.* 2010;25(2):128–134.
3. Ahmed A, Fincham JE. Physician office vs retail clinic: patient preferences in care seeking for minor illnesses. *Ann Fam Med.* 2010;8(2):117–123.
4. Mehrotra A, Dean KM, Sinaiko AD, Sood N. Americans support price shopping for health care, but few actually seek out price information. *Health Aff (Millwood).* 2017;36(8):1392–1400.
5. Jackson JL, Chamberlin J, Kroenke K. Predictors of patient satisfaction. *Soc Sci Med.* 2001;52(4):609–620.
6. Cooil B, Keiningham TL, Aksoy L, Hsu M. A longitudinal analysis of customer satisfaction and share of wallet: investigating the moderating effect of customer characteristics. *J Mark.* 2007;71(1):67–83.