

# Correlation of Provider Burnout With Patient Experience

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Kathleen E McKee, MD<sup>1,2</sup> , Andrea Tull, PhD<sup>3</sup>,  
Marcela G del Carmen, MD, MPH<sup>1,4</sup>,  
and Susan Edgman-Levitan, PA<sup>5</sup>

## Abstract

Initiatives to mitigate physician burnout and improve patient experience occur largely in isolation. At the level of the department/division, we found lower physician burnout was associated with a more positive patient experience. Physician Maslach Burnout Inventory data and patient Consumer Assessment of Healthcare Providers and Systems Clinician and Group experience scores were significantly correlated with 5 of 12 patient experience questions: “Got Routine Care Appointment” ( $-0.632, P = .001$ ), “Recommend Provider” ( $-0.561, P = .005$ ), “Provider Knew Medical History” ( $-0.532, P = .009$ ), “Got Urgent Care Appointment” ( $-0.518, P = .014$ ), and “Overall Rating” ( $-0.419, P = .047$ ). These correlations suggest burnout and experience might be better addressed in tandem. Principles to guide an integrated approach are suggested.

## Keywords

physician burnout, patient experience, Maslach Burnout Inventory, CG-CAHPS

## Introduction

Decreasing physician burnout and improving patient experience have become institutional priorities in health-care systems across the country. Burnout has been described by psychologist Christina Maslach as a feeling of distress within a helping relationship (1). Burnout threatens well-being of physicians and the viability of the health-care system. One longitudinal study estimated that the increase in burnout from 2011 to 2014 resulted in a reduction of the physician workforce equivalent to losing the graduating classes of 7 medical schools (2). Patient experience focuses on how patients experience key aspects of their care. Evidence suggests that better care experiences are associated with higher levels of adherence to physician recommendations and better clinical outcomes (3,4).

It seems logical that less burned out physicians would deliver a higher quality patient experience, and vice-versa. A 2002 study of 115 internal medicine residents utilizing an anonymous mailed survey found burnout was associated with self-reported suboptimal patient care practices (5). To our knowledge though, the relationship between physician burnout and patient experience has not been more quantitatively described. Data and action on burnout and experience are collected and executed largely separately. We sought to

determine whether a quantitative correlation exists between physician burnout and patient experience.

## Methods

The analysis of deidentified data was approved by the Partners Human Research Committee, Protocol#: 2014P002779. Burnout among physicians in the Massachusetts General Physician Organization (MGPO) was measured via the Maslach Burnout Inventory—General Service (MBI-GS)

<sup>1</sup> Massachusetts General Physicians Organization, Boston, MA, USA

<sup>2</sup> Department of Neurology, Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA

<sup>3</sup> Edward P. Lawrence Center for Quality and Safety, Massachusetts General Hospital, Boston, MA, USA

<sup>4</sup> Department of Obstetrics, Gynecology and Reproductive Biology, Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA

<sup>5</sup> John D. Stoeckle Center for Primary Care Innovation, Massachusetts General Hospital, Boston, MA, USA

## Corresponding Author:

Kathleen McKee, Massachusetts General Hospital Physicians Organization, 55 Fruit Street, Bulfinch 205, MA 02114, USA.  
Email: kathleen.mckee@imail.org.



survey distributed to physicians to complete between May and June 2017. The survey was part of a larger physician survey conducted biennially and asked physicians to consider their experience working within the MGPO. Physicians received a monetary incentive for completing the survey as part of the organization's quality incentive program (6). Consistent with prior administrations, survey response rate was greater than 90%. The MBI-GS characterizes burnout as a state of high emotional exhaustion and depersonalization along with a low sense of personal accomplishment (1). Questions regarding these 3 domains are scored: 0 = never, 1 = a few times a year or less, 2 = once a month or less, 3 = a few times a month or less, 4 = once a week, 5 = a few times a week, and 6 = everyday. Burnout was calculated in 2 ways. First, via the methodology originally conceived by Christina Maslach in which physicians are considered "burned-out" if they score at the extreme in 2 of 3 subscales:  $\geq 3$  in emotional exhaustion,  $\geq 2$  in cynicism, and  $\leq 4$  in professional efficacy (1). Secondly, burnout was also calculated via the method employed in several recent studies in which individuals are considered burned out if they are extreme in just 1 of 3 subscales (7). Results are reported as the percentage of physicians in that department/division who met criteria for burnout.

Patient experience was measured by Consumer Assessment of Healthcare Providers and Systems Clinician and Group (CG-CAHPS) survey. This program of the Agency for Healthcare Research and Quality provides validated questions for patients about their experience of care (8). The CG-CAHPS 3.0 survey was administered to patients by phone within 10 to 12 days of their outpatient appointment. Up to 5 attempts were made to reach the patient. Nearly all surveys were completed within 6 weeks of the visit, but protocol permitted responses up to 12 weeks post. Results are reported as the percentage of patients within a department/division who responded to a CG-CAHPS survey question with a "top-box" answer. Sampling of patients was conducted to obtain a minimum number of completed patient surveys needed for statistical significance for analyses at the level of the department/division, not the individual physician. For visit dates between July 1, 2016, and June 30, 2017 (the academic year preceding the distribution of the physician survey), we analyzed 12 CG-CAHPS 3.0 survey items: 10 items that comprise 3 composite measures (Access to Care, Provider Communication, and Care Coordination), and 2 single-item measures (Overall Provider Rating and Likelihood to Recommend Provider). Questions relating to the physical office environment and front staff behavior were excluded. The full text of each question and explanation of "top-box" methodology can be found in Online Appendix 1.

Pearson correlation coefficients were calculated by department/division between the percent of physicians meeting burnout criteria as calculated by both methods and percent of patients reporting a top-box score for each CG-CAHPS question. One CG-CAHPS question in one division

had fewer than 25 patient responses and was excluded from the analysis. Alpha of  $P \leq .5$  was considered statistically significant.

## Results

There were 23 departments/divisions for which both MBI-GS burnout and CG-CAHPS experience data were available. A total of 92% of physicians completed the survey ( $n = 1343$ ). Per department, an average of 58 physicians (range: 7-232) completed the survey. Of all, 26.3% of patients contacted ( $n = 20\,942$ ) completed the CG-CAHPS survey with an average number of responses per question per department/division of 752 (range: 26-6334). Table 1 details the number of physician and patient responses per department/division.

Pearson correlation coefficients are listed in Table 2. Five of 12 CG-CAHPS questions were significantly correlated. The following CG-CAHPS questions had significant correlation to physician burnout defined via Maslach method and are graphically depicted in Figure 1: "Got Routine Care Appointment" ( $-0.632$ ,  $P = .001$ ), "Recommend Provider" ( $-0.561$ ,  $P = .005$ ), "Provider Knew Medical History" ( $-0.532$ ,  $P = .009$ ), "Got Urgent Care Appointment" ( $-0.518$ ,  $P = .014$ ), and "Overall Rating" ( $-0.419$ ,  $P = .047$ ). The "Provider Listened Carefully" question approached statistical significance ( $-0.408$ ,  $P = .054$ ). When burnout was defined using the other methodology (extreme in 1 of 3 subscales) there were no significant correlations.

## Limitations

Correlations at the level of the department/division highlight opportunities for organizational improvement (eg, improving access to urgent and routine care appointments) and ways in which the nature of a specialty itself may contribute to burnout and experience. Analysis at the level of the individual would be more appropriate due to the individual nature of burnout as well as the individual physician's role in shaping the experience of care for patients. Unfortunately, the anonymity of the physician survey as well as current patient experience sampling strategies prevent such an individual analysis.

Another limitation is that burnout scores obtained by the MBI-GS reflect the entirety of a physician's clinical experience, not just outpatient work; yet only outpatient care is reflected in the CG-CAHPS data. Regardless of the source of physician burnout (ie, inpatient vs outpatient work) though, once burned out, physicians likely carry this burden to all aspects of their practice. We thus hypothesize that the results would be much the same even if broader patient experience data, attributable to individual providers and practice settings, were obtained.

**Table 1.** List of the 23 Departments Divisions for Which CG-CAHPS Patient Experience and MBI-GS Burnout Data for Academic Year 2016 to 2017 Was Available.<sup>a</sup>

Department/Division	MBI-GS Physician Responses, N	CG-CAHPS Max Patient Responses, n	CG-CAHPS Average Patient Responses, n
Anesthesia and critical care	129	207	169
Dermatology	40	781	597
Med—Allergy immunology	14	206	168
Med—Cardiology	78	1038	867
Med—Endocrinology	45	699	589
Med—Gastroenterology	37	443	365
Med—Infectious disease	44	241	200
Med—Nephrology	25	188	161
Med—Primary care	232	6351	5459
Med—Pulmonary and critical care	34	241	201
Med—Rheumatology	16	243	203
Neurology	105	1366	1100
Neurosurgery	14	420	345
OB/GYN	54	1394	1137
Oral and maxillofacial surgery	7	209	162
Orthopedics	42	1793	1478
Pediatrics—Primary care	56	1008	785
Pediatrics—Specialists	103	997	763
Pediatrics—Surgery	7	133	107
Physical medicine and rehab	45	187	153
Radiology	108	379	304
Surgery	96	2039	1666
Urology	12	379	316
Total	1343	20 942	—

Abbreviations: CG-CAHPS, Consumer Assessment of Healthcare Providers and Systems Clinician and Group; MBI-GS, Maslach Burnout Inventory—General Service; OB-GYN, Obstetrics - Gynecology.

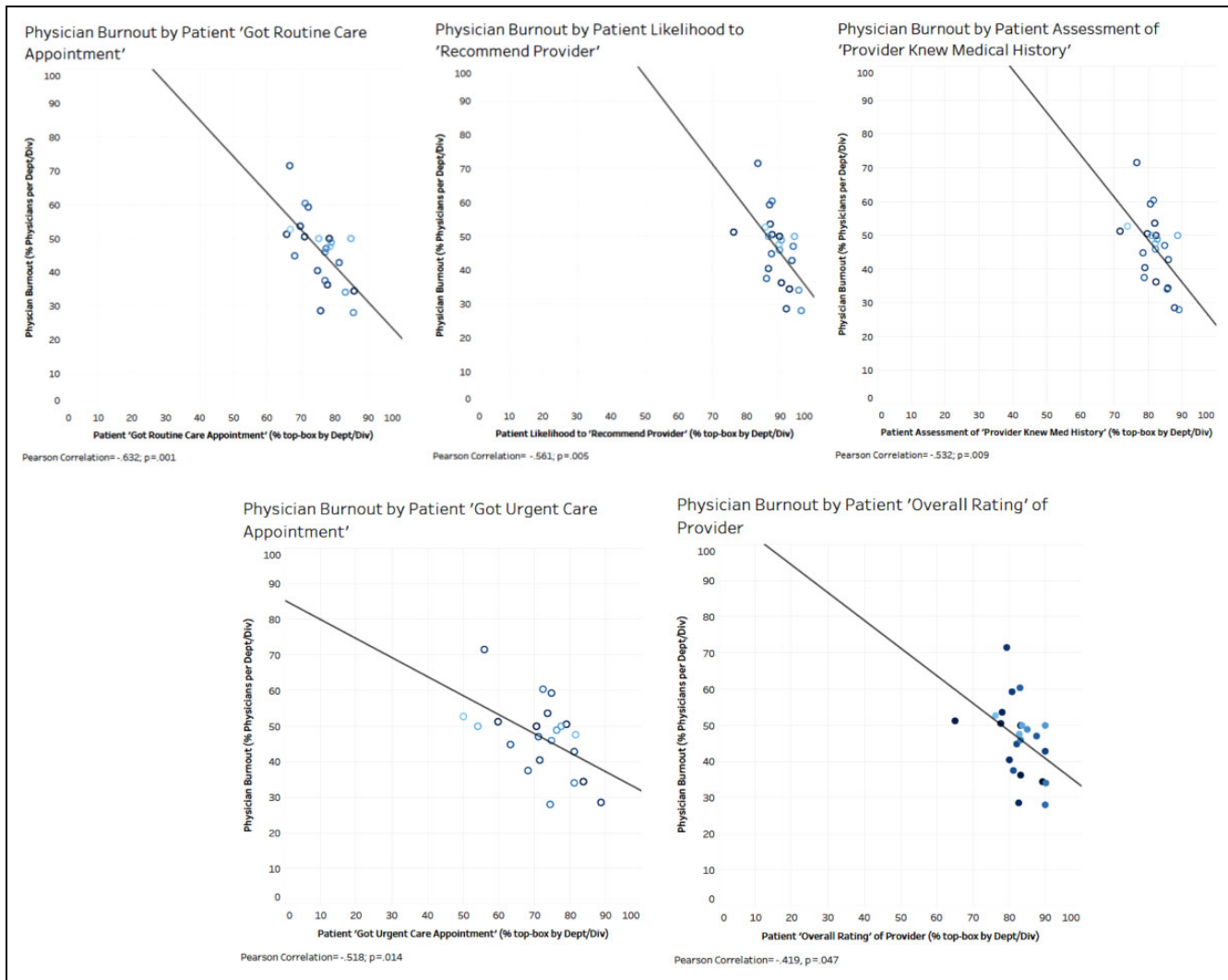
<sup>a</sup>The second column lists the number of physicians in each department/division who completed the MBI-GS. The third column lists the maximum number of patients who responded for each department/division. Because not all patients answer all questions, the fourth column depicting average number of responses per department/division is also included. This number is an average of the absolute number of responses to each individual CG-CAHPS survey question. Source: Massachusetts General Hospital Physician Organization Internal Data.

**Table 2.** Pearson Correlation Coefficients Between Department/Division Averages on Individual Physician-Specific CG-CAHPS Questions and Department/Division Average Physician Burnout as Measured on MBI-GS and Categorized By Maslach Method (Extreme in 2/3 Subscales).<sup>a</sup>

Topic	CG-CAHPS Question Abbreviation	Pearson Correlation Coefficient	Significance (2 Tailed)
Access to care	Got urgent care appointment	−0.518	.014
	Got routine care appointment	−0.632	.001
	Saw provider within 15 minutes of appointment time	−0.320	.137
Provider communication	Provider explained things	−0.228	.294
	Provider listened carefully	−0.408	.054
	Provider showed respect	−0.195	.372
	Provider spent enough time	−0.344	.108
Care coordination	Provider knew medical history	−0.532	.009
	Someone followed up with test results	−0.193	.377
	Someone discussed all prescription medications	−0.010	.962
Rating	Overall rating	−0.419	.047
Recommend	Recommend provider	−0.561	.005

Abbreviations: CG-CAHPS, Consumer Assessment of Healthcare Providers and Systems Clinician and Group; MBI-GS, Maslach Burnout Inventory—General Service.

<sup>a</sup>Source: Massachusetts General Hospital Physician Organization Internal Data. Note: n = 23 departments for all questions except “Got Urgent Care Appointment” (n = 22) and “Someone Discussed All Prescription Medications” (n = 22). The full text of each CG-CAHPS question is detailed in Online Appendix 1.



**Figure 1.** Graphical depiction of the 5 Consumer Assessment of Healthcare Providers and Systems Clinician and Group (CG-CAHPS) questions that had significant correlations to physician burnout as defined via Maslach method (extreme in 2 of 3 subscales). Source: Massachusetts General Hospital Physician Organization Internal Data.

## Discussion

Overall rating of provider and patient likelihood to recommend a provider is considered summative single item assessments of patient experience of a provider (9). That these questions significantly correlate with physician burnout suggest patients have a better experience of care from physicians who are less burned out. The correlation between patients' access to routine and urgent care appointments and physician burnout may suggest that adequately staffed and scheduled practices lead not only to improved patient experience but also reduced physician burnout. This may reflect the development of highly reliable systems of care within those practices. Alternatively, prompt access to care may result in less frustrated and less sick patients which may improve physician experience.

Several measures of patient experience do not appear to be correlated with physician burnout. This may be because

burnout does not affect these particular measures—for example, both burned out and nonburned out physicians may run late and spend too little time with the patient. Alternatively, a patient's response to the experience question may not be linked to physician behavior—for example, someone following up test results and discussing medications may correlate with divisional practice habits rather than individual physician characteristics. Surprisingly all 4 "Provider Communication" items were not found to be significantly correlated although "Provider Listened Carefully" approached statistical significance. We suspect that a larger sample size analyzed at the level of the individual may show a significant correlation between physician burnout and "Provider Listened Carefully" as well as the other communication measures.

Interestingly, a correlation existed only when burnout was defined as originally conceived by Christina Maslach as

extreme in 2 of 3 subscales. That no correlation was observed when burnout is defined as extreme in just 1 of 3 subscales may suggest that such a definition of burnout increases sensitivity at expense of specificity.

Efforts to decrease physician burnout and improve patient experience remain segregated in different corners of the health-care system. Based on the correlation between burnout and experience, a joint approach should be considered. Fixing one may fix the other, or fixing both together may fix both *faster*. Indeed, a handful of interventions targeted to improve patient experience have been shown to improve physician burnout and patient safety (10,11).

Any conceptualization of a joint approach must move beyond superficial solutions to lasting organizational change. Many of the independent efforts to improve burnout and experience to-date have focused on fringe elements of the problem. “Window dressing” strategies such as yoga for physicians or redecorated lobbies for patients fall short because they fail to address the root cause of both problems. The current literatures on physician burnout (12) and patient experience (13) have *separately* made clear that organizational changes are needed for each domain. The joint approach must thus focus on such systemic change.

In order to achieve this fundamental organizational change, burnout and experience must be elevated as institutional priorities with a concerted effort to achieve physician buy-in. Because physicians often bristle at the measurement of patient experience, leaders must communicate with physicians why measurement matters. Usually physician discomfort arises from fear of being held accountable for conditions they cannot change and unrealistic patient expectations they cannot meet. In communicating with physicians, it helps to emphasize that patient experience is the product of a *team* effort. Additionally, patient experience focuses on how patients *experience* key aspects of their care—not how *satisfied* they are with their care. Two patients can have the exact same experience and have different levels of satisfaction because they had different expectations. Consumer Assessment of Healthcare Providers and Systems and other patient experience survey questions are designed specifically to measure *experience*, not satisfaction. Physicians are not being asked to meet unrealistic expectations, but rather to work as part of a team that provides a highly reliable experience.

Finally, given the complexity of care delivery, there cannot be a single approach across an organization that will effectively combat burnout and improve experience. Inpatient versus outpatient/elective versus urgent/one disease versus another: all of these entities deserve their own strategy. Processes must be mapped and improved locally by frontline physicians and other caregivers. Only with such customized systematic change can we elevate patients’ experience of care while simultaneously restoring joy and meaning to physicians’ practice of medicine.

## Authors’ Note

The analysis of this deidentified data was approved by the Partners Human Research Committee, Protocol#: 2014P002779. All procedures followed were in accordance with the ethical standards of the responsible institutional or regional committee on human experimentation or in accordance with the Helsinki Declaration of 1975, as revised in 1983. Kathleen E McKee is now affiliated with Neurosciences Clinical Program, Intermountain Healthcare, Salt Lake City, UT, USA.


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## ORCID iD

Kathleen E McKee, MD  <https://orcid.org/0000-0002-8354-151X>

## Supplemental Material

Supplemental material for this article is available online.

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### Author Biographies

**Kathleen E. McKee**, is an Assistant Professor, movement disorder neurologist, and associate medical director for neurosciences patient experience at Intermountain Healthcare in Salt Lake City, UT. She completed neurology residency and fellowship at Massachusetts General and Brigham and Women's Hospitals as well as a fellowship in health policy and hospital management with the Massachusetts General Physicians Organization. Her research focuses

on dissemination and implementation of best practices to enable caregivers to provide the highest value healthcare with compassion.

**Andrea Tull**, has over 20 years' experience in performance management in the healthcare and social service industries. She currently serves as Senior Director for Quality Performance Management in the Lawrence Center for Quality and Safety at Massachusetts General Hospital. Andrea leads a broad portfolio of quality and safety evaluation and operational activities, including regulatory quality reporting, patient experience, safety reporting, institutional capacity and health equity. She has a PhD in Gerontology from the University of Massachusetts, and continues to volunteer in the elder services field through serving on the boards of directors for senior living communities in the greater Boston area.

**Marcela G. del Carmen**, is a Professor of Obstetrics, Gynecology and Reproductive Biology at Harvard Medical School, holds a dual appointment in the Department of Surgery at the Massachusetts General Hospital, and Chief Medical Officer of the Massachusetts General Physicians Organization (MGPO). In that role, she leads over 3,200 MGPO physician members. Dr. del Carmen has authored over 250 papers in the peer-reviewed literature and has authored a textbook. Dr. del Carmen's research focuses on disparities in gynecologic cancer outcomes in underserved minorities and rare gynecologic malignancies.

**Susan Edgman-Levitan**, is Executive Director of the John D. Stoeckle Center for Primary Care Innovation at Massachusetts General Hospital. She is known for her advocacy of understanding the patient's perspective on healthcare. From 1995 to the present, Ms. Edgman-Levitan has been the co-principal investigator on the Harvard Consumer Assessment of Healthcare Providers and Systems (CAHPS). Ms. Edgman-Levitan serves on several boards and national advisory committees, including the ABIM National Council, the Lucian Leape Institute, and the Patient-Centered Primary Care Collaborative. She is a senior fellow at IHI and an international expert on patient and family centered care for ISQua.