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The modern experience of care: patient satisfaction as a quality metric after the Affordable Care Act

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THE MODERN EXPERIENCE OF CARE:
PATIENT SATISFACTION AS A QUALITY METRIC AFTER THE
AFFORDABLE CARE ACT

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ABSTRACT

The Hospital Value-Based Purchasing Program (HVBP), created by Section 3001 of the Patient Protection and Affordable Care Act passed in 2010, enacted a major industry shift in Medicare towards “pay for performance,” or paying for high marks on a variety quality metrics rather than the traditional reliance on volume of care delivered. This study examines one of these quality metrics in particular: patient satisfaction. The trajectory of this paper begins with an overview of the current focus on patient satisfaction as a modern quality metric in American healthcare, contextualizes this emphasis on satisfaction within the intellectual movement of “patient-centered care,” and moves on to a review of the relevant scholarship that attempts to explain the numerous determinants of patient satisfaction scores (with special attention to the inpatient hospital setting), as well as the robust academic debate over whether satisfaction is even an appropriate quality metric at all relative to clinical outcomes in care. The second half of my discourse moves on to more practical applications – first I break down the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey and the impact of its methodology on providers, then the Medicare HVBP program itself and its
various directions towards the value-based care model. I conclude with a quantitative analysis of trends in patient satisfaction over time between 1) HVBP-participating providers (as of FY2014) and 2) those providers who have not opted in (including those ineligible to do so). My comparison aims to study the strength of the HVBP incentives to improve patient satisfaction in those subject to the financial incentive relative to those who are not. Additionally, I preface this analysis whether patient satisfaction scores are associated with either clinical process of care scores or outcome scores in the HVBP program. My research questions aim to shed light on the academic debate between patient satisfaction and more traditional clinical outcomes – are they related in the context of FY2014 HVBP? Are the new incentives to improve patient satisfaction actually doing so in a meaningful way among providers newly accountable to these incentives? Finally, in a market defined by zero-sum resources, is there evidence that a financial incentives around patient satisfaction are channeling resources and by extension improvement away from clinical outcome performance? I believe this last question is the true concern of patient satisfaction skeptics, and hope to address it with applicable data.

By providing a thorough qualitative grounding in the topic followed by current quantitative analysis, my goal is to create an informed perspective on the use of patient satisfaction as a quality metric in U.S. healthcare, which can be applied meaningfully from policy, provider, and consumer vantage points. With patient satisfaction becoming increasingly more internalized in the value-based care model, these analyses of the initial results in HVBP potentially serve as predictive insight into provider behavior in this area moving forward.
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LIST OF ABBREVIATIONS

AHRQ……………Agency for Health Research and Quality
ARRA……………American Recovery and Reinvestment Act
CMS……………...The Centers for Medicare & Medicaid Services
CXO………………Chief [Patient] Experience Officer
DRG………………Diagnosis-Related Group
FAQ………………Frequently Asked Questions
FY………………..Fiscal Year
HCAHPS…………Hospital Consumer Assessment of Healthcare Providers and Systems
HHS………………U.S. Department of Health and Human Services
HITECH Act……...Health Information for Economic and Clinical Health Act
HVBP……………...Medicare Hospital Value-Based Purchasing Program
ICU………………Intensive Care Unit
IOM……………..Institute of Medicine
IPPS……………...Inpatient Prospective Payment System
IVR………………Interactive Voice Recognition
MRI………………Magnetic Resonance Imaging
NQF………………National Quality Forum
OMB…………….Federal Office of Management and Budget
P4P……………….Pay-for-Performance
P4R……………….Pay-for-Reporting
PCC………………Patient-Centered Communication
PPACA/ACA……Patient Protection and Affordable Care Act/Affordable Care Act

TPS………………Total Performance Score

VA………………U.S. Department of Veterans Affairs
INTRODUCTION

The Patient Protection and Affordable Care Act, passed by Congress and signed by President Obama in March 2010, targeted a variety of market failures within the United States healthcare system – including the incentive structures dealing with how care is delivered and paid for in this country. Often overlooked by media coverage and political discourse that favors a focus on more controversial elements such as the individual insurance mandate or the Medicaid expansion, payment reform in the ACA – specifically introducing quality incentives amounts to a significant paradigm shift in the way healthcare is structured, financed, evaluated, and conceptualized in the United States. The purpose of this paper is to examine the sphere of quality that is derived from the perspective of the patient, perhaps an unexpected concept for many given the complexity of the healthcare system and its historical opaqueness when it comes to consumer evaluation of quality. Regardless of how well a patient is informed about the policy shift involving these quality measures, their individual experience in the care setting now plays a more prominent role in a provider’s bottom line than ever before.

While heralded as a major step towards cost-sustainable and quality healthcare, an important point of controversy in this shift, and particularly the HVBP, has been the tension between quality measures reflecting clinical processes of care (i.e. the more traditional conception of quality) and those evaluating the patient’s experience of their care, namely satisfaction. Wide disagreement has persisted whether patient experience care, and by extension patient satisfaction, is truly an appropriate metric for determining quality of care. The Affordable Care Act made a firm choice in the affirmative – HVBP
structured the “Patient Experience of Care” domain as 30% of a hospital’s Total Performance Score (TPS) in FY2013 and subsequent years, with “Clinical Processes of Care” starting at 70% of TPS and in FY2014 the introduction of “Outcome” scores\(^1\). By choosing to include patient experience of care in the incentive equation, the results from HVBP participation allow us an opportunity to revisit this debate over the appropriateness of patient satisfaction in a quality setting, using real-life providers for the first time.

I aim to examine the trends in patient satisfaction both before and since the implementation of these new incentives for experience of care – whether patients are in fact reporting higher satisfaction in their care, whether these gains are vary significantly between providers who opted into HVBP during FY2014 versus those that did not, and also examine whether scores in the patient experience of care domain bear any relationship to those of clinical processes of care and outcomes. My quantitative analysis will also look at improvement in patient satisfaction relative to improvement in outcomes between pre-ACA and the most recent quarter of reported data in the aim of looking at whether improvement in satisfaction and improvement in clinical outcomes is a zero-sum game as skeptics fear. Examining this provider data, I hope revisit and further inform this debate as hospitals begin their journey into “pay-for-performance” quality incentives.

\(^1\) The “Efficiency” Domain will be added in FY2015 and subsequent years focusing on cost.
PATIENT SATISFACTION: THEORETICAL PERSPECTIVES

Though patient satisfaction is a both a quantifiable and standardized variable according to the purposes of our research question, it is critical to discuss the theoretical background of patient satisfaction in the context of the movement towards patient-centered care. Several questions arise when thinking about patient satisfaction as a variable in social science, first of all what is it? What are its determinants? What are the implications for caregivers and delivery of healthcare if and when it’s incorporated into the incentive structure for providers? Does higher satisfaction really lead to better health outcomes for patients, e.g. is a consumerist model a good thing for healthcare? Is it an appropriate metric to include in a value based, “pay-for-performance” incentive structure? Are patients really informed enough to be able to recognize quality care when they receive it, and when they don’t? These are questions that the relevant scholarship has engaged in, and certain opinions on the answers to these questions have successfully wound their way into the policy debate, including the Affordable Care Act. I aim here to present and summarize the scholarship relating to patient satisfaction in the interest of providing a meaningful context for current policy regarding this metric.

Various scholars point to a range of salient factor in determining the sources of patient satisfaction. Foremost among these views are the prior expectations of a patient entering the care setting (Thompson & Suñol), (Thiedke), demographics such as age, gender, ethnicity, socioeconomic status, and health status (Thiedke), attention to patients’ religious and spiritual concerns (Williams et al.), the communicative ability of the physician referred to as “physician-patient communication” or “patient-centered
communication” (Epstein), (Kaplan et al.), (Olson et al.) and finally the traditional view that satisfaction is exclusively a function of clinical quality in outcomes (O’Toole et al.). These theoretical perspectives collectively contrast with the practical – that is, the elements that are actually included in the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey which are used to determine the Patient Experience of Care score for hospitals participating in HVBP. I’ll examine here the theoretical perspectives that have played major roles in the scholarship involving patient satisfaction, and later will keep these perspectives in mind when breaking down the specific components that make up the HCAHPS survey, which in terms of policy application serves as the “official” definition of patient satisfaction endorsed in the Affordable Care Act/used by HVBP.

Broadly surveying the literature, patient expectations are complex and involve a variety of psychological, sociological, market theory, and time-series (encompassing the “before”, “during”, and “after” of care) considerations that vary in weight depending on the scholar, type of care setting, and arguably the individual patient (Thiedke 2007). Thiedke, a professor of family medicine at the Medical University of South Carolina, reflects on the two-plus decades of literature on the topic as a consistent struggle to come to a universally standard accepted definition of satisfaction in healthcare. Even with the HCAHPS methodology fully transparent and publicly vetted, this lack of theoretical/foundational consensus creates uncertainty into what exactly at the end of the day is being measured in a patient satisfaction survey. While concluding that what’s ultimately being measured is a combination of prior expectations, experience during the
care visit, and post-visit resolution of symptoms (a rather comprehensive view relative to other scholars), Professor Thiedke’s most compelling contribution to the theory of patient satisfaction is a breakdown of determinant factors across three spheres of control: patient-related factors, physician-related factors, and system-related factors (a particularly interesting and impactful category given our focus on inpatient hospitals, which are increasingly part of larger health systems). I outline them here:

**Patient-related factors:** Age, Ethnicity, Gender, Socioeconomic status, Health status

**Physician-related factors:** Expectations, Communication, Control, Decision-making, Time spent, Technical skills, Appearance

**System-related factors:** The clinical team, Referrals, Continuity of care

(Thiedke 2007)

Equipped with multiple decades of experimental and survey literature, this categorical ordering provides us with a broad picture of the various determinant factors that scholars have concluded play a role in satisfaction to varying degrees.

How do these factors impact satisfaction scores? While gender studies have proven to be contradictory, the other demographic categorical factors featured general patterns (though no determinant was not without at least one study posing a possible caveat). Higher age is associated with greater satisfaction, minority ethnicity is associated with lower satisfaction, lower socioeconomic and less education is associated with lower satisfaction, and poor health status (specifically those with one or more chronic conditions) report more hassle and lower satisfaction with care especially in situations where continuity in care is poor. Though Thiedke touches on many
determinant areas in a broad sense, certain more primary factors warrant more extra attention. An almost universally salient factor that predicts patient satisfaction is the expectations of the patient prior to entering the care setting, and the strength of its role in satisfaction has important implications for implementing P4P structures.

Returning to Professor Thiedke’s list, we’re given insight into several patient factors that are constants across care settings – namely the demographic factors categorized as patient-related. Why distinguish the determinant factors that remain constant across care settings from the rest? It is important to recall that the factors in Thiedke’s paper, while no doubt based upon diverse and collective scholarship over time, are articulated from the perspective of family medicine. Nearly every author exploring satisfaction in healthcare cites serious challenges in standardizing a measure that successfully incorporates all relevant inputs into account. Among the main challenges is that the settings for the delivery of care is not constant – the norms and processes found in primary care differ markedly from the inpatient hospital setting, which in turn are distinct from psychiatric hospitals, rehabilitation hospitals, home-care settings, etc.

Determinant factors like opportunity for meaningful PCC are radically different between the primary care office and the ICU; the clinical teams across these care settings are structured differently and uniquely composed to meet specific population needs. Where in primary care communication is regular and grounded in a relationship built over time, the majority of inpatient care is single instance with a care team that is far larger than a single practitioner – this has shown to greatly inhibit PCC and opportunities for patients to engage jointly in the decisions about their care (Olson & Windish 2010), (Arora et al.
2009). When we turn to the quality debate over appropriateness of experience of care measures vs. strictly clinical outcomes, we’ll consider theories that apply generally as well to the inpatient hospital setting specifically, as it is the specific landscape for HCAHPS and MBVP. When we consider the topic surveyed by HCAHPS, we’ll again be afforded the opportunity to consider how specific methodological choices respond to the unique characteristics of the inpatient hospital setting.

THE DEBATE: DOES SATISFACTION BELONG AMONG QUALITY CONSIDERATIONS?

While the shift towards paying for performance (e.g. quality) enjoys broad industry support, a prolific debate exists over whether patient satisfaction is truly an appropriate indicator of quality care. Unlike traditional consumer markets, quality in healthcare has long been opaque – violating traditional economic assumptions whereby consumers are able to judge quality and determine appropriate demand. This has certainly been a salient determinant of cost escalation, but for our purposes it poses a potential hurdle when that same imperfect consumer judgment is used to define quality with the backing of financial incentives. That being said, the debate is no longer merely a theoretical one – the Medicare Value-Based Purchasing Program has endorsed the appropriateness of taking this judgment into account by introducing the “patient experience of care” as a sizeable (though minority relative to clinical outcomes) factor into the new program. As the quantitative section of this piece examines trends in patient satisfaction via the “experience of care” component of HVBP, it’s prudent to address here
the substantial literature, both for and against, including patient satisfaction metrics in the evaluation of quality care. The debate hinges on the intersection between theory and practice – in an ideal world every market is naturally impacted by viable consumer quality judgment, and the fundamental disagreement is whether we can accurately produce a metric system that solves the market problem by facilitating relevant and meaningful quality judgments by patients. The proponents say it can be done and already has been accomplished through the institutionalized HCAHPS survey. Detractors contend the imperfections in this method are 1) too great, 2) do not succeed in solving the fundamental consumer-market problem unique to healthcare, and 3) create unnecessary (pertaining to quality), even perverse incentives for caregivers who are subjected to reimbursement schemes that employ metrics for satisfaction.

A worthy place to launch the “against” argument summary comes from a headline written by Elisabeth Rosenthal of the New York Times in late 2013 titled – “Is This a Hospital or a Hotel?” The piece touched lightly on the new incentives to invest in patient satisfaction, but painted a vivid observational portrait of several hospitals around the country investing massively in hospitality amenities: private rooms, luxury surroundings, gourmet food service, flat-screen televisions – all in an effort to increase patient demand, and many holding the view that patient demand is correlated much higher to these amenities than the clinical quality of the care. Such a scene described in the article is the epitome of the fears opponents of incentivizing patient satisfaction share. The idea that ultimately an emphasis on patient satisfaction will ultimately interfere with the clinical quality of care those patients will receive, and undermine the very notion of “patient-
centeredness” that is given credence on both sides of the debate yet in the view of opponents cited inappropriately in this instance by proponents.

Foremost among concerns is the potential ethical dilemma created when a patient requests an unnecessary or otherwise inappropriate care procedure (recall that patient expectations are a salient, if not primary, determinant of satisfaction), and the treating physician finds herself choosing between satisfying the patient’s inappropriate request or saying no and risking a poor satisfaction score and the financial incentives that come with it. This dilemma, posed by family physician and addictive medical specialist Dr. Aleksandra Zgierska in a 2012 American Medical News article by Kevin O’Reilly, captures the potential pitfalls of deferring to patients in the care process. O’Reilly’s article cites numerous experimental studies that point to flaws in incentivizing satisfaction – among them a 2007 *Annals of Internal Medicine* article concluding that 36% of physicians reported they would yield to a patient request for an MRI exam that was clinically unwarranted. Though some literature would point to malpractice liability and the norm of “defensive medicine” as at least a partial source of this survey result, what’s interesting is that the study was undertaken three years before the Affordable Care Act was signed into law. If not HBVP, then where are these satisfaction incentives? O’Reilly describes a trend preceding the ACA whereby hospitals and health systems employ their own internal incentive schemes. Referencing a Hay Group report, 43% of these providers employed incentive schemes that included patient satisfaction metrics in 2010, which increased by nearly half to 63% in 2011. While MBVP standardizes both the measure and incentive scheme across all eligible providers, proprietary incentive
schemes are just as meaningful if not more likely to influence physician behavior at a given institution. The conflict presented in this dilemma is how far can patient-centered care truly go before a physician must grab the reins back? Is it a zero-sum relationship where a patient’s agency comes at the cost of clinical appropriateness and vice versa, or can a balance be struck that preserves the values of both parties?

Ethical considerations aside, a more straightforward and oft-written about con in paying for satisfaction is the view that high patient satisfaction simply does not equate to a high quality in clinical outcome. Without the aid of experimental studies we can easily imagine a situation where a hypothetical patient receives a completely unnecessary invasive medical procedure, yet is completely satisfied with their care. Early studies into the question favored the “no relationship” argument with weak and consistent evidence of any association (Cleary & McNeil), no association between global rating of care and technical quality in a sample of elderly patients (Chang et al.), and more troublesome newer findings that higher satisfaction was associated with greater use of inpatient services, greater utilization of healthcare (negative from a cost control perspective), higher spending on prescription drugs, and increased mortality rates than those reporting lower satisfaction (Fenton et al.). Furthermore as briefly noted in the previous section, the inpatient hospital setting presents even bigger obstacles to achieving even basic semblances of interaction that would lead to satisfaction. A majority of patients were found to lack the ability to name a single physician on their care team (Arora et al.) – potentially compromising a salient factor in the patient’s ability to evaluate their care experience. It’s prudent to note that not all advocates who view patient satisfaction
metrics as unrelated to clinical quality support the exclusion of these experience of care measures from a pay for performance scheme. Chang et al. conclude that quality care assessments should include both patient evaluations and independent clinical/technical assessments, joined by New York Times Best-Selling author Martin Makary of Johns Hopkins, who also rejects the association between patient experience and clinical quality but nonetheless retains the former as an important hospital priority. Interestingly enough, Makary points to workplace culture in the inpatient setting as a primary determinant of satisfaction, which if meaningful makes for compelling implications around employer culture as a source of financial benefit.

Though much of the motivations for supporting inclusion of patient satisfaction metrics into quality care considerations have been discussed from the perspective of the patient-centered care movement, the literature also lends itself to positive implications for inclusion of satisfaction in performance incentives. Higher patient satisfaction has shown to be associated with greater adherence to treatment regimens (Glickman et al.), and lower 30-day readmissions (one of the most important clinical quality measure) with high satisfaction in discharge planning (Boulding et al.). While authors both for and against using patient satisfaction have acknowledged the inherent uncertainty in how satisfaction is determined and how best to measure it, none of the proponents float the idea to evaluate quality exclusively with experience of care measures but rather as a supporting category. With the notion of patient-centeredness in mind and a diverse set of at times interrelated, at times conflicting perspectives regarding the sources of patient satisfaction and how they relate to clinical quality, we turn to the HCAHPS survey to examine the
concrete choices made in calculating the patient experience of care in the Medicare Value-Based Purchasing Program.

**THE MEDICARE VALUE-BASED PURCHASING PROGRAM (FY2014)**

The Medicare Hospital Value-Based Purchasing Program (Hospital VBP or VBP) was established by Section 3001 of the Affordable Care Act of 2010 (ACA), adding Section 1886(o) to the Social Security Act. The legislation builds on past Congressional action in the area of quality reporting: the 2003 Medicare Prescription Drug, Improvement, and Modernization Act and the 2005 Deficit Reduction Act both introduced mandatory transparency measures that laid the groundwork for much of what Hospital VBP requires and relies on in terms of quality reporting. (Frequently Asked Questions Hospital Value-Based Purchasing Program).

Hospitals participating in the Hospital Value-Based Purchasing Program will begin to receive incentive payments for providing high quality care or improving care after during pre-defined “Baseline Periods” which establish benchmark scores for each quality metric/domain, followed by a “Performance Period” during which time patient discharges are factored into the Total Performance Score by CMS for that particular fiscal year. The FY2014 phase of the program, which is both the most recent in terms of public reporting and the focus of this paper’s analysis, features three categories of evaluation known as “domains.” These domains are “Patient Experience of Care,” which is a slightly tweaked HCAHPS measure weighted at 30% of the Total Performance Score, “Clinical Process of Care,” which comprises several evidenced-based medical procedural
metrics weighted at 45% (down from 70% in FY2013), and finally an “Outcome” score assessing mortality rates for heart attack (acute myocardial infarction), heart failure and pneumonia and weighted at 25% of TPS. (Frequently Asked Questions Hospital Value-Based Purchasing Program) While FY2014 does not yet incorporate readmission rates into the Outcome Domain, these are publicly reported and included in the upcoming analysis.

RESEARCH QUESTIONS/METHODOLOGY

Questions

In light of the academic debate surrounding the benefits versus potential pitfalls of including patient satisfaction in a quality score with tangible financial implications, my purpose here is to clarify the debate using second year data from the Hospital VBP program (FY2014) as well as archived HCAHPS and clinical outcomes data from before the passage of the Affordable Care Act.

The objective of my quantitative analysis is to examine, using available HCAHPS reporting data (as well as Domain/TPS scores for Hospital VBP-participating providers), patient satisfaction scores for all hospitals that engage in public reporting including various sizes, types, and geographic locations within the United States. My samples of interest are twofold and mutually exclusive – on the one hand, I’m interested in the group of eligible hospitals that decided to opt into the Medicare Hospital VBP program for FY2014. Second, I’m interested in the group of non-participating providers as of
FY2014 (N = 712), which includes both providers that are defined as ineligible under Hospital VBP rules, as well as eligible providers who decided against opting into the program in its sophomore year.

My three major research questions are as follows:

1) In the Hospital Value-Based Purchasing Program, does the “Patient Experience of Care” domain (patient satisfaction) bear any relationship to the more traditionally clinical domain categories of “Outcomes” and “Clinical Process of Care?”

2) Did the passage of the Affordable Care Act, specifically the provision creating the Hospital Value-Based Purchasing Program in Medicare, lead to a significant increase in patient satisfaction for those hospitals that opted in for FY2014?

2) For providers who opted into Hospital VBP during FY2014, did improvement in patient satisfaction come at the expense of improvement in clinical outcomes?

Recall that VBP in FY2014 featured a 1.25% reduction in Medicare DRG payments to providers (up from 1% in FY2013), and calculated each provider’s Total Performance Score using three domains: Patient Experience of Care at 30%, Outcomes at 25%, and Clinical Processes of Care at 45%. Critics of including patient satisfaction in a P4P program contend generally that satisfaction is an inappropriate quality indicator because of a lack of relationship to clinical outcomes; according to this viewpoint its inclusion would logically result in lower clinical quality scores or lower rates of clinical improvement than if patient satisfaction was not part of the quality equation.

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2 See Appendix C for a breakdown of provider eligibility requirements for Hospital VBP participation

3 FY2013 of Hospital VBP featured a scoring scheme of Clinical Process of Care – 70%, Patient Experience of Care – 30% (Outcomes was not included in FY2013)
Question #1 is the a straightforward baselines question before diving into comparisons between groups, and it is concerned exclusively with the group of Hospital VBP-eligible providers that opted into the program for FY2014. Given that the Total Performance Score is made up of only two domains, one being patient satisfaction, the goal here is to answer a simple question: is there a correlation between the two? Additionally, I’m able to explore the relationship not only between “Patient Experience of Care” and “Clinical Process of Care” domains, which make up the TPS, but also the “Outcome” domain that is reported but not yet included in the scoring scheme for Hospital VBP in FY2014. The answer to this question will provide further insight into the patient satisfaction inclusion debate, and nicely set up the last question of interest.

Question #1 is a baseline question. Its purpose is to that aims to explore whether the financial incentives to increase patient satisfaction were in fact strong enough to effect provider improvement on that metric. It’s baseline in nature because if the incentives were not strong enough to encourage providers to renew their focus on improving their patient satisfaction scores, then it can be reasonably assumed that the presence of patient satisfaction in the Hospital VBP composition should bear no risk to improvement on more traditional quality metrics like clinical processes of care and outcomes (the latter metric, while consistently reported, does not make its way into Hospital VBP until FY2014). This comparison will be made using I expect there to be a significant finding in regards to the this question – that is, I expect a higher rate of improvement

The goal of Question #3 is to meaningfully test the concern of critics of
incentivizing patient satisfaction in healthcare. That is, does incentivizing patient satisfaction result in either lower absolute scores in clinical outcomes or lower rates of improvement in those outcomes, presumably due to an unwarranted provider focus on patient satisfaction. In other words, is improvement in patient satisfaction and improvement in clinical outcomes mutually exclusive? We return to the two sample groups to test this question, operating under the assumptions that both groups (even in the absence of Hospital VBP financial incentives for the non-participating group) respond to base-level incentives to improve satisfaction and outcomes due to public reporting of and transparency of these satisfaction measures. If we find that the results of Question #1 indicate a higher level of improvement in patient satisfaction due to the VBP incentives (i.e. the expected result), then it will be doubly revealing to explore the same improvement trends in clinical outcomes between the two groups. Should the rate of improvement in clinical outcomes appear to be stunted among the VBP-participating providers, the result could lend credence to opponents of including satisfaction. If, however, outcome improvement rates are comparable or greater among the participating hospitals, it would likely enhance the position of those that view patient satisfaction as a viable indicator of quality care – a position endorsed by Congress, HHS, and CMS. It should also be noted that the general assumption is that providers, due to increasing transparency and scientific advances, will show better clinical outcomes over time.

I take no official position on the merits of either side of the debate; rather, I aim to let the data analysis clarify the debate objectively as the industry moves from theory to application in P4P that includes patient satisfaction scores.
Data/Methodology

The primary sources of data for this study were collected from two public sources: The Medicare.Data.gov⁴ website administered by the CMS, and archived Hospital Compare data from the Hospital Quality Initiative section of CMS.gov.⁵

Specifically, I’ll be drawing on data from two points in time for purposes of comparison: July 2009, eight months before the Affordable Care Act was signed into law, as well as the most recent public reporting data as of March 2014. For the quality metrics I’m interested in, HCAHPS Score and Outcomes, the earlier data serves as a relevant starting point given that it’s relatively recent yet still before the passage of the ACA. It serves as a baseline given that the Hospital Value-Based Purchasing Program did not yet exist, and all providers regardless of future opt-in status shared the same incentives for reporting these measures in Medicare (not yet differentiated along P4P measures). The most recent FY2014 data of course features the split in “control” versus “experimental” groups –that is the non-participating VBP group and the FY2014 VBP-participating group respectively. Excluded from the analysis are providers that did not report either HCAHPS or Outcomes as of July 2009, in addition to providers that reported these measures in July 2009 but did not exist due to merger or closure by 2014.

Question #1 data, unlike the following too, involves FY2014 Hospital VBP-specific scores assigned to participating providers. While the other research questions focus on comparisons between VBP-participating and non-participating providers on

⁴ https://data.medicare.gov/data/hospital-compare
⁵ http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/HospitalCompare.html
(experimental and control groups, respectively) using metrics that facilitate valid comparisons, the sole focus here is on the experimental group. Specifically, does the Patient Experience of Care score bear any relationship to the other domains? This result can preliminarily speak to the debate over correlation with clinical outcomes and apply it in a targeted way to the scoring system produced by CMS in the VBP program.

Whereas Question #1 uses VBP Domain scores, Questions #2 and #3 involve non-VBP participating providers that lack these scores; comparisons are drawn from “raw” HCAHPS scores and parallel clinical outcome reporting on both 30-day mortality and readmission measures. These metrics are formulated as follows, beginning with HCAHPS/patient satisfaction followed by clinical outcomes:

**HCAHPS Questions**

1. How often were the patients’ rooms and bathrooms kept clean?
2. How often did nurses communicate well with patients?
3. How often did doctors communicate well with patients?
4. How often did patients receive help quickly from hospital staff?
5. How often was patients’ pain well controlled?
6. How often did staff explain about medicines before giving them to patients?
7. Were patients given information about what to do during their recovery at home?* (i.e. discharge instructions)
8. How do patients rate the hospital overall?**
9. How often was the area around patients’ rooms kept quiet at night?
10. Would patients recommend the hospital to friends and family?*

For seven out of ten of these questions (the exceptions are denoted with an asterisk, with one unique question denoted with two asterisks) the methodology for this analysis is what percentage of patient respondents indicated “Always” to the survey question – their two other options being “Usually” and “Sometimes or Never.” While improvement in patient satisfaction is certainly possible moving from the “Sometimes or
Never” box to the “Usually” box, I focus exclusively on the percentage of “Always” answers as the best measure of improvement. This is because over time I expect that patient satisfaction will naturally improve as best practices are discovered and implemented, and it allows specifically the strongest improvement to be factored into the quantitative analysis.

HCAHPS Questions #7 and #10 ask a “Yes” or “No” question, with the measure of improvement in this analysis being determined by the percentage of patient respondents indicating “Yes” in both cases. Finally, HCAHPS Question #8 offers the patient respondent an interval scale from 1-10, with the sequential scoring options as “6 or below,” “7 or 8” and “9 or 10.” For similar methodological reasons as the “Always” answer for the majority of HCAHPS questions, I am concerned only with the percentage of “9 or 10” as a measure of comparative quality improvement. Moving onto the Outcome measures:

**Outcome Metrics**

1. Heart Attack (Myocardial Infarction) – 30 Day Mortality Rate
2. Heart Attack (Myocardial Infarction) – 30 Day Readmission Rate
3. Heart Failure – 30 Day Mortality Rate
4. Heart Failure – 30 Day Readmission Rate
5. Pneumonia – 30 Day Mortality Rate
6. Pneumonia – 30 Day Readmission Rate

Due to occasional inconsistencies in reporting in terms of when individual providers began publicly reporting their HCAHPS and outcome performance, the sample sizes for Question #2 and Question #3 are slightly different. (While P4R incentives/legislation has been in place since 2003, the adoption of these practices has not
been uniform). Question #2 features a control sample of N = 712, that is providers who publicly reported their HCAHPS performance in July 2009 as well as 2014 but did not participate in Hospital VBP due to ineligibility or choice, and an experimental sample N = 2,143 of providers that both publicly reported their HCAHPS performance in July 2009 and participated in Hospital VBP during FY2014. Question #3 features parallel control and experimental groups but instead along the metric of publicly reported clinical outcomes, with a control group N = 1,782 and experimental group N = 1,810.

RESULTS

Question 1

Critic who contend patient satisfaction has no bearing on clinical outcomes seem to have some support for their claim in the data – Patient Experience of Care scores showed a very slight negative correlation (essentially amounting to zero correlation) with Outcome domain scores:

<table>
<thead>
<tr>
<th>Patient Experience of Care</th>
<th>Outcome Domain</th>
<th>Clinical Process of Care Domain</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-.1038</td>
<td>.1127</td>
</tr>
</tbody>
</table>

Table 1 – Patient Experience of Care Correlation

The correlation coefficients for Patient Experience of Care domain scores relative to the Outcome and Clinical Process of Care domain in FY2014 HVBP

The correlational relationships above suggest that at least in terms of CMS formula scoring regarding patient satisfaction, outcomes, and clinical processes of care, patient satisfaction (Patient Experience of Care Domain) does not appear to bear any
relationship to the more “traditionally clinical” Outcome and Clinical Process of Care Domains. While lending credence to the argument that patient satisfaction and clinical measures are not correlated in terms of Hospital VBP scoring, the next two questions explore the effects of Hospital VBP incentives on improvement in patient satisfaction and whether this incentivization on experience of care comes at the cost of quality improvement in clinical outcomes.

*Question 2*

Here I’ve explored whether providers that have opted into FY2014 Hospital VBP, and with it incentives to improve Patient Experience of Care (HCAHPS), have in fact shown an improvement in satisfaction relative to the non HVBP-participating providers that lack those same financial incentives. First, I start with the non-HVBP participating providers or “control” group:
Figure 1 – Non HVBP-Participating Providers HCAHPS Performance

Figure 2 – HVBP-Participating Providers HCAHPS Performance
As Figures 1 & 2 suggest, the two groups of providers are nearly identical when it comes to the various HCAHPS measures in July 2009 – eight months before the Affordable Care Act was signed into law and Hospital VBP in Medicare became a reality. This is an important initial finding because if one group started out way ahead in terms of their HCAHPS results, it could lessen the impact and relevance of improvement comparisons over time and suggest that the groups are too dissimilar to warrant a valid comparison on the basis of program participation. I do not find this to be case. Rather, I expected and we see here a “level playing field” where both groups were subject to the same P4R incentives regarding HCAHPS prior to the Affordable Care Act.

Figure 3 highlights the level of change in mean scores per HCAHPS measure, and we see slight support of the hypothesis that the introduction of the Patient Experience of
Care Domain in Hospital VBP led to a higher rate of improvement among participating providers that after the ACA had more to gain from improvement in this area.

Acknowledging that the percentage scale in Figure 3 is defined by single percentage points (increments of .01), the VBP-participating group showed higher mean scores after five years in every HCAHPS measure except three, which all ended in draws. The likelihood of these results being due to sampling error is quite low given the large sample sizes for both groups. The results certainly move away from the “Is This A Hospital or A Hotel” article by Elisabeth Rosenthal that anecdotally cited massive provider shift towards hospitality over quality; the results point to very modest but apparent increased improvement in patient satisfaction scores among the providers participating in Hospital Value-Based Purchasing during FY2014.
Question 3

**Figure 4 – Non-Participating Group Outcome Scores**

**Figure 5 – HVBP-Participating Group Outcome Scores**
If HCAHPS scores between provider groups appeared similar in July 2009, the Outcome scores for these same groups are virtually identical during that time. There is extremely little 2009 variation in any of the Outcome measures, indicating even more emphatically than with HCAHPS that these providers, despite later splitting along participation and non-participation in Hospital VBP, exhibited virtually no differences in clinical outcome scores directly prior to the Affordable Care Act.

The improvement (or lack of) these Outcome scores over five years into 2014 is slightly more nuanced, and determined most directly by the Outcome metric being measured rather than participation in Hospital VBP. Referring to Figure 6, we have the unexpected result of two out of six Outcome measures (Pneumonia 30-day mortality rate and Heart failure 30-day mortality rate) actually *worsening* over the five-year span rather than improving. In each case, however, the trend is uniform between the control and

![Figure 6 – Average Improvement in Outcomes Control vs. Experimental](image-url)
experimental groups. In terms of better performance between the groups (Note: Unlike HCAHPS improvement *a negative indicates improvement i.e. fewer deaths/readmissions*), each group (VBP-participation vs. non-participation) either shows better improvement or a lesser decline than the other. Again, the results in Figure 6 are most indicative of the specific Outcome measure trends that have improved versus the two that have not, which is perhaps indicative of overall population health rather than the presence of financial quality incentives affecting either group.

**Limitations**

As will be discussed in the next section, this period of analysis is one of transition as hospitals make the switch to new quality incentives. Given the relative infancy of this transition, it’s possible that certain results may not be generalizable to all providers moving forward. After all, different hospitals and health systems are moving at different paces; priorities are diverse and it’s in many too early to tell which adaptations will yield the best competitive advantage.

Additionally, the experimental group (HVBP-participating) and control (no HVBP participation) are unequal in both size and composition. The experimental group outnumbers the control by a factor of three, and due to eligibility requirements many providers in the control group did not have a choice in whether to opt in or not given that they are ineligible. That being said, with both groups still containing a large number of observations (as well as HCAHPS and Outcomes being reported consistently for both groups regardless of HVBP participation) the comparisons still allow for meaningful
analyses in the purposes of this paper. While no statistics are available on the percentage of the control group that is ineligible versus those who were eligible but had institutional prerogative to opt out, it is assumed that the majority of eligible providers opted into the program under the assumption that P4P is a trend that is only expanding and cementing itself in the landscape of American healthcare. That being said, it is crucial that all providers regardless of VBP eligibility are on the hook for public reporting these measures (P4R), and consumer transparency is a driving force in its own right removed from quality reimbursement. These comparisons remain relevant given that with the recent internalization of public reporting, all providers regardless of VBP eligibility are in a sense at the very least indirectly held accountable to a quality payment structure and incented to pursue quality improvement.
DISCUSSION

This analysis comes at a unique time in the landscape of healthcare payment reform. Decades of pressure to move to capitation, enforceable quality metrics, and global budgeting are emerging in practice as a result of the Affordable Care Act. It is highly unlikely this trend, with all its inertia, will be reversed in the foreseeable future – such is the momentum of cost control and quality advocates alike. As it stands, HVBP is the tip of the “pay for performance” iceberg. The federal government (Congress, HHS, and CMS acting together) decided that this movement must include a patient’s experience of care, validating the patient-centered care movement and linking it directly with the shift towards evidenced-based medicine and accountability in outcomes. It’s necessary to examine its impact in the present during this transition period, but also with a long-term eye on future implications as the program expands and embeds itself into balance sheets and industry culture.

As by far the largest payer in the U.S. healthcare market, Medicare is a uniquely equipped single payer with massive purchasing power to effectively delineate market conditions related to payment via reimbursement. Its DRG (diagnosis-related group) payments represent the largest standardized fee schedule on the market, in effect granting CMS considerable leverage on provider behavior. How much are providers on the hook for in this transition to quality incentive payments?

The results here point to several initial conclusions at the outset of this policy-industrial shift. These lessons, regardless of their longevity, serve as a foundation for future thinking about linking quality to payment. The first question raised by scholars,
policy analysts, and industry advocates in the wake of the inclusion of patient satisfaction into the definition of quality is does satisfaction bear any relationship to outcomes? The results in this analysis point to no. With a slightly negative correlation between CMS-adjusted “Patient Experience of Care” domain scores and similarly adjusted “Outcome” scores, there appears to be no relationship between these metrics as scored by HVBP. Does this validate critics’ claims that patient satisfaction has no business being regarded as an indicator of quality care? Not quite. On the one hand, it is noteworthy that the data suggests virtually no correlation between satisfaction and outcomes. But the answers to Questions #2 and #3 do not indicate meaningful results that providers with skin in the game for patient satisfaction are diverging from a focus on quality improvement in clinical outcomes. After all, outcome has its own domain in FY2014 and beyond – percentage-wise they are almost held almost just as accountable for Outcome Domain scores as they are Patient Experience of Care. Few scholars addressed the possibility of harmonious balance between incentives that are more traditionally clinical and ensuring a high quality (though possible subjective) patient experience of their care. Given the lack of consensus over patient satisfaction not being linked to good outcomes, coupled with the new financial incentives, providers may just as well conclude that the debate is moot at best.

It’s no secret that providers are adjusting to the new incentive structure including emphasizing and holding staff accountable for high marks on the HCAHPS. While

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6 Despite not being a metric that is calculated into the HVBP Total Performance Score until FY2014 and beyond, the nonbinding scores are both reflected in FY2014 data and relevant for this analysis.
studying the impact of financial incentives for patient satisfaction is a work in progress, there has been conspicuous behavior on the part of providers responding to these incentives – no more visible than in the human resources department. Specifically, the emergence of “Chief patient experience officers” or “CXO’s” indicates that certain hospitals with cultures of early adoption are making patient experience of care a management priority (Diana). In an environment where all resources are zero-sum (and in light of the potential pitfalls in assessing a relationship between outcomes and satisfaction based on holistic categorical data) the purpose here was to explore whether such a push in the direction of satisfaction was/is being made at the expense of outcomes – again, the evidence does not support this notion. We find no meaningful results in this analysis that indicate high patient satisfaction and good outcomes to be mutually exclusive, though as providers and their consultants adjust to the Hospital VBP program it will remain relevant to explore what practices providers are employing to maximize their scores/payments.

Looking Ahead

Hospital VBP, while an important disruptor in the status quo of care delivery from the payment perspective, is not acting alone. Since 2009, the American Recovery and Reinvestment Act (ARRA, also known as the “stimulus package”) allocated nearly twenty billion dollars in incentives for hospitals and medical practices to adopt electronic health record (EHR) and display “meaningful use” of that technology towards a prescribed set of ends including care coordination, patient safety such as drug
interactions, adherence to evidenced-based medicine (i.e. clinical processes of care), and other efficiency-related goals (Hospital Inpatient Value-Based Purchasing Program).

All industry indicators point to a continued push in the direction of value-based care, which would involve a higher percentage of provider reimbursement tied to quality measures as time goes on and more providers make the adjustment. In these beginning stages, many providers find themselves of two minds: one towards innovation and adaptation to the value-based model, yet the other rooted firmly in the status quo incentives that remain fee-for-service. Until financial stakes become higher (and recent transparency becomes more grounded in consumer behavior), the U.S. healthcare market will not be truly competitive on the basis of quality. The experience of the patient will continue to be a salient aspect of this competition, and future research is warranted into the optimal balance between incentivizing patient satisfaction relative to the other quality metrics internalized by the healthcare industry.
APPENDIX A: THE RISE OF “PATIENT-CENTERED” CARE

To gain a better sense of context for the current emphasis on patient satisfaction as a quality metric, it’s helpful to understand its role as cog in the larger scheme of the movement towards “patient-centered care.” In the context of a movement towards quality and cost-effective care, it is not immediately clear or inevitable that patient satisfaction be a part of this transformation. When we examine the antecedents of patient-centered care (that is, traditional care defined by professional sovereignty and fee-for-service), it is accepted fact that the patient in the most ironic sense had little to no agency in the delivery and receipt of their own healthcare. This made sense for obvious reasons: How could a patient’s perspective be remotely relevant when paired with an extensively trained, well-respected clinical professional? Moreover even if patients’ perspectives were considered relevant and supplementary to the opinion of the physician (they were not), there were no meaningful or direct financial incentives to solicit patients as partners in their care in the first place. A central tenet of Paul Starr’s canon work *The Social Transformation of American Medicine* (1984) documents the trajectory of the medical profession in the United States and in particular its uniquely maintained “professional sovereignty” – a societal value given to physicians by the public as medicine gradually progressed from glorified quackery to a true power to heal and improve health (Starr). Meticulously maintained by the medical profession, this sovereignty served as an effective shield from those seeking to change the status quo of professional autonomy and financial security from fee-for-service. This powerful norm of medical sovereignty
effectively succeeded, until recently, in insulating physicians from outside questioning of their practices. Ironically, the attrition of that norm was generated first from within the ranks of the medical profession.

In 2001, the Institute of Medicine (IOM) released a groundbreaking report surveying the current quality of care in the United States (which was found to be much poorer and less safe than anyone thought) that has yielded industry-wide shifts in attitude and behavior since its publication over a decade ago. *Crossing the Quality Chasm: A New Health System for the 21st Century* was instrumental not only due to the flaws in organization and structure it exposed and articulated, but its prescriptive elements that defined itself as an impetus for advocacy. What made it a true call to action was the way in which it presented glaring problems with their solutions — clear, concise, and easily boiled down into six “aims for improvement:” safety (avoiding and eliminating unnecessary medical errors), effectiveness (adhering strictly to treatment that can benefit as opposed to treatment that is unnecessary, e.g. evidence-based medicine), timely (reducing wait times for those in need of care), efficient (eliminating waste), equity (addressing systemic inequality in access and provision of care), and finally care that is patient-centered – “providing care that is respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decision.” (IOM, 3). Of its ten “Rules for Redesign” the first three all directly spoke to the concept of patient-centered care:

1. **Care is based on continuous healing relationships.** Patients should receive care whenever they need it and in many forms, not just face-to-face visits. This implies that the health care system must be responsive at all times, and access to care
should be provided over the Internet, by telephone, and by other means in addition to in-person visits.

2. **Care is customized according to patient needs and values.** The system should be designed to meet the most common types of needs, but should have the capability to respond to individual patient choices and preferences.

3. **The patient is the source of control.** Patients should be given the necessary information and opportunity to exercise the degree of control they choose over health care decisions that affect them. The system should be able to accommodate differences in patient preferences and encourage shared decision-making.

(IOM, 1-3)

Dr. Donald Berwick, a renowned patient safety expert, former IOM delegate, and later Administrator of CMS under President Obama built upon the idea of patient-centeredness and magnified calls for its attention in a piece published in May of 2009 – the height of a long legislative slog that characterized the drafting the Affordable Care Act. In it he makes distinctions between “a consumerist view of the quality of care” over the “more classical, professionally dominated definitions of ‘quality’” and chooses to endorse the former (Berwick, 1). He provides his own definition of patient-centered care (eight years after the IOM report made the idea mainstream): “The experience (to the extent the informed, individual patient desires it) of transparency, individualization, recognition, respect, dignity, and choice in all matters, without exception, related to one’s person, circumstances, and relationships in healthcare.”

Increasing professional internalization of patient-centered care evidenced by the two perspectives above has ensured an inevitability that patient satisfaction, the measure by which we empirically observe to what extent individuals generally feel that they are indeed a source of control in the delivery of their own care (more about the actual
methodology of the measure itself in a later section), is a relevant and necessary component of quality care. A salient focus on patient satisfaction is surely associated with the patient-centered care movement, though other posited explanations for its rising popularity in scholarly attention could have been part of the more general consumerist movement, a maturation of the family medicine research agenda, or perhaps a byproduct of increased provider competitiveness stemming from the managed care movement which led provider networks to focus on new distinguishing quality factors in order to attract patients (Thiedke, 1). On this last point, insurance companies (typically not characterized as “good” actors in perceptions of U.S. healthcare) have in many respects forged the path on quality incentivization compared to the federal government and many states. None serves as a more prime example than Blue Cross Blue Shield of Massachusetts, one of the Commonwealth’s leading private insurers, which in 2009 enacted its “Alternative Quality Contract” which combined global budgeting with significant opportunity for bonuses based on robust quality measure reporting that included patient satisfaction (Chernew et al.). Given the regional leverage of Blue Cross Blue Shield as one of only a few major insurers in the market, private sector innovation was made possible and witnessed encouraging results in both quality improvement and cost reduction. Given Medicare’s massive and exclusive economy of scale as a public single payer, government-led innovation in quality incentivization was a logical transition after this kind of well-documented success in the private sector. Returning to the oft-ill perception of insurance companies and their motivations, it stands to reason that if the incentives are structured
properly (i.e. those rewarding quality and transparency in care) the market, even one as convoluted as American healthcare, will subsequently reward good behavior.

This internalization of the importance of patient satisfaction as a meaningful part of patient-centeredness and quality care successfully embedded itself into federal public policy with Section 3001 of the Affordable Care Act establishing the Medicare Hospital Value-Based Purchasing Program, which has directly adopted patient satisfaction as not only a salient indicator of the quality of inpatient hospital care but also an aspect by which these providers are judged and ultimately awarded federal funding.

The values espoused by the IOM and later Dr. Berwick fly unabashedly in the face of decades, if not well over a century of precedent concerning the roles of physicians and patients in the systematic delivery of care in the United States. This statement is in some ways misleading, because to say the patient had a “role” is to give credence to the supposition that historically the patient had any real agency at all – this was not the case. As the next section will discuss, the individual patient was little more than a passive recipient of the expert knowledge and decision making of physicians, who would have thought it downright inconceivable to transfer any portion of that decision making authority to a party outside the walls of the profession. The third IOM rule of redesign is especially forceful in this direction – claiming without any qualifier that the patient is the primary and ultimate source of control in healthcare. Berwick goes even further to posit patient choice in all matters “without exception” to be the norm of choice and necessity in modern healthcare. As the IOM is composed entirely of leading physicians, these two similar interpretations about patient-centeredness represent a level and salience of
advocacy not typically seen in other areas of more visible elements of healthcare reform: advocacy from within the ranks of the medical profession. With the growth of managed care and increasing internalization of the patient-centered care and pay-for-performance movements within organized professional medicine, the political opportunity for more patient-oriented policy coincided with the Democratic electoral victories of 2006 and 2008 that effectively guaranteed healthcare reform as a feasible policy goal.
APPENDIX B: PATIENT-PHYSICIAN COMMUNICATION AS AN ANTECEDENT TO PATIENT SATISFACTION

The scholarly focus from within professional medicine on patient-physician communication played a salient role in acknowledging the role of the patient and eventually became part of the patient-centered care movement. Its status as a major determinant of patient satisfaction warrants further discussion here. Thompson & Suñol (1995) chronicle these various perspectives presented by different authors in the discipline and present four categories of patient expectations:

1) **Ideal** – Desires in outcomes of care

2) **Predicted** – Involving desires, but closer to the more realistic anticipated outcome.

3) **Normative** – What patients believe should happen, often based on physician counsel but also socially produced.

4) **Unformed** – When patients are unable or unwilling to articulate expectations due to lack of knowledge or fear of expected outcomes.

(Thompson & Suñol, 130-131)

They go on to cite expectancy disconfirmation theory as a central underlying factor affecting each of these types of expectations – the idea that satisfaction in healthcare is the result of a cognitive comparison, a difference equation, between prior expectations of the outcome and perceived benefits of the care experience after the fact. In this model, satisfaction occurs when this comparison results in a net positive, while dissatisfaction is when the cognitive equation is negative. Notice that according to this model (which the authors acknowledge has received both affirmations and disavowals in the supporting literature) clinical outcomes are an important factor, but only *relative* to the baseline
desires and anticipated outcomes of the patient. If true, it is in the physician’s interest from a satisfaction standpoint (and under HVBP-affected physicians, a financial standpoint) to be the sole source of prior expectations for the patient; only then do clinical outcomes and satisfaction align completely. While this is likely impossible to produce in practice, the concept segues into an important source of satisfaction long given attention inside the ranks of the medical profession: physician-patient communication. Aside from clinical outcomes, this is the area where physicians have the most individual agency with which to impact the satisfaction of their patients.

Physician-patient communication is a topic that has enjoyed extensive scholarly attention over several decades; its findings have formed the foundation for views on patient satisfaction as we know it in 2014. The first forays into physician-patient interactions (later termed “patient-centered communication” or PCC by way of eventual inclusion into the patient-centered care movement) explored the interactions between physicians of various types and welcomed psychology into medicine. Kaplan et al. (1989) pioneered an experimental study that articulated a holistic framework for physician-patient interaction and explored its relationship to patient satisfaction. Using randomized trials of patients with different chronic illnesses, the authors concluded the existence of a meaningful relationship between the behavior between physicians and patients during an office visit and the subsequent health status of that patient (Kaplan et al.). Other findings indicate that better quality of physician interpersonal skills increased medical outcomes due to increased patient adherence/compliance to medication regimens and other self-care activities post-care visit; moreover, patient satisfaction was a
mediating factor in the level of adherence gained though strong physician interpersonal communication (Bartlett et al.). (Note: while not the focus of this paper patient adherence is an extremely salient factor in cost containment - lack of proper adherence on the part of the patient, especially those with chronic illnesses, precipitates avoidable emergency room visits). Patient-centered communication (PCC), a natural terminology synthesis between patient-centered care and physician-patient communication, and includes a blend of normative and practical considerations about the relationship between doctor and patient and their impacts on ensuring quality care. The four “communication domains” of PCC are as follows: the patient's perspective, the psychosocial context, shared understanding, and sharing power and responsibility (Epstein et al.). A subset of PCC that has garnered recent attention is the sensitivity of physicians to patients’ religious, spiritual, and cultural attributes over the course of their treatment. Research has discovered that only half of hospital inpatients desiring a religious/spiritual treatment discussion (41% of inpatients) with their physician received one (Williams et al.). More importantly for our purposes, patients who did engage in discussions of a religious/spiritual nature with their physician, regardless of whether they reported a desire to have such a conversation, were more likely to rate their care at the highest level across four different measures of patient satisfaction (Williams et al.). Whether physician attention to individual religious and spiritual patient considerations improves clinical quality on the merits is unclear, but it certainly appears to impact satisfaction.

Finally, an outdated yet relevant definition of patient satisfaction is the one historically viewed by the medical profession and especially in inpatient/surgical settings
– the notion that clinical quality of the outcome is the exclusive predictor of satisfaction level. Before the attention shift to communication and other more psychologically involved factors in the doctor-patient relationship, outcomes stood alone as the measure of satisfaction. And for good reason – it would seem logical that the better the health outcome caused by a care visit, the happier that patient in theory should be with the care received. Though a wealth of evidence exists and has been presented that in fact many additional patient-related factors affect satisfaction, a study as recent as 2008 focusing on surgical procedures for severe lower-extremity injuries found that after two years satisfaction among patients was predicted far more by clinical measures such as function, pain, and even the presence of depression rather than any characteristic stemming from the patient (O’Toole et al.). While a noteworthy result, survey methodology must also be kept in contest. When the HCAHPS format is discussed in its own section, the maximum time frame post-discharge is a mere six weeks – helpful to keep in mind to stand in contrast to a far longer follow up period that could perhaps lend more weight to clinical outcome as predictors of satisfaction than in the shorter term.
Appendix C: HCAHPS METHODOLOGY & IMPLICATIONS

Up to this point the discussion has included intellectual movement that precipitated the focus on patient satisfaction, the views on determinants and reliable predictors of satisfaction, as well as the debate around whether satisfaction is in fact an appropriate metric in the context of quality incentive programs, like the HVBP. Much debate has ensued on how to best measure satisfaction in healthcare, ranging from the purely theoretical to various researchers and advocates endorsing specific standardized assessments. For our purposes here, we’re less concerned with the methodological merits of various available types surveys in favor of the only assessment endorsed by Congress in the Affordable Care Act and used to calculate the score for the “Patient Experience of Care” domain in the Medicare HVBP – the HCAHPS.

The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) touts itself as the first national, standardized, publicly reported survey of patients’ perspectives of hospital care (HCAHPS Fact Sheet). Prior to the release of HCAHPS it was not uncommon for hospital and health systems to measure satisfaction and other quality measures internally, but HCAHPS provided a first of its kind standardization to patient satisfaction (HCAHPS Fact Sheet). Fortunately for both research and consumer choice purposes, HCAHPS began publicly reporting on a national scale in 2008 – two years prior to the Affordable Care Act being signed into the law. These years prior to the ACA and Medicare HVBP can effectively serve as the control years, i.e. the years without the incentive structure introduced by HVBP (more on research methodology later). Its goals are threefold:
1) Implement a standardized survey tool to facilitate meaningful consumer comparisons between healthcare providers.

2) Increase provider incentives to improve quality of care via regular public reporting periods.

3) Increase transparency and accountability of healthcare that in the hospital setting is in multiple capacities supported by taxpayer dollars.

(HCAHPS Fact Sheet)

In the few years since its release after a rigorous joint testing between CMS and the Agency for Health Research and Quality\(^7\) (abbreviated AHRQ – also under the umbrella of the U.S. Department of Health and Human Services), it’s been endorsed by the National Quality Forum and the federal Office of Management and Budget for public reporting purposes (HCAHPS Fact Sheet).

What’s in the HCAHPS, then? Relevant for both informative purposes and later comparisons with literature on satisfaction theory are two major factors: content and administration methodology. We’ll begin with the former.

The HCAHPS survey is composed of nine key topics: communication with doctors, communication with nurses, responsiveness of hospital staff, pain management, communication about medicines, discharge information, cleanliness of the hospital environment, quietness of the hospital environment, and transition of care. Followed by the core areas of performance are seven demographic questions (which are used by CMS to determine a “patient adjustment coefficient” that in theory create a level playing field for hospitals with higher proportions of at-risk patients). The survey is 32 questions in
length (HCAHPS Online). The question core areas listed below along with their frequency:

1) Communication with nurses (4 questions)
2) Communication with doctors (3 questions)
3) The responsiveness of the hospital staff (5 questions)
4) The cleanliness of the hospital environment (1 question)
5) The quietness of the hospital environment (1 question)
6) Pain management (3 total, 2 conditional)
7) Communication about medicines (3 total, 2 conditional)
8) Discharge information (3 total, 2 conditional)
9) An overall global rating of the hospital (1 question, Scale 1-10111)
10) Would they recommend the hospital to others (1 question, Yes or No)
11) Demographics (7 questions, all non-performance related)

After much theoretical discourse from a diverse set of authors over time, the HCAHPS core topic areas simultaneously allow and warrant a discussion about the specific priorities, methodological choices, weighting, and exclusions reflected in the survey. Foremost among observations of the distribution in question topic is the concentration of categories that involve system actors that are not physicians. Nurses are by far the most prominent group from an HCAHPS perspective, though they are joined by more ancillary hospital maintenance staff. Even measures that imply the role of a doctor such as pain management, communication about medicines, and discharge information (which perhaps is the most direct link to clinical outcomes via improved compliance) may not in fact directly involve a doctor. Increasingly, these traditionally

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physician-dominated care functions are being filled by nurses (Donelan et al. 2013) including many states loosening professional restrictions on support staff such as physician assistants (Beck).

Through personal conversations with hospital administrators who are on the hook for HCAHPS reporting as well as HVBP, this methodology lends itself to rigorous staff management when it comes to maintaining high scores. Because the inpatient hospital settings lends itself far more to patient-staff interaction falling outside of the physician-patient relationship, factors like cleanliness quiet levels become administrative priorities that do not necessarily come within the purview of medicine. Returning to the academic debate over satisfaction now that we’re presented with concrete application of patient satisfaction in a nationally standardized survey, these arguably non-clinical factors can be cause for concern. The rebuttal however, again both through personal conversations as well as scholarship, is an argument in favor of holding providers accountable to these measures. The measures are justified by the finding that the more enthusiastic, happy, and team-oriented hospital staffs are associated with better clinical outcomes in their hospitals (“Positive Practice Environments”). Regardless of the validity or relevance of the survey topics, HCAHPS has won a mandate in Medicare and acts as the sole meaningful measure of patient satisfaction in the HVBP.
APPENDIX D: Hospital VBP Eligibility Requirements

The eligibility criteria includes only those hospitals that can be paid through the inpatient prospective payment system under Medicare and meet the additional eligibility criteria listed under Section 3001c of the Affordable Care Act. According to CMS, more than 3,000 hospitals across the country are eligible to participate in Hospital HVBP. The program applies to subsection (d) hospitals located in the 50 states and the District of Columbia and acute-care hospitals in Maryland (FAQ – Hospital Value-Based Purchasing Program). A summary of ineligible hospitals are listed below followed by general eligibility criteria for reference:

Ineligible Providers (excluded from HVBP, HCAHPS reporting optional):

- Critical access hospitals
- Children’s hospitals
- VA hospitals
- Long-term care facilities
- Psychiatric hospitals
- Rehabilitation Hospitals
- Hospitals cited by the Secretary of HHS for deficiencies during the performance period that pose an immediate jeopardy to patients’ health or safety
- Hospitals that do not meet the minimum number of cases, measures, or surveys required by the Hospital HVBP

General Methodological Eligibility for Subsection (d) Hospitals:

- The Clinical Process of Care domain requires four or more measures, each with at least 10 cases.
- The Patient Experience of Care domain requires at least 100 HCAHPS surveys in the performance period.
- The Outcome domain in FY 2013 requires two or more mortality measures, each with at least 10 cases. In FY 2014, the minimum cases for the mortality measures changes to 25 cases. PSI-90 will require 3 cases as a minimum for any of the underlying indications. CLABSI will require the hospital to have at least one predicted infection during the applicable period.
- The Efficiency domain will require 25 cases for the Medicare Spending per Beneficiary measure.
- To be included in VBP, the hospital must meet these criteria for all domains.

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