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Variations in the patients' hospital care experience by states' strategy for Medicaid expansion: 2009-2013

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Cover Page Footnote

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Variations in the patients' hospital care experience by states' strategy for Medicaid expansion: 2009-2013

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Abstract

Our investigation evaluates the extent of differences in the patient's hospital experience due to variations among state strategies to adopt, or not adopt, their Medicaid plans to the 2010 ACA legislation. Using ten HCAHPS measures, we analyze patient hospital experience data for the 2009 - 2013 period for all 50 states and the District of Columbia grouped by those states that (1) did not expand, (2) expanded Medicaid through Section 1115 waivers, (3) expanders early, and (4) expanded Medicaid concurrent with the new ACA legislation.

Our findings reveal that those states that opted out of Medicaid expansion typically started with higher patient experience scores in 2009 on all 10 HCAHPS hospital measures and maintained their higher scores levels for all five years over the other three state expansion strategies for most measures. While states that were early expanders and those that expanded concurrent with the ACA implementation generally show higher growth rates over the five-year period for most HCAHPS measures when compared to states that opted out of the Medicaid expansion, our multivariate results indicate that their rates of growth were not statistically superior to those states that opted out of the expansion.

We conclude that while there have been concerns that the patients in opt-out states would experience lower levels of satisfaction from their state's actions, the patient experience scores in these states show that they perform better or as well as those states that expanded early, expanded under waivers, and expanded with the implementation of the ACA legislation.

Keywords

Patient hospital experience, patient satisfaction, value-based purchasing, HCAHPS, affordable care act, state Medicaid expansion

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The context in which hospitals provide high quality patient services is intense. In 2013, there were 33.6 million inpatient admissions to 4,974 community hospitals at a cost of \$782 billion and profit margins averaged 5%. There were 795,603 staffed beds and 40% served rural populations.¹ However, many hospitals struggle to balance multiple missions including outstanding patient service,

teaching, and community service.² A national survey of healthcare executives indicates that high on the list of problems facing hospitals are: financial challenges, healthcare reform implementation, government mandates, and patient satisfaction.³ Faced with soaring costs and intense competitive pressures, hospitals are struggling to

remain financially viable while providing high quality patient care.^{4,5,6,7}

Growing Importance of the Patient's Hospital Experience

In an effort to improve the patient's hospital experience many hospitals are increasingly emphasizing patient care.^{8,9,10,11,12,13,14} A growing body of research indicates that patient-focused care has important benefits for patients through improved communication, more appropriate interventions, enhanced satisfaction, and better reported outcomes.^{15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30}

In the nation's hospitals, the importance of the patient has been prioritized with the passage of The Patient Protection and Affordable Care Act of 2010 (ACA) colloquially known as 'Obamacare'.³⁸ An important aspect of the ACA legislation designed to improve the quality of patient care are the incentives to the nation's hospitals built into the Medicare payment methodology referred to as value-based purchasing (VBP). The underlying rationale of the VBP approach is to shift the current payment paradigm away from a supply-side driven health care system based on established provider arrangements to paying for patient services based, in part, on their value to the patient.^{11,12,13} A milestone in this fundamental change in Medicare payment paradigm due to the ACA legislative came in December of 2012 when Medicare payments to hospitals were reduced by one percent to create a funding pool and, based on the VBP methodology, 1,557 hospitals with outstanding quality ratings received higher Medicare payments from this pool while 1,427 hospitals with lower quality scores lost Medicare revenue.²⁴ Again, in 2013, in the second year of Medicare's VBP quality incentive program, CMS announced that more hospitals received penalties than bonuses and that the average penalty for hospitals was steeper than it was in the first year.³⁰

This fundamental change in the Medicare payment paradigm has incentivized hospitals to try to optimize their 'value' to the patient and, in effect, pitted one hospital against another. Lower scores on the patient's hospital experience are beginning to have real financial consequences and those consequences, it appears, will be growing over time. In evaluating the factors that might influence the hospital 'value' scores of patients, one factor that has not received a great deal of attention is the way in which states have chosen to respond to the new ACA legislation. Do differences in state strategies have any influence on the level of hospital success in providing value to their patients?

State Responses to ACA Legislation

The ACA was signed into legislation on March 23, 2010 and signaled that the United States was on the verge of the most dynamic expansion in health insurance coverage

since the creation of Medicare and Medicaid in 1965. Starting in January 2014, coverage through expanded Medicaid eligibility and subsidies for health insurance purchases through Exchanges (now referred to as Marketplaces) had extended coverage to millions of Americans. The legislation was challenged on grounds of its constitutionality and ultimately the legality of the legislation made it to the United States Supreme Court. In the *National Federation of Independent Business v. Sebelius* (NFIB) case, on June 28, 2012 the Supreme Court upheld the constitutionality of most provisions of the ACA. The one part of the ACA the Supreme Court ruled unconstitutional was the requirement that states expand their Medicaid programs in accordance with the ACA's provisions or lose all federal funding for their existing Medicaid programs. The Supreme Court ruling effectively made Medicaid eligibility expansion to 138% of Federal Poverty Level (FPL) optional for states.^{31,32}

As a result, there has been considerable variation in how States have approached their implementation of the Affordable Care Act. One option the 2010 ACA legislation offered states was the opportunity to expand eligibility to low-income adults at or below 133% of the federal poverty level (FPL) before the national 2014 expansion. States that were early expanders typically enacted Medicaid expansion that included some or all of the low-income adults who were to become eligible for Medicaid under the 2014 ACA legislation. Unlike the 2014 expansion, these early expansions were subject to the state's baseline match rate (Federal Medical Assistance Percentage, or FMAP), rather than the 100% initial federal funding (and 90% in the long run) offered by the ACA for newly eligible adults in 2014. In these early expansions, states also had the flexibility to choose an eligibility threshold below 133% of FPL.

Another alternative for states for ACA expansion resulted from the Medicaid state Section 1115 Demonstration Waiver authority through the Centers for Medicare and Medicaid Services (CMS). Section 1115 Medicaid waivers give states an opportunity to test new approaches in Medicaid that differ from federal program rules. These waivers allow for "experimental, pilot, or demonstration projects" that, in the view of the HHS Secretary, "promote the objectives" of the Medicaid program. Waivers can provide states with additional flexibility in how they operate their programs, beyond the flexibility already available to states under federal law, and they can have a considerable impact on program financing. As such, waivers play a notable role in the Medicaid program and have historically been used for a variety of purposes, including expanding coverage to populations who were not otherwise eligible, changing benefit packages, and instituting delivery system reforms.

The waiver initiatives typically propose improvements to the Medicaid delivery of mental health, physical health,

substance use disorder, oral health, and population health programs and services. In addition, they may request authority to recognize costs not typically matchable from local and state health expenditures to implement these programs. In doing so, this authority is intended to 'free up' state and local funding to provide needed financial assistance to Medicaid programs to pursue meaningful delivery system reforms that help improve the state's health care system. These improvements can help the state system's create enhanced capacity to address the behavioral and physical health needs of all beneficiaries including newly-eligible adults and children, pregnant women, people with disabilities, establish partnerships with providers and community-based organizations, and establish performance measures to assess whether a state's Medicaid goals are being achieved.³³

In the face of the formidable ACA implementation challenges and the wide variation in responses by the state, it raises the question - 'Has the ACA implementation had an impact on the patient's hospital experience in these states?' Although the ACA implementation has been specifically directed at Medicaid patients and programs, the potential impact and strain of the implementation and the consequences of the ACA legislation on hospital administrators, staff, and resource have been dramatic.^{34,35,36} Early qualitative reports examining changes in eight states - on issues related to coverage expansion; financial impacts; the development of information technology systems; outreach, education and enrollment assistance; insurer participation, competition and premiums in marketplaces; insurance market reforms; development of marketplaces; and issues of provider capacity - conclude that different design choices made by states will lead to different results. The author's find that the law will work very differently for residents in different states around the country and there will be different outcomes both in terms of coverage and economic impacts.

Other researchers have expressed much deeper concerns about these states that have made 'opt-out' decisions that they note will leave millions uninsured who would have otherwise been covered by Medicaid and the health and financial impacts will likely be substantial. Using data from the Oregon Health Insurance Experiment, these authors' predict that many low-income women will forego recommended breast and cervical cancer screening; diabetics will forego medications, and all low-income adults will face a greater likelihood of depression, catastrophic medical expenses, and death. They note that because the federal government will pay 100 percent of increased costs associated with Medicaid expansion for the first three years (and 90 percent thereafter), opt-out states are turning down billions of dollars of potential revenue.⁵⁰ A Heritage Foundation Report goes even further arguing that the ACA legislation breaks the promises of access and

quality of care for all citizens by escalating resource shortage and increasing the burden and stress on an already fragile healthcare system and a system overload is inevitable.

Given these concerns, one aspect of the ACA implementation that has not been examined is the extent to which there are differences in the hospital patient's experience due to variations in way states have adopted, or not adopted, their Medicaid plans. Does there appear to be any pattern in the state's approach to adopting the ACA legislation and the patient's hospital experience?

To address these questions, we use national patient experience data from the Hospital Consumer Assessment of Healthcare Providers and Hospital System Survey (HCAHPS) to analyze the patient's hospital experience for the years 2009 through 2013 in all 50 states and the District of Columbia to differentiate states that (1) have not expanded Medicaid, (2) have expanded Medicaid through Section 1115 waivers, (3) were early expanders of Medicaid, and (4) expanded Medicaid consistent with the new ACA legislation. Such information could be valuable to federal and state policymakers as well as numerous stakeholders. Moreover, to our knowledge, there are no empirical investigations that have looked at the patient's hospital experience by state implementation status over this period of time.

Data and Methodology

Measuring Patient Satisfaction

Historically, it has been difficult to obtain comprehensive and uniform hospital patient satisfaction data across a national hospital database. So, for more than a decade, the Centers for Medicare & Medicaid Services (CMS) have been laying the groundwork to measure patients' hospital experience.^{21,22} Beginning in 2002, CMS partnered with the Agency for Healthcare Research and Quality (AHRQ) to develop and test a hospital-focused patient satisfaction survey. AHRQ carried out a rigorous scientific process, including a public call for measures; review of literature; cognitive interviews; consumer focus groups; stakeholder input; a three-state pilot test; extensive psychometric analyses; consumer testing; and numerous small-scale field tests. Through these activities, a robust, prioritized and standardized set of hospital quality measures were developed and legislated for use in 2012 based on the VBP program methodology to reward and penalize hospitals. In effect, with the passage of the ACA legislation, most of the nation's acute-care hospitals that accept Medicare payments are now competing with each other based, in part, on the value that patients attribute to their services.^{22,23}

The hospital patient care experience measures developed by CMS, referred to as the Hospital Consumer Assessment

of Healthcare Providers and Hospital System Survey (HCAHPS), are the first publicly available, standardized survey designed to gather information from adult inpatients about the degree of their inpatient care experiences. The Department of Health & Human Services hosted website Hospital Compare currently reports hospital performance data collected from the nearly 4,000 participating hospitals and the data is updated quarterly and can be found and downloaded from their website. In the spring quarter of 2013, HCAHPS results on Hospital Compare scores were based on more than three million completed surveys from 3,904 hospitals. Put differently, HCAHPS reports, on average, every day more than 8,200 patients complete the HCAHPS survey.⁴⁰

The HCAHPS survey consists of twenty-seven questions and takes seven to ten minutes to complete. Of the first twenty-two questions, eighteen are substantive, and the responses to them are publicly reported at the HCAHPS website. The typical response options to these questions are “never,” “sometimes,” “usually,” and “always,” with a few exceptions. For the discharge questions, the options are “yes” and “no.” For the question about willingness to recommend the hospital, the response options are “definitely no,” “probably no,” “probably yes,” and “definitely yes.” Four questions are screening questions used to determine the eligibility of patients for subsequent questions. The survey also includes five questions about respondents' socio- demographic characteristics. Further details on the methodology and survey-instrument construction can be found on the HCAHPS website and in survey documentation.⁴⁰

The HCAHPS survey is administered to a random sample of adult patients across major medical conditions in each hospital and the survey is not restricted to Medicare beneficiaries but covers virtually all hospitalized patients. It is administered to a random sample of patients eighteen years old or older after an inpatient stay of at least one night for medical, surgical, or maternity care. The patients themselves must complete the survey. Excluded patients comprise those with a foreign address, discharged to hospice or law enforcement, or requesting privacy when admitted. Estimates indicate that 85 percent of inpatients at participating US hospitals are eligible. The number of hospitals that collected data qualifying them for public reporting of their survey scores for public reporting in March 2009 accounted for 97 percent of eligible inpatient stays.⁴²

The timing for administering the HCAHPS survey is between 48 hours and six weeks after discharge and can be done either by mail, telephone, mail with telephone follow up, or interactive voice response on the telephone through an approved vendor. Hospitals may either use an approved survey vendor, or collect their own HCAHPS data. Hospitals must survey patients throughout each

month of the year. The survey is available in five languages and the scores for each hospital are publically reported on Medicare's website.⁴¹

The patient's experience captured in the HCAHPS survey is derived from the patient's perspectives on care and the patient's rating of items that encompass two comprehensive measures of the patient's satisfaction with the hospital: 1) overall rating of the hospital, 2) willingness to recommend the hospital to family and friends, and eight ratings of key patient issues related to their hospital stay: 3) communication with doctors, 4) communication with nurses, 5) responsiveness of hospital staff, 6) pain management, 7) communication about medicines, 8) discharge information, 9) cleanliness of the hospital environment, and 10) quietness of the hospital environment. The survey also includes four items to direct patients to relevant questions, three items to adjust for the mix of patients across hospitals, and two items that support Congressionally-mandated reports.⁴⁰

These ten resulting composite HCAHPS questions are used in our analyses with the mean percent of patient's 'positive' response to each question analyzed for each of the 3,633 hospitals in our sample. We use HCAHPSs data from all 50 states and the District of Columbia for the years 2009 through 2013.

State ACA Implementation Status

As of December 2013, 26 states and the District of Columbia (DC) had taken legislative or regulatory action on some aspects of the ACA legislation while 24 states had opted not to expand Medicaid (AK, AL, FL, GA, ID, IN, KS, LA, ME, MO, MT, MS, NC, NE, NH, OK, SC, SD, TN, TX, UT, WI, WY, VA). Of the 26 states that expanded, 17 states and DC adopted Medicaid implementation generally consistent with the legislative intent of the ACA legislation (AZ, CO, DE, HI, IL, KY, MA, MD, ND, NM, NV, NY, OH, OR, RI, VT, WV), five of these states and DC were considered 'early expanders' (CA, CT, DC, MN, NJ, WA), and four states implemented expansion through a Section 1115 waiver option (AR, IA, MI, PA).^{43,44,45,46}

Data Analysis

From these data, four groups of states were created (1) early expanders, (2) expanded with the implementation of ACA in 2014, (3) expanded under waivers, and (4) non-expansion states. These groupings of state ACA strategies along with the national averages were used over the five-year period – 2009-2013 to track rates of rates of change and chart their improvement for the ten HCAHPS measures discussed above.

In addition, for all 10 HCAHPS measures, we ran regressions using the mean scores for these ten measures for each of the 3,633 hospitals in our database controlling

for the state expansion strategies (non-expansion states were excluded) and year dummy variables for the years 2009 through 2012 (2013 was excluded).

Results

Overall Hospital Patient Experience Scores

Figures 1 and 2 graph the patient experience scores for each of the states and DC as defined by their responses to the ACA legislation. Figure 1 and 2 indicate that the non-expanding states started in 2009 with the highest average HCAHPS scores for the measures of 'high overall hospital rating' and 'would definitely recommend the hospital to family and friends' with 67.9% and 69.9%, respectively, and increased to 71.9% for both scores in 2013.

In contrast, Figures 1 and 2 show that the states that expanded with the ACA legislation and states that were the early expanders had the lowest starting scores for both measures - 'high overall hospital rating' and 'would definitely recommend the hospital to family and friends' and still in 2013 remained the lowest scores for both of these measures. They generally average 3% points or more below the patient experience scores of the non-expanding states on the measure 'overall high hospital rating' while averaging about 2% lower on the measure 'would definitely recommend the hospital to family and friends'.

The patient experience scores for the HCAHPS measure 'high overall hospital rating' for states that expanded under the Section 1115 waiver provisions were above the national average in each of the years for just the 'overall high hospital rating' but fall below the national average for the HCAHPS measure 'would definitely recommend the hospital to family and friends'.

Hospital Patient Experience Communication Scores

For the four HCAHPS communication measures in Figures 3-6, 'doctors always communicate well,' 'nurses always communicate well,' 'hospital staff communicated well about medications,' and 'discharge information communicated well,' non-expansion states consistently showed the highest level of HCAHPS scores over the 2009-2013 period on three of the four measures - 'doctors always communicate well,' 'nurses always communicate well,' 'hospital staff communicated well about medications.' On the measure 'discharge information communicated well,' states that expanded with waivers showed the highest patient experience scores in both 2009 (81.9%) and 2013 (86.3%). In all four communication figures, Figures 3-6, states that expanded early had the lowest levels of patient experience scores in each of the five years compared to the other ACA scenarios. States that expanded with the implementation of the ACA legislation were also consistently lower than the national average in three of the four measures - 'doctors always communicate well,' 'nurses always communicate well,'

'hospital staff communicated well about medications.' Among the ten HCAHPS patient experience measures, Figure 6 - 'discharge information communicated well' showed the smallest difference (1.9%) between the highest (86.3%) score and lowest (84.4%) scores.

Hospital Patient Experience Patient-Care Scores

Figures 7 and 8 show the five-year trends for the HCAHPS patient experience measures for 'hospital staff were always response' and 'pain was always managed well.' Similar to earlier patient experience patterns, non-expansion ACA states consistently maintained the highest average scores over the five-year period with the exception of 2012 when their average was a tenth of a point under states that expanded early under the waiver. Again, early expanding states had the lowest patient experience scores on these two measures in all five years while the states that expanded with ACA legislation had the next lowest patient experience scores among the various state expansion strategies.

Hospital Patient Experience Facility Scores

For the two HCAHPS patient experience with hospital facility measures, 'rooms was always quiet' and 'rooms was always clean' - the pattern of scores mirrors earlier patterns and, consequently, these figures are not shown to conserve space. The non-expanding state have the highest score in each year of the five year period ranging from 62.1% to 65.3% for the measure - 'room was always quiet' and 71.4% to 74.0% for the measure 'room was always clean.' The only exception was for the year 2013 when states that expanded under a waiver were .2 percent higher (74.2% vs. 74.0%) on the 'room was always clean' measure. Again, for both of these measures, the early expanding states had the lowest patient experience scores in all five years while the states that expanded with ACA legislation had the next lowest patient experience scores among the various state expansion strategies. Interesting, the largest spread in scores among the ten HCAHPS hospital patient experience measures was on the measure 'room was always quiet.' In 2009, the difference between the non-expansion states that had the highest score on this measure (62.1%) and the lowest scoring early expander states (50.5%) was 11.6%. By 2013, this high-low difference amongst the same two groups of states had dropped to just 10.9% (65.3% vs. 54.4%).

2009-2013 Patient Experience Percentage Change

As indicated earlier, other studies have found that hospital HCAHPS scores have generally improved since the introduction of HCAHPS hospital measures. Reflecting this evidence, as Table 1 shows, for the 2009-2013 period, HCAHPS patient experience scores in our nation's hospitals improved for all ten measures. The lowest percentage increase in HCAHPS score was 2.1% for the measure 'doctor's always communicating well' while the highest HCAHPS scored percentage increase over the

Table 1. Percent Change in Patient Experience Scores by State Expansion Strategy, 2009-2013

State Expansion Strategy	Overall Rating: Mean % High	Recommend to Others: Mean % Yes Definitely	Doctors Communicate Well: Mean % Always	Nurses Communicate Well: Mean % Always	Staff Explained Meds: Mean % Always	Discharge Info Communicated: % Yes	Staff Responsive: Mean % Always	Pain Well Managed: Mean % Always	Rooms Were Quiet: Mean % Always	Rooms Were Clean: Mean % Always
Expanded Early	7.5%	3.0%	2.8%	6.0%	8.9%	6.0%	8.2%	4.0%	7.8%	4.5%
Expanding with ACA	7.4%	4.0%	2.5%	5.6%	7.7%	4.9%	8.0%	3.0%	8.7%	5.0%
Expanding Under a Waiver	6.7%	4.1%	2.2%	4.6%	7.0%	5.4%	6.8%	2.6%	7.3%	5.0%
Non-Expansion States	6.0%	2.9%	1.6%	4.2%	7.4%	5.4%	5.9%	2.3%	5.1%	3.6%
National Average	6.6%	3.3%	2.1%	4.9%	7.6%	5.4%	6.9%	2.8%	6.6%	4.2%
	highest	lowest								

five-year period was 7.6% for the measure ‘staff always explained medication well.’ For the HCAHPS measure, ‘high overall rating of the hospital’, the score increased 6.6% over the 2009-2013 period. However, among states with different expansion strategies HCAHPS patient experience measures the rates of change varied widely.

In general, the states that expanded early showed the greatest percentage change in improvement. Of the ten patient satisfaction measures, early expanding states had the highest improvement in their percentage change over the 2009-2013 period for seven of the ten scores. Of the three measures early expander states were not the highest score, two were in the facility scores ‘room were always quiet’ (7.8%) and ‘rooms were always clean’ (4.5%) although in both of these measures the early expander’s scores were above the national average, 6.6% and 4.2%, respectively. Only on the measure ‘would definitely recommend the hospital’ (3.0%) were the early expander states below the national average of 3.3%.

A similar pattern of strong improvement in HCAHPS scores over the 2009-2013 period is evident from Table 1 for the states that expanded with the implementation of the ACA legislation. For eight of the ten HCAHPS measures, these states showed the second greatest degree of improvement in HCAHPS scores over this period. Their improvement in the high overall rating of the hospitals was 7.4% just .1% lower than the early expander states on this measure and they had the highest improvement (8.7%) on the HCAHPS measure ‘rooms were always quiet.’ For just one HCAHPS measure, ‘communicated discharge information well’ (4.9%) this group of states showed the lowest degree of improvement.

In contrast, the non-expansion group of states showed the lowest degree of improvement for eight of the ten HCAHPS patient experience scores. Over the 2009-2013 period, non-expansion ACA states showed the lowest level of improvement (1.6%) of any of the HCAHPS measures in Table 1 for ‘always communicating well with physicians’ while on the HCAHPS measure ‘high overall rating of the hospital’ they showed a 6.0% improvement.

Regression Results

Table 2 and 3 show the regression results for two of the HCAHPS measures - ‘overall satisfaction with hospital stay’ and ‘would recommend hospital to family and friends.’ The results in these two tables show that the rates of growth among the three different state expansion strategies - early expanders, expanded under waiver, and expanded with the ACA legislation - did not differ significantly from the growth rates in the non-expansion states for either HCAHPS measure. In effect, the patient experience scores for these two measures, as hinted at in the two figures, shows that while there are some differences in the raw magnitudes of the scores for the four state strategies over the five-year period, these rates of growth among the four state strategies do not differ significantly. They all improved over the five-year period but the rates of growth in those improvements were parallel. Similarly, the results for the other eight HCAHPS measures, that are not shown to conserve space, are similar to the results reported in Table 2 and 3 and reveal no difference across the growth rates for the different state implementation strategies.

Discussion

Passage of the ACA in 2010 culminated years of legislative efforts to address quality problems in health care and to place an emphasis on achieving ‘high value’ in the patient’s hospital experience. However, few studies have examined differences among state ACA implementation strategies and their impact on HCAHPS patient experience scores over time.^{48,49} Our study uses the ten HCAHPS scores for the nation’s hospitals over the 2009-2013 period to document the extent of state differences in patient experience scores among states and the District of Columbia in their ACA implementation strategies. Four different groups of states were tracked: (1) states that expanded early, (2) states that expanded with the implementation of ACA, (3) states that expanded under a waiver, and (4) states that did not expand their Medicaid programs. Our findings result in a number of comments.

Table 2. Associations between state Medicaid policy under ACA and growth rates in percent of patients treated at a hospital that were 'highly satisfied with their overall hospital stay' from 2009-2013

	Coefficient	Std. Err.	P>t	95% Conf. Interval	
Expanding	Reference				
Waiver	-0.014	0.008	0.089	-0.029	0.002
Early	0.007	0.010	0.519	-0.014	0.027
Not expanding	-0.011	0.008	0.165	-0.026	0.005
N =3,633 hospital					

Table 3. Associations between state Medicaid policy under ACA and growth rates in percent of patients treated at a hospital that 'would definitely recommend the hospital to family and friends' from 2009-2013

	Coefficient	Std. Err.	P>t	95% Conf. Interval	
Expanding	Reference				
Waiver	0.056	0.052	0.286	-0.048	0.160
Early	-0.003	0.013	0.803	-0.029	0.022
Not expanding	-0.002	0.010	0.839	-0.022	0.018
N =3,633 hospital					

Over the five-year period, the patient experience scores in the states and DC show steady improvement regardless of their implementation strategies. In fact, our regression results indicate these rates of growth did not differ among the various state strategies and even states that chose not to expand showed improvement in patient hospital experience scores.

Consistent with what might have been expected, state that expanded prior to the implementation of ACA experience the greatest improvement over seven of the ten measures with improvements in HCAHPS scores ranging from 2.8% to 8.3%. Perhaps, most importantly, on the first HCAHPS measure 'high overall hospital rating,' which is the critical HCAHPS measure used in financially rewarding or penalizing hospitals in the patient experience portion of the payment methodology, states with early expansion strategies grew 7.5% slightly higher than states that timed their expansion with the implementation of the ACA legislation – 7.4%.

The ACA non-expansion states had the lowest rates of increase among the ACA state strategies for eight of the ten HCAHPS patient experience scores. Nevertheless, for this group of 24 states, they still recorded a 6% increase on the important HCAHPS measure 'high overall hospital rating' over the five-year period. Moreover, while Table 1 showed the five-year percentage changes for the non-

expansion states were always below the national averages, on only two measures, 'discharge information communicated well' and 'room was always quiet' were they one percentage or greater above the national average.

However, when we charted the five year trends for the ten HCAHPS hospital patient experience scores by each of the four state implementation strategies, on nine of the ten measures states that had not expanded their Medicaid programs with the ACA legislation had the highest patient experience scores over the full 2009-2013 period with the exception of one measure 'room was always quiet' were they were best by .2 percent in one year 2013. The only measure on which the nonexpanding states faltered in besting all the other implementation strategies was 'discharge information always communicated well.' In contrast, those states with implementation strategies that started early or coincided with the implementation of ACA legislation typically started in 2009 with patient experience scores that were below the national averages and remained below the national averages for each year through 2013.

One unanticipated finding from our study is the high patient hospital experience scores for the states that opted out of Medicaid. As we noted earlier, some researchers have commented that these opt-out decisions will leave millions uninsured who would have otherwise been covered by Medicaid and the health and financial impacts

will like be substantial. While these concerns appear well founded, it doesn't appear that these actions by the opt-out states for the 2009-2013 period have resulted in negative HCAHPS patient experience scores. The opt-out states consistently had the highest patient scores on nine of the ten HCAHPS measures over nearly every year of the five-year study period and, while their overall rate of growth was the lowest rates of increase among the ACA state strategies for eight of the ten HCAHPS patient experience scores, they still showed improvement on all ten measures over the five-year period and their growth rates were not significantly different from states that opt-in by any strategies we evaluated.

Since the ACA implementation for most states didn't start until 2014, it is too early to use detailed data from the states to analyze what state characteristics might explain the variations among expansion and non-expansion HCAHPS scores and their growth rates. Clearly, the incentives in the ACA legislation around patient value encourage all hospitals to improve their HCAHPS scores. However, expanding states would be more likely to experience increasing enrollments of new patients and these patients may be more likely to express satisfaction with their hospital stay because of their new ability to gain access to hospital resources which they lacked before. Alternatively, however, the burden associated with increasing enrollments may have the opposite impact in expanding states as hospitals scramble to meet the increased needs of their Medicaid populations and are, perhaps, unable to keep up with the initial surge of patients and their medical needs. In addition, there are many demographic differences among state populations that could have an impact on the patient's hospital experience. Differences in patient characteristics like age, gender, and race/ethnicity all likely impact the patient's hospital experience and other aspects of the hospital's structure and process all likely have an important influence on patient scores. These factors all need to be investigated further.

Limitations

While it is very likely that the ACA legislation has had an impact on hospitals and on their patients' care experience, it is important to note that the payment incentives in the VBP program did not go into effect until the end of 2012 - a year before our study's end date. More specifically, at implementation, the patient experience scores were counted as a small portion of the Medicare reimbursement penalties that were more restrained in the beginning. Other national initiatives, like pay-for-performance^{51,52}, and meaningful use^{53, 54,55,56} may be more likely to affect hospital administrators actions than the scores on patients' experiences of care. Nevertheless, because the startup of the VBP program began in 2004,^{22,23,57} it is likely that hospitals' administrative efforts to evaluate their facilities,

implement changes, and improve patients' care experience were already well under way.^{58,59} Elliott and colleagues note in their evaluation of nationwide improvements in HCAHPS scores in the 2008-2009 period that any improvements might be understated because of timing: hospitals were increasingly aware of their comparative standings on scales from numerous sources, information that would be likely to motivate stepped-up levels of action.⁴²

There may also be limitations in the HCAHPS data. The average response rate for the HCAHPS post-discharge survey is 34 percent, raising the possibility of nonresponse bias. While studies have found that nonresponse bias is less a matter of participants' response rates than of the use of protocols that are not rigorous and consistently standardized^{60,61,62} like those of the HCAHPS surveys,⁴⁰ it is difficult to measure. Since HCAHPS results are based on survey samples of just 300 patients per hospital with varying lengths of stay, covering adult patients 18 years or older across all major medical conditions between 48 hours and six weeks after discharge, and not restricted to Medicare beneficiaries, they may not fully capture important demographic characteristics that could influence patient scores.

While some of the adjustments made reduce bias in HCAHPS scoring, it is not clear if these adjustments are sufficient to create an even playing field. For example, patients who receive emergency care have been found to rate their overall experience lower than patients receiving scheduled care, and public hospital patients are more likely than non-public hospital patients to be admitted through the emergency department. While CMS does adjust for emergency department treatment any hospital with a high volumes of HCAHPS emergency department patients may be at a disadvantage when compared to hospitals with lower volumes of emergency services. This may be an important issue for public hospitals, which have high shares of emergency department visits. In addition, there may be other important factors that CMS fails to account that might prevent equal comparison between public hospitals and hospitals nationally. For instance, workplace environment has been linked to quality of care, and variables like overcrowding, work interruptions, and number of available staff all relate to how patients are treated.

Concluding Comments

The importance of the patient's hospital experience has been prioritized with passage of The Patient Protection and Affordable Care Act (ACA) in 2010 and the incentives in the Medicare payment methodology known as value-based purchasing (VBP). The essence of VBP is to replace the current supply-side-driven payment paradigm with a system that, in part, pays for patient-oriented health-care

services on the basis of their value to the patient. An essential component of this shift is capturing the patient's health-care experience using the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey. In this quality-focused competitive environment, it is essential for hospitals to understand the factors that influence patients' experience of care and other measures of quality.

To date, little research has examined how differences among states in their implementation of ACA legislation in the hospital setting impact the patients' care experiences. In our investigation, we analyzed the patients' hospital experience for the years 2009 through 2013 in all 50 states and the District of Columbia that (1) have not expanded Medicaid, (2) have expanded Medicaid through Section 1115 waivers, (3) were early expanders of Medicaid, and (4) expanded Medicaid consistent with the new ACA legislation.

Our findings reveal that those states that opted out of Medicaid expansion typically started with higher patient experience scores in 2009 on all 10 HCAHPS hospital measures and maintained their higher score levels for most measures over all five years compared to states in the other three state expansion strategies. While states that were early expanders and those that expanded concurrent with the ACA implementation generally show higher growth rates over the five-year period for most HCAHPS measures when compared to states that opted out of the Medicaid expansion, our multivariate results indicate that their rates of growth were not statistically different from those states that opted out of the expansion. We conclude that while there have been concerns that the patients in 'opt-out' states would experience lower levels of satisfaction from their state's actions, the patient experience scores in these states show that they perform better or as well as those states that expanded early, expanded under waivers, and expanded with the implementation of the ACA legislation.

Further research is needed to document trends in other states and to assess the overall impact on specific state populations after full ACA implementation. In addition, further research is needed to determine how hospitals and policymakers can identify and better serve those patients whose hospital experiences are less than optimal.

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Figure 1. Overall Hospital Rating by Year and State - Mean % High

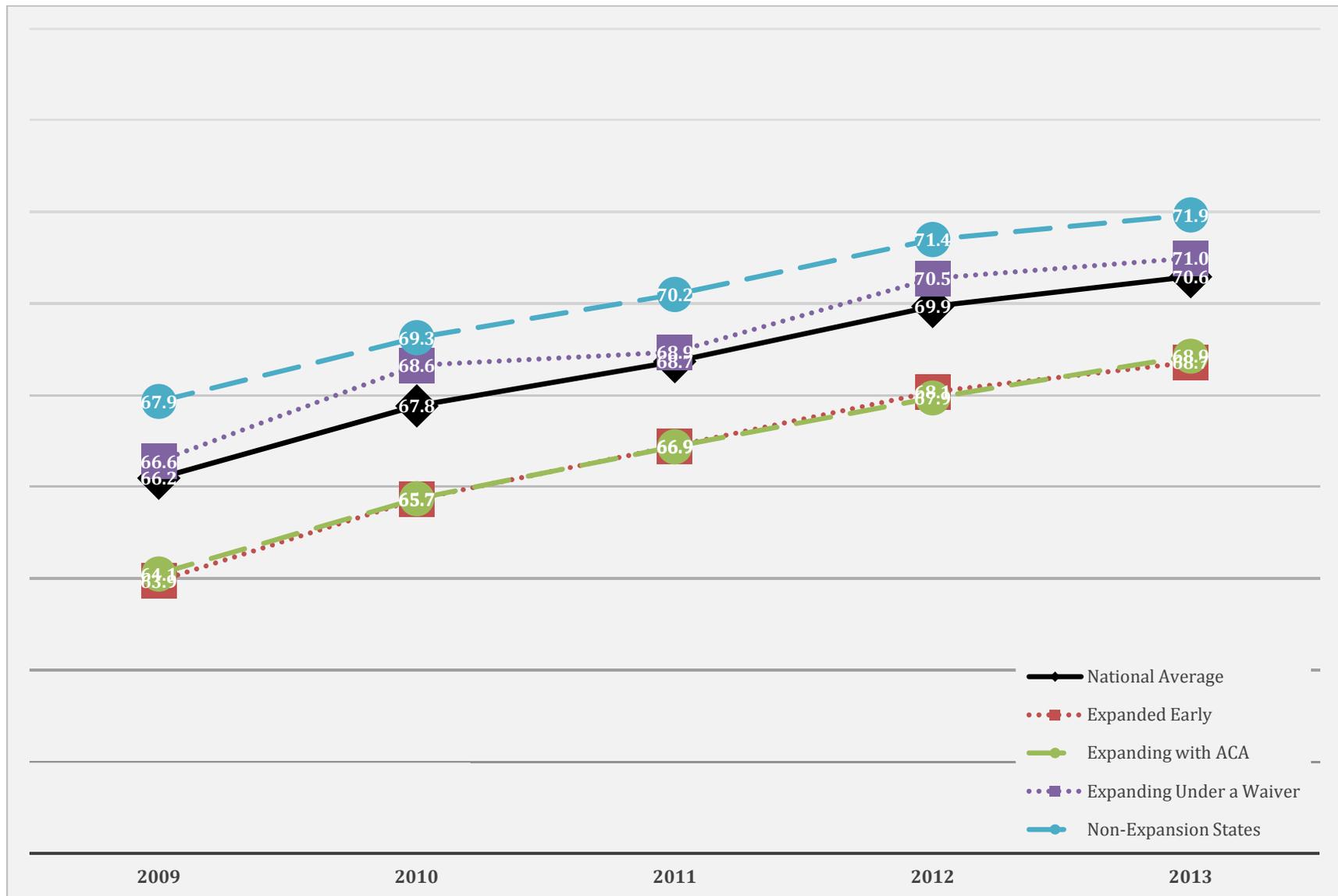


Figure 2. Would You Recommend to Family and Friends? - Mean % Yes, Definitely

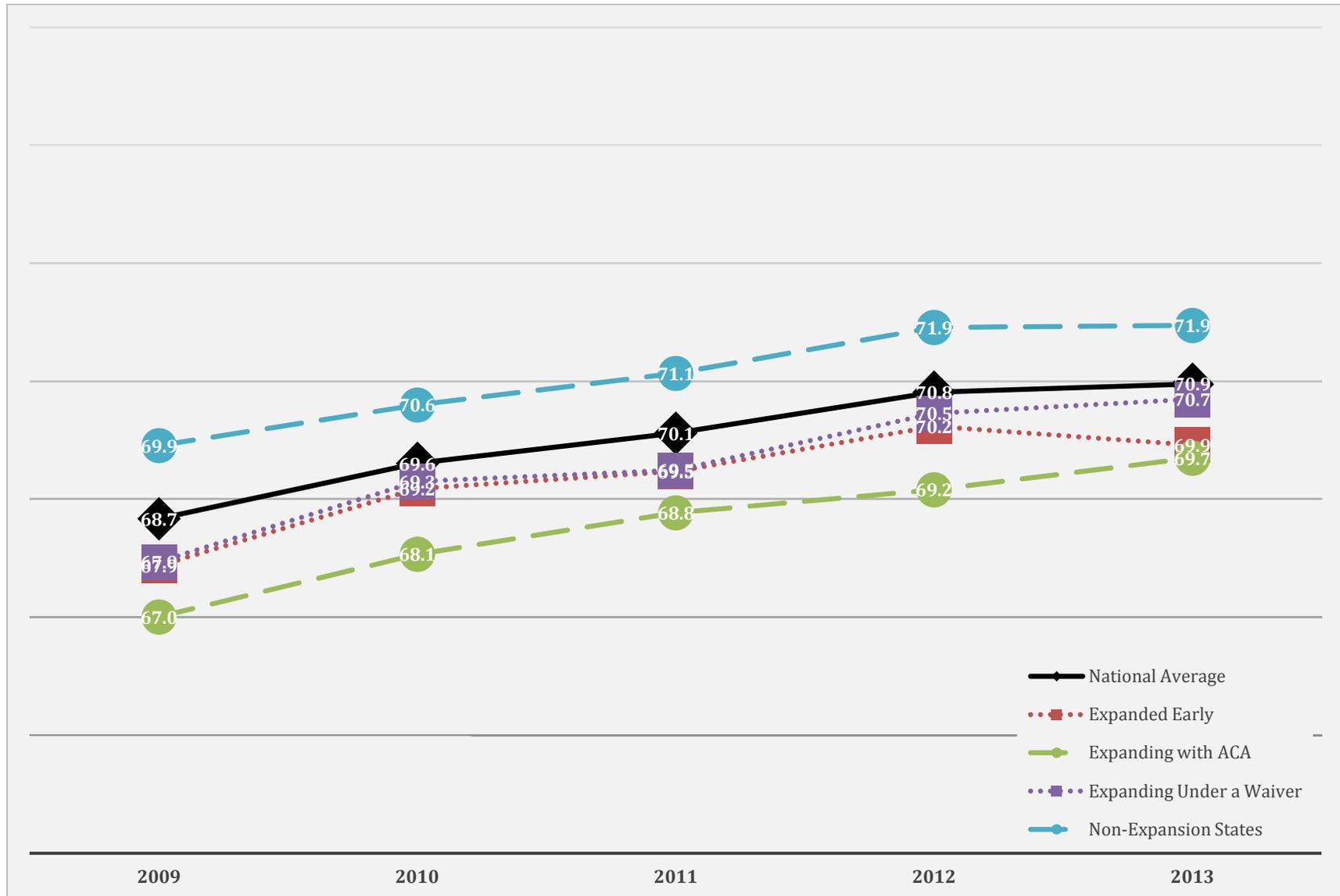


Figure 3. Doctors Communicate Well - Mean % Always

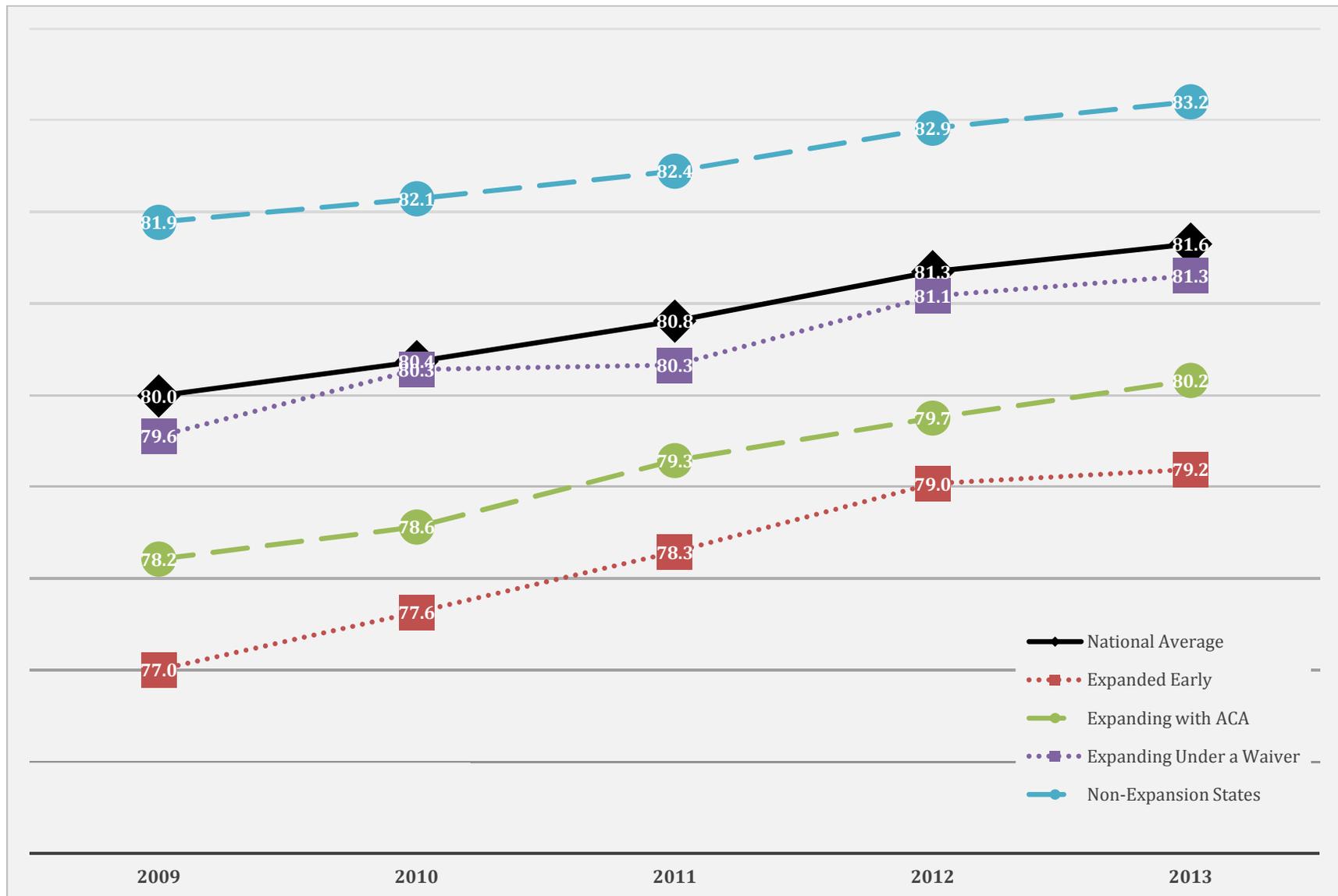


Figure 4. Nurses Communicate Well - Mean % Always

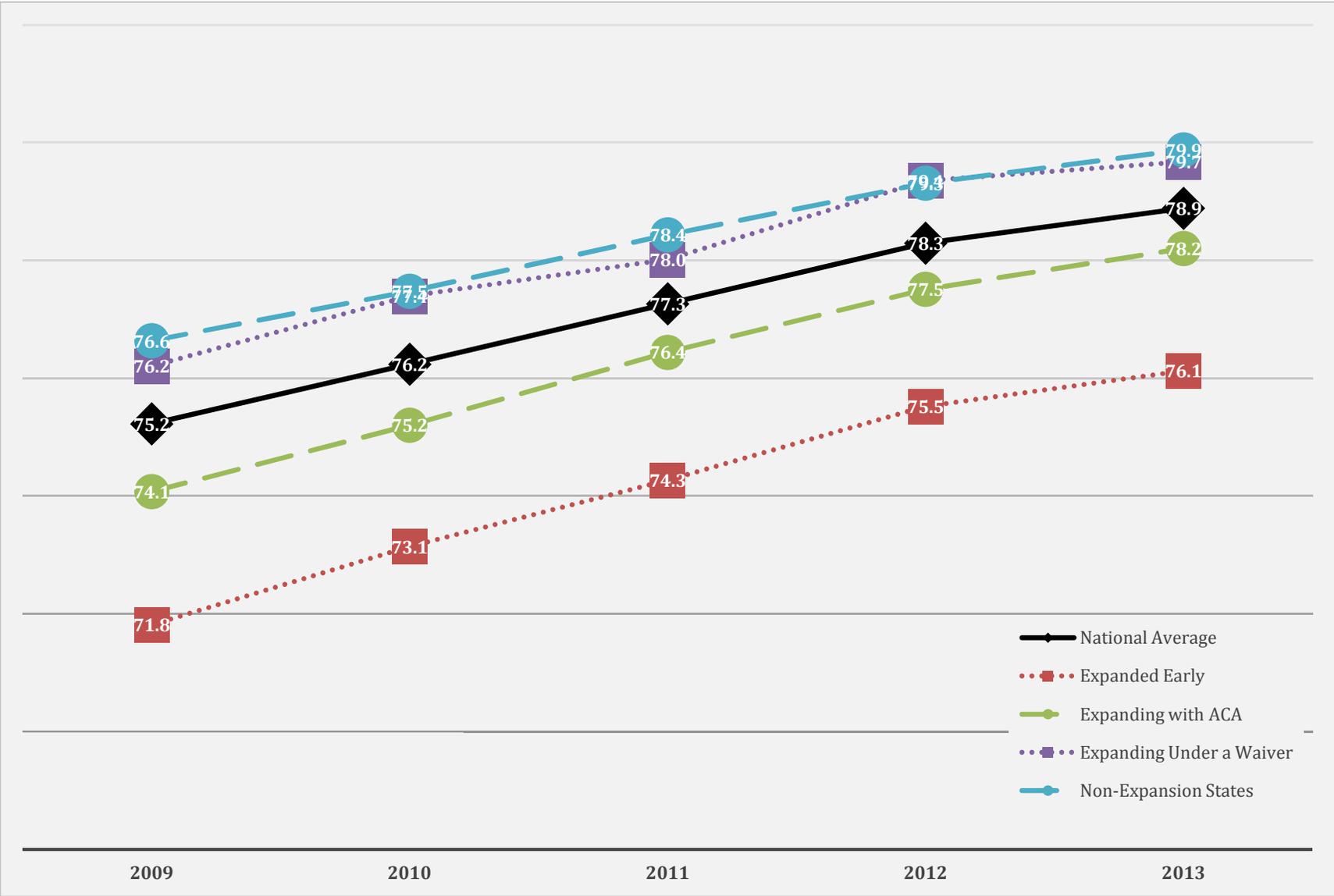


Figure 5. Hospital Staff Communicated About Medications - Mean % Always

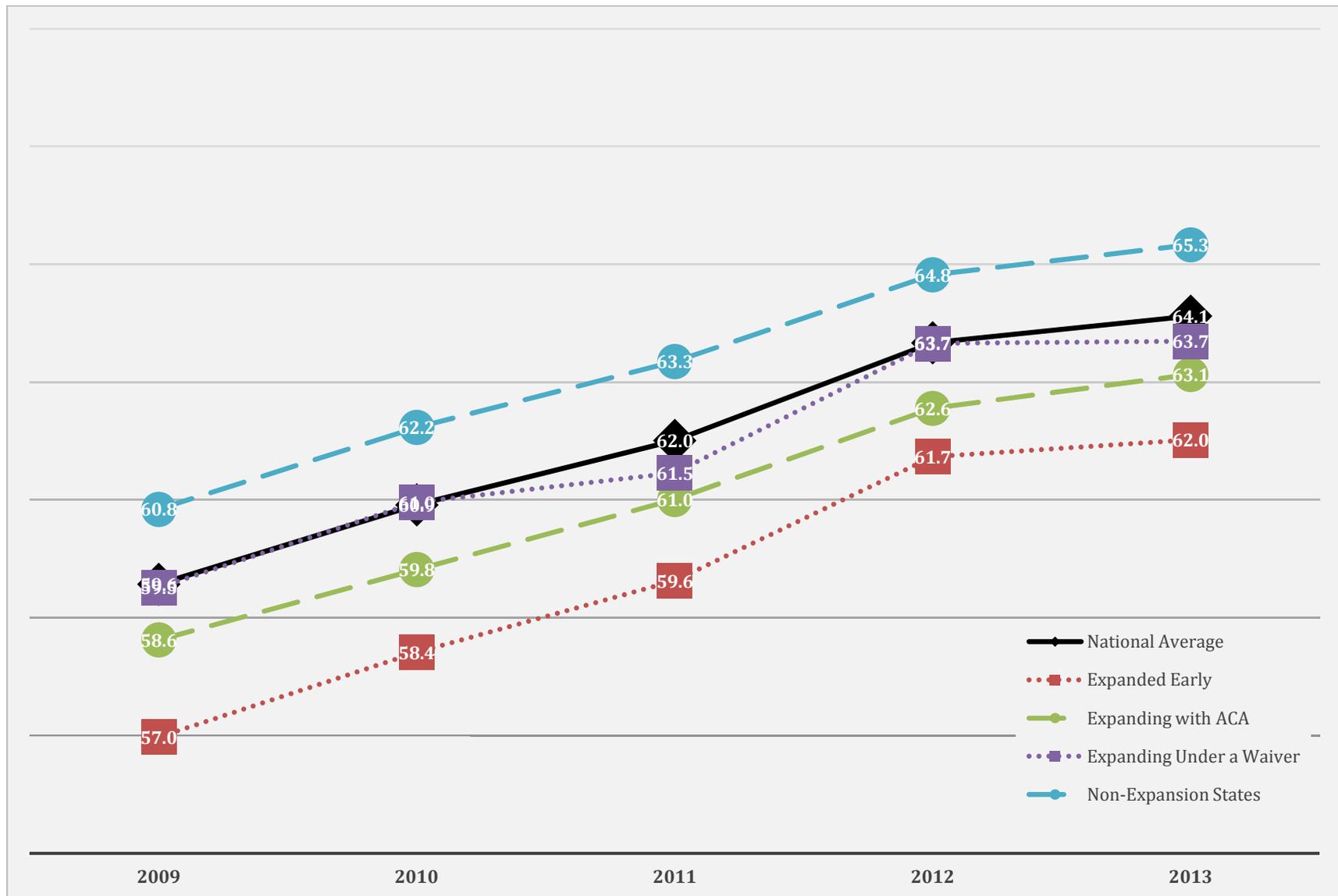


Figure 6. Discharge Information Communicated Well - Mean % Yes

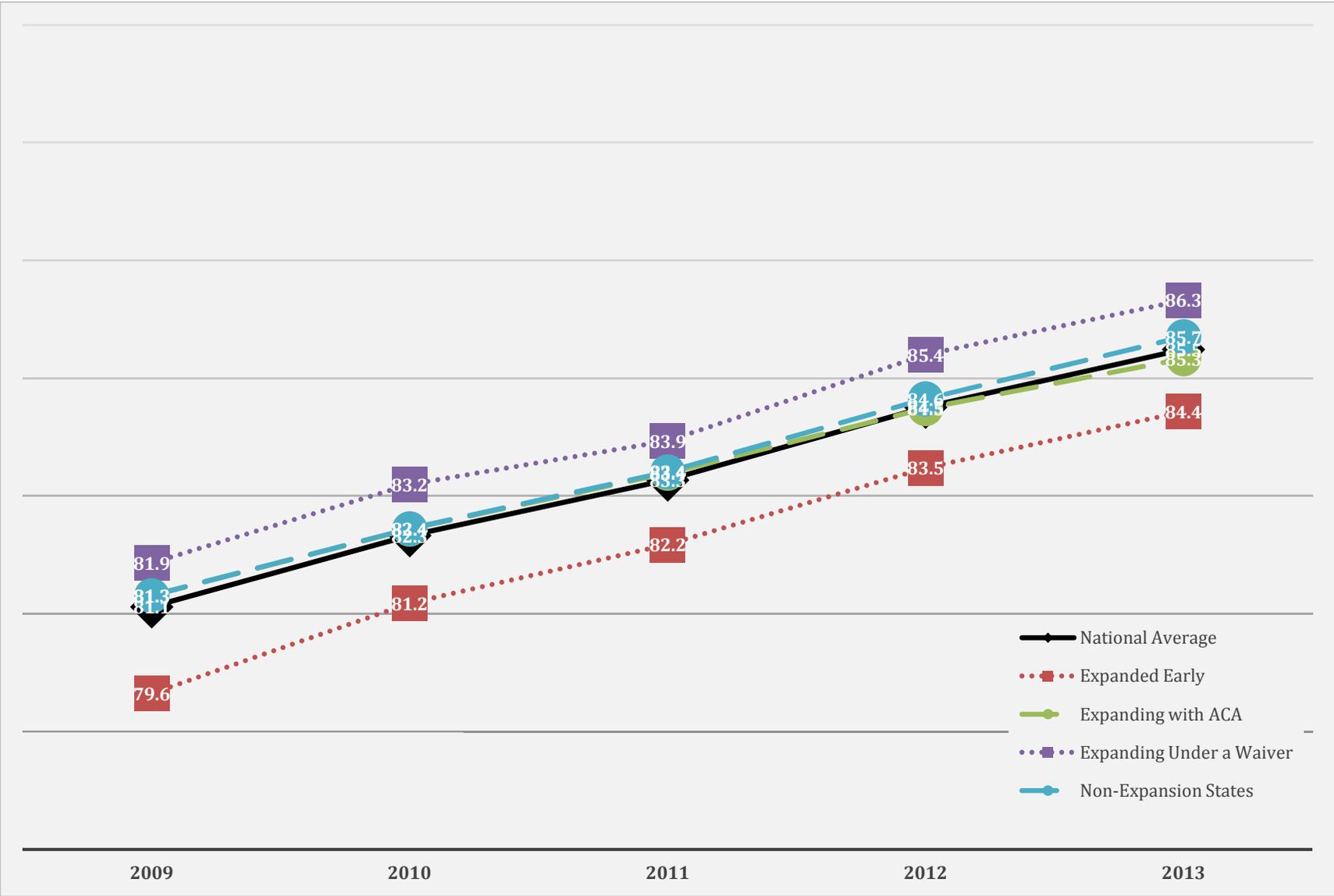


Figure 7. Hospital Staff Were Responsive - Mean % Always

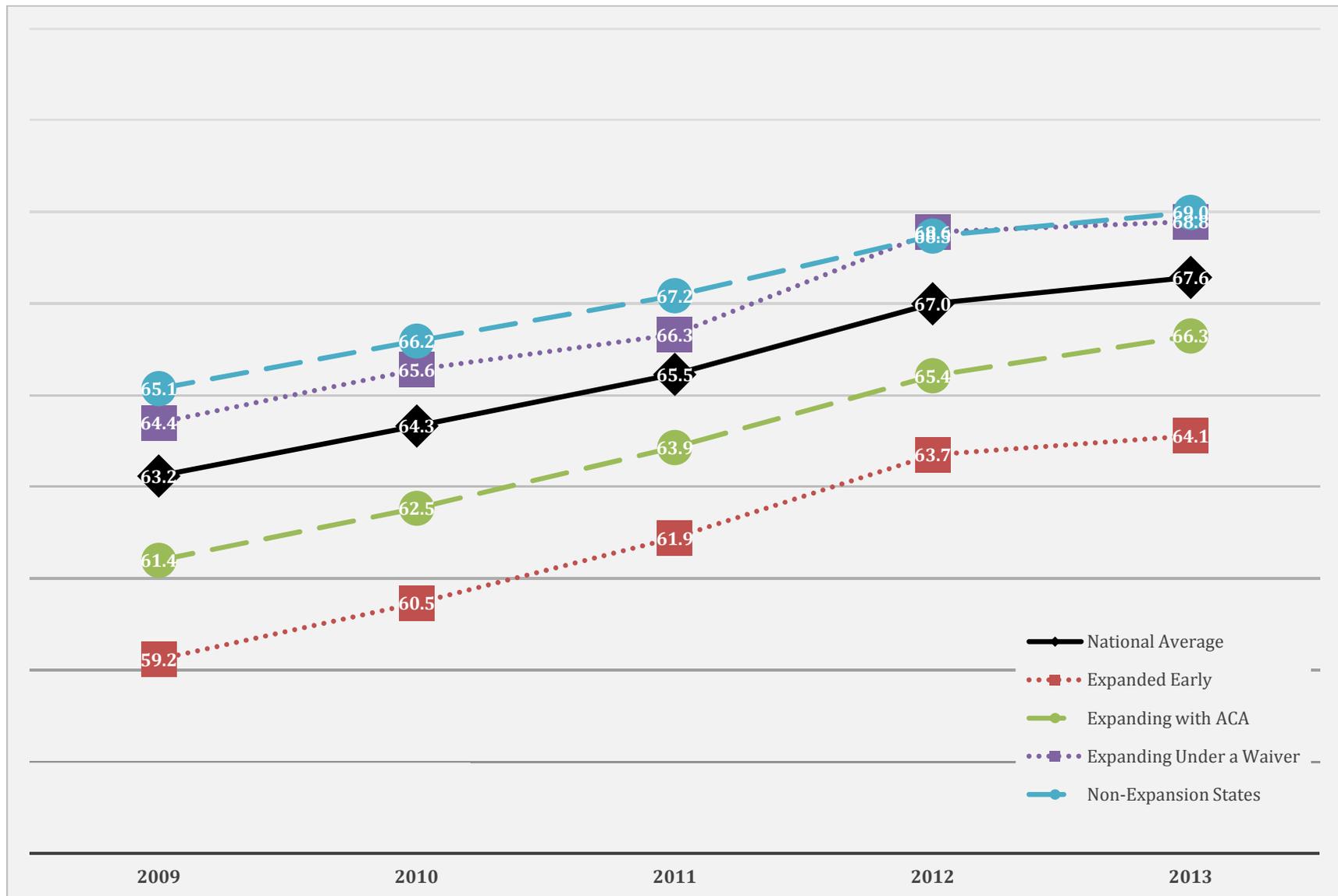


Figure 8. Pain Was Well Managed - Mean % Always

