The Patient Protection and Affordable Care Act's Effect on Emergency Medicine: A Synthesis of the Data

Laura N. Medford-Davis, MD*; Vidya Eswaran, BS; Rohan M. Shah, BS; Cedric Dark, MD, MPH

*Corresponding Author. E-mail: Lmedfo@mail.med.upenn.edu, Twitter: @MedfordDavis.

This review synthesizes the existing literature to provide evidence-based predictions for the future of emergency care in the United States as a result of the Patient Protection and Affordable Care Act, with a focus on emergency department (ED) visit volume, acuity, and reimbursement. Patient behavior will likely be quite different for patients gaining Medicaid than for those gaining private insurance through the Marketplaces. Despite the threat of the individual mandate, not all uninsured patients will enroll, and those who choose to enroll will likely be a different population from those who remain uninsured. New Medicaid enrollees will be a sicker population and will likely increase their number of ED visits substantially. Their acuity will be higher at first but will then revert to the traditionally high number of low-acuity visits made by Medicaid patients. Most patients enrolling through the Marketplace are choosing high-deductible health plans, and they will initially avoid the ED because of high out-of-pocket costs but may present later and sicker after self-rationing their care. Most patients gaining health coverage through the Affordable Care Act will be shifting from uninsured to either Medicaid or private insurance, both of which reimburse more than self-pay, so ED collections should increase. Because of the differences between Medicaid and Marketplace plans, there will be a difference in ED volume, acuity, and financial outcomes, depending on states' current demographics, whether states expand Medicaid, and how aggressively states advertise new options for coverage in Medicaid or state health insurance Marketplaces. [Ann Emerg Med. 2015;66:496-506.]

Please see page 497 for the Editor's Capsule Summary of this article.

A **podcast** for this article is available at www.annemergmed.com.

0196-0644/$-see front matter

http://dx.doi.org/10.1016/j.annemergmed.2015.04.007

INTRODUCTION

Background

The practice of medicine has been under enormous external pressure as health insurers, governments, and the general public have become more conscious of cost, health outcomes, and the experience of care. In this climate, the emergency department (ED) has been scrutinized for providing expensive and unnecessary care.[1]

Statistics indicate that 129.8 million visits were made to US EDs in 2010,[2] and there has been an increase in the per-capita rate of ED visits every year since 1997 (with 2010 being the exception).[3] Emergency physicians account for only 4% of the total physician workforce, yet of the 354 million annual acute unscheduled care visits, emergency physicians treat a disproportionate share.[4] Approximately half of acute unscheduled care visits for patients with Medicaid/Children's Health Insurance Program and more than 60% of acute unscheduled care visits for the uninsured are provided by emergency physicians.[4] An increasing use of EDs for acute unscheduled care has occurred despite a 12.7% decline in the number of hospital-based EDs between 1991 and 2011.[5] With the expansion of health insurance coverage as a result of the Patient Protection and Affordable Care Act of 2010, many expect that the strain on our nation's EDs will continue to increase.[6]

Regardless of its ability to affect health care quality, freedom of choice, affordability, or access to care, the Affordable Care Act will have far-reaching influence on the practice of emergency medicine. Some elements of the law will affect the demand for emergency care and others will change expectations for the ED's role in coordinating care.[7] A poll of emergency physician opinions in 2014 found that after implementation of the Affordable Care Act, 46% perceived increases in their visit volume, 86% expected ED visits to continue to increase, and 51% expected reimbursement to decrease.[8] Despite these perceptions, administrative data from EDs in Maryland and the District of Columbia offer contradictory findings of a 3.7% decrease in ED visits.[9]

Many peer-reviewed studies have been published demonstrating the relationship between changes in health care legislation and resulting trends in emergency care. This review synthesizes the existing literature to

Editor's Capsule Summary

What is already known on this topic

The Patient Protection and Affordable Care Act may change how patients access the health care system. Organizations may attempt to steer less ill patients away from expensive emergency department (ED) care.

What question this study addressed

This systematic review predicted what the future would be for EDs in the Affordable Care Act era.

What this study adds to our knowledge

The insurance profile of patients treated in EDs may change, with variable effects on reimbursement to physicians and hospitals, depending on geography and other circumstances.

How this is relevant to clinical practice

This will help ED and hospital administrators prepare to best meet the needs of the population as payer models evolve under the Affordable Care Act.

provide evidence-based predictions for the future of emergency care in the United States as a result of the Affordable Care Act.

MATERIALS AND METHODS

We searched the PubMed, EMBASE, PsycINFO, and Ovid Healthstar databases for all articles combining the free-text terms "Affordable Care Act" and "emergency medicine." Additionally, we searched for variations including "emergency room," "emergency department," "ED," "ER," and "emergency physician." Additionally, we searched the CINAHL database, using its predefined Boolean phrases.

Our search uncovered 198 unique sources. From these sources, the first and senior authors (LNM-D and CD) reviewed titles and abstracts to exclude any article not directly related to the federal health reform law or the practice of emergency medicine. The full text of the remaining 40 articles was reviewed for inclusion in our synthesis, leading to the exclusion of an additional 16 that did not focus on the Affordable Care Act's effect on the ED specifically. References of selected articles were also explored for relevance, and 15 more articles were added to our review (Figure 1).

After review, the selected literature was grouped into the Affordable Care Act's anticipated effects on the following categories: ED volume, acuity of emergency care, and reimbursement for emergency care.

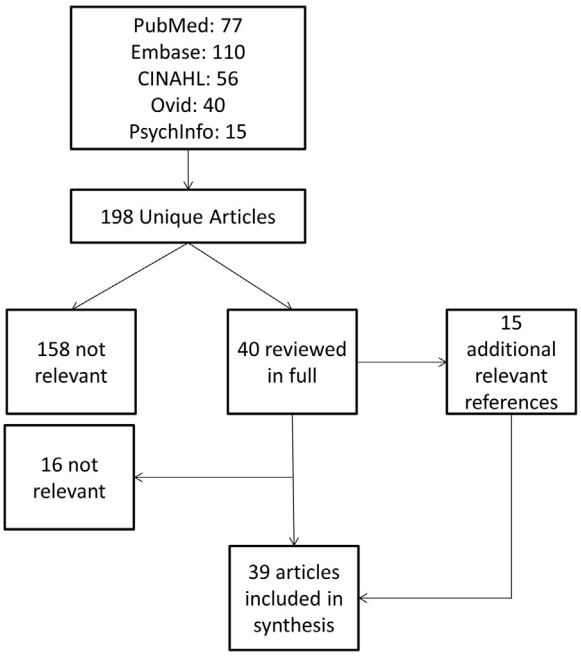

Figure 1. Literature review flowchart.

RESULTS

Given the steady increase in ED visits in the past decade,[3] contrasted with the expectation by policymakers that the Affordable Care Act will replace ED utilization with primary care visits,[10] the net effect of the Affordable Care Act on ED volumes is the subject of much speculation. In 2010, 71% of emergency physicians expected a surge in visits.[11] This percentage increased to 86% of emergency physicians expecting surges in 2014.[8] Forty-six percent thought they had already observed increasing ED visits in the first 4 months of 2014, coinciding with the first full-scale efforts to implement the Affordable Care Act.[8]

Policymakers designed the Affordable Care Act to provide increased access to primary care providers, with the assumption that this would cause substitution of emergency care with primary care. Although increased rates of insurance coverage are designed to improve access to primary care, fewer than half of Americans with a primary care provider have access to that physician after hours (nights and weekends) when a significant number of acute care visits are made.[12] When patients call to make appointments, true availability of primary care for new privately insured patients is only 84.7% and decreases to 57.9% for Medicaid patients.[13]

Appointment availability was lowest and wait times were longest in Massachusetts,[13] a state that implemented Affordable Care Act–like reforms. This research suggests that patients may face a limited supply of primary care providers after national health care expansion.[14] National surveys find that patients who report difficulty accessing their primary care provider use the ED more often[15-17] and that the percentage of patients reporting such barriers has doubled from 6.3% to 12.5% during the past decade.[16] Sixty-four percent of ED patients with a primary care provider and 78% of those without a primary care provider reported an issue with access to care rather than perceived acuity of their condition as the cause of their most recent ED visit.[1] Research from Massachusetts combined with the trends in primary care provider access suggest that significant barriers to accessing primary care will remain a problem for patients after Affordable Care Act implementation. This could lead to greater ED utilization.

Many researchers suggest that true Affordable Care Act results cannot be studied until at least a full year "washout period" after implementation,[18,19] so current trends may not accurately portray long-term changes. However, early evidence from Colorado, comparing the first 2 quarters of 2014 to pre–Affordable Care Act implementation, shows that states choosing to expand Medicaid have experienced a 5.6% increase in total ED visits compared with just 1.8% in nonexpansion states.[20] Previous research suggests that this increase may be temporary. People who lose or gain insurance coverage report using significantly more ED care within the first year after their coverage change.[21,22] Patients obtaining Medicaid coverage visit the ED approximately 21% more frequently than those obtaining private insurance,[21] which may explain some of the early findings in states expanding Medicaid.[20]

A recent analysis of the Low Income Health Program in California that expanded Medicaid early (in July 2011) showed a large spike in Medicaid visits in the first year, which leveled off after 18 months.[23] People in the program who had no previous health care coverage or visits, whom the authors characterized as having high "pent-up demand," were responsible for the majority of the increase in ED visits.[23] Similarly, in Massachusetts' Affordable Care Act–like health reform, patients who were uninsured before gaining Marketplace-type insurance increased their ED visits by 12%, whereas patients who had public insurance before gaining a private plan decreased their ED visits by 18%.[24] Additionally, the results of a nongovernmental program in Virginia that provided free primary care (but not full Medicaid) to the people who would be eligible for Affordable Care Act Medicaid expansion found that with continuous primary care provider access, ED visits continued to decrease each year for 3 years.[25] At least in the near future, it appears the Affordable Care Act will substantially increase ED visits, particularly for individuals who have been uninsured previously or who gain Medicaid, but visit rates may stabilize to the slow growth rate observed before the Affordable Care Act within 1 to 2 years. Figure 2 presents a prediction of the anticipated effects of the Affordable Care Act on ED visit rates according to available data.

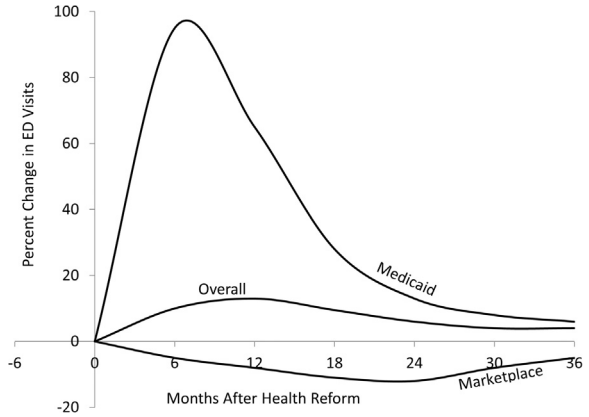

Figure 2. Anticipated change in ED visits above baseline annual growth after national health reform.

State insurance expansion experiments can be used to extrapolate the results of the Affordable Care Act. Massachusetts implemented a health care reform similar to the Affordable Care Act in 2006. The state had a much lower uninsured rate before their health reform than the national average before the Affordable Care Act (10.9% versus 18.4%) and is therefore not fully representative of expected national effects but does provide some suggestions about the effects of this type of insurance coverage change. Two surveys found that patients in Massachusetts reported more clinic-based and preventive care after reform.[19,26] Although policymakers hope this trend will lead to decreased ED use, true behavior is subject to complex incentives.

One survey found a nonsignificant 2% decrease in ED use at 2 years postreform (2008 versus 2003 to 2005).[19] Another survey found a significant 3.8% decrease in the number of people making any annual ED visit, a 1.9% decrease in people visiting the ED more than 3 times annually, and a 3.8% reduction in people making nonemergency visits to the ED.[26] However, this decline did not begin until 2010, when health reform had already been in place for 4 years.[26] Thus, the Affordable Care Act may ultimately slow the growth in ED use very slightly from the pre–Affordable Care Act baseline after an initial bump in utilization.

To supplement self-reports, Massachusetts has also produced several studies of administrative ED visit data. The study by Miller[27] found that, compared with that of neighboring states that had not expanded health coverage, ED use in Massachusetts decreased by more than 5%.[27] These reductions were mostly in primary care–treatable conditions during weekday hours when outpatient clinics were open. These results are consistent with patients' reports and suggest that health reform is having the desired effect of replacing nonemergency ED use with clinic use when available.

However, Chen et al[28] found no difference in ED visits between Massachusetts and 2 neighboring states. Two studies compared changes in ED utilization for counties in Massachusetts that had small or large changes in insurance coverage after reform. Two different methods to estimate a county's change in insurance coverage led to 2 opposite results: Smulowitz et al[29] found a 2.2% increase in ED visits, whereas Miller[27] found a 6% to 8% decrease in ED visits in counties where the most people gained insurance. In addition, a study of changes in insurance coverage in California found that both total and low-acuity ED visits decreased when insurance rates increased.[30] The majority of the evidence from Massachusetts and the evidence from California suggest that increased insurance coverage is associated with a small decrease in ED visits.

In 2008, Oregon expanded Medicaid to a select number of eligible adults by a lottery system, creating a randomized natural experiment that provides the most robust prediction of how Medicaid expansion will affect ED visits. Analyses of self-reported health care use in the year after expansion found no change in ED visits for patients gaining Medicaid.[31,32] However, a subsequent analysis by the same authors, using administrative ED visit data, found that patients obtaining Medicaid actually made 41% more ED visits than those who remained uninsured.[33] Their direct comparison of survey and interview reports of ED use to actual ED use provides a warning against the overreliance on reported rather than actual behavior. These results from Oregon suggest that among the Medicaid population, ED visits could increase substantially.

Similarly, a public insurance expansion in Wisconsin that automatically enrolled low-income adults without children, the group most likely to benefit from Affordable Care Act Medicaid expansion, found a 46% increase in ED visits after expansion despite a 55% increase in preventive visits and a 13.5% increase in acute care visits to clinics.[34] When Tennessee reversed course, taking Medicaid coverage away from 171,000 adults in 2005, weekly ED visits decreased by 2.6% in the state, further corroborating that patients with Medicaid use the ED more frequently than the uninsured.[35]

However, a study matching 10 states that chose to expand their Medicaid eligibility between 2000 and 2009 to control states that did not expand it found that people obtaining Medicaid did not decrease their ED utilization any more than Medicaid enrollees in matched nonexpansion states.[36] New Medicaid enrollment increases ED utilization within states expanding eligibility, but this increase may not be significant when compared to temporal trends in states not expanding it.

The Affordable Care Act includes a provision that took effect in September 2010 that allows young adults aged 18 to 25 years to remain insured by their parents' private health insurance plans. Previous analysis of young adults who lost their parents' health insurance in 7 states revealed that they were 40% less likely to visit the ED when uninsured.[37] These data suggest that young adults will increase ED visit rates as a result of the Affordable Care Act. However, a later analysis of the same data set after the Affordable Care Act took effect did not find any difference in ED visits by individuals younger than 25 years after they remained insured.[18] Two separate analyses of ED administrative data actually reported decreases in ED visits by young adults in the first 15 months after the Affordable Care Act of 2.1% and 1.6 visits per 1,000 young adults.[38,39]

Abraham[40] combined the estimated changes in ED visits observed in several previous studies with a large data set of pre–Affordable Care Act ED utilization to make overall estimates about the Affordable Care Act's potential effect. The study's estimates ranged from a 9% decrease to a 12% increase in ED utilization. The specifics of the different studies reviewed indicate that this wide range is due to the difference between the types of coverage expansion (Table 1). A general increase in health care coverage, as was observed in Massachusetts, is associated with stable or slight decreases in ED use. An increase in private health coverage leads to decreased ED use for young adults, whereas an increase in Medicaid coverage alone appears to significantly increase ED use. Young adults are likely a much healthier population with fewer health care needs than those gaining Medicaid. Visit rates may also depend on whether patients were uninsured or insured before gaining policy-related insurance. All of these changes may stabilize over time to the baseline slow growth rate observed pre–Affordable Care Act.

It has been debated whether expanded insurance coverage will decrease the severity of illness of patients presenting to the ED (ie, acuity). When patients are treated and managed in the outpatient setting, the provision of

Table 1. Changes in ED volume by type of coverage expansion.

Reference	Percentage Change	State	Data Source	Subjects*
Overall health reform				
Long, 2012[26]	↓3.8	MA	2006–2010 Massachusetts-based telephone survey	15.5K patients 18–64, with oversampling of uninsured and adults in low-income areas
Miller, 2012b[27]	↓5–8	MA	State hospital data and census data	Change in insurance coverage by county
Chen 2011, Miller 2012a[19,28]	Zero	MA	Chen—2004–2009 state hospital data, NH and VT are controls; Miller—2003–2008 National Health Interview Survey, 8 control states	Chen—2.2M ED visits in MA by patients <65 Miller—21.6K respondents 18–64
Abraham 2014[40]	↓9–↑12	USA	2008–2010 Medical Expenditure Panel Survey; compares use by the uninsured eligible for ACA with those already insured	184.7M nondisabled persons 18–64
Smulowitz 2014[29]	↑1.2–2.2	MA	2004–2009 state hospital data; insured rates in each county estimated by percentage of hospital visits covered by insurance in the area	2M annual outpatient ED visits, 850K inpatient admissions, and 150K observation stays
Medicaid expansion states				
CHA 2014a[20]	↑5.6	USA	2013–2014 hospital data, 15 states	465 hospitals
Medicaid nonexpansion states				
CHA 2014a[20]	↑1.8	USA	2013–2014 hospital data, 15 states	465 hospitals
Young adult population				
Anderson 2012[37]	↑40	USA	2005–2007 ED administrative data in 5 states	1.7M ED visits by patients 18–19
Chua 2014[18]	Zero	USA	2002–2011 Medical Expenditure Panel Survey	56.5K adults 19–34
Antwi 2015[39]	↓1.4	USA	2007–2011 Healthcare Utilization Project Nationwide Emergency Department Sample, 30 states	77M ED visits by patients 19–29
Hernandez-Boussard 2014[38]	↓2.1	CA, FL, NY	2009–2011 HCUP SEDD and SID and census data	10.2M ED visits by patients 19–31
Marketplace population				
Lee 2015[24]	↓4	MA	2004–2008 Public health insurance enrollment data and statewide ED visit claims	353K adults >17
Wharam 2013[47]	↓4.6–11.7	MA	2001–2008 claims data	16.3K people <65 whose employers switched them from HMOs to HDHPs
Medicaid population				
Lo 2014[23]	↑300	CA	2013–2014 state claims data	182K LIHP new enrollees who would be eligible for Medicaid after expansion
DeLeire 2013[34]	↑46	WI	2008–2009 state claims data	9.6K new Medicaid enrollees
Taubman 2014[33]	↑41	OR	2007–2009 survey data, Medicaid enrollment data, and ED administrative data from 12 Portland hospitals	25K Medicaid lottery winners 19–64
Heavrin 2011[35]	↑2.6	TN	2004–2006 HCUP SEDD and SID, Medicaid enrollment data, and census data	4.6M ED visits by adults >17
Baicker 2011, Finkelstein 2012[31,32]	Zero	OR	2008–2009 mail surveys	23.7K Medicaid lottery winners 19–64 who responded to mailed surveys

K, Thousand; *M*, million; *ACA*, Patient Protection and Affordable Care Act; *CHA*, Colorado Hospital Association; *HCUP*, Healthcare Cost and Utilization Project; *SEDD*, State Emergency Department Database; *SID*, State Inpatient Database; *HMO*, health maintenance organization; *HDHP*, high-deductible health plan; *LHIP*, low-income health program.
*Age is provided in years.

timely primary care may prevent acute exacerbations of chronic illness and late presentations of acute illness by the uninsured. Indeed, since Affordable Care Act implementation, the percentage of people reporting that they have delayed health care needs because of cost, which can lead to more urgent untreated conditions, has declined 17.5%, the first decline in a decade.[41] Conversely, the Affordable Care Act could increase the ED acuity of the patients who continue to visit the ED because of the relative decrease in low-acuity conditions' being shifted to the primary care setting. In an opinion poll of emergency physicians by the American College of Emergency Physicians, more than half of respondents believed the Affordable Care Act would make no difference in visit acuity.[8]

Most published evidence indicates that mortality rates have decreased in Massachusetts and in several other states after voluntary Medicaid expansions, which might suggest lower severity of illness at the population level or improved access to lifesaving care.[42,43] When Tennessee decreased Medicaid enrollment in 2005 (a reform opposite of the Affordable Care Act), ED visit mix shifted from Medicaid

Table 2. Changes in ED acuity by acuity measure and type of coverage expansion.

Reference	Percentage Change	State	Data Source	Subjects*
Low-acuity visits				
Exchange population				
Wharam 2013[47]	↓8.7 low-acuity visits†	MA	2001–2008 claims data	16.3K people <65 whose employers switched them from HMOs to HDHPs
Medicaid population				
Taubman 2014[33]	↑43 ED discharges	OR	2007–2009 survey data, Medicaid enrollment data, and ED administrative data from 12 Portland hospitals	25K Medicaid lottery winners 19–64
DeLeire 2013[34]	↑38.7 low-acuity visits†	WI	2008–2009 claims data	9.6K new Medicaid enrollees
Gandhi 2014[44]	↓1–4 low-acuity visits†	USA	2000–2009 National Hospital Ambulatory Medical Care Survey and current population survey	185K ED visits by Medicaid enrollees compared to uninsured <65
High-acuity visits				
Exchange population				
Wharam 2013[47]	↓31.9 high-acuity visits†	MA	2001–2008 claims data	16.3K people <65
Medicaid population				
Lo 2014[23]	↑0.3–15.2 admissions	CA	2013–2014 state claims data for LIHP; result stratified by insurance status before LIHP enrollment	182K new LIHP enrollees who would be eligible for Medicaid after expansion
Colorado Hospital Association 2014a[20]	↑9–13 number of concurrent diagnoses	CO	2013–2014 hospital data	Medicaid inpatients from 153 hospitals
Heavrin 2011[35]	↓0.6 ED admits	TN	2004–2006 HCUP-SEDD and SID, Medicaid enrollment data, and census data	4.6M ED visits by adults >17
Mortality				
Medicaid population				
Sommers 2012[42]	↓6.1 mortality	NY, ME, AZ	1997–2007 Centers for Disease Control and Prevention Compressed Mortality File and census data	68K deaths of adults 20–64

*Age is provided in years.
†Low acuity is defined as treatable in the primary care setting.

to uninsured, and acuity, as defined by hospitalizations, increased slightly for the uninsured.[35] There was also a slight increase (0.6%) in total ED visits leading to hospitalization (Table 2).[35]

Reviewing a national database of ED visits, Gandhi et al[44] found that adult Medicaid enrollees made the most nonemergency visits (538.2/1,000 people) and that their rate of nonemergency visits has been increasing in the past decade, whereas nonemergency visits for the uninsured (202.5/1,000) and privately insured (106.1/1,000) were much less frequent and have remained constant. Wisconsin's 46% increase in ED visits for patients attaining Medicaid was primarily due to a 38.7% increase in low-acuity visits.[34] In Oregon, despite the 41% increase in ED visits by patients attaining Medicaid there was no increase in hospitalizations.[33] These data suggest that Medicaid patients will make more low-acuity ED visits.

On the other hand, reports on the first 2 quarters of Medicaid enrollees accessing care in Medicaid expansion states revealed a 10% increase in case acuity and a 9.2% to 13.2% increase in the number of concurrent diagnoses per visit, suggesting that regardless of whether visits themselves are emergency or not, the new Medicaid enrollees so far are a relatively sicker population.[20] Cook County in Chicago expanded Medicaid to the Affordable Care Act–eligible population 1 year early. Reports indicate that new enrollees had high rates of obesity, diabetes, and hypertension, and a quarter of them had been admitted to the hospital in the year before enrollment.[45] Eighty-five percent of the Cook County enrollees could not afford their medications in the year before enrolling, suggesting they may have sequelae of untreated chronic disease.[45] Similarly, people enrolled through the early Medicaid expansion in California had high rates of hospital admissions, particularly if they had gone without health care in the year before expansion, although with time their admission rate returned to baseline.[23] People choosing to take advantage of newly available Medicaid coverage under the Affordable Care Act may represent a sicker population who will make higher-acuity ED visits because of multiple and previously untreated medical conditions.

Behavior may be different for the patients gaining private health insurance through Affordable Care Act Marketplaces, particularly because 85% have chosen

high-deductible health plans.[46] There are not yet many data about patients transitioning from uninsured to a high-deductible health plan, but a study of patients switching from a health maintenance organization to a high-deductible health plan may offer some insight. Patients with lower socioeconomic status (many of the people eligible for Marketplace subsidies) decreased their high-severity ED visits by 24.5% in the first year and an additional 7.4% the second year.[47] In contrast, patients with high socioeconomic status (those earning >400% of the federal poverty level) and high-deductible health plans decreased their overall ED visits by 14.8% but made no change in high-severity visits.[47] In the same study, patients of low socioeconomic status also initially decreased their hospitalization rates by 23% the first year.[47] However, in the second year, hospitalizations increased back to baseline levels, suggesting that these patients simply delayed presenting for high-acuity conditions.[47] 2014 Data from Hospital Corporation of America (HCA), a national hospital chain, showed that Marketplace patients had higher acuity as measured by the ratio of ED visits to admissions than traditional employer-based private insurance or the uninsured (2.86:1 versus 3.39:1 versus 9.58:1).[48] Like the early enrollees in Medicaid, those taking earliest advantage of Marketplace plans may also be a relatively sicker population with recently untreated health needs.

Overall, the data suggest that Medicaid patients make many low-acuity ED visits, but that the initial Affordable Care Act Medicaid enrollees represent a sicker and higher-acuity population. Many patients who gain coverage through high-deductible health plans might delay needed care despite gaining health insurance which, although initially decreasing the proportion of high-acuity visits in early years of implementation, could lead to higher-acuity ED visits.

ED reimbursement is an important issue to both the emergency physician and the hospital administrator. A few analyses of anticipated profit changes caused by the Affordable Care Act, as well as outcomes from state-level reforms, are promising, but decreased Medicaid Disproportionate Share Hospital funding that also comes with the Affordable Care Act may offset these gains. Indeed, more than half of emergency physicians fear reduced reimbursement under the Affordable Care Act.[8]

Wilson and Cutler[49] estimated that hospital ED profit margins (facility fees) would be higher with the Affordable Care Act than without it (7.3% versus 11.7%, respectively) in 2023. In addition, an analysis by Galarraga and Pines[50] similarly estimated that physician reimbursements (professional fees) for newly insured Medicaid patients will increase by 17%; for newly privately insured patients, by 39%.

Current ED reimbursement trends reveal that 15% to 18% of ED visits are self-pay,[4,49] and only 10.4% of uninsured patients ever make any payment on their hospital bills.[48] The majority of hospital ED profits come from admissions (21.8% profit margin compared with 3.2% for discharges) and the privately insured (profit margin 39.6%).[49] Although EDs lose money on Medicaid visits (negative 35.9% profit margin), EDs lose substantially more on self-pay visits (negative 54.4% margin), so converting the currently uninsured into Medicaid or privately insured patients should be beneficial to ED profit margins for both the hospital and the physician.[49]

However, profitability varies by visit acuity. Henneman et al[51] found that commercial insurance pays 1,256% more for level 5 visits than level 1 ($1,281 versus $102), whereas Medicaid pays just 246% more for the highest-acuity visits ($273 versus $111). As a result, Medicaid visits with levels of service 1 to 3 are profitable for EDs, and only levels 4 and 5 Medicaid visits lose money.[51] For ED level of service 1 visits, Medicaid and commercial insurance are actually approximately equally profitable (margin $67 versus $68 per visit).[51]

We can again turn to other state-level health insurance changes for clues about what to expect from the Affordable Care Act. The uninsured will likely make up a smaller percentage of ED visits as a result of the act. When Tennessee decreased Medicaid eligibility, Medicaid ED visits declined by 6.2% (3,319 visits per week), whereas uninsured ED visits increased by 5.3% (2,203 visits per week).[35] By doing the opposite, as the Affordable Care Act does, Massachusetts increased Medicaid and private insurance coverage while decreasing ED visits by the uninsured from 9.5% to 5.7%.[29]

Early analyses of the Affordable Care Act reveal that the payer mix for emergency ED visits by young adults has experienced a 3.1% to 5.0% increase in private insurance and a 1.7% to 2.9% decrease in self-pay patients.[39,52] Arkansas hospitals, where the state has aggressively pursued Affordable Care Act health reform, reported a 24% reduction in uninsured ED visits in the first 3 months of the Affordable Care Act.[53] Tenet, a national hospital chain, reported a 33% reduction in uninsured visits in states that expanded Medicaid compared with an increase in uninsured visits in nonexpansion states.[53]

A report of more than 400 hospitals in 30 states found that in expansion states Medicaid charges had increased 29% and uninsured charges had decreased 25%, with total charity care decreasing by 30% as a result.[54] These changes to charges match the volume-based changes to payer mix and were not observed in nonexpansion states.[54] Early

expansion of Medicaid in Chicago led to a 10% decrease in charity care by the end of the first year.[53] Financial outcomes from the Affordable Care Act thus far reveal favorable changes in payer mixes, particularly for EDs in states choosing to expand Medicaid.

Unfortunately, although there may be an increase in revenue because of a shift of patients from uninsured to private insurance and Medicaid, much of the increased revenue will be needed to offset costs for the remaining uninsured populations, which will include undocumented immigrants, legal immigrants living in the United States for fewer than 5 years, adults not earning enough income (<100% federal poverty level) to qualify for subsidies in health insurance Marketplaces in states not expanding Medicaid, and those eligible for Medicaid or Marketplace subsidies but choosing not to enroll.

Before the Affordable Care Act, hospitals providing uncompensated charity care received funding from Medicaid and Medicare Disproportionate Share Hospital programs. Because the act expected to decrease the uncompensated care pool by insuring a much larger percentage of the population, the law mandated large cuts to Disproportionate Share Hospital payments (Table 3).

After 2 delays, $1.8 billion (16%) will be cut from total federal Medicaid Disproportionate Share Hospital payouts in 2017, $4.7 billion per year (41%) in 2018 to 2020, and up to $5 billion per year through 2023.[55] The cuts will be relatively larger or smaller for each state, depending on the uninsured rate in the state and the way the state chooses to distribute its Disproportionate Share Hospital funds to hospitals.[56] States with high pre–Affordable Care Act uninsured rates who do not expand Medicaid, such as Texas, Louisiana, and Florida, are expected to lose the most in Disproportionate Share Hospital payments[57] while losing new Medicaid reimbursements for the currently uninsured because the payment calculations are based on historical uninsured rates that lag a few years behind, so initial payments would continue to give robust payments to expansion states despite decreases in their uninsured rates. The double loss to nonexpansion states should be somewhat offset by the delayed start date, which will shorten the lag to incorporate the higher uninsured rates post–Affordable Care Act in these states.

We expect EDs and emergency physicians to experience increased reimbursements from the Affordable Care Act because of the shift of patients from uninsured to Medicaid or private insurance. However, cuts to federal Disproportionate Share Hospital payments will adversely affect hospital revenue, particularly in states not expanding Medicaid, in which EDs will realize fewer benefits from the Affordable Care Act and face larger Disproportionate Share Hospital losses.

Table 3. Reductions from Disproportionate Share Hospital funding by year.*

Year	2017	2018	2019	2020	2021	2022	2023	2024
Medicaid, $	1.8	4.7	4.7	4.7	4.8	5.0	5.0	4.4

*In billions of dollars. Reductions are from the annual pre-ACA allotment (which was stable but inflation adjusted), independent of the amount reduced in the previous year, for a total of $34.7 billion in reductions from 2017 to 2024. Source: Medicaid Program, State Disproportionate Share Hospital Allotment Reductions, Final Rule, September 9, 2013.

DISCUSSION

Early into Affordable Care Act expansion, publicly reported preliminary trends show increases in ED volumes, possible increases in patient acuity for Medicaid and Marketplace patients, and decreases in uncompensated care for states expanding Medicaid.[20,45,48,54] However, it is still early in the act's rollout, and as late as January 2015 states have continued to change their individual approach to expansion and Marketplace creation.[58] Thus, it is too early to determine the long-term effects on EDs and emergency physicians. Most current evidence comes from previous state-level reforms and shows a mixed picture, depending on the type of insurance gained, insurance status before reform, and the length of time since implementation.

The actual experiences for EDs and emergency physicians will differ greatly, depending on whether the state in which they practice chooses to expand Medicaid or aggressively promote Affordable Care Act Marketplace enrollment, because patient behavior may be quite different for new Medicaid versus Marketplace patients. Of uninsured adults, 12.9 million will be eligible for Marketplace plans and just 8.6 million will be eligible for Medicaid.[59] There will also be a difference in outcomes according to states' current uninsured rates, pre–Affordable Care Act Medicaid eligibility levels, income levels, and numbers of undocumented immigrants who will remain ineligible for coverage expansions. Over time, there may be reductions in mortality as a result of expanded insurance coverage.[42,43]

Although the individual mandate was intended to lead to nearly universal enrollment, predictions estimate that the Affordable Care Act will cover only approximately half of the uninsured population.[49,60] Individuals who choose to enroll will likely be a different population from those who remain uninsured. People taking advantage of early expanded Medicaid enrollment tended to be relatively sicker, with high rates of chronic illness and numerous barriers to care.[45] The relatively sicker[20,45] new Medicaid

enrollee may initially have higher-acuity visits even though traditionally Medicaid patients make the greatest proportion of low-acuity visits of all payer types.[44]

The classic RAND Health Insurance Experiment suggests that care use is highly dependent on the amount of cost sharing, so patients gaining Medicaid who have no copayments may use a high number of services, whereas patients enrolling in high-deductible health plans through the Affordable Care Act Marketplaces may decrease their use of services.[61] Low-income patients with high-deductible health plans may initially avoid the ED because of deductibles but may present later as a sicker population after self-rationing of their care.[47] Conversely, they may also have high unmet health needs similar to those enrolling in Medicaid if they were uninsured previously, leading to frequent ED visits after enrollment.[48]

Oregon and Wisconsin both experienced large increases in ED visits after expanding Medicaid,[33,34] whereas Massachusetts's expansion of private insurance with a more modest Medicaid expansion appears to have had a much smaller absolute effect on ED visits.[19] However, Massachusetts Medicaid enrollees who were uninsured before enrollment increased their ED visits.[24] Thus, the overall declining ED visit rates in Massachusetts may reflect their lower-than-average uninsured rates before health care reform and may not hold true nationwide.

Another consideration is whether the shift toward Medicaid Managed Care will change patient behavior and ED outcomes. More Medicaid patients are shifting to managed care plans from traditional fee-for-service plans, but Medicaid Managed Care is implemented differently in each state[62] and is likely to have a mixed effect on emergency care, depending on how it is implemented. Although Oregon initially reported increased ED visits after Medicaid expansion,[33] updates show a 21% decrease in ED visits for Medicaid patients enrolled in Oregon's particular brand of managed care.[63] It is not yet known whether other states' versions of managed care will have similar or opposite effects on ED utilization.

Medicaid reimburses much less than private insurance but more than the average self-pay patient.[49] As long as the majority of people gaining Medicaid were previously uninsured, total ED reimbursement should increase. If patients gaining Medicaid do make more low-acuity visits as experienced in Oregon and Wisconsin, however, those visits will be as profitable as commercial low-acuity visits.[33,34,51] It is yet to be determined whether coverage through the Marketplace with private insurance, traditionally the highest payer for ED services, will have similar reimbursement to standard employer-based private insurance products. It is also possible that crowd-out of some patients from private insurance to Medicaid will occur as well. In fact, some companies such as Walmart, Target, and Home Depot that previously offered private insurance plans chose to discontinue their plans and allow their employees to choose Medicaid or Marketplace plans instead.[64] HCA has reported that 56% of their patients insured by Marketplace plans in 2014 were previously insured versus 44% converting from uninsured to Marketplace.[48] However, the percentage of previously insured individuals converting to Marketplace plans from Medicaid versus employer-sponsored plans was not reported and will be most relevant to whether reimbursement for their care will increase or decrease. These reimbursement trends need to be monitored by providers of emergency care.

High-deductible health plans could make a patient's first few ED visits effectively self-pay if patients have no yet met their deductible. Emergency physicians are therefore concerned that these changes will not be reimbursed. In 2014, only 33.7% of HCA patients with Marketplace plans made any payment on their bills, and payments averaged only $390 for those who paid, but this is still more than the 10.4% of uninsured patients who made any payment.[48] In addition to being high deductible, many Marketplace plans also offer limited networks, which could similarly decrease providers' reimbursement if they are out of network. Some providers have found themselves in a different network than the hospital where they are contracted. These changes could require a more robust mechanism on the part of emergency physician groups to procure compensation from patients seeking care before satisfying their deductibles, which will increase the administrative burden and costs for the ED.

However, in accordance with the literature the newly insured patients should bring an overall desirable reimbursement mix.[49,50] If this proves true, emergency physician groups may want to actively recruit them. Potential mechanisms could include efforts to improve wait times and the overall patient experience[65] and to direct outreach to in-network patients.

For emergency physicians trying to determine their role in the changing face of health care, research will be required to monitor how the Affordable Care Act is actually implemented and what changes health reform actually brings. Interesting analyses will include the difference between Medicaid expansion and nonexpansion states and between states operating federal versus state Marketplaces. According to the drastic change in estimates from Oregon between actual ED claims data and patient-reported data,[33] large administrative data sets will likely yield more accurate information about use, acuity, and reimbursement, whereas patient-centered survey methods will be useful to determine the motivations behind observed behavioral

changes. Other Affordable Care Act reforms such as bundled payments, mental health parity, and Accountable Care Organizations may have significant effects on EDs, but data are currently lacking on their influence. Many other payment and care delivery models have been funded by the Affordable Care Act and are currently being demonstrated across the country, but it remains to be seen whether and how each of these distinct models will affect emergency care.

The authors acknowledge Seth Trueger, MD, MPH, and Brandon Maughan, MD, for their assistance preparing the article.

Supervising editor: Daniel A. Handel, MD, MBA

Author affiliations: From the Department of Emergency Medicine, University of Pennsylvania Perelman School of Medicine, and the Robert Wood Johnson Foundation, Philadelphia, PA (Medford-Davis); the Section of Emergency Medicine (Dark), Baylor College of Medicine (Eswaran, Shah), Houston, TX; and the Harris Health System, Houston, TX (Dark).

Funding and support: By *Annals* policy, all authors are required to disclose any and all commercial, financial, and other relationships in any way related to the subject of this article as per ICMJE conflict of interest guidelines (see www.icmje.org). The authors have stated that no such relationships exist.

Publication dates: Received for publication November 26, 2014. Revision received March 22, 2015. Accepted for publication April 2, 2015.

REFERENCES

1. PricewaterhouseCoopers Health Research Institute. The price of excess: identifying waste in healthcare spending. 2008. Available at: http://www.pwc.com/us/en/healthcare/publications/the-price-of-excess.jhtml. Accessed February 3, 2015.
2. CDC NCHS. *National Hospital Ambulatory Medical Care Survey: 2010 Emergency Department Summary*; 2010. http://www.cdc.gov/nchs/data/ahcd/nhamcs_emergency/2010_ed_web_tables.pdf. Accessed October 1, 2014.
3. Henry J. Kaiser Family Foundation. Hospital emergency room visits per 1,000 population. Available at: http://kff.org/other/state-indicator/emergency-room-visits/#notes. Accessed October 1, 2014.
4. Pitts SR, Carrier ER, Rich EC, et al. Where Americans get acute care: increasingly, it's not at their doctor's office. *Health Aff (Millwood)*. 2010;29:1620-1629.
5. American Hospital Association. Trendwatch Chartbook 2013. 2013. Appendix 1, Table 3.3. Available at: http://www.aha.org/research/reports/tw/chartbook/index.shtml. Accessed October 1, 2014.
6. Gardner A, Schneider SM; Future of Emergency Medicine Summit II Participants. The future of emergency medicine: update 2011. *Ann Emerg Med*. 2013;61:624-630.
7. McClelland M, Asplin B, Epstein SK, et al. The Affordable Care Act and emergency care. *Am J Public Health*. 2014;104:e8-e10.
8. ACEP. 2014 ACEP polling survey results. April 2014; 1–20. Available at: http://newsroom.acep.org/ACEP-Emergency-Visits-Up-Since-Implementation-of-ACA. Accessed October 1, 2014.
9. Simon RM. Hard data contradicts ACEP survey of emergency physicians. *Future of Healthcare, MEP News*. 2014; 2014. Available at: http://www.mephealth.com/the-shift/the-shift/future-of-healthcare/national-narrative-er-volumes-likely-wrong/. Accessed November 20, 2014.
10. US House of Representatives Committee on Ways and Means. Hearing on the president's fiscal year 2012 budget proposal with US Department of Health and Human Services Secretary Kathleen Sebelius. Available at: http://waysandmeans.house.gov/news/documentsingle.aspx?DocumentID=230472. Accessed October 11, 2014.
11. ACEP. More than two-thirds of emergency physicians expect ER visits to increase despite national health care reform. May 17, 2010. Available at: http://www.acep.org/content.aspx?id=48442. Accessed October 1, 2014.
12. O'Malley AS. After-hours access to primary care practices linked with lower emergency department use and less unmet medical need. *Health Aff (Millwood)*. 2013;32:175-183.
13. Rhodes KV, Kenney GM, Friedman AB, et al. Primary care access for new patients on the eve of health care reform. *JAMA Intern Med*. 2014;174:861-869.
14. Henry J. Kaiser Family Foundation. *Massachusetts Health Care Reform: Six Years Later*. Menlo Park, CA: 2012. 8311. Available at: http://kff.org/health-costs/issue-brief/massachusetts-health-care-reform-six-years-later/. Accessed November 20, 2014.
15. Mortensen K. Access to primary and specialty care and emergency department utilization of Medicaid enrollees needing specialty care. *J Health Care Poor Underserved*. 2014;25:801-813.
16. Cheung PT, Wiler JL, Ginde AA. Changes in barriers to primary care and emergency department utilization. *Arch Intern Med*. 2011;171:1397-1399.
17. Rust G, Ye J, Baltrus P, et al. Practical barriers to timely primary care access: impact on adult use of emergency department services. *Arch Intern Med*. 2008;168:1705-1710.
18. Chua KP, Sommers BD. Changes in health and medical spending among young adults under health reform. *JAMA*. 2014;311:2437-2439.
19. Miller S. The effect of the Massachusetts reform on health care utilization. *Inquiry*. 2012;49:317-326.
20. Colorado Hospital Association, Center for Health Information and Data Analytics. Impact of Medicaid expansion on hospitals: updated for second-quarter 2014. September 2014. Available at: http://www.cha.com/Documents/CHA-Study/FINAL-CHA-Medicaid-Expansion-Study-Q2-Sept-2014.aspx. Accessed October 12, 2014.
21. Ginde AA, Lowe RA, Wiler JL. Health insurance status change and emergency department use among US adults. *Arch Intern Med*. 2012;172:642-647.
22. Lau JS, Adams SH, Boscardin WJ, et al. Young adults' health care utilization and expenditures prior to the Affordable Care Act. *J Adolesc Health*. 2014;54:663-671.
23. Lo N, Roby DH, Padilla J, et al. *Increased Service Use Following Medicaid Expansion Is Mostly Temporary: Evidence From California's Low Income Health Program*. Los Angeles, CA: UCLA Center for Health Policy Research; 2014.
24. Lee J, Ding R, Zeger SL, et al. Impact of subsidized health insurance coverage on emergency department utilization by low-income adults in Massachusetts. *Med Care*. 2015;53:38-44.
25. Bradley CJ, Gandhi SO, Neumark D, et al. Lessons for coverage expansion: a Virginia primary care program for the uninsured reduced utilization and cut costs. *Health Aff (Millwood)*. 2012;31:350-359.
26. Long SK, Stockley K, Dahlen H. Massachusetts health reforms: uninsurance remains low, self-reported health status improves as state prepares to tackle costs. *Health Aff (Millwood)*. 2012;31:444-451.
27. Miller S. The effect of insurance on emergency room visits: an analysis of the 2006 Massachusetts health reform. *J Public Econ*. 2012;96:893-908.
28. Chen C, Scheffler G, Chandra A. Massachusetts' health care reform and emergency department utilization. *N Engl J Med*. 2011;365:e25.

29. Smulowitz PB, O'Malley J, Yang X, et al. Increased use of the emergency department after health care reform in Massachusetts. *Ann Emerg Med*. 2014;64:107-115, 115.e101-103.
30. Baker LC, Hsia RY. The association between community-level insurance coverage and emergency department use. *Med Care*. 2014;52:535-540.
31. Baicker K, Finkelstein A. The effects of Medicaid coverage—learning from the Oregon experiment. *N Engl J Med*. 2011;365:683-685.
32. Finkelstein A, Taubman S, Wright B, et al. The Oregon health insurance experiment: evidence from the first year. *Q J Econ*. 2012;127:1057-1106.
33. Taubman SL, Allen HL, Wright BJ, et al. Medicaid increases emergency-department use: evidence from Oregon's Health Insurance Experiment. *Science*. 2014;343:263-268.
34. DeLeire T, Dague L, Leininger L, et al. Wisconsin experience indicates that expanding public insurance to low-income childless adults has health care impacts. *Health Aff (Millwood)*. 2013;32:1037-1045.
35. Heavrin BS, Fu R, Han JH, et al. An evaluation of statewide emergency department utilization following Tennessee Medicaid disenrollment. *Acad Emerg Med*. 2011;18:1121-1128.
36. Ndumele CD, Mor V, Allen S, et al. Effect of expansions in state Medicaid eligibility on access to care and the use of emergency department services for adult Medicaid enrollees. *JAMA Intern Med*. 2014;174:920-926.
37. Anderson M, Dobkin C, Gross T. The effect of health insurance coverage on the use of medical services. *AEJ Policy Volume*. 2012;4:1-27.
38. Hernandez-Boussard T, Burns CS, Wang NE, et al. The Affordable Care Act reduces emergency department use by young adults: evidence from three states. *Health Aff (Millwood)*. 2014;33:1648-1654.
39. Antwi YA, Moriya AS, Simon K, et al. Changes in emergency department use among young adults after the Patient Protection and Affordable Care Act's dependent coverage provision. *Ann Emerg Med*. 2015;65:664-672.
40. Abraham JM. How might the Affordable Care Act's coverage expansion provisions influence demand for medical care? *Milbank Q*. 2014;92:63-87.
41. Commonwealth Fund. The rise in health care coverage and affordability since health reform took effect. January 2015. Available at: http://www.commonwealthfund.org/publications/issue-briefs/2015/jan/biennial-health-insurance-survey. Accessed February 8, 2015.
42. Sommers BD, Baicker K, Epstein AM. Mortality and access to care among adults after state Medicaid expansions. *N Engl J Med*. 2012;367:1025-1034.
43. Sommers BD, Long SK, Baicker K. Changes in mortality after Massachusetts health care reform: a quasi-experimental study. *Ann Intern Med*. 2014;160:585-593.
44. Gandhi SO, Grant LP, Sabik LM. Trends in nonemergent use of emergency departments by health insurance status. *Med Care Res Rev*. 2014;71:496-521.
45. Frost P. Cook County releases 1st snapshot of new Medicaid patients. *Chicago Tribune*. 2014. Available at: http://articles.chicagotribune.com/2014-06-02/business/ct-medicaid-illinois-snapshot-0602-biz-20140602_1_cook-county-health-countycare-health-law. Accessed November 2, 2014.
46. Department of Health and Human Services. *Health Insurance Marketplace: Summary Enrollment Report for the Initial Annual Open Enrollment Period*. Washington, DC: 2014. Available at: http://aspe.hhs.gov/health/reports/2014/MarketPlaceEnrollment/Apr2014/ib_2014Apr_enrollment.pdf. Accessed October 1, 2014.
47. Wharam JF, Zhang F, Landon BE, et al. Low-socioeconomic-status enrollees in high-deductible plans reduced high-severity emergency care. *Health Aff (Millwood)*. 2013;32:1398-1406.
48. Hospital Corporation of America Reporting, Benchmarking & Analytics. Analysis of HCA data relevant to aspects of the Affordable Care Act. January 2015. Available at: http://hcahealthcare.com/util/documents/hca-data-aca.pdf. Accessed February 7, 2015.
49. Wilson M, Cutler D. Emergency department profits are likely to continue as the Affordable Care Act expands coverage. *Health Aff (Millwood)*. 2014;33:792-799.
50. Galarraga JE, Pines JM. Anticipated changes in reimbursements for US outpatient emergency department encounters after health reform. *Ann Emerg Med*. 2014;63:412-417.e412.
51. Henneman PL, Nathanson BH, Li H, et al. Is outpatient emergency department care profitable? hourly contribution margins by insurance for patients discharged from an emergency department. *Ann Emerg Med*. 2014;63:404-411.e401.
52. Mulcahy A, Harris K, Finegold K, et al. Insurance coverage of emergency care for young adults under health reform. *N Engl J Med*. 2013;368:2105-2112.
53. Kardish C. Uncompensated care dropping fast in Medicaid expansion states. *Governing*. 2014. Available at: http://www.governing.com/topics/health-human-services/gov-uncompensated-care-dropping-fast.html. Accessed October 1, 2014.
54. Colorado Hospital Association, Center for Health Information and Data Analytics. Impact of Medicaid expansion on hospital volumes. June 2014. Available at: http://www.cha.com/Documents/Press-Releases/CHA-Medicaid-Expansion-Study-June-2014.aspx. Accessed October 12, 2014.
55. Neuhausen K, Davis AC, Needleman J, et al. Disproportionate-share hospital payment reductions may threaten the financial stability of safety-net hospitals. *Health Aff (Millwood)*. 2014;33:988-996.
56. Centers for Medicare & Medicaid Services. Fact sheets: Medicaid state Disproportionate Share Hospital allotment reductions final rule. 2013. Available at: http://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2013-Fact-sheets-items/2013-09-13.html. Accessed February 7, 2015.
57. Graves JA. Medicaid expansion opt-outs and uncompensated care. *N Engl J Med*. 2012;367:2365-2367.
58. The Advisory Board Company. Where the states stand on Medicaid expansion. 2015. Available at: http://www.advisory.com/daily-briefing/resources/primers/medicaidmap. Accessed February 6, 2015.
59. Henry J. Kaiser Family Foundation. How will the uninsured fare under the Affordable Care Act? April 7, 2014. Available at: http://kff.org/health-reform/fact-sheet/how-will-the-uninsured-fare-under-the-affordable-care-act/. Accessed October 4, 2014.
60. Insurance coverage provisions of the Affordable Care Act—CBO's April 2014 baseline. 2014. 43900. Available at: http://www.cbo.gov/publication/43900. Accessed October 12, 2014.
61. Brook RH, Ware JE, Rogers WH, et al. The effect of coinsurance on the health of adults: results from the RAND Health Insurance Experiment. *Reports*. 1984:1-123. Available at: http://www.rand.org/pubs/reports/R3055.html. Accessed October 1, 2014.
62. Sparer M. Medicaid managed care: costs, access, and quality of care. *Robert Wood Johnson Foundation Research Synthesis Report*. September 2012.
63. Oregon Health Authority. Mid-year health system transformation report shows continued progress into 2014 [press release]. January 14, 2015.
64. Banjo S, Wilde Mathews A, Francis T. Wal-Mart to end health insurance for some part-time employees. *Wall Street Journal*. October 7, 2014. Available at: http://online.wsj.com/articles/wal-mart-to-end-health-insurance-for-some-part-time-employees-1412694790. Accessed November 1, 2014.
65. Becker NV, Friedman AB. ED, heal thyself. *Am J Emerg Med*. 2014;32:175-177.