



ACAView™

Tracking the Impact of Health Care Reform

First Observations Around the Affordable Care Act

athenaResearch

Iyue Sung, PhD, Director
Josh Gray, Vice President

July 14, 2014



Introduction to ACAView

With this report, we are pleased to provide an overview of the results to date of the ACAView project. ACAView is an initiative jointly undertaken by the Robert Wood Johnson Foundation (RWJF) and athenaResearch, a department of athenahealth. RWJF is the largest foundation in the United States focused solely on improving health and health care. athenahealth is a health care information technology and services company serving 52,000 providers representing 92 specialties across the country. The goal of ACAView is to provide timely, non-partisan measurement and analysis of how coverage expansion under the Affordable Care Act (ACA) affects the day-to-day practice of medicine.

2014 marks the implementation of the coverage expansion requirements of the ACA – arguably the most important provision of health care reform. Between now and the end of 2016, millions of individuals are expected to sign up for insurance through newly established health care exchanges, or marketplaces. Policymakers, researchers, and providers have an interest in understanding how coverage expansion is changing the nation's medical practices and patients' care experience. ACAView reports on practice metrics that reflect these changes.

Over the course of 2014, ACAView will introduce approximately 35 metrics, derived from data entered by medical practices using athenahealth's single-instance, cloud-based ambulatory-care software platform.¹ [A full

list of metrics is provided in the Appendix on page 9]. This aggregated data gives analysts near real-time visibility into patient characteristics, clinical activities, and practice economics. In other words, ACAView provides a dramatically shortened analysis and reporting cycle for understanding the results of policy innovations. Since we directly measure provider activity, we also avoid distortions resulting from self-reported survey data.

The goal of ACAView is to provide timely, non-partisan measurement and analysis of how coverage expansion under the Affordable Care Act affects the day-to-day practice of medicine.

athenahealth provides RWJF with reports on a monthly basis. In addition, blog posts with descriptions of our findings can be accessed on RWJF's website² or on CloudView, an athenahealth blog³. This first quarterly report presents data through May, 2014.

The value of ACAView is twofold: to rapidly detect changes in practice patterns and to create a detailed understanding of important characteristics of medical practices. Because it is difficult to predict where and to what extent changes will develop, we are tracking a fairly wide set of metrics. In our experience, metrics on practices often remain stable or change slowly over time. We anticipate some important shifts in these patterns as providers respond to new demands and new patients, but those shifts are likely to unfold gradually; other metrics may not shift at all.

Our hope is to create a balanced and detailed view during a three-year period of critical change in American health care, including variation in how coverage expansion affects health care in different parts of the country.

¹ With single-instance software, all clients use the same version of a software product, which makes data more comparable across providers.

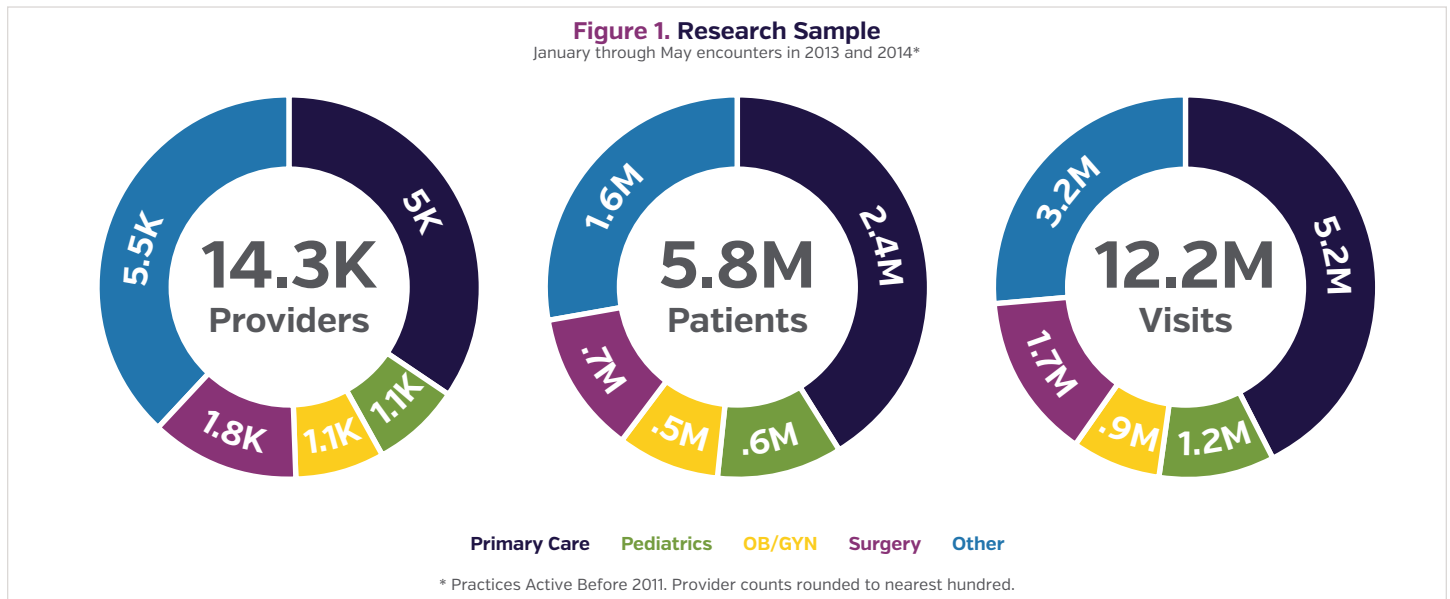
² <http://www.rwjf.org/en/research-publications/find-rwjf-research/2014/03/athenahealth.html>

³ <http://www.athenahealth.com/blog/category/analytics-research/>

Sample Overview

ACAView’s method is to track provider activity across a cohort of practice locations that have been using athenahealth’s cloud-based software continuously since December 31, 2010 or earlier, allowing us to trend key metrics for a significant period of time. These practices include approximately 14,300 providers, of whom 35% are primary care providers, 8% are pediatricians, 8% are OB/GYN and 13% are surgeons [see

Figure 1). Compared to the United States as a whole, the ACAView sample has fewer solo practices and more practices with ten or more physicians. While the proportions of ACAView providers in the North and East are very close to the national proportions in those regions, the cohort has a higher proportion of providers in the South and a smaller proportion in the West than the national proportions. A detailed summary of the ACAView sample compared to national averages can be found in the Appendix to this report.



⁴ One of the important metrics we are tracking is new patient visits, which we define as patient visits where the patient has not seen the physician for at least 24 months. To compare new patient visits for 2013 and 2014, it was necessary to include physicians that have been using our software for at least three years prior to January 1, 2014.

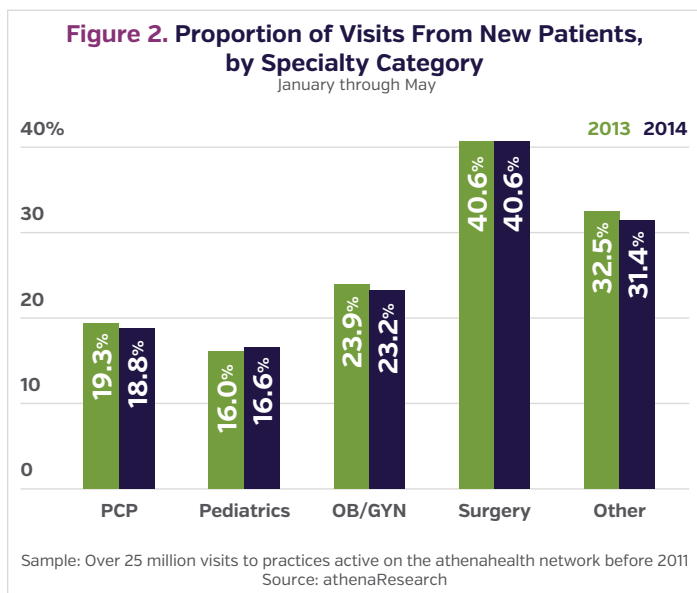
No increase in new Patient visit rates; Medicaid gap widening

Volume: Providers Are So Far Not Seeing an Uptick of New Patients

ACAView monitors new patient volumes in order to assess whether providers have increased the number of new patients they are seeing in response to the ACA's individual mandate. If coverage expansion is allowing patients to establish new relationships with physicians, we would expect to see physicians devote a greater share of their calendars and work effort to caring for new patients. We defined new patients as those who have not visited a practice in the preceding two calendar years. For example, a patient who has not visited a practice in 2011 or 2012 is defined as new for the entirety of 2013.

With the exception of pediatrics, all physician types are seeing lower new patient visit rates in 2014 compared to 2013.

Figure 2 shows that most specialty types did not see higher new patient visit rates for the first five months of 2014 than they did in the same period in 2013. Indeed, with the exception of pediatrics, all specialties are seeing lower new patient visit rates in 2014 compared to 2013.

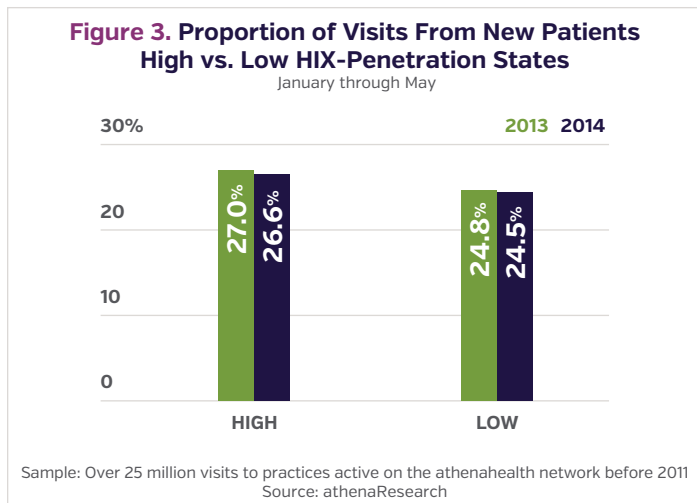


We have not analyzed the reasons for the lack of new patient visits, but we offer several conjectures. First, some newly insured patients (for example those who were formerly uninsured and are now receiving Medicaid) may continue to receive care in emergency departments, even for non-emergent-care needs, rather than in physicians' offices. Second, it may take more time for newly insured individuals (such as the large number enrolled in March) to shop for physicians, schedule appointments, and be seen. Scheduling an appointment may be particularly challenging for patients covered by plans in the health insurance exchanges that offer narrow provider networks with relatively few providers or available

appointments. Finally, the lack of a change in new patient volumes in early 2014 may be partly attributable to severe weather in January and February in some parts of the country; transportation difficulties may have discouraged new patients especially with milder illnesses from seeking care.

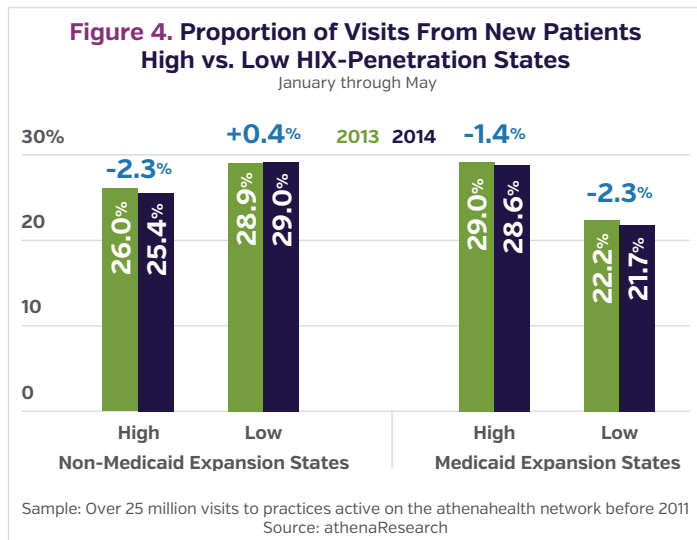
If providers in the athenahealth sample are not seeing more new patients overall, is the experience any different for providers in states with greater enrollment in the new health insurance exchanges (HIXs)? To shed light on this question, we compared new patient percentages of high HIX-penetration states (states in which at least 25% of those eligible for coverage through the exchanges applied for and selected a plan) to low HIX-penetration states (states in which less than 25% of eligible individuals selected a plan). HIX-penetration rates are based on enrollment figures published by the Department of Health and Human Services (HHS) and eligible population figures are based on estimates published by the Kaiser Family Foundation and HHS.⁵ The results of the analysis are shown in Figure 3. Again, at least through May, coverage expansion has not increased the proportion of new patients appreciably. In fact, the proportion of individuals in both high and low penetration states decreased slightly.

⁵ <http://kff.org/health-reform/state-indicator/marketplace-enrollment-as-a-share-of-the-potential-marketplace-population/#>



To test how sensitive these results are to different approaches to defining higher and lower HIX penetration states, we also tried dividing states into three groups and four groups by their varying degree of HIX penetration. These alternative divisions did not alter the finding that new patient visits have not changed materially year-to-date 2014.

The impact of coverage expansion on new patient volumes might also depend on increased Medicaid coverage rather than increased commercial coverage. We therefore further divided the high and low HIX penetration states by the states' Medicaid expansion status. (As of May, 2014, 26 states had accepted federal support for extending Medicaid eligibility to individuals with incomes of up to 138% of the Federal Poverty Level). As shown in **Figure 4**, this division by states' Medicaid expansion status did not identify a subset of states with an increase in the proportion of visits by new patients.



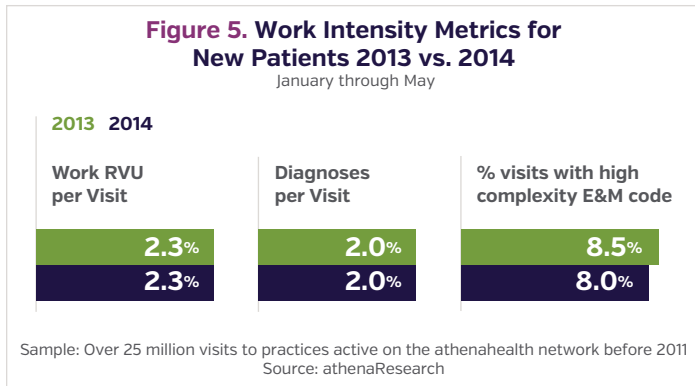
No Evidence of Greater Health Needs Since Coverage Expansion

One important concern about the transition to coverage expansion was that some newly insured patients might seek care for illnesses that had previously been untreated. Physicians and other providers would then struggle to provide care to these sicker-than-average patients while continuing to meet the needs of their established patients. However, ACAView analysis has not yielded evidence of pent-up demand.

We began by using three metrics to capture the overall complexity of patient need: work relative value units (wRVUs), number of diagnoses per visit, and encounters with complex evaluation and management (E&M). wRVUs measure the relative time, skill, and effort required to provide a service. This measure seems well suited to capture higher intensity care that would be needed by sicker-than-average patients seeking care for previously untreated conditions. We also believe that diagnoses per visit and the proportion of high-complexity E&M codes are reasonable indicators of a higher burden of illness among new patients.⁶

These three metrics, however, all showed no sign of an increased burden of illness or complexity among new patients in 2014 as compared to new patients in 2013 (see **Figure 5**). Work RVUs and the number of RVUs per visits held steady at 2.3 and 2.0 respectively, while the proportion of visits with a high complexity E&M code fell slightly, from 8.5% to 8%.

⁶ We define high-complexity E&M encounters as those with claims billing for CPT codes that are valued more highly within a cluster of E&M codes. For example, within the group of E&M codes 99211-99215, we classify the codes 99214 and 99215 as high-complexity.

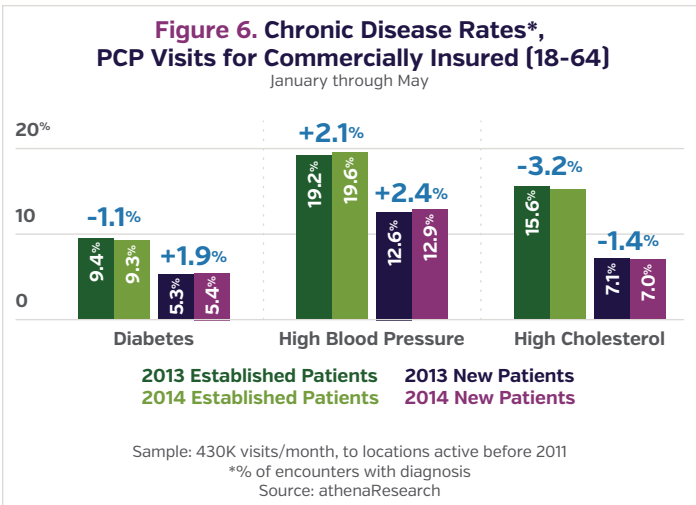


For an additional perspective on the illness burden of new and established patients, we also examined rates of several chronic diseases among commercially insured patients aged 18-64 who visited their PCP in the first five months of 2013 and 2014. We measured disease rates for diabetes, high blood pressure, and high cholesterol [See Figure 6].

We observe two interesting points from this data. One is that for both years, new patients had a lower rate of chronic disease than established patients. For example, the rate of diabetes in 2013 among established patients was 9.4% compared with 5.3% for new patients. Similarly, the rates of high blood pressure and high cholesterol among new patients in 2013 were roughly two-thirds and one-half the rates for established patients, respectively.

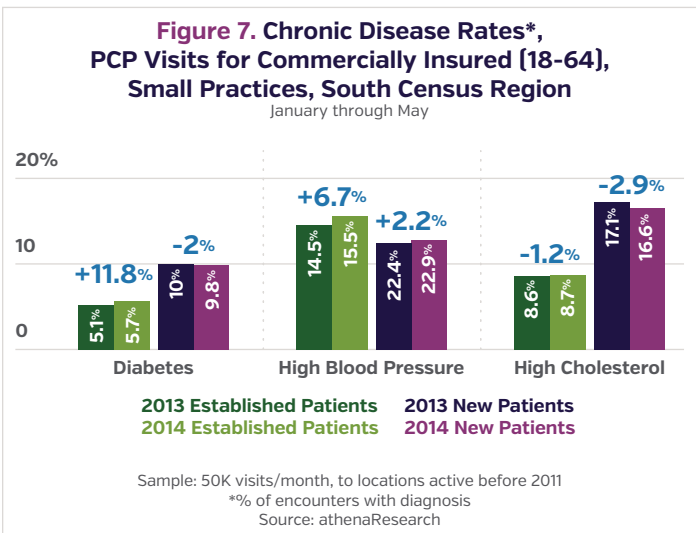
New patients had a lower rate of chronic disease than established patients.

A second point is that the year-to-year changes in the rates of these conditions for the new patients were modest: the diabetes rate increased 3%, for example, while the rate of high cholesterol decreased 1%. [These percentage changes indicate relative year-to-year changes, not year-to-year percentage point differences.] We interpret this data as consistent with the above observations on RVUs, number of diagnoses, and E&M codes: Judging by PCP visits for the commercially insured, there are not material changes in new patient health indicators between 2013 and 2014.



We see one possible exception to the small changes in chronic disease rates between commercially insured new PCP patients in 2013 and 2014: small medical practices in the South. [See Figure 7.] Among commercially insured patients visiting PCPs at small practices [5 or fewer providers] in the South, the proportion of visits in which a diagnosis of diabetes was recorded increased by 12% in relative terms from 2013 to 2014. For high blood pressure the corresponding increase was 7%, and for high cholesterol there was a slight increase of 2%.

We will return to these metrics in the future to see if such regional variation in practice patterns persists over time.



Medicaid and State Policy: Medicaid Case-Mix Increasing in Medicaid-Expansion States, Decreasing in Non-Expansion States

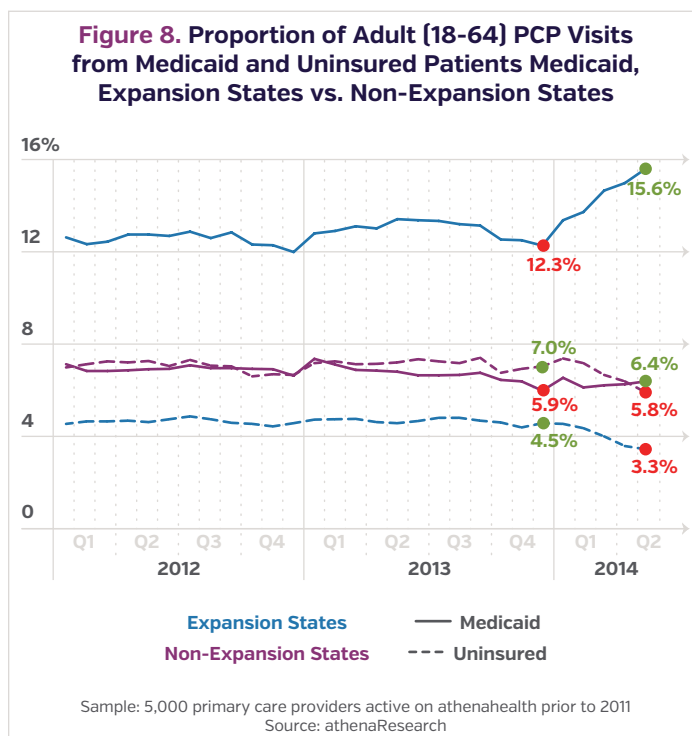
In measuring effects of coverage expansion, it is important to take state policy towards Medicaid expansion into account. The intention of the ACA was to expand coverage through two mechanisms: Many people with moderate income could gain coverage through the exchanges, often encouraged by subsidies; others with lower incomes could gain coverage through expansion of Medicaid eligibility to include groups that had not traditionally qualified for Medicaid. States, however, had for many years created widely varied Medicaid eligibility rules, with some states covering only women and their children in need of public aid and low-income people with disabilities. Other states had expanded eligibility to include many more people at income levels higher than the federal poverty level.

The ACA would originally have extended Medicaid coverage to everyone below 138% of the federal poverty level, with Federal money covering almost all of this expansion. The Supreme Court, however, ruled in June of 2012 that the provisions proposed in the ACA to enforce state compliance with Medicaid expansion were too coercive, and that states could choose not to implement Medicaid expansion. Since the Court's decision, 26 states have chosen to expand Medicaid coverage, four states are considering an expansion, and 20 have decided not to.⁷ The split of states on this question has largely followed political party lines, with most blue states choosing expansion and most red states rejecting expansion. Since Medicaid expansion has gone into effect, the number of individuals receiving Medicaid has increased by 6 million, roughly a 10% increase in Medicaid enrollment overall. The increase in Medicaid-expansion states is 15.3%, compared to 3.3% for non-Medicaid expansion states.⁸

Given the differing decisions among states in regard to Medicaid expansion, we examined our data on visits to PCPs separately for states with and without Medicaid expansion. **Figure 8** shows proportions of visits between January 2012 and May 2014 for four groups of adults (18-64): uninsured individuals in the Medicaid-expansion states; uninsured individuals in the non-Medicaid expansion states; Medicaid beneficiaries in the expansion states; and Medicaid beneficiaries in the non-expansion states.

ACA Coverage expansion appears to be widening a pre-existing gap between states that have elected to pursue Medicaid expansion and those that have not.

Two observations are worth noting. First, ACA coverage expansion appears to be widening a pre-existing gap between states that have elected to pursue Medicaid expansion and those that have not. Providers in the Medicaid-expansion states were already seeing higher proportions of Medicaid beneficiaries in 2013. For example in December of 2013, 12.3% of 18-64 year-old visits to PCPs in expansion states were from Medicaid beneficiaries, compared with 5.9% in non-expansions states, a 6.4 percentage point differential. By May 2014, the percentage point difference had expanded to a 9.3 percentage point differential, as the percent of Medicaid visits increased in Medicaid expansion states but held constant in non-expansion states. Second, the proportion of uninsured fell in both categories, from 4.5% to 3.3% in expansion states and 7.0% to 5.8% in non-expansion states [figures for January through May for both years respectively].



⁷ Data current as of May 22. See the Advisory Board Company, "Where the States Stand on Medicaid Expansion", accessed June 8, 2014. <http://www.advisory.com/daily-briefing/resources/primers/medicaidmap>.

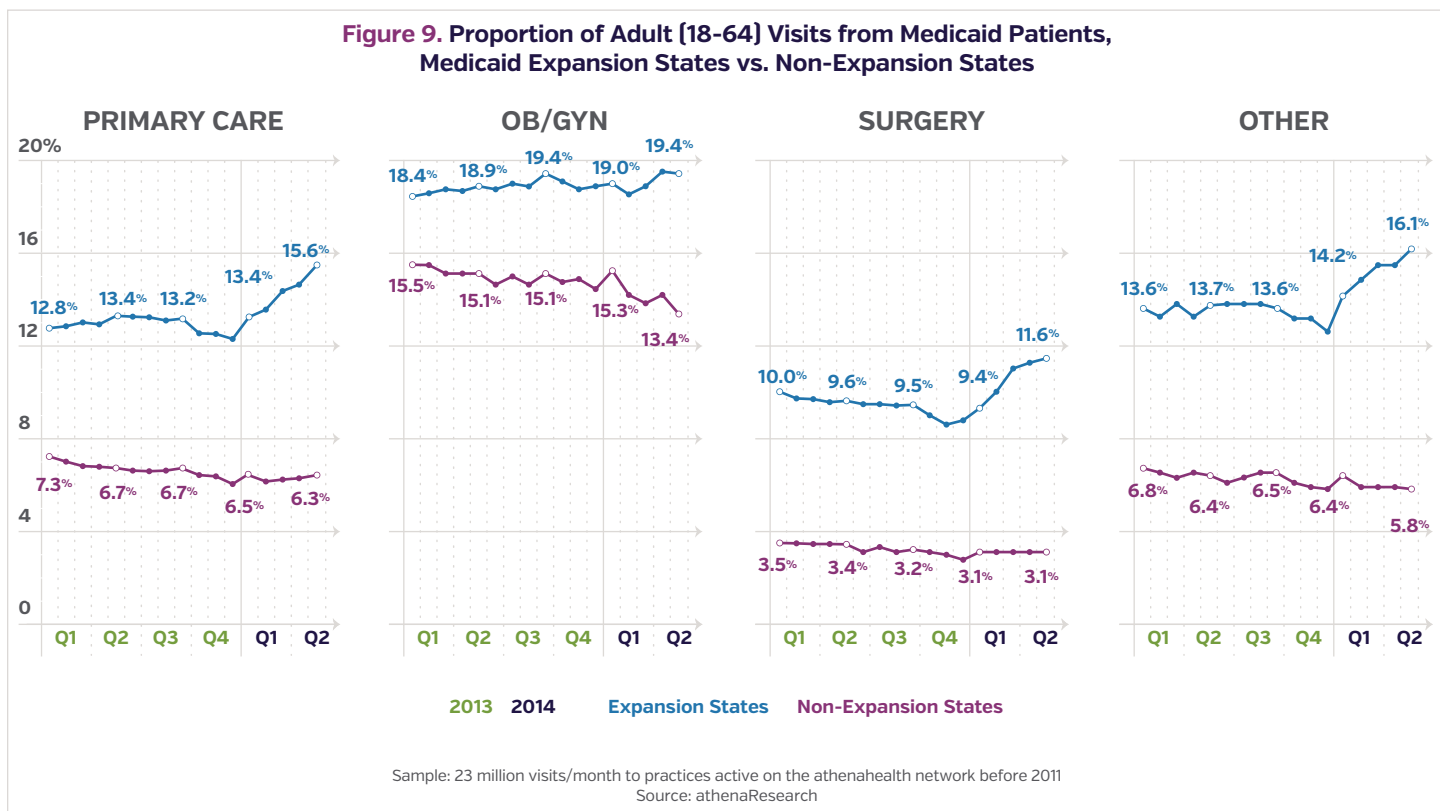
⁸ Department of Health and Human Services, "Medicaid and CHIP: April 2013 Monthly Applications, Eligibility Determinations, and Enrollment Report", June 4, 2014.

Figure 9 expands the Medicaid payer mix analysis to other specialties. In Medicaid expansion states, all four specialty groups show a substantial increase in the proportion of visits by Medicaid beneficiaries. In contrast, in non-Medicaid expansion states, the proportion of visits by Medicaid beneficiaries decreased for all four specialty groups.

The result of these changes by early 2014 is that for PCPs, surgeons and other specialists, the proportion of visits by adult Medicaid beneficiaries (18-64) in Medicaid expansion states are two to three times higher than in non-Medicaid expansion states [for example, 15.6% versus 6.3% for PCPs; 11.6% versus 3.1% for surgeons]. For OB-GYN, the ratio between the proportion of visits by Medicaid beneficiaries

in the expansion and non-expansion states is much smaller, 19.4% versus 13.4%. This may reflect more generous Medicaid eligibility in non-expansion states for pregnant women compared to other adults.

As we monitor these metrics, it will be interesting to see where the increase in Medicaid volumes in expansion states levels off. Also of interest is a deeper understanding of why an increase in Medicaid visits does not correspond to an increase in new patient visits. Is the increase in Medicaid visits driven by established patients who were previously uninsured? Is the increase in Medicaid visits having a material effect on practices? We will attempt to address these [and other] complex issues over the year.



Moving forward, we will endeavor to publish ACAView reports at three month intervals.

Please look for postings at RWJF, CloudView, and TheHealthCareBlog.⁹ Questions or suggestions for further analysis should be directed to:

Josh Gray

jogray@athenahealth.com | twitter @JoshGray_hit

⁹ <http://www.rwjf.org/en/research-publications/find-rwjf-research/2014/03/athenahealth.html>;
<http://www.athenahealth.com/blog/category/analytics-research/>;
<http://thehealthcareblog.com/>

Appendix

Provider Practice Metrics to be Tracked through ACAView

Metrics in **magenta** are currently tracked.

Category	Measures
Patient Access	New patient visits as a percentage of total patient visits for primary care providers (PCPs), pediatricians, specialists
	Number of days between when appointment was made and when patient was seen by PCP for new and established patients
	Schedule density by proportion of PCP slots used out of slots available
Patient acuity	Number of problems selected in the patient problem list – new and established patients
	Number of diagnoses per visit – new and established patients
	Percent of evaluation and management visits with code of 4 or higher – new and established patients
	Scripts per visit for new and established patients
	Obesity rate for new and established patients
	Referrals per visit, new and established patients
	Percent of new and established patients with a diagnosis of diabetes
	Percent of new and established patients with HbA1C levels < 7
	Percent of new and established patients with a diagnosis of hyperlipidemia
	Percent of new and established patients with LDL levels < 100 mg/DI
Physician work intensity	wRVU¹⁰ per visit, new and established patients
	Documentation time per visit for new and established patients
Workload distribution	Percent of visits performed by physicians, nurse practitioners, and physicians’ assistants
Patient financial burden ¹¹	Patient financial responsibility per PCP visit for new and established patients
	Patient financial responsibility per specialist visit for new and established patients seeing specialists
	Patient out-of-pocket payments per PCP visit for new and established patients
	Patient out-of-pocket payments per specialist visit for new and established patients
	Percentage of what a patient owes he or she has paid at 90 days for PCP visits – new and established patients
	Percentage of what a patient owes he or she has paid at 180 days for PCP visits – new and established patients
	Percentage of what a patient owes he or she has paid at 90 days for specialist visits – new and established patients
	Percentage of what a patient owes he or she has paid at 180 days for specialist visits – new and established patients
Physician practice burden	Proportion of charges going to collections
	First pass rate ¹² for new and established patients
	Denials for new and established patients
Physician Reimbursement	Proportion of charges going to collections
	Percentage change in allowables per RVU ¹³ – PCPs – new and established patients
	Percentage change in allowables per RVU – Surgeons – new and established patients
	Percentage change in allowables per RVU – Ob-Gyns – new and established patients
	Percentage change in allowables per RVU – Medical specialists – new and established patients

¹⁰ Work RVUs (Relative Value Units), measure the relative time, skill, and effort required for a service.

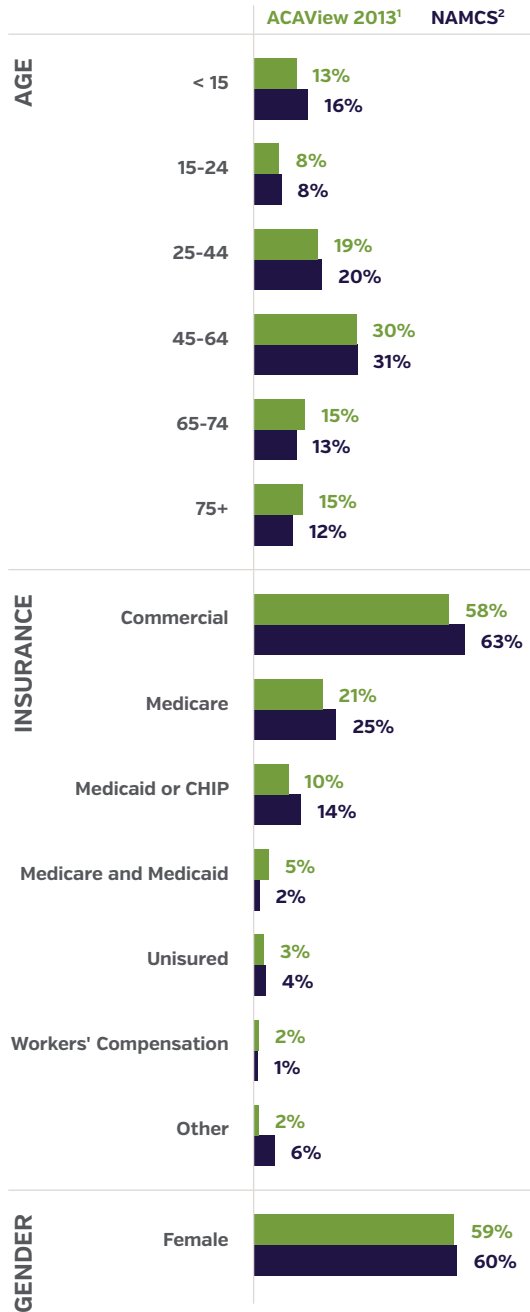
¹¹ Patient financial responsibility is what a patient owes for his/her care after primary and secondary insurance is taken into account. Out-of-pocket payments is what a patient pays.

¹² First pass rate refers to the percentage of claims that are submitted and reimbursed without a denial or partial payment, after the first submission.

¹³ Allowables refers to the amount that a physician should be paid for services rendered, assuming full payment from the insurer and the patient.

Athenahealth ACAView Practice Cohort vs. NAMCS

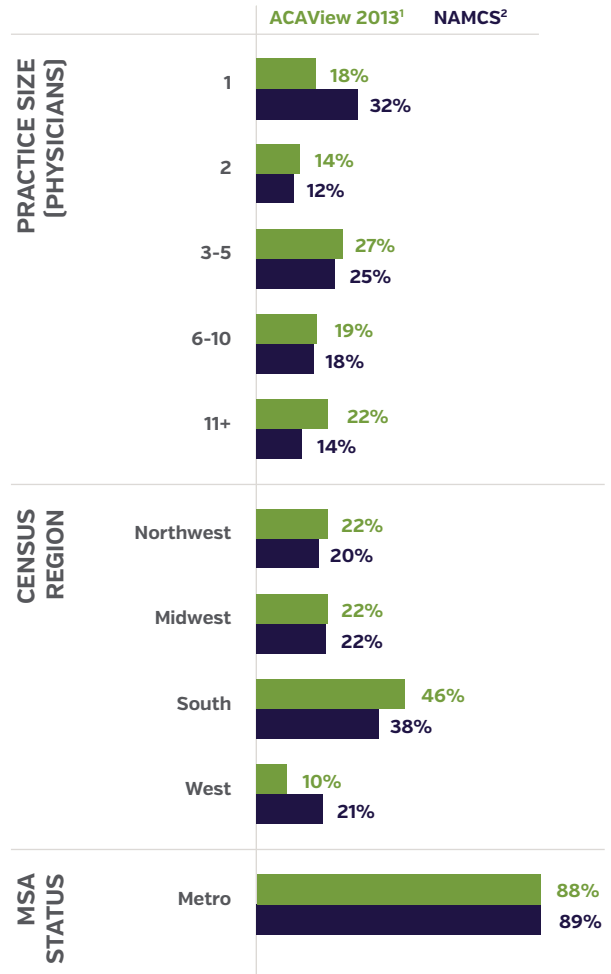
**Office Visit Characteristics: Patient Demographics
Athenahealth ACAView Practices vs. NAMCS**



Source: athenaResearch

1: 30 million visits to practices active on the athenahealth network before 2011
2: http://www.cdc.gov/nchs/data/ahcd/namcs_summary/2010_namcs_web_tables.pdf

**Office Visit Characteristics: Provider Demographics
Athenahealth ACAView Practices vs. NAMCS**



Source: athenaResearch

1: 30 million visits to practices active on the athenahealth network before 2011
2: http://www.cdc.gov/nchs/data/ahcd/namcs_summary/2010_namcs_web_tables.pdf

Acknowledgments

We thank Robert Wood Johnson Foundation for their generous financial support and partnership with ACAView, and Katherine Hempstead, PhD, in particular, for her enthusiastic and expert consultation as case officer.

Special recognition is due also to Matthew Nix and Christopher Jones, of athenahealth, for their tireless and sophisticated collaboration on methodology development, data engineering, and analytic support.

Finally, we would like to thank the following individuals for their expert contribution to ACAView in multiple capacities: copy editing, data analysis, health insurance exchange research, insurance package research, insurance transaction research, methodology development, policy research, promotion and communication, and visual design:



- Matthew Trujillo, PhD



- Elizabeth Costa
- Stacy Dubois
- John Fox, PhD
- Reuben Goodman
- Laurie Graham
- Kimberly Green
- Eben Harrell
- Caitlain Kelley
- Elizabeth Kellogg
- Leah VanWhy
- Michelle Mangino
- Nicholas Maselli
- Sloane Moran
- Jillian Palash
- Gregory Paylor
- Stacey Santiago
- Caroline Smart
- Holly Spring
- Brendan Walsh
- Adam Weinstein
- Kimberly Williams
- Amy Yeh

¹⁰ Work RVUs (Relative Value Units), measure the relative time, skill, and effort required for a service.

¹¹ Patient financial responsibility is what a patient owes for his/her care after primary and secondary insurance is taken into account. Out-of-pocket payments is what a patient pays.

¹² First pass rate refers to the percentage of claims that are submitted and reimbursed without a denial or partial payment, after the first submission.

¹³ Allowables refers to the amount that a physician should be paid for services rendered, assuming full payment from the insurer and the patient.

ACAView™

Tracking the Impact of Health Care Reform


Robert Wood Johnson
Foundation

P.O. Box 2316
Princeton, NJ 08543
877.843.7953
rwjf.org

 athenahealth™

311 Arsenal Street
Watertown, MA 02472
781.642.8800
athenahealth.com