7-7-2009

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Geiger Gibson /
RCHN Community Health Foundation Research Collaborative
Policy Research Brief No. 9

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July 7, 2009

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About the Geiger Gibson / RCHN Community Health Foundation Research Collaborative

The Geiger Gibson Program in Community Health Policy, established in 2003 and named after human rights and health center pioneers Drs. H. Jack Geiger and Count Gibson, is part of the School of Public Health and Health Services at The George Washington University. It focuses on the history and contributions of health centers and the major policy issues that affect health centers, their communities, and the patients that they serve.

The RCHN Community Health Foundation, founded in October 2005, is a not-for-profit foundation whose mission is to support community health centers through strategic investment, outreach, education, and cutting-edge health policy research. The only foundation in the country dedicated to community health centers, the Foundation builds on health centers' 40-year commitment to the provision of accessible, high quality, community-based healthcare services for underserved and medically vulnerable populations. The Foundation's gift to the Geiger Gibson program supports health center research and scholarship.

Executive Summary

The American Recovery and Reinvestment Act of 2009 (ARRA) will invest approximately $49 billion to expedite health information technology (HIT) adoption through Medicare and Medicaid financial incentives targeted at specific health care providers. The United States Department of Health and Human Services has set a goal of 40 percent HIT adoption by 2012. Currently about 16 percent of physicians have fully electronic health records (EHR); another 15 percent report partial EHR.

Physicians who are able to demonstrate "meaningful use" will be eligible for the Medicaid financial incentives up to $63,750 over six years if their patient mix includes at least 30 percent Medicaid volume. Pediatricians who do not meet the 30 percent Medicaid volume threshold but have at least 20 percent Medicaid patients will receive up to $42,500. Physicians who predominantly practice in federally qualified health centers (FQHCs) or rural health clinics (RHCs) are accorded broader eligibility criteria that allow payment if at least 30 percent of patients are "needy individuals," defined as patients who either are covered by Medicaid or who receive uncompensated care and for whom charges are prospectively adjusted on a sliding-scale basis.

Based on an analysis of 2006 NAMCS data, we estimate that more than 45,000 office-based physicians (15 percent of the roughly 300,000 practicing office-based physicians in the country) will qualify for Medicaid incentives based on their Medicaid patient volume. In addition, we estimate that approximately 99 percent of all health center physicians meeting a predominant practice standard will qualify for the Medicaid HIT incentives. If all qualifying physicians apply for the Medicaid incentives and receive the maximum level of payments, the federal government will invest more than $2.8 billion in HIT through Medicaid.

Numerous challenges remain for HIT adoption, including the definition of "meaningful use," how the additional costs generated by HIT will be financed over the long-term, how support will be extended to physicians who fail to qualify for either Medicare or Medicaid incentives, achieving interoperability, and how quickly state implementation of the Medicaid incentives will occur. Despite these limitations, ARRA offers a critical first step in providing financial resources for initial investments in HIT.

Introduction

Congress enacted the American Recovery and Reinvestment Act of 2009 (ARRA) in February 2009 as an economic recovery package with an estimated cost of $787 billion between 2009 and 2019.[1] A key element is a $49 billion investment in health information technology (HIT),[2] spurred by previous studies suggesting the positive effects of HIT adoption on health care quality and efficiency. Federal investments to promote HIT adoption may reduce overall health care costs and improve quality by improving the efficiency of care and reducing duplicate or unnecessary care. Although there is some disagreement, a number of experts predict savings; one study estimates that 90 percent adoption of Electronic Health Records (EHR) will yield health system savings of 10 to 15 percent.[3]

ARRA is designed to expedite national HIT adoption through the use of Medicare and Medicaid financial incentives targeted at certain health care providers who can achieve "meaningful use" of technology.[4] The definition of meaningful use encompasses several distinct elements, including the use of government-certified technology, the use of technology within practice in ways that promote safety and quality, and the reporting of information gleaned from practice.

While similar in approach, the Medicare and Medicaid provisions also contain important differences. Medicaid is targeted to physicians, clinics, other health care professionals and hospitals that treat significant numbers of Medicaid patients. In addition, Medicaid not only rewards adopters but makes financing available on an up-front basis; thereby extending financial assistance to providers that otherwise might not have funds of their own to invest. Furthermore, while the Secretary of HHS is obligated to implement the Medicare HIT incentives, Medicaid implementation is an optional state undertaking. That is, implementation of the reforms is not a condition of participation in the Medicaid program; instead, states are incented to act through generous funding levels.

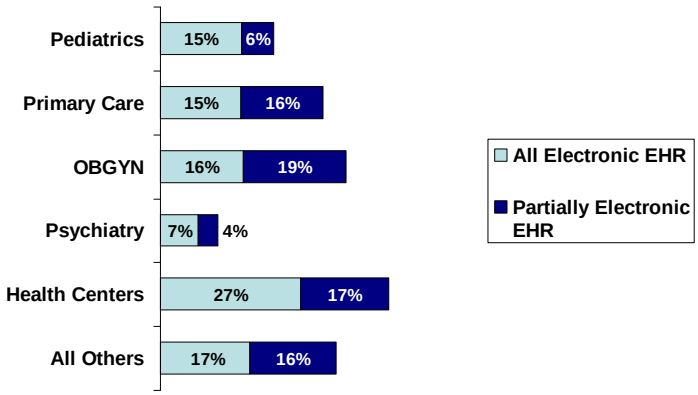
This research brief discusses Medicaid incentive payments and explores the relationship between the incentives and office-based physicians and community health centers. We estimate the number of office-based physicians who may be eligible for ARRA's Medicaid HIT incentives and also examine the incentives in the context of community health centers (CHCs), which provide care to more than 16 million low-income patients.[5]

Using 2006 National Ambulatory Medical Care Survey (NAMCS) data, we estimated the percentage of office-based physicians who already have EHR systems and those who may be eligible for Medicaid HIT incentive payments based on their Medicaid patient volume. Estimates derived from the 2006 NAMCS are likely conservative in light of the increase in the number of Medicaid enrollees since 2006 (see Appendix for description of methodology and limitations).[6] Administrative data reported by federally-qualified health centers as part of the Uniform Data System were used to calculate more accurate estimates for community health centers.

Current Use of EHRs. There are many different estimates for the percent of physicians using EHR systems, a likely result of the varying definitions regarding the functionalities that are considered to comprise a full EHR system. Most estimates range between 9 and 29 percent.[7] In

the NAMCS 2006 data, about one-sixth (16 percent) of physicians reported already having EHR systems. Another 15 percent said they had partial EHR systems and 69 percent reported they had no EHR system. Figure 1 shows the use of EHR systems by physician specialty category. Notably, health center physicians reported a larger rate of fully electronic EHRs (26 percent) than any other category of physicians. Although a growing number of physicians report using EHR (in 2005 only 10 percent reported having EHR), the HHS Strategic Plan calls for an ambitious 40 percent target by 2012.[8]

Figure 1:
Percent of EHR Use by Physician Category, 2006



Source: GW Analyses of NAMCS data, 2006.

ARRA offers financial incentives under Medicare and Medicaid to help physicians become "meaningful EHR users." The Medicare statute provides a broad, three-part test of meaningful use: (1) use of certified EHR technology; (2) information exchange; and (3) the ability to report using EHRs.[9] The ARRA Medicaid amendments give state Medicaid agencies flexibility to develop a definition of meaningful use that may differ from that used by Medicare,[10] and unlike Medicare, Medicaid payments may be made in the first year to assist in adoption itself.[11]

A proposed rule including the definition of meaningful use is expected by the end of 2009.[12] On June 16, 2009, the HIT Policy Committee's Meaningful Use Workgroup released a recommendation which defined meaningful use as encompassing the following elements:[13]

- Provide access to comprehensive patient data for a patient's health care team
- Use evidence based order sets
- Apply clinical decision support at the point of care
- Generate lists of patients who need care
- Report to patient registries for quality improvement, public reporting, and other purposes
- Provide patients and families with access to data, knowledge and tools to make informed decisions
- Exchange meaningful clinical information among health care team

- Communicate with public health agencies
- Ensure privacy and security protections
- Provide transparency of data sharing to patient

ARRA resources have been set aside to assess whether existing systems meet the meaningful use requirements and whether adjustments can be made to existing systems that do not meet them.

Medicaid HIT Incentive Payments. The Medicaid financial incentives will begin in 2011 for physicians who are able to demonstrate compliance with the law's requirements, including initial adoption, implementation, or upgrading of technology in Year One, followed in subsequent years by demonstrated meaningful use. Eligible health care professionals can initially receive up to $21,250 (or 85 percent of the maximum $25,000 in "net average allowable costs")[14] to cover the cost of purchasing or upgrading certified technology including training and other support services. Providers are eligible to receive an additional $8,500 annually for five years as long as they continue to demonstrate meaningful use. According to the ARRA implementation plan released by HHS, non-hospital-based physicians (including pediatricians) are eligible to receive up to $63,750 if they have at least 30 percent Medicaid patient volume;[15] and an alternative payment schedule and patient-mix criteria is set for office-based pediatricians, who may receive up to $42,500 ($8,500 per year for five years) if they have at least 20 percent Medicaid patient volume.

For physicians who predominantly practice in federally qualified health centers (FQHCs) or rural health clinics (RHCs), the criterion for payment eligibility is broader: physicians practicing in these settings can qualify for payments if at least 30 percent of their patients are determined to be "needy individuals," defined as patients who either are covered by Medicaid or who receive uncompensated care and for whom charges are reduced by the provider on a sliding-scale basis.[16] (In other words, after-the-fact debt forgiveness is not sufficient to classify a provider as one who serves "needy" patients who are uncovered by Medicaid).

As noted, EHR-related incentives reflect 85 percent of the net average allowable costs for certified EHR technology. The maximum payment schedule for office-based physicians or practices that have at least 30 percent Medicaid volume is as follows:

- Year 1: $21,250
- Year 2: $8,500
- Year 3: $8,500
- Year 4: $8,500
- Year 5: $8,500
- Year 6: $8,500

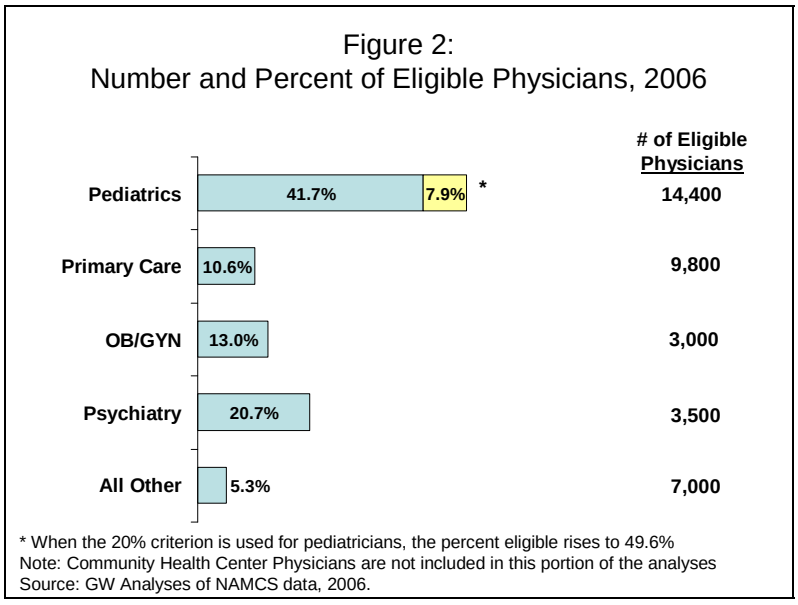
This brings the potential 6-year Medicaid payment total to $63,750 and, as noted, Medicaid payments can be made in advance of actual meaningful use so that adoption itself can be undertaken. ARRA also provides somewhat smaller incentive payments for providers under Medicare (totaling $48,400 for early adopting physicians with lower incentives each year), including eventual penalties for those who fail to adopt certified EHRs by the end of 2015.

Providers may choose to receive incentives under either Medicare or Medicaid, but not both. Because the Medicaid incentives are higher than the Medicare incentives and permit payments in advance of use in order to support the adoption effort itself, we would expect physicians who qualify under both to choose the Medicaid option.

Findings

Estimates of Qualifying Physicians. While the majority (85 percent) of physicians are not eligible for the Medicaid incentive program, a small percentage of eligible physicians equates to thousands of providers. Our analyses of 2006 NAMCS data indicate that more than 45,000 office-based physicians (15 percent of the roughly 300,000 practicing office-based physicians in the country) would be eligible for Medicaid incentives based on their Medicaid patient volume. As shown in Figure 2, about half of pediatricians, one-fifth of psychiatrists, one-eighth of obstetricians/gynecologists, and one-ninth of other primary care physicians (defined as family and general practitioners and internists) would qualify as meeting the required volume of Medicaid patients. About 6 percent of physicians practicing in other sub-specialty fields also would qualify.

Figure 2 separates pediatricians into the two eligibility categories, those exceeding the 20 percent or greater Medicaid criterion but with less than 30 percent Medicaid volume (yellow bar), and those with at least 30 percent Medicaid volume (blue bar).



The NAMCS data show that 65 percent of health center physicians (not included in Figure 2) meet the 30 percent Medicaid volume criterion, but this is an underestimate since it focuses only on Medicaid volume and does not include the broader "needy individuals" category included in the ARRA criteria. Separate analysis of FQHC physicians, presented below, indicates that almost all physicians whose practice is predominantly in a health center can be expected to qualify, although the term "predominant" has not yet been defined.

Physician categories have varying levels of eligibility for the Medicaid HIT incentives. The high percentage of pediatricians who may qualify is important for that specialty, since pediatricians would not be expected to qualify under the Medicare incentive provisions. Obstetricians/gynecologists do a relatively low volume of Medicare business, but the NAMCS data indicate that only 13 percent appear to qualify under Medicaid criteria. This low proportion is consistent with the relatively low level of obstetrician/gynecologist participation in Medicaid generally,[17] despite the fact that 41 percent of all U.S. births are financed by Medicaid.[18] Likely explanations are that a large share of Medicaid births are performed by health center physicians,[19] as well as by hospital-based physicians and medical residents who are not included in the NAMCS data. In addition, health professionals such as family practice physicians and nurse midwives may play a larger role in pregnancy related care for Medicaid patients.

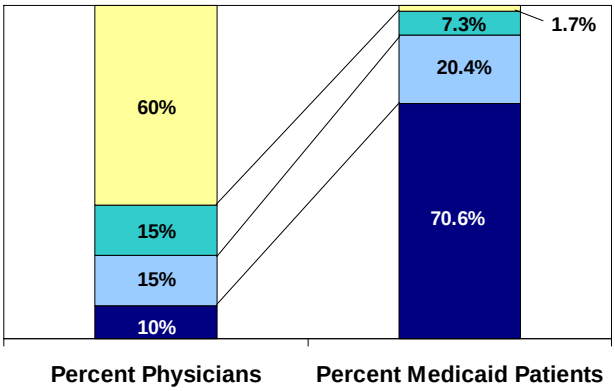
The NAMCS data suggest that 11 percent of the other primary care physicians (family and general practitioners and internists not practicing in health centers) appear likely to qualify for Medicaid incentives. While this percentage may appear low, because there are more than 90,000 such physicians in total, about 10,000 would qualify. Only the number of qualifying pediatricians (14,000 under the 20 percent criterion and 12,000 under the 30 percent criterion) is larger.

Our estimates found that more than 45,000 physicians will qualify for the Medicaid subsidies. Analyses of the NAMCS data indicate that nearly half of the physicians qualifying for the Medicaid incentives had no Medicare visits, suggesting that even if they were to qualify for Medicare payments, the aggregate payments would be so low as to offer limited incentivization. This fact leaves open the question of how to encourage the use of EHRs by physicians, such as pediatricians and pediatric sub-specialists, who do not meet the Medicaid threshold and yet do not participate in Medicare or else participate to such a limited degree that their aggregate Medicare payments will be extremely limited.

This analysis suggests Medicaid's potential to power the financial dimension of HIT adoption. The Medicaid incentives potentially assist 15 percent of office-based physicians obtain or upgrade EHR systems, thereby positioning the nation to make significant strides toward reaching the HHS goal of 40 percent of physicians using HIT by 2012. If all qualifying physicians apply for the Medicaid incentives and receive the maximum level of payments, we estimate that the federal government will invest more than $2.8 billion in HIT.[20]

Concentration of Care for Medicaid Patients. Analyses of the NAMCS data indicate that care for Medicaid patients by office-based physicians is highly concentrated among a relatively limited number of physicians. For example, Figure 3 shows that 10 percent of office-based physicians were responsible for more than 70 percent of all Medicaid visits, and that 25 percent of the physicians accounted for more than 90 percent of all visits. About 60 percent of office-based physicians reported few or no Medicaid visits. Of course, it is important to recall that medical visits are not evenly distributed across all physicians; because of the nature of their specialties or practices, some physicians, particularly specialists, see far fewer patients than others.

Figure 3:
Percent of Office-based Physicians Treating Medicaid Patients, 2006



Source: GW Analyses of NAMCS data, 2006

HIT Eligibility Among Community Health Centers. We performed a more detailed examination of the eligibility of Medicaid HIT incentives for federally-qualified health centers using 2007 Uniform Data System (UDS). As noted earlier, ARRA broadens the criterion for health centers to allow incentives to flow to physicians that predominantly practice at health centers if 30 percent of their patients are Medicaid or "needy," defined as patients who receive uncompensated care or who use sliding fee scales. Table 1 presents state-by-state data on the number and percent of health centers that qualify based on the reported volume of uninsured and Medicaid patients and an estimation of patients who would qualify for sliding fee scale discounts (see appendix for methodology). In 39 states, 100 percent of health centers would qualify. In most of the remaining states, 90 percent or more of the health centers would qualify. Health centers in North Dakota (60%) and Oklahoma (85%) are relatively less likely to qualify than health centers in other states. Analysis reveals that the health centers that do not qualify tend to be smaller, rural health centers that serve a broad community of patients in those areas. Because the UDS data do not clearly break out the number of patients who receive sliding fee scale services, these estimates are likely conservative. Some of the health centers that do not appear to qualify in Table 1 might actually qualify.

HIT Eligibility Among Rural Health Clinics. ARRA also provides Medicaid incentives for physicians practicing in designated rural health clinics. Unfortunately, we do not have similar data about the practice patterns among rural health clinics, nor do the NAMCS data identify physicians in rural health clinics. Therefore, we cannot provide similar estimates for rural health clinic physicians.

Table1: Percent of Health Centers that Qualify for Medicaid HIT Incentives

State	Percent Qualifying for Incentive	Number Qualifying for Incentive		State	Percent Qualifying for Incentive	Number Qualifying for Incentive
Alaska	100%	26		Montana	100%	13
Alabama	100%	16		North Carolina	96%	26
Arkansas	100%	12		North Dakota	60%	3
Arizona	100%	14		Nebraska	100%	5
California	100%	110		New Hampshire	100%	9
Colorado	100%	14		New Jersey	100%	18
Connecticut	100%	10		New Mexico	100%	15
District Of Columbia	100%	5		Nevada	100%	2
Delaware	100%	4		New York	100%	49
Florida	100%	40		Ohio	96%	25
Georgia	100%	28		Oklahoma	85%	11
Hawaii	93%	13		Oregon	100%	23
Iowa	92%	12		Pennsylvania	100%	32
Idaho	100%	10		Rhode Island	100%	7
Illinois	100%	36		South Carolina	100%	22
Indiana	94%	17		South Dakota	100%	6
Kansas	100%	11		Tennessee	100%	24
Kentucky	94%	16		Texas	98%	57
Louisiana	100%	22		Utah	100%	11
Massachusetts	100%	34		Virginia	95%	20
Maryland	93%	14		Vermont	100%	6
Maine	100%	18		Washington	100%	25
Michigan	100%	30		Wisconsin	94%	15
Minnesota	100%	14		West Virginia	100%	28
Missouri	100%	21		Wyoming	100%	6
Mississippi	100%	21				

Source: GW analyses of 2007 Uniform Data System reports

In addition to the ARRA Medicaid incentives for health centers, there are other sources of federal funds that health centers can use to obtain, improve or operate EHRs. ARRA provides $125 million available through the Health Resources and Services Administration (HRSA) for HIT systems/network grants. The process for applying for and receiving this funding has not yet been announced by HRSA, but is expected soon.

Conclusion

Despite the potential for a large number of physicians and health centers to adopt or update HIT systems, challenges remain.

First, the "meaningful use" definition has not yet been finalized and issued as a rule. The meaningful use definition, if stringent, may affect the cost and complexity of EHR system adoption and use, thereby affecting the number of physicians who can fully meet the criteria for ARRA incentive payments, as well as the number who remain eligible for incentive payments throughout the incentive period.

Second, while individual EHR systems are important, overall effectiveness of HIT depends on a variety of other system-wide innovations that promote interoperability and communication from a doctor's office to other sources of health care such as hospitals, other primary and specialty care physicians, dentists and pharmacies. Thus, physician adoption incentives are only part of the health care system investments that may be needed to achieve the quality and efficiency improvements envisioned by EHRs.

Third, while the infusion of funding for the adoption of HIT under ARRA is beneficial, it is temporary. HIT will require ongoing investments in system upgrades, staff training, technical support and quality improvement. It remains to be seen whether these costs can be met under "normal operating costs" for medical care in physicians' offices or community health centers in the future.

Fourth is the challenge of incentivizing states to rapidly pursue implementation of the Medicaid provisions. For physicians treating a high proportion of Medicaid patients, the availability of Medicaid financing to both support and reward adoption will be crucial. Furthermore, certain providers such as pediatricians, obstetricians and gynecologists, and community health centers either do not qualify for Medicare incentives at all (in the case of health centers because their payment system is a separate one and does not appear to be covered by the Medicare adoption provisions) or else serve such a low proportion of Medicare patients that Medicaid by definition becomes the central means of financing adoption. State Medicaid programs will benefit from rapid and clear interpretive policies and the provision of technical assistance; careful monitoring will be needed to measure the pace of implementation and challenges that arise.

Fifth is that the challenge which arises in the case of physicians whose participation in Medicare and Medicaid are sufficiently low to receive only limited federal assistance in the case of Medicare and none under Medicaid. In this group is a very small number of community health center physicians and an unknown number of rural health clinic physicians, both of which are key sources of primary health care.

Despite these limitations, ARRA offers a critical first step in providing financial resources for initial investments in HIT, but substantial ongoing efforts are needed to implement and sustain these changes and for all physicians to adopt meaningful use of EHR in their practices.

Appendix

NAMCS is a nationally-representative survey of practicing office-based physicians in the United States, conducted by the National Center for Health Statistics, which is part of the Centers for Disease Control and Prevention. It samples physician practices from all 50 states and the District of Columbia. The 2006 NAMCS sample included 1,268 responding physician practices. Each physician had their patient records sampled for an assigned week to obtain a random sample of visits. In this report, we assume that the proportion of visits by Medicaid patients is equivalent to the proportion of Medicaid patients. Whether a visit is counted as Medicaid or not is based on the expected payor recorded in the patient record. In some cases, the actual payor may differ from the expected payor. An oversampling of community health center physicians (104) was conducted to ensure comparability of health center physicians and patients with non-health center physicians and patients. Physician and patient weights were used in corresponding estimates to ensure accurate national estimates. When appropriate, we report the percentage standard errors, adjusting for the complex survey design of NAMCS. Following NAMCS protocol, estimates were considered reliable when the relative standard error is 30 percent or less. Instances when the relative standard error was greater than 30 percent are noted. Our analyses stratify the physician data by specialty and CHC status. We grouped key specialties together due to the similar function played in the health care system. Table 2 provides more detailed data that were used to create Figure 1.

Table 2: EHR use by Physician Category

	All Electronic EHR		Partially Electronic EHR		No EHR		Don't Know		Blank	
	Percent	Std Err	Percent	Std Err	Percent	Std Err	Percent	Std Err	Percent	Std Err
General and family Practice/Internal Medicine	15.1	2.3	15.6	2.7	69.1	3.2			0.3	0.3†
Pediatrics	15.3	4.3	6.1	3.0†	78.6	5.0				
OBGYN	15.7	3.9	19.3	4.9	65.0	5.6				
Psychiatry	7.1	3.5†	3.8	1.9†	89.1	3.9				
Health Center Physicians	26.5	5.9	16.5	4.8	57.0	6.4				
All Others	16.9	2.0	16.2	2.0	66.5	2.6	0.4	0.2†		
Total	15.8	1.23	14.6	1.3	69.34	1.7	0.2	0.1†	0.1	0.1†
† Relative standard is greater than 30 percent										

Table 3 provides more detailed data used in Figure 2. Half of pediatricians (49.8 percent) would qualify under the 20 percent Medicaid volume criterion and slightly fewer (41.8 percent) meet the more stringent 30 percent criterion. As noted in the report, the percent of health centers physicians who qualify is much higher than the share who qualify using only the Medicaid volume criterion.

Table 3: Percent of Physicians Eligible for Medicaid HIT Incentives

	Equal or greater to 20% Medicaid patients		Equal or greater to 30% Medicaid patients		Number of Eligible Physicians
	Percent	Std Err	Percent	Std Err	
General and family practice/Internal Medicine			10.6%	2.2	9741
Pediatrics	49.7%	6.2	41.8%	6.1	14355
OBGYN			13.0%	3.6	3011
Psychiatry			20.6%	5.1	3475
Health Center Physicians			65.0%	6.2	4854
All Others			5.3%	1.6†	7047
† Relative standard is greater than 30 percent					

The percentage of patients qualifying for the sliding fee scale was estimated by multiplying the percentage of private health insurance patients by the percentage of patients below 200 percent of the Federal Poverty Level, as reported in the UDS data. This percentage was then added to the percent of Medicaid and uninsured patients to determine if the eligibility threshold of 30 percent "needy individuals" was met for health centers reported in Table 1.

There are a number of limitations to the estimates in this analysis. First, the estimates of Medicaid use in this report are based on 2006 NAMCS and 2007 UDS data, but Medicaid participation has almost certainly increased since then due to the recession, so the number of physicians or health centers eligible on the basis of Medicaid enrollment have probably increased. Second, the estimates of Medicaid volume are approximate because they are based on a single week's sample for each physician and are based on expected payors for the visits. Third, some physicians with the required level of Medicaid volume might not receive payments because they do not apply or because they cannot meet the meaningful use standards, which have not yet been issued by HHS.

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[8] U.S. Department of Health and Human Services. American Recovery and Reinvestment Act of 2009 Implementation Plans. 2009.

[9] The American Recovery and Reinvestment Act of 2009. Public Law 111-5 (2009)

[10] 42 U.S.C. §1396b(t)(6)(C)(i)(I)

[11] 42 U.S.C. §1396b(t)(6)(C)(i)(II)

[12] Kaiser Health News. Physicians wait for health IT guidelines, officials want 'every doctor's office' online. June 15, 2009. Available at: http://www.kaiserhealthnews.org/Daily-Reports/2009/June/15/Health-IT.aspx

[13] U.S. Department of Health and Human Services. Meaningful Use Matrix. June 16, 2009. Available at: http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS_0_11113_872719_0_0_18/Meaningful%20Use%20Matrix.pdf

[14] The term "net average allowable costs" means the average allowable costs reduced by any payment that is made to the provider from any other source that is attributable to payments for the adoption or support of certified EHR technology. 42 U.S.C. §1396b(t)(3)(C) and (E)

[15] U.S. Department of Health and Human Services. American Recovery and Reinvestment Act of 2009 Implementation Plans. 2009.

[16] 42 U.S.C. §1396b(t)(2)(A)(iii)

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[19] Health centers are a source of care for one in five low-income births: Shin P, Finnegan B, Sharac J, Rosenbaum S. Health Centers: An Overview and Analysis of Their Experience with Private Health Insurance. *The Henry J. Kaiser Family Foundation*, Jan 2008.

[20] Based on the percentage of eligible physicians, assuming that 98.7 percent of community health center physicians will qualify for the HIT incentives.