

**Geiger Gibson /  
RCHN Community Health Foundation Research Collaborative**

**Policy Research Brief # 41**

**Can Electronic Health Records Systems Support New  
Payment Methods for Health Centers?**

**Peter Shin  
Feygele Jacobs<sup>i</sup>  
Jeffrey Barnes<sup>ii</sup>  
James B. Welsh<sup>ii</sup>  
Lisa Perry<sup>ii</sup>  
Scott D. Morgan<sup>iii</sup>**

The George Washington University  
Milken Institute School of Public Health  
Department of Health Policy and Management

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<sup>i</sup> RCHN Community Health Foundation

<sup>ii</sup> Community Health Care Association of New York State

<sup>iii</sup> CohnReznick LLP

## **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 Milken Institute School of Public Health 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 is a not-for-profit operating foundation established to support community health centers through strategic investment, outreach, education, and cutting-edge health policy research. The only foundation in the U.S. dedicated solely to community health centers, RCHN CHF builds on a long-standing commitment to providing 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.

Additional information about the Research Collaborative can be found online at <http://publichealth.gwu.edu/projects/geiger-gibson-program-community-health-policy> or at [rchnfoundation.org](http://rchnfoundation.org).

## **ACKNOWLEDGEMENTS**

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## **EXECUTIVE SUMMARY**

This study assessed the feasibility and usefulness of combining electronic health record (EHR) data with federal cost report data for the purposes of: 1) quantifying the provision of enabling services; and 2) for use as the basis of community health center payment rate-setting. The study used EHR data derived from the Center for Primary Care Informatics to isolate enabling services and perform the end-to-end analysis that might be required to develop or evaluate reimbursement rates. The study revealed that data extracted from federal cost reports combined with data from the EHR fall short of providing the information required to reasonably develop new rate setting approaches or evaluate existing rates as they might be applied to community health centers. Specifically, key findings include:

- Use of internal, center-specific codes (for example, in CPT fields) complicates the translation into relative value units (RVUs) and the aggregation of comparable data across health centers.
- Enabling services are difficult to quantify.
- Vague and inconsistent position titles lead to potential inaccuracies in the allocation of expenses.
- The current funding environment deters capture of new information.

This study raises fundamental questions about how to quantify (let alone how to reimburse) the true value associated with the community health center model of care. The study recommends tailoring EHR products to better capture the unique services provided by health centers and their effective management of high-risk patients. Fully moving to value-based reimbursement models will likely require that health centers adapt workflow to ensure that additional critical information (e.g., social determinants of health) is properly entered as structured data and not merely as scanned notes and other documentation.

## **INTRODUCTION**

Community health centers are private, non-profit community-based, patient-directed organizations that serve populations with limited access to health care, including vulnerable populations isolated from other forms of care because of language, income, geographic, cultural or other barriers. In 2013, HRSA reported about 1,300 health centers (including centers funded under Section 330 of the Public Health Law and similar centers that do not receive a grant but enjoy other benefits from HRSA certification as “look-alikes”) which cared for nearly 23 million patients, providing some 90 million visits across 9,300 service sites nationwide.<sup>1</sup>

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<sup>1</sup> HRSA, 2013 Uniform Data System (UDS). <http://bphc.hrsa.gov/healthcenterdatastatistics/>

Community health centers are and have been at the forefront of efforts to expand access to affordable health care, in large part because they evolved in response to federal mandates and legislation designed to embed health care access objectives into their organizational missions. Under federal law, health centers must serve underserved communities or populations and must provide a unique set of primary care and preventive health services, with additional ancillary services as appropriate and necessary, either directly or through established written arrangements and referrals.<sup>2</sup> Numerous studies to date show health centers effectively manage patients at high risk for poor health.<sup>3</sup> Health center visits encompass a broad array of medical care, dental care and behavioral health services. A major component of their delivery model includes enabling services - such as translation, transportation, outreach, education, and case management - which play an important role in facilitating access to care and help effectuate access to preventive services.<sup>4</sup>

This emphasis on overcoming access barriers has its roots in the War on Poverty. Throughout the mid-to-late 1960s, as the desperate plight of the nation's poor became ever more apparent, "Neighborhood Health Centers" received funds directly from the federal government to establish health care beachheads in communities across the U.S. In the 1970s and 1980s, Congress enacted several laws that established new health care entities and, in 1989, passed legislation that for the first time gave formal definition to the federally-qualified health center (or FQHC) designation. In 1996, The Health Centers Consolidation Act established a single authority for FQHC funding under Section 330 of The Public Health Service Act. The qualifications contained in this law include the requirement that today's health centers, like their antecedents, provide enabling services and comprehensive health services without regard to insurance status or ability to pay, and be governed by a board containing community residents as a majority of its members.

Congress took an important step in 2000. In order to align federal reimbursement with the costs associated with meeting the healthcare needs of uninsured and underserved patients, Congress established a payment rate methodology known as the Prospective Payment System (PPS).<sup>5</sup> Still in use today, PPS rates are based on the actual costs of care incurred by health centers as reported in federal cost reports or estimated for the region in which the health center is

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<sup>2</sup> 42 USC §254b.

<sup>3</sup> Sharma R, Lebrun-Harris L, and Ngo-Metzger Q. Costs and Clinical Quality Among Medicare Beneficiaries: Associations with Health Center Penetration of Low-Income Residents. *Medicare & Medicaid Research Review*. 2014; 4(3):E1-E17; Hing E, Hooker R, and Ashman J. Primary Health Care in Community Health Centers and Comparison with Office-Based Practice. *J Community Health*, 2011; 36(3): 406-13

<sup>4</sup> Laiteerapong N, Kirby J, Gao Yue, Yu TC, Sharma R, Nocon R, Lee SM, Chin MH, Nathan AG, Ngo-Metzger Q, and Huang ES. Health Care Utilization and Receipt of Preventive Care for Patients Seen at Federally Funded Health Centers Compared to Other Sites of Primary Care. *Health Services Research*. 2014; 49(5):1498-1518. Lebrun LA, Shi L, Zhu J, Sharma R, Sripipatana A, Hayashi AS, Daly CA, and Ngo-Metzger Q. Racial/Ethnic differences in clinical quality performance among health centers. *Journal of Ambulatory Care Management*. 2013; 36(1):24-34; Shi, L., Lebrun, L.A., Hung, L., Zhu, J., and Tsai, J. US primary care delivery after the Health Center Growth Initiative. *J Ambulatory Care Manage*, 2012; 35(1):60-74.

<sup>5</sup> 42 USC §1396a(bb)(6)(B).

located. Uniquely, PPS encounter-based cost-payment rates also include recognized enabling services that support the provision of basic health services.<sup>6</sup>

Cost-based healthcare reimbursement systems, PPS among them, are becoming increasingly rare.<sup>7</sup> Increasingly, payers are seeking to negotiate alternative payment arrangements to better incentivize quality, care coordination, and integration of services. It is now common practice for providers to receive reimbursement based on a predetermined price. Payment may also be based on the attainment of certain pre-determined measures. One model, used by Accountable Care Organizations (ACOs), is predicated on producing shared savings by meeting standards for quality performance measures for a defined patient population.<sup>8</sup>

The advent of value-based payment models has proven challenging for many providers, particularly health centers. While a number of studies indicate that health centers generally provide high-quality care,<sup>9</sup> health centers rarely have the requisite data to support value-focused rate negotiation. For example, community health centers and other providers seeking to participate in ACOs must be able to align patients to a single practice and group of providers and to attribute care at the patient level. FQHCs would also need to be able to separate the costs associated with enabling services so that these services could be considered when reimbursement rates are negotiated with payers. Federal cost reports or cost-accounting systems do not contain all of the information needed for performance- or outcomes-based rates. Consequently, new data sources will be needed to support health centers in their attempts to participate in value-based reimbursement models and to support the development of reimbursement models that account for the unique role that health centers play and the unique service profile that characterizes community health centers.

While the primary purpose of EHR systems is to efficiently support the provision of clinical care and to track performance, the EHR data may also be used for purposes of cost analysis and and rate negotiation.<sup>10</sup> Like other providers of primary care, community health centers have increasingly adopted EHR systems to help them maintain information on patient

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<sup>6</sup> Medicare Payment Advisory Commission. *Chapter 6: Federally Qualified Health Centers*. 2011. Available at: [http://www.medpac.gov/documents/reports/Jun11\\_Ch06.pdf?sfvrsn=0](http://www.medpac.gov/documents/reports/Jun11_Ch06.pdf?sfvrsn=0)

<sup>7</sup> National Association of Community Health Centers. *Emerging Issues in the FQHC Prospective Payment System*. 2011. Available at: <https://www.nachc.com/client/SPR38%20Emerging%20Issues%20in%20PPS%20September%202011.pdf>

<sup>8</sup> Ku L, Cunningham M, Goetz-Goldberg D, et al. Quality incentives for federally qualified health centers, rural health clinics and free clinics: A report to Congress. Washington, D.C.: Department of Health and Human Services. Available at:

[http://hsrc.himmelfarb.gwu.edu/cgi/viewcontent.cgi?article=1047&context=sphhs\\_policy\\_facpubs](http://hsrc.himmelfarb.gwu.edu/cgi/viewcontent.cgi?article=1047&context=sphhs_policy_facpubs)

<sup>9</sup> Kaiser Commission on Medicaid and the Uninsured Report Quality of care in community health centers and factors associated with performance. 2013, available at <http://kff.org/medicaid/issue-brief/quality-of-care-in-community-health-centers-and-factors-associated-with-performance/>; also Shi L, Stevens G, Wulu J, Politzer R, and Xu J. America's health centers: reducing racial and ethnic disparities in prenatal and birth outcomes. *Health Services Research* 2004;39(6), Part I, 1881-1901.

<sup>10</sup> Office of the National Coordinator for Health Information Technology. *Capturing High Quality Electronic Health Records Data to Support Performance Improvement*. 2013. Available at: <http://www.healthit.gov/sites/default/files/onc-beacon-ig3-ehr-data-quality-and-perform-impvt.pdf>

history and health conditions, coordinate care, communicate with other providers to whom patients are referred, manage medications, and track services and reimbursement. Nationwide, nearly nine in ten health centers have electronic health records and nearly all plan to comply with meaningful use requirements.<sup>11</sup>

In order to assess the feasibility and usefulness of health center EHR data to set payment rates, this study focused on one of the largest electronic health records (EHR) systems in wide use today. Specifically, this article presents key findings from this examination of data from two New York State health centers and offers recommendations for improving the quality and use of the data.

## METHODS

This study had two key purposes: 1) to assess the feasibility of quantifying the provision of enabling services which are unique to health centers, and 2) and to examine the usefulness of the EHR data as the basis of FQHC rate-setting. The study used data derived from the Center for Primary Care Informatics (CPCI), a statewide repository of EHR data.<sup>12</sup> The CPCI was implemented by the Community Health Care Association of New York State to enable health centers to evaluate quality of care, to improve care processes and to identify patients in need of care management services. Currently, CPCI normalizes data captured from the EHR systems of about 30 participating health centers, with additional health centers joining the repository each quarter. These data are then used as the basis of numerous reports and measures that allow each health center to evaluate its results and compare them to the results achieved by other health centers in New York State.

Currently, CPCI captures EHR data from about 30 participating centers, with additional health centers joining the repository each quarter. The data from diverse EHR systems are “normalized”, or mapped to a common set of codes and definitions, to permit their aggregation and comparison across centers. These data are then used as the basis of numerous reports and measures that allow each health center to evaluate its results and compare them to the results achieved by other health centers in New York State. By using CPCI normalized data, we were able to isolate enabling services and perform the end-to-end analysis that might be required to develop or evaluate reimbursement rates. This involved several activities. We sought to translate the data into comparative measures used in other payment methodologies, such as relative value units (RVUs). To make this translation we had to classify services into standard groups used as the basis for reimbursement in Medicaid, Medicare and other federal programs. We also had to isolate health center enabling services. Specifically, we attempted to categorize each service recorded in the EHR data into one of five groups, identified from our review of Ambulatory Health Care Facility (AHCF) cost reports and data from HRSA’s Uniform Data

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<sup>11</sup> 2013 Uniform Data System, HRSA. Available at <http://bphc.hrsa.gov/uds/datacenter.aspx?q=tall&year=2013&state=>

<sup>12</sup> See Statewide Primary Care Informatics Data Warehouse at <http://www.chcanys.org/index.php?src=gendocs&ref=Statewide%20Primary%20Care%20Informatics%20Data%20Warehouse&category=HIT>

System, to which all health centers must report on a yearly basis.<sup>13</sup> The groups were defined as medical, dental, behavioral health, ancillary, or enabling services. Costs, revenue, and RVUs associated with the services were also allocated to these five service groups.<sup>14</sup> This allowed us to calculate the type of cost ratio that might be used for rate-setting purposes. For example, we calculated cost per RVU rates within each service group. Ratios were compared across the health center as a reasonableness check. Enumerating and understanding the steps that were required to produce cost ratios and learning whether it was possible to complete each step in a rigorous way also provided information about how useful EHR data might be in a rate-setting context.

To make the data more comparable with other provider types and to facilitate review, certain costs were excluded, such as services at methadone clinics, inpatient services, contracted ancillary services, WIC contract expenses, and bad debt. Salaries were allocated based on position titles in the supporting documentation to the AHCF cost report (salary schedule by individual, with titles). Other individual (“line item”) direct expenses were assigned to specific service groupings based on the AHCF description and the supporting trial balance. Fringe, administration, and facility expenses were allocated based on direct expenses. After a review of two extracted CPCI files, a revised specification was adopted that would better link the claim details (CPT codes) with patient and visit information in a single file. That file was used to create counts of visits and to derive the RVUs for each visit. For the RVU mapping, we used Medicare RBRVS tables, Medicare Lab payments for the appropriate Medicare region and proprietary dental RVUs. Older CPT codes were manually reassigned and center-specific codes excluded from the analysis. In the end, CPCI and AHCF data were manually reconciled to within a one percent variance. Due to confidentiality requirements, no actual data findings are presented.

## KEY FINDINGS

Our study revealed that data extracted from federal cost reports combined with data from the EHR fall short of providing the information required to reasonably develop new rate setting approaches or evaluate existing rates as they might be applied to community health centers. For example, we found it very difficult to combine and use the data in a way that would produce results that would be comparable across even our two sample health centers. Given the similarity of the service models, a higher degree of correspondence might have been expected. In other words, we might have expected the cost and financial ratios that we calculated to be roughly similar. Instead we found marked differences that were apparent even for high-level measures. Our analysis leaves many questions about the feasibility and reliability of existing clinical, administrative, and financial data for the development of alternative or bundled payment methods. Identified challenges and limitations include:

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<sup>13</sup> HRSA. 2013 Health Center Data National Program Grantee Data, 2014.

<http://bphc.hrsa.gov/uds/datacenter.aspx?year=2013>

<sup>14</sup> For the RVU mapping, we used Medicare RBRVS tables, Medicare Lab payments for the appropriate Medicare region and proprietary dental RVUs. Older CPT codes were manually reassigned and center-specific codes excluded from the analysis.

- **Use of internal, center-specific codes (for example, in CPT fields) complicates the translation into RVUs and the aggregation of comparable data across health centers.**

Health centers use a variety of non-standard codes to satisfy internal accounting requirements and the requirements of various payers. The use of non-standard codes that vary across providers makes it difficult to put the data in a form useful for analysis. Translating these center-sourced codes into standard procedure codes required a labor-intensive dialogue with providers.

Similar problems were encountered with unstructured data. In cases in which a structured data field was not available in the EHR, health center staff sensibly chose to enter data into free-form fields designed for narrative descriptions of patient conditions or treatment. In this form, the data is very difficult to standardize and use.

We encountered these issues when analyzing data from health centers but similar problems would be found had we examined other types of providers. Any provider that needs to collect information the EHR system does not capture by design may be forced to create codes or use fields in creative ways. While this may fulfill the exigent need, it greatly complicates any type of analysis.

- **Enabling services are difficult to quantify.**

Many of the problems encountered were more pronounced for enabling services than for other service categories. While the community health center model requires the delivery of enabling services, the two EHR systems did not consistently or uniformly capture these services. In general, EHR systems are not standard across FQHCs or medical providers generally; they are produced by different vendors, store data in different ways, and store different data sets. If enabling services are expected appropriately covered, they will need to be incorporated in a standardized way across multiple, commercial EHR systems.

- **Vague and inconsistent position titles lead to potential inaccuracies in the allocation of expenses.**

Moving beyond EHR data, we note that we also encountered difficulty using cost report data because health centers report the titles of their staff generically and do not allocate or associate staff to medical departments or services. For example, the position of “social worker” could relate to behavioral health services, medical support services (e.g., enabling services) or non-medical supportive services. Similarly, “care coordinator” can be a catchall term for providers of a variety of enabling and non-enabling services. A more accurate method for reallocation of expenses would require extensive direct work with each subject center.

- **The current funding environment deters capture of new information**

Finally, in the existing fixed, cost-based reimbursement system, the data that would be required for a value-based system simply is not captured, or is unedited and of varying



quality. The number of unbillable encounters (or “touches”) by the full team of caregivers is generally not accounted for.

## DISCUSSION

This study raises fundamental questions about how to quantify (let alone how to reimburse) the true value associated with the community health center model of care. Effort, whether measured in “visits per FTE” or RVUs, may be less relevant in today’s results-oriented, population-health-driven systems of care. This is a particularly important issue given that reimbursing health center services based on effort (RVUs) may not address cost savings and quality-of-life benefits that rely on the effects of prevention or effective disease management. Ideally, the information in EHR systems would allow health centers to accomplish objectives related to population health. The CPCI repository (and EHRs in general) may offer an opportunity to quantify certain patient outcomes of recognized value (e.g. percent of hypertensive patients with blood pressure under control) and to consider whether such measures of value bear any relationship to traditional measures of effort. If EHR systems captured data on the social determinants that affect health, it might be possible to build reimbursement schemes that would provide the resources needed to support health center efforts to promote the health and healthy behavior by patients and others living within the service area.

Assuming a common understanding of value could be reached, we found many reasons why existing EHR data would disappoint. First, since current EHRs are not designed to provide detailed information on the specific activities of various members of the care team, it may always be necessary to supplement federal cost report and EHR data with data from supplemental reporting templates or special studies. For example, random moment studies are often used to document the proportion of employee effort expended on various activities. They might be adaptable to the health center setting to obtain reliable allocations of the workday for team members. Combined with data on staffing models, they might help to allocate staff costs to coordination/enabling services that are not well captured in cost reports or EHRs.

A review of the distribution of Evaluation & Management CPT codes (and other procedures) across health centers might begin to address questions about the consistency of coding and whether centers are coding completely. For example, additional analysis may be needed to determine how best to adapt coding schemes to accurately capture information on the actual level of effort expended by the provider, for adoption by the centers. This is a particularly important issue with respect to enabling services. This problem and some potential solutions were recently addressed in a paper written by the Association of Asian Pacific Community Health Organizations and the National Association of Community Health Centers.<sup>15</sup>

Any future analysis should be undertaken with a clear understanding of the existing limitations of EHR data, and a clear assessment of the information required to support robust analysis. Here it is important to note that the quality issues with electronic health record data are

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<sup>15</sup> Association of Asian Pacific Community Health Organizations, National Association of Community Health Centers. Highlighting the Role of Enabling Services at Community Health Centers: Collection Data to Support Service Expansion and Enhanced Funding, 2010. [http://www.aapcho.org/wp/wp-content/uploads/2012/03/Enabling\\_Services\\_White-Paper-9\\_1-10-Final.pdf](http://www.aapcho.org/wp/wp-content/uploads/2012/03/Enabling_Services_White-Paper-9_1-10-Final.pdf)

not unique to health centers.<sup>16</sup> Further review of the information captured by the various EHRs should be conducted to identify the extent to which enabling services are available for extraction as structured data that can be coded using standard CPT designations. It will also be necessary to determine if certain EHRs offer greater potential to capture these services. Alternatively, it may be possible to build an explicit set of rules for assigning costs, visits, RVUs, and revenue to specific activities (like the service groupings that we attempted to use), but only after addressing fundamental questions about the reliability and validity of such translations.

## DISCUSSION

This study reveals the challenges of collecting meaningful data as well as the limitations of using the existing clinical systems, which are focused on capturing patient history and the use of services, to negotiate or develop new FQHC payment rates. Utilizing customary cost reports or simply presenting cost as a function of services and staffing to justify payment rates is unlikely to be effective. Rather, health centers will be pressed to find other credible and innovative ways to align payments to outcomes or other performance benchmarks. EHR products must be tailored to better capture the unique services health centers provide and their effective management of high-risk patients. At the same time, health centers must also adapt. Fully moving to value-based reimbursement models will likely require that health centers adapt workflow to ensure additional critical information (e.g., social determinants of health) is properly entered as structured data and not merely as scanned notes and other documentation. Health centers have a number of statutory obligations that make their costs difficult to compare with other physician practices or other outpatient services. However, health centers must continue to make the “business case” for their integration in the broader health system.

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<sup>16</sup> Bowman S. Impact of Electronic Health Record Systems on Information Integrity: Quality and Safety Implications. *Perspectives in Health Information Management*, 2013: 1c. Also available at: <http://perspectives.ahima.org/impact-of-electronic-health-record-systems-on-information-integrity-quality-and-safety-implications/#.VOdDoymmpo>; Landro, Laura. “Health-Care Providers Want Patients to Read Medical Records, Spot Errors.” *Wall Street Journal*, June 9, 2014. see <http://www.wsj.com/articles/health-care-providers-want-patients-to-read-medical-records-spot-errors-1402354902>