NATIONAL INSTITUTE FOR HEALTH CARE REFORM

ADVANCING HEALTH POLICY RESEARCH

Research Brief

NUMBER 5 • JUNE 2011

Fostering Health Information Technology in Small Physician Practices: Lessons from Independent Practice Associations

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As policy makers try to jumpstart health information technology (HIT) adoption and use in small physician practices, lessons from independent practice associations (IPAs)—networks of small medical practices—can offer guidance about overcoming barriers to HIT adoption and use, according to a new qualitative study by the Center for Studying Health System Change (HSC). Often because of inadequate technical and financial resources, small practices' adoption of electronic health records (EHRs) and other HIT trails larger physician practices. Despite broader trends of physicians moving to larger practice settings, a sizeable share of physicians is likely to practice in small groups for the foreseeable future.

IPAs, which first formed in the 1970s to allow independent practices to accept risk-based managed care contracts, provide a useful model to examine ways of supporting HIT activities in small practices. As network-based organizations, the five organizations studied provided coordinated assistance with HIT activities to otherwise independent and relatively small physician practices. They also cultivated trusted and HIT-knowledgeable physician leaders to help less-technologically savvy clinicians. Additionally, the IPAs studied provided leadership to align HIT adoption with other IPA activities, such as quality improvement and pay for performance. IPA experiences with HIT adoption can offer insights for other entities charged with helping physicians in small practices overcome barriers to HIT adoption and use. And, given the proliferation of entities fostering HIT, the potential for overlapping efforts exists, increasing the importance of local planning, stakeholder communication, and ongoing assessment of how best to align and coordinate efforts.

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Helping Small Physician Practices Adopt EHRs

With the clock ticking toward a 2014 goal that all Americans have an electronic health record, policy makers have launched an ambitious agenda to encourage health care providers to adopt and use health information technology in hopes of improving care and controlling costs. Landmark 2009 legislation, known as the HITECH Act, authorized up to $27 billion over 10 years to encourage hospitals, physicians and other providers to implement electronic health records and engage in health information exchange (HIE) (see box on page 3 for more about the HITECH Act).

Recent surveys of hospitals and physicians indicate that many plan to apply for federal incentives to adopt EHRs, but policy makers remain concerned that small physician practices' adoption and use of EHRs lag that of larger groups.[1] One study, for example, found that only 7 percent of practices with one or two physicians had at least a basic electronic health record, compared to 22 percent of practices with 11-50 physicians and 33 percent of practices with more than 50 physicians.[2] To put these statistics in perspective, almost half of all physicians in 2008 practiced in groups of five or fewer physicians, while almost a third practiced solo or in two-physician groups.[3] While all physician practices face challenges when adopting

HIT, barriers for small practices in particular include lack of technical expertise and knowledge of best practices, lack of financial resources, difficulties and disruptions associated with installation and implementation, the need for staff to work longer hours to enter clinical data and redesign workflow, loss of revenue, lack of understanding of the potential benefits of HIT use, and use of suboptimal products.[4]

IPAs and HIT Adoption

Different types of organizations have supported small physician practices in adopting and using electronic health records. For example, the Massachusetts eHealth Collaborative and the New York City Primary Care Information Project both have helped hundreds of independent physician practices implement EHRs by providing start-up funds and technical support.[5] Likewise, hospitals have facilitated adoption of EHRs by affiliated, independent physician practices.[6]

This qualitative study examined the role of another type of organization, independent practice associations, or IPAs, in assisting small physician practices to adopt and use EHRs and health information exchange (see Data Source). The study focused on the activities of five organizations—one management services organization, Physician Health Partners, that supports four IPAs; and four other IPAs: Genesis Physicians Group, Huron Valley Physicians Association, Physicians Medical Group of Santa Cruz County (PMG) and Mid Rogue Independent Physician Association (see box on page 4 for more about the organizations).

IPAs are legal entities comprised of independent physicians who join to receive support services related to health plan contracting, quality improvement, clinical integration initiatives and other activities.[7] IPAs have been in operation since the mid-to-late 1970s, after being recognized in the Health Maintenance Organization (HMO) Act of 1973 as a mechanism for physicians to participate in HMOs while maintaining independent practices.[8] HMOs typically contract with IPAs on a capitated basis, or a fixed per-member, per-month payment, and in turn, IPAs contract with individual physician practices to care for patients. Over time, IPAs grew in size and number as the growth of tightly managed care continued. Following the physician and consumer backlash against managed care in the mid-1990s, the prevalence of HMO products and associated risk-based contracts with IPAs decreased. Nonetheless, a sizeable number of IPAs continue to operate across the country to support independent physician practices. According to study respondents, IPAs typically do not dictate strategy or policy to member practices but rather provide vision, leadership and assistance with activities members wish to pursue.

IPAs are of particular interest because they provide examples of how health information technology, including EHRs, can be supported through network-based arrangements of otherwise independent physician practices. Unlike most HIT vendors or others promoting HIT use, IPAs are physician-led organizations with established and trusted relationships with member physicians. At the same time, IPAs are different than other organizational mechanisms to align physicians, such as hospital ownership of physician practices, integrated delivery systems or large multispecialty physician groups, because physicians remain independent. IPAs' experiences in supporting small physician practices' adoption and use of health information technology can offer lessons for others seeking to help small practices adopt and use HIT.

HIT Activities of IPAs

Four of the five organizations studied—Physician Health Partners, Genesis Physician Group, PMG and Mid Rogue—have actively assisted—for example, through financial incentives and training—the adoption of EHRs by physician members. Four of the five organiza-

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Data Source

This study examined health information technology adoption and use activities undertaken by four independent practice associations and one management services organization. Researchers conducted telephone interviews between March and May 2010 with 27 people who either worked in or were affiliated with the five organizations—an average of five interviews per organization. Organizations were initially identified through expert recommendations and Internet searches and were purposefully selected to represent geographically diverse organizations that were working with physician practice members on various initiatives related to adoption and/or use of clinical information technology. Respondents included IPA administrative and clinical leaders, practicing clinicians who belong to the IPA, and outside collaborators, such as HIT vendors. Each interview was conducted using a two-person team with semi-structured interview protocols. Interview notes were summarized and jointly reviewed for completeness and accuracy.

tions—Genesis Physician Group, PMG, Mid Rouge and Huron Valley—have developed approaches to connect practices and external entities via various forms of HIE. Other HIT activities include development of disease registries for population-level analysis and management.

Electronic health record activities. IPA approaches to EHR adoption varied, with all providing purchasing guidance and some providing financial support. Another key decision was whether to support a common EHR across member practices or allow members a choice of EHR systems.

Physician Health Partners supports physician practices in its four affiliated IPAs with adoption of a common electronic health record by explaining the process of EHR adoption and helping practices with workflow re-engineering to maximize benefits from the system. Physician Health Partners is affiliated with Centura Health, a large Colorado hospital system that holds a master contract with the EHR vendor. Centura pays 85 percent of the upfront and ongoing costs of the software and related IT support—beyond that provided directly by the IPA—for affiliated physicians, with the remainder the responsibility of individual physicians as required by federal law.[9]

In contrast, Genesis Physicians Group contracts with multiple EHR vendors and supports a group-purchasing program to encourage member practices to choose their own systems. As an IPA, Genesis bears no direct cost but negotiates discounts for members. Like Genesis, members of PMG choose their own EHR systems to best fit the needs of their practices. EHR and connectivity costs are shared by practices and the IPA. In addition, PMG provides a fee-based menu of options to members for HIT support and services, including comprehensive technology support, hardware supply and maintenance, installation, and data backup solutions.

Mid Rogue provides support to physician practices for adoption and use of an EHR system, Prime Suite, which includes access to electronic clinical chart information, e-prescribing and computerized physician order entry, or CPOE. The IPA supports affiliated practices in several ways. First, Mid Rouge covers a portion of the cost of EHRs for members. Second, it provides technical assistance to affiliated practices using certified trainers employed by the IPA. Third, Mid Rogue serves as the "host" of the EHR, relieving individual practices of IT processing and operational burdens. Mid Rogue plans to assist practices in achieving meaningful use standards over the next several years to help ensure the practices receive federal incentive funds.

Health information exchange activities. IPA approaches to health information exchange also varied. For example, some HIE efforts provided access to a broad range of clinical patient information, while others focused on such specific tasks as patient scheduling. Some used Web-based portals, while others were working to establish linkages through EHRs.

Mid Rogue, Genesis Physicians Group, Huron Valley and PMG assist members with HIE through such activities as developing online portals to connect diverse EHR systems among member practices. They also support broader, community-wide information exchange involving hospitals, community health centers and other organizations.

In conjunction with its EHR system, Prime Suite, Mid Rogue offers affiliated practices access to local hospital and laboratory data contained in a central data warehouse through a Web portal. When setting up the system, Mid Rogue invested significant staff effort to collect and compile

Policies Promoting HIT Adoption and Use

The 2009 Health Information Technology for Economic and Clinical Health Act (HITECH), part of the American Recovery and Reinvestment Act, includes significant financial incentives for physicians and hospitals to adopt and demonstrate meaningful use of certified electronic health records. A particular focus of the law is to promote EHR adoption in small, independent physician practices.

The HITECH provisions promote HIT adoption in several ways. First, the law provides graduated financial incentives through Medicare and Medicaid, with the most potential funding going to providers demonstrating the earliest so-called meaningful use of EHRs. And, the law includes penalties for Medicare-eligible physicians who fail to demonstrate meaningful use of EHRs by 2015. HITECH also created 62 regional extension centers (RECs) to help providers adopt and meet meaningful-use requirements that providers must achieve to receive incentives. Organized by the Office of the National Coordinator for Health Information Technology (ONC), the RECs have a special focus on assisting primary care providers, practices with fewer than 10 clinicians, and practices in rural and other underserved settings.

Another HITECH focus is health information exchange of clinical information among providers. Through ONC's State HIE Program, funding is provided to states to increase connectivity and enable the secure flow of information across the health care system. To meet the meaningful-use standards, providers must demonstrate that they can share information securely.

The Patient Protection and Affordable Care Act of 2010 also includes health system reforms, such as creation of accountable care organizations, that will likely encourage physicians to adopt and use HIT.

Independent Practice Associations: Lessons in HIT Adoption and Use

Physician Health Partners, Denver, is a management services organization established in 1996 that contracts with four IPAs representing more than 300 primary care physicians—the largest includes about 180 physicians and the smallest includes about 20-25 physicians. The IPAs contract with PHP to provide IPA management, provider relations, contracting, financial and data management, and utilization and case management services. PHP negotiates risk contracts with health plans on behalf of the IPAs. Each IPA has its own board, which makes contracting decisions and holds contracts, but the IPAs have no staff working on administrative or infrastructure-related issues. PHP has undertaken efforts to improve information technology infrastructure for the four IPAs, including implementation and use of electronic health records and patient registries among member practices to improve clinical integration and health care quality.

Genesis Physicians Group, Dallas, formed in 1986, is the largest IPA in north Texas with approximately 1,425 physician members—about 30 percent are primary care physicians—in about 700 practices in the Dallas-Fort Worth area. Genesis provides payer contract management, claims resolution, credentialing, regulatory updates and guidance, and continuing medical education, among other services. Genesis supports an EHR group-purchasing program for members and has established Genesis Connect, a single sign-on portal that connects different practice management systems and EHRs.

Huron Valley Physicians Association, Ann Arbor, Mich., is an IPA established in 1985 that now has more than 700 members—three-fourths are specialists—in roughly 300 practices, ranging in size from solo practices to 40-60 physician groups. Huron Valley works with the only hospital system in the area with an open-staff model, St. Joseph Mercy Health, which is part of Trinity Health System. The IPA provides health plan contract management, credentialing, and clinical and practice management services, education, and other services to members. The IPA provides members with access to an e-prescribing system, patient registries and an online portal that facilitates scheduling, prescription refills and other functions. Huron Valley also maintains a centralized data warehouse populated with clinical registry information combined with all-payer claims data.

Physicians Medical Group of Santa Cruz County, Santa Cruz, Calif., was established as an IPA in 1992. With more than 300 physicians, PMG offers the largest network of independent physicians in Santa Cruz County, of which about 30 percent are primary care physicians. PMG has about 100 small practices, comprised of one to three physicians each. There are a few larger practices participating in PMG with five to eight physicians and one group with 30 physicians. PMG is the primary sponsor of the Santa Cruz Health Information Exchange, one of the oldest and most advanced multi-stakeholder exchanges in the country. More recently, PMG has begun providing support to member practices implementing EHRs with an emphasis on allowing connection to the HIE, which was previously a Web-based portal only. PMG also provides financing for members seeking to establish EHRs in their practices.

Mid Rogue Independent Physician Association, Grants Pass, Ore., is located in rural southwest Oregon and was founded in 1994. The IPA is owned by 78 physician shareholder members and includes a network of primary care physicians, specialists, independent nurse practitioners, behavioral health counselors, optometrists, alternative medicine specialists and physician assistants. The IPA has risk-based contracts with the state of Oregon for Medicaid and the federal government for Medicare. The IPA also recruits physicians and other clinicians to the rural market, provides clinical and practice management support services, and leads quality improvement and clinical integration efforts among members. The IPA provides a Web portal for various HIT functions, including e-prescribing, computerized physician order entry, and a Web-based interface for local laboratory and hospital clinical information.

historical clinical patient data. Mid Rogue practices that have implemented Prime Suite have an interface with the local hospital to access laboratory and imaging reports and with independent labs to access report results. Mid Rogue also received a $150,000 state grant to implement interoperable data transmissions between practice EHRs and the state's immunization database, allowing for real-time access to patient immunization histories.

Genesis Physicians Group introduced a single, sign-on portal, Genesis Connect, to enable 40 EHR systems and 75 practice management systems used by members to exchange clinical and practice management information with one another and manage referrals for patients they mutually care for. The IPA financed Genesis Connect, and ongoing expenses are supported by members using the portal and limited physician payments.

Huron Valley's approach to HIE involves the use of an online portal to

facilitate electronic referrals among member practices, as well as patient scheduling, prescription refills and online bill pay. Huron Valley negotiated volume discounts from the vendor and subsidizes about half of practices' costs to adopt and use the portal.

The Santa Cruz Regional Health Information Exchange, which PMG spearheaded along with others in 1996, connects nearly 80 percent of the county's physicians, as well as hospitals, county health clinics, national and local reference laboratories, imaging centers, safety net clinics, and other providers. Data are available to more than 700 users via a secure Web site.

Two of the organizations, Physician Health Partners and Huron Valley, support Web-based registries to help member practices track patient care information. Physician Health Partners supports use of a Web-based registry that allows practices to track services provided to adults and children with chronic conditions, including diabetes, heart disease and asthma. The goal is for the practices' common EHR system to replace the registry and eliminate duplicative data entry in patients' medical records and the registry. Huron Valley also uses a Web-based registry to track clinical service information. Practices can use the registry to monitor population-based health measures over time and information for individual patients. For example, the registry allows monitoring of hemoglobin A1C, or blood sugar level, trends over time for patients with diabetes.

Overcoming Challenges

Common challenges associated with IPA support of HIT adoption and use in physician practices included dealing with suboptimal functionality and interoperability of EHRs, defining the business case for HIT adoption, securing practice buy in, and providing ongoing training and support to physician practices. To overcome these challenges, organizations combined strategies focused on both top-down organizational support and bottom-up physician leadership and input.

Although most clinicians see long-term benefits of HIT, they, nonetheless, vary in their level of interest and willingness to invest time and resources in adoption efforts—even with new incentives under HITECH. Early adopters have experienced technical challenges with set up and implementation, given the newness of the technologies and the lack of technological know-how of practice staff. Many practices also have concerns or have experienced disruptions in productivity as new systems come online. Nonetheless, the IPAs studied have made progress and are committed to moving forward with HIT adoption activities.

The extent of participation or take-up rate of HIT by the IPAs' member practices varied, but all have experienced recent growth and expect more growth, especially in light of the HITECH incentives. Rates of EHR use by member practices ranged from 20 percent to 60 percent across the five organizations. Among those implementing HIE, PMG's long-established system has an 80 percent participation rate among practices, while Genesis' newer system has a participation rate of about 10 percent of practices, with a goal of nearly 100 percent over the next four years.

Facilitating EHR choice and interoperability. IPA respondents said finding a particular EHR system or group of systems to meet all of their selection criteria—commonly cost, functionality, quality of technical support, ease of use and adaptability for HIE—was challenging. Suboptimal EHR functionality emerged as the most often-cited challenge when choosing a system. For instance, several respondents noted that disease registry functions often are not part of EHRs currently on the market, forcing practices to use two systems. Respondents said they had to settle for less than ideal EHRs because no current EHR does what practices and IPAs would like them to do. In the absence of ideal EHRs, some of the IPAs—Genesis and PMG—have elected to support multiple EHRs.

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In addition to tackling issues of functionality, IPAs faced challenges in determining how and if EHR systems could be made interoperable, both within the organization—across practices that earlier adopted different systems—and externally, particularly with hospitals. Some IPAs chose to address interoperability head on, but others were taking a wait-and-see approach. Genesis, recognizing that many members had already chosen EHR systems, developed an HIE portal to connect diverse EHRs rather than sponsor a particular EHR at the IPA level. On the other hand, Huron Valley delayed EHR adoption because the major hospital system in the community had not yet chosen an EHR, and the IPA was worried about future compatibility issues.

Because they represent an existing network of physician practices, the IPAs studied provide a useful platform to enhance interoperability and generate clinical information exchange. This platform includes a group of practices in a relatively defined geographic area

While IPA leaders play a critical role in negotiating with vendors and acting as facilitators of the HIT selection process, their most important role may be providing strong leadership. Respondents emphasized that without physician leadership and rallying of fellow physicians, HIT adoption efforts would fall flat.

serving a generally identifiable population of patients. However, because there is no one-size-fits-all EHR and because physician members of IPAs retain independence to choose their own systems, these IPAs—unlike more integrated organizations—face limits in establishing seamless HIT across their members.

Enhancing the business case for HIT adoption. Despite the widely held belief that HIT adoption ultimately will save costs and improve quality, several respondents suggested the business case—adequate financial incentives and return on investment—remains somewhat unclear to both IPAs and member practices, especially in the short term. Some accumulating research indicating the benefits of HIT[10] and the potential for enhancement or loss of Medicare and Medicaid reimbursements under HITECH add new dimensions to the business case for EHR adoption, but respondents indicated the perceived return on investment of EHRs among physicians and IPAs continues to evolve. For instance, an IPA leader emphasized the dearth of meaningful measures to quantify the clinical impact of adopting EHRs.

Research also has shown both perceived strengths and limitations in use of HIT for enhancing communication among clinicians and between clinicians and patients.[11] In the future, value-based purchasing reforms may provide more incentives to achieve clinical outcomes, but if HIT is not shown to bring about improvements in those outcomes—and direct funding for HIT diminishes over time—the currently enhanced business case for HIT may not be sustainable.

Nonetheless, the IPA respondents on balance expected that HIT will have a critical role in delivery of health care in the future. Thus, they have taken a range of approaches to supporting the business case for individual practices, including negotiating contracts with vendors to make HIT adoption more affordable to practices and offering training above and beyond vendor support to help practices become more efficient users of EHRs.

Despite this support, physician practices usually still faced significant start-up and maintenance costs and experienced productivity loss while users became accustomed to EHRs. A Physician Health Partners respondent emphasized that while some, but not all, physician practices have reported increases in revenue through productivity gains and reductions in labor costs since adopting EHRs, the initial investment and productivity loss still give pause to practices considering EHR adoption. Therefore, the organization tries to provide member practices with sufficient and candid information about the process of EHR adoption to help a practice make an informed choice.

While smaller physician practices in IPA networks are unlikely to have access to the kind of financial resources available to practices in large hospital or integrated delivery systems, the IPAs studied offered some advantages for enhancing the business case for HIT adoption and allowing practices to remain independent. In particular, the IPAs provided expertise to help practices investigate the best options for different practice circumstances and offered access to licensure agreements or other financing vehicles that can reduce investment costs for practices.

Securing member practices' buy in through physician leadership. Physicians face a great deal of inertia when considering whether to adopt HIT. In the absence of peer-to-peer advice and persuasion, respondents reported it was difficult to convince some physicians that HIT adoption is worthwhile. While IPA leaders play a critical role in negotiating with vendors and acting as facilitators of the HIT selection process, their most important role may be providing strong leadership. Respondents emphasized that without physician leadership and rallying of fellow physicians, HIT adoption efforts would fall flat.

In most or all of the IPAs studied, physician leaders—physicians who believe in HIT adoption and understand how it can enhance clinical practice—had an ongoing role in convincing other physicians that HIT adoption is feasible and beneficial in the long run. One respondent took the concept of physician leadership to another level, noting the value of a physician "tech guru"—a physician with sophisticated technical knowledge who can bridge the gap between physicians and vendors or internal technical support teams. This role was crucial because, as several respondents shared, successful HIT adoption is as much about understanding and re-engineering workflow as it is about learning the software. Having a physician who can explain the clinical side of this equation to the technical experts—and the technical side to the clinicians—was considered invaluable.

Ongoing training and support. Many

The availability of assistance from multiple entities will increase the importance of local planning, stakeholder communication, and ongoing assessment of how best to align and coordinate efforts.

respondents noted the training offered by HIT vendors is inadequate to get new systems up and running. As a result, most of the IPAs studied developed internal training teams to fill the gaps. The key to developing effective training sessions, respondents emphasized, is to allow for plenty of give-and-take between technical experts, physicians and practice staff. One-way communication from technical staff to practice staff is not an effective means of training, because it does not allow practice staff enough opportunity to offer insights on integrating HIT with practice workflows, how to optimize the functionality of the system, and how to minimize productivity loss. Again, the presence of a physician tech guru can help ease these discussions by translating various points of view. IPAs also were able to tailor training to their members' particular office structures, workflows and needs because of their knowledge of these features, given their established relationship and the other non-HIT related services they provide.

IPAs helped bridge gaps in training and technical support by providing technical expertise that most individual practices lack and a clinically oriented understanding of practices' training and support needs that many vendors lack. Unlike software vendors, IPAs' relationships with members are consistent and usually long term.

Policy Implications

Fueled by substantial new funding and incentives, physician practice adoption of HIT appears to be intensifying nationwide. Nonetheless, the barriers to HIT adoption and use by small, independent physician practices are considerable, with a strong need for tailored practice-level support to help small practices make the transition. The lessons of IPAs in supporting member practices can offer important insights to policy makers and others interested in fostering adoption and greater use of HIT.

This study highlights how small physician practices seeking to implement HIT can benefit from technical assistance offered by larger entities with HIT experience and relevant technical expertise. Under the HITECH Act, the federal government is responding to this growing need with the recent creation of regional extension centers (RECs). Physician practices can enroll with a REC and receive technical assistance from consultants, obtain access to group-purchasing options and choose from among qualified HIT vendors. Other government entities, such as quality improvement organizations, and private-sector stakeholders, such as local medical societies and hospital systems, also are increasing support to physician practices. Organizations focusing on transformation of primary care practices to patient-centered medical homes also may be an important source of support for HIT implementation.

Based on the experiences of the IPAs studied, a key lesson for the array of emerging entities supporting HIT adoption in small practices is that physician practices can benefit from network-based arrangements in local markets—even if remaining otherwise independent of larger groups or delivery systems. These networks may exist already in the form of IPAs or physician hospital organizations and could expand membership and take on new HIT support activities. Or, new networks may form in response to health care reform initiatives, such as the development of accountable care organizations.[12] Another key finding is that identifying physician leaders who can bridge the gap between technology and clinical care is a powerful way to help physicians in small practices overcome barriers to HIT adoption.

Finally, given significant new HIT funding, growing awareness of physicians' technical assistance needs and the proliferation of entities charged with fostering HIT, the potential for overlapping efforts exists. The availability of assistance from multiple entities will increase the importance of local planning, stakeholder communication, and ongoing assessment of how best to align and coordinate efforts. ■

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