RUPRI Center for Rural Health Policy Analysis
Rural Policy Brief

Brief No. 2011-2 April 2011 www.public-health.uiowa.edu/rupri/

Use of Health Information Technology in Support of Patient-Centered Medical Homes Is Low among Non-metropolitan Family Medicine Practices

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Key Findings

- Use of HIT applications that support patient-centered medical homes (PCMHs) is low among family medicine practices; fewer than 30% report using 8 of 11 relevant applications.
- Non-metropolitan physician practices are less likely than metropolitan practices to be using HIT applications that support PCMHs.
- Current use of electronic information is predominantly for administrative purposes, not patient care.

Introduction

The term "medical home" has been in use since at least 1967, when the American Academy of Pediatrics published *Standards of Child Health Care.* It defined medical home care as "accessible, continuous, comprehensive, family-centered, coordinated, and compassionate."[1] The *Future of Family Medicine* report,[2] published in 2004, is generally credited with initiating the current national conversations around the principle of a patient-centered medical home (PCMH).[3] Interest in the concept of a medical home was heightened in 2008, when the American Medical Association's House of Delegates voted to adopt a core set of PCMH principles endorsed by the Patient-Centered Primary Care Collaborative, a broad-based coalition of large national employers, major primary care physician associations, health care quality improvement associations, and others.[4] Section 3502 of the Patient Protection and Affordable Care Act of 2010 provides more momentum by creating a medical home program within Medicare. Are physician practices, especially non-metropolitan primary care practices, ready to become PCMHs? We use a nationwide survey of physician practices to partially answer this question, focusing on the use of health information technology (HIT).

Funded by the Federal Office of Rural Health Policy, Health Resources and Services Administration, U.S. Department of Health and Human Services (Grant #U1C RH20419)

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Use of HIT That Could Support PCMHs in Primary Care Physician Practices: Metropolitan—Non-metropolitan Differences

We analyze data describing use of HIT to complete selected processes of care and communication that characterize a well-functioning PCMH, focusing on the dominant provider type in non-metropolitan places, family practice. The 2009 Practice Profile I Survey, conducted by the American Academy of Family Physicians (AAFP) from June to August 2009, provides data from 1,156 active AAFP members. Weights were calculated for all respondents to adjust the demographics of the dataset to a closer match with the demographic characteristics of the active AAFP membership. Table 1 uses that data to show rates of using HIT applications that would support PCMHs.

Table 1. Incorporation of Select Health Information Technology Applications, All Metropolitan and Non-metropolitan Practices

Health Information Technology Applications	Overall	Metropolitan	Non-metropolitan	
Electronic Health Record	52.9%	53.8%	50.2%	ns
e-Prescribing	43.5%	45.5%	38.3%	p<0.05
Personal Digital Assistant	42.3%	40.5%	48.4%	p<0.05
E-mail with Patients	30.3%	31.2%	28.4%	ns
Web-Based Information for Patients	29.6%	31.6%	24.1%	p<0.05
Registries or Patient Tracking System	23.9%	26.2%	18.1%	p<0.01
Electronic Performance Measurement Reporting	21.3%	23.6%	14.7%	p<0.01
Online Scheduling of Appointments	16.4%	18.0%	12.2%	p<0.05
Clinical Practice Guideline Software	14.0%	15.0%	11.3%	ns
Outcomes Analysis	13.9%	15.5%	9.5%	p<0.05
Web-Based Consults or e-Visits	6.0%	6.9%	3.7%	ns

Source: 2009 American Academy of Family Physicians, Practice Profile I Survey.

Family medicine practices located in metropolitan areas were more likely than their non-metropolitan counterparts to have incorporated 6 of the HIT applications that support functional PCMHs. Non-metropolitan practices were more likely than their metropolitan counterparts to have incorporated the HIT practice of "using a PDA."

Most of the components analyzed require a significant investment in information technology (e.g., web-based information, registries, electronic performance measurement, etc.), which might be seen to favor larger group practices. Indeed, if only small practices (those with 3 or fewer total providers) are considered, the use of "web-based information for patients" is significantly different (27.5% metropolitan, 15.4% non-metropolitan).

Considering only the largest practices (those with more than 10 total providers), 2 HIT applications have been differentially incorporated by metropolitan and non-metropolitan practices (Table 2).

Table 2. Incorporation of Select Health Information Technology Applications, Large Metropolitan (>10 Providers) and Non-metropolitan Practices

Health Information Technology Application	Overall	Metropolitan	Non-metropolitan	
Electronic Health Record	72.9%	74.7%	66.3%	ns
e-Prescribing	55.7%	57.5%	49.5%	ns
Use PDAs in Practice	46.6%	46.8%	45.8%	ns
E-mail with Patients	39.5%	40.6%	35.5%	ns
Web-Based Information for Patients	48.2%	50.0%	42.1%	ns
Registries or Patient Tracking System	40.3%	44.9%	24.3%	$p<0.01$
Electronic Performance Measurement Reporting	40.9%	43.3%	32.7%	ns
Online Scheduling of Appointments	28.2%	32.0%	14.9%	$p<0.05$
Clinical Practice Guideline Software	25.5%	26.4%	22.4%	ns
Outcomes Analysis	29.9%	33.1%	18.7%	ns
Web-Based Consults or e-Visits	8.6%	9.9%	3.7%	ns

Source: 2009 American Academy of Family Physicians, Practice Profile I Survey.

Conclusions

The data reported in this policy brief indicate that a high percentage of all family medicine practices have considerable room for growth to be ready to function as PCMHs, based on their current uses of HIT. Rates of HIT use are low across all practices; only 3 of 11 applications are used by more than 30% of family medicine practices. There are a number of indications that non-metropolitan practices are even less prepared, with significantly lower rates of adoption in 6 of the 11 HIT applications.

The data reported here suggest important steps that should be considered in further development of PCMHs as a preferred method of delivering services. The investment of time, resources, and technical assistance will be substantial for small non-metropolitan practices in particular. With that in mind, any pilots or demonstrations of the PCMH concept (private or public) should include a focus on small non-metropolitan practices. Those practices may never be able to meet all the preconditions for a "fully certified" PCMH, but pilot or demonstration projects may lead to design modifications that facilitate their participation in the PCMH movement.

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