Development of a clinical information system in an Underserved Community Clinic: A Community Partnered Participatory Research Approach

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Abstract and Objective

Community Partnered Participatory Research (CPPR) offers a research approach which addresses the barriers to Health Information Technology (HIT) use in medically underserved communities. It advocates for equal community and academic partnership. Here a team of academic informaticians and health care providers from a community health center, serving a mostly uninsured minority patient population, are together using a CPPR approach in order to develop a clinical information system) for improved diabetes disease management.

Keywords:

Clinical information system, Community clinic, Disease registry, Diabetes

Introduction

Community clinics have been identified as prime targets for the adoption of HIT innovations; yet a recent first of its kind comprehensive survey of HIT use among California Community Clinics suggests that while 96% of the clinics have diabetes registries in place, only 31% report that all providers use the registries [1]. The discrepancy between the pervasive presence and low utilization of diabetes registries in such clinics suggests the presence of barriers (such as lack of sophisticated in-house IT support, software customization and stakeholder "buy in") that prevent a more wholehearted adoption. Recognition of these issues has led to a unique multi-disciplinary collaboration between academic researchers and clinicians at an urban primary care community clinic.

Methods

Developing a clinical information system to manage diabetes care was a high priority issue for this clinic since they have a high burden of chronic diseases, particularly diabetes (50% prevalence). With the identification, engagement and "buy-in" of key stakeholders secured, the core work team of eight individuals from the university and the clinic met bimonthly for 18 months. Table 1 encapsulates the guiding principles we used, outlined by Jones & Wells in their JAMA article on CPPR [2].

Table 1- Twelve Guiding Principles of CPPR

1) Joint leadership
2) Written agreement
3) Regular communication
4) Transparent process understood by all participants
5) Solve problems collectively
6) Transparent process of evaluating progress/impact
7) Balance Academic and community goals
8) Financial/ in-kind support for community partners
9) Facilitate community leadership and growth
10) Understand community history and priorities
11) Respect of community values and time frames
12) Seek support and recognition from leaders of the Academic institution for CPPR & time requirements.

Results

This CPPR collaboration has: a) allowed the development of an electronic diabetes registry which is geared to addressing conditions found in safety net clinics (e.g., patients may see a different primary care provider on each clinic visit); and b) provided a process and the resources to the team to develop and tailor the diabetes registry to the specific needs of the clinic, with the potential to implement in other similar clinics.

Conclusion

Given the low rates of adoption of HIT solutions, such as the diabetes registry, in safety net settings, a CPPR approach may be useful for introducing HIT solutions into these settings.

References

[1] The State of Health Information Technology in California: Use Among Physicians and Community Clinics. Oakland, CA: California Healthcare Foundation, 2008.

[2] Jones L, Wells K. Strategies for academic and clinician engagement in community-participatory partnered research. JAMA. 2007;297(4):407.