Effective Health Care

Mobile / Wireless Technology to Connect Patients to Electronic Health Records Nomination Summary Document

Results of Topic Selection Process & Next Steps

- Mobile/wireless technology to connect patients to electronic health records (EHR) was found to be addressed by existing and in-process AHRQ reports. Given that the existing and in-process reports cover this nomination, no further activity will be undertaken on this topic.

  - Gibbons MC, Wilson RF, Samal L, Lehmann CU, Dickersin K, Lehmann HP, Aboumatar H, Finkelstein J, Shelton E, Sharma R, Bass EB. Impact of Consumer Health Informatics Applications. Evidence Report/Technology Assessment No. 188. (Prepared by Johns Hopkins University Evidence-based Practice Center under contract No. HHSA 290-2007-10061-I). AHRQ Publication No. 09(10)-E019. Rockville, MD. Agency for Healthcare Research and Quality. October 2009. Available at: http://www.ahrq.gov/downloads/pub/evidence/pdf/chiapp/impactchia.pdf

  - In-process report: *Enabling Patient-Centered Care through Health Information Technology*. A review protocol, including draft key questions, background information, and scope of the review, is available at: http://www.ahrq.gov/clinic/tp/pcchittp.htm.

  - To sign up for notification when this and other AHRQ Evidence-based Practice Center Program topics are posted, please go to https://subscriptions.ahrq.gov/service/multi_subscribe.html?code=USAHRQ.

Topic Description

Nominator: Organization

Nomination Summary: This nomination concerns a telemedicine study in using mobile/wireless technology connected to medical devices in order to store patient readings in common electronic health records to improve self-managed care and health care costs. This nomination considers a range of telehealth technologies. The nominator states that they "are looking to connect a patient to their electronic health record."

Staff-Generated PICO
Population(s): All patients, particularly those with chronic illness such as diabetes mellitus, asthma, obesity, chronic obstructive pulmonary disease, and hypertension
Intervention(s): Mobile/wireless technology that connects patients to their electronic medical records and health care providers
Comparator(s): Existing telehealth systems
Outcome(s): Self-managed care, compliance, rates of emergency department use, and health care costs

**Key Questions
from Nominator:** None

<table>
<tr><td style="background-color:#F5C96E; text-align:center; font-weight:bold;">Considerations</td></tr>
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- The topic was found to be addressed by existing and in-process AHRQ reports.

- In an existing AHRQ Evidence-based Practice Center report titled *Impact of Consumer Health Informatics Applications*, consumer health informatics is defined as any electronic tool, technology, or electronic application that is designed to interact directly with consumers, with or without the presence of a health care professional that provides or uses individualized (personal) information and provides the consumer with individualized assistance. This report includes the consideration of internet and mobile phone technology. Although the data is limited, the report concludes that select consumer health informatics applications may effectively engage consumers, enhance traditional clinical interventions, and improve both intermediate and clinical health outcomes. Key questions from the report include:

  1. What evidence exists that CHI applications impact:
     a. Health care process outcomes (e.g., receiving appropriate treatment) among users?
     b. Intermediate health outcomes (e.g., self-management, health knowledge, and health behaviors) among users?
     c. Relationship-centered outcomes (e.g., shared decisionmaking or clinician-patient communication) among users?
     d. Clinical outcomes (including quality of life) among users?
     e. Economic outcomes (e.g., cost and access to care) among users?
  2. What are the barriers that clinicians, developers, consumers, and their families or caregivers encounter that limit utilization or implementation of CHI applications?
  3. What knowledge or evidence exists to support estimates of cost, benefit, and net value with regard to CHI applications?
  4. What critical information regarding the impact of CHI applications is needed to give consumers, their families, clinicians, and developers a clear understanding of the value proposition particular to them?

- An in-process report titled *Enabling Patient-Centered Care through Health Information Technology* focuses on the development of a comprehensive understanding of the impact of health information technology (IT) applications developed and implemented to enhance the provision of patient-centered care. This report aims to review the evidence on the impact of currently developed health IT applications on patient-centered care, identify the gaps in the literature, and recommend future research endeavors in order to better assess these IT applications' impact on patient-centered care. Interventions will broadly include computer-based and telecommunication information systems designed to assist clinicians in providing medical care that is respectful of and responsive to individual patient preferences, needs and values. Draft key questions from this report include:

  1. What evidence exists that health IT applications which enable clinicians to provide patient-centered care or patients to elicit patient-centered care are effective in improving:
     a. Clinical outcomes for patients (including quality of life)?
     b. Health care process outcomes (e.g., receiving appropriate treatment)?

    c. Intermediate outcomes such as patients' improved health knowledge, health behaviors and physiologic measures, patient satisfaction, and reduced costs?

    d. Responsiveness to the needs and preferences of individual patients?

    e. Improving shared decision-making between patients, their families, and providers, clinician communication, or providing patients and clinicians access to medical information?

    f. How does the impact on improving clinical, health care process, intermediate, or responsiveness outcomes vary by type of health IT application?

2. What are barriers, drivers or facilitators that clinicians, developers, and their families or caregivers encounter that may impact implementation and use of health IT applications to enable patient-centered care?

    a. How do these barriers, drivers or facilitators vary by type of health IT application?

3. What knowledge or evidence deficits exist regarding needed information to support estimates of cost, benefit, impact, sustainability, and net value with regard to enabling patient-centered care through health IT? Discuss gaps in research, including specific areas that should be addressed and suggest possible public and private organizational types to perform the research and/or analysis.

4. What critical information regarding the impact of health IT applications implemented to enable patient-centered care is needed in order to give consumers, their families, clinicians, and developers a clear understanding of the value proposition particular to them?

■ The following in-process AHRQ health IT reports may also be of interest: *Enabling Health Care Decisionmaking through the Use of Health IT* and *Enabling Medication Management through Health IT*. To sign up for notification when these and other AHRQ Evidence-based Practice Center Program topics are posted, please go to https://subscriptions.ahrq.gov/service/multi_subscribe.html?code=USAHRQ.