



# Effective Health Care

## Diabetes Management Programs Nomination Summary Document

### Results of Topic Selection Process & Next Steps

- Diabetes management programs was found to be addressed by two in-process AHRQ Effective Health Care Program reviews: 1) *Closing the Quality Gap Series: Comparative Effectiveness of Medication Adherence Interventions*, and 2) *Comparative Effectiveness of Case Management for Adults With Medical Illness and Complex Care Needs*. Given that the in-process reviews cover this nomination, no further activity will be undertaken on this topic.
  - *Closing the Quality Gap Series: Comparative Effectiveness of Medication Adherence Intervention*. To view a description and status of the research review, please go to: <http://www.effectivehealthcare.ahrq.gov/index.cfm/search-for-guides-reviews-and-reports/>.
  - *Comparative Effectiveness of Case Management for Adults With Medical Illness and Complex Care Needs*. To view a description and status of the research review, please go to: <http://www.effectivehealthcare.ahrq.gov/index.cfm/search-for-guides-reviews-and-reports/>.
  
- To sign up for notification when these and other EHC Program topics are posted, please go to <http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list1/>.

### Topic Description

**Nominator:** Organization

**Nomination Summary:** The nominator is interested in the effectiveness of aggressive between-visit patient outreach in improving outcomes (including HbA1c serum levels) for patients with type 2 diabetes mellitus. They are particularly interested in the subpopulations of Hispanics, other minorities, low-income groups, and women.

**Staff-Generated PICO**

**Population(s):** Adults with type 2 diabetes mellitus  
**Intervention(s):** Aggressive between-visit patient outreach  
**Comparator(s):** Standard care  
**Outcome(s):** HbA1c serum levels

**Key Questions from Nominator:** 1. For diabetic patients, what is the effectiveness of a routine care plan patient outreach compliance program?

## Considerations

- The topic meets EHC Program appropriateness and importance criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)
- This topic was found to be addressed by two in-process AHRQ comparative effectiveness reviews.

### 1) Closing the Quality Gap Series: Comparative Effectiveness of Medication-Adherence Interventions Draft Key Questions

#### Question 1

This question contains two parts:

- a. Among patients with chronic or acute diseases with self-administered medication prescribed by a provider, what is the comparative effectiveness of interventions directed at patients or providers versus usual care or other interventions in improving medication adherence?
- b. For the subset of patients with improvements in medication adherence, what is the comparative effectiveness of medication adherence interventions versus usual care or other interventions in improving other outcomes (i.e., biomarkers, clinical outcomes [mortality and morbidity], quality of life, patient satisfaction, health care utilization [and associated costs], and quality of care)?

#### Question 2

This question contains two parts:

- a. Among patients with chronic or acute diseases with self-administered medication prescribed by a provider, what is the comparative effectiveness of changes in health-delivery systems (such as delivery of interventions through allied health professionals) or policy (such as copay or refill practices) versus usual care or other interventions in improving medication adherence?
- b. For the subset of patients with improvements in medication adherence, what is the comparative effectiveness of medication-adherence interventions versus usual care or other interventions in improving other outcomes (i.e., biomarkers, clinical outcomes [mortality and morbidity], quality of life, patient satisfaction, health care utilization [and associated costs], and quality of care)?

#### Question 3

Does the effectiveness of medication-adherence interventions across conditions vary by the following characteristics of interventions?

- Multicomponent versus single component
- Theory-based vs. non-theory-based
- Mode of delivery (i.e., human, video, written material, computer/internet/wireless, and other)
- Regimen simplification versus other goals

#### Question 4

Do medication-adherence interventions vary in effectiveness for vulnerable subpopulations (such as racial and ethnic minorities, low-health-literacy groups, the elderly, and patients with multiple comorbid conditions)?

#### Question 5

What adverse medication effects are associated with interventions to improve medication adherence?

### 2) Comparative Effectiveness of Case Management for Adults With Medical Illness and Complex Care Needs

#### Final Key Questions

**Question 1:** In adults with medical illness and complex care needs, does case management improve patient health outcomes (as listed above) when compared with usual care or other models of case management?

a. Does the effectiveness of case management for patient health outcomes differ according to patient characteristics?

Patient characteristics include, but are not limited to: particular medical conditions; number or type of comorbidities; patient age and socioeconomic status; social support; and/or level of formally assessed health risk.

b. Does the effectiveness of case management for patient health outcomes differ according to intervention characteristics?

Intervention characteristics include, but are not limited to: practice or health care system setting; case manager experience, training, or skills; case management tools, techniques or information systems; and complexity of the case management program.

**Question 2:** In adults with medical illness and complex care needs, does case management affect resource utilization outcomes (as listed above) when compared with usual care or other models of case management?

a. Does the effectiveness of case management for resource utilization outcomes differ according to patient characteristics?

b. Does the effectiveness of case management for resource utilization outcomes differ according to intervention characteristics?

**Question 3:** In adults with medical illness and complex care needs, does case management affect process measure outcomes (as listed above) when compared with usual care or other models of case management?

a. Does the effectiveness of case management for process measure outcomes differ according to patient characteristics?

b. Does the effectiveness of case management for process measure outcomes differ according to intervention characteristics?

■ Additional references relevant to this topic include:

- In-process Technology Assessment: Lifestyle Interventions for Four Conditions: Breast Cancer, Prostate Cancer, Type 2 Diabetes Mellitus, and Metabolic Syndrome.  
<http://www.ahrq.gov/clinic/techix.htm>
- In-process EPC Report: Enabling Patient-Centered Care through Health IT.  
<http://www.ahrq.gov/clinic/tp/pcchittp.htm>
- McKibbon KA, Lokker C, Handler SM, Dolovich LR, Holbrook AM, O'Reilly D, Tamblyn R, Hemens BJ, Basu R, Troyan S, Roshanov PS, Archer NP, Raina P. Enabling Medication Management Through Health Information Technology. Evidence Report/Technology Assessment No. 201. (Prepared by the McMaster University Evidence-based Practice Center under Contract HHS 290-2007-10060-I). AHRQ Publication No. 11-E008-EF. Rockville MD: Agency for Healthcare Research and Quality. April 2011. <http://www.ahrq.gov/clinic/tp/medmgttp.htm>
- 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. HHS 290-2007-10061-I). AHRQ Publication No. 09(10)-E019. Rockville, MD. Agency for Healthcare Research and Quality. October 2009. <http://www.ahrq.gov/clinic/tp/chiaptp.htm>

- Jimison H, Gorman P, Woods S, Nygren P, Walker M, Norris S, Hersh W. Barriers and Drivers of Health Information Technology Use for the Elderly, Chronically Ill, and Underserved. Evidence Report/Technology Assessment No. 175 (Prepared by the Oregon Evidence-based Practice Center under Contract No. 290-02-0024). AHRQ Publication No. 09-E004. Rockville, MD: Agency for Healthcare Research and Quality. November 2008. <http://www.ahrq.gov/clinic/tp/hitbartp.htm>
- Balk E, Teplinsky E, Trikalinos T, et al. Applicability of the evidence regarding intensive glycemic control and self-monitored blood glucose to Medicare patients with type 2 diabetes. Technology Assessment Report. September 7, 2007. <http://www.cms.gov/determinationprocess/downloads/id40TA.pdf>
- Pal K, Eastwood SV, Michie S, Farmer AJ, Barnard ML, Peacock R, Murray E. Computer-based diabetes self-management interventions for adults with type 2 diabetes mellitus. Cochrane Database of Systematic Reviews 2010, Issue 10. Art. No.: CD008776. DOI: 10.1002/14651858.CD008776. [http://www2.cochrane.org/reviews/en/protocol\\_21180765828813796899090910125342.html](http://www2.cochrane.org/reviews/en/protocol_21180765828813796899090910125342.html)