

The Role of Disease Management in Medical Research and Quality

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Steps to Quality Improvement

What do we know works? Research synthesis Are we doing what works? - Quality measurement Why aren't we doing it? - Health services research, policy analysis How can we do more of it/do it better? Quality improvement research What do we still need to know? New research

Ten Roles of Government in Health Care Quality

- Purchase health care
- Provide health care
- Assure access for vulnerable populations
- Monitor health care <u>quality</u>
- Regulate health care markets

- Inform health care decision- makers
- Support acquisition of new knowledge
- Support development of health technologies and practices
- Develop the health care workforce
- <u>Convene stakeholders</u>

Research on disease management

- Studies on health and economic outcomes
 - Diabetes
 - Congestive heart failure
 - Asthma
 - High-risk pregnancy
 - Depression
 - Arthritis

Programs Relevant to Chronic Care

- Research: Outcomes, QI, IT, cost-effectiveness, disparities
- Information syntheses: Evidence-based Practice Center Program, Technology Assessment
- Monitoring: National Healthcare Quality and Disparities Reports
- Tools: National Guideline and Quality Measures Clearinghouses, Quality Tools
- Research networks: Practice Based Research Integrated Delivery System Research Networks
- Knowledge transfer
- Data: MEPS (medical costs), HCUP (Hospitalization data); CAHPS (Consumer satisfaction)

Portfolios

- Care management
- Prevention
- Quality/Patient safety
- Health information technology
- Costs, Organization, Socioeconomics

- Pharmaceutical outcomes
- Data development
- System capacity and Bioterrorism
- Training
- Long-term Care

Why Disease Management?

- Growing burden of chronic diseases
- Substantial gaps in care persist
 - Only 20% of diabetics have received recommended tests/immunizations
 - 37% diabetics with optimal control
 - One-third of children and adults with asthma not prescribed primary therapy
- High costs of preventable hospitalizations, procedures and complications

Challenges of Research on Disease Management

- Rapid pace of change
- Importance of system interventions, various system components
- RCTs difficult, less applicable to real world
- Growth of private sector activity
- Disease-specific research silos

Change is Coming

 New Medicare drug benefit
 Medicare chronic care pilot programs and demonstrations
 Pay for Performance Initiatives
 Consumer directed health plans

Planned Care Model



Functional & Clinical Outcomes

Wagner's Chronic Care Model "6 Pillars"

- Health care organization
 - Leadership, incentives, policies
- Community
 - Community resources, awareness, support
- Practice Design
 - Efficient use of personnel
- Evidence-based decision support
 - Reminders, guidelines
- Patient self-management
 - Education, plans, problem management, referral
- Data systems
 - Monitoring, Audit and feedback, Tracking

Limitations of current research

- Lack of appropriate comparison groups
 - E.g., participants vs. non-participants
- Limitations of before-after comparisons
 - Secular trends
 - Regression to the mean
- Failure to account for all the costs and benefits of programs
- Studying models of disease management that may not be widely available
- Durability of effects
 - Do improvements persist?

Effect on health outcomes

Studies on diabetes

- 20 of 28 programs had favorable effects on at least one health outcome
- 16 of 20 reported improvements in at least one health service
- Studies in asthma and heart failure
 - reductions in emergency room visits and hospitalizations
 - increases in the proportion of patients getting appropriate care
- Studies on physician and patient satisfaction found favorable effects

Effect on health outcomes

- Few studies show significant effects on longterm health outcomes
- Some clinicians concerned about fragmentation of care and "hassle factor"
- Models in research studies developed within a health care organization
 - involved patients and clinicians in an integrated health care system
 - effectiveness of disease management in privatesector organization without formal connections to providers has not been studied as thoroughly

Potential to reduce health care costs

- Effects on costs have been mixed
- Studies fail to account for all associated costs
- Examples:
 - CHF patients had improved functional status and aerobic capacity
 - 85-percent reduction in hospital admission rates
 - average savings of \$1,591 per patient was reported
 - but economic analysis based only on hospital days
 - did not calculate other health care expenditures

Potential to reduce health care costs

Examples

- home-based disease management for CHF patients
 - 62-percent decrease in hospital admissions
 - improved functional status
 - no economic data reported
- disease management protocol for diabetes
 - reported gross economic adjusted savings of \$50 per patient per month
 - decrease of 18 percent in hospital admissions and 21 percent in total inpatient days
 - no comparison control group or financial data to calculate true costs related to the program

Potential to reduce health care costs

Persistence of cost savings over time

- Some studies indicate costs rise after programs are stopped
- Studies lasting 1-2 years may underestimate improvements
- Statistical models may not account for all possible savings

- Survey of urban California primary care physicians
 - 43 percent believed a disease management program caused fragmentation of care, BUT very few believed that care was compromised
 - 78 percent stated the program did not change quality of their relationships with patients

Figure 1. Diabetes patients' performance of self-care behavior according to quality of physician-patient communication



Source: Piette JD, Schillinger D, Potter MB, et al. Dimensions of patient-provider communication and diabetes self-care in an ethnically diverse population. J Gen Intern Med 2003;18:624-33

- Physician assessment of patient recall and understanding during office visit
 - 92 percent of patients with diabetes had good blood sugar control when physician assessed comprehension
 - Only 55 percent had good blood sugar control when physician did not assess patient comprehension

Chronic Disease Self-Management Program

- Helps prevent or delay disability in patients with arthritis, heart disease, and hypertension
- Over a 2-year period, patients had improved health, decreased disability, and fewer physician and emergency room visits
- Savings ranged from \$390 to \$520 per patient

Current AHRQ research projects

- Evaluating Breakthrough Series and Chronic Care Model (HRSA) for
 - quality of care and outcomes
 - ways to enhance effectiveness, sustainability, and costs and costeffectiveness

Current AHRQ research projects

developing and evaluating disease management programs for chronic diseases

- effectiveness of information technology systems
- self-care of chronic disease
- training home health aides in disease management
- evaluation of quality, outcomes, patient satisfaction, and cost-effectiveness

Best Practices Series

- Systematic reviews of interventions to improve care in IOM'S High Priority Health Conditions
 Reports on diabetes and hypertension released in 2004-5
- Report on asthma, care coordination underway
- Report on health literacy

Critical areas for DM research and practice

- Where is the greatest potential for true cost impact?
- Tailoring disease management to specific patient populations
 - Low health literacy
 - Cultural values
- Addressing multiple co-morbidities efficiently
 Integrating disease management with small group primary care practice
 Role of HIT in improving disease management

Challenges for AHRQ

How can we think more inclusively about research designs that will advance our understanding of effective DM? September 14-16 AHRQ/NIH/CDC meeting How can we work with stakeholders in business and policy community to promote efforts to improve? Ensuring that HIT promotion captures the potential to improve management of chronic diseases

Conclusion

Disease management potential

- improve health and quality of life of patients with chronic diseases without increasing costs
- reduce total costs
- Challenge
 - most effective, efficient, and practical ways of implementing effective disease management for specific conditions, specific populations, and specific clinical settings