

14.1 Decision Support Tools

Decision support tools for various population health management strategies are being developed by a variety of organizations. From programs developed in-house by healthcare organizations to software vendors interested in selling decision support software for such activities, the possibilities are increasing. One example is a software product called “Clinical Performance Manager” that integrates widely accepted practice guidelines with demographic information from patients and additional information from providers (“Clinical” 1997). Such software promises to assist healthcare organizations as they try to monitor, improve, and document program results.

“ ‘Clinical Performance Manager’ Integrates Practice Guidelines to Enhance, Monitor DM Efforts.” 1997. *Healthcare Demand and Disease Management* 3 (11): 174-76.

14.2 Telemedicine Programs

Formal telemedicine programs in the United States have been developed to target remote markets, including underserved, rural, military, or international patients (Satava 1995; McGee and Tangalos 1994; Hassol et al. 1996; Grigsby 1995). Because remote patient management is the foundation of many population health management programs, telemedicine approaches are of great interest. One project established by The Ohio State University Medical Center in conjunction with the Ohio Department of Rehabilitation and Corrections explored the feasibility and cost savings potential of using telemedicine to enhance access to care for incarcerated individuals (Brunicardi 1998; Warisse 1996). This work focused on the telemedicine tool of two-way interactive video and assessed the costs and benefits associated with this methodology. Using another telemedicine technology, Doctors Hospital in Columbus developed a program of interactive video conferencing designed to improve the education and preceptoring of surgical teams (Ball et al. 1995). In the context of population health management programs, incorporating tools such as interactive video can help reduce costs while improving access to specialized and appropriate providers. Especially in cases where dedicated specialist services are necessary (e.g. catastrophic care management) telemedicine options can extend the reach and improve the quality of available health management services.

Emerging programs also include telephone follow-up to patients post-discharge or post-visit. Telephone follow-up programs have been implemented in different sites across the country, including programs following discharge after coronary artery bypass graft surgery (Barnason and Zimmerman 1995); congestive heart failure and myocardial infarction admissions (Keeling and Dennison 1995); early discharge for low-risk newborns (Braveman et al. 1996); and emergency department discharge (Jones et al. 1997; Adams and Thompson 1996; McNamara 1995). Incorporating such telephonic post-discharge services into a population health management program such as disease management or catastrophic care management can be very useful.

For rural residents, population health management programs must often be available remotely. Under such circumstances, the potential gains from telemedicine to improve health and healthcare services can be quite marked. In rural areas of states, including Minnesota, Vermont, Texas and South Carolina, telemedicine projects have been initiated as a means of

expanding access to care for those citizens who typically have to drive more than 20 miles to reach a major academic medical center. As examples, programs in Montana and Mississippi provide access to specialist consultations while other projects focus on provider education.

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14.3 Web-based Tools

One Internet communications tool that is gaining popularity for disease management programs is called the Health Buddy. Developed by the Health Hero Network based in Mountain View, California, Health Buddy provides access to an Internet site, devices for home telephones, and customizable applications for patient screening and management. Programs that use the Health Buddy are charged for program setup (\$50,000) and then charged \$100 for each patient user (Scott 1999).

PacifiCare Health Systems successfully reduced hospitalization rates in a pilot program for congestive heart failure patients using the Health Buddy appliance. Their “Taking Charge of Your Heart Health” program developed through PacifiCare Behavioral Health used in-home monitoring with the Health Buddy and additional health education to aid patients with self-care and self-management. Patients using the system found it easy to use and valued the attention they received from their health plan regarding their care needs. Program results showed inpatient hospitalizations decreased by 50 percent and emergency department utilization dropped by 73 percent for participants. Average savings calculated for the program approached \$5,300 per patient, or a 200 percent return on investment overall (“Cardiac” 2001).

Another web-based tool has been created specifically to enhance demand and disease management programs by leveraging the Internet. SoftWatch Inc. has downloadable, diary-based self-care programs that enable patients to enter, track, and share data with providers as they receive assistance about how to manage their diseases (“New” 1997). Use of these types of web-based tools helps population health management programs utilize all available communications technologies to improve service and responsiveness to patient participants.

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