The United States has struggled to reform its healthcare system for over a century [8, 9]. One of the historical challenges elected officials and the public at large have grappled with is reconciling the promotion of health care access for all with the maintenance of a private, free market-driven health care financing and delivery system. As insurance access has improved through the expansion of public and private programs, attention has turned from access and is now largely focused on the affordability of health care.

There are many drivers of health care costs, including the increased costs of episodes of care, poor productivity, the use of expensive medical technologies, administrative waste, the aging of the population and the growing burden of chronic disease. While chronic disease is only one
factor among many driving health costs, the number of people with a chronic condition is growing rapidly. In 2005 an estimated 133 million people lived with at least one chronic condition, a number that is projected to rise to 155 million by 2020 and 170 million by 2030 [10, 11].

Diabetes is one chronic disease that deserves increased attention. According to Centers for Diseases Control and Prevention (CDC), in 2010 there were 25.8 million people, or 8.3% of the U.S. population, living with diabetes [7]. Millions more are pre-diabetic. In 2008, 35% of US adults aged 20 years or older had prediabetes (50% of adults aged 65 years or older). In 2010, an estimated 79 million American adults aged 20 years or older were pre-diabetic [7].

In addition to the increasing burden of chronic disease, escalating costs of care, and other challenges to the health care system, there are also patient-level factors that create challenges for reducing rates of chronic disease and improving overall health status, such as limited health literacy and poor self-management behavior [14, 15].

Below we have outlined the challenges of escalating healthcare costs and health literacy in greater detail, the efficacy of peer support as one tool to address these challenges, cost effectiveness data of peer support programs, and the benefits of peer support to key stakeholders.

The Issues

The Escalating Healthcare Cost

The United State health system is one of the most expensive systems in the world, consuming a greater percentage of its Gross Domestic Product (GDP) than any other county. U.S healthcare expenditures are estimated to hit the $2.9 trillion mark in 2013, a staggering 17.8% of GDP. This translates to $9,214.2 per capita [1]. To put U.S health expenditures in context, consider the top twelve industrialized nations, members of the Organization for Economic Co-operation and Development (OECD). These nations spent on average 10.55% of their GDP on health [16].

Increased costs manifest themselves in several areas of the health care system. First, health insurance premiums, especially for those getting their health insurance through their employer, have risen exponentially in the past decade. For example, premiums for a family have risen from an average of $8003 in 2002 to $15,745 in 2012 [2]. This is a 102% increase in worker contributions for premiums and a 97% increase in employer contributions to premiums. These increases are even more staggering when compared to wage increases. Employee earnings rose 47% in the same period, and inflation rose 38%. In other words, health care premiums are rising faster than almost any other good in the US. These costs show no signs of subsiding, despite increased efforts by insurers, providers, and consumers to contain costs. Rising health care premiums are a major concern for employers and employees alike, as insurance premiums consume a greater percentage of employees’ wages and employers’ revenues every year [17].

Theories abound about why the US spends more on health per capita or as a percentage of GDP than any other industrialized nation. Factors such as higher incomes to spend on health care, an aging population, unhealthy behaviors, high numbers of hospitals and physicians, and overutilization of health services have all been cited as the major drivers of the high cost. However, careful comparison between the US and other industrialized countries challenges some of these theories. For example, in 2009 Norway had a per capita income of $ 55,730 and spent 9.6% of its GDP on health [16]. Based on health care spending and GDP data from 33 of the 34 OECD countries, a linear regression would predict the US spent 11 % of its GDP on health in the same year, or about $4,849 per capita, much less than actual spending levels [16, 19].

The US has on average a smaller elderly population than other OECD countries. For example, in 2009 22.7 % of Japan’s population was over 65 years old and it spent 8.5% of its GDP on health care. Also in 2009, 13% of the US population was over 65, and the country spent 17.4% on health. This indicates that aging of the population alone does not account for significantly higher spending on health care services.

The US has higher obesity rates and these rates have grown faster as compared to other industrialized nations. In 2010, 35% of the population was obese compared to 15% in 1978. In 15 other OECD nations, 22% of the population was obese [4, 5]. This could explain some of the higher health care costs, as those
with obesity are more likely to have chronic health conditions that require regular contact with the health care system.

Other factors that have a greater effect are the comparatively high prices of prescription drugs and high costs of office visits and medical procedures [20, 21]. Further, use of expensive medical technology is more common in the U.S. than other OECD countries [16]. The cost of each episode of care accounts for more of the rising costs of care than factors such as obesity and demographic shifts.

In order to reduce health care costs, an intervention would need to promote behavior change, encourage less use of expensive technology, and reduce frequent and unnecessary office visits and hospital admissions, in order to slow rising spending and improve patient outcomes. One challenge of promoting these types of changes within the health care system is the limited capacity of the current health care workforce to implement new interventions. The current healthcare workforce is overstretched and overburdened, often caring for patients with insufficient resources, time, and personnel [12, 22]. Peer support presents an opportunity to ease some of the burden placed on current providers and expand the services provided to patients.

Health Literacy

According to The Patient Protection and Affordable Care Act of 2010, TITLE V—Health Care Workforce, Subtitle A—Purpose and Definitions, health literacy is the degree to which an individual has the capacity to obtain, communicate, process, and understand basic health information and services to make appropriate health decisions [23]. Studies have shown a correlation between limited health literacy and worse health outcomes in adults and children [14, 15, 24-28].

In the context of health, literacy often involves the ability to process complex medical information and provider instructions. High health literacy is required to perform most health care tasks, ranging from finding the ophthalmology department to get an eye exam to communicating effectively with health care providers to filling out medical and insurance forms to receive health care services [33]. Studies have also indicated that possibly half of the US adult population, or 90 million people, have limited health literacy [29-32].

This is particularly troubling as a growing body of evidence shows that, compared to those with adequate health literacy, individuals with low health literacy are more likely to inappropriately or infrequently use health care services, face difficulty following medical instructions, have worse physical and mental health, and have a shorter life expectancy [33, 34].

There are several ways to address health literacy issues, including the education system, the health care system, and the community. [29]. The community and health system level intervention points might be best suited to address the challenges associated with low health literacy. Paasche and Wolf reason that “people generally exist within a web of social relationships. Below a certain level of function, much of the day-to-day detail of chronic disease management often needs to be facilitated by others” [35]. This is to say that using a person’s network of relationships can help them overcome barriers like low health literacy, gain access to the health care system and improve health outcomes.

Peer and Social Support

Effectiveness of Peer Support

Peer supporters work under many names and occupy diverse roles in clinical and community settings. Community Health Workers (CHWs), lay health advisors (LHA), and promotores de salud are all peer supporters operating under different names [36]. Peer supporters perform many functions. Among the most important are providing education to promote self-management of chronic disease, linkage to medical services, on-going support, and emotional support.

Studies have looked at the effect of peer support on diabetes, mental illnesses, and cancer self-management, in addition to other health issues. Systematic reviews of the literature demonstrate some improvement in key clinical and self-management indicators as a result of peer support, such as HbA1c or at home glucose testing in diabetic patients. However, the literature also cautions against over-generalizing the results of one study to all populations and health conditions [37-42]. One area where peer support has been particularly effective is in promoting diabetes self-management. Below, this is discussed in greater detail.
Diabetes Management and Peer Support

Diabetes is currently the sixth leading cause of death in the US and the leading cause of blindness, kidney failure, foot amputations, and pregnancy-related complications in the US. Diabetes and its related complications cost an estimated $98 billion a year [6]. Diabetes self-management is a complicated undertaking, often made more challenging among populations with low health literacy and limited access to a regular source of care [43-47]. The management of diabetes usually calls on patients’ to problem solve on their own in between their regular office visits [48]. It has been noted that patient level factors account for 98% of glucose management in type 2 diabetes, while physicians account for only 2% of diabetes management [49].

Studies have indicated that peer support is effective in helping patients with uncontrolled blood glucose. Peer support efficacy has been found to be particularly effective when offered to racial and ethnic minority populations. In one study, researchers randomized Mexican-American patients to either a culturally sensitive, peer-led education model or standard diabetes care [50]. The reported results indicated that the peer led intervention performed better than standard care. The authors of the study reported that at 10 months, the intervention group experienced a 1.5-point reduction in HbA1c, while there was no significant change in the control group [50].

In another randomized control trial, the researchers randomized African American veterans to standard care, peer counseling, or standard care with financial incentives [51]. The patients who received counseling from a peer with previously uncontrolled diabetes that was now under control were able on average to reduce their HbA1c by one point. This is compared to those patients that received incentives ($100 if they reduced HbA1c level by 1% and $200 for reductions of 2%) and experienced reductions in HbA1c of a half point.

These interventions may have particularly large effects in racial and ethnic minority populations because peers usually closely resemble the intended audience of the intervention. As a result, they are able to provide culturally appropriate support for self-management.

Cost Effectiveness

A literature review of several peer support interventions has shown modest cost savings with peer support based interventions. By promoting self-management behaviors, peer support is able to reduce costs primarily by reducing the number of individual provider visits and reducing the utilization of inpatient services [54-59].

Business Case for Payers Utilizing Peer Support

Many stakeholders should be concerned with the rising costs of care and the potential of peer support to reduce spending. Public and private payers are paying a high price for the fragmented care of chronically ill patients. For example a 2009 study [60], found that 19.6 % of Medicare fee-for-service patients were readmitted within 30 days of discharge. In the same study, Jencks and colleagues estimated that unplanned hospital readmissions in 2004 cost $17.4 billion of the total $102.6 billion hospital payments made by Medicare that year. As noted above, there are several studies that have shown reductions in the number of hospital readmissions among patients that receive a peer support intervention immediately following discharge. Peer support-based interventions are one tool that will enable the payers to invest in a sustainable intervention that can lower readmission rates and overutilization of inpatient services, and promote primary care and disease prevention.

Business Case for Providers Utilizing Peer Support

Providers are facing serious pressures to reduce costs and utilization of health care dollars. Centers for Medicare and Medicaid Services (CMS) has instituted programs like Value Based Purchasing, the Hospital Readmission Reduction Program, and the Physician Quality Reporting System, all geared towards holding providers accountable for the care they provide [61-66]. These programs exact a penalty from providers who are not providing high quality care and have high rates of readmission [67]. CMS is a pace setter for the rest of the industry, so it is not surprising that other payers are instituting similar changes. Some of the measures in these programs are problematic because providers cannot control all factors affecting quality of care and health outcomes [35, 67]. Especially for patients with chronic disease, much of the management of their disease occurs at home away from the auspices of a
medical professional. Peer support can provide a high-quality, low cost method for promoting self-management behavior, increasing adherence to provider care plans, and reducing unnecessary medical visits or costly complications. Providers stand to benefit from peer support in the form of better patient outcome indicators and lower use of costly services that may be differentially reimbursed [68].

How can you take action?

1. **Perform a needs-assessment.** The success of peer support interventions requires an assessment of the target populations, the existing health care infrastructure, and the resources and assets of the community. Perform a needs assessment with key stakeholders, community leaders, and patients to identify which needs could be addressed through a peer support intervention most effectively.

2. **Select and adapt possible peer support interventions.** Many evidence-based peer support interventions have already been developed, piloted, and evaluated. Following a needs assessment, these interventions can be adapted or tailored to better address the needs of the intended audience of the intervention.

3. **Assess funding options.** Examine private and public funding opportunities in your state for peer support programs. A growing number of private and public insurance companies are providing reimbursement for peer support programs that meet certain criteria. In addition to insurance reimbursement, there are a number of federal and private grants available for health and population-specific interventions.

4. **Develop a sustainability plan.** As peer support interventions become more established, it is important to consider strategies for ensuring their sustainability. Integration into a health care setting presents one viable strategy for ensuring long-term viability, though it is not the only or most appropriate option for all settings [69].

**Conclusion**

Peer support based interventions, as noted above, provide patients with culturally appropriate resources for improving their self-management behaviors. By promoting greater patient involvement in their care, peer support can indirectly reduce the unnecessary utilization of care, hospitalizations for preventable conditions, and costly hospital readmissions. It can also promote wellness and improve health outcomes among chronically ill populations with multiple comorbid conditions.

Payers, providers, and patients all stand to benefit from peer support interventions. Payers will see reduced costs of caring for chronically ill patients, providers may see improved health outcomes and reduced use of excess services that may not be fully reimbursed. Patients, arguably, have the most to gain from effective peer support interventions. Patients can reduce their out of pocket costs, reduce the number of visits with a provider, and improve their overall health. In some scenarios, patients may even be able to reduce the dosage of prescription drugs they are using to manage their conditions.

By following some of the action steps given, you can ensure the best peer support intervention is selected for maximum impact among the target population. Peer and social support, if well designed and sustained, can go far in reducing not only costs, but also the overall experience of patients within the health care system.
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