

# Prevention Takes Center Stage

Kenneth E. Thorpe, PhD

**P**reventing and more effectively managing chronic illness are critical national health priorities. Rising rates of diagnosed and treated chronic diseases, many associated with obesity, are a key factor in rising US health care spending. Patients with chronic diseases are estimated to account for 75% of overall health spending<sup>1</sup> and at least 96% of Medicare spending.<sup>2</sup> Multiple chronic conditions are common; more than half of Medicare beneficiaries are treated for five or more chronic conditions yearly.<sup>3</sup> Six chronic ailments account for 40% of the recent rise in Medicare spending.<sup>3</sup> Despite significant health care spending, chronically ill patients receive just 55% of clinically recommended services,<sup>4</sup> and that gap in care may explain a significant portion of morbidity and mortality in the United States.

The national spotlight on prevention is justified and long overdue. Research has proven that targeted prevention programs work when they are based on science, when they reach the right people at the right time in the right places with the right interventions. By focusing on prevention, our country has the potential to develop a comprehensive health system that thrives on averting disease and maintaining good health, rather than restoring health once it's lost—a far departure from our current sick care system.

## The Impact of Obesity

To control costs in health care, the nation must put the obesity epidemic at the top of the agenda. The Centers for Disease Control and Prevention asserts that “American society [is] ‘obesogenic,’ characterized by environments that promote increased food intake, non-healthy foods, and physical inactivity.”<sup>5</sup> The rise in the prevalence of adult obesity has been well documented over the last 20 years, increasing from 12% in 1989 to 27% in 2008.<sup>6</sup> Childhood obesity has tripled in the same period.

A 2009 collaborative report from United Health Foundation, the American Public Health Association, and Partnership

for Prevention—a supplement to America's Health Rankings—provides projections of future health costs directly attributable to obesity for each state and for the nation. Using nationally representative data on adults, the study estimates the effect of the increasing prevalence of obesity on total direct health costs.

According to the report, North Carolina is packing on the weight.<sup>7</sup> Today, nearly 34% of all adult North Carolinians are obese, and that percentage is projected to increase to 40% in 2013 and 47% in 2018. These percentages equate to \$2.4 million (\$371 per adult) currently spent in North Carolina on obesity-attributable health care, \$4.3 million (\$620 per adult) expected to be spent in 2013, and \$11 million (\$1,473 per adult) spent by North Carolina in 2018 to treat obesity-related illnesses. By 2018, Oklahoma is expected to have the highest obesity rate in the country (56%), with Mississippi, Maryland, Kentucky, Ohio, and South Dakota all having adult obesity rates at over 50%. Colorado will have the lowest state obesity rate in 2018 at 29.8%, the only state projected to have a prevalence of adult obesity that is less than 30%. Other major findings of the report include:

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- Obesity is growing faster than any previous public health issue our nation has faced. If current trends continue, 103 million American adults will be considered obese by 2018.
- If obesity levels were held at their current rates, the US could save an estimated \$820 per adult in health care costs by 2018—a savings of almost \$200 billion dollars.
- If Americans continue to pack on pounds, obesity will cost the US about \$344 billion in medical-related expenses by 2018, eating up about 21% of health care spending.<sup>7</sup>

Obesity is an epidemic that is expanding our waistlines and our national budget. It not only takes a toll on physical health, but it also places a financial burden on the health care delivery system to treat increased illness as a result of obesity-related health challenges. It is estimated that as much as \$75 billion of our public health spending was attributable to obesity in 2003, about half of which was publically financed.<sup>8</sup> Adult obesity isn't solely to blame. Given current obesity trends, one-third of all children born in 2000 will develop diabetes over their lifetime.<sup>9</sup> It is essential to combine the efforts of individuals, community leaders, elected officials, employers, and health care professionals to develop individual and community interventions that slow the rise in obesity.

## The Road to Prevention

While recent trends in obesity prove that it should be addressed in national prevention discussions, other preventable causes of death must also be confronted. Smoking is still the number one cause of preventable death in the United States, accounting for about 440,000 deaths annually. Although tobacco use has sharply declined over the last 40-plus years, more than one in five US adults still smoke, accounting for about 46 million people. The majority—70%—say they would like to quit. Smoking-related chronic diseases include cancers, cardiovascular disease, and respiratory diseases.<sup>10</sup> The National Institutes of Health estimate that cancers cost the United States an overall \$219 billion in 2007.<sup>11</sup> It is estimated that approximately \$9.6 billion per year is spent in the United States on lung cancer treatment alone.<sup>12</sup>

It is important to note that not all prevention programs work, many because they aren't grounded in science, and not all of them save money. All medical interventions—including secondary and tertiary prevention—cost money. Screening for common and costly diseases, like high blood pressure, diabetes, and high cholesterol, may actually raise spending in the short-term, because people who need treatment will get it. But over the long-term, that treatment is likely to prevent even more costly complications and thereby escape higher health care spending.

Many studies show that well-designed, evidence-based prevention programs are cost-saving. For example, a significant reduction in total health care spending is

linked to community-based lifestyle interventions (primary prevention). Research shows that savings range from a short-term return on investment of \$1 for every \$1 invested, rising to more than \$6 over the long-term. An investment of \$10 per person per year in community-based programs tackling physical inactivity, poor nutrition, and smoking could yield more than \$16 billion in medical cost savings annually within five years. This is a significant return of \$5.60 for every dollar spent, without considering the additional gains in worker productivity, reduced absenteeism at work and school, and enhanced quality of life.<sup>13</sup>

The Breast and Cervical Cancer Early Detection Program, funded by the CDC, is a great example of secondary prevention. It targets uninsured and underinsured women 18 years and older who are at or below 250% of the federal poverty level. Services include clinical breast examinations, mammograms, Pap tests, diagnostic testing for women whose screening outcome is abnormal, surgical consultation, and referrals to treatment. Last year 301,209 women who wouldn't otherwise have had care had mammographies, and nearly 3,800 cases of breast cancers were found. Furthermore, 321,296 women got Pap tests, and more than 5,201 cases of cervical cancers and high-grade precancerous lesions were found.<sup>14</sup>

Worksite health promotion programs have also proven to be effective at both primary and secondary prevention. A systematic review of more than 50 studies meeting rigorous guidelines for review by the US Task Force on Community Preventive Services found strong evidence of worksite health promotion program effectiveness in the following specific areas: tobacco use, dietary fat consumption, high blood pressure, total serum cholesterol levels, and days absent from work due to illness or disability, as well as improvements in other general measures of worker productivity.<sup>15</sup> At Citibank, for example, a comprehensive health management program showed a return on investment of \$4.70 for every \$1 in cost.<sup>16,17</sup> A similar comprehensive program at Johnson & Johnson reduced health risks, including high cholesterol levels, cigarette smoking, and high blood pressure, and saved the company up to \$8.8 million annually.<sup>15,18</sup>

There is evidence of effectiveness for tertiary prevention strategies as well. Here is one of the best: for nearly 25 years, senior researchers at the University of Pennsylvania have implemented a series of large, randomized controlled trials with high-risk older adults. Their studies have demonstrated that comprehensive tertiary prevention focused particularly on transitional care produces better health outcomes and significant cost savings. Their most recent research showed a 56% reduction in readmissions and 65% fewer hospital days for patients in transitional care. At the 12-month mark, average costs were \$4,845 lower for these patients. If this model were scaled nationally with an investment of \$25 billion over 10 years, savings could reach \$100 billion over the same period.<sup>19</sup>

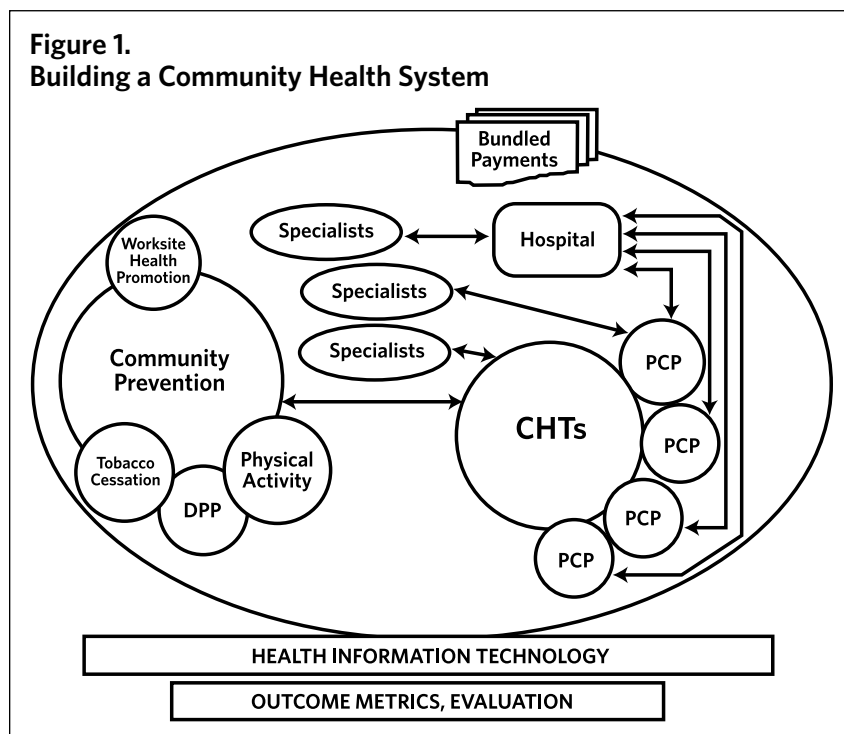
## Community Health Teams and Coordinated Care

The solutions to America's health problems are not primarily determined by what happens inside hospitals and doctors' offices, but what happens in our homes, our schools, our workplaces, and our playgrounds and parks. Patients with chronic disease and their families are happier and healthier when their care is coordinated between doctors, clinics, and hospitals. Community health teams (CHTs) include care coordinators, nutritionists, behavioral and mental health specialists, nurses and nurse practitioners, and social, public health, and community health workers. CHT models vary (see Figure 1), but they all use a team approach to coordinate care, target patient and family education and support, enhance provider communication and access, and improve data-driven management.<sup>20</sup>

Several states (including North Carolina as well as Colorado, New Mexico, Oregon, Pennsylvania, Rhode Island, and Vermont) have already included community-based prevention and care management into traditional fee-for-service programs. There are also examples of large health systems that use care coordination processes and multidisciplinary teams. They offer important anecdotal

evidence of positive effects of care coordination on cost savings and prevention:<sup>20</sup>

- North Carolina's Medicaid program saved an estimated \$535 million in two coordinated care programs (one targeting children and the second targeting aged, blind, and/or disabled individuals).
- Intermountain Healthcare in Utah and Idaho reduced admissions for patients with complex illness by nearly 8.7% and mortality by 3.4% just two years into their care coordination program. Reported savings per patient range from \$640 to \$1,650 per year.
- At Group Health Cooperative in Washington, a 29% reduction in urgent care and emergency department use in the first year was enough to offset the initial investment in its care management program. There was a 6% decrease in office visits but a 12% increase in phone visits and a 90% increase in physician-directed secure messages.
- The Geisinger ProvenHealth Navigator Program in Pennsylvania reduced total medical costs by 7% for its first 11,000 members and posted an estimated 2:1 return on investment.



Nearly all of every Medicare dollar—96 cents of each and every one, or more than \$447 billion last year—and 85 cents out of every dollar in Medicaid—nearly \$300 billion—go to care for chronic diseases, most of which are preventable. In one year this amounts to approximately \$1.7 trillion spent treating patients with one or more chronic diseases—roughly 75% of all US health care spending. This is essentially a hidden tax on every taxpayer in America.

Chronic illnesses—mostly preventable—take an increasing toll on Americans' health, productivity, and quality of life. Achieving better health requires action both by individuals and by society. If society supports and enables healthier choices—and individuals make them—we can achieve significant improvements in our nation's health that reverse or at least slow the rise of chronic illness, and we can reduce health spending over the long term. **NCMJ**

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