

Chronic disease management and prevention in the US:

The missing links in health care reform

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Summary: In the United States (US), chronic diseases are among the most prevalent and costly health care problems, as well as the most preventable. This article examines chronic disease as the missing link in health care reform in the US; candidly discusses the particular impact chronic diseases and the lack of prevention have on quality of life, on escalating health care costs, and on the overall US economy; and recommends population health improvement programmes to reach and support citizens with chronic diseases in varied settings.

Key words: Chronic Disease, Population Health Improvement Programmes, Prevention, USA

The burden of chronic disease

Chronic diseases account for seven out of ten deaths in the United States, and consume 75 cents of every dollar spent on health care. Nearly half of all people in the US – of all ages, race, and socio-economic background – live with a chronic condition, such as high blood pressure, diabetes, or asthma.¹ More than two-thirds of all deaths are caused by one or more of five chronic diseases: heart disease, cancer, stroke, chronic obstructive pulmonary disease and diabetes.² Many chronic diseases are lifelong conditions, and their impact lessens the quality of life, not only of those suffering from the diseases, but also of their family members, caregivers and others. Chronic diseases not only affect health and quality of life and reduce economic productivity by contributing to increased absenteeism and poor at-work performance, but they also drive rising health care costs and threaten health care affordability.

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In 2007, the US spent over \$2.2 trillion on health care, and three-quarters of this went to treat patients with one or more chronic diseases. In public programmes, treatment for chronic diseases constitutes an even higher portion of spending: 83 cents of every dollar in Medicaid and more than 95 cents in Medicare.³ From 1987 to 2000, health spending for non-institutionalised populations doubled from \$314 billion to \$628 billion per year; fully \$211 billion of that increase was attributable to the increase in treated disease.³

Those figures represent just the direct costs. By some measures, indirect costs actually dwarf money spent on treatment. A groundbreaking study in late 2007 by the Milken Institute reported that treatment costs for the seven most common chronic illnesses – cancers, diabetes, heart disease, hypertension, stroke, mental disorders, and pulmonary conditions – ran to \$277 billion in the US in 2003. That figure does not include treatment costs for secondary conditions and complications. But indirect costs were nearly four times as high: totalling more than \$1 trillion.⁴ The same analysis estimates that modest reductions in unhealthy behaviours could prevent or delay forty million cases of chronic illness per year.

Despite these significant and growing expenditures, research shows that chroni-

cally ill patients receive only 56% of clinically recommended health care.⁵ While the US is spending a staggering amount on chronic disease care, objective measures indicate it may not be spending wisely or well to treat chronically ill patients. This discrepancy results chiefly from systemic inadequacies: the American health care system was built to deliver health care services to acutely ill patients requiring episodic care, not to patients who are chronically and persistently in need of medical care. Additionally, the US spends more on health care than any other industrialised nation, but by many measures, its spending is not achieving the results wanted or needed.⁶

A study comparing the trends in deaths considered amenable to health care before age 75 between 1997/98 and 2002/03 in the US and 18 other industrialised countries should give the US pause.⁷ On average, preventable deaths account for 32% of total mortality among women and 23% among men under age 75. The majority of the conditions responsible for preventable deaths are chronic conditions: cancers, diabetes, ischemic heart disease, and other circulatory disorders. The average decline in amenable mortality in developed countries was 16%. But the US was an outlier, with a decline of only 4%. If the US could have reduced amenable mortality to the average in the three top-performing countries – France, Japan, and Australia – there would have been 101,000 fewer deaths per year. In addition, a recent study indicates that life expectancy in the US has dropped for the first time in a hundred years, which may be attributed to chronic disease resulting from smoking and obesity.⁸

The rates of amenable mortality and life expectancy are indicators of overall health system performance. America's significant performance gap is a worrisome signal that the health care system is not performing well against a set of relative health measures. On its current trajectory, cases of chronic disease will significantly increase, along with their associated direct and indirect costs. The truth is though, the vast majority of chronic disease could be prevented or better managed.

Discussions regarding health care reform in the US are incomplete if they do not consider the role that chronic disease plays in driving preventable ill-health, increasing costs for care, and decreasing American competitiveness. Transforming the US health care system to better meet the needs of people with chronic conditions will

require a renewed focus on preventing disease when possible, identifying it early when it occurs, and implementing evidence-based secondary and tertiary prevention strategies that slow disease progression and the onset of activity limitations, as well as save money for the patient and the health care system.

Evidence in support of prevention and chronic disease management

Over three-quarters of American adults are candidates for at least one health prevention activity which, if fully adhered to, would decrease heart attacks by 63% and strokes by 31%.⁹ The US medical community has developed consensus recommendations on the clinical treatment and appropriate preventive measures for patients with diabetes, hypertension and other chronic conditions.

Aggressive secondary and tertiary prevention in the present system have the appearance of insurmountable time and cost requirements. Education in professional medical programmes nationwide should frame the discussion on preventive medicine as one of needed and lasting benefit to patients and populations. If such actions were to be adopted nationally, the aggregate results have the potential to decrease demand for treatment, freeing both time and resources for targeted care provision. These savings will not only be enjoyed by the individual, but by the entire US health care system.

Evidence-based research suggests that well designed prevention and primary care focused chronic disease management programmes can both improve health and provide financial value, including cost savings. Investments in high-impact, cost-effective population prevention and health improvement programmes can increase the affordability of health care, while helping Americans live longer, healthier lives, thus contributing to higher productivity and increased economic performance.¹⁰

Prevention programmes must be appropriately tailored to specific populations; targeting people who are at higher risk is more effective than programmes that screen large segments of the population for a particular illness or condition without regard to risk.¹¹ When directly tied to particular interventions or population groups, prevention can be cost-effective, even in the short term.

Following the diagnosis of a chronic disease, disease management interventions

can also have a positive effect. Chronically ill populations, particularly those suffering from multiple diseases and conditions, or receiving services from multiple health care providers, might require appropriate and ongoing management and intervention to ensure adherence to high-quality care and, ultimately, to improve health outcomes.

Implementing community health improvement programmes

Effective population health improvement strategies consider the range of physical, environmental, and socioeconomic factors that contribute to health. Recognising both the significant problems of chronic disease and the opportunities for population health improvement, groups across the US are developing sustainable, adaptable programmes that work to improve health and lower costs.

Well-designed, community-based lifestyle interventions can produce dramatic reductions in the incidence of chronic diseases like hypertension and diabetes.¹² A recent analysis found significant reduction in total health care spending linked to these programmes: savings ranged from a short-term return on investment of \$1 for every \$1 invested, rising to more than \$6 over the longer term.¹³ Though limited in scope, community-based programmes provide instructive models for design of federal health care policy that could capture substantial health care savings through disease prevention and care coordination on a national scale.

American businesses are also investing in prevention and wellness initiatives as they see costs associated with obesity and smoking-related illness increase. According to the National Business Group on Health, employers are paying 100% more for health care since 2000. Recognising the negative impact on their competitiveness and profit margin, employers are increasingly embracing workplace health promotion (WHP) programmes.

Several scientific reviews report that WHP programmes reduce medical costs and absenteeism and produce a positive return on investment. For example, at Citibank, a comprehensive health management programme showed a return on investment of \$4.70 for every \$1 in cost.^{14,15} A similar comprehensive programme at Johnson & Johnson reduced health risks including high cholesterol levels, cigarette smoking and high blood pressure, saving the company up to \$8.8 million annually.^{16,17}

Reforming care delivery

An estimated 90% of the care chronically ill patients require must be self-managed, outside the health system.¹⁸ But the US health care system is hospital and physician-centric, which means chronically ill patients are rarely educated to manage their conditions effectively outside physicians' direct care. Few have community-based support systems that can reinforce active disease management and help them stay out of the hospital. Reorienting the US health care system toward effective chronic disease care will require reform of many aspects, including payment structures to encourage coordination of care, patient incentives for healthy behaviours, broader use and adoption of health information technology and development of the primary health care workforce. In the meantime, state and local initiatives have been able to achieve remarkable changes within the existing system. Exemplary among them is an effort by the state of Vermont.

Vermont has been first in launching a state-wide collaborative system of care for chronically ill patients. The Vermont Blueprint for Health creates 'medical homes' for patients with chronic diseases, bringing together:

- patients, who learn how to manage their health conditions;
- primary care physicians, who oversee patients' care;
- health care teams, to provide individualised support to the patient, including one or two health providers (typically nurses), a public health specialist, and community health workers; and
- patients' local communities.

To support the medical home model, the legislature changed how providers are paid for care. Participating providers receive normal fee-for-service reimbursements plus a care management fee. This fee is tied to the competencies measured in the National Committee for Quality Assurance's (NCQA) patient-centred medical home model. Under the NCQA criteria, specific points are assigned for different capabilities, such as the adoption of evidence-based guidelines for care, active patient self-management support and systematic tracking of test results and identification of abnormal results. As a practice's skills and competencies increase, payments increase along a sliding scale.¹⁹

Conclusion

Chronic disease management and prevention, as well as health improvement initiatives, can contribute to changing unhealthy behaviours, improving health and mitigating costs in the US. Health improvement initiatives reach people through a variety of settings, where they work, where they live, where they study, and within the health care system itself.

Care delivery clinically must include prevention, and prevention must include action outside the physician's office. Patients need to be educated about health conditions, empowered to maintain health and assisted in managing chronic disease. Providers must work within a coordinated system of practitioners, collaborating with the patient to deliver the care that is needed. Those in the US medical community must learn from past attempts, advocate for responsible change, focus on preventing what can be prevented and, in the end, have enough resources to meet the most basic health care needs of Americans nationwide.

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