Addressing social determinants and its impact on healthcare

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Contents

Overview

In September 2012, the New York City Board of Health approved a measure to ban the sale of large sodas and other sugary drinks in restaurants, movie theaters, sports arenas and street carts in a first of its kind restriction in the US. At the forefront of this measure was Mayor Michael Bloomberg. The mayor noted that 6,000 New Yorkers die every year from obesity-related illness. Some ethnic groups in the city have rates of overweight and obesity approaching 70 percent of adults. African-American New Yorkers are three times as likely, and Hispanic New Yorkers twice as likely, as white New Yorkers to die from diabetes.[1] Is this social policy run amuck? Is it, as some have suggested, an infringement on individual rights? Or is it simply recognition that health issues cannot be treated in isolation from the many other factors that affect an individual's or a community's health?

This executive overview paper examines the factors that drive change in the healthcare industry.[2] It covers the social determinants of health and introduces a smarter approach to care that enables healthcare providers to personalize programs, services and treatments based on a holistic view of the individual and the individual's family. By intervening proactively to address the social determinants of health and with this smarter approach to care, the costs of healthcare can be curtailed or even reduced.

The need for change

Healthcare systems around the world are approaching a point of crisis. Expenditures and demand continue to increase and the ability to pay for and to support the current models are at their limit. Healthcare today is characterized by a number of critical factors.

Increased and changing demand

Perhaps no factor is driving change in healthcare as much as the increase in the number of elderly people worldwide. The impact is already being felt. The US Centers for Disease Control and Prevention have indicated that the aging population has contributed to an increase in the use of ambulatory medical services because the elderly seek medical attention more frequently than any other population excluding infants. Between 1995 and 2005, hospital emergency room and physician's office visits increased by 36 percent to 1.2 billion total visits.[3]

Competition

Although there is some debate over whether or not competition is good for the healthcare industry, the fact remains that competition drives change. Interesting examples can be found in almost every country. The repeal of a provision in a Washington state law intended to reduce costs and increase competition resulted in increased costs and decreased competition when health insurance companies left the state. In Queensland, Australia, the government contracted with private-sector providers as a way of pressuring public-sector hospitals to improve performance. In Derby, England, a private-sector provider brought in by the commissioner to run a primary care practice appeared to improve performance in other nearby practices.[4]

Legislative reform

Examples of legislative healthcare reforms that have transformed healthcare systems around the world are in abundance. The Patient Protection and Affordable Care Act, passed in 2010, is intended to ensure that all Americans have access to quality, affordable healthcare and over time will transform the US healthcare system. In Australia, the National Health Reform Act of 2011 established a new Independent Hospital Pricing Authority and the National Health Performance Authority. The Exceptional Medical Expenses Act (AWBZ) in the Netherlands is a national insurance enacted in 2006 that insures the costs of treatment, support, nursing and personal care when these costs are extremely high.

Increased expenditures

Health expenditures continue to rise faster than economic growth in most Organization for Economic Co-operation and Development (OECD) countries, maintaining a trend observed since the 1970s. Health spending reached more than 9 percent of GDP on average in 2009, the most recent year for which figures are available, an increase of more than 8 percent in 2008. Health spending accounted for more than 17 percent of GDP in the US, 12 percent of GDP in the Netherlands and more than 11 percent of GDP in France and Germany.[5] About 80 percent of that spending goes to the chronically ill.

Declining reimbursements and profits

In spite of increased demand and increased healthcare spending, a 2011 survey of more than 300 healthcare executives in the US cited decreasing reimbursement as their number one challenge for 2012.[6] Although low Medicare rates might keep costs down relative to the high amount of needs of the population it serves, for example, those rates have contributed to the access problems faced by many enrollees.[7] This is a common issue in many countries.

Disconnection from the workplace

A clear relationship exists between an individual's health and employment that, although related, goes well beyond the ability to secure health insurance. For example, in the US, studies have shown that the odds for return to full employment drop by 50 percent after six months of absence.[8] In Europe, overall, death rates for men increased by 44 percent during the first four years that followed a job loss compared with the rates of a control group.[9]

How to respond

The world needs healthy workers to sustain economic vitality. Changing demands from citizens, increased competition from providers, declining reimbursement rates and a smaller profit margin have created really only one logical response from healthcare providers who want to survive and thrive: improve service and reduce costs by getting smarter. One fundamental way of getting smarter is to address the social determinants of health rather than just the clinical causes of illness.

The social determinants of health

The World Health Organization describes "health" as being "a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity."[10] It is complex and has many influences. With a rapidly aging society, a dramatic rise in chronic illnesses and a major increase in mental health issues, it is more difficult for policymakers to ignore this fact. Healthcare alone accounts for only 10 to 25 percent of the variance in health over time.

The remaining variance is shaped by genetic factors (up to 30 percent), health behaviors (30 to 40 percent), social and economic factors (15 to 40 percent) and physical environmental factors (5 to 10 percent).[11] With the recognition of the importance of social determinants in the health of individuals, limiting solutions to healthcare problems to the healthcare system is no longer feasible.

Policymakers are now looking beyond traditional medical care toward the other determinants of health such as housing, education, work, income, early life experience, race and ethnicity to find new solutions. With the increasing focus on social determinants of health, the line between health and social policy has become increasingly blurred. Anti-smoking policies, sugary drink taxes, parental classes, drug rehabilitation programs and public housing schemes are all examples of this overlap.

People with multiple health and social needs are high consumers of healthcare services, and thus drivers of high healthcare costs. One US study estimated that high-risk, high-need patients represent 20 percent of the population and generate 80 percent of healthcare costs.[12] Homelessness, substance abuse, physical disability and economic factors are just a few examples of social determinants of health that add massive costs to the healthcare system. Addressing these challenges requires smarter solutions that achieve lasting outcomes.

Some examples include:

- The Partnerships for Older People Projects in the UK was aimed at promoting healthy living among older people. The results are leading to an integrated approach to health and social care with the express purpose of reducing health sector costs.
- The Camden Coalition of Healthcare Providers in the US focuses on "hot spots," places with a high density of people with complex medical and behavioral needs, which leads to lower healthcare costs.
- A community enterprise center, Station 20 West, in Saskatchewan, Canada, addresses fundamental social needs in the community and that, in turn, leads to health benefits.
- New York's Medicaid Health Home Program in the US addresses the high-risk, high-need beneficiaries by providing coordinated care where the patient's caregivers all communicate with one another so that the person's needs are comprehensively addressed.

These approaches have a common set of characteristics. They identify high-risk, high-need people and intervene with health and social programs to delay or eliminate health costs.

A smarter approach

Health and social program providers need to get society's various care systems to work together to address health issues, change individual behaviors and ultimately reduce healthcare costs. Investing in care homes, for example, can help older people leave high-cost hospital beds. Investing in children and better parenting skills can help decrease the incidence of childhood obesity and other childhood illnesses.

Based on years of experience in the health and social program fields, IBM has identified five activities that are fundamental to the job of healthcare and social program professionals: identify, assess, respond, manage and measure (See Figure 1). These five activities can enable health and social programs to come together to achieve better outcomes for individuals and society.

Identify

How complex are the individual's needs? What meaningful relationships exist for the individual? What are the key events in the individual's care history?

Everything starts with understanding the individual's context. The social determinants of health must be identified and then factored into the care plan. This involves addressing not only the health issues of individuals, but also their financial status, housing, education, safety, employment and nutritional needs. All of these factors have a direct effect on the individual's health.

Assess

What is the magnitude of the individual's needs? Are the needs similar to other individuals? What are the potential costs and risks?

After the individual's needs are identified, they must be quantified to determine their magnitude. This involves taking the individual's combined health and social context into consideration, looking at their strengths and needs with evidence-based models and identifying optimal outcomes based on these needs. This outcomes-based needs assessment is a crucial step and may be repeated many times in complex cases.
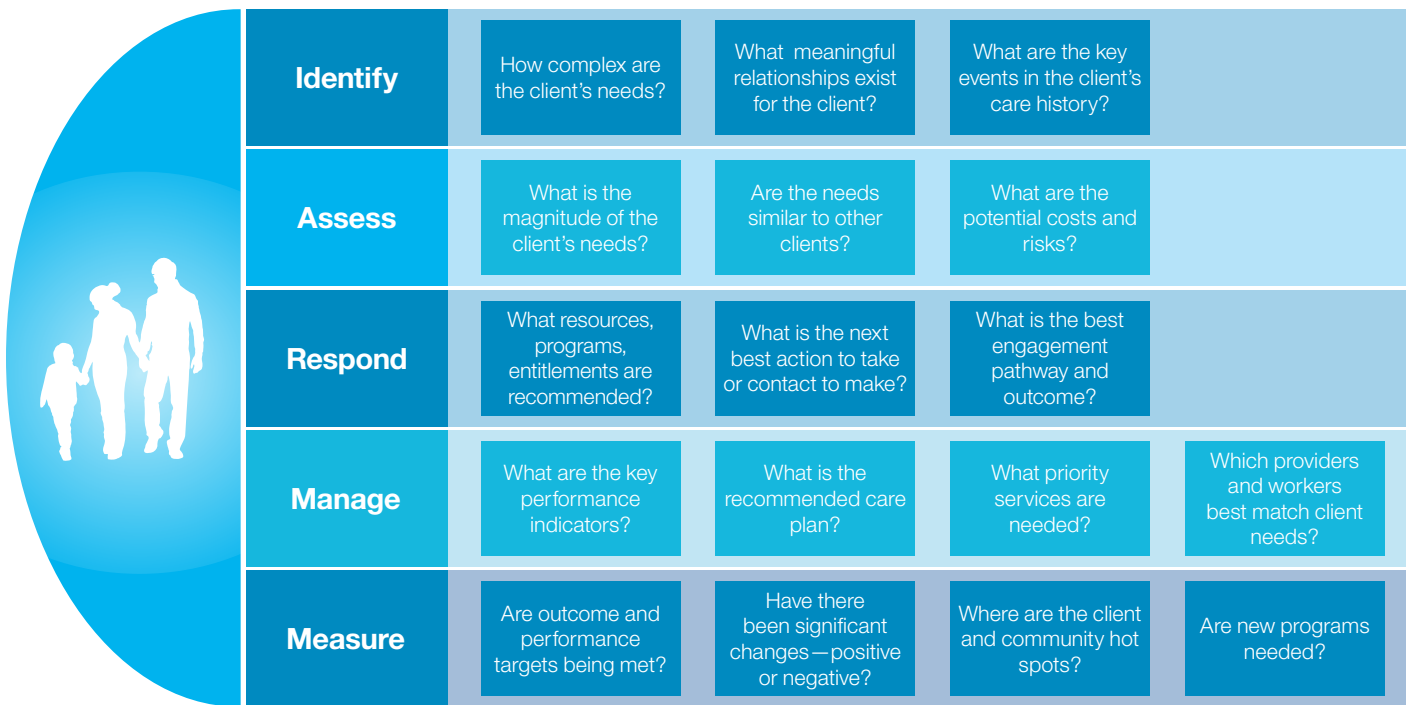
Identify	How complex are the client's needs?	What meaningful relationships exist for the client?	What are the key events in the client's care history?	
Assess	What is the magnitude of the client's needs?	Are the needs similar to other clients?	What are the potential costs and risks?	
Respond	What resources, programs, entitlements are recommended?	What is the next best action to take or contact to make?	What is the best engagement pathway and outcome?	
Manage	What are the key performance indicators?	What is the recommended care plan?	What priority services are needed?	Which providers and workers best match client needs?
Measure	Are outcome and performance targets being met?	Have there been significant changes—positive or negative?	Where are the client and community hot spots?	Are new programs needed?

Figure 1: Five activities are fundamental to the work of health care and social program professionals, and form the foundation of Smarter Care.

Respond

What resources, programs and entitlements are recommended? What is the best engagement pathway and outcome? What is the next best action to take or contact to make?

The next step is to respond to the individual's needs. This involves a series of planning activities that are based on the initial outcomes-based needs assessment. A care coordinator uses the assessment to determine eligibility and entitlement to benefits and services and then creates an engagement pathway that appropriately addresses the severity of these needs.

Manage

What is the recommended care plan? What priority services are needed? Which workers and providers are the best matches to the individual's needs? What are the key performance indicators for cost, utilization and outcomes?

The care coordinator creates and manages the individual's care plan by selecting the appropriate responses, which might include a combination of counseling, physical or occupational rehabilitation therapy, follow-up doctors' appointments, filling prescriptions and training or any other combination of services. For the plan to be achieved, the care coordinator must work with multidisciplinary teams that include members from a combination of healthcare providers, government and non-government social programs, family members, direct care settings and community support agencies. The goal is to enable delivery of the right services, at the right time, by the right provider, in the right setting to achieve the right outcome. At any stage, a reassessment can evaluate progress and even result in a change to the response required to get back onto the right care pathway.

Measure

Are the individual, program and organizations meeting outcome and performance targets? Have significant positive or negative changes occurred? Where are the individual and community hot spots? Are new programs needed?

Outcomes must be measured at the individual, program and organizational levels. Outcome evaluations, reports and key performance indicators can all inform decisions at the individual and community levels. Analytics can be applied to gathered results to predict future needs and apply preventive measures. The development and implementation of care pathways becomes an iterative process that is based on evidential experience of good and best practices.

How the activities achieve better outcomes

Identifying high-risk, high-need people and assessing their needs with evidence-based models enables the appropriate response to be created and managed to achieve the right outcome for the individual and their family. By putting appropriate measurement systems in place, the assessment models and care pathways can learn and improve over time, increasing the effectiveness of the health and social systems to address the social determinants of health.

Five implications for policymakers

Implementing a smarter approach to healthcare is not simple. It involves looking at the problems of society in a different way from the way they are seen today and bringing together two systems of care that, in most countries, are separate. Therefore, before you embark on this journey, you must ask some difficult questions about how far you are willing to go to address the ever-increasing cost of healthcare.

Are you ready to recognize the social determinants of health?

The social determinants of health often lie outside the control of the health sector yet evidence shows that these determinants have a major impact on health. The first step for policymakers is to recognize the significance of the social determinants of health. Poor housing and homelessness make people sick. Obesity leads to chronic illnesses. Unemployment can lead to depression. Poverty has a direct link to poor health. Early life experiences shape a person's health as an adult. Are you willing to address cause and effect?

How will you work effectively with different systems of care?

Policymakers must acknowledge the fact that all government and non-government entities must be involved to achieve the best outcomes. You must be willing to be proactive in working with the other sectors that affect health. A comprehensive, coordinated approach to healthcare that includes collaboration and sharing data between healthcare and social care means working with different program types, the public and private sectors, different levels of government and non-profit and for-profit entities. Are you willing to tear down information silos? Are you ready to share your data, information and decisions with others?

Which interventions, for whom, how early?

Addressing the social determinants of health requires early intervention and prevention policies. It involves establishing programs that identify problems at an early stage before they become acute. These policies can be controversial but are seen to be highly effective. Seat-belt laws and penalties for driving under the influence of drugs or alcohol are examples of these policies. Not many people would argue against these interventions, but what about taxing fatty foods and sugary drinks, making physical education mandatory in schools or making employers provide stress counseling for their staff. Forty percent of deaths are from preventable risks. Are you willing to take action that can help prevent them?

Are your stakeholders willing to pursue real reform?

Addressing the social determinants of health to reduce costs requires tough decisions to be made. If health improvements occur as a result of addressing social issues, the demand for healthcare services will be reduced. When demand drops, supply has to follow to keep costs low. Closing hospital wards and reducing reimbursements to the medical community are among those tough decisions. Even if you and your stakeholders are willing to take the political risk involved with influencing behavior, early intervention, legislating change and working across the traditional silos of health and social programs, are you willing to make the decisions that must be made to lower the costs of healthcare?

How do you know if you should start?

If your health and social care systems are isolated or poorly integrated and you have issues of sustaining your expenditures on healthcare, this is a good sign that you should start looking at smarter approaches to care. The stronger the social determinants are in creating high-risk and high-need populations, the greater advantages you will be able to see from a smarter approach to care. If you have these problems and the strength to address them, then the conclusion has to be to start. However, if these conditions exist, but stakeholders are less than willing to address the tough choices, perhaps educating the stakeholders and your populations more thoroughly will result in better preparation for the inevitable decisions that will still need to be addressed later.

Conclusion

Governments are facing increasing demands from individuals and businesses to deliver better, more timely and personalized services in just about every domain of business: environment, health, education, social programs and economic development, to name a few. Moreover, these services are expected to do more and at a lower cost. Incorporating the social determinants of health into healthcare can lead to lower recidivism rates and commensurately lower primary program costs. A multidimensional, holistic approach to healthcare can also improve services, reduce costs and create better outcomes for individuals and society. Although innovation and change are not easy, making the decision to innovate and change is.

IBM Watson Health

Existing systems of care, wellness and support face severe economic and demographic pressures. They must come together in new ways with technology, data and expertise to drive better outcomes that can help individuals live healthier and more productive lives.

Tapping the vast, rapidly increasing sources of data about individuals from all dimensions of wellness — their clinical, genomic, behavioral and social context—to establish a holistic view of an individual's needs is now possible. Advanced analytics and cognitive computing can be applied for new insights and knowledge. Healthcare providers and payers, social program organizations, life sciences leaders and employers can now find better ways to manage population health, deliver social services and discover new treatments and care pathways.

IBM Watson Health helps enhance, scale and accelerate expertise across the domains of health and human services, and facilitate collaboration throughout the community of care for better outcomes at lower cost.

IBM Cúram Research Institute

The IBM Cúram Research Institute is the IBM social policy research arm. Its mission is to foster the development of innovative service delivery models to enable social programs to raise the social and economic potential for people and society.

The Institute is committed to undertaking and commissioning research with social enterprises, not-for-profits, academia and other social research organizations. Output from the Institute consists of position papers, industry consultations, industry points of view and input to the IBM Cúram product family.

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1 Pilkington, E. "The fight over New York's jumbo soda ban is becoming a civil rights issue." *Business Insider*, 24 January 2013. Available at: http://www.businessinsider.com/naacp-joins-soda-ban-lawsuit-2013-1 (Accessed 9 February 2013)

2 A full version of this paper will be available on **ibm.com**/curam-research-institute after 15th March 2013

3 Catharine Burt, Linda McCaig and Elizabeth Rechtsteiner. "Ambulatory Medical Care Estimates for 2005." *Advance Data from Vital and Health Statistics*, 2007, 26.

4 Penelope Dash, M.D., and David Meredith. "When and how provider competition can improve health care delivery." *McKinsey Quarterly*, November 2010.

5 OECD. Health Data 2012. Available at: http://www.oecd.org/els/healthpoliciesanddata/oecdhealthdata2012.htm (Accessed 9 February 2013)

6 Doug Smith and Christine Ricci. *Top 10 Healthcare Trends – 2012*, 2009. Available at: https://www.besmith.com/sites/default/files/Top%2010%20Healthcare%20Trends%202012.pdf (Accessed 9 February 2013)

7 Stephen Zuckerman, Aimee F. Williams, and Karen E. Stockley. "Trends in Medicaid Physician Fees, 2003-2008," *Health Affairs*, 2009, 28 (3).

8 American College of Occupational and Environmental Medicine. *Preventing Needless Work Disability by Helping People Stay Employed*, 2006. Available from: http://www.acoem.org/PreventingNeedlessWorkDisability.aspx (Accessed 9 February 2013)

9 The European Foundation for the Improvement of Living and Working Conditions. "Work and health: A difficult relationship?" *Foundation Focus* [Internet], 2011, (9). Available from: http://www.eurofound.europa.eu/pubdocs/2011/17/en/1/EF1117EN.pdf

10 World Health Organization. *WHO definition of Health*, 2003. Available at: http://www.who.int/about/definition/en/print.html (Accessed 9 February 2013)

11 Institute for Alternative Futures. *Community Health Centers Leveraging the Social Determinants of Health*, 2012. Available at: http://www.altfutures.org/leveragingSDH (Accessed 9 February 2013)

12 U.S. Department of Health and Human Services. *The High Concentration of U.S. Health Care Expenditures*, 2012. Available at: http://www.ahrq.gov/research/ria19/expriach1.htm (Accessed 9 February 2013)

13 World Health Organization, *10 facts on ageing and the life course*. Available at: http://www.who.int/features/factfiles/ageing/en/index.html (Accessed 9 February 2013)

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