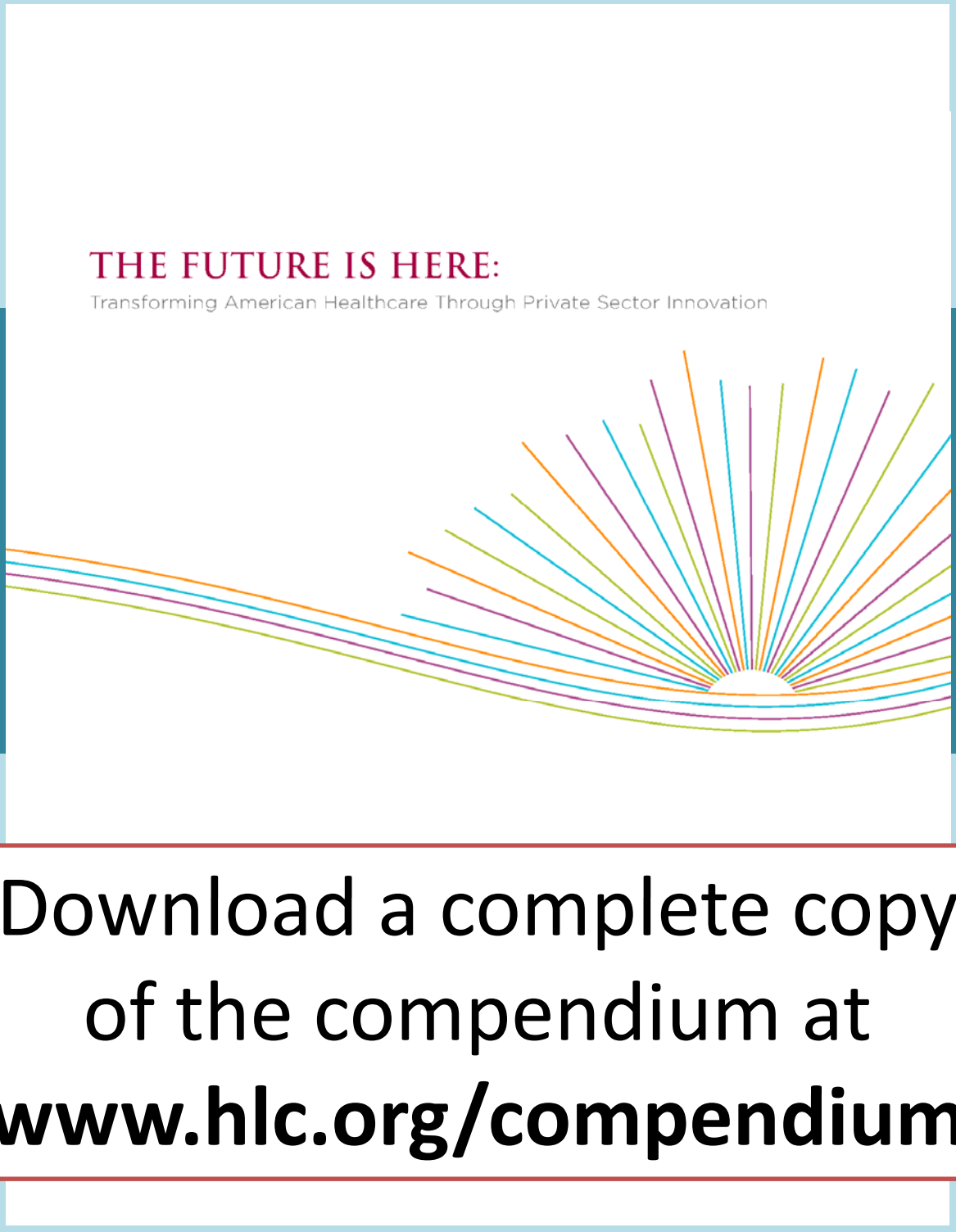


Download a complete copy of the compendium at **www.hlc.org/compendium**

The Future is Here: A Compendium of Healthcare Innovation is a collection of successful private sector value and wellness initiatives developed by members of the **Healthcare Leadership Council (HLC)**.

HEALTHCARE LEADERSHIP COUNCIL

Johnson & Johnson

CEO CANCER GOLD STANDARD

Overview

- The CEO Cancer Gold Standard™ is an initiative of the CEO Roundtable on Cancer. Created by Roundtable member CEOs, the CEO Cancer Gold Standard™ defines what private sector CEOs and their organizations can do to prevent cancer, detect it early, and ensure access to the best available treatment for those who are diagnosed with cancer.
- Former Johnson & Johnson Chairman William C. Weldon chaired the CEO Roundtable on Cancer (2007 – 2011), a nonprofit group comprised of corporate executives from major American companies representing diverse industries, whose mission is to work toward the elimination of cancer as a disease and as a public health problem. Johnson & Johnson's CEO and Chairman Alex Gorsky continues to lead the way in the fight against cancer.

Background

- 70% of deaths for the most prevalent types of cancer are preventable;
- U.S. employers spend $206.3 billion on cancer-related costs annually:
  - $17.9 billion in productivity;
  - $110.2 billion in premature death; and
  - $78.2 billion in direct medical care.
- Employers spend $16,000 in direct annual medical costs for cancer patients compared to $3,000 for those without cancer.

Description

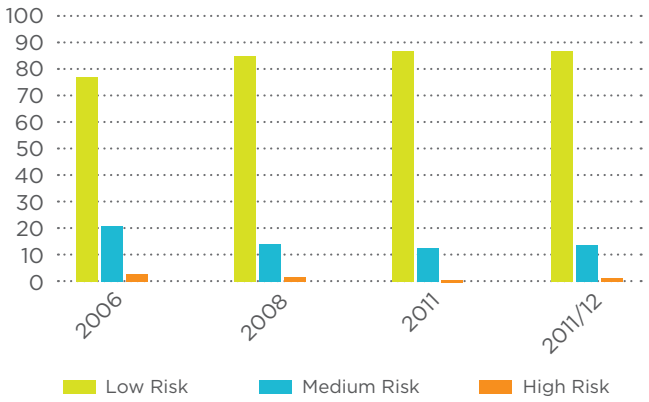
- Organizations that adopt the CEO Cancer Gold Standard™ measure their annual improvement against established baselines in five areas: tobacco use, diet and nutrition, physical activity, screening and early detection, and access to quality treatment and clinical trials.
- **Risk Reduction through Lifestyle Change**
  - Tobacco Use
    - Establish and enforce tobacco-free worksite policies;
    - Ensure that health benefit plans include coverage at no cost for evidence-based tobacco treatments (counseling and medications);
    - Establish workplace-based tobacco cessation initiatives.
  - Nutrition
    - Sustain a culture that value, supports, and promotes healthy food choices;
    - Provide access to healthy weight and/or nutrition programming.
  - Physical Activity
    - Sustain a culture that values, supports and promotes physical activity;
    - Provide access to opportunities for physical activity.
- **Early Detection**
  - Prevention, Screening and Early Detection
    - Sustain a culture that values, supports, and promotes the prevention, screening, and early detection of cancer;
    - Ensure that health benefit plans cover, at either no cost or at a reasonable cost-sharing level, screening services for breast, colorectal, and cervical cancer, and all FDA-approved vaccines for the prevention of cancer.

- **Quality Care**
  - Access to Quality Treatment and Clinical Trials
    - Ensure that health benefit plans provide access to cancer treatment at Commission on Cancer-accredited programs and/or National Cancer Institute-designed cancer centers;
    - Provide education about cancer clinical trials;
    - Ensure that health benefit plans continue to provide coverage for the current standard of care when covered individuals are participating in cancer clinical trials.

Metrics

- In 2010, the Harvard Business Review highlighted the CEO Cancer Gold Standard™ as an example of a high-quality, signature program that can boost the overall effectiveness of a broad spectrum of workplace wellness initiatives. The article showed that the return on investment (ROI) can be as high as 6 to 1.
- In recognition of the organization's efforts in building a culture of health and wellness, particularly in the area of cancer prevention and risk reduction, Johnson & Johnson earned the CEO Cancer Gold Standard™ accreditation in 2006, and has sustained its accreditation for the past seven years. By reducing tobacco use and focusing on diet and nutrition, physical activity, and early detection and screening for cancer, Johnson & Johnson has been able to demonstrate the value of these efforts on employee health, wellness, and business success.

Population Health Risks



Low Risk = 0-2 Risk Factors, Medium Risk = 3-4, High Risk = 5+

Health Profile Summary, Choices Eligible Employees 1/1/2006-12/11/2012

Johnson & Johnson population health risk decline over time as a result of creating and sustaining a culture of health

Value

- In addition to preventing cancer, sustaining a culture that reduces the health risks that contribute to cancer can reap its own benefits. For example, providing coverage for tobacco cessation treatments such as over-the-counter quitting aids, prescription medications, and counseling raises cessation rates and is highly cost-effective relative to other clinical interventions. Each employee who quits smoking saves his or her employer an estimated $1,300 per year.
- The impact of the CEO Gold Standard™ has increased exponentially since 2006. There are now over 140 participating organizations and over 3,400,000 covered lives reaping the benefits of a workplace culture that encourages healthy lifestyles and promotes wellness benefits. In 2013, the accreditation process was extended to include global application requirements for organizations accredited in the U.S. with a presence overseas.

COMPREHENSIVE KIDNEY CARE MANAGEMENT

Overview

- inVentiv Medical Management, a unit of inVentiv Health, helps employers improve the lives of employees and their families by promoting accountable care and wellness. The URAC - accredited Comprehensive Kidney Care (CKC) program addresses health risks, manages health issues, and holds down the cost of treatment.
- CKC's population health management approach pairs surveillance software such as predictive risk modeling with human experts who negotiate with providers for the best price, detect billing errors, and recognize patterns of fraud or abuse. The pairing improves care while lowering claims costs.
- Grounded in evidence-based methods, in-house physicians, nurses, claims analysts, and other specialists respond to risks before they escalate into catastrophic claims for 500,000 lives in the CKC program as well as in oncology, cardiovascular disease, and other disease areas.

Background

- Chronic kidney disease affects 26 million Americans. Guidelines for "normal-risk" individuals call for screening at age 60, but overweight, sedentary younger adults also are at risk.
- In early stages, there may be no symptoms. Data suggest that 90% of undiagnosed workers with markers for kidney disease do not suspect that they are likely to become sick. Early detection is critical—once the disease progresses to Stage 3 (moderate impairment), it cannot be stopped.
- The financial burden of kidney disease on companies and taxpayers is growing exponentially due to the rise of obesity, a risk cofactor. Medicare spending on end-stage renal disease exceeds $33 billion annually.

Description

- The CKC program focuses on early detection and lifestyle intervention, then transplantation, and dialysis as the last resort. Many care management programs underemphasize transplants and focus solely on negotiating lower prices for dialysis, which has 44% mortality by the third year of treatment.
- Managing 916 patients with chronic kidney disease over a 10-year period, the CKC program helped many receive kidney transplants, sparing them the misery, high costs, and poor prognosis of dialysis. When the transplant option was unavailable, the program focused on significantly delaying dialysis. CKC promoted "peritoneal" home dialysis in lieu of hemodialysis when aggressive intervention became unavoidable.
- A focused staff that includes a board-certified nephrologist is central to the CKC program.
  - The staff works with employers and third-party administrators.
  - The team monitors adherence to evidence-based medicine and patterns of billing fraud and abuse by examining insurance claims data, prescription drug data, precertification and other patient records, health risk assessment and biometrics data from wellness programs, and cases flagged by board-certified physicians.
  - Medical staff is in frequent touch with providers. For example, a CKC staff nephrologist may call a dialysis center to say that a patient's blood work indicates he is receiving too much erythropoietin, a blood-boosting drug often overprescribed in clinics.
- A "data surveillance engine" uses "physician logic" and algorithms to scrutinize claims and other unstructured clinical data.

Metrics

- Some 13% of late-stage CKC patients received kidney transplants, versus a national average of 5%. In addition to higher quality of life, the transplant option yielded dramatic cost savings:
  - Dialysis and medications: $560,000/year, on average;
  - Kidney transplant: $260,000, plus $30,000/year for antirejection drugs.
- Among patients with Stage 3-5 (moderate-to-severe) kidney disease, many achieved a four-month delay in progression to dialysis compared with the national average.
- Some 21% of patients in the program who required dialysis were treated at home with an advanced "peritoneal" approach, versus 6% nationally. Compared with conventional hemodialysis in a clinic or hospital, the home-based approach is:
  - 25% less expensive;
  - Gentler on the patient;
  - Less likely to cause infections and other complications;
  - Less likely to result in a visit to the ER; and
  - Associated with lower mortality rates.

Value

- The CKC program realized $3.3 million in cost savings on dialysis and medications over three years.
- A return on investment (ROI) of 6:1 was achieved for CKC patients with Stage 3-5 kidney disease:
  - 60% saved through slower progression to dialysis;
  - 18% through cost containment (avoiding double-billing, misapplied fees, etc.);
  - 15% through indirect employee costs such as absenteeism; and
  - 5% through avoiding cardiovascular events.
- An ROI of 4.7:1 was achieved for CKC patients with end-stage renal disease on dialysis:
  - 52% through alignment with evidence-based medicine (curtailing overtreatment with "blood-boosting" drugs and other steps);
  - 31% through cost-containment and claim surveillance;
  - 10% through preference for peritoneal dialysis;
  - 6% from steering patients quickly to kidney transplant; and
  - 1% through reduced cardiovascular event.

FRANCISCAN MISSIONARIES OF OUR LADY HEALTH SYSTEM

HEALTHY Lives™

HEALTHY LIVES™

Overview

- Franciscan Missionaries of Our Lady Heath System (FMOLHS), headquartered in Baton Rouge, LA, provides care to 40% of Louisiana's population and includes four hospitals, more than 10,000 team members, and 2,000 physicians.
- FMOLHS established a strategic imperative to serve as a leader in healthcare reform. A new arm of the organization, Franciscan Health and Wellness Services, was created to explore innovative models of care in the area of population health management.
- Franciscan Health and Wellness Services developed and implemented the Healthy Lives™ program in the 2011 benefit year for its team members and dependents to build a healthier workforce and improve the value of healthcare delivery.
- Since its introduction with the 2011 benefit year, Healthy Lives™ has improved the health of FMOLHS team members and reduced overall health plan costs.
- FMOLHS began sharing Healthy Lives™ with other employers and health systems in January 2012. Since then, 30 employers, including three health systems, are implementing the Healthy Lives™ program, which represents nearly 80,000 lives across eight states. The model is now being expanded to manage the health of other populations, including Medicaid and the uninsured.

Background

- After a review of the dramatic growth in health plan expenses, FMOLHS leaders realized that if utilization continued at the same rate and the health of the population did not improve, covering employees and their families under the current benefit structure was unsustainable.
- Rising healthcare costs and escalating concerns over healthcare reform are causing employers to seek innovative, value-driven models of care delivery. Local employers looked to FMOLHS and its affiliated hospitals, as the trusted resource and experts in healthcare, for practical solutions.

Description

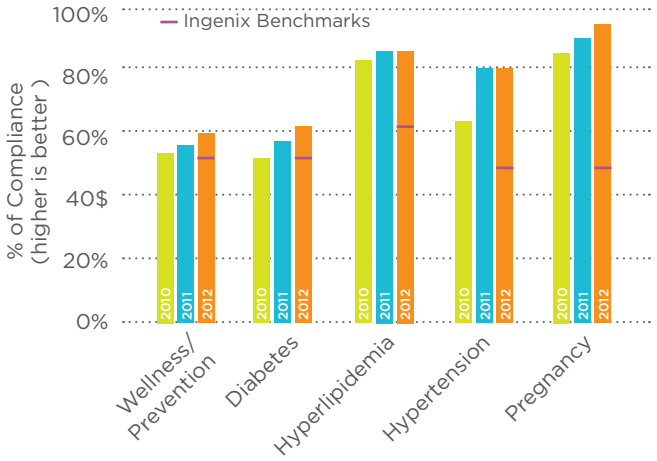
- Healthy Lives™ is a comprehensive wellness program based on a best-practice, holistic model of care developed by physicians and other clinicians that is rooted in evidence-based medicine.
- Healthy Lives™ has four components that provide a cost-effective program for employers:
  - Creation and analysis of a comprehensive workforce population profile, using a robust analytics program that draws from several data sources, including medical and pharmacy claims, in order to understand a company's health risks;
  - Biometric screenings and health risk assessments of employees along with the other data sources model the risk and create a detailed health risk report for each employee. While individual health information is private, the company receives a report outlining the health risk profile of the company's workforce in aggregate;
  - Wellness services are customized for a company and its employees based on the data and culture and include consultation on incentives, health education, and clinical expertise;
  - Health coaching by local, registered nurses and dieticians, who provide support and motivation to help employees overcome obstacles to reach their health and wellness goals. When needed, the coaches work collaboratively with physicians.

Net Health Plan Expense per Employee Per Year (PEPY)

*Total health plan expense minus employee premiums.

**National Mean Net PEPY Cost, 17th Annual Towers Watson/National Business Group on Health Employer Survey on Purchasing Value in Health Care.

Quality of Care Measures are Better for Patients in Healthy Lives Program



Metrics

- Based on data from the 2011 and 2012 program years, Healthy Lives™ has demonstrated value through improved health of FMOLHS team members and has reduced overall health plan costs. Results include:
  - Member participation in Healthy Lives™ is at 80%, up from 47% prior to implementing the program;
  - Population risk profiles exhibit a positive trend in risk reduction, with overall reduction of high-risk members from 11% in 2009 to 6% in 2012, suggesting improvements in care management consistent with Healthy Lives™ health coaching and care management models;
  - Positive trends in utilization and medical management of the population continued in 2012, with a 3% reduction in hospitalizations and a 60% reduction in readmissions. (Decreased hospitalizations drive decreased health plan costs.);
  - Evidence-based, quality-of-care performance scores continued overall positive trends since 2009, with a focus on wellness/prevention, diabetes, high cholesterol, and high blood pressure.

Value

- Total health plan expense for 2012 continued a downward trend from expected costs since 2009.
- Total health plan expense per employee per year (PEPY) was $11,419, performing below the national benchmark mean (Towers Watson/ NBGH 2012).
- FMOLHS projects a 4:1 return on its investment over five years. This equates to $37.3 million in savings to the health plan and a savings of 1.7 days per year per employee in absenteeism costs.

NorthShore
University HealthSystem

SCREENING FOR UNDIAGNOSED HYPERTENSION

Overview

- NorthShore University HealthSystem (NorthShore) is a comprehensive, fully integrated, healthcare delivery system that serves the Chicago region.
- NorthShore has utilized an electronic health record that spans the ambulatory and inpatient continuum of care for more than 10 years.
- Development of innovative approaches to diagnosis and therapeutic interventions in chronic disease management has arisen directly from NorthShore's commitment to research informatics and quality and clinical analytics.
- Deployment of more effective and efficient approaches to the diagnosis and treatment of chronic diseases will reduce the clinical and economic burden from these diseases.

Background

- Some 29 percent of adults in the U.S. have hypertension. Approximately one third of patients with hypertension are undiagnosed.
- Undiagnosed and untreated hypertensive patients are at a higher risk of developing heart disease, stroke, and chronic kidney disease.
- One of the major reasons patients have unrecognized and undiagnosed hypertension is the unavailability of accurate and relevant blood pressure readings that promote clinical decision making and early intervention to treat hypertension and prevent longer-term consequences.
- Since primary care physicians are often unaware of blood pressure readings collected outside of the office (readings taken in other office settings, including trends over time), it is important to provide information gleaned from the entire health system to support more effective care decisions.

Description

- NorthShore's enterprise-wide data warehouse allows for the collection of critical data points, while the Research Informatics and Quality and Clinical Analytics teams created algorithms to help weave raw data points into a probability index for basing the diagnosis of hypertension on these systemwide readings from multiple locations.
- Patients with a high index of suspicion for the diagnosis of true hypertension were contacted using telephonic, patient portal (NorthShore Connect), and mail channels.
- Use of an automated office blood pressure machine (AOBP) gave patients who were contacted a more accurate blood pressure reading performed in the office setting.
- Using a set of informatics tools ranging from a fully deployed electronic health record, enterprisewide data warehousing, research informatics, quality and clinical analytics resources, predictive modeling, patient portal-based communication, and office-based workflow changes, many new patients with historically unrecognized hypertension were found, producing greater opportunities to reduce cardiovascular risk in this population.

Metrics

- In the first 18 months of the program, the rate of undiagnosed hypertension fell from 14% to 8% of the primary care adult population.
  - Some 1,586 patients were identified who satisfied at least one of the predictive algorithms created to help recognize patients with putative hypertension.
  - Of the initial population of patients identified by informatics algorithms to have possible

hypertension, 33% of them came to a NorthShore Medical Group office to validate their blood pressure.

- Of the patients who had blood pressures recorded by AOBP, 38.5% were found to have a verified diagnosis of previously unrecognized hypertension, and 41.5% had clinically relevant prehypertension, which is also a risk factor for future cardiovascular disease.

- Based on this initial success, approximately 50 new patients per month are found with a de novo diagnosis of hypertension where interventions ranging from lifestyle modification to medication starts have been implemented. Patients are also being recognized during office visits, where clinical decision support alerts identify patients who meet the criteria for being at high risk of having hypertension.
- Surveys of physicians were conducted to assess the value of the program:
  - 88% said the program led to a measurable improvement in patient care;
  - 79% said the intervention produced a change in their personal practices of patient care.

Value

- Most screening programs for hypertension rely on labor-intensive interventions across untargeted groups of patients. By instituting a program that focuses on patients identified as having probable hypertension, NorthShore can more effectively and efficiently intervene with patients having the highest risk for cardiac complications.
- Providing information about hypertension to patients and treatment teams at NorthShore has enhanced recognition of hypertension and allowed more effective treatment planning and higher degrees of patient engagement.
- This innovation has produced better diagnostic efforts leading to better quality of life and prevention of cardiovascular complications of patients with a very prevalent chronic disease state.

BETTER DIABETES SCREENING

Overview

- Novo Nordisk Inc., a healthcare company with a 90-year history of innovation and leadership in diabetes care, is focused on changing the way America prevents and treats diabetes.
- Nearly 26 million adults in the U.S. have diabetes, and 7 million of them do not know it; they are the undiagnosed.
- Some 79 million Americans have prediabetes and are at high risk of developing type 2 diabetes within 7 to 10 years if no action is taken. About 90% of people with prediabetes are unaware of their condition.
- Targeted screening of people at high risk for type 2 diabetes is an essential first step to identify:
  - Those with prediabetes who can be referred to evidence-based, community-based diabetes prevention programs that focus on diet, exercise, and weight loss measures to prevent or delay the disease;
  - Those with undiagnosed diabetes who can begin treatment as early as possible in the course of their disease to prevent or delay the onset of complications.
- Targeted screening for diabetes and prediabetes is the entry point to stopping or curtailing the disease.

Background

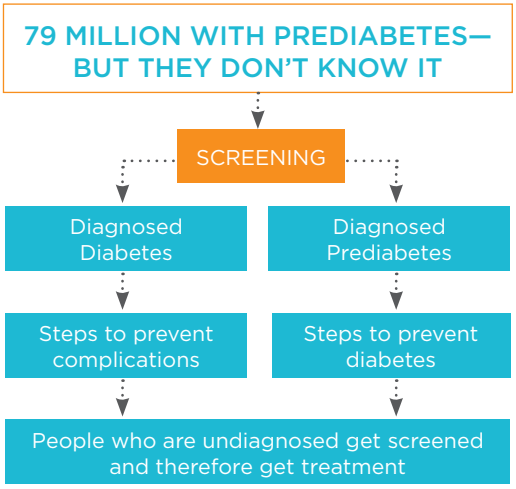
- The Centers for Disease Control and Prevention (CDC) estimates that as many as 1 in 5 adult Americans could have diabetes by 2025 if current trends continue, and 1 in 3 adults by 2050.
- Diabetes typically has few or no recognizable symptoms in its early stages. As a result, when people are first diagnosed with the disease, they often already have complications.
- Federal guidelines from the U.S. Preventive Services Task Force (USPSTF) recommend screening for type 2 diabetes only in asymptomatic adults with high blood pressure.
  - Under the Affordable Care Act, coverage of preventive services such as screening for diabetes is tied to these guidelines. Thus, many individuals with risk factors for type 2 diabetes may not be eligible for free screening for type 2 diabetes with no insurance co-pay.
- Novo Nordisk commissioned research that resulted in an article published in Health Affairs in January 2012, "The U.S. Preventive Services Task Force Should Consider a Broader Evidence Based in Updating its Diabetes Screening Guideline." The authors recommend that prevention of type 2 diabetes itself should be an important health outcome that the task force consider when assessing the value of screening for type 2 diabetes.

Description

- The current guidelines of the American Diabetes Association (ADA) are based on multiple risk factors and recommend screening individuals who are overweight or obese and have one or more risk factors:
  - Physical inactivity, family history of diabetes, high-risk race or ethnicity, hypertension, high cholesterol, cardiovascular disease, history of gestational diabetes, delivery of baby weight more than nine pounds, or polycystic ovary syndrome.
  - For individuals without risk factors, ADA recommends that screening begin at age 45 and, if no diabetes is found, be repeated at least every three years.
- Other entities that recommend risk factor-based screening include: Centers for Medicare and

Medicaid Services (CMS), Department of Defense, Department of Veterans Affairs, the American Association of Clinical Endocrinologists, National Diabetes Education Program, National Institute of Diabetes and Digestive and Kidney Diseases, and the American College of Physicians.

- In May 2013, the USPSTF announced that it will begin an evidence review on screening for type 2 diabetes to update its current screening recommendation.



Metrics

- Research shows that compared to the current federal guidelines, the screening guidelines of the ADA are better at identifying people with undiagnosed diabetes and prediabetes and more cost-effective.
  - A retrospective study of nearly 47,000 adult patients comparing the ADA and USPSTF guidelines found that USPSTF guidelines identified one-third fewer people with diabetes.
  - A study that applied USPSTF guidelines to National Health and Nutrition Examination Survey (NHANES) data for more than 7,100 adults found that the USPSTF screening recommendations identified fewer than half of those with undiagnosed diabetes.
- A modeling study found that screening for type 2 diabetes reduces complications and deaths when started between the ages of 30 and 45, with screening repeated every three to five years.
- This study also found that the current USPSTF guideline detects fewer cases of type 2 diabetes and has a smaller effect on preventing eye, kidney, and nerve damage than screening based on age.

Value

- Screening is the entry point for preventing both the disease and its complications. Research recently published by the ADA shows that in 2012, diabetes cost the nation $245 billion – a 41% increase from 2007.
- People with diabetes have medical costs that are more than twice as high as people without the disease. With targeted screening of people at high risk for diabetes, we can identify more people with prediabetes and undiagnosed diabetes and begin to alter the human and economic toll of diabetes.

More Health Consequences Prevented by Screening Adults Starting at Age 45