



Milbank Memorial Fund

REPORT

State Population Health Strategies that Make a Difference:

Reducing the Burden of Chronic Diseases in Delaware and Iowa

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Message from the President

How much does state health policy really matter? Can public and private sector leaders actually enact steps that systematically improve the health of entire populations? Or is the health of communities completely determined by forces resistant to state-level change—global economics, local political cultures, and the behavior of individuals?

If state health policy matters, how does effective policy happen? We are awash with “evidence” and advocacy to persuade policymakers. Legislators pass laws, the executive branch implements and enforces them, and providers and payers play their roles in delivering services. But what are the activities necessary for public officials to enact meaningful change?

These are more than questions of passing interest for the Milbank Memorial Fund. Since our mission is to improve population health by connecting leaders and decision makers with the best evidence and experience, we have a lot riding on these questions and their answers.

To pursue them, we engaged Boston University researchers David Jones and Christopher Louis to work backward—to determine if there are states that appear to have systematically and significantly improved their performance in multiple investigations of statewide measures of specific areas of population health. Then, if these states could be identified, go to those states and investigate what actually happened to generate that improvement.

Jones and Louis did indeed identify instances where states made big improvements in population health measures. Some “big mover” states made progress in reducing chronic disease burden and others reduced infant mortality. The researchers’ investigations showed that state health policy in fact drove these changes. Their findings, however, yield no secret formula but instead uncover important steps for health care leaders and anyone committed to this work.

This research is highlighted in this report, a companion report, and a summary of the project and findings. We hope it helps inform and inspire all who engage in the important work of developing policies to help people live long and fulfilling lives.

Christopher F. Koller
President, Milbank Memorial Fund

Identifying Solutions from the “Big Movers”

State health policy leaders are looking for effective approaches to improve the health of the people they serve. There is growing recognition of the important role that state policy can play in improving population health. The development of effective policy at the state level is as important as ever, given the tumult and discord surrounding national health reform politics.

In this study, we took a unique approach to identifying effective population health improvement strategies in states. Rather than look exclusively at the states that consistently have the best health outcomes or focus on an evaluation of a specific program, we sought to identify states that had made dramatic improvement on one or more key population health outcome measures (hereafter referred to as “big movers”). We sought to identify which states made progress and examine how and why.

We did not focus on identifying the states that had the best outcomes or were consistently the highest performers, largely because the political dynamics, history of policy development, and access to resources in these states might make their lessons impractical and less relevant for low-ranking states. Peers may be able to learn more—or at least different lessons—from states that improved from a ranking in the 40s to the 20s, for example, compared to the highest-performing states.

We used a rigorous process to analyze prominent health scorecards (America’s Health Rankings, The Commonwealth Fund, and Kids Count) to identify states that have made particularly impressive improvement in identifiable categories of population health. We examined 157 population health measures across the scorecards before settling on the issues of chronic disease and birth outcomes. Finally, we sought confidence, using probability analysis, that the improvement was real and not random variation.

Two states met our criteria for improvement in the area of chronic disease between 2007 and 2012 (see the Appendix for more details on our data, methods, and why we used these time periods):

1. Delaware, improving from 32nd to 23rd
2. Iowa, improving from 20th to 11th

Four other states met our criteria for improvement with respect to infant mortality, a subset of birth outcomes, between 2004 and 2014:

1. Florida, improving from 33rd to 25th
2. Georgia, improving from 43rd to 31st
3. Maryland, improving from 41st to 31st
4. Missouri, improving from 38th to 29th

Having identified states that had made dramatic improvement in each of these important areas, we traveled to two states from each category—Delaware and Iowa for chronic disease; Florida and Georgia for infant mortality—to learn directly from key leaders (see the Appendix for more details about case study selection and methods). We used this comparative case study approach to answer the following questions:

- What policies did leaders put in place to achieve these gains?
- What challenges did they face?
- How were such challenges overcome?
- What can leaders in other states learn from their experiences?

Our study does not assess the causal relationship between certain policies and health outcomes; rather, it serves to generate ideas for promising population health strategies at the state level.

This report focuses on the lessons we learned from leaders in Delaware and Iowa about how to reduce the burden of chronic disease. A [companion report](#) examines how leaders in Florida and Georgia reduced infant mortality and improved birth outcomes.

This report proceeds as follows: first, we describe why chronic diseases are such an important issue in the United States. Second, we highlight what has been accomplished in Delaware and Iowa. Finally, we wrap up with broader themes and lessons across the two states.

The Burden of Chronic Disease: Wide Variations by State

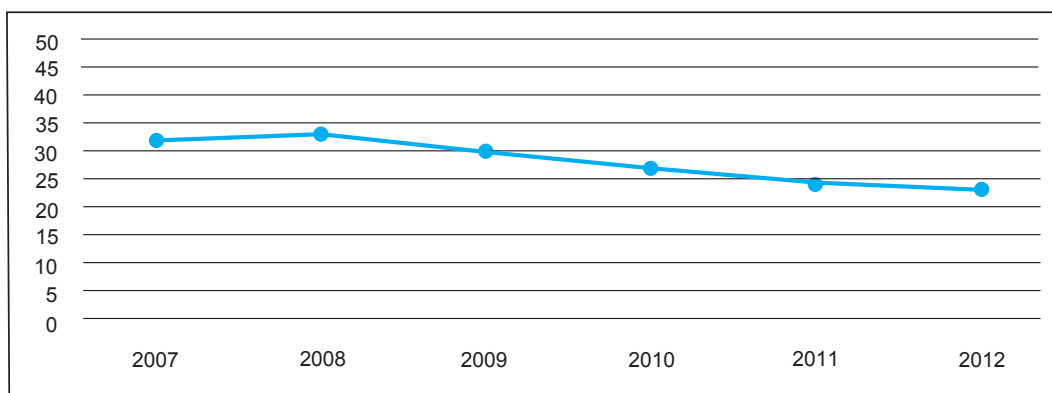
In 2012, nearly half of all adults—117 million people—in the United States had one or more chronic diseases. Treatment for these individuals accounted for more than 85% of the nation's health care costs that year.^{1,2} Moreover, of the top 10 causes of death in 2010, seven were chronic diseases, with cancer and heart disease accounting for nearly half of all deaths.³ A chronic disease (also known as a noncommunicable disease), as defined by the U.S. National Center for Health Statistics, is a disease lasting three months or longer.⁴ Chronic diseases include cancer, heart disease, stroke, type 2 diabetes, arthritis, and many others. States vary in their burden of chronic disease; that is, the number of people with that disease. A recent report published by the Partnership to Fight Chronic Disease found regional differences in disease rates.⁵ Figure 1 illustrates that the highest disease rates were in the states along the Appalachian corridor, ranging from Mississippi to Pennsylvania, and in some parts of the Northeast. Conversely, the lowest disease rates existed in the Southwest, between California and Texas.⁶ Numerous reasons for these differences have been identified, including access to health care services; a shortage of health care professionals, including primary care physicians; a lack of accountability from patients; low compliance with medication regimens; and geographic and environmental factors. But what can states do to combat these trends and reduce their burden of disease for their population?

in each state with individuals knowledgeable about the policies that were adopted during that time, the role of key leaders, and the major cross-sector collaborations. In neither case was there a single policy or program implemented that clearly explained the improvement. Thus, we profile their endeavors and identify lessons for other states.

Case Study: Delaware

Between 2007 and 2012, Delaware improved nine rankings in the chronic disease composite measure we created for this study. They began the study period at 32nd and finished at 23rd. Despite a small uptick in 2008, Delaware has steadily improved. Figure 2 provides Delaware's chronic disease ranking trend from 2007 to 2012.

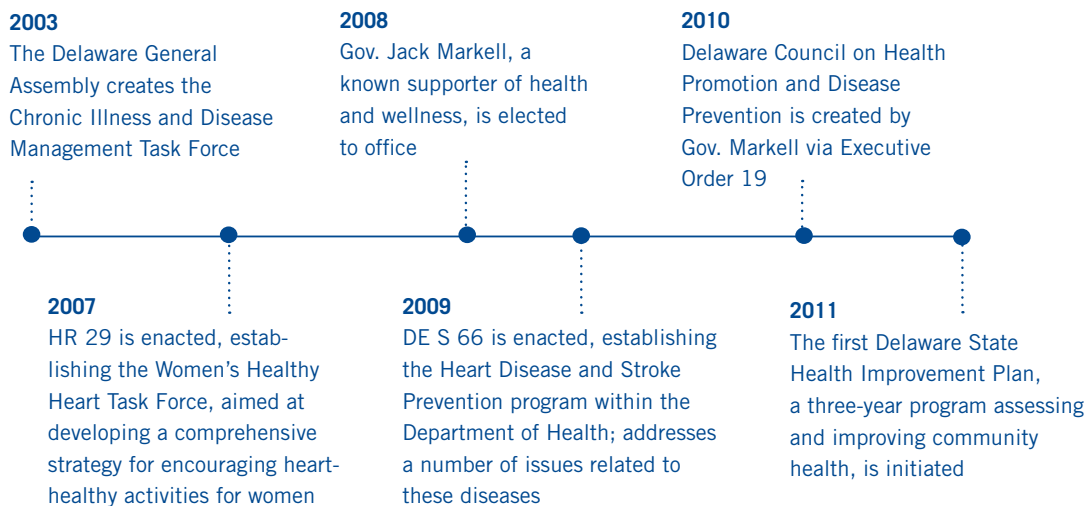
Figure 2. **Delaware's Chronic Disease Ranking, 2007-2012**



Source: America's Health Rankings. <http://www.americashealthrankings.org>.

In the years leading up to and during the study period, several notable policy-related events occurred that may have contributed to the progress in Delaware. The creation of the Chronic Illness and Disease Management Task Force in 2003 instilled a new statewide focus on chronic diseases. Then, several pieces of legislation on specific programs further emphasized the need for progress in certain areas (such as heart disease and stroke). Support from pro-public health Governor Jack Markell following his election to office in 2008 was also instrumental in passing legislation targeting improvements in chronic disease. (See Figure 3.)

Figure 3. **Timeline of Notable Events: Reducing Chronic Diseases in Delaware**



The Need for Change: Chronic Diseases Cost Delaware More than \$3 Billion Annually in the Early 2000s

In the early 2000s, Delaware spent more than \$4.4 billion on health care costs annually.⁸ Treatment and management for patients with chronic diseases accounted for nearly 80% of that total, or roughly \$3.4 billion. At the same time, Delaware ranked in the bottom half of the country in stroke, heart disease, and diabetes.⁹ These facts were not ignored by state leaders and signaled that a change needed to occur.

Shifting the State's Health Care Focus Toward Chronic Diseases: Government Leadership at Work

In 2003, which predates our study period but is germane to the changes that occurred, the Delaware General Assembly created the Chronic Illness and Disease Management Task Force. The purpose of this task force was to study disease management strategies and their potential to improve health status and quality of care, identify gaps in the health care delivery system, and contain costs. The task force embarked on a nearly yearlong investigation into the burden of chronic disease in the state and produced a number of recommendations for state leaders. Among these recommendations, a special emphasis was placed in two areas: (1) primary prevention aimed at stopping the onset of chronic disease, and (2) secondary prevention seeking to mitigate the impact of chronic disease once it develops.¹⁰

Several legislatively driven task forces and initiatives that focused on reducing the burden of chronic diseases ensued, one example being the Women's Healthy Heart Task Force (2007). However, a coordinated effort to bring together the potential solutions aimed at solving the chronic disease problem in Delaware did not occur until Governor Jack Markell took office in 2009. Governor Markell took a number of legislative actions focused

on chronic disease during his tenure, which ended in January 2017. Possibly the most notable of these was Executive Order 19, which created the Delaware Council on Health Promotion and Disease Prevention in 2010. This council was formed to “advise the Governor and Executive Branch state agencies on the development and coordination of strategies, policies, programs and other actions statewide to promote healthy lifestyles and prevent chronic and lifestyle-related disease.”¹¹ Among these responsibilities, a key role of the council is to develop an overarching statewide strategy for promoting healthy lifestyles. In more recent years, the council has heightened its focus on opioid use and high utilizers of health care services.

Delaware legislators acknowledged they needed to create a more comprehensive approach to improving population health. In 2011, Delaware initiated its first State Health Improvement Plan (SHIP) to improve community health for all residents. This three-year process led by the Delaware Department of Public Health “was designed to fill the need for a comprehensive statewide plan and increase coordination and communication across organizational ‘silos’ while addressing core issues identified for action by the community.”¹² This program decomposed the health improvement process into six overlapping phases: (1) organizing, (2) visioning, (3) completing assessments, (4) identifying strategic issues, (5) formulating goals and strategies, and (6) an action cycle.¹³

During the latter part of the study period, other government-led strategies were implemented throughout Delaware that likely aided in the improvement of chronic diseases. To develop partnerships between community-based and nonprofit organizations, the Delaware government aligned with the American Heart Association, American Cancer Society, University of Delaware, STARS campus, and the YMCA to broaden the reach of its chronic disease investments. These relationships were structured such that the state government (e.g., the Public Health Department) supplied funds to these organizations, and, in return, the organizations would manage chronic disease programs. The YMCA, for example, has used this as an opportunity to advance initiatives focused on diabetes.

Examples of other chronic disease initiatives used by the government during this time include: partnering on behavioral health/primary care integration; enacting policies increasing the number of mental health beds; launching public relations campaigns (e.g., the 5-2-1-Almost None campaign); monitoring prescription drug use; supporting school training and education programs around tobacco and substance use; encouraging healthy lifestyles; and integrating medical records across all state hospitals. Delaware was also ranked third in 2015 for bicycle-friendly states by the League of American Bicyclists, which is a result of Markell’s creation of a network of shared-use trails and pathways for nonmotorized travelers.

Delaware exemplifies its best practices in chronic disease prevention and awareness with its state employees. DelaWELL, the state employees’ health benefits program and the state’s largest employer, has implemented a number of national programs (such as Million Hearts) and policy initiatives that target members with chronic diseases.

Using Data to Facilitate Transformation

To facilitate improvements in chronic disease management, organizations in Delaware invested in many resources in health information technology. The main vehicle used to increase interoperability and share health data between all Delaware hospitals was the Delaware Health Information Network (DHIN). In 2007, this health information exchange “went live” and functioned as an integrated, statewide health data system to support the information needs of consumers, health plans, policymakers, providers, purchasers, and researchers. By the end of our study period (2012), all Delaware hospitals, federally qualified health centers and skilled nursing facilities, most of the state’s physicians, and more than 80% of the state’s assisted living facilities sent data to DHIN, and more than 1.5 million patients were included in its directory.¹⁴ Data from the DHIN has been used to support physician-driven quality improvement activities. For example, the system has been used to assess medication usage and immunization tracking.

Delaware also developed the Health Tracker, a website dedicated to helping the public track progress made in specific health indicators and lead healthier lives.¹⁵ The Delaware Health Tracker brings hundreds of community health indicators together in a single, user-friendly location, includes a disparities dashboard, provides the ability to examine data at the state and county levels, and provides a progress tracker for the Healthy People 2020 Health and Human Services initiative. The tracker was created by the Delaware Healthcare Association, a statewide membership organization representing hospitals, health systems, and related health care organizations. The Healthy Communities Institute (HCI) maintains the site. HCI is a third-party administrator that specializes in supporting technology applications and provides client support.

Political Support for Chronic Disease Improvement

Dating back to the early 2000s, Governors Ruth Ann Minner and Markell provided strong state leadership for public health. Key informants from Delaware also spoke about newly elected Governor John Carney and former senator and now Lieutenant Governor Bethany Hall-Long as being strong proponents of public health and many of the initiatives across the state. Also known for their collaboration efforts across state government agencies are the Delaware Department of Health and Social Services (DHSS) Secretary Rita Landgraf; the Division of Public Health Director Karyl Thomas Rattay; and the Bureau of Chronic Disease Chief Lisa Henry. Specifically, DHSS is known for its cross-departmental strategies targeted at health promotion, substance use, and data and informatics.

The state of Delaware is relatively small. This characteristic facilitates state-, county-, and organization-level collaboration. Since there are only three counties in the state and the leadership knows each other well from task forces and community-based programs, state legislators and the health systems work closely on chronic disease initiatives.

Current Initiatives Building on Earlier Successes

In 2014, the Delaware legislature created the Delaware Center for Health Innovation (DCHI). The task of this center is to collaborate with the Health Care Commission, a division of Delaware Health and Social Services, “to guide the State Innovation Model’s effort and track its progress.”¹⁶ The DCHI has a 15-member board, a budget of \$130 million, and support through external contributions and the Center for Medicare & Medicaid Innovation (CMMI) funding.¹⁷ Its main source of funding is a multi-year State Innovation Model (SIM) grant approved by CMMI in July 2014 as an extension of Delaware’s prior CMMI design grant.¹⁸ In short, the SIM grant aims to align the state with the triple aim of improving patient experience of care, improving the health of the population, and reducing health care costs.¹⁹

In addition, DCHI has developed a program called Healthy Neighborhoods that operates in conjunction with SHIP. This program aims to drive the state in being among the nation’s healthiest. It has implemented a three-year strategy to improve health in each of the following chronic disease areas: (1) healthy lifestyles, (2) maternal and child health, (3) mental health and addiction, and (4) chronic disease prevention and management. More detail on the evaluation of the SIM grant can be found at [Delaware Center for Health Innovation](#).

Lessons from Delaware

State legislators and executive branch leaders in other states can learn from some of the steps Delaware took to alleviate the burden of chronic disease.

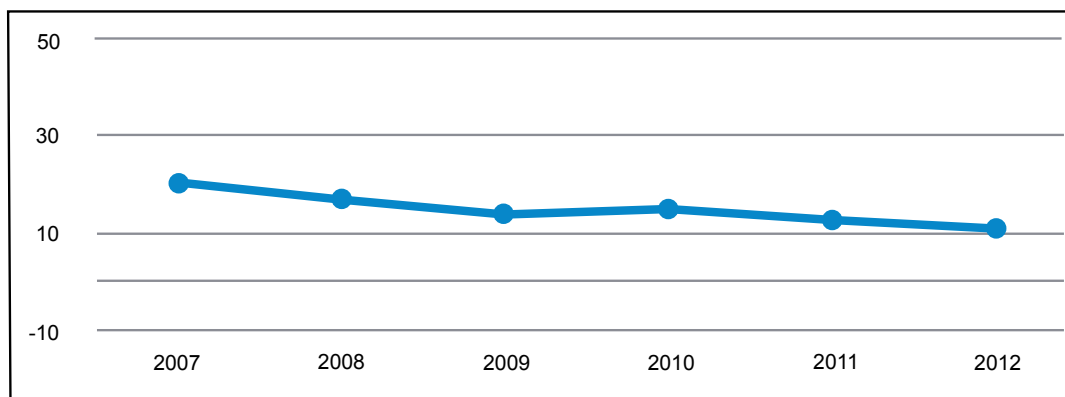
- 1. Obtain leadership support for population and public health.** Delaware appears to maintain a persistent focus on preventing and treating chronic diseases as a public health effort. At several points before, during, and after the study period, we found that Delaware used legislative action and executive orders to create task forces around chronic disease and population health. This top-down approach meant that government resources were to be used to help solve these issues.
- 2. Start with state employees.** The Delaware government leverages its position as the largest employer (through DelaWELL) to emphasize prevention and provide comprehensive wellness programs. This approach with its own employees shows that these initiatives are not just “talk.”
- 3. Use data to connect stakeholders.** The use of data in supporting health information technology (HIT) connectivity and data sharing was a factor in Delaware’s success. HIT provides the ability to send alerts, track patients, and analyze quality. Utilization data collected by the DHIN provided new capabilities for task forces and health systems focused on patients with chronic disease.
- 4. Engage community partners.** Forming partnerships between government agencies (individuals and funding opportunities) and community-based organizations in support of specific programs focused on chronic diseases can be used as a strategy to influence change at the local level. These programs should engage data-driven organizations that have a reputation in the community for supporting population health.

5. Align competing organizations around a common goal. Creating opportunities to bring competing stakeholders to the table to elicit their opinions (especially around public health strategy and funding) has been instrumental in Delaware's progress. Through multi-stakeholder task forces, strategic planning committees, and other initiatives, Delaware has developed programs around disease-specific goals that competitors agree on. Relatedly, the relatively small size of Delaware seemed to help in this regard. There are only so many key stakeholders in each of the three counties, so to make meaningful change, each needed to participate or their absence would have been easily identified.

Case Study: Iowa

Like Delaware, Iowa improved nine rankings in our chronic disease composite measure between 2007 and 2012, moving from 20th to 11th in the nation. Figure 4 provides Iowa's chronic disease rankings trend from 2007 to 2012.

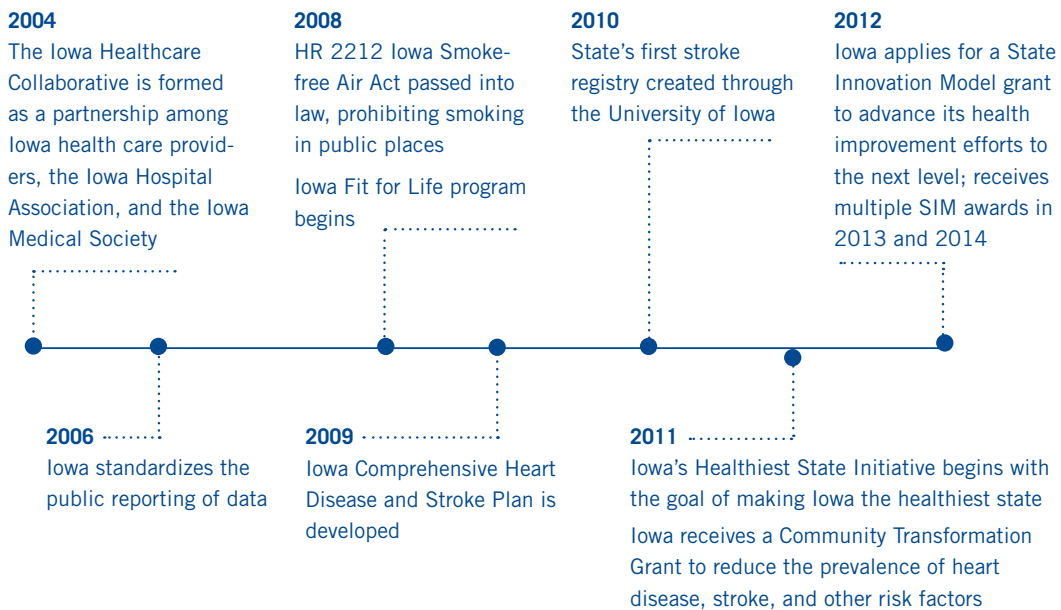
Figure 4. **Iowa's Chronic Disease Ranking, 2007-2012**



Source: America's Health Rankings. <http://www.americashealthrankings.org>.

In the years leading up to and during the study period, several important events occurred that may have contributed to the improvements we found in Iowa. In 2004, the Iowa Healthcare Collaborative, which includes many key health care industry stakeholders, was created to focus the state on chronic disease and public health issues. A number of specific strategic initiatives and laws related to making progress in these areas ensued, including the passage of a law standardizing the public reporting of data, and the Iowa Comprehensive Heart Disease and Stroke Plan. (See Figure 5.)

Figure 5. **Timeline of Notable Events: Reducing Chronic Diseases in Iowa**



The Need for Change: Chronic Diseases Cost Iowa More than \$13 Billion Annually; Millions Affected

The top seven chronic conditions—cancer, diabetes, heart disease, hypertension, stroke, mental disorders, and pulmonary conditions—in Iowa affected more than 1.6 million people in 2003.²⁰ Coupled with a total estimated economic impact of more than \$13.4 billion to the state, legislators could not deny the pressing issue of chronic disease.²¹ A report published by the Iowa Department of Health determined that six of the top seven leading causes of death are chronic diseases,²² with heart disease, cancer, and stroke holding the top three positions for both males and females. This report prompted state policymakers, health systems, and community-based organizations to take action.

Establishing Multiple Programs and Partnerships Aimed at Reducing the Chronic Disease Burden

Iowa's approach to reducing the burden of chronic disease has been comprehensive and multi-faceted. Key informants discussed nearly two dozen programs that were in place across the state commencing just before the study period and during it. As such, we profile the main programs, collaboratives, and other initiatives that focused on improving chronic disease prevention, treatment, and management.

Iowa Healthcare Collaborative. Formed in 2004 through a partnership between Iowa health care providers, the Iowa Hospital Association, and the Iowa Medical Society, this multi-stakeholder collaborative aims to facilitate improved quality for patients and the sharing of data for the purpose of disseminating best practices.²³ This group was a driving

force in the state in establishing aligned measures for standardized reporting and encouraging transparency among providers, insurers, suppliers, the Iowa government, and other key players.²⁴ This collaborative also serves in a pseudo-statewide coordinating role in understanding the work of other task forces and work groups.

Iowans Fit for Life. Beginning in 2008, the Iowa Department of Public Health (DPH) was awarded a grant from the Centers for Disease Control and Prevention (CDC) that addressed issues of physical activity, nutrition, and chronic disease.²⁵ Iowa appropriately branded this program [Iowans Fit for Life](#). This four-year partnership involved statewide stakeholder groups, including transportation and community planners. One of the main tasks of this partnership was to develop a comprehensive strategic plan addressing physical activity and nutrition for all of Iowa's residents.

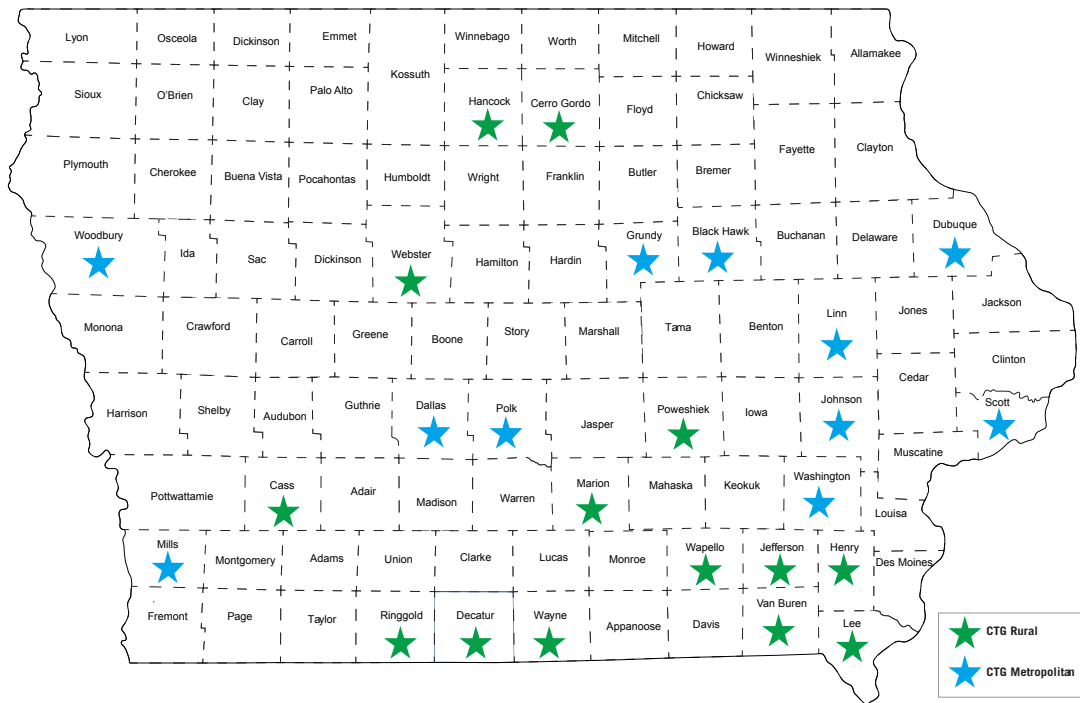
HR 2212 Iowa Smoke-free Air Act. In July 2008, Iowa became one of the first states to pass a state law banning smoking in public places; it also raised the tobacco tax. The passage of this law not only acknowledged the need for clean air in public places but also served as a political stance on the role that smoking plays in exacerbating chronic diseases such as cancer and heart disease.

Iowa Comprehensive Heart Disease and Stroke Health Plan. In 2009, Iowa developed the [Comprehensive Heart Disease and Stroke Plan 2010-2014](#). The purpose of this initiative was to provide “a framework to reduce the risk factors related to heart disease and stroke, decrease its impact on individuals and families, and increase quality and years of healthy life.”²⁶ Plan development fell within the purview of the Cardiovascular Work Group, an affiliate of the Iowa Healthcare Collaborative led by clinical experts. Concurrently, Iowa participated in the U.S. Department of Health and Human Services Million Hearts national initiative, which aims to prevent 1 million heart attacks and strokes by 2017.²⁷

Iowa's Healthiest State Initiative. One of the most noteworthy actions taken by state policymakers was Governor Terry Branstad's Healthiest State Initiative in 2011. This initiative aims to make Iowa the healthiest state in the nation by supporting local communities to make incremental changes to become a “Healthy Hometown.” It brings awareness to underutilized resources at the DPH and uses the website as a resource for communities and organizations wanting to make improvements.

Community Transformation Grant. Iowa was awarded a [Community Transformation Grant](#) in 2011 from the CDC. The money for this grant is to be used to reduce the prevalence of heart disease and stroke and the associated risk factors. It funded activities such as prevention education, awareness activities, and other locally driven initiatives in 25 intervention counties across the state. Figure 6 shows the location of the 25 counties participating in this grant.²⁸

Figure 6. 2011 Iowa Community Transformation Grant Counties



Source: Community Transformation Grant. <https://www.legis.iowa.gov/docs/publications/IH/17177.pdf>.

Cancer Initiatives. Several cancer-related initiatives also took effect between 2007 and 2012. One notable example is the Iowa DPH’s Comprehensive Cancer Control Program. Together, the DPH, the Iowa Cancer Consortium, and many state partners (including policymakers, organizational leaders, and cancer survivors) coauthored a state cancer control plan. This five-year plan was developed in 2011 and executed from 2012 through 2017. Key goals were prevention, early detection and diagnosis, access to cancer services and programs, and improved quality of life.²⁹

Healthy Iowans. Healthy Iowans is a stakeholder-driven initiative that began in the early 2010s that focused on issues related to chronic disease and population health. Participants included nonprofit and private providers, hospitals, Wellmark (Blue Cross Blue Shield), and advocacy groups.³⁰ Through joint meetings of the collaborative, stakeholders identified 39 statewide critical health needs. These areas were then categorized into nine domains and included in Iowa’s Health Improvement Plan 2012-2016.

Using Data to Facilitate Improvement

Standardized Public Reporting of Data. In 2006, Iowa took an initial step toward asserting a culture of, and building policy capacity for, data use and standardization. The Iowa legislature passed into law the requirement that public reporting by providers on key health and

quality measures, including specific patient measures, be standardized across all reporting entities. Because of this requirement, health care organizations are now able to work with the DPH to obtain reports that summarize performance and help them understand where to focus operational initiatives. The Iowa Healthcare Collaborative was instrumental in facilitating this change and implementing this new law.

Stroke Registry. Building on the knowledge gained from having a decades-old cancer registry, the University of Iowa began developing a stroke registry in 2010. As of 2015, the registry had grown to include 35 hospitals, more than 15,000 unique patient admission records, and four years of trended quality data.³¹ Health systems and community-based organizations can access this data and develop strategies to assess performance on certain metrics when needed.

Iowa Public Health Tracking Portal. The Iowa DPH created a tracking portal that is a publicly available, centralized repository for a multitude of public health data. This site houses data from numerous sources and includes dozens of quality and population health metrics. It is to be used for improving public health decision-making, performing community health needs assessments, increasing opportunities for funding, and aiding a more efficient use of time and resources.³² The tracking program was started with a grant by the Iowa Division of Environmental Health and was ultimately supported by the CDC, which modeled this program in 22 other states.

Telligen Quality Innovation Network–Quality Improvement Organization (QIN–QIO). QIN–QIO was formed as a requirement of the Centers for Medicare and Medicaid Services (CMS). It was created to improve “quality in health care for Medicare beneficiaries by providing communities with technical assistance, convening learning and action networks for sharing best practices, and collecting and analyzing data for improvement.”³³ Its expertise is to use data to develop population health strategies for the Iowa Healthcare Collaborative.

Political Support for Population Health

After having led the state from 1983 to 1999, Governor Branstad retook office in 2011. Since then, he has endorsed the Healthiest State Initiative but has not been proactive in creating legislation or moving population health initiatives through the legislature. His recent agenda has focused more on issues of infrastructure and education than health improvements. However, this may be a function of the high ranking we identified by the time he became governor (in 2012, Iowa was ranked 11th in chronic diseases based on our analysis of the data), and as a result his priorities are focused elsewhere.

Despite this lack of emphasis on chronic diseases in the governor’s agenda, several key informants interviewed for this study identified state Senator Jack Hatch (D-Des Moines) as the unrelenting force in population health initiatives, particularly from his seat on the Health and Human Services budget subcommittee for advanced coverage. He is considered by many as “the voice of the people” in this regard. Interviewees also praised government

leaders for their collaborations with organizations such as the Iowa Healthcare Collaborative; the Iowa State University and its extension; Wellmark, the largest insurance company in the state; the Iowa Pharmaceutical Association; and local communities with respect to transportation and complete streets initiatives.

Ongoing Initiatives Building on Iowa's Success During the Study Period

Following the development of several initiatives to support improvements in chronic diseases, Iowa has continued that momentum with a flurry of activity. Here, we highlight a few integral programs started recently that are expected to be instrumental to the state's continued success.

Diabetes Education. In 2015, Iowa became one of two states with certified diabetes education programs.³⁴ The certification is approved through Iowa Medicaid Enterprise and is required to obtain reimbursement from Medicaid and some private insurers in the state of Iowa.

Mission: Lifeline. Building on prior work of the Iowa Comprehensive Heart Disease and Stroke Health Plan, a program called [Mission: Lifeline](#) began in 2015. Mission: Lifeline is the American Heart Association's community-based initiative that aims to improve outcomes for heart attack patients and focuses on areas of the state outside major cities. This initiative unites "Iowa's health systems, hospital networks, emergency medical service providers, and the State of Iowa's Department of Public Health . . . to identify gaps that lead to slower and less effective care."³⁵ To date, this initiative is responsible for providing emergency medical service education in more than 20 communities and has been instrumental in getting statewide segment elevation myocardial infarction guidelines approved.³⁶

State Healthcare Innovation Plan (SHIP) and State Innovation Model (SIM). The [SIM](#) grant awarded by CMS gives Iowa an opportunity to transform the health care system across the state, with a specific focus on payment and delivery system reform. The Iowa Medicaid Enterprise in the Department of Human Services has been a leader in developing the [SHIP](#). Approval of these state innovation programs may be in part the result of years of progress made in other areas such as chronic disease and population health improvement. These past efforts have likely cultivated an environment where implementing these innovation programs is possible. The 2015 annual report can be accessed [here](#).

Iowa Wellness Plan. Iowa's Medicaid 1115 Waiver is currently approved and expiring in 2018. The waiver provides coverage for adults with incomes up to and including 100% of the federal poverty level. CMS also approved the Marketplace Choice Plan demonstration to expand Medicaid coverage to the new adult group with incomes between 100% and 133% through premium assistance. The demonstrations allow the state to charge premiums to beneficiaries with income above 50% of the federal poverty level in the second year of enrollment. Beneficiaries who complete "healthy behaviors" (a wellness exam and health risk assessment) in the first year of continuous enrollment are not subject to premiums in the second year.

Lessons from Iowa

When the study period began, Iowa was already in the top 40% of states for chronic disease. For that reason, their task in making marked improvements was potentially more challenging, as some of the “low-hanging fruit” may have already been picked. Nonetheless, they steadily improved to 11th place over the next six years by employing a strategy consisting of multi-stakeholder collaboratives, work groups and task forces, and state- and community-led health initiatives. Several important lessons were learned:

- 1. Establish baseline data.** Iowa’s efforts to reduce the burden of chronic disease began with establishing a data baseline across the state. This was state-driven and critical in facilitating agreement by key state players in determining where opportunities for improvement existed. This took a number of years and required the support of the Iowa Healthcare Collaborative, state legislators, and health care providers. Ultimately, in 2006 Iowa passed legislation that required the standardization of public reporting and patient metrics.
- 2. Form multi-stakeholder collaboratives.** Collaboration across public, private, and community-based organizations is a key success factor in driving improvement. Many state initiatives succeeded because of partnerships that were grassroots efforts or state-based initiatives directly targeting specific stakeholders. Moreover, leaders at the DPH also worked to develop strong personal relationships within other state-level entities, such as Medicaid, the Department of Education, and the Iowa Healthcare Collaborative. In fact, key informants discussed the use of the Iowa Healthcare Collaborative as a vehicle for advancing the state’s health care agenda without having to navigate the typical legislative channels. It is noteworthy that health insurers play a supporting role as advisory board members but appear to be less central than other health care providers in Iowa’s collaboratives.
- 3. Coordinate statewide efforts and establish a unified message.** No single program or task force is enough to reduce the burden of chronic disease. Given the clinical differences and interplay between each chronic disease, it takes a collaboration of diverse experts to make even the smallest improvements. Furthermore, having a coordinating mechanism (in this case, the Iowa Healthcare Collaborative served largely in this role) at the state level to organize the interrelationships between all the programs, work groups and task forces, and initiatives seems to have been important in reducing some level of duplicative work. These efforts, coupled with a simplistic public message that Iowa aspired to be the healthiest state in the country, showed alignment in the numerous activities and the governor’s vision between the mid to late 2000s and the early 2010s.

- 4. Seek external funding.** Do not rely on state funding to create new chronic disease programs and initiatives. States should seek external grant funding to support focused chronic disease improvement activities. Iowa was able to jump-start several programs critical to its success with the support of CDC funding. For example, Iowans Fit for Life received multiple waves of funding and made marked improvements in areas ranging from chronic disease to nutrition and physical activity. Similarly, the Community Transformation Grant has been successful in establishing external funding because it takes a forward-looking approach in redesigning the way this care is conceptualized and provided.

Conclusion

In this report, we highlighted the work of Delaware and Iowa for their improvements in reducing the burden of chronic disease compared to their peers. This work is complex and requires collaboration from a wide range of individuals and organizations. We noted several important differences in each state's approach, demonstrating that there is not necessarily a single path to progress. However, three common lessons emerged from these two states. To succeed, the effort requires (1) leadership, (2) partnership, and (3) data.

Government Leaders Start It

Delaware had a more active leadership presence in driving change in chronic diseases than Iowa did. Delaware used multiple policy and legislative actions to serve as a catalyst for change and had prominent elected and appointed officials as champions of such change. Meanwhile, Iowa leveraged its relationships with state leaders and relied more heavily on multi-stakeholder collaboratives that were made up of leaders from key health care organizations to advance the population health agenda.

Establish Multi-Sector Ownership for Steady Progress

Iowa's approach to solving population health was primarily focused on building partnerships among health care organizations through collaboratives, task forces, and other initiatives. The Iowa Healthcare Collaborative served as a change agent and trailblazer within the state. Moreover, to the extent possible, it unified its messages across these different work groups and collaboratives. Statewide campaigns such as Healthy Iowans helped give the public additional ways to get involved in these initiatives.

Delaware benefited from having a much smaller group of influential stakeholders. Since this state only has three counties, the state proved more nimble in getting the key actors together to determine the most critical health care needs and implement strategies to solve these issues. In these cases, establishing a clear, causal path between overall strategic planning and quality outcomes in one or many of the specific chronic diseases is difficult. However, having multiple initiatives and collaboratives generating momentum against

chronic disease seems to have some influence on the focus of attention that the state and its key stakeholders have. This appears to have value in improving performance on outcomes.

Measure and Analyze

The use of legislation to standardize data reporting and metrics laid an important part of the foundation for Iowa's cultural transformation. This statewide commitment to establishing a baseline for quality metrics has helped determine trends and allow the collaboratives, health systems, and other key stakeholders to make decisions using similar data. Delaware used data more operationally through its HIT infrastructure. It used the DHIN to link organizations and inform care providers about their patients. These data were also shared with its collaboratives and health systems to improve specific measures of chronic disease.

We are not in a position to make causal claims about what drove the improvements in Delaware or Iowa. Even so, our rigorous process of identifying states that made significant progress in reducing the chronic disease burden led us to these states. Their stories provide insight to leaders elsewhere on the challenges and opportunities inherent in using state policy to improve population health.

Appendix

I. Overview of Scorecards Used

We began this project by identifying the state health performance scorecards from which we would draw our data. We focused on three publicly available scorecards: (1) America's Health Rankings, produced by the United Health Foundation; (2) Kids Count, produced by the Annie E. Casey Foundation; and (3) The Commonwealth Fund Health Systems Scorecards. Using multiple scorecards improved the likelihood that we would detect significant trends and gave us greater confidence in our results. These scorecards were selected for several reasons. First, these data sets incorporated longitudinal data that allows for greater confidence in performance results. Second, these data sets included diverse measures that could be used to examine many issues related to population health. Third, these data sets are publicly available and easily accessible to government officials and the general public. Last, the different scorecards cover adults and children, in addition to including some measures that are stratified by various demographic factors (e.g., age, sex, race).

It is important to note that the metrics used in developing the composite measures for chronic diseases were not always consistent in their reporting schedules. To minimize confounding issues, we only used the period that was the same across each measure (2007-2012). In doing so, we acknowledge that some policy issues that were dealt with just before and after this period may have influenced the performance during the study period.

America's Health Rankings

America's Health Rankings is the longest-running annual assessment of the nation's health on a state-by-state basis and is the result of a partnership between the United Health Foundation, the American Public Health Association, and Partnership for Prevention.³⁷

Kids Count

Kids Count was started by the Annie E. Casey Foundation and is widely considered to be the premier source for data on child and family well-being in the United States. This data set provides access to hundreds of indicators that can be downloaded to create reports and graphics from the Kids Count Data Center.³⁸

The Commonwealth Fund Health Systems Scorecards

The Commonwealth Fund Health Systems Scorecards is a series of scorecards that provide performance benchmarks and improvement targets for states, communities, and the nation. The Health Systems Data Center allows users to access comparison data on a variety of metrics and populations, including low-income populations.³⁹

II. Approach to Analyzing Scorecard Data

There are 157 measures focused on aspects of population health across the three scorecards. Before analyzing the data to look for states that had made significant improvement,

we went through a process to decide which measures were most important. We relied on a 2015 report called *Vital Signs*, in which a panel convened by the National Academy of Medicine (NAM, formerly known as the Institute of Medicine of the National Academy of Sciences) reviewed hundreds of measures used in health and health care. They divided the measures into 15 categories and selected the indicators within each category that they thought were most important for scholars and policymakers.

We grouped our 157 measures into the categories described by the NAM report. Because our goal for this project is to make recommendations about improving population health rather than health care, we chose to exclude categories focused on clinical decision making and clinical care. This left us with eight categories: (1) life expectancy, (2) overweight and obesity, (3) addictive behavior, (4) unintended pregnancy, (5) preventive services, (6) care access, (7) well-being, and (8) healthy communities.

After completing this categorization process, we created an alternative categorization for these measures. This was performed as a supplemental analysis where we found additional clusters of measures, above and beyond what NAM had identified. For example, any measure across the three scorecards that related to the birth of a child, which isn't a distinct NAM metric, was put into an additional category named "birth outcomes."

Once the categorization of all measures was complete, we created a database of the raw data in the scorecards for all states (excluding Washington, D.C.). For some measures it is better to be ranked 1 (such as percent of children receiving immunizations), and for other measures it is better to be ranked 50 (such as percent uninsured). We oriented each measure in the same direction so that 1 is the best and 50 is the worst ranking.

A stringent set of criteria was developed so we could identify states that had a marked improvement in their rankings, did not vary wildly, and did so over a minimum of five years (with most measures having 10 years of data available). In other words, these criteria helped us cut through the noise to identify states that likely had made actual progress. To be considered a big mover, our study inclusion criteria required that a state meet the following:

1. A minimum of five years of data must be available between the years of 2004 and 2014, the year for which the most reliable data was available at the time of analysis;
2. The state must have improved a minimum of eight rankings during the data years available; and
3. The state must have a maximum of a 4.0 mean squared error (MSE) during the data years available.

MSE is a commonly used statistical approach to determine how much variation exists between multiple data points. For example, a state that had an improvement of one ranking every year for eight years would have a much lower MSE—actually zero MSE—than a state that fluctuated five rankings every year but had the same total change between the first and eighth years.

We approached analysis by looking at measures across a spectrum of broad to narrow. At the broadest level, we created an aggregate measure that clustered individual measures that had been averaged for every state across all three scorecards. The National Quality Forum defines a composite measure as “a combination of two or more individual *measures* in a single *measure* that results in a single score.”⁴⁰ These clusters were organized around the NAM categories of key variables. Very few states showed up as big movers in the composite measures given the strictness of the three criteria mentioned above and the requirement that states either be steady or make improvement across multiple related measures. This provides an opportunity to assess whether broad population-based changes, as opposed to individual clinical care changes, might have influenced this improved performance.

In the middle of our spectrum from broad to narrow, we were particularly interested in the NAM category “life expectancy.” The NAM report suggests prioritizing infant mortality, which is a single metric but one that is indicative of many things. We analyzed this measure in connection with other indicators of birth outcomes such as low birth weight and the teen birthrate.

Finally, we analyzed each measure as an individual indicator. This allowed us to identify more specific trends that were not captured in the broader analysis and to identify narrower but still important areas where states had shown improved performance.

III. Qualitative Analysis

We went to each of our four case study states and interviewed top leaders. In each state, we contacted legislators, executive branch officials, academics, leaders of relevant state-level stakeholder organizations, and county-level public health leaders. We spoke with seven or eight people per state between October and December 2016 on topics ranging from policymaking to leadership to federal-, state-, and county-level programs. Approximately half the interviews took place in person, with the remainder occurring by phone. We promised interviewees confidentiality in exchange for candor, so we do not present any information in this report that might reveal identities. The Boston University Medical Campus Institutional Review Board approved this study.

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