HEALTHIER BY DESIGN: CREATING ACCOUNTABLE CARE COMMUNITIES

A Framework for Engagement and Sustainability

Organized and led by:

AUSTEN BioInnovation INSTITUTE IN AKRON

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I. Introduction

In the United States (U.S.) today, $2.5 trillion dollars are spent on healthcare, a figure twice the amount spent by any other industrialized nation per capita[1]. Yet the U.S. ranks 49th in the world on life expectancy[2], with substantial gaps in how Americans use recommended health services and quality of care received[3]. Nearly 40% of U.S. deaths are caused by preventable conditions each year[4], but clinical interventions to prevent these conditions reach only 20-50% of the people who need them[5]. Leaders in the health professions increasingly realize that improving the system cannot rest solely upon the shoulders of hospitals and physicians. Nor can it fall totally upon patients and their families, millions who remain uninsured, underinsured, and overburdened by the ongoing national economic crisis. Preventing disease and improving population health in the U.S. will require collaboration and shared accountability across various sectors including healthcare providers, media, business, academia, government, and local communities.

> "An Accountable Care Community is a collaborative, integrated, and measurable multi-institutional approach that emphasizes shared responsibility for the health of the community, including health promotion and disease prevention, access to quality services, and healthcare delivery.
>
> Dr. Janine E. Janosky
> Vice President
> Center for Clinical and Community Health Improvement
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In March 2010, the *Patient Protection and Affordable Care Act (PPACA)* was enacted with the goal of increasing access to care and decreasing health spending in the U.S. with emphases on collaborative, team-based, service-based, patient-centered, and mutually accountable care. Though PPACA has been subject to challenges at every level, the main concepts of care coordination, team-based care, improved outcomes, reduced cost will endure regardless of PPACA. Healthcare professionals, community members, and other stakeholders are critical to implementing these concepts and improving the way care is delivered in the US.

Again, we are reminded that collaboration and shared accountability across sectors will be needed to create lasting improvements in our healthcare system.

Dr. Donald Berwick, immediate past Administrator of the Center for Medicare and Medicaid Services, has stated that our current healthcare system must transform into "…a system that offers a more seamless, coordinated care approach for patients. And the outcomes for that system we'd like to think of as having three parts—one, better health for people; two, a better care experience for people; and three, lower cost through continuous improvement"[7]. This has been referenced as the "Triple-Aim."

The Austen BioInnovation Institute in Akron embraces Dr. Berwick's vision and we have led the effort to usher in this new health culture in our region by developing the concept of an Accountable Care Community (ACC). The ACC is a new health model which aims to foster collaborations borne of shared responsibility among various sectors in order to transform health in Northeast Ohio. Other communities around the U.S have implemented smaller initiatives around community-based approach to care with promising results. Some examples include the Sagadahoc (Maine) Health Improvement Project, the Community Care of North Carolina Program and the Aligning Forces for Quality (AF4Q). These examples of integrated, community-based health improvement efforts have both informed and accelerated the ACC initiative to impact. The ACC model of shared responsibility can be implemented and adapted for other communities throughout the nation.

In June 2011, we convened a group of experts from leading health organizations around the country to discuss the need for this new model of health. The goal of this *Healthier by Design: Creating Accountable Care Communities* event was to discuss strategies for building an efficient, sustainable model of care that promotes health, prevents disease, addresses gaps in the system, and increases access to high-quality services while lowering costs.

Attendees heard from local, state, and national leaders about the significance of an ACC at this point in our nation's health history. Questions were asked and ideas shared about the means and ways in which the ACC model can contribute to a healthier, more productive, and less illness-burdened community.

This White Paper introduces the concept, collaborators and stakeholders, infrastructure and mechanisms, implementation steps, and metrics for assessing success of an ACC. We are confident that the ACC model represents the future direction of health in this country, with the direct impact to improve population health, reduce health costs, and remaining competitive in a rapidly changing system. We hope that through this White Paper, we can continue the conversations and collaborations to reach the full potential of an ACC, resulting in improved community health.

> "ACC recognizes and seeks to leverage the full cycle of wellness and prevention, acute intervention, chronic intervention, and maintenance to optimally control and manage chronic disease.
>
> Dr. Frank Douglas
> President & CEO
> Austen BioInnovation Institute in Akron

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II. Executive Summary

The United States (U.S.) is a recognized leader in many areas, but our healthcare system has been labeled as "broken" by many policymakers and thought leaders. The time has come to address the longstanding challenges producing unsustainable costs and inadequate health outcomes. With the debate surrounding the passage and implementation of the *Patient Protection and Affordable Care Act (PPACA)*, the U.S. has moved to a heightened level of healthcare transformation.

A central premise of healthcare transformation is fundamental change in care delivery from silos to a more integrated and coordinated system. Concepts such as patient-centered medical home, care coordination, shared accountability, and value-based payment are gaining momentum in effort to reverse the trends in cost and health outcomes for an aging society.

Within this era of change, the Austen BioInnovation Institute in Akron (ABIA) is developing an innovative model entitled the "Accountable Care Community" (ACC) that embraces and enables many of the reform concepts and offers significant potential to address the core challenges. The ACC, described in greater detail in this document, will be a collaborative, integrated, and measurable strategy that emphasizes shared responsibility for the health of the community, including health promotion and disease prevention, access to quality services, and healthcare delivery.

The ACC is not dependent upon healthcare systems adopting specific public or private payer initiatives. It builds on initiatives to encompass not only the area's medical care providers, but also the public health system and community stakeholders whose work, taken together, spans the spectrum of the determinants of health. In addition, the ACC focuses on health outcomes of the entire population of a defined geographic region, Summit County (Ohio), rather than silos of population of health consumers selected by a health insurance entity or provider participant.

The ACC model is structured around the following components:

- Development of integrated medical and public health models to deliver clinical care in tandem with health promotion and disease prevention efforts;
- Utilization of interprofessional teams including, but not limited to, medicine, pharmacy, public health, nursing, social work, mental health, and nutrition to align care management and improve patient access and care coordination;
- Collaboration among health systems and public health, to enhance communication and planning efforts;
- Development of a robust health information technology infrastructure, to enable access to comprehensive, timely patient health information that facilitates the delivery of appropriate care and execution of effective care transitions across the continuum of providers;

- Implementation of an integrated and fully mineable surveillance and data warehouse functionality, to monitor and report systematically and longitudinally on the health status of the community, measuring change over time and assessing the impact of various intervention strategies;
- Development of a dissemination infrastructure to rapidly share best practices;
- Design and execution of a robust ACC implementation platform, specific tactics, and impact measurement tool; and
- Policy analysis and advocacy to facilitate ACC success and sustainability.

ABIA is dedicated to developing and deploying the ACC initiative to enable a healthier and more productive population across Summit County for generations to come. This effort will build on the existing collaboration behind ABIA and engage many others through the implementation steps described in greater detail throughout this White Paper. ABIA calls on all those, across the region, and beyond, who deserve a healthier future to join us in this critical work.

III. Accountable Care Community

Accountable Care Community (ACC): a collaborative, integrated, and measurable multi-institutional approach that emphasizes shared responsibility for the health of the community, including health promotion and disease prevention, access to quality services, and healthcare delivery. The ultimate goal of the ACC is a healthier community.

ACC Distinguished from an ACO

While the ACC may share certain characteristics with the accountable care organization (ACO) concept[8, 9], called for in PPACA, the ACC is not dependent upon area healthcare providers adopting a Medicare or other ACO infrastructure. It also differs from the ACO concept in that an ACC encompasses not only medical care delivery systems, but the public health system, community stakeholders at the grassroots level, and community organizations whose work often encompasses the entire spectrum of the determinants of health[10, 11]. A final difference between the two concepts lies in the focus of the ACC on the health outcomes of the entire population of a defined geographic region, rather than a defined and targeted population of health consumers selected by an ACO for their efforts at payment and care delivery reform.

High-Level Steps in Developing an ACC

The ACC will achieve improvement in community health outcomes, as well as progress toward the six aims of the Institute of Medicine's (IOM) 2001 report[12] *Crossing the Quality Chasm: A New Health System for the 21st Century* and Healthy People 2020[13] by integrating multiple components of the participating region's health system as well as other institutions, agencies, initiatives, and so forth. The initial goals include:

- Develop a system of health promotion and disease prevention, access to quality services, and healthcare delivery that is based on the goals of Healthy People 2020 and the IOM's recommended parameters of safety, timeliness, effectiveness, efficiency, equity, and patient centeredness;
- Conduct an inventory of community assets and resources, based upon the Health Impact Pyramid[14], to evaluate current and needed community capabilities, infrastructure, and programs and initiatives with a focus on which to implement;
- Strategically identify and rank health priorities, metrics, and outcomes utilizing a framework of community-based participation with the broadest possible involvement of community stakeholders;
- Realize improved health outcomes for a defined population with a focus on individuals within that population;
- Utilize benchmark metrics that include short-term process measures, intermediate outcome measures, and longitudinal measurement of impact; and
- Develop and demonstrate the economic case for healthcare payment policies that lower the preventable burden of disease at the local level[15, 16, 17, 18], reward improved health and health outcomes, deliver cost efficient care, and provide a positive experience of healthcare system utilization for all stakeholders.

The ACC is fueled by the participation of multiple stakeholders collaborating at the

community level to improve the health of the community. The essential participants include primary care and specialty physicians, dentists, nurses, mental health workers, pharmacists, nutritionists, hospitals and health systems, home health and hospice providers, private and public insurance plans, public health officials, civic leaders, community business members, academic institutions, community thought leaders, consumer groups, education leaders, social service members, and community citizens.

ACC Structural Components

The structural components that comprise the ACC include a model of integrated health promotion and disease prevention, access to quality services, and healthcare delivery resulting in better coordinated preventive services, chronic disease management, and general healthcare and, ultimately, improved health outcomes. These components include:

- Development of integrated medical and public health practice models to deliver clinical care in tandem with health promotion and disease prevention efforts;
- Utilization of interprofessional teams including, but not limited to, medicine, pharmacy, public health, nursing, social work, mental health, and nutrition, to align care management and improve patient access and care coordination;
- Collaboration with health systems, to enhance communication and planning efforts;
- Development of a robust health information technology infrastructure, to enable access to comprehensive, up-to-date patient health information that facilitates the delivery of appropriate care and execution of effective care transitions across the continuum of providers;
- Implementation of an integrated and fully mineable surveillance and data warehouse functionality, to monitor and report systematically and longitudinally on the health status of the community, measuring change over time and assessing the impact of various intervention strategies;
- Development of a dissemination infrastructure to rapidly share best practices; and
- Policy advocacy and analysis supporting development of outcome-based payment incentives, to incent value over volume.

ACC Metrics for Assessing Success

Robust data collection and impact measurement metrics are key components of the ACC. This is essential both to track progress and to refine the model, through formative evaluation as it moves through implementation. Outcome measures are instrumental to assess effectiveness, quality, cost, and patient experiences of any intervention undertaken with the population under consideration.

Systematic improvements in the health of the community, patient care, long-term outcomes, and local burden of disease can be measured as the ACC initiative reaches maturity. These are outcomes that would otherwise prove difficult to achieve without implementing an ACC model. Broad categories of measurement for evaluation should include:

- Community participation;
- Local, national, and regional burden of disease;

- IOM Specific Aims for 21st century healthcare;
- Primary, secondary and tertiary prevention indicators;
- Community intervention measures;
- Care coordination metrics;
- Determinants of health;
- Health information technology (HIT) utilization and information sharing metrics;
- Clinical improvement metrics;
- Patient safety metrics;
- Patient self-management measures; and
- Patient-centered medical home measures.

Specific community-driven measures should be determined by strategic planning utilizing recommendations from a number of national consensus and evidence-based recommendations[19, 20, 21, 22].

IV. Current Issues in U.S. Healthcare

The U.S. is recognized as a leader in many areas, but our healthcare system has been labeled broken by many policymakers and thought leaders. At the core of the problem lies a significant uninsured and underinsured population, relatively high and rising costs with inadequate outcomes, financial incentives to diagnose and treat illness rather than prevention, and fragmented delivery. These issues permeated the nation's awareness during the two years of debate and in the aftermath of the enactment of the PPACA.

The numbers are compelling. In 2007, an estimated 46 million Americans were uninsured and another 25 million were underinsured[23]. Healthcare spending has been growing at an unsustainable rate:

- The U.S. outspends every other industrialized country on healthcare—in 2009 total health expenditures reached $2.5 trillion, which translates to $8,086 per person or 17.6% of the nation's Gross Domestic Product (GDP)[24];
- By 2017, healthcare expenditures are expected to consume nearly 20% of the GDP[25]; and
- Healthcare spending is 4.3 times the amount spent on national defense[26].

Despite outspending all other countries, our health outcomes are alarmingly inadequate. For example:

- The U.S. ranks 37th in health status according to the World Health Organization[27];
- The nation ranks 29th for infant mortality[28]; and
- The U.S. ranks 19th in unnecessary deaths[29].

Contributing to the high costs and quality challenges are the misaligned payment incentives from public and private payers that reward volume of service over quality. This fee-for-service payment structure compensates providers for each service they deliver regardless of results. The current U.S. payment structure does not incentivize providers to work together to coordinate care. Healthcare services are fragmented between primary care and specialty care and among the various specialties, as well as between acute and post-acute providers.

All of these factors, taken within the broader context of a struggling economy, have provided the impetus for the nation's policymakers to begin to address healthcare reform. On March 30, 2010, PPACA was signed into law, enacting the most comprehensive overhaul of U.S. healthcare since the enactment of Medicare 45 years before.

The overarching objectives of the PPACA are to expand coverage, improve quality, and reduce cost. This is to be accomplished without increasing the federal deficit over the course of ten years. In order to offset or pay for the costs of expanding coverage to an estimated 32 million people by 2019 and improving quality, the law contains "pay-for" provisions (e.g., reducing reimbursement for providers and suppliers; taxing medical device companies; reducing fraud and abuse). These provisions together

> "Policymakers recognize that you have to bend the cost curve, you have to do it while improving quality and patient safety, you have to put the patient first."
>
> Karen Fisher, JD
> Senior Director and
> Senior Policy Council
> Association of
> American Medical Colleges

represent significant changes in the federal framework for healthcare coverage, payment, and delivery.

The PPACA contains significant healthcare delivery and payment reform provisions to help address the cost and quality issues described above. These reforms are aimed at incentivizing care coordination and provider accountability through various payment mechanisms (e.g., bundled payments, shared savings). The previously mentioned ACO concept is one PPACA initiative gaining considerable attention.

The law authorizes the establishment of an ACO demonstration project through the Centers for Medicare and Medicaid Services (CMS) to reward providers who work together to manage and coordinate the care of Medicare beneficiaries. The ACO model, over time, asks providers to take on the risk of managing the healthcare costs of a Medicare population in exchange for a share of any savings, provided there is no reduction in quality of care. The notion of driving efficiency and outcomes through different payer models continues to take root in pilots and projects across both the private sector and public programs.

Other PPACA healthcare delivery and payment reform provisions include the following.

- ***Center for Medicare and Medicaid Innovation (CMMI)*** Housed within the CMS, CMMI will test, evaluate, and expand various payment structures and methodologies within Medicare, Medicaid, and Children's Health Insurance Program (CHIP). The goal of the Center is to reduce program expenditures while maintaining and/or improving the quality of care provided.
- ***National Pilot Program on Payment Bundling*** The goal of the program is to provide incentives for providers to coordinate care for Medicare beneficiaries in various healthcare settings (including inpatient hospital services, physician services, outpatient hospital services, and post-acute care services).
- ***Community-Based Care Transitions Programs*** This initiative focuses on improving care transition services to high-risk Medicare beneficiaries including initiating care transition services for a beneficiary no later than 24 hours prior to discharge; arranging timely post-discharge follow-up services; assist beneficiary with productive and timely interactions with all care providers; assessing and actively engaging beneficiary with self-management support; and conducting comprehensive medication review and management for beneficiary.
- ***Independence at Home Demonstration*** The goal of this program is to test new payment incentives and service delivery models that utilize physician and nurse practitioner directed home-based primary care teams designed to reduce expenditures and improve health outcomes for high-need beneficiaries enrolled in Medicare Parts A and B only.

The highly charged political environment has made the PPACA subject to challenges at every level. States and private parties have mounted broad legal attacks on the individual insurance mandate. Industry is advocating for changes to the various tax

and regulatory components. Some Congressional leaders are trying to eliminate funding for implementation of the Act. And parts of the American political spectrum have made repeal of the law a central focus for the 2012 national elections.

At the same time, the continuing economic slowdown in the U.S. and across much of the globe is placing even greater stress on healthcare systems. Government at all levels and individuals are struggling to cope with rising insurance premiums, medication costs, and the chronic disease burden of an aging population. In many states, Medicaid has become the single greatest fiscal challenge. The need for innovation and efficiency is greater than ever. All of these acute factors are being faced as well in the Akron region. ABIA has a lead role as helping to "bend the curve" of healthcare costs. Through designing, implementing, and monitoring the ACC, greater coordination and delivery of health promotion and disease prevention, access to care and services, and healthcare delivery will be achieved irrespective of the political surroundings of the PPACA.

V. Collaborating to Improve Health

The Centers for Disease Control and Prevention (CDC) recognizes the critical importance of collaboration among all stakeholders in order for healthcare to improve. To change healthcare and healthcare systems, the emphasis will require connections and shared accountability among healthcare, public health, social service, and broader communities sectors. Moving from access to better care to community care means more lives are saved. As the number of lives saved increases, costs decrease. Over the long term, prevention will actually reduce costs in this model.

> "If we're actually going to move the needle, we're going to need connections and shared accountability across our various sectors and silos.
>
> Peter Briss, MD, MPH
> Director
> National Center for Chronic Disease Prevention and Health Promotion
> Centers for Disease Control and Prevention

One step is the recent Request for Proposals (RFP) from the CDC for Community Transformation Grants (CTG), which strongly emphasized the importance of collaborative submissions over individual ones and encouraged healthy communities by addressing smoking, obesity and hypertension in ways that are more coordinated than they have been historically. The ACC initiative has received funding from the CTG program at CDC[30]. Most CDC programs have been silos; for example, those engaged in the area of tobacco may not communicate with those involved in the area of cancer.

The CDC is working to improve these issues by becoming more holistic. Therefore, an ACC must:

- Reward quality, coordinated, and integrated care;
- Prioritize the promotion of wellness as well as the treatment of illness and injury;
- Optimize efficiency and cost containment; and
- Link a healthcare system to public health and social services to provide an integrated whole.

The result of such actions would be to optimize efficiency; spend less than current levels or, at a minimum, have better outcomes at the current spending level; and have a healthcare system that links with public health and social services for a coherent whole.

ACC Coalition

A broad-based community-wide coalition is a structural necessity for the ACC. Historically coalitions have been geographically specific, focused upon a single-issue, and time-limited. As a structural component of the ACC, a community coalition is a mechanism for addressing complex health issues at the local level. The ACC involves collaborative partnerships of diverse members working together toward the common goal of improving the health of the community, by affording the community the opportunity to combine and leverage resources from multiple sources. These collaborations enable greater breadth of scope and depth of responses to intractable problems impacting the health of our communities. In addition to leveraging and increasing access to resources, the ACC coalition offers many other advantages that make collaboration an asset for individuals, organizations, and communities. By mobilizing relevant resources around a specific goal, the opportunity to coordinate services and limit duplication of parallel or competing efforts is improved. The diverse membership inherent to an ACC also offers avenues to develop and increase public sup-

port for issues, actions, or needs and gives individual organizations the opportunity to influence the community through the ACC on a larger scale[31, 32, 33, 34, 35, 36, 37, 38, 39, 40].

The ACC broad-based community-wide coalition involves multi-sector oversight that can monitor and streamline efforts across the community and across numerous health issues for health promotion and disease prevention, access to quality services, and healthcare delivery. This type of coalition is well-positioned to comprehensively address a broad range of health issues while maximizing the community's existing assets. An additional benefit to such a broad-based coalition and shared understanding of community health is that this participatory forum can be used to inform and guide the efforts of the ACC. The programs and the initiatives of the ACC will have the benefit of observational grassroots input and a shared frame of inquiry. False assumptions, cultural insensitivity, and costly errors can be avoided as the ACC develops and strengthens authentic partnerships to impact the health of the community[41].

To form the coalition for the ACC, key stakeholders have come together to create this broad-based coalition for improving the health of the community. This coalition is a multi-sector partnership with robust participation from the community with a diverse membership including representation from: public health, medicine, health systems, higher education, secondary education, safety-net health services, academic researchers, practicing health care providers, alcohol/drug/mental health services, local chapters of national health organizations, the faith and service community, local issue-focused coalitions and multiple community-based programs. Our coalition has a broader focus with the goal of effecting changes across the entire spectrum of the determinants of health. By serving as a central organizational node in the ACC, the coalition can improve efficiency and reduce redundancy in community efforts by strengthening the links between existing programs, capitalizing on current resources, and building novel solutions to all health issues[42]. Through the inclusion of these broad-base community-wide partnerships, the interconnections can be strengthened and duplication of efforts will be reduced. By mobilizing the coalition in coordinated and collaborative efforts, the goal of the ACC to improve the physical, social, intellectual, emotional, and spiritual health of the community will be realized.

VI. National Examples of Collaboration

In light of the numerous and complex challenges facing the American health system, along with clear signals that solutions are likely to come through broad-based collaboration, we have examined a range of previous and current initiatives. Lessons learned from these must inform the development of the next generation platform for community health improvement. Among the examples of community-based strategies considered are three diverse programs that have gathered momentum and garnered results in their respective locations. These initiatives are summarized.

> "Population health has to go hand in hand with clinical services. But that will not work unless you have somebody leading the pack who is going to make system change and bust the silos.
>
> Hugh Tilson, MD, DrPH
> Professor of
> Public Health Leadership
> Epidemiology and Health Policy
> UNC School of Public Health

The first program; the Sagadahoc (Maine) Health Improvement Project (SHIP) was built upon an IOM publication, *The Future of Public Health*[43]. In 2001 there were no county health departments in Maine, which led the Sagadahoc Commissioners to explore how this infrastructure could be developed in the region. They concluded that a preparedness-based, "virtual" health agency should be created. This virtual health agency would help bring this capability, and partnering among all key actors would be essential to accomplish this in a reasonable timeframe. These leaders set out to identify gaps in health protection, promotion, and delivery that could be filled by their efforts.

At the heart of the SHIP experience was a partnership between local hospitals and primary care providers, cemented as both joined an advisory board of health for the SHIP[44]. These important linkages for more coordinated care were strengthened through a deliberate process of community needs assessment, comprehensive planning, and the previously mentioned emphasis on gap-filling. The SHIP development process also led to the identification of ten essential functions (adopted from the IOM publication *The Future of Public Health*), to be positioned at the forefront of community health improvement:

- monitor health status;
- diagnose and investigate;
- inform, educate, and empower;
- mobilize community partnerships;
- develop policies and plans;
- enforce laws and regulations;
- link people to needed services and assure care;
- assure a competent workforce;
- evaluate health services; and
- conduct research.

And, just as importantly, SHIP targeted action around those things that the medical care system could not accomplish on its own.

The second program is the Community Care of North Carolina (CCNC) program[45]. This initiative was spurred by the mounting challenges of the Medicaid program; in particular the rising costs at both the individual beneficiary and population levels. The program was struggling with patients at the highest cost (e.g., chronic diseases, disabled, and mentally ill), and these were also the hardest to manage. It was clear that lowering reimbursement to contain Medicaid costs would only reduce access and increase emergency department use. Further, taking

steps to reduce eligibility or benefits would increase the burden of the uninsured on the community and its providers.

The CCNC response to these complex challenges was to create a statewide medical home and care management system. The premise was to improve access to, quality of, and coordination of care while decreasing the cost to the Medicaid program in North Carolina. This was a community-based and provider-led model to change the system and the results. The resulting implementation framework used both population level and individual level management strategies to pursue these goals.

CCNC has moved forward to linking each Medicaid beneficiary to a medical home. Fourteen local networks across all 100 counties in the state use this approach to serve more than a million patients. They provide resources to more than 4,500 participating primary care physicians in 1,360 medical homes. The medical homes, in turn, are linked with other healthcare system components (e.g., hospitals, health departments, mental health agencies, and social services). These networks also pilot potential care solutions, monitor their implementation, and disseminate best practices across the clinical sites.

Financial support for the CCNC is provided through a per-member per-month reimbursement to the networks, as well as fee-for-service and per-member per-month payments to the providers. The system manages these resources around collectively identified priorities and clear accountability measures. A timely process for data feedback and evaluation on the program, network, and practice level is supported by a robust health information technology system, including an informatics center with access to the Medicaid claims data.

The CCNC system-wide results are compelling. The state now ranks in the top 10% in the nation in the Health Effectiveness Data and Information Set (HEDIS)[46] measures for diabetes, asthma, and heart disease. Its Medicaid program has saved over $700 million since 2006 through the CCNC initiatives[47, 48, 49]. When adjusted for severity, costs are 7% lower than expected. In the first three months of fiscal year 2011, per-member per-month costs for this population are running 6% below the same period in 2010[50].

The third community-based health improvement concept is the unprecedented commitment by the Robert Wood Johnson Foundation to improve quality and value of care, reduce health disparities, and provide models of reform through the Aligning Forces for Quality (AF4Q) program[51]. This initiative is addressing a national challenge through local solutions in sixteen communities across the country.

The AF4Q began with two key questions. First, can those who give care, get care, and pay for care unite in a common forum and reach a consensus about improving quality in their community? Second, can they work together to ensure that their community provides high-quality, patient-centered, and equitable care? The program assumes that both questions will be addressed differently in each participating community to drive the best possible results.

> “Let’s not forget about the patient as the expert in his or her own care. The patient does not live in the doctor’s office, does not live in the hospital, lives at home. We have to look at the environment, we have to look at not only our healthcare system, we have to look at our community system.
>
> Susan Mende, BSN, MPH
> Senior Program Officer
> Robert Wood
> Johnson Foundation

Behind the tailored approaches of the sixteen participating areas, however, are some common assumptions. First, common standards are used to measure quality of care and information will be made available to the public. Second, this quality improvement also is centered on evidence-based strategies that participating providers can follow. Third, consumers need information and resources to be informed and active managers of their own care and are a key partner in transforming their local healthcare systems. Fourth, there must be a commitment to paying for quality, not quantity of care. Finally, the initiatives focus on reducing disparities in care for patients of different races and ethnicities.

Early stage results are encouraging across the pilot areas. For example, the Detroit AF4Q Alliance has had a meaningful impact on the region's diabetes measures. With three years of data analyzed, the diabetes cholesterol control has increased by 2.9%. Further, the HbA1c poor control has decreased by 6.9% in two years. In Memphis, small primary care groups are finding solutions to more effectively manage people with chronic disease and decrease emergency department utilization. Lastly, in South Central Pennsylvania, a primary care provider team strategy is targeting "super-users" of emergency departments for intensive management.

These examples of integrated, community-based health improvement efforts have both informed and accelerated the ACC initiative to impact. Close examination of the best practices developed here and in other locations have been synthesized into the emerging ACC model. This learning and refining process will continue as new efforts take shape such as the CDC partnership with the Public Health Institute to improve community health by developing collaborative, multi-sector leadership teams across the country.

VII. Creating the Accountable Care Community

Akron's Path to ACC

ABIA has created a robust framework for our regional partners to develop seamless, high quality, efficient care that leads to otherwise unattainable improvements in health and health outcomes across the area's population. The resulting ACC initiative positions Akron at the forefront of health, health system, and community innovation.

ABIA serves as the leader and hub of integration of the ACC initiative without taking on a direct provider role. The planning phase focused on working with key stakeholders to design the ACC strategic plan. The ACC planning team:

- Set the mission and vision;
- Refined the goals;
- Established tactics and action plans to support the goals;
- Developed an inventory of community assets and resources to determine how best to implement;
- Determined any necessary governance and operating structures; and
- Developed a set of benchmarks based on the concepts of
    - ° preventable burden of disease at the local level and
    - ° strategic recommendations for measurable outcomes in primary care, public health, and health practice transformation.

One factor in the development of the ACC strategic plan was a surveillance of available regional programs. Telephone surveys were conducted with agencies associated with the ACC Wellness Council (Coalition) to survey the health and wellness programming available within Summit County, Ohio. In addition to programming, information was collected on the target populations, mission and objectives, evaluation components, and history of the program. For context and evaluation assessments, the results were then mapped to the Health Impact Pyramid[52] (Figure 1) and Healthy People 2020 topic areas. The Health Impact Pyramid is a five-tiered visual aid to evaluate a program's impact on community health; the programs at the top of the pyramid have a high individual effect and those at the bottom of the pyramid have a high societal effect. The surveillance information gained was used to identify gaps in programming that existed within our community, as well as determine possible targets for future activities. Summit County programs were categorized by level of intervention as well as their health target. After mapping the results to the Healthy People 2020 topic areas, we discovered more than 50% of the health targets were addressed by current programs in Summit County.

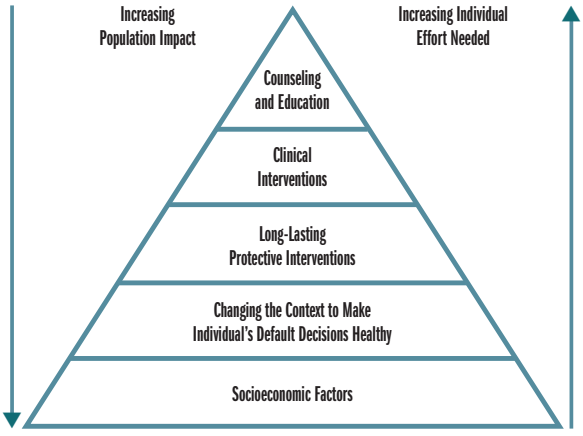

Figure 1: Health Impact Pyramid

> As we think about the Accountable Care Community, we have the opportunity to impact the quality of life, and also the economic vitality of our community, not only for us but also serving as a national model and transporting to other parts of the United States.
>
> Janine E. Janosky, Ph.D.
> Vice President
> Center for Clinical and Community Health Improvement
> Austen Bioinnovation Institute in Akron

Figure 2 depicts some of the results of our surveillance; here the focus was on the prevention-based programs of nutrition, weight-status, and physical activity. These types of programs can impact chronic disease. Detailed were the target audience, and what specific activities were targeted. The top of the pyramid lists by the partner offering the individual based programs. At the bottom of the pyramid are the population-based programs that affect large groups of people. By using the Health Impact Pyramid, we noted that there are no substantial prevention-based programs to map to the long-lasting protective interventions level. This absence focused our search to better serve our community by identifying the need. An ACC integrates current programs as well as identifies and implements needed programs and initiatives with collaborators, target populations, and the needs of the community. As an ACC, we have the opportunity to impact the health, the quality of life, and the economic vitality of our community, serving as a national model of best practices for other communities in the U.S.

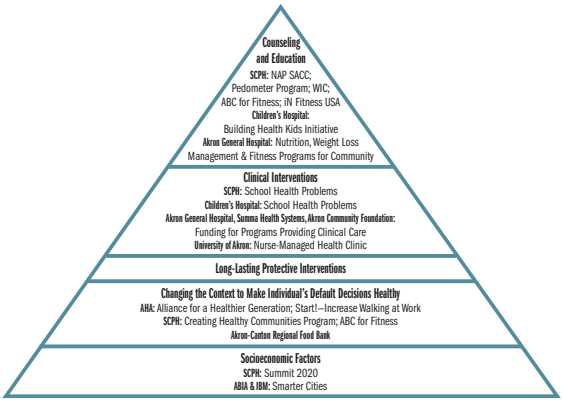

Figure 2: Health Impact Pyramid Mapped with Summit County Prevention Based Programs

Initial Focus

The ACC's initial focus is on diabetes. In the U.S., 25.8 million people or 8.3% of the population has diabetes, with 11.3% of those aged 20 years and older. Approximately 1.9 million people 20 years of age and older were newly diagnosed in 2010, and 35% of the population 20 years old and older has a fasting blood glucose level indicating pre-diabetes. If left unmanaged, diabetes may cause blindness, disability, increased healthcare costs, decreased quality of life, stroke, and premature death. It is the seventh leading cause of death in the U.S.[53]

Type 2 diabetes accounts for 90 to 95% of all adult cases[54]; treatment focuses on diet, medication (both oral and insulin), exercise, and weight control. The CDC states "self-management education or training is a key step in improving health outcomes and quality of life[55]." The importance of self-management education was exemplified in the Diabetes Prevention Program, a randomized clinical trial consisting of participants from 27 clinical centers[56]. Participants in the lifestyle group reduced their risk of developing diabetes by 58%, a much higher percentage than experienced by the other groups, including those receiving drugs or placebo with information about diet and exercise, but no motivational counseling. The "lifestyle-intervention group" received intensive training in diet, physical activity, and behavior modification with the goal of losing 7% of body weight and maintaining the decrease. People at risk for developing diabetes can delay or prevent diabetes with lifestyle changes[57]. Effective lifestyle changes can contribute to lowering preventable causes of death from diabetes[58].

The burden of diabetes is disproportionately shouldered by those with less education, fewer resources, and by race. Some of the barriers include financial difficulties such as insufficient income to purchase glucometer test strips, prescription medications and healthy food; lack of access to a regular healthcare provider; lack of provider continuity; difficulty attending appointments; and pain and disability that limit the ability to conduct health activities, such as exercise[59, 60]. These barriers exist in Summit County as well. The highest African-American population levels, the highest number of uninsured African-Americans and the poorest neighborhood walkability coexist in three of the five Summit County zip codes with the highest population density of African-Americans[61, 62].

In the Akron Metropolitan Statistical Area (MSA), which encompasses Summit County, 10.8% of the population has been diagnosed with diabetes, with an additional 2.1% reporting pre-diabetes or borderline diabetes as a diagnosis[63, 64]. This compares to a rate of 8.3% for the U.S. and 10.1% for the state of Ohio. With regard to diabetes-related risk factors in the Akron MSA, 24.8% of the population reports no physical activity in the past month; and 77.7% of adults consume less than the recommended five servings of fruits and vegetables per day[65]. In addition, 37.3% of adults are overweight (body mass index [BMI] 25.0-29.9), and 30.4% are obese (BMI 30.0 or higher). Finally, 18.8% of adults are current smokers[66]. The Akron MSA represents an at-risk community that would benefit from health interventions.

With the high local burden of diabetes, the ACC launched with a focus on diabetes prevention and management as it is amenable to prevention interventions at both the individual and population levels to:

- Positively impact the health of our community, and in particular the medically underserved;
- Advance the education of local healthcare providers in the promotion/prevention and care for diabetes; and
- Become a national model for a community-wide approach to affect a significant clinical disease.

The ACC initiative represents a sea change in the efforts to improve the health of our region's population, especially for those individuals most at risk of missing the benefits of more narrow reforms. The challenge of producing an integrated and seamless health system is significant, but ABIA and the ABIA partners have the commitment and assets to be a national leader in forging this new paradigm. The results will lift the quality of life across the region and provide a replicable model for community-wide accountability for the health of all.

Key Metrics of Success

As mentioned previously, robust data collection and impact measurement metrics are key components of the ACC. There are four key metrics for recognizing success:

- There is an improvement in the patient experience. The patient feels comfortable in his or her knowledge of how to access and leverage applicable programs in the community.

- There is a subsequent reduction in healthcare costs and improved value.
- The burden of disease is decreased.
- There is an improvement in the quality of life.

With almost 13% of the Akron population diagnosed with pre-diabetes and diabetes and a state level of individuals with pre-diabetes and diabetes exceeding 12%[67], it is estimated that by 2050, if current trends continue, about a third of our population will have a diagnosis of diabetes[68]. This is an untenable situation from both a quality of life and an economic perspective as slightly less than $180 billion is currently spent annually on the care for individuals with diabetes[69]. If nothing is done by 2050, the costs for this one disease alone will be staggering. Diabetes is a chronic disease that affects Akron, Summit County, the state of Ohio, and the U.S. As an ACC, through this work on our first initiative on diabetes, we will have a significant impact not only on quality of life and health, but we will also affect the economic vitality of our community, the county, the state and the nation.

VIII. Next Steps

Framework for Accountable Care Community Engagement and Sustainability

In order to advance the ACC strategy, ABIA is developing a robust implementation capability to engage the various assets of the community coalition, as well as the related policy and program elements that surround them. The framework for the engagement and sustainability of the Accountable Care Community will connect, align, and fill gaps across the region in a manner that produces quantifiable improvements in population health and the comprehensive costs of care.

This framework embraces the notion that collaborative advances produce better health citizen-by-citizen. The ability to coordinate complex and evolving care delivery, public health, and social services produces change in individual lives. Progress in the ACC strategy will be reflected through healthier citizens across the community for generations to come.

Structure

Employing the ABIA "Healthier by Design" methodologies, the engagement and sustainability will be developed in detail and operated by the ABIA. ABIA will serve as a hub for these community health improvement initiatives. This effort will reflect the unique dimensions of Akron and Summit County, OH while aiming to serve as a replicable model for other regions. Furthermore, it is expected that the CDC Community Transformation Grant recently awarded to ABIA[70] will align with and help fuel the initial phases of engagement and implementation.

Engagement, Implementation and Evaluation

As noted throughout this document, both the ACC and various community health improvement initiatives across the country rely on multiple levels of engagement. ABIA, through the ABIA founding partner structure, starts with a set of regional leaders who form the foundation of the ACC coalition. The engagement and implementation will build on this strength to identify, recruit, and integrate a wide range of partners behind the ACC strategies.

ABIA is not a healthcare provider, but rather the independent, trusted party for building inventories of current efforts, identifying gaps, designing integrated solutions, guiding execution, and measuring results. To help accomplish this, ABIA will use the ACC structural components and the engagement and implementation plan identified earlier to support and conduct discrete projects that will begin to produce seamless care improvement strategies across the region.

Specifically, ABIA will be the hub for the development and execution of a series of targeted, multi-party interventions. In the initial phase of ACC implementation, ABIA will begin to build the operational infrastructure to enable these programs. This will include the formation of an ACC Operations Committee to bring community assets to the efforts and set priorities. The first two building blocks for ACC implementation are a diabetes self-management program and a collaboration with the Cuyahoga Valley National Park for healthy living. The Operations Committee will assess the status of these programs to deter-

mine if either or both should be enhanced in the ACC launch. Concurrently, the group will review the gap analysis to identify up to three potential areas for intervention development. It is expected that the ACC will have multiple new interventions within the first year.

Incorporated within intervention development is a reliable methodology for evaluating and reporting outcomes for the ACC strategy and projects. Demonstrating the return on investments to stakeholders is, of course, the best means for broadening engagement and sustaining efforts. In order to power this activity, ABIA has developed the ACC Impact Equation as the central tool for assessing the efforts.

ACC Impact Equation

The *ACC Impact Equation* is intended to operate at multiple levels. First, at the macro level, it should be a proxy for the overall benefits and costs of the ACC engagement and implementation efforts. Second, at the micro level, the *Impact Equation* should be useful for considering specific projects like the diabetes self-management initiative.

The *ACC Impact Equation* is constructed around three principal elements. One is the measure of the outcomes in quality improvement across various settings. It is imperative that impact include this feature, especially when lowering cost of care is a simultaneous objective.

The next measure is the scope of the population served. ABIA aims to deliver the ACC throughout Summit County, Ohio as the initial borders with likely expansion in future years. Of course, different projects will reach different components of the community and the *Impact Equation* must be flexible enough to recognize this characteristic.

Finally, the direct and indirect costs of disease across Summit County must be reduced by the ACC strategy and investments. The *Impact Equation* will express the disease burden in economic terms. This capture of the disease burden is the function of the denominator below the numerator of quality improvement multiplied by population served.

Impact = f (quality improvement* population served / disease burden)

Alternatively, the burden is measured in terms of progression of disease, cost of treating the disease, and cost of loss of productivity. From a population perspective, then

Impact = f (delay of progression / total cost of treating disease)

delay of progression can be measured by surrogates, such as HbA1c or delay of progression of increase in a biological marker. Total cost = cost of treatment of cohort + cost of lost workdays.

Sustainability

Beyond the momentum generated by unfolding projects, the *ACC Impact Equation* includes a purposeful effort to determine what public policy, community asset, and private sector ingredients are necessary to make the ACC a continuously improving and defining characteristic of the region. While ABIA intends to be a hub for carrying out the ACC strategy, long-term success will come from systemic changes that help move extraordinary collaborative behavior into the norm.

The sustainability feature will use the ACC implementation projects, such as diabetes self-management or healthy living initiatives, to build a knowledge base of policy, financing, regulatory and other levers that can be used to enable the broader ACC. None of this work happens in a vacuum. ABIA will bring real-world experience to bear as a rationale for making these changes.

ABIA's Center for Clinical and Community Health Improvement will create a sophisticated knowledge management tool for this purpose. It will be a transparent and highly accessible information system that multiple users in the region and beyond can study and utilize to drive useful change. The system will include data points from area initiatives both inside and outside the ACC implementation.

IX. Conclusion

The Austen BioInnovation Institute in Akron, as the convener of the *Healthier by Design: Creating Accountable Care Communities Summit*, is leading the development of a new, sustainable model of health that helps bring costs in line with outcomes, promotes shared accountability, and focuses on improving the health of an entire population—the Accountable Care Community. With the support of the ABIA partners and an expanding network of stakeholders, the Accountable Care Community will enable Akron and Summit County, Ohio to become a guiding force for a better health across all portions of our society. ABIA invites your participation in this journey.

ADDENDUM A: Summit Agenda

"Healthier by Design: Creating Accountable Care Communities Summit"

June 22, 2011
Akron, Ohio

Greeting & Opening Remarks

- Frank L. Douglas, PhD, MD, *President and CEO, ABIA*
- Janine E. Janosky, PhD, *Vice President, Center for Clinical and Community Health Improvement, ABIA*
- Max Blachman, *Northeast Ohio Regional Representative for U.S. Senator Sherrod Brown*

Chronic Disease Perspective

- Introductions: Sharon Hull, MD, MPH, *Director of Community-Based Health Services Research, ABIA*
- Peter Briss, MD, MPH, CAPT, USPHS, *Medical Director, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention*

Prevention, Institute of Medicine

- Hugh Tilson, MD, DrPH, *Adjunct Professor of Public Health Leadership, Epidemiology and Health Policy UNC, School of Public Health and Adjunct Professor of Medicine, Duke University*

Summa Health System's Journey to Accountable Care

- Introductions: Stan McDermott, PharmD, MS, *Director and Head of Clinical Trials*
- Nancy A. Myers, PhD, *System Director for Quality and Clinical Effectiveness, Summa Health System*

What Children's Hospitals are Doing Nationally

- Norman Christopher, MD, *Chair, Department of Pediatrics, Akron Children's Hospital*

Integrated Care Models

- Jeffrey L. Moore, MD, *Chair, Department of Psychiatry and Behavioral Sciences, Akron General Health System*

Accountable Care Organizations at the National Level

- Introductions: Karen Snyder, MEd, *Center Manager, Center for Clinical and Community Health Improvement*
- Karen Fisher, JD, *Senior Director and Senior Policy Counsel, Association of American Medical Colleges*

Philanthropic Foundation Perspective on Accountable Care

- Susan R. Mende, BSN, MPH, *Senior Program Officer, Robert Wood Johnson Foundation*

Interprofessional Community Response

- Panel Moderator: C. William Keck, MD, MPH, *Northeast Ohio Medical University (NEOMED), formerly NEOUCOM*
- Cynthia Flynn Capers, PhD, RN, *The University of Akron*
- Robert Howard, MA, *Akron Children's Hospital*
- Gene Nixon, MPA, *Summit County Health District*
- Jeffrey Susman, MD, *Northeast Ohio Medical University (NEOMED)*

Closing Remarks

- Janine Janosky PhD, *Vice President, Center for Clinical and Community Health Improvement, ABIA*

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