



مجلس الضمان الصحي  
Council of Health Insurance

## Improving Health in Saudi Arabia Through Population Health Management

Council for Cooperative Health Insurance  
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**A regulator's perspective on the importance of population health management as a catalyst for improving health in Saudi Arabia.**

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## **Key Messages**

- **Population health has become a rallying cry for addressing and improving the health of defined groups of individuals, but there is no clear consensus on a single definition.**
- **Population health management is an effective patient-level medical management framework that is often confused with system-level population health initiatives.**
- **A clear understanding of related terms will improve communication, collaboration, and help to manage expectations among diverse stakeholders working to transform the health sector in the Kingdom.**
- **Building infrastructure to support the population health paradigm, and population health management specifically, has the potential to accelerate health sector transformation.**
- **A program is proposed by CCHI that is aligned with Vision 2030 and the Health Sector Transformation Program strategy that emphasizes population health management for five high-burden, high-cost chronic diseases among private beneficiaries.**

## Preface

The Council for Cooperative Health Insurance (CCHI) is pleased to present this white paper. The paper presents clarifying definitions for population health and related terms and amplifies the importance of alignment with the health sector transformation strategy in the Kingdom. The need to continue building infrastructure to support population health improvement, including a useful system of measurement based on the Triple Aim framework, is underscored.

As a progressive, learning, regulator of the private health insurance sector, CCHI influences the quality of health care for the roughly 10 million beneficiaries. The aim is to enable and guide private payers and all providers that care for these beneficiaries to transition from health care that is reactive and merely transactional to care that is evidence-based, high-value, proactive, and preventative.

This paper reinforces priorities of Vision 2030 related to reducing the burden of noncommunicable diseases, reducing premature deaths, and increasing life expectancy as it describes a proposed programs to improve the health of private beneficiaries over the next five years. The program builds towards value-base healthcare by focusing on five high-burden, high-cost chronic disease conditions while enabling complimentary program initiatives, including population health management, that will ultimately improve the health of this population. Significantly, the program is expected to reduce waste in healthcare through addressing failures in care, low-value health care, and lapses in care coordination.



## Definitions

The term “population health” has become increasingly prominent as a framework for addressing health and healthcare for defined groups of individuals. As argued, it “has become a rallying cry at the policy level, a mission, and strategy for many health systems, and a burning platform for new collaborations within communities”<sup>1</sup>.

Although the term is widely used, it is not universally understood. Some use it to emphasize outcomes. Others focus on measurement. Still others use it to underscore accountability. Adding to the confusion, the term includes both “health” and “population,” two fluid concepts that vary with one’s frame of reference or professional point of view.

For example, a public health official may use the term to describe the death rates for a census track, while a primary care physician may use the term to describe the level of glucose control for diabetic patients. Because both uses refer to the health of a population, both are correct. However, for optimal engagement in health transformation strategies, the meaning of the term must be clear to organizations, communities, or stakeholders.

At present, there is no universally accepted definition for population health across the Saudi health sector that includes clinicians, researchers, policy-makers, public health practitioners, payers, and government regulators, among other stakeholders. There is a critical need to clarify this term and related terminology.

### Population Health

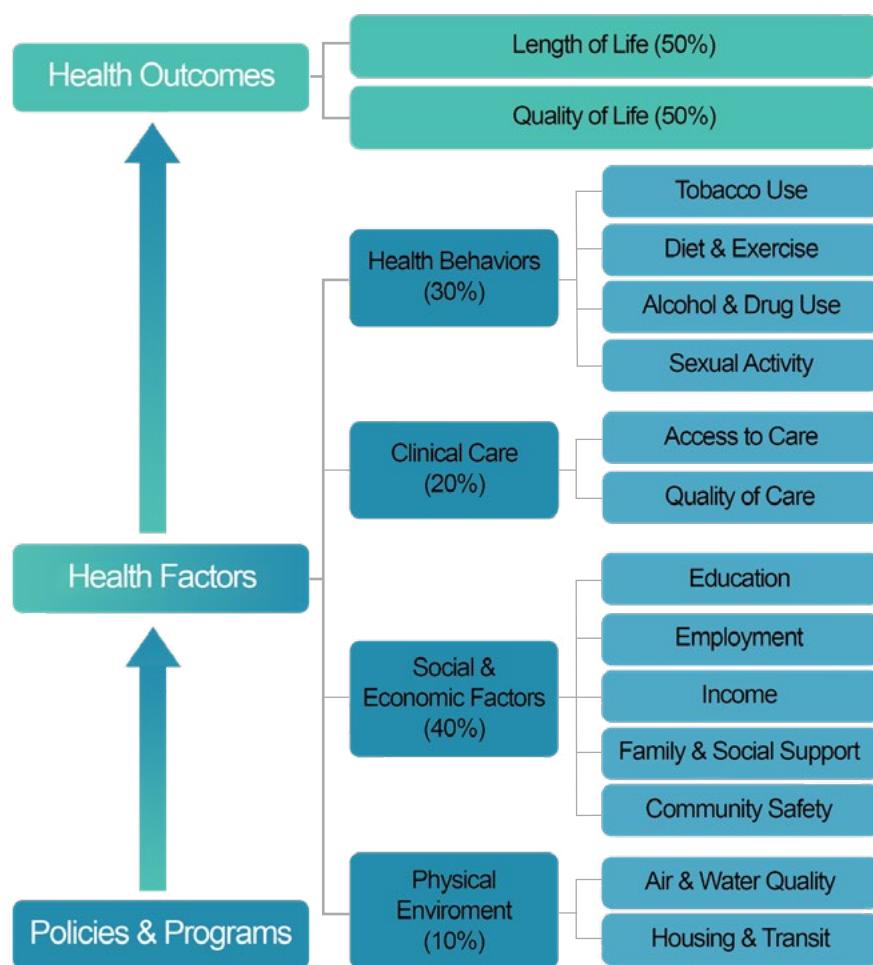
Population health is not a new concept. However, the term has increased in acceptance in the era of health transformation. The rise in the term was likely fueled because it is foundational to the Institute for Healthcare Improvement’s Triple Aim, a widespread framework for optimizing performance of three dimensions of care: the health of a defined population, the experience of care for individuals in the population, and the total cost per capita for providing care for this population<sup>2</sup>.

The most commonly cited definition for population health was created by Kindig and Stoddart<sup>3</sup>: “Population health is the distribution of health outcomes of a defined group of people, the determinants that influence distribution, and the policies and interventions that affect the determinants.”

## Determinants of Population Health

There are a number of determinants of health for a population. Health results from a dynamic interaction of many things beyond health care and access to modern medical advances. Factors that make up the complete picture of individual and population health span health behaviors (e.g., tobacco use, diet and exercise, and alcohol and drug use), clinical care (e.g., access to care and quality of care), social and economic factors (e.g., education, income, and family and social support), and the physical environment (e.g., air and water quality and housing and transit). Figure 1 represents a conceptual model of the factors of population health<sup>4</sup>.

Because of the multiple determinants of health, the key to improving the health of a defined population is implementing a collaborative and comprehensive strategy.



Source: Modified from County Health Ranking (Remington et al, 2015)

Figure 1: County Health Rankings Model



## Defining Populations

A defined group of people may be, but is not limited to, those who are attributable to or served by a clinic, hospital or health care system, those living in a specified geographic area or community or those experiencing a certain condition or disease<sup>5</sup>. In addition, the defined group must be enrolled or included in a registry to enable them to be tracked over time.

Typically, organizations choose to define populations either in discrete (defined) groups or geographically-defined groups<sup>6</sup>.

Discrete (defined) populations are enterprise-level populations that make business sense. Typically, they are a group of individuals receiving care within a health care organization, or whose care is financed through a specific health insurance plan or payer. Examples of a discrete population include employees of a business, health insurance beneficiaries, all those within a practice patient panel, or those with a particular diagnosis (see Figure 2).

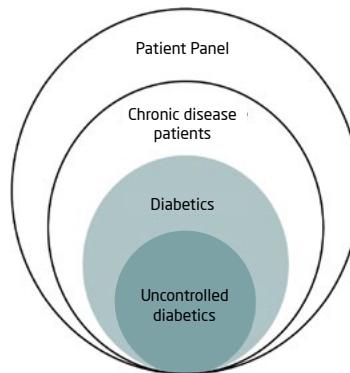


Figure 2: Examples of discrete (defined) populations of different sizes.

Regional/community populations are inclusive population segments, defined geographically. People within a segment of a community population are unified by a common set of needs or issues based on a health risk assessment, such as low-birth weight babies, motor vehicle crashes, or older adults with complex needs (see Figure 3). However, these individuals may receive care from a variety of systems or may be unconnected to care. They may or may not be insured.

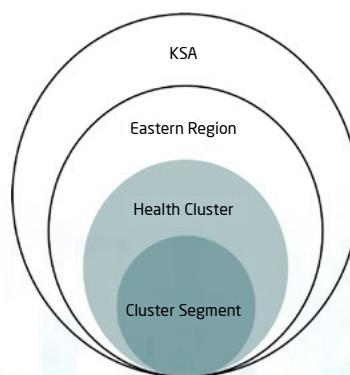


Figure 3: Examples of regional/community populations of different sizes.



## Population Health Approaches

The US Centers for Disease Control and Prevention views population health as an interdisciplinary, customizable approach that allows health departments to connect practice to policy for change to happen locally. This approach “utilizes non-traditional partnerships among different sectors of the community – public health, industry, academia, health care, local government entities, etc. to achieve positive health outcomes”<sup>7</sup>.

Table 1: Common System and Patient-level Strategies to Improve Population Health

Level	System (“meso-system”)	Patient (“clinical micro-system”)
<b>Population</b>	Regional/community	Discrete/defined
<b>Common entities/actors</b>	<ul style="list-style-type: none"><li>• Ministry of Health (MoH)</li><li>• Public Health Authority/Weqaya</li><li>• Health Cluster/ACO</li><li>• Health Insurance Company/TPA</li><li>• Specialized Regulators (e.g., CCHI, CBAHI, SFDA)</li><li>• Private Sector Partners</li><li>• Other Governmental Agencies</li></ul>	<ul style="list-style-type: none"><li>• Primary Care Provider (PCP)</li><li>• Care Manager/coordinator</li><li>• Nutritionist</li><li>• Social Worker</li><li>• Health Coach</li><li>• Center of Excellence</li><li>• Patient-centered Medical Home</li></ul>
<b>Common Strategies</b>	<ul style="list-style-type: none"><li>• Health awareness campaigns</li><li>• Fluoridation of public water</li><li>• Banning smoking in public spaces</li><li>• COVID mass vaccination program</li><li>• Calorie count menu labeling laws</li><li>• Walking and biking paths</li><li>• Eliminating food deserts</li><li>• Waiving co-pays for PCPs</li></ul>	<ul style="list-style-type: none"><li>• Diabetes prevention program</li><li>• Lifestyle change program</li><li>• Team-based care</li><li>• Self-monitoring blood pressure</li><li>• Smoking cessation program</li><li>• Chronic care management</li><li>• Remote patient monitoring</li><li>• Medical therapy management</li></ul>

As shown in Table 1, population health improvement requires collaboration between various entities under the umbrella of the Health Sector Transformation Program that have the power to shape the environment and behaviors of individuals in the target population.



Health authorities recognize several ways for stakeholders to coordinate efforts<sup>8</sup>, including the following:

- Supporting prevention and wellness initiatives.
- Promoting healthier behaviors (e.g., treatment adherence, patient self-care, and lifestyle changes.)
- Implementing a community-based team approach in which healthcare providers and other community resources coordinate to meet people's needs for medical care, food, housing, and social contract.
- Advocating for and implementing health-promoting policies.
- Building community by investing in education, economic, and workforce development projects that aims to produce long-term healthcare savings.

## **Population Health Management vs. Population Health**

The term population health management should be distinguished from the broader term of population health. As presently practiced, it has been argued that population health management can be best conceptualized as population medicine<sup>9</sup>. Said another way, it can be thought of as “the practical application of population health within the medical delivery system”<sup>10</sup>.

By focusing on the active management of discrete groups of individuals defined by clinical criteria (e.g., diagnosis, risks), usually the more complex and costly patients, providers and care systems customize programs to promote healthy lifestyles and improved adherence to evidence-based care. The goal is to improve patient outcomes at a lower cost (see “Patient-level” in Table 1).

By contrast, population health focuses on the contextual social, environmental, and behavioral determinants of health in order to achieve better outcomes and are often led by actors/stakeholders beyond or outside of the healthcare system. Operationally, these ecosystem approaches are represented as “System-level” in Table 1.

Because “the lines between a population (health) management focus on health care services and a population health focus on the broader determinants of health can become blurry with certain population segments<sup>11</sup>”. Nonetheless, communicating clearly about these concepts and the roles, responsibilities, contributions, and desired outcomes for various stakeholders will be critical for the HSTP strategy involving multiple public and private participants.





## Public Health

A significant contributor to improving the health of populations, “public health” is not synonymous with “population health.” Public health works to protect and improve the health of communities through policy recommendations, health education, promotion, outreach, surveillance, and research for disease detection and injury prevention. The Institute of Medicine defined it as what “we as a society do collectively to assure the conditions in which people can be healthy<sup>12</sup>.”

Public health can be viewed as one of several synergistic pillars for improving the health of a given population. Other pillars include health policy, chronic care management, quality and safety, and population health management. Traditionally, public health focuses on the broader determinants of health for a given geographically-defined population (e.g., environmental quality and emergency preparedness). Moreover, public health is generally financed by public resources (taxes). Lastly, public health practitioners often include non-clinical professionals such as sanitarians, environmental health scientists, biostatisticians, and epidemiologists, rather than health care workers.

In the Kingdom, the mandated function of public health lies primarily with the Ministry of Health and the Public Health Authority/Weqaya.

## Context

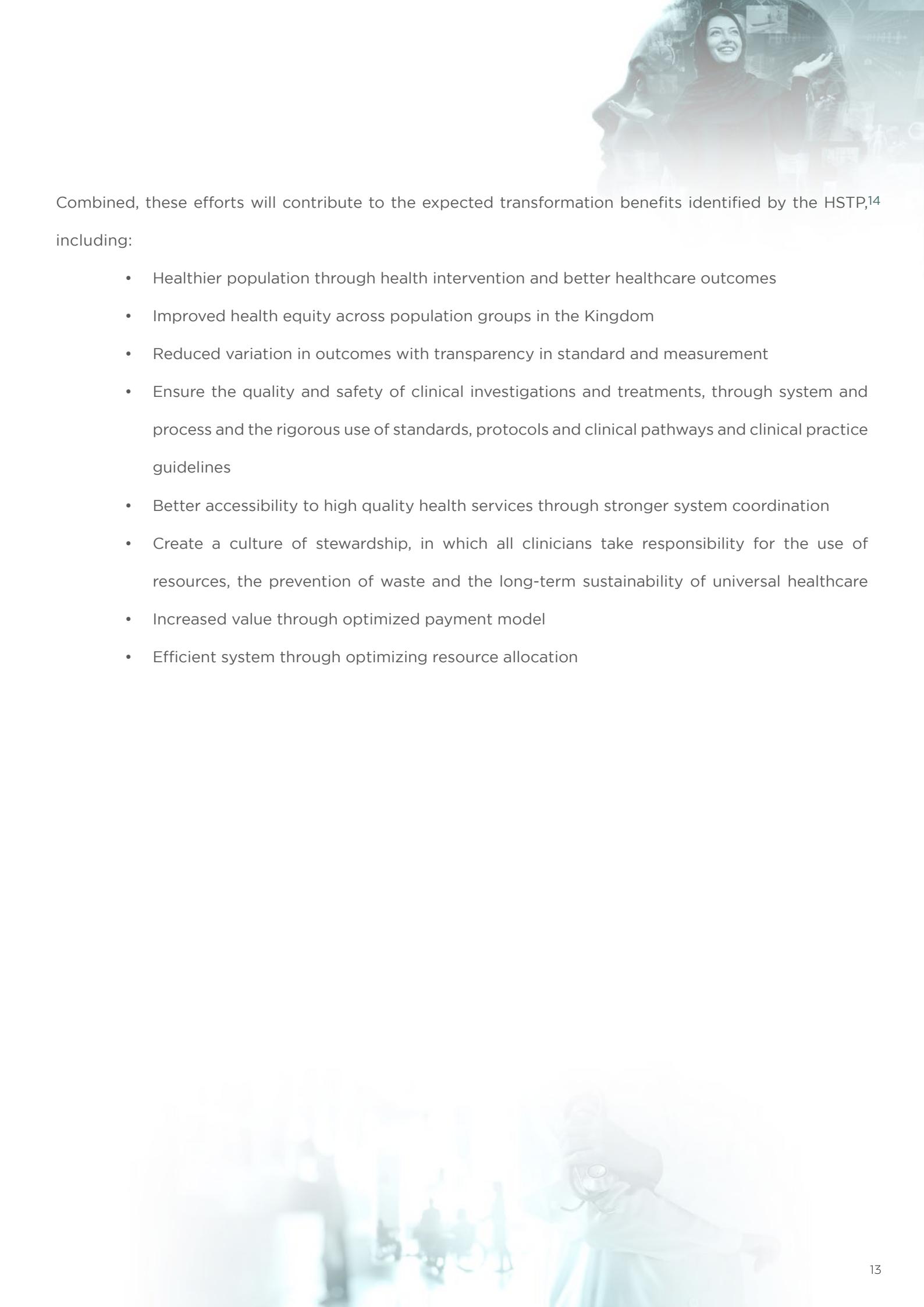
### Vision Realization for Health Sector Transformation

As a part of Saudi's Vision 2030, the Health Sector Transformation Program (HSTP) is restructuring the health sector to be a comprehensive, effective and integrated health system that is based on the health of the population<sup>13</sup>. The HSTP strategy, developed in close collaboration with the National Transformation Program, identified several challenges limiting optimal performance of the sector. Included among these challenges were population coverage gaps; sub-optimal care delivery with limited focus on population empowerment, preventive, and primary care; variation in outcome across provider groups and regions; and the high rate of chronic diseases.

Population health and population health management can address these challenges thereby serving as a catalyst for health transformation in the Kingdom. Specifically, by addressing three areas of the five design principals identified by the HSTP for anchoring the fundamental changes needed. Namely, the approach empowers patients and is responsive to population needs (population-centric), focuses on prevention proactively (preventative), and it is a well-established strategy that can deliver satisfactory outcomes in a sustainable way (value-based).

As described, system-level actors (e.g., MoH, Weqaya, medical cities, regulators) are best equipped to influence broader population health level factors. Examples would include policies that address essential health benefits (e.g., Essential Benefit Package), universal access to healthcare via expanded networks, health information exchange platforms (e.g., NPHIES), health determinants such as community support, environmental quality, and the built environment.

Patient-level actors (e.g., payers and health care providers) are closer to the individual population members (beneficiaries) and can therefore directly influence payment models, provider practice behavior, clinical decision-making, and care coordination. As such, population health management influences clinical outcomes, patient safety, satisfaction, and experience. Further, by carefully tracking the cost-related outcomes for the care of segmented discrete/defined populations (e.g., patients with diabetes), it can influence per capita cost.



Combined, these efforts will contribute to the expected transformation benefits identified by the HSTP,<sup>14</sup> including:

- Healthier population through health intervention and better healthcare outcomes
- Improved health equity across population groups in the Kingdom
- Reduced variation in outcomes with transparency in standard and measurement
- Ensure the quality and safety of clinical investigations and treatments, through system and process and the rigorous use of standards, protocols and clinical pathways and clinical practice guidelines
- Better accessibility to high quality health services through stronger system coordination
- Create a culture of stewardship, in which all clinicians take responsibility for the use of resources, the prevention of waste and the long-term sustainability of universal healthcare
- Increased value through optimized payment model
- Efficient system through optimizing resource allocation

## Recommendations

To achieve optimal population health in the Kingdom, stakeholders participating in the strategy for HSTP must continue to collaborate to build infrastructure to support the population health paradigm (Box 1).

Box 1: Basic Attributes of a Population Health Paradigm<sup>15</sup>

- Population identification
- Registry consisting of searchable data warehouse
- Risk stratification modeling using patient surveys and health data input (e.g., insurance claims, EHR information)
- Personalized, patient-centered care that includes self-management, shared decision-making, health promotion, disease management, and case management
- An identified primary care provider (medical home)
- An interdisciplinary health care team to provide supportive services (team-based care)
- Integration with public health and community systems
- Utilization of evidence-based guidelines to provide quality, cost-effective care
- Ongoing evaluation of outcomes with feedback loops
- Implementation of interoperable cross-sector Health Information Technology (HIT) platform
- Clinician knowledge about and recognition of determinants of health and their effect on population health and individual health

These attributes are complimentary, if not essential, to new approaches to the management of health systems, decentralizing decision-making and allowing local health systems to shape care provision to meet the needs of their population. More pointedly, harnessing the power of these attributes will assist the Kingdom in addressing the triple challenges of increasing quality of care, reducing costs, and improving the patient care experience.

Obviously, a useful system of measurement based on varied sources of data is essential to this work and shifting from health care that is transactional and reactive to health care that is proactive, preventative, and promotes health and wellness. Moreover, the operational effectiveness of population health management relies on bringing data and analytic tools together in a useable way<sup>16</sup>. The Institute for Healthcare Improvement offers a menu of suggested measures for the three dimensions of the Triple Aim<sup>17</sup>. Table 2 shows a modified menu of outcome measures with sample data sources available in the Kingdom<sup>18 19 20</sup>. Expanding reliable data sources, including those related to cost information at the system and patient levels, will benefit the Kingdom greatly.

Table 2: Menu of Triple Aim Outcome Measures and Sample Data Sources

Dimension of the IHI Triple Aim	Outcome Measures	Sample Data Sources in the Kingdom
<b>Population Health</b>	<p><b>Health Outcomes:</b></p> <ul style="list-style-type: none"> <li>Mortality: Years of potential life lost; life expectancy; standardized mortality</li> <li>Avoidable/amendable mortality</li> <li>Health and Functional Status: e.g., Single-question assessment (from CDC HRQOL4-)</li> <li>Healthy Life Expectancy (HLE): Combines life expectancy and health status into a single measure, reflecting remaining years of life in good health</li> </ul> <p><b>Disease Burden:</b></p> <ul style="list-style-type: none"> <li>Incidence and/or prevalence of major chronic conditions</li> </ul> <p><b>Behavioral and Physiological Factors:</b></p> <ul style="list-style-type: none"> <li>Behavioral factors include smoking, alcohol consumption, physical activity, and diet</li> <li>Physiological factors include blood pressure, BMI, cholesterol, and blood glucose</li> <li>Health risk assessment (HRA) score</li> </ul>	<ul style="list-style-type: none"> <li>MoH Statistical Book (Health Indicators)</li> <li>KSA World Health Survey</li> <li>National Health Information Center</li> <li>Global Burden of Disease Study</li> <li>Saudi Health Interview Survey</li> <li>Global Adult Tobacco Survey</li> <li>Beneficiary medical questionnaire (disclosure form)</li> <li>Electronic health record (EHR)</li> <li>Annual employee Health Risk Assessment (HRA)</li> <li>National registries (e.g., Saudi National Diabetes Registry)</li> <li>CCHI chronic disease registry</li> <li>National Center for Health Information administrative data</li> <li>STEPS Survey data</li> <li>Cluster/ACO data</li> </ul>
<b>Experience of Care</b>	<p><b>Patient surveys:</b> Global questions from Consumer Assessment of Healthcare Providers and Systems (CAHPS)</p> <p>Set of measures based on key dimensions (e.g., Institute of Medicine's six aims for improvement: safe, timely, efficient, effective, equitable, patient-centered; "STEEP")</p>	<ul style="list-style-type: none"> <li>Health care provider survey</li> <li>CCHI customer satisfaction survey</li> <li>CAHPS</li> <li>Press Ganey Survey</li> <li>Net Promoter Score</li> </ul>
<b>Per Capita Cost</b>	<p><b>Total cost</b> per member of the population per month</p> <p><b>Hospital and emergency department (ED)</b> utilization rate and/or cost</p>	<ul style="list-style-type: none"> <li>Claims data from private insurance company or TPA</li> <li>Milliman cost benchmarks</li> <li>Health care provider administrative data</li> <li>Patient information costing system</li> </ul>

## Our Way Forward

The HSTP has developed the long-term road map, meant to improve health care quality in the Kingdom. Successful transformation will in part depend on how well the various entities (health care providers, payers, public health agencies, policymakers, businesses, and community-based organizations) take up the strategy. Each entity within and outside of the healthcare sector must be poised to make substantive contributions from their respective position of influence.

The Council for Cooperative Health Insurance seeks to be an active agent of change for health sector transformation under the HSTP strategy. As the technical regulator for private healthcare, CCHI is in the unique position to support this healthcare transformation journey for the approximately 10 million beneficiaries. The Council's mission is to "improve the health of beneficiaries through a regulatory environment that enables stakeholders to enable transparency, equity, and value-based care<sup>21</sup>".

Among the Council's strategic objectives are those that align with and reinforce the Triple Aim, an underlying tenet of the HSTP strategy:

- Enable population segments to be fully covered and protected (i.e., improve population health)
- Enable payers and providers to improve their services to beneficiaries through progressive policies (i.e., improved patient experience)
- Improve sustainability and innovation in the sector (i.e., aid in lowering total costs)

The key to successfully accomplishing these objectives lies in part in defining population segments based on the level of risk of poorer outcomes and managing them effectively.

### Priority-setting

It has been estimated that twenty-five percent (or more) of healthcare spending may be wasted . Among the six categories for waste described in the study, three were related to clinical care<sup>22</sup>. Namely, up to 40 percent of the wasted healthcare spend is attributed to failed care management, including failure in care (e.g., failure to use best practices, preventive care, safety standards), failure in care coordination (e.g., fragmented care resulting in patients falling through cracks), and overtreatment/low-value care (e.g., subjecting patients to care that cannot help them).

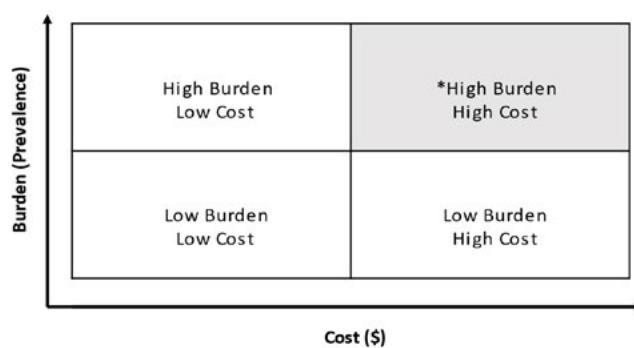


It is evident that escalating healthcare expenditure in the midst of poor health outcomes is unsustainable. The need to shift from low-value (wasteful), inconsistent, fragmented care to high-value, evidence-based, coordinated care is imperative. However, given the wide spectrum of disease conditions and risk factors leading to premature death, disease, and disability, the healthcare sector must grapple with how best to start and what conditions to target. By expanding coverage and ensuring cost-sharing schemes for priority conditions, the revised Essential Benefit Package (which establishes the minimum benefits for the privately insured) can help to achieve this.

It is not known how much of the escalating healthcare expenditure for the Kingdom is wasted. And while the healthcare system in the Kingdom is not comparable to that in the US, international benchmarks estimate the average waste to be around 25 – 20 percent<sup>23</sup>. This level of waste may equate to billions of riyals for the Kingdom. This level of waste is untenable.

A reasonable approach for priority-setting is to consider both the prevalence and cost of diseases/conditions. Some diseases present commonly (e.g., headaches, sore throat), but are relatively low cost. Other conditions are common and are expensive to treat (e.g., high blood pressure, diabetes). Other conditions are uncommon and inexpensive, while others (e.g., cystic fibrosis) are expensive to treat, but present less often (see Figure 4). The potential for transformational impact is highest by focusing on conditions that are both high burden and high cost.

Figure 4: Matrix of Potential Health Conditions





The HSTP strategy identifies the high rate of non-communicable diseases<sup>23</sup>. National data estimates for 2019 showed that 8 of the top 10 causes of death and disability in the Kingdom were non-communicable diseases, including heart disease, stroke, and diabetes<sup>24</sup>.

Moreover, data showed that metabolic and behavioral risks combined accounted for eight of the top ten risk factors for death and disability. These risks included high blood pressure, high BMI, high fasting plasma glucose, tobacco use, low physical activity, and dietary risk<sup>25</sup>.

Worse yet, these data show that the prevalence for these causes and risks for death and disability have increased significantly from 10 years earlier (2009). For example, rates of diabetes increased by nearly 80 percent, high BMI by 56 percent, tobacco use by 46 percent, and high blood pressure by 29 percent. Significantly, these conditions are among the most expensive to manage and treat<sup>26 27 28</sup>.

## **Population Health 5x5 Program**

In response to the concerning trends in health outcomes and costs, the Council has created the Population Health 5x5 Program. The program aims to improve the health of the ten million privately insured beneficiaries (see Figure 5) by transitioning to value-based health care and focusing on five high-burden high-cost health conditions during the next five years. These include three diseases and two significant lifestyle factors:

- High blood pressure
- Coronary heart disease
- Diabetes/pre-diabetes
- Tobacco use
- Obesity

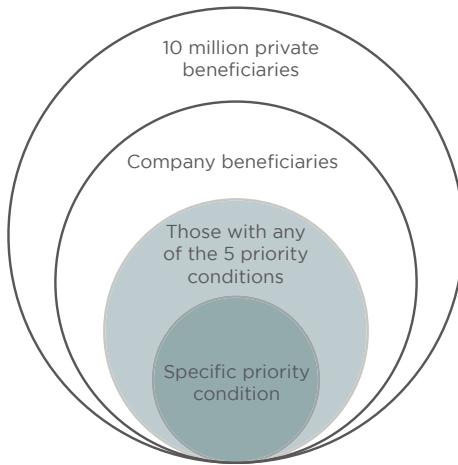


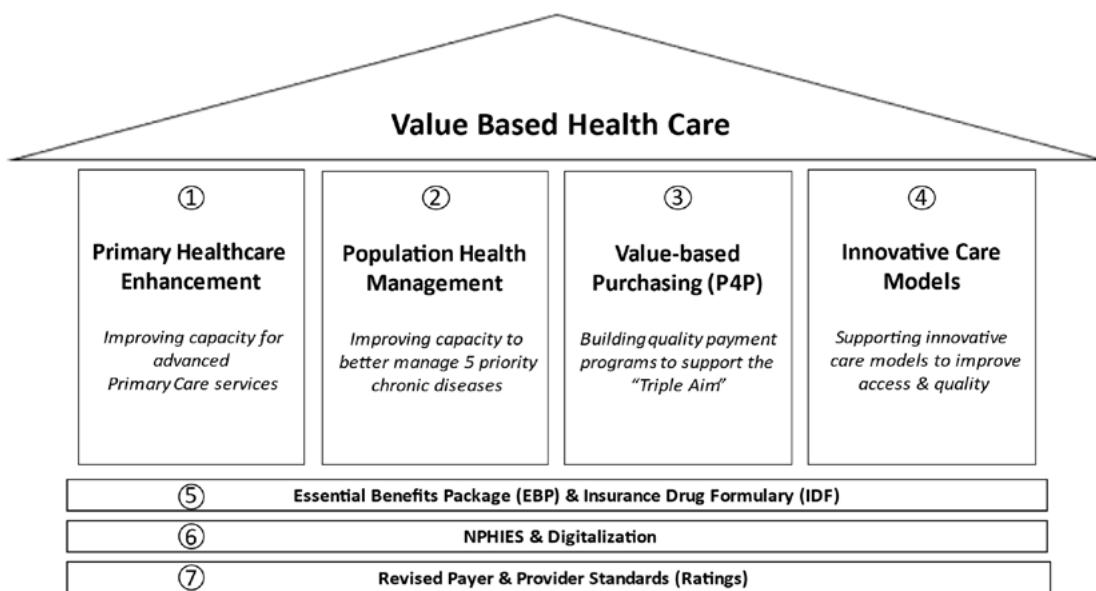
Figure 5: Populations of private beneficiaries by size.

In alignment with the Kingdom's Vision 2030 HSTP priorities, the program has several complimentary components for this population. These activities will include 1) the development and use of national registries for these five priority conditions; 2) the expansion and use of evidence-based clinical guidelines and protocols for these priority conditions and others; 3) building capacity for private payers and providers to enable them to use population health management approaches for these five priority conditions; 4) a strong set of standards for provider classification and payor qualification that will facilitate change management; and 5) providing technical assistance/education aimed closing the knowledge gap.

Figure 6 depicts the overarching strategic framework for the program. CCHI has translated the HSTP strategy from the perspective of a private health insurance regulator. The strategy aims to build a value-based health care system for the privately insured population. The details for the strategy are beyond the scope of this paper. In brief, the four discrete related initiatives include primary care enhancement, population health management, value-based purchasing programs, and innovative care models. These initiatives are undergirded by several cross-cutting enablers, including the essential benefit package of services, insurance drug formulary, and a robust health information exchange platform.



Figure 6: Population Health 5x5 Program Strategic Components



Each initiative has been informed by national best practices and international benchmarks. For example, there are notable national and international evidence-based population health and management interventions<sup>29 30 31</sup> that can be adapted and adopted for use in the Kingdom. A summary of evidence-based interventions for controlling high blood pressure is shown in Table 3 below.

Table 3: Evidence-based Interventions to Control High Blood Pressure<sup>32</sup>

<b>Strategies to Improve Medication Adherence</b>	<ul style="list-style-type: none"><li>• Low or no medication co-payments</li><li>• Fixed-dose medication combinations (two or more medications combined into a single tablet) with low or no co-payments</li><li>• 90 - day supply or longer medication fill supply</li><li>• Innovative pharmacy packaging (e.g., calendar blister packs)</li></ul>
<b>Strategies to Improve Care Coordination</b>	<ul style="list-style-type: none"><li>• Standardized protocols to manage blood pressure and cholesterol</li><li>• Electronic prescribing (e-prescribing) with 2-way information exchange between prescriber and pharmacy</li><li>• Medication therapy management (MTM) programs</li></ul>
<b>Strategies to Improve Blood Pressure Monitoring</b>	<ul style="list-style-type: none"><li>• Provide patients with known or suspected hypertension validated home blood pressure monitors and reimburse for the clinical support services required for self-measured blood pressure monitoring (SMBP).</li></ul>

Some interventions, for example, waiving co-payments and fixed-dose medications, can be implemented by system-level actors and policy (e.g., Essential Benefit Package, Insurance Drug Formulary, NUPCO). Others, like clinical protocols and medication management, can be applied by patient-level actors (e.g., primary care providers, care coordinators, and pharmacists). These patient-level interventions may be optimized through a team-based care approach whereby “health professionals who work collaboratively along with patients, family caregivers, and community service providers on shared goals within and across settings to achieve care that is safe, effective, patient-centered, timely, efficient, and equitable<sup>33</sup>”.

The Council has established a high-level 5-year and detailed timeline for this program (Table 4 below). Through ongoing bidirectional communication, provision of technical assistance, cooperation, and supervision, CCHI plans to enable payers and providers in the private sector to work collaboratively to build the capacity required to gradually adopt population health management strategies initially for the five priority conditions.

Table 4: High-level Time-phased Milestones for Population Health 5x5 Program

Year/ Program Components	2021	2022	2024 – 2023	2025
<b>Milestones</b>	<b>Educate Sector</b> <ul style="list-style-type: none"> <li>Define priorities</li> <li>Engage stakeholders</li> <li>Develop compliance standards</li> <li>Support Primary Care pilots</li> <li>White paper</li> <li>Stakeholder workshops</li> </ul>	<b>Build Capacity</b> <ul style="list-style-type: none"> <li>Ongoing technical assistance</li> <li>Complete registries</li> <li>Expand CPGs for payers and providers</li> <li>Scale successful PCP pilots</li> <li>Voluntary participation</li> </ul>	<b>Scale &amp; Benchmark</b> <ul style="list-style-type: none"> <li>Improved outcomes</li> <li>Publish findings</li> <li>Mandate all KPIs</li> <li>Quality Improvement</li> <li>Investment guidelines</li> <li>Mandatory participation</li> </ul>	<b>Expand Program</b> <ul style="list-style-type: none"> <li>Program evaluation</li> <li>Expand to other priority conditions (e.g., depression, CKD)</li> <li>Improvement</li> <li>Investment guidelines</li> </ul>
<b>Monitoring &amp; Evaluation</b>	<ul style="list-style-type: none"> <li>Adapt NPHIES to enable reporting</li> <li>Build/validate chronic disease registry</li> <li>Revise existing classification and qualification standards</li> </ul>	<ul style="list-style-type: none"> <li>Finalize clinical KPIs</li> <li>Finalize PROMs/PREMs</li> <li>Report selected metrics (baseline) for at least 2 conditions</li> <li>Analysis of chronic disease registry</li> <li>Cost estimates for 5 conditions</li> </ul>	<ul style="list-style-type: none"> <li>Require KPI, PROMs, PREMs reporting for selected metrics (baseline) for all 5 conditions</li> <li>Analysis of chronic disease registry; share findings with payers and providers</li> </ul>	<ul style="list-style-type: none"> <li>Require reporting on all metrics for 5 conditions</li> <li>Analysis of chronic disease registry; share findings with payers and providers</li> <li>Benchmark payers</li> <li>Benchmark providers</li> </ul>

NPHIES, National Platform for Healthcare Information Exchange Services; TA, technical assistance; CPGs, clinical practice guidelines; KPI, key performance indicators (NCQA HEDIS outcome and prevention measures, CAHPS); PROMs, patient outcome measures; PREMs, patient reported experience measures).



The expectation is that during the next five years payers and providers in the private sector begin to prioritize and demonstrate evidence of

- Segmenting beneficiaries based on high-risk conditions
- Estimating aggregate and/or per capita cost for five priority conditions
- Integrating Care Managers to promote the health of high-risk beneficiaries
- Setting short- and long-term healthcare goals for the high-risk beneficiaries
- Enhancing health promotion and disease prevention
- Expanding enhance products and operations based on population health needs
- Highlighting evidence-based practices in quarterly compliance reports
- Employing more robust fraud, waste, abuse prevention and mitigation safeguards
- Enhancing healthcare data management integrity

Going forward, using capabilities developed during the program period, other discrete populations of beneficiaries/patients (e.g., super-utilizers, asthmatics, frail elderly at risk for falls) should be targeted for population health management based on risks of poor outcomes, health expenditure, and the availability of evidence-based solutions.

## Impact

The Population Health 5x5 Program is expected to have a financial, social, and legal (or regulatory) impact on the private healthcare sector in the Kingdom.

**Financial impact.** As described previously, it has been estimated that twenty-five percent (or more) of healthcare spending may be wasted. Among the six categories for waste, three were related to clinical care. Up to 40 percent of the wasted healthcare spend is attributed to failed care management, including failure in care, failure in care coordination, and overtreatment/low-value. This program is expected to reduce waste in healthcare spending while improving health outcomes.

**Social impact.** The Center for Improving Value in Health has proposed a multi-dimensional definition of value in health from the perspective of the customer<sup>34</sup>. This definition emphasizes the optimal utilization of resources for achieving the best health outcomes. In addition, the HSTP strategy emphasizes keeping people healthy by focusing on the whole population through a preventive approach, rather than a solely curative approach to health provision; and providing treatment in an outcome-focused way, without overtreating or under-treating patients<sup>35</sup>. This value-based program is expected to improve the health of society across all regions of the Kingdom through accessible, quality, evidence-based care.

**Legal/regulatory impact.** The current qualification and classification requirements for private insurance companies and providers, respectively, will be modified over time to support transformation to a value-based healthcare system. These innovative standards will be phased-in over five years and include revenue cycle management, clinical effectiveness measures, prevention services, and customer satisfaction and experience.

## Acknowledgments

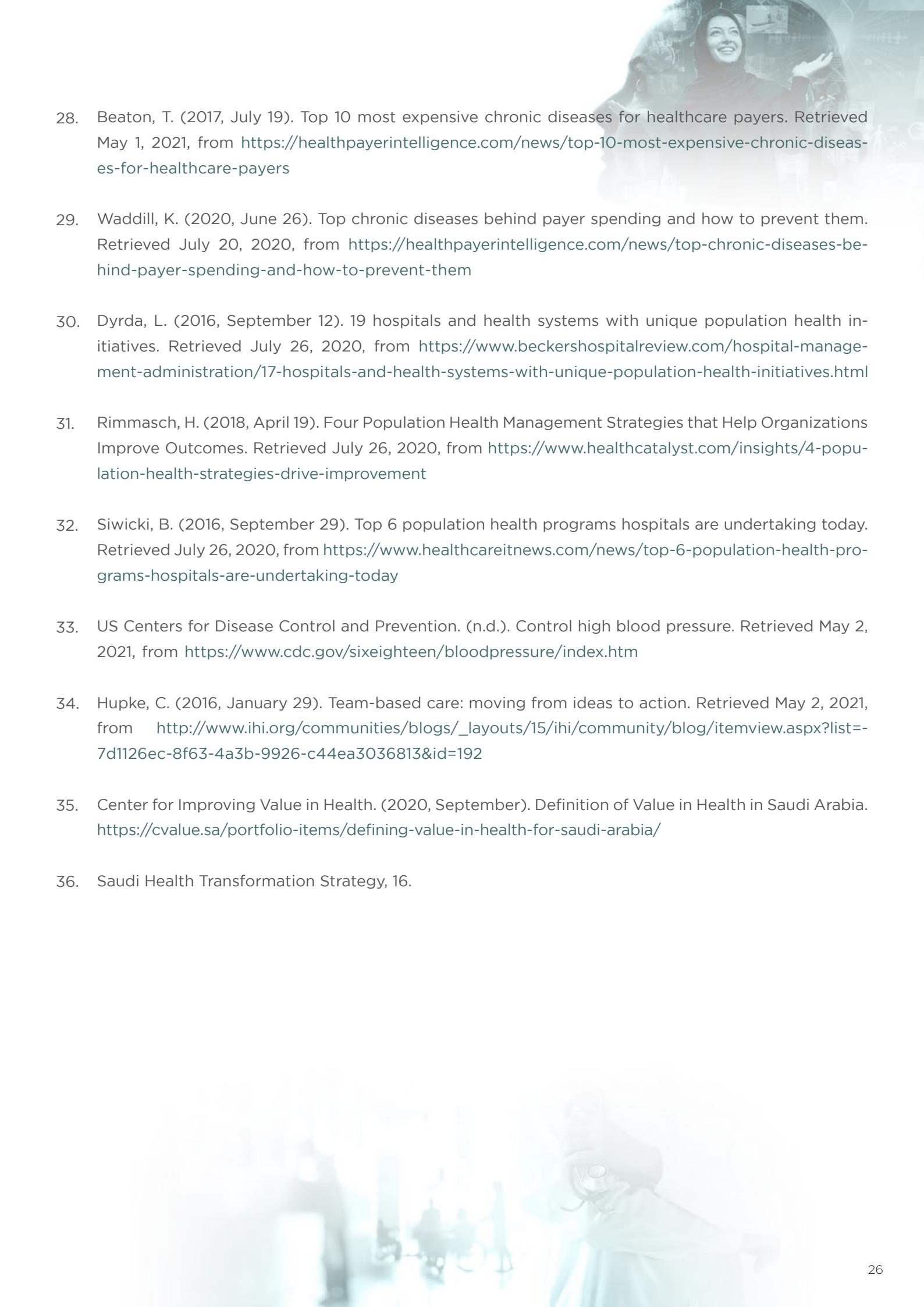
In addition to meeting with members of the HSTP, the Council has engaged with several key stakeholders, including a subset of providers and all private payers and third-party administrators, to invite their critical feedback, and support. The Council wishes to acknowledge those who generously provided their time and reflective appraisal of the program and perspectives described in this white paper. We thank our professional colleagues from the Vision Realization Office, Health Sector Transformation Program, General Investment Authority, Ministry of Health, Saudi Health Council, Saudi Commission for Health Specialties, Public Health Authority/Weqaya, Saudi Food and Drug Authority, National Unified Procurement Company, Central Board for Health Accreditation of Healthcare Institutions, CCHI Executive Committee and Board of Directors, and others.

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