



Value-Driven Population Health Strategies: Designing Models for Different Populations

Expert presenters

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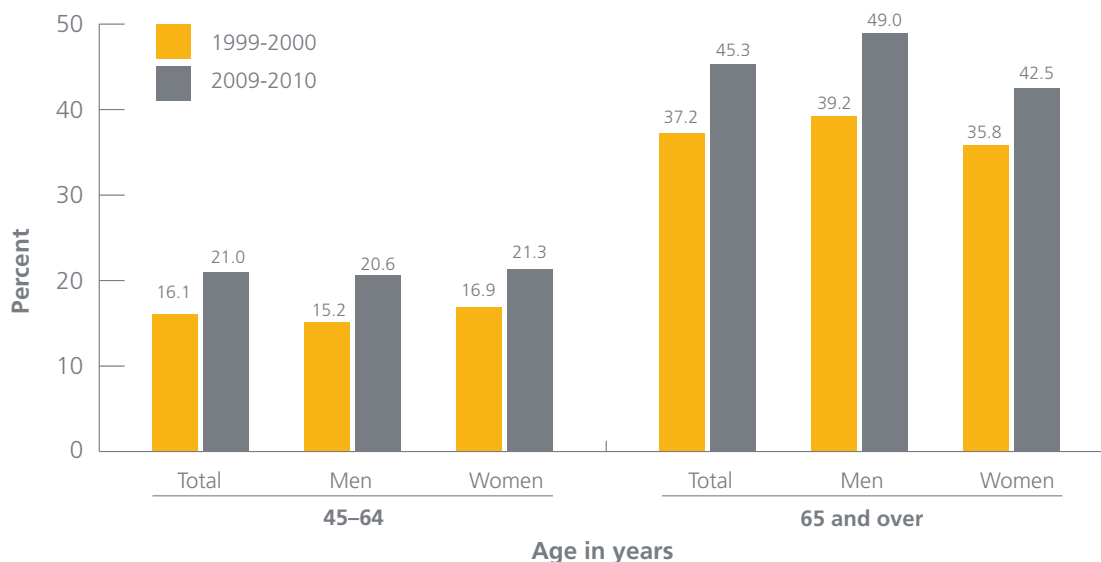
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At \$1.7 trillion annually, the cost of treating chronic disease accounts for 75% of total U.S. health care spending. This burden – and the urgency to contain it – grows with the rising prevalence of multiple chronic conditions (MCC), particularly within the expanding 65-and-older demographic. Between 2000 and 2010, the number of Medicare members with two or more conditions increased from 37.2% to 45.3%. The MCC rate is closer to 50% among Medicare-age men.

In addition, unsustainable costs attached to treating chronic disease – and the debilitating impact on life quality – increasingly extend beyond the Medicare population to a younger, commercial segment. Over the past 10 years, as demonstrated below, the incidence of two or more chronic conditions in the 45-to-64 demographic has increased from 16.1% to 21%.

Figure 1

The percentage of adults ages 45-64 and 65 and over with two or more of nine selected chronic conditions increased between 1999-2000 and 2009-2010



“Epidemic obesity is one example that foreshadows the alarming prognosis for quality of life and medical costs unless we manage chronic disease more strategically,” said Dr. Mark Leenay, chief medical officer, Optum. “Because of the rapid rise in childhood obesity and its role in driving other chronic health conditions, like diabetes, we are the first generation in 200 years whose children may have shorter life expectancies than their parents.”

Historically, the health care industry has taken a disease-by-disease approach to chronic illness treatment – identifying and managing clinical interventions tied to particular clinical situations. There is growing evidence that *population-based* health management – focused on future utilization and cost drivers – can empower people to live healthier lives, decrease avoidable chronic

complications and reduce a dominant contributor to unsustainable health care costs.

Keying in on population differences is a win-win proposition. A strategy that considers contrasts – between commercial and Medicare/Medicaid, as an example – not only elevates value for respective members, it simultaneously enhances value propositions for payers.

On the commercial side, employers emphasizing consumer-directed health insurance derive top line and bottom line value – greater productivity at lower overhead – from engaged employees accessing evidence-based medicine to make wellness choices. Federal and state government payers, by comparison, meet their missions by piloting alternate delivery models like accountable care organizations and medical homes.

Population Health Management Is About “Knowing Your Audience”

Several key principles underlying the efficacy of population management strategy mirror already-validated “science of marketing” best practices for creating outcomes that satisfy strategic objectives. The parallel principles include: Identify key drivers of value, segment preferred targets, assess critical internal motivations and customize interactions to influence behaviors that create desired results.

Within the context of value-driven population management aimed at improving the health of an entire population, the strategic framework generally takes the following form:

- Identify and differentiate populations according to needs and conditions.
- Use assessment and predictive modeling to stratify risk levels and plan cost-impact strategies that address value drivers.
- Tailor and customize evidence-based care interventions aligned with risk segments.
- Activate consumer capacity to self-manage wellness status and directly impact care costs.
- Increase care provider adherence to evidence-based medicine.

What does it look like when population health management strategy leverages differentiation to design tailored, value-driven programs? The following examples demonstrate the concepts of segmentation, customization and tailored activation.

- **Segmentation vs. one size fits all.** A narrow or “silo” approach to separately managing a member’s distinct conditions demonstrates the shortcoming in using a traditional *one size fits all* approach. Due to overlapping syndromes – particularly within geriatrics, but also for other age groups now presenting multiple conditions – some syndrome-specific interventions may be counterproductive. Population-level management, by comparison, segments members according to risk factors, models predicted future risk and matches individuals to tailored intervention programs.
- **What does “value” look like?** Success at influencing member decisions, actions and participation stems from programming keyed to varying perceptions of “value.” Viewpoints that differentiate commercial consumers and Medicare/Medicaid members, for example, fundamentally impact the design of a population-level care model and programs.

“The under-65 commercial member, for example, values self-navigating the network and experiencing high-quality benefit claims support,” Leenay pointed out. “Medicare and Medicaid members, by comparison, focus on access to health care services and getting assistance in navigation.”

- **Are incentives in play?** Commercial members responsible for a greater portion of health care expense account for – or can self-determine – a major portion of health status and resulting medical costs. The Centers for Disease Control and Prevention (CDC) estimates commercial member control impacts up to 50% of health status cost outcomes. More than sufficient rationale to emphasize behavior-shaping incentive strategies and tactics.

This *member activation* opportunity is a significant focus for commercial population management. “It’s not simply identifying who is ill and who would benefit from an intervention,” emphasized Leenay. “The motivation today is high-participation consumers. An activated member is healthier and makes better use of plan assets. Those outcomes, in turn, result in lower costs for the patient, for the plan and for the health care system.”

The nature of Medicare and Medicaid, by comparison, does not allow payers to significantly incent preferred behavior, noted Leenay. “Interventions put in place for Medicare and Medicaid differ significantly from commercial populations because of low co-pays and changes in payment methodology.”

Viewpoints that differentiate commercial consumers and Medicare/Medicaid members, for example, fundamentally impact the design of a population-level care model and programs.

— Dr. Mark Leenay,
Chief Medical Officer, Optum

Cost Distribution Data Validates “Impact Opportunity” Points

Payer ROI from health management at a population level derives, in great part, from strategic, targeted asset and resource deployment along the future-risk spectrum. The range extends from personal *health* management support for consumers at low levels of future risk, to the more intense, *care* management approach that high-risk members require. Population-level risk segmentation and stratification play critical roles as targeting and tailoring mechanisms to align assets and resources with risk segments defined by conditions and comorbidities that drive medical cost and utilization.

Figure 2 maps the Medex cost distribution, using 2011-12 data, for a commercial population. The scale on the X-axis reflects Impact Pro® Risk Score categories. A risk score of 1 reflects the healthiest, lowest-risk segment. The population sector with a 15 score is the most ill and has the highest propensity for services

utilization. Bars measured on the Y-axis indicate the percentage of total membership within each risk segment.

The teal line represents the total plan cost for the respective “bands” of risk. The orange line is PMPM costs. “Historically, providers and health plans have focused on the PMPM costs,” noted Leenay. “But the population having a very high risk score actually is fairly small. Accordingly, the compelling opportunity to impact future plan costs is in the 5-7 and 7-15 bands of risk.”

Figure 3 demonstrates a Medicare population cost distribution and future cost. The tendency is to focus on the highest PMPM, which is generated by the highest-intensity interventions. Once again, however, the corresponding population is so small (1%) that the total cost impact opportunity is relatively low. Shifting the focus of care management two or three bands of risk away from the highest PMPM puts payers in an “opportunity to impact” position where higher population counts intersect with upward-trending future costs.

Figure 2

Commercial Membership: Opportunity to Impact Medical Cost

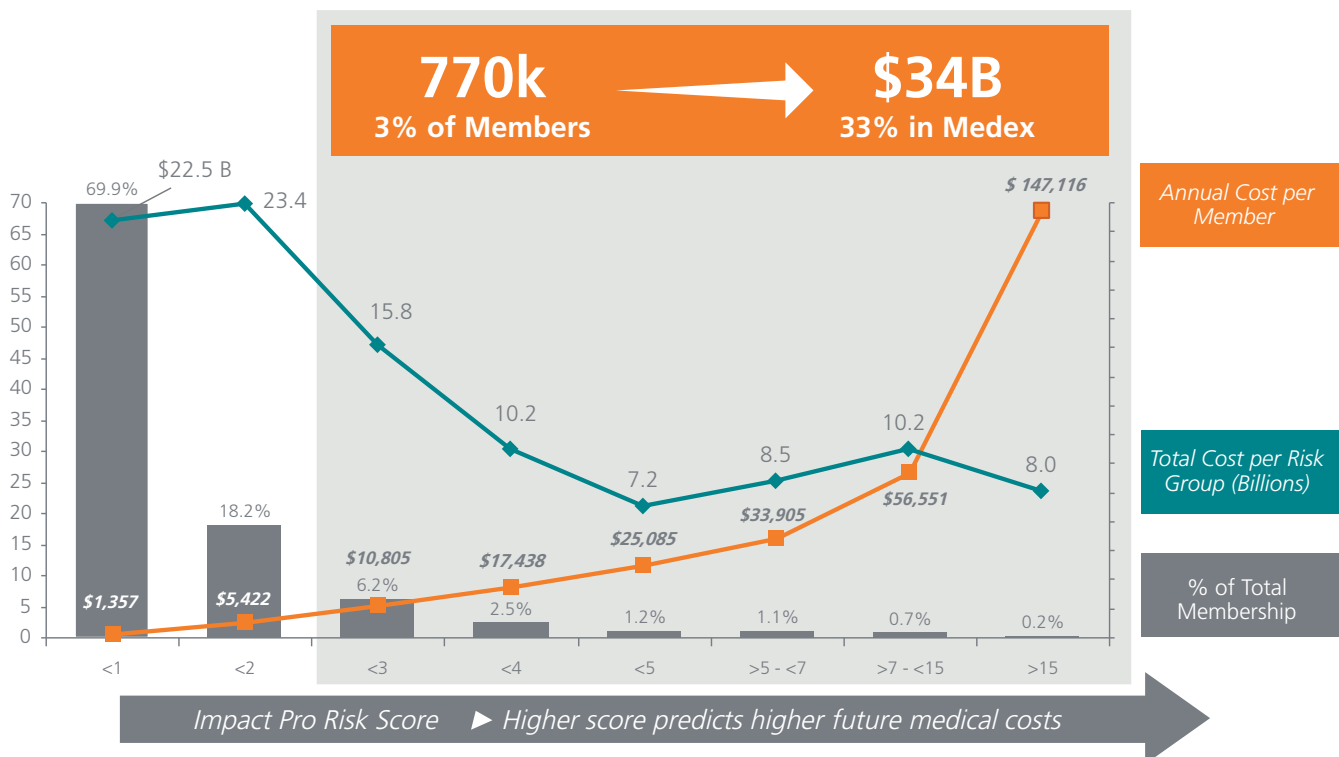
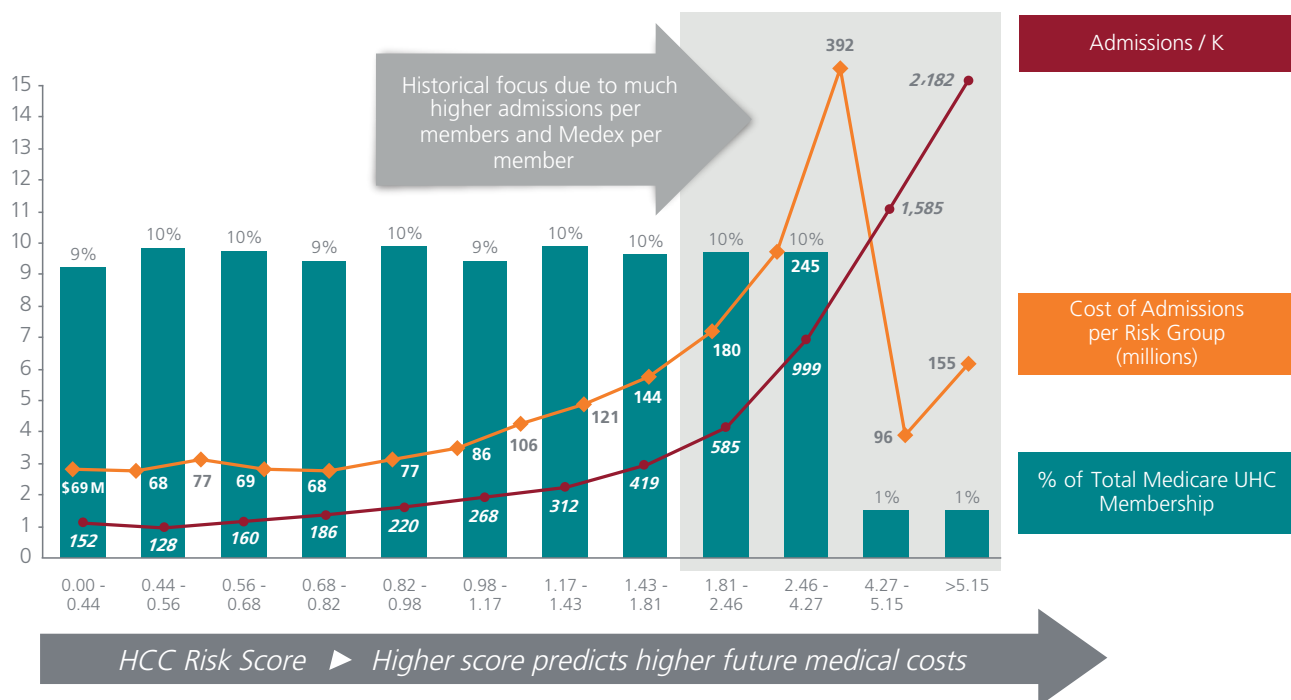


Figure 3

Medicare Membership, Dual & Chronic SNP plans



Payer competency in this population management element is particularly critical as plans increasingly support providers moving into risk-bearing payment agreements. “Providers are likely to appropriately deploy resources on high-end, high-intensity interventions, but they don’t necessarily have skills to efficiently identify, segment and stratify the lesser-risk segments,” said Leenay. “To apply resources wisely, you need to be much more strategic on elements like which interventions work, and when it’s appropriate to roll members off of management programs.”

From Theory to Action: Analytics Drive Population Health Management

What programs make sense? How do you design those programs? Population Assessment identifies the prevalence of clinical conditions, evident comorbidities, cost and use drivers, opportunities for improvement, and root causes. **Figure 4** uses commercial population data to isolate key cost drivers: the prevalence of members with certain conditions, and the typical costs – by types of services involved – associated with those conditions. In chronic heart failure (CHF) cases, payments to hospitals account for 57% of the PMPM cost for that condition.

The cost driver for back and spine surgery, by comparison, is professional services at 44% of the PMPM cost.

How do you find members who match your programs?

This step, known as identification and stratification, helps define an “actionable member” profile – a defined category of the population comprising patients that a health management program is specifically designed to support. Dr. Dan Dunn, senior vice president, Business Solutions, Optum, explained: “Given what you’re good at, and even what you’ve decided not to address, analytics become the key to efficient processes for mining the data and surfacing those members with whom you can really make a difference.”

Figure 5 indicates key elements in profiling members for the matching process.

What information is useful in supporting interventions?

“Population assessment will identify, segment and stratify groups of like-condition patients or members,” said Dunn. “In terms of intervention itself, you need to describe what that patient class looks like. Who are their providers? What is the dominant social context in which you will be trying to improve their care?”

Figure 4

Population Assessment: Condition Prevalence and Cost

	Percent of Per Patient Per Month Cost							
	Member % Prevalence	Per Patient Per Month Cost (PPM)	Relative Cost Ratio	Ancillary	Facility Inpatient	Facility Outpatient	Pharmacy	Professional Services
Asthma	1.7%	\$753	2.3	9%	18%	20%	16%	36%
Back and Spine	2.7%	\$1,063	3.3	5%	17%	23%	11%	44%
CAD, w/o CHF	0.7%	\$2,239	6.8	6%	41%	18%	9%	26%
Breast Cancer	0.2%	\$2,830	8.7	25%	13%	20%	6%	35%
Renal Failure – ESRD	0.1%	\$7,256	22.2	8%	39%	31%	5%	18%
Hypertension	5.4%	\$1,113	3.4	7%	27%	21%	13%	32%
CHF	0.1%	\$6,426	19.7	6%	57%	14%	4%	20%
Diabetes	2.6%	\$1,199	3.7	8%	26%	20%	18%	28%
W/ none of the above	88.9%	\$226	0.7	5%	15%	22%	15%	42%
All	100%	\$327	1.0	6%	19%	22%	14%	39%

Figure 5

Matching Individuals to Programs

Clinical Profile

Array of conditions and comorbidities; clinical results

Risk

Future cost expectation, likelihood of a future medical event (inpatient stay, high ER use, back surgery, bariatric surgery)

Care History/Utilization

Past medical and pharmacy use. Significant events and episodes.

Gaps in Care

Areas where member's care deviates from evidence basis. Areas where appropriate or targeted care is not being observed.

Activation

Indicators that an individual will participate and be compliant with the program. Behavioral and attitudinal attributes.

Social Context

Level of support. Challenges to seeking appropriate care. Environmental factors that can be addressed.

Algorithms and Cohort Definitions

Map individuals to programs and interventions

Looking deeper also informs the activation agenda – how to interact with medical consumers to promote change. Equally important, given the risk sharing more common in the provider space, how do you engage providers? How do you help them be successful and support your goals around population management?

Using supporting information from two patients, both diabetic, **Figure 6** demonstrates the power of analytics to help plans work with patient populations once they are identified.

How can a program be improved? How do you measure program performance, including cost vs. benefits and the ROI for members? The critical nature of analytics in population management is on robust display as the key to continuous quality improvement (CQI). “Analytics initiate the improvement process

long before interventions,” Dunn pointed out. “You can develop your systems in a way that your programs continually learn, beginning with reporting on efficiency in identifying members for program participation.”

Dunn noted that payer organizations working with Optum collect CQI intelligence not only by tracking success at finding the right patients, but also through sophisticated understanding related to members the identification and stratification process misses.

Overall program measurement and analysis, Dunn concluded, is a challenging task. “It’s a complex topic that predictably generates a lot of discussion and debate, particularly around assessing ROI in the form of changed behaviors, closing gaps in care and delivering interventions that drive value. Dunn added that strategic analytics comes down to the rigor of the measurement

Figure 6
Information to Support Interventions: Looking Deeper

	Patient A	Patient B
Prior Cost	\$21,700	\$25,400
Predicted Risk (Cost)	9.0 (\$34,020)	4.0 (\$15,120)
Predicted Risk (Inpatient)	29.2% in next 3 months	6.9% in next 3 months
Diabetes	Type 2 Diabetic, non-insulin dependent	Type 2 Diabetic, non-insulin dependent
Clinical Profile	Coronary Artery Disease (CAD) Hyperlipidemia; LDL-C > 100 mg/dl Most recent HbA1c is 8.9; taken 2 months ago	Hypertension Most recent HbA1c is 8.2; taken 9 months ago
Care History	Recent Hospitalization – AMI Over 15 Outpatient Visits – (Diabetes and CAD)	Over 15 Outpatient Visits – (Diabetes, Infectious Disease, Carpal Tunnel Syndrome)
Gaps in Care	Not refilling Beta-blockers for CAD Lipid levels	No eye exam for Diabetes No recent HbA1c Test
Care Team	Dr. Sugar – Diabetes Manager No Cardiac Care Manager	Dr. Pressure – Cardiac Care No Primary Care Physician
Care Alerts	Poor CAD/Diabetes Management Not refilling Beta-blockers No Cardiac Care Manager	Lack of Eye Exam Lack of recent HbA1C Test No Primary Care Physician
Activation	Moderate	Moderate

methodology and proof of a vetted approach a plan can trust. "In this space, performance measurement is an involved science, but it is science. You can objectively validate the process and the measurement accuracy."

Right Time, Right Place

A growing body of evidence points to *population health management* as a robust solution capable of cutting through and navigating complexity unique to the U.S. health care scenario – today and into the future.

Validating the population-level approach to health care management begins with evaluating the strategy against the capacity to identify, create and leverage value drivers that genuinely move the needle on utilization, costs and wellness outcomes. The caliber of value-driven objectives population management expects to achieve is familiar:

- Prevent re-admissions due to avoidable complications.
- Close evidence-based gaps in care.
- Refer to preferred provider networks (highest outcomes,

lower cost).

- Create preferred provider transparency in the community.
- Enable member self-managed choice and behavioral change.
- Improve long-term health outcomes by working "upstream" on wellness and prevention.

Taking a population perspective is a potential tipping point in ongoing health care reform.

"We know that it's not a lack of sophisticated diagnostics and interventions driving up health care costs," concluded Leenay. "It's more the fact those elements get deployed to a broader cross section of the population than they are intended to reach. That's the strategic, tactical and operational strength in population management. We know – both intuitively and objectively – that targeting appropriate members for appropriate interventions is the way to improve member health while reducing utilization and cost."

How Optum can help

Optum's integrated approach to quality, risk adjustment and utilization provides health plans with a holistic view of their member population, enabling them to provide the right intervention at the right time to drive member and provider behavior. Our goal is to deliver better, more integrated care, increase efficiency in the health system and reduce costs. We provide:

- Predictive analytics and member assessments
- Comprehensive member and provider outreach and engagement services
- Integrated network services
- Operations and management reporting
- Program effectiveness studies and continuous improvement programs

Want to learn more?

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