

How to Build a Population Health Program

By Jon Burroughs, M.D., M.B.A., FACHE, FAAPL, President and CEO,
The Burroughs Healthcare Consulting Network, Inc.

During the majority of the 20th century, individuals had two choices to address healthcare issues: the hospital and its emergency department and the physician's office. Population health enables a hospital or health system to rationalize its resources in a more cost-effective manner by focusing the majority of resources on the "unhealthy minority" and creating more consumer-friendly options for the "healthy majority."

This article describes the fundamental approach to building and operationalizing a population health program that makes wiser use of resources to be able to impact the greatest healthcare challenges with less and to focus primarily on the prevention and mitigation of risks that potentially move individuals out of the healthy majority into a higher risk pool.

21st-Century Focus

Last century, the focus for children's hospitals was the diagnosis, treatment, and management of sick and injured children. The primary reimbursement methodology was fee-for-service, and organizations did well by creating a large inventory of procedures and tests utilized in the treatment of children with

Key Board Takeaways

- A focus on the prevention of illness/injury for covered lives requires both a clinical and business transformational plan that must be synchronized over a defined time period (e.g., three to five years).
- Attempting to do population health (particularly in the ambulatory setting) while remaining in a largely fee-for-service reimbursement model will be self-destructive and impossible to sustain.
- Clinical and business analytics (as opposed to data) is obligatory and represents the cost of doing business.
- The board must be completely aligned with its medical staff, management team, payers, and potential stakeholder partners to build a successful population health model.
- The transition from a "sickness" to a "healthcare" industry is not incremental and requires bold thinking and action.

a multitude of diseases and trauma. The current century is seeing a dramatic (some would say revolutionary) shift away from reimbursement for the treatment of specific disease and trauma to compensation for "covered lives" with an emphasis on the prevention of acute illness/trauma and a significant reduction in unnecessary hospitalizations, and visits to the emergency department and the physician's office. Commercial payers now offer "at-risk" population health contracts to organizations willing to take on full risk for severity-adjusted covered lives with an emphasis on prevention and quality-adjusted life years (years lived without disability) and the

reduction of cost throughout the continuum of care.

The following represents the fundamental approach to doing just that.

1. Identify a Group of Covered Lives

Every healthcare organization has a payer mix that is made up of public, private, and self-funded payers, each of which creates a distinct pool of covered lives. For pediatric hospitals and health systems, the number of state and federally funded Medicaid beneficiaries along with self-insured families with no healthcare coverage may be significant. The first step is to

identify all potential covered lives that the hospital or health system is likely to provide care and/or coverage for.

2. Build a Population Health Infrastructure That Includes Predictive Analytics and a Health Information Exchange (HIE)

The fundamental population health infrastructure includes the following:

- Aligned physicians, practitioners, healthcare organizations (e.g., skilled nursing facilities, nursing homes, home health, etc.), payers with at-risk arrangements
- A clinically integrated network (CIN) that all participants (including payers) contribute to build and operate
- Palliative care for those with life-threatening conditions
- Disease management for those with chronic disorders that often lead to significant disability or potentially impair an individual’s activities of daily living (ADL)
- Post-acute care programs to address the ongoing care of pre- or post-hospitalized patients with significant acute and chronic conditions throughout the continuum of care

- Retail clinics to treat minor acute problems outside of the emergency department and physician office setting
- E-health solutions to support virtual visits for those with high-volume/low-risk conditions
- Clinical and business analytics that are capable of tracking clinical and business outcomes proactively and in real time as the care is provided

This requires a significant investment of time, human resources, and capital but is the necessary “cost of doing business” in order to establish a credible population health program.

3. Risk Stratify Covered Lives into Functional Subpopulations

Through the use of an enterprise data warehouse, data about all covered lives can be converted into predictive analytics that can risk stratify all covered lives into functional subpopulations. Why is this step necessary? Researchers have determined that everything we do within a clinical organization impacts only approximately 15 percent of an individual’s life expectancy and predicted quality of life. Other factors such as genetics, socioeconomic factors (e.g., education, housing, financial

net worth, zip code), healthcare decisions (e.g., misuse of drugs, failure to use a helmet, non-compliance with life-saving treatments, etc.), and environmental exposure have the greatest predictive impact of an individual’s health. Thus, claims and clinical data must be combined with these non-clinical determinants to create a more accurate picture of who will most likely require focused and prioritized services.

The typical way that covered lives are risk stratified are shown in **Table 1**.

Most healthcare organizations are surprised by the results that factor in non-clinical determinants, which go beyond claims and clinical data. For instance, one large midwestern system found that almost half of its employee healthcare coverage costs came from dependents of employees with significantly higher-than-average ear, nose, and throat costs secondary to second-hand smoking and exposure to sick children and infants at day care facilities. The second-highest cost group was employee dependents with higher-than-expected incidence of acne secondary to high-sugar diets. The insight gained from this kind of risk stratification is significant.

Table 1: Risk Stratification

Percentage of Costs	Subpopulation	Annual Healthcare Costs
Top 1%	Life-Threatening Conditions	>\$95,000
Top 5%	Serious Chronic Conditions	>\$55,000
Top 10%	Multiple Stable Chronic Conditions	>\$15,000
Bottom 50%	Healthy Majority	<\$5,000

Table 2: Clinical and Business Plan for Each Subpopulation

Percentage of Costs	Subpopulation	Clinical and Business Plan
Top 1%	Life-Threatening Conditions	<ul style="list-style-type: none"> • Palliative care team with comprehensive care coordination and home health, wireless technology with clinical and business analytics to track ongoing progress, and early interventions for changes and acute exacerbations • Comprehensive behavioral assessment and management for patient and family support • Physician and care coordinator direction
Top 5%	Serious Chronic Conditions	<ul style="list-style-type: none"> • Comprehensive team-based disease management program and home health, wireless technology with clinical and business analytics to track ongoing progress, and early interventions for changes and acute exacerbations • Comprehensive behavioral assessment and management for patient and family support • Physician and care coordinator direction
Top 10%	Multiple Stable Chronic Conditions	<ul style="list-style-type: none"> • Wireless technology with clinical and business analytics to screen for early manifestations of change or exacerbation with early interventions • Behavioral assessment and management • E-health with mobile apps for education, screening, and monitoring purposes • Care coordinator and advanced practice practitioner direction with physician oversight
Bottom 50%	Healthy Majority	<ul style="list-style-type: none"> • E-health with mobile apps, retail medicine for acute minor conditions, and a customized health plan • Advanced practice practitioner direction with physician oversight

4. Develop a Clinical and Business Strategy for Each Functional Subpopulation

Once the subpopulations are identified, the most important next step is to create a focused and cost-effective clinical and business plan to serve the needs of each subpopulation. Obviously, the needs of the unhealthy minority and the healthy majority require different approaches as shown in **Table 2**.

Individuals can migrate from one subpopulation to another over time and their care will vary accordingly. Also, each covered life should be monitored for

both clinical and cost outcomes to determine if the level of care is in fact appropriate and relevant. Every screening tool is imperfect and thus physicians, care coordinators, and advanced practice practitioners should be the final arbiters as to the appropriate level and intensity of care based upon measurable outcomes.

5. Utilize Clinical and Business Analytics to Predict, Monitor, and Track Results to Modify Your System in Real Time

Population health requires a continuous feedback loop whereby data is converted into clinical and

business analytics that inform care decisions, the results of which then continually modify the approach. This represents an “infinity loop” where the level of care is continuously monitored and modified according to measurable and actionable findings.

Conclusion

Population health represents a more rational and pragmatic approach than the one-size-fits-all methodology of the 20th century. Not everyone requires a team or a physician and most stable and healthy individuals feel comfortable monitoring

their own progress with the assistance of decision support tools and on-demand information to guide them. On the other hand, those with complex life-threatening conditions require a

more sophisticated team-based approach with the support of wireless technology and clinical/business analytics to monitor short- and long-term outcomes in real time. Organizations that

invest in this new approach will be rewarded with better cost-effective outcomes that will serve the greater good and support a more prudent use of scarce resources.

The Governance Institute thanks Jon Burroughs, M.D., M.B.A., FACHE, FAAPL, President and CEO, The Burroughs Healthcare Consulting Network, Inc., for contributing this article. He can be reached at jburroughs@burroughshealthcare.com.

