

Brushed Risk Under the Carpet

Risk Assessment in the Era of Masked Risk

July 2011



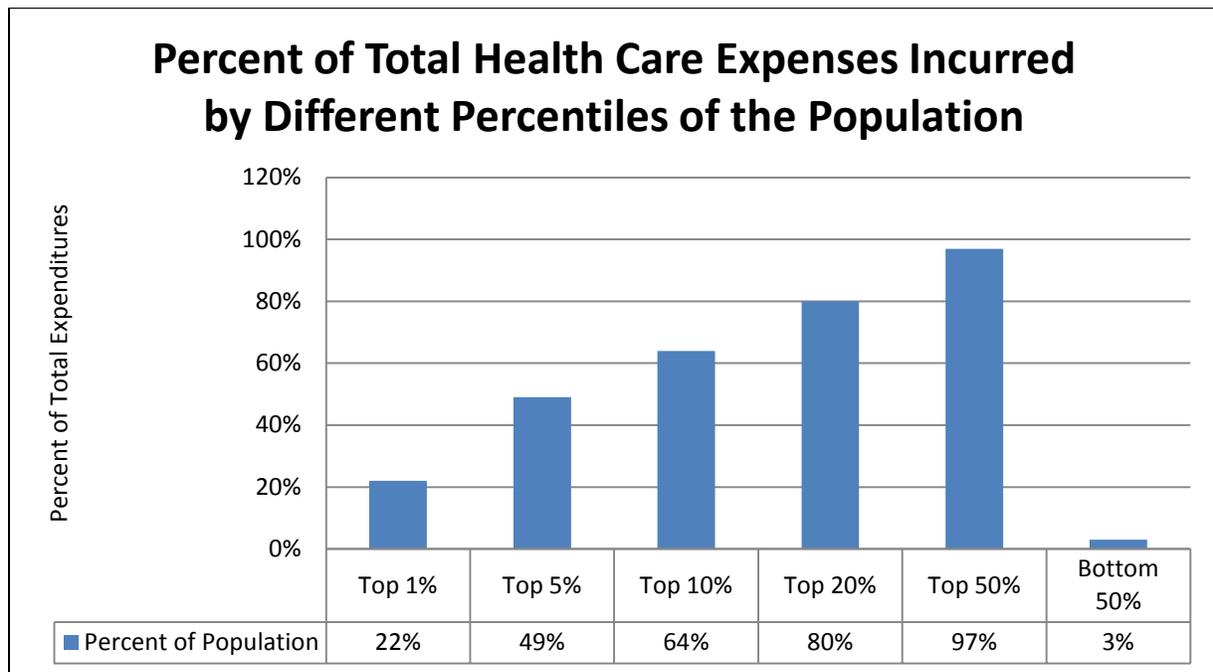
Health Enterprise Partners

Aggregating Investment for Mutual Benefit

Introduction

During the restructuring of the U.S. healthcare ecosystem, one topic that is not gaining enough attention – which will transform the delivery of care – is *risk*. The structure of the current system infamously masks risk, where consumers currently do not share much of the burden in healthcare. The fee-for-service model with third party payers and cross-subsidization, combined with the “bigger-is-better” and supersized culture, has led to a discrepancy between those who make decisions about healthcare and those who pay for it.

We are faced with a conundrum: *It’s 5% of the population that accounts for 50% of the total healthcare cost.*ⁱ It is now more important than ever to be able to identify that 5%, the riskiest, sickest, and costliest patients. This article will not delve into the causes of the conundrum, for which there are many: increase in patient complexity, suboptimal and fragmented care, new therapies, various interpretations of medical ethics, and a general lack of accountability by payors, providers, and patients. But rather, what are the solutions? What tools will emerge to manage risk?



The golden ticket for payors and providers, facing increasing financial constraints and responsibility to cover patients with varying risk, will be to identify the riskiest patients, implement early interventions to prevent the costs later, and engage those patients in their care. At Health Enterprise Partners, we believe the need for better risk assessment and predictive tools will drive innovation in three main subsets of healthcare information technology:

- Business Intelligence and Analytics -- *which will consist of better predictive tools and data integration*
- Clinical Decision Support – *which will assist health professionals with decision making tasks to determine diagnosis and treatment of patients*
- Consumer Engagement – *which will attract consumers, or patients, in their own care and wellbeing*

Business Intelligence and Analytics

As the costs of healthcare skyrocket, there will be an increasing need to analyze cost patterns and identify the “sickest of the sick” early. As Atul Gawande describes in his *New Yorker* article, “Hot Spotters,” the high-risk patients receiving inadequate care are in the “sweet spot” for preventative care, patient awareness and consumer engagement. Identifying the “sickest of the sick” comes down to data integration, improved care coordination, and predictive analytics.

The mechanism payors currently use to assess risk is outdated and depends solely on claims data. After claims for an individual or population hit a certain threshold, care management programs are implemented in an attempt to curb the increasing costs. But, as Eugene Wilkinson, Principal of The Wilkinson Group, LLC, states, “At that point, the horse is already out of the barn.” The lag time can be two to four or even five months depending on the case and plan structure.ⁱⁱ Relying solely on claims data is not enough to identify the risky or future risky patients.

New models will emerge that incorporate various data sources to give a better depiction of risk – before the cost of care even begins to rise. Such models will not only use claims data, but also clinical, environmental and educational factors – and incorporate compliance and adherence as an indicator for health risk. For example, credit-score player Fair Isaac Corp (FICO) recently announced it is bridging into healthcare working with pharmacy benefit managers (PBMs) to predict compliance. FICO is targeting both providers (physicians) and insurance companies to assist them in determining which patients need follow-up calls and reminders to make sure they take their medicine.

In addition, with an enhanced focus on minimizing hospital readmissions, the Heritage Provider Network has launched the Heritage Health Prize Competition for the best algorithm that will predict which patients are most likely to be hospitalized in the next year. The idea is that the prediction will enable proactive (instead of reactive) care to be given to patients before emergencies occur, thereby reducing the number of unnecessary hospitalizations.

As another example, one of Health Enterprise Partners’ portfolio companies, SCIOinspire, provides a suite of analytics-based healthcare cost-containment solutions for payors and self-insured employers, including care management support. SCIOinspire applies predictive modeling and analytics to improve program design and use of resources, while also helping payors assess clinical and financial ROI of care management programs. It will be data mining and analytic experts like **SCIOinspire and FICO** that can integrate various sources that will emerge as winners in healthcare as the demand for better risk assessment tools increases.

Clinical Decision Support

In ACO and ACO-like structures, providers generally assume more clinical and financial risk with respect to the quality and outcomes associated with the patients. This will lead to enhanced cost-benefit and risk-reward analysis on when and what care is provided.ⁱⁱⁱ Providers will need tools to answer clinical questions: *Should the patient receive a hip replacement*



"If his chart dips down to 15 here, he'll start emitting a hellish, non-stop squeal."

or be guided to a nursing home? With only one bed available, should ICU support be given to someone hurt sledding, or someone who has AIDs? If a nurse just begins his/her shift, which patient should be attended to first? Although these questions play into medical ethics and might make some feel uncomfortable, such guidance will become imperative to providers and welcomed by payors.

New clinical decision support tools that leverage data on evidenced-based medicine and payor reimbursements will assist in determining appropriate care plans. In essence, providers will be given decision-trees to determine best next-actions and process steps. For example, companies are emerging like Rothman Healthcare which calculates patients' single score based on 26 common observations and results available from the hospital's electronic health records (EHR) system. It then graphs the scores on an easy-to-understand picture so physicians and nurses can better allocate their time to the neediest – and riskiest – of patients.

In addition, ActiveHealth Management, a subsidiary of Aetna, is a health management and data analytics company. It provides tailored and actionable clinical analysis and decision support for payors, providers, patients and other healthcare organizations – over 14.5 million patients nationwide currently benefit from ActiveHealth's programs. Technologies that incorporate risk assessment in decision-making support will be the winners during the transformation in the delivery of care.

Consumer Engagement

With more access and exposure to health knowledge, consumers are attempting to self-diagnose and research their own health. At the same time, payors, providers and companies are currently attempting to crack-the-code in consumer engagement – and not only educate patients on making healthy decisions, but also ensure healthy actions and decisions follow, thereby lowering costs in the system overall. Risk assessment tools will foster and emerge with this focus on patient engagement, attempting to incentivize consumers to make healthy decisions. A leading advocate of “consumer driven” healthcare, Regina Herzlinger, concludes that financial incentives need to be aligned before consumers fully engage in their own risk-status and healthcare – suggesting we as a society spend more time looking through Consumer Reports to buy a new car than we do finding a surgeon to open our hearts. In an op-ed in the *Wall Street Journal*, Herzlinger argues that consumer choice drives the health system in Switzerland because the Swiss pay for more of their care out of their own pockets. Thus, as payment reform slowly takes hold in the U.S. system, and deductibles, co-pays and premiums rise, consumers will become more engaged in their care – and demand more transparency.

New technologies providing such transparency will not only incorporate healthcare cost and quality information, but also personalized risk-assessment data. For example, Verisk Health, a subsidiary of Verisk Analytics, uses healthcare data to create risk-scores and strategies for both individuals and populations. Its desire to provide a consumer-facing aspect of its products was demonstrated last year in its partnership with Carena, Inc, which provides consumers with 24/7 medical care and education through its network of physicians and nurses.



In addition, the self-quantification movement^{iv} in our society will lead to continued consumer demand for real-time information on our bodies – whether in the form of apps, knowledge networks, or social media. Health risk-scores, similar to FICO scores, will emerge as a way to communicate and engage consumers in their health status. Whether risk assessment companies will branch into consumer products, or consumer products (Garmin, Nike, and Apple, as examples) will branch into risk assessment will be the million dollar question.

Conclusion

The need for better risk assessment and predictive tools will drive innovation in business intelligence and analytics, clinical decision support, and consumer engagement – three of the sectors we focus on for investments at Health Enterprise Partners. Such tools will allow payors and providers to identify the riskiest patients, implement early interventions to minimize expensive treatments later, and engage those patients in their care.

Charles Tremper stated, “The first step in the risk management process is to acknowledge the reality of risk. Denial is a common tactic that substitutes deliberate ignorance for thoughtful planning.” The disruptive technologies that will emerge during this time of health technology reform will be the ones that do not brush risk under the carpet, but rather embrace and incorporate it into the standard of care.

ⁱ Conwell LJ, Cohen JW. Characteristics of people with high medical expenses in the U.S. civilian noninstitutionalized population, 2002. *Statistical Brief #73*. March 2005. Agency for Healthcare Research and Quality, Rockville, MD. Web site: http://www.meps.ahrq.gov/mepsweb/data_files/publications/st73/stat73.pdf.

ⁱⁱ David Wilson, Windsor Strategy Partners, 13 July 2011.

ⁱⁱⁱ David Gruen, 9 July 2011.

^{iv} “The growing phenomenon of self-quantification – people who observe certain aspects of their lives in great detail, analyze this data, and conduct self-experiments in the interests of improving their lives – is something health care professionals (HCPs) should be aware of” (Mehta, Rajiv. The Self-Quantification Movement. *SelfCare* 2011; 2(3):87-92).