As health systems move towards value-based models of care and focus on reducing healthcare spending, there is growing interest in improving the care of high-need, high-cost patients, sometimes referred to as “super utilizers” or “frequent fliers.” These patients account for a high proportion of overall health care utilization and spending, receive more fragmented care, require more intense coordination, and often have worse health quality and outcomes. Health systems across the country are scrambling to intervene on the utilization patterns of these patients. The impact of care models targeting these groups has been mixed, but heterogeneity of patient populations and intervention strategies have made it challenging to draw firm conclusions. Nevertheless, there are various clinical models, including many academic medical centers, which specialize in the care of these patients, building innovative primary or transitional care programs for them.

In general, incentives in our largely fee-for-service health systems are not well-aligned with the care needs of these patients. High-risk patients require longer outpatient visits due to their complexity, intensive within-visit coordination, and transportation or navigation services that are not easily obtainable. Consequently, high-touch, and sometimes home-based services that are needed to fully address patients’ barriers to care, are not properly compensated under current billing codes, thereby reducing sustainability. Thus, until incentives shift across healthcare settings, it will be difficult for such models to move beyond pilots or grant-funded projects towards integrated components of our health system. As groups move towards shared savings, accountable care organizations, and value-based care, the incentives to provide such care are growing rapidly.

One challenge to implement new care models successfully is the need to define and identify patients most in need of high-intensity services. Early efforts focused on patients with high prior spending, but a major limitation of this strategy is related to high variability of patient expenditures over time—even those in the top 5% of spending in one year do not tend to incur that same level of spending in the following year. A few years ago, “hot spotting”—using claims data to guide clinical interventions—was an acceptable method for predicting future risk and cost, but further analysis of large claims datasets has revealed that most patients have short periods of high need and high cost, then return to their baseline levels of spending. Although variable across different populations, in general only about 10-30% of patients will remain high-utilizers for more than one year; rates may be lower in Medicare or commercial populations. These patterns also raise methodological issues when assessing the effectiveness of new models, as decreases in health expenditures of patients enrolled in high-risk care models may be related to regression to the mean and not hold up in randomized trials. In our conversations with emerging programs across the country, this is a major factor in their development: claiming regression to the mean as a success leads to initial favorable outcomes followed by an almost inevitable plateau in financial performance.

Similarly, identifying the set of patients about to enter this high-risk, high-cost pool using claims or automated data has not been particularly fruitful. While many commercial algorithms are available and plans have proprietary risk scores, studies have found that these models have a positive predictive value of only 10-15%. The relatively poor performance of claims-based algorithms is probably related to the lack of information about the most important drivers of cost, such as social determinants of health, health behaviors, social support, trust in the health care system, and patient activation. Growing care management systems should focus on these underlying issues and add them to risk stratification algorithms, supplementing the diagnostically-focused claims-based models currently available.

For those who have invested in care models for high-risk, high-cost patients, programs adopt widely variable staffing models that limit scope and generalizability. Early programs and some health plans often use telephone-based support models that have not shown consistent impact on outcomes. Even more expensive and resource-heavy programs target broad groups of high-utilizers, most of whom have

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Transforming Care for High Cost, High Needs Patients to Improve Experience, Quality, and Spending

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multiple comorbidities. The complexity required for managing multiple diseases and polypharmacy is poorly met by the disease-specific care protocols usually included in traditional care models. Furthermore, patients in this group are clinically heterogeneous (e.g., patients in the last year of life, patients on disability, patients with active substance abuse) requiring very different clinical skills and care coordination modalities, depending on the factors that lead to their high service utilization. Most programs are built to serve one type of patient population and may not be flexible enough to respond to the various needs of high-risk patients. Learning more about this population will be key to understanding different clinical cost drivers and to creating programs and linkages that can respond to them, even if these are varied or require different approaches.

Our experience overseeing clinical programs for high-risk patients at urban academic medical centers has shown us that one of the most valuable metrics in working with high-cost, high-need patients is patient satisfaction. This becomes obvious during the transition for such patients when their situation has stabilized and they are returning to traditional primary care settings. Patients are quite reluctant to leave their interdisciplinary team, easy access to team members, and abundant available resources. We have adopted more patient engagement efforts so that our initial enrollment of newly enrolled patients can pivot more toward empowerment efforts, increased activation, health literacy, and motivation. Nationally, there is tremendous interest in rapidly identifying and managing the care of high-cost, high-need patients. As we gain experience, more payers pilot these models, and more research is conducted, we can share best practices to optimize patient selection and intervention models to improve the health and quality of care for the most vulnerable populations. Despite the great deal of heterogeneity discussed above, some best practices are emerging, especially for high-risk Medicare and Medicaid populations and summarized as follows:

1. Superutilizer status is dynamic, and patients may move in and out of this category over time.
2. Supporting and strengthening primary care structures is key to engaging and retaining patients.
3. Integrating behavioral health care into high-risk programs should be a priority.
4. Face-to-face interventions are more successful than telephonic ones.
5. Home-based assessments can improve engagement and understanding of patient barriers.
6. Training health professionals further in prognosis and goal setting and in palliative care communication is very beneficial.
7. Programs that are adapted to the needs of the local population are more successful. These needs should drive team composition (e.g., pharmacist, health coaches, nurse care managers, social workers, etc.).
8. Identifying social needs and incorporating social services is important to address barriers for high-risk patients, especially when there is cross-agency collaboration.
9. Close relationships with certain subspecialty providers may be beneficial, as their expertise may be crucial for subgroups (e.g., congestive heart failure, chronic obstructive pulmonary disease, or palliative care).
10. Staff dedication, mission and flexibility are key to success.
11. Access to real-time data sharing across health systems allows for more effective patient outreach and engagement into high risk models.

Building scalable programs that are appropriately staffed and well incentivized to provide care for medically and psychosocially complex vulnerable patients will improve our health system and improve patients’ outcomes. As incentives shift and primary care develops in this direction, we need to learn from one another and commit to the study of this field. We need to work together to collect best practices and rapidly implement them into our population health systems to achieve our goals of patient-centered care, improved quality, and lower costs.

References