THE CHALLENGE

Rapid demographic change—particularly aging populations and a growing burden of chronic disease and multimorbidity—are straining even the most sophisticated primary health systems. Many frontline health systems are ill-equipped to respond to these challenges, constrained by low health worker availability and fragmented service provision. Innovative models for staffing and organizing frontline health services are needed that foster interdisciplinary collaboration, coordination of care, and person-centred approaches to help people remain healthy and active in their communities as they age.

TRADITIONAL CARE MODELS ARE STRUGGLING TO RESPOND TO DEMOGRAPHIC AND EPIDEMIOLOGICAL TRANSITIONS

Population aging is a key driver of the growing burden of chronic disease and disability worldwide. In high-income countries, almost 50% of the total disease burden is concentrated among individuals aged 60 years or older, even though they represent just 20% of the population. At the same time, most poor health is attributable to chronic noncommunicable diseases (NCDs) including cardiovascular disease, cancer, chronic respiratory disease, and musculoskeletal disorders. The overmedicalization of advanced age (i.e., the growing tendency to treat certain ailments commonly associated with aging as states of disease to be treated) and bottlenecks in accessing aged care facilities are keeping many elderly people in the hospital and out of their homes and communities. Meanwhile, rising health expenditure in many countries is outpacing economic growth, increasing pressure to rationalize already constrained health budgets.
Many NCDs are potentially preventable or can be effectively managed through behavior change interventions, which are best supported through consistent health promotion and contact within the communities. Primary-care led interventions, such as supporting tobacco cessation and multidrug treatment for cardiovascular disease, can offer a cost-effective strategy to help curb the rise in NCDs. Responding to the burden of NCDs thus demands a shift in primary health care towards health promotion, disease prevention, and risk stratification, helping prevent development of chronic conditions, acute episodes, and avoidable hospitalizations. Further, many individuals are eager to age gracefully and remain active in their communities, avoiding lengthy hospital stays or overly frequent doctors’ appointments. Traditional primary care models, however, center on facility-based, episodic care; they are poorly suited to respond to these pressures and effectively deliver care and support within communities, particularly given health workforce constraints (see Brief 15c). There is a growing demand for an expanded and more diverse primary health workforce to support comprehensive care using multidisciplinary care teams and alleviating burdens on physicians and nurses.

**Fragmented Primary Care Systems are Ill-Equipped to Manage Increasingly Complex Health Needs**

Aging patients increasingly have multiple and complex health needs, leading to new challenges in coordinating care across a range of health care providers and services. Evidence suggests that in high-income settings, up to 65% of adults aged between 60 and 80 years may be multimorbid—with two or more chronic health conditions. Traditional primary care models have been largely physician-centered and single-disease focussed, with limited integration between medical and social services. However, the rising burden of multimorbidity and disability demands team-based models of primary health care that foster multidisciplinary collaboration between frontline workers and integration of services to ensure continuity of care. Primary health care providers are also increasingly serving as providers of palliative care, requiring extensive integration among services including mid-level cadres, pharmacists, and allied health.

**THE PATH FORWARD: BUILDING EFFECTIVE CARE TEAMS**

Multidisciplinary Primary Care Teams: Providing Continuity from the Facility to the Community

Responding to demographic change and the ever-growing complexity of the health care system, mature health systems are increasingly exploring team-based primary health models as strategies to improve quality, accessibility, and coordination of care. Following small-scale evidence that these approaches may improve continuity of care and patient satisfaction, several large-scale team-based staffing models have been implemented across a range of settings. Among the most successful models is the U.S.-based Patient-Centered Medical Home (PCMH), a multidisciplinary team-based model emphasizing patient-centered, coordinated, and comprehensive care. A systematic review found that PCMH models can improve patient experience and care processes, with unclear impact on clinical outcomes. The implementation of primary care teams within several centers in Canada, based on the
PCMH, has also been linked, in several small studies, to less frequent visits to emergency departments, and reductions in avoidable hospitalization. Elsewhere, trials are exploring smaller team-based units—“teamlets”—consisting of a clinician and medical assistant working together to deliver care to a defined patient group. The “teamlets” are often embedded within a larger primary care team, where several “teamlets” are supported by a pharmacist, nurse, social worker and/or other health practitioners. Several small-studies report positive patient experiences and improved staff communication, though impact on health outcomes remains unclear.

**Working Together More Effectively**

Even within team-based care models, ensuring coherent and coordinated patient care requires proactive effort. New models seek to embed coordination of care in providers’ daily routines. At the Cambridge Health Alliance, for example, primary care teams meet for daily 10-minute team “huddles” to support coordination of care. Likewise, UCLA Health found that introduction of a comprehensive care coordinator (CCC) led to a 20% reduction in emergency room visits by patients in participating practices.

**Principles for Frontline Staffing Models:**

1. Person centred
2. Multidisciplinary teams: bringing together the right staff and skill mix to optimize
3. Integrated: linking health providers and services
4. Community-centered
5. Empanelment: the same team treating the same patients to achieve continuity of care
6. Emphasizing health promotion and disease prevention
7. Using task-sharing and team-based delivery for cost-effective care

**Constructing the Frontline Team**

Despite growing literature supporting multidisciplinary primary care models, there is limited high quality evidence for optimal staffing models and skill mix. As community-based management of chronic diseases becomes more common, clearer evidence is needed to understand the cost-effectiveness of including pharmacists, allied health, and other practitioners in primary health care teams. Task-shifting strategies to alleviate burdens on primary care physicians (e.g., using mid-level cadres such as physician assistants) have also been widely used in the U.S. and more recently introduced in the U.K., with as yet unclear effects on efficiency and cost-effectiveness. Physician assistants tend to see a different caseload than clinicians, focusing on acute presentations and younger patients; in practice, they also require supervision, potentially reducing their efficiency. Greater understanding of the role for mid-level cadres in primary health care teams is needed to ensure quality and cost-effectiveness of care. At the other extreme, some systems have explored the integration of specialists as members of community-based health teams. While previous initiatives to move specialists out of hospitals and into communities have not been shown to be cost-effective, specialists may be able to support multidisciplinary teams by attending team meetings or educating community-based teams.
SPOTLIGHT

Patient-Centered Medical Homes (PCMH)

► Patient-Centred Medical Homes (PCMH) are a team-based model of primary health care developed in the United States; they are currently being scaled up at several centers in the U.S. and in other countries. Drawing upon the successes of a comprehensive model for treatment of chronic disease in children, the PCMH applies a multidisciplinary team approach to strengthen primary care for patients’ acute, preventive, and chronic care needs across their lifetimes.PMCH care teams include a provider (physician, physician assistant or nurse practitioner) and medical assistant, and may also include nursing staff, social workers, pharmacists or health educators; the entire team is conceptually centred around meeting an individual patient’s needs. Mid-level cadres, including physician assistants, are often used as primary providers.

Together, PCMH teams deliver care based on five key pillars:

8. **Comprehensive Care.** Meet patients’ health and wellness needs across prevention, acute episodes, and chronic care.

9. **Accessible Services.** Offer shorter waiting times, longer in-person hours, and use of technology to support after-hours access.

10. **Patient-Centered Care.** Respect and empower patients and their families as individuals, treating them as partners in their own care.

11. **Coordinated Care.** Coordinate care across specialty services, home-based care, hospitals, and community or support services.

12. **Quality and Safety.** Foster a culture of quality and safety, including use of evidence-based medicine, performance measurement, and engagement with patient feedback.

► Systematic reviews of the PCMH model have indicated small improvements in patient outcomes, coordination of care and delivery of preventative health care. One study suggested that the model reduced emergency room visits by 19 percent, but had no effect on hospital admissions. Several recent studies have suggested that PCMH models can reduce health care costs, but additional high quality evidence is needed to confirm their cost-effectiveness.

Retail Clinics

► Retail clinics are walk-in primary health care clinics, often embedded in retail stores or pharmacies and typically staffed by nurse-practitioners or physician assistants. Driven by patient demand and perceptions of economic opportunity among for-profit retailers, this model of care is scaling rapidly; as of in 2018, there were more than 2,400 clinics across the United States, delivering 35 million cumulative visits. Retail clinics initially offered care only for low-acuity conditions such as influenza and urinary tract infections, but are increasingly expanding to cover chronic disease care.

In theory, retail clinics can improve patient access to frontline care (see Brief 6c) because they stay open longer than traditional primary care facilities; do not require...
an appointment made in advance; enable nurse-practitioner and physician-led care in areas with a shortage of general practitioners; offer price transparency (and more affordable prices) for patients without comprehensive insurance coverage; and can provided integrated services with on-site pharmacies, increasing convenience to patients and revenue for the host retailers.\textsuperscript{xxix} Medical doctors, however, have expressed skepticism and physicians’ groups have issued formal policy statements opposing their use for pediatric care,\textsuperscript{xxx} higher-acuity medical issues, and chronic disease care,\textsuperscript{xxxi} citing concerns about coordination, fragmentation of care, and potential quality deficits. \textit{Increasingly, research evidence suggests a middle ground: retail clinics appear able to deliver less costly and equally effective care for simple conditions,\textsuperscript{xxii} but additional evidence and formal evaluation is needed to address outstanding concerns, particularly for care of chronic conditions which remains largely unstudied.\textsuperscript{xxiii}}

ENDNOTES

\begin{itemize}
\item[iii] Prince et al., “The Burden of Disease in Older People and Implications for Health Policy and Practice.”
\end{itemize}
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