Learning from Kaiser Permanente:
Integrated systems and healthcare improvement in Canada

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Executive Summary: Lessons from Kaiser Permanente

Priority areas for system transformation suggested by a review of care integration at Kaiser Permanente:

1. Develop a system of clinical governance where medical leadership has a major role in both the delivery and planning of population care.

   Example: Identify where care coordination and health resource decision making can be improved through greater physician leadership, and move toward performance-based reimbursement schedules that foster an accountable, team-based health workforce.

2. Formulate active care management strategies between all service areas and remove structural barriers where appropriate.

   Example: Create a care management system that actively supports the patient, with providers coordinating to keep the patient out of hospital. Instances where a patient faces an administrative delay before moving to the appropriate level of care should be seen as severe failures.

3. Align incentives in order to reward health providers for supporting a coordinated care environment while achieving care and service standards.

   Example: Move from rewarding the volume of services provided to the appropriateness and quality of the care delivered.

4. Ensure health information platforms are standardized across care environments, are secured centrally, and have accessible elements for patients.

   Example: Ensure electronic health records are located in a central repository (i.e., a cloud-based network), rather than isolated within several different locations. Fragmentation reduces the overall security of personal health records, and restricts beneficial activities such as predictive analytics, personalisation and support for patient self-management.

Integrated Care Principles

Physician Accountability:

Physicians have a central role within an integrated health system, facilitating overall population care, developing new services and managing health resources.

A Collaborative Workforce:

A multidisciplinary organizational culture leads to a shared commitment to improving healthcare performance.

Cost Effectiveness:

Alignment is required between clinical and financial incentives.

E-Health Investment:

Meaningful information technology and innovation investments are necessary components of an integrated system.

The Patient's Viewpoint:

Successful integration requires an understanding of the patient's perspective, from the promotion of preventative care to the personalization of healthcare goods and services.

Introduction

Quote

"Underpinning the Kaiser Permanente model is not just an integrated model of care…but a critical cultural change – the physicians lead in population care."[1]

This report draws on a growing body of literature on integrated care, and compares two distinctive approaches to health system provision in North America: a non-profit insurance and managed care system (i.e., Kaiser Permanente), and two provincial taxfinanced, single insurer, systems in Canada (i.e., Ontario's Ministry of Health and Long-Term Care and Saskatchewan's Ministry of Health). In offering such a comparison, this report does not suggest any one system has a monopoly on good ideas. The reality is that comparing Kaiser Permanente to other healthcare systems is complex, and subject to bias and error, as several differences are readily apparent between the populations served and the funding made available.[2,3,4] Despite these differences, Kaiser Permanente has invested heavily in an integrated clinical system, and can provide many lessons to Canadian jurisdictions looking to strengthen healthcare leadership, financing, information and innovation.

What does it take to be an integrated system? The Kaiser Experience

- The clinical and administrative environment is easy to navigate, consistent and reliable
  - The patient is supported as they transition between clinics, hospitals, laboratories, and pharmacies
- Primary, secondary and specialty structures are connected (physically or virtually)
  - Primary care physicians are empowered to be proactive and take overall responsibility for care
  - A large number of health services are made available to the patient (e.g., routine health checkups, disease-management programs, same-day outpatient surgery)
  - Patients can receive laboratory and imaging tests, as well as get prescriptions filled at a convenient location
  - Video consultations provided when necessary (e.g., in remote environments, or when confined to bed)
- A single, patient accessible, health care record
  - Online services available for patients to view lab test results and for secure patient to physician email communication

It is generally accepted that one's interaction with the healthcare environment should be as uniform and straightforward as possible. Providing a single point of entry for primary and secondary care, as well as diagnostic and wellness services, Kaiser Permanente has made integration a central component of its business model, which has received significant attention internationally.[5,6,7] For the purposes of this report, the Kaiser Permanente approach to integrated patient care will be analyzed as having four component parts: integrating care environments and leadership (Section One), integrating funding with the provision of service (Section Two), integrating information for patient management (section Three), and integrating through innovation (Section Four).

While the healthcare systems under review may be historically and administratively distinct, they do provide

a similar range of health goods and services to an insured population. Kaiser Permanente, a US-based private insurance network, positions itself to its members as an integrated care network, with service accountability and physician ownership as organizing principles. It has a uniquely egalitarian approach to health care provision, especially when compared to its US health insurance peers.[8] Alternatively, the health ministries in Ontario and Saskatchewan are positioned as health system stewards, engaging with a diverse provider landscape to initiate an assortment of policy reforms (e.g., from service restructuring, to waiting time reductions, and initiatives to improve the quality of healthcare delivered).

Short History - Kaiser Permanente

- Kaiser Permanente's origin dates back to 1933, when Californian physician Dr. Sidney Garfield moved medical care from a fee-for-service basis to a prepayment by a local group of construction workers. Dr. Garfield found that without significant financial barriers, workers would see him before injuries became serious, allowing enough time for preventive treatments and education. Therefore, the incentive changed from waiting for illness to arrive, to actively reducing the healthcare burden. [9]
- In the late 1930s, Henry and Edgar Kaiser employed Dr. Garfield to create a similar plan for their workers in Washington State, which proved popular and expanded dramatically before becoming an open plan in 1945. [10]
- The Kaiser Permanente of today is a virtually integrated system with providers remaining as distinct organizations with cooperation enabled through contracting. Kaiser Permanente consists of a consortium of three interdependent groups: Kaiser Foundation Health Plan, Kaiser Foundation Hospitals, and the Permanente Medical Groups. [11]

It is apparent after reviewing the organizational platforms of Kaiser Permanente and the health ministries in Ontario and Saskatchewan that they are all strongly committed to improving care quality and outcomes given limited health resources. The leadership within all three systems acknowledge that increasing health care costs will require action, and the themes of strict healthcare rationalization and system re-engineering are common to all.[12,13,14]

There is additional consistency in how these systems perceive the challenges ahead, as they all acknowledge care can be moved closer to home, and have made greater investments in information platforms and healthcare resources available in the community. However, Kaiser Permanente and the health ministries have taken different paths in pursuit of this therapeutic future, with distinctive organizational cultures and value systems. For example, as a virtually integrated non-profit insurance plan, Kaiser Permanente has found its comparative advantage through investments in care integration, coordination, information, and patient management. In other words, an integrated clinical governance system that is both cost effective and encourages the recruitment of employees that believe in multidisciplinary methods for keeping patients healthy. While the Canadian health ministries have worked to evolve their individual systems and structures through a series of legislated reforms, they have moved only tentatively towards an integrated future.

It is important to highlight that the systems under review have approached care delivery differently, and have several coverage and service-mix differences. The two Canadian provinces have nearly identical insurance and drug plans with relatively minor coverage differences between them (e.g., public health strategies, drug

formulary and catastrophic coverage decisions, etc.).[15] When compared to the Canadian ministries, Kaiser Permanente offers a similar range of acute (e.g., ambulatory, emergency, etc.) and subacute services (e.g., skilled nursing, speech and physical therapy, rehabilitation, hospice care, home care). However, Kaiser Permanente is more likely to require a copayment for these services (particularly for acute care), and typically caps these additional expenses with an annual out-of-pocket maximum.[16] While Kaiser Permanente provides additional dental and optometry benefits, Ontario and Saskatchewan offer more services for mental health, psychiatric care, long-term care and non-medical residential care.[17] Kaiser Permanente does provide skilled-nursing care for a period of up to 100 days, however, long-term care is not included (in the US, supplemental long-term care insurance, or governmental agencies may provide these benefits). Assistive device coverage (e.g., hearing aids, medical equipment) is comparable between the three systems.

While inpatient drugs are covered in all three systems, general pharmaceutical coverage in the Canadian provinces is generally considered to be supplementary before the age of 65, while Kaiser members have comprehensive prescription coverage (with a copayment). In general, supplementary insurance coverage would be more likely for Ontario and Saskatchewan residents (about 66% of the Canadian population have private health insurance), as Kaiser Permanente members would rarely hold duplicate insurance.[18] Kaiser Permanente faces several special costs related to administration, sales, marketing, research, and insurance (e.g., malpractice), while the Canadian provinces have additional outlays that relate to public health, education, and research funding (e.g., grants, scientific services). In addition to service-mix differences, the covered population is likely to be distinct between the three systems. Comparison studies between England and Kaiser Permanente have shown that the age distribution may be skewed toward older clients in national health systems, with the NHS serving nearly double the amount of patients above the age of 75.[19]

The three health systems by the numbers [20,21,22,23,24,25]

	Kaiser Permanente	Ontario Ministry of Health and Long-Term Care	Saskatchewan Ministry of Health
Operating Revenue	~$53 billion (USD)	~$51 billion (CAD)	~$5 billion (CAD)
Population Served	~9.5 million (over 6 states, 7.3 million in California)	~13 million	~1.1 million
Hospitals	~38 Kaiser Foundation hospitals sites Kaiser operates many ambulatory facilities and hospitals, but also provides coverage payments to other hospitals.	~157 public, private and specialty psychiatric hospitals	~65 public hospitals

Physicians Employed	~17,400 • Many physicians (primary care and specialist) are shareholders or partners of medical groups. • Physicians are paid a salary, which includes 5-10% in performance-based incentives.	~27,000 • Physicians are paid on a fee-for-service basis, or through a blended payment plan (capitation, salary, fee-for-service, etc.). • Some additional incentive fees are available for chronic disease management.	~2,000 • The majority of physicians are paid on a fee-for-service basis.
Service-mix Differences (*may require copayment)	Acute • Emergency*, ambulatory (surgery)* • Laboratory services Subacute* • Rehabilitation • Hospice care • Home care • Mental health services • Speech and physical therapy • Skilled nursing facilities Primary* and preventative care Other* • Outpatient drug coveage • Assistive devices • Dental and optometry services	Acute • Emergency, ambulatory (surgery) • Laboratory services Subacute* • Rehabilitation • Hospice care • Home care • Mental health services • Speech and physical therapy • Psychiatric care • Long-term care • Complex Continuing Care Primary and preventative care Other* • Outpatient drug coverage (65+) • Assistive devices • Public health services • Non-medical residential care	Acute • Emergency, ambulatory (surgery) • Laboratory services Subacute* • Rehabilitation • Hospice care • Home care • Mental health services • Speech and physical therapy • Psychiatric care • Long-term care Primary and preventative care Other* • Outpatient drug coverage (65+) • Assistive devices • Public health services • Non-medical residential care
Waiting Times	Generally, a minimal amount of waiting is required for access to health tests and procedures Some long wait times found for mental health services	Potential for significant waiting times before seeing a specialist or receiving elective surgery	Potential for significant waiting times before seeing a specialist or receiving elective surgery

Population covered	Employer enlisted or individual enrolment (range of benefit and copayment options). Medicare beneficiaries can choose the Kaiser Permanente system.	All residents. Tax based, universal for medically necessary services.	All residents. Tax based, universal for medically necessary services.
Health Information Infrastructure	Kaiser Permanente Health Connect (Information is available across all providers and settings).	eHealth Ontario (Limited integration between platforms, about two thirds of patients have an EHR).	eHealth Saskatchewan (Supports three EHR platforms across the province).

Despite several intrinsic and historical differences, this report investigates Ontario and Saskatchewan's current integrated care platform, providing a head-to-head comparison with Kaiser Permanente in order to understand its particular strengths and weaknesses in the areas of integrated leadership (Section One), financing (Section Two), information (Section Three) and innovation (Section Four).

It should be noted that while the Kaiser Permanente's approach to care integration has been widely heralded, it has yet to be extensively copied. While a number of national health systems have looked for examples within the Kaiser Permanente system (including the British NHS and Danish health system), they have made only limited inroads into replicating the extensive integrated healthcare model.[26] In the US, few insurers have taken integration as seriously as Kaiser Permanente, while the insurer itself has made only minimal progress with its business model beyond a few states.[27] However, it is the view of this report that while not all lessons will be applicable, greater care integration is intuitively the correct path forward from the patient's perspective.[28]

Section One – Integration, patient care and leadership

Quote

"The patient's perspective is at the heart of any discussion about integrated care. Achieving integrated care requires those involved with planning and providing services to impose the patient's perspective as the organising principle of service delivery."[29]

A fully integrated delivery system

From the viewpoint of its membership, Kaiser Permanente is the definition of an integrated delivery system, with one organization offering access to several historically separate care settings (e.g., hospital, multi-specialty clinic, home care, long-term care, pharmacy, etc.). In reality, three separate entities are responsible for administration and care delivery, namely the Kaiser Foundation Health Plan, Kaiser Foundation Hospitals, and Permanente Medical Groups. Under this arrangement, the health plans and hospitals receive federal not-for-profit tax status, while the medical groups operate on a for-profit or professional corporation basis.[30]

At Kaiser Permanente, a typical episode in primary care is handled solely in an outpatient environment, with the medical centres providing any necessary paediatric, internal, geriatric, emergency, or specialist support, as well as a range of health educator, nurse, nurse practitioner, and pharmacy options. The laboratory systems are in-house, and many advanced diagnostic services are centrally provided. If it is necessary for a patient to be admitted to hospital (an option of last resort given Kaiser Permanente's emphasis on shared care and early intervention), any follow-up care can be provided at an independently contracted skilled nursing facility. This multifaceted care arrangement is further enabled by two separate systems that are explored in Section Three of this report, integrated patient pathways and electronic health records (EHRs).

Physician leadership and cultural change

Quote

"We learned this from Kaiser, if you don't have the physicians on board with you, you can't succeed."[31]

An integrated care arrangement requires that historical barriers between primary,secondary, and tertiary care be broken and reshaped. Furthermore, an organizational culture is needed to support and reinforce this perspective, as the health workers recruited to such a system will need to think in terms of a whole systems approach and be willing to contribute to a team based medical environment.[32] In order to embrace an integrated vision, Kaiser Permanente has incorporated a physician leadership and governance model that makes the budget and care performance a shared responsibility.

At Kaiser Permanente, the physicians design and run the services they provide, which has led to collaborative solutions to minimize costs and hiring practices that support extensive physician management. Generalists and specialists are aware that hospital bed days are the most expensive component of a health episode, and have built a system around treating patients closer to home, with the expectation that this will drive costs down.[33] It is a system that avoids a 'them and us' culture, and seeks value above all else, often finding solutions outside the hospital through contracts with non-physician specialists.

Ontario Comparison

Like Kaiser Permanente, the Ministry of Health and Long-Term Care is in a position to capitalize on its dual role as insurer and provider with responsibility for the patient both inside and outside the hospital. At its core, an overall system view should ensure that there is no incentive to build capacity in one area at the expense of another. However, Ontario has yet to plan towards a fully integrated care model, and will need to reshape its relationship with physicians and other providers to enable a coordinated system. Until the governance and financial management of acute and community services become less fragmented (e.g., hospitals continue their relationship with patients in Community Care Access Centres and vice versa), poor transitions between care environments are likely to result.

While the Ministry of Health and Long-Term Care has been communicating the importance of greater care integration, its efforts are likely made more challenging by the number of administratively separate organizations within the province's governance and accountability milieu. The management and delivery of healthcare in Ontario has been divided between the Ministry and several individual agencies (e.g., Local Health Integration Networks, Community Care Access Centres, Cancer Care Ontario, etc.), leading to a perceived overlap in organizational directives and a significant administrative burden. For the Kaiser Permanente client, the health platform is clear and consistent, despite the fact that there is administrative separation between the health plans, hospitals, and medical groups.

Saskatchewan Comparison

While less administrative fragmentation is apparent in Saskatchewan than in Ontario (e.g., health regions, eHealth Saskatchewan, the Saskatchewan Cancer Agency, etc.), the Ministry of Health has yet to seriously tackle the lack of physician coordination between sectors. It is apparent that Saskatchewan, like many provinces, encourages provider independence, and that specialists tend to stay within distinct clinical environments. If physicians are encouraged to work in silos, there is little incentive to coordinate with other care providers to help patients avoid the need for additional services. As physicians lack responsibility for the overall performance of the system, this can lead to systemic inefficiency and reduced care quality (e.g., unneeded emergency admissions, longer waits before accessing services). The significant investments that Kaiser Permanente has made in developing clinical leadership, suggests physicians will work towards shared system goals when they are made equal partners within the system.

Moving towards an integrated future

If the health ministries of Ontario and Saskatchewan were to pursue Kaiser-like integrated care it would require a concerted effort to simplify the healthcare delivery platform for the individual. For the patient, this would reduce confusion through the provision of a single brand and gateway to health delivery. This could be furthered

through the integration of some administrative components (e.g., local primary health teams with hospital, rehab, and home care providers), and overcoming any legislative and jurisdictional barriers that underlie the current diverse range of health system stakeholders. Ontario and Saskatchewan have successfully navigated difficult transitions in the past, including significant hospital closures and system restructuring, which suggests they can overcome the challenges required to integrate the care provided to their residents.[34]

As an integrated system relies on primary, secondary, and tertiary care providers taking overall responsibility for the management of the clinical environment, significant organizational hurdles could be surmounted with the cooperation of physician groups. If physicians could be viewed as shareholders within the health system, rather than individuals receiving payments for their services, the province would take a considerable first step toward a truly integrated healthcare environment. It is likely that once inefficiency and waste are concerns for all of Ontario and Saskatchewan's doctors, the system would more readily make investments in prevention and community care. Furthering the incentive environment will, therefore, be a key requirement for the proactive participation of physicians in healthcare decision-making.

Section Two – Financing that supports integrated care

The economics of an integrated future

With considerable size and scope, Kaiser Permanente and Canada's provincial health authorities face similar challenges ensuring the long-term sustainability of their respective healthcare systems. In Ontario, the Ministry of Health and Long-Term Care aims to create better value from existing health expenditures, limiting spending growth to 3% while reforming hospital funding.[35] Similarly, Kaiser Permanente has prepared for a significant expansion in insurance coverage under the Affordable Care Act (ACA) and strengthened its platform as a model Accountable Care Organization (ACO). Notably, while undergoing the ACA shift Kaiser Permanente has operated at a profit netting $2.7 billion in 2013 on $53.1 billion in operating revenue, with both amounts greater than in the previous year.[36]

As of 2012, over two hundred ACOs had been established through complex contracts involving the Centers for Medicare and Medicaid Services (CMS) and a combination of private payers. The ACO concept was developed in order to combat rising costs attributed to the mainly fee-for-service reimbursement environment.[37] Under the ACO agreement, a provider (e.g., physician practice, hospital, etc.) is accountable for the costs attributed to the patients they serve, while also having the ability to share in any savings due to quality of care improvements. The payer in the ACO model sets the quality benchmarks and level of spending. If a provider meets the quality benchmarks that have been set, they are eligible for a proportion of the savings achieved or may be penalised if spending is higher than the chosen target.[38] As the ACO model encourages a Kaiser-like relationship between funder and provider, many health providers are looking to replicate Kaiser Permanente's contracted payment schedules and quality commitments. However, ACOs will typically require new relationships to form between previously separate providers, and little is known about how long these arrangements will last and what the consequences will be if they fail.[39]

Moving to new incentives

As hospitals account for a significant proportion of healthcare expenditure, the acute care sector is commonly targeted for cost reductions and efficiency reforms, particularly during times of austerity.[40] A considerable focus in recent years within both the Canadian and US healthcare systems has been to reduce the fee-for-service financial model and create more comprehensive contracts for services. In recognizing that fee-forservice promotes volume but does little to ensure value, reimbursement changes in the US (e.g., CMS hospital value-based purchasing, community integration and bundled funding initiatives) have moved away from paying hospitals and physicians based on the volume of care delivered. [41] The Kaiser Permanente model, which incentivizes physicians based on the quality of care delivered and keeping patients healthy, is well placed to benefit from these new CMS reimbursement methods.

Ontario Comparison

In Ontario, the Ministry of Health and Long-Term Care has been shifting hospitals from global budgets to episode of care payments under Health System Funding Reform.[42,43] As an important first step to better align the quality of care with funding, the province introduced Quality Based Procedures (QBPs) in fiscal year 2012,

targeting four initial areas of hospital activity: cataract extraction surgery, dialysis for chronic kidney disease, unilateral hip replacement and unilateral knee replacement. In order for this to occur, a hospital's estimated cost and projected volume of procedures was carved out from the base budget before being reallocated on a quality-adjusted case mix basis.[44] The linking of quality to expected best practice has been expanded in fiscal year 2013, with additional QBPs implemented for congestive heart failure, stroke, chronic obstructive pulmonary disease, elective vascular surgery, chemotherapy and colonoscopy. While Ontario has made significant steps towards a quality-based funding mechanism, the province has yet to develop an incentive mechanism for a more integrated, value-based health system like the ACA model in the United States. A central policy platform that links financing and the integration of care around accountable and coordinated providers could facilitate a more complete transition than any single structural change within the system (e.g., ACOs, Better Care Funds and Care Commissioning in the UK).

Saskatchewan Comparison

In Saskatchewan, the Ministry of Health utilizes a future needs assessment for its regional health payments, with the aim to fairly distribute the necessary funds based on demographic and service characteristics (i.e., a population-based funding system). While this is an equitable approach, it avoids some of the market dimensions (e.g., yardstick competition, performance and quality incentives, etc.) that episode-based funding systems create. This flexibility to incorporate quality standards in funding incentives is likely the reason why a majority of OECD health systems have moved to payment approaches based on activity.[45] The province may find that adopting activity-based financing would create a powerful mechanism to direct its providers towards policy priorities related to care integration and quality.

Performance and quality informing practice

While payments at the organizational level are undergoing a performance-based shift in Canada, more could be done to support coordinated care using physician reimbursement. A largely fee-for-service based reimbursement model for physicians' rewards the volume of services delivered, and not the quality of care provided. In order to achieve both provider consistency and reward overall performance, a Kaiser-like model would consist of a blended salary and pay-for-performance model (e.g., making 5-10% of physician income performance-based). The basic theory behind the salary and pay-forperformance model is that explicit incentives can be directed at those involved in the provision of care in order to achieve, or improve upon, pre-set quality objectives.[46] Quality in the healthcare environment could be considered as "[t]he degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge".[47] As this definition suggests, a properly aligned incentive would rely on evidence-based practices and be judged by quality dimensions such as patient safety, efficiency, and care coordination.

As pay-for-performance has the ability to incentivize many facets of quality practice, there has been a great deal of global policy interest in adopting these methods to solve particular quality issues.[48] However, while pay-for-performance has the potential to direct attention to system priorities, it needs to be deployed cautiously to avoid several pitfalls.[49] In order for Ontario and Saskatchewan to move toward an integrated future, many organizational and clinical initiatives would need to be implemented alongside any changes to provider payment.

Section Three – Information and patient management

Building the information platform

The electronic health record has been accepted as a tool to improve health safety, coordination, and enhance record keeping, which enables greater adherence to evidencebased clinical guidelines[50] Kaiser Permanente has placed electronic information and patient management technologies at the heart of its business model, with substantial investments enabling many of its integrated health initiatives. It is estimated that Kaiser Permanente financed a $4 billion electronic health record system deployment over 10 years for its 9 million clients.[51] A vast patient database labelled HealthConnect houses several information products including a client portal, smart device and medical home monitoring systems. The end-result is an interactive system that, as an example, would allow a primary care physician to advise patients when a telephone or e-visit can take the place of an inperson visit, reducing physician time as well as the burden on a patient or caregiver.

Kaiser Permanente HealthConnect

1. An electronic health record with interoperability across care settings—inpatient and outpatient, clinical support, and connectivity to laboratory, pharmacology, and radiology systems;
2. A web-based client portal for secure patient-provider messaging, as well as access to personal health records;
3. A system for messaging between providers, allowing care updates to be automatically added to patient records.[52]

Moving beyond the electronic health record

When comparing the move to electronic health care in Canada to that of Kaiser Permanente, some differences are apparent with regard to how integration and patient access have been approached. In Ontario and Saskatchewan, crown corporations have been established to lead and coordinate the development and management of electronic health systems in their respective provinces. While these eHealth agencies have individual responsibility for electronic record development, the not-for profit Canada Health Infoway has additionally provided financial and practical support ($1.5 billion to date) in order to accelerate the wider adoption of health information technologies in Canada.[53]

Ontario Comparison

In Ontario, eHealth has moved on from its politically charged early years to adopt several platforms, including diagnostic imaging, physician records, medication management and laboratory information systems. The latest eHealth Strategy lasted three years (2009-2012), and had a total cost of $2.1 billion.[54] While eHealth Ontario has made integration around regional hubs a goal, "to enable systems to talk to each other in order to get secure, accurate and comprehensive patient information into the hands of health care providers," the agency communicates little in terms of patient accessible records and health provider e-messaging.[55]

While many of Ontario's eHealth efforts are both innovative and important, it is discouraging that many of these systems would appear to lack a consistent integrated platform for the distribution and analysis of electronic health information. Furthermore, the limited interoperability of these platforms – often due to the individual provider seeking the best, purpose-fit solution– will have a largely negative impact on individual patient empowerment.[56]

Saskatchewan Comparison

It is a positive sign that eHealth Saskatchewan is pursuing a central platform for electronic record keeping, with both integration and patient empowerment being serious planning considerations. It is estimated that eHealth Saskatchewan has spent $502 million since it began operations.[57] In addition to a province-wide solution for patients and physicians to communicate electronically, eHealth Saskatchewan has indicated that they will develop a wide-scale eHealth Patient Portal, however, at this time the plan has few details and a 3-5 year development roadmap.[58]

It is apparent that the use of care pathways could be strengthened in Saskatchewan, particularly for common procedures such as hip and knee replacements, and that eHealth could better facilitate patient-provider communication. As demonstrated by the Kaiser Permanente experience, once the underlying patient record and inter-provider communication platform is in place, the patient can interact in a safe and secure environment with the most appropriate health providers. It would be difficult to have a similar level of confidence in a health communication system that omits important information form the patient record, therefore, the more fragmented the eHealth environment the less likely patients will be to proactively manage their health online.

Information facilitates greater healthcare collaboration

With a strong information system in place, Kaiser Permanente has shown an impressive ability to actively manage its patients from hospital to home. This is possible due to an interdisciplinary care environment that utilizes provider and planning staff throughout the patient journey. For example, hospitalists work with inpatients to provide care pathways for common conditions, discharge planners move patients through the most appropriate care settings, and skilled nursing facilities can provide rehabilitation when appropriate (e.g., when a patient requires assistance before returning home). Kaiser Permanente has also been pursuing Patient-Centred Medical Home solutions, to encourage personalized care in a familiar environment that is physician coordinated and electronically supported. For example, team-based care is provided in home, led by a primary care physician and supported by a group of healthcare professionals, which could include nurses, nutritionists, social workers, and pharmacists. The limited research into this model of care has shown that the medical home model may improve clinical outcomes, with higher patient and staff satisfaction, along with lower health costs.[59] The Patient-Centred Medical Home is another example of how investments in care integration can enable greater patient satisfaction, and yield cost savings down the road.

Section Four – Innovation for greater personalization

Big data and analytics

The Kaiser Permanente approach to innovation has been to focus on strengthening the integration of clinical practices, with many initiatives utilizing advanced technologies and health analytics to improve patient care. The Garfield Innovation Centre is at the heart of this forward looking process. Described as a "living laboratory", the Garfield Innovation Centre is a large facility in Northern California where ideas can be tested in a controlled medical environment, which includes mocked up versions of patient rooms, hospital wards, and surgical environments.[60] The centre employs staff with a variety of backgrounds to work in teams, which allows healthcare providers (e.g., physicians and nurses) to join engineers, architects, and technologists to advance clinical care. With a mandate to find and create new and emerging health technologies, such efforts are not without cost. The centre reviews around 250 technologies in a year, investigates between 40 and 50, and may implement only 1 or 2. In addition, an innovation fund is open to all Kaiser Permanente employees, with several pilot projects leading to new products.

As an early adopter of electronic patient records, the Garfield Centre has been tasked with using its considerable analytical resources to improve outcomes and affordability. With an integrated healthcare platform, Kaiser Permanente can provide its researchers with data and analytics that reach across hospital, lab, physician and pharmacy environments. The average Kaiser Permanente client also stays with the insurer longer (17 years, versus an industry standard of 2-3 years), allowing more consistent datasets to be available to the researcher.[61] This large and consistent dataset has led to evidence-based clinical improvements (e.g., guidelines to reduce variations in practice) and a preventative approach to population management where unplanned events are a sign of failure (i.e., suboptimum care).

Moving forward

While the health ministries in Ontario and Saskatchewan have taken differing approaches to innovate for system improvement, they have been consistent in their appreciation of quality improvement methods.

Ontario Comparison

In recent years, the Ministry of Health and Long-Term Care has implemented a series of new initiatives aimed at increasing the innovative capacity of the healthcare system. For example, the Improving & Driving Excellence Across Sectors (IDEAS) strategy has adopted Intermountain Healthcare's Advanced Training Program to disseminate knowledge through health provider learning programs.[62] Similarly, the Ministry has funded Community Health Links to formalize networks between several providers to ensure the most complex patients receive better-managed and coordinated care. While it remains to be seen if the scale of the approach will allow lasting change, the province is increasing its investments in care coordination and building cooperation between differing health system structures. A strong health innovation community has been fostered through provincial investments (e.g., MaRS, Ontario Health Innovation Council, etc.), which can tap into the many global leaders and entrepreneurs in health research that make their home in Ontario. To be more Kaiser-like, it will be important to leverage home grown innovation leaders, and make clinical integration and patient focused health solutions a tangible goal and business opportunity.

Saskatchewan Comparison

In 2012, the Ministry of Health in Saskatchewan committed to an aggressive fouryear program in Lean quality improvement in order to review the value of every aspect of the health system. The province has initially focused on improving acute services, patient safety, and optimizing its capital investments through Lean projects shared between the Ministry of Health and Saskatchewan Cancer Agency.[63] The province expects to have over 1,000 Lean projects in development by 2016.

While the investment in Lean is likely to generate efficiencies, these should still be directed towards the larger themes of care integration and patient self-management. As the Kaiser Permanente experience has shown, a clinically integrated health platform informed by information and evidence, can lead to more patient-oriented health interventions. This has particular relevance in the monitoring and treatment of chronic conditions (e.g., diabetes, heart disease, etc.) where patients can be supported by best practice information to increase the likelihood of positive health outcomes.

A personalized medical future

The greater personalization of health information has the potential to better optimize the workflow of health providers, allow more accurate predictions of who may be readmitted to hospital, and could reduce the relative complexity of care for some patients. Kaiser Permanente has moved to make the personalization of medicine its next major innovation investment. Greater patient involvement in the care process can have a positive impact on every aspect of healthcare, particularly when looked at from a population health perspective. While healthcare providers are familiar with devoting resources to caring for patients once they become unwell, the most cost-effective investment is likely to support the patient to achieve better health and avoid illness.

With personalized medicine, Kaiser Permanente can align its disease management (e.g., care pyramid) and electronic health platform to predict the best place to allocate resources, ensuring long-term solutions are found to common population health problems. It is with such forward looking investments that Kaiser Permanente has made its name in the past, and if Ontario and Saskatchewan disregard these analytical systems, they risk falling behind in the search for more efficient and effective patient care platforms.

Conclusion

The Kaiser Permanente experience suggests that Canadians may be better served by a healthcare system that is better integrated, with a multidisciplinary culture that rewards improvements in care quality, timeliness and cost. The first section of this report highlighted how clinical leadership can enable more integrated healthcare environments. At Kaiser Permanente, the physician is at the centre of the care coordination process, which promotes overall population care. This is further reflected in the organizations multidisciplinary culture and its strong focus on making improvements to the quality of healthcare delivery. The focus on integration of clinical and financial processes in the second section, highlights how accountability and performance can be linked to reinforce organizational goals. The clinical acceptance of financial incentives, and the establishment of a blended payment model, were key to the Kaiser Permanente integrated system approach.

The third section of this report showed that directed investments in information technology enabled Kaiser Permanente to actively manage the patient experience. The patient's ability to interact online with an appropriate provider has the potential to save time and healthcare resources. Finally, the fourth section emphasized how a focus on innovation at Kaiser Permanente has led to the greater personalization of care. With an understanding of the patient's perspective using enhanced analytical capacity, the healthcare platform can become more integrated while supporting overall population health.

Overall, the Kaiser Permanente experience suggests that more can be done in the provinces of Ontario and Saskatchewan to ensure services are provided in a coordinated, fiscally responsible, and technologically advanced way. Reviewing what can be learned from the Kaiser Permanente model may help these health systems to be more predictive and personal, while ensuring both quality and cost effectiveness are central to the care delivered by an engaged physician community.

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