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EXPLORING ALTERNATIVE LEVEL OF CARE (ALC) AND THE ROLE OF FUNDING POLICIES: AN EVOLVING EVIDENCE BASE FOR CANADA

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TABLE OF CONTENTS

KEY MESSAGES

- There are approximately 7,500, or 14%, of acute care hospital beds inappropriately used across Canada each day. The alternative level of care (ALC) required for these patients has downstream consequences for emergency room admissions, facility transfers, and elective surgeries. This results in inefficient use of hospital resources and poorer quality of care for all patients.
- Despite differences in definition across jurisdictions, the provision of continuing care is generally characterized as involving multiple levels of care intensity and multiple providers. This creates silos of care, resulting in a fragmented system of uneven utilization and costs.
- A more integrated system of continuing care may improve quality and reduce inappropriate hospital utilization. It is uncertain, however, whether or not an integrated system offers comprehensive solutions for improving patient flow between acute and post-acute settings, and reducing ALC utilization.
- Current funding of continuing care not only supports a fragmented system, but may also contribute to higher ALC utilization. In discharging a relatively low-cost ALC patient and admitting a relatively high-cost acute patient, there is a financial disincentive for hospitals to lower ALC utilization. Nor are there financial incentives for post-acute providers to ensure that the care they deliver is timely or at the appropriate intensity.
- Several different funding mechanisms exist that may offer policy-makers solutions to overcome the ALC issue. These mechanisms reward the coordination and continuity of care across acute and post-acute providers and offer potential for adaptation in Canada.
- There are few provinces where data collection infrastructure and reporting mechanisms in continuing care are in place to support the development of appropriate funding policies aimed at improving ALC utilization and the coordination of care.

Recommendations:

- Keep the reduction of ALC utilization a high-priority objective for health systems.
- Align funding mechanisms and incentives with policy objectives using targeted strategies such as activity-based funding and pay-for-performance.
- Focus strategies to reduce ALC on
  1) discharging patients from acute care earlier to the appropriate setting
  2) reducing demand for future hospital-based care.
- Ensure data reporting systems are integrated and sufficiently comprehensive to match services to patient needs.
- Establish pan-Canadian evidence-based guidelines and standardized definitions.
- Emphasize knowledge translation and cross-jurisdiction learning.

EXECUTIVE SUMMARY

Introduction

This report synthesizes the evidence regarding funding policies designed to improve patient care in the transition period between acute and post-acute settings. Those in this transition period are referred to as alternate level of care (ALC) patients. They are not able to be discharged to a post-acute provider or to the community even though they no longer require the intensity or specialized medical care provided by acute hospitals. Projected to be in excess of $55 billion in spending in 2011, acute care hospitals represent a significant component of provincial expenditures. Consequently, much emphasis is placed on the high number of acute care beds occupied by patients ready to be discharged to post-acute by health system managers.

Approximately 14% of Canadian hospital beds are filled with patients who are ready to be discharged but for whom there is no appropriate place to go. Over a single year, these patients' use of acute hospital beds exceeds 2.4 million days, which equates to over 7,500 acute care beds each day. It is widely understood that complex combinations of care needs, social needs and institutional relationships contribute to keeping some patients in acute care hospitals. Nonetheless, there are considerable downstream consequences. ALC utilization limits hospitals' capacity, thus reducing the bed availability for emergency room admissions, facility transfers, and elective surgeries.

Information regarding effective strategies for ALC utilization is timely given that several Canadian provinces are announcing and implementing activity-based funding (ABF) initiatives for acute hospitals. These initiatives are designed to create financial incentives to increase the volume, or throughput, of hospital care. However, the effectiveness of these initiatives may be at risk by the inability of hospitals to discharge patients to appropriate post-acute settings in a timely and safe manner.

Continuing care in Canada

Continuing care is a general term used to describe the system of care that provides supportive health, social and other supportive services to incapacitated seniors and people with disabilities. Among this patient population, continuing care is most commonly delivered in long-term care, supportive living settings and home care either on an intermittent basis or a prolonged period, depending on the patient's need and their level of (or risk of) impairment.

A pan-Canadian description and comparison of the transition between, and utilization of, continuing care settings is complicated by differences in terminology representing equivalent intensities of continuing care across provinces. Long-term care may be defined as a certain set of services in one province and a different set of services in another. These differences in nomenclature are not surprising given that the organization and delivery of continuing care has evolved separately in each jurisdiction. Moreover, a consensus for defining intensity or level of continuing care would be a valuable step in the ability to compare characteristics and utilization of continuing care across provinces and territories. Further, it would facilitate peer-based benchmarking of providers on quality of care and financial performance, much of which is missing today.

Structural factors

The continuing care environment in Canada involves different silos of post-acute care providers, where areas of responsibility are defined by care setting rather than patient condition. These silos have resulted in a fragmented delivery system, with little continuity between providers or care settings. Delivery-system fragmentation is associated with a lack of coordination between health and social services, a mismatch between care needs and the intensity of care and poorer patient outcomes. Based on evidence from other countries, the consequences of a fragmented delivery system are variations in the use of, and payments for, continuing care. These variations can be attributed to differences in practice style, the availability of continuing care resources and a lack of objective clinical guidelines or treatment protocols.

Tension between silo-based healthcare funders can lead to higher overall costs and suboptimal outcomes in access to services. The frail elderly are particularly vulnerable in this situation as delays in matching services and rapid deteriorations in health can result in unnecessary acute hospitalizations or early admission to long-term care.

Applied to the Canadian context, the research regarding fragmentation of care has implications for ALC utilization and patient flow. First, while ALC patients may be safely cared for in a variety of continuing care settings, their ultimate destinations are not always optimized given that there are few objective clinical guidelines regarding the intensity of care needed after discharge from acute care. Secondly, the supply-sensitive nature of many aspects of continuing care indicates that an unchecked expansion of capacity could result in higher utilization, not all of it efficiently used.

Integrated care models are earning the attention of Canadian policy-makers as a proposed means to improve the utilization of appropriate, effective and more efficient care, which would lead to reduced ALC utilization. The evidence supporting integrated care models in the reduction of ALC utilization has yet to be clearly established. However, integrated processes aimed at improving quality, such as improved discharge processes to speed the safe discharge to post-acute care, are expected to reduce the use of inappropriate hospital care.

Funding continuing care

Current funding of continuing care not only supports a fragmented system, but may also inadvertently contribute to higher ALC utilization. There are financial disincentives for hospitals to lower ALC utilization. In the current system, hospitals receive the same revenues for relatively low-cost (ALC) patients as they would for high-cost (acute care) patients (the growing interest in activity-based funding may change this). Little has been done by the Canadian provinces to create financial incentives for reducing ALC. Instead, the issue is being addressed by improving discharge processes and reducing the demand for hospital-based care.

Policy tools that create financial incentives for providing efficient continuing care are well developed in many other countries. In Australia and the U.S., for example, activity-based funding has been implemented as a basis for remunerating skilled nursing facilities, inpatient rehabilitation, nursing homes and long-term care, respectively. Capitated managed care, shared savings, bundled payments, and pay-for-performance are examples of other funding mechanisms that could potentially improve the coordination and continuity of care across providers.

Process issues: Review of the data

Data and information regarding continuing care activity varies considerably by sector and by province. A significant effort to collect patient-level facility-based continuing care information has been emphasized in several provinces, notably Ontario and Alberta. To support these efforts, service-specific reporting systems have been developed by the Canadian Institute for Health Information (CIHI). The reporting systems are based on setting-specific clinical assessment instruments.

Gaps in standardized, reliable, data make it challenging for policy-makers to make informed policy decisions to improve service efficiency and project population needs into the future. Furthermore, silo-based datasets should promote information sharing between providers of all types and align with national electronic health record standards.

There are opportunities; some provinces having implemented continuing care reporting in multiple settings with shared definitions for clinical, function and demographic items. These standardized datasets will lead to consistent and comparable data across settings; and, when used across settings, will be expected to improve the match between service provision and patient needs.

Summary

In many respects, ALC use is an inefficient use of scarce hospital-based care. To combat ALC use, provinces and regions are using a variety of strategies; however, there are difficult measurement issues involved in assessing which strategies are effective at reducing ALC while providing high-quality care. Moreover, solving ALC will involve challenging a number of different provider types comfortable with operating within their silo of care.

Policy tools that create incentives for reducing ALC are not yet in use in Canada. Potential tools aiming at lowering ALC utilization must span silos of care, serving both as an incentive to coordinate safe care and promote the delivery of effective care in the appropriate setting. In order for these solutions to be effective, however, data systems that provide timely and relevant information to both caregivers and policy-makers are needed.

Based on this assessment, we recommend the following:

- Keep the reduction of ALC utilization a high-priority objective for efficient health systems
- Align funding mechanisms and incentives with policy objectives of reducing ALC use
- Focus strategies to reduce ALC on:
  1) discharging patients from acute care earlier to the appropriate setting
  2) reducing demand for future hospital-based care
- Ensure data reporting systems are integrated and sufficiently comprehensive to match services to patient needs
- Pan-Canadian evidence-based guidelines and standardized definitions should be established
- Emphasis should be placed on knowledge translation and cross-jurisdiction learning

1 INTRODUCTION

This report is intended to synthesize the evidence regarding funding policies designed to improve patient care between acute and post-acute settings. Throughout this report, we refer to the care received through different settings as patient "flow", underscoring the transition from acute to post-acute settings. The successful implementation of these funding policies undoubtedly depends on the context and environment in which they are executed. Thus, this report will not only discuss funding issues but also will touch on structural and process issues underlying continuing care in general to arrive at its recommendations.

The inefficient use of acute hospital resources is considerable. In the fiscal year 2007-2008, 14% of acute hospital days were estimated to be consumed by patients waiting for post-acute care,[1] with the highest rates reported in Ontario, British Columbia (B.C.) and Newfoundland. These figures, which are measured over time, represent approximately 7,500 inappropriately used acute care hospital beds each day across Canada.[2, 3] These figures likely underestimate the actual situation.

It is widely understood that some patients are kept in acute care hospitals because there is insufficient post-acute capacity to provide appropriate care to meet their clinical care and social needs, as well as meet patient and caregiver preferences. This matching requirement is important to note; while the continuing care system as a whole may have spare capacity, it may not be appropriate given the patient's circumstances. For example, while long-term care beds may be available, they may not be suitable for a patient suffering from severe dementia with behavioural problems, or a post-joint replacement patient requiring minimal nursing care but intensive rehabilitative services.

The content of this report is also relevant given that several Canadian provinces are in the throes of announcing and implementing activity-based funding (ABF) initiatives for acute hospitals.[4] These initiatives are designed to create financial incentives to increase the volume, or throughput, of hospital care. Based on international experience, ABF is associated with decreasing wait times and increasing hospitalizations,[5, 6] and provinces are embarking on their initiatives with similar expectations. However, the effectiveness of these initiatives may be hampered by the inability of hospitals to discharge patients to appropriate post-acute settings in a timely fashion.

Thus, new policy tools designed to increase volume in acute care, such as ABF, raise critical questions: where are additional patients expected to be discharged to? Will these new policy incentives exacerbate this pre-existing inefficient use of hospital care? In order to satisfactorily answer these questions, this report explores the research and policy evidence-base for initiatives that have effectively addressed the issue of patient flow, and contextualizes these initiatives to the Canadian healthcare setting.

2 CONTINUING CARE IN CANADA

2.1 A primer: Acute care utilization

Over a single year, the use of acute hospital beds by ALC patients exceeds 2.4 million days. From a clinical perspective, these patients no longer require the intensity or specialization of medical care provided by acute hospitals, and can be safely discharged to a post-acute provider, or to the community (with home, community or family supports).

This is not a new issue for Canadian hospitals [1, 2, 7] or other countries. In the 1990s, approximately 15% of acute beds were similarly occupied in Sweden.[8] Likewise, in the late-1990s, the mean wait time for a nursing home in Norway was approximately 7 to 18 weeks for acute inpatient and geriatric patients with behavioural health conditions, and it was 9.5 months for those waiting for admission who lived at home.[9]

This patient-type is associated with relatively low hospital resource consumption consisting of accommodation and minimally intensive nursing care.[7] There are very high fixed costs associated with operating acute hospital beds. Thus, this type of care is widely considered to be an inefficient use of costly hospital resources—resources that could otherwise be used for those with acute needs. Changes in discharge strategies must take into account that premature discharge from acute care can cause tremendous pressure on staffing models and lengthen lengths of stays in post-acute care.

The clinical and demographic profile of ALC patients is varied. Their hospitalizations are often associated with trauma, stroke care and dementia and may involve specialized equipment such as a ventilator. Their median acute hospitalization length of stay is 10 days, which is much longer than average, suggesting they have complex care needs, and they tend to be the most elderly in the population—age in excess of 80 years.[1]

ALC utilization directly effects bed occupancy which, in turn, impacts staffing management and care quality. High occupancy rates have unintended consequences on staffing. When occupancy rates are very high (i.e., above 90%), labour absenteeism and turnover increases[10] which contributes to decrements in quality of care.[13] ALC utilization, and commensurately high hospital occupancy, has a rippling effect throughout the healthcare system: fewer available acute care beds limit the number of hospital admissions, resulting in backlogs in emergency rooms, restricting facility transfers and cancelled elective surgeries—undermining efforts to improve timeliness of access.[12] These backlogs are frequently reported in the media[13, 14, 15] and have led to calls for expanded post-acute services.[16]

Is expanding post-acute care capacity the solution to this problem? Some provinces evaluating long-term care capacity (one type of post-acute care provider) does not think so. Alberta, for example, has 'capped' the number of long-term care beds[17] and is changing remuneration policies to create incentives to improve the efficiency of care and the movement of patients out of higher intensity settings.[18] Other provinces are taking a multi-pronged approach to the issue, expanding transition bed capacity while aiming to reduce future hospital demand.

2.2 Where do acute care patients go?

Projected to be in excess of $55 billion in spending in 2011, acute care hospitals represent the largest component of healthcare spending in Canada[19] and serve as a reference for discussing patient flow to post-acute care. For most patients, acute hospitalizations are very temporary in nature and most often the result of a healthcare crisis, such as severe illness or injury. Thus they need ongoing treatment or recovery from surgery, and require complex clinical services using sophisticated equipment, specialized personnel or materials.

From acute hospitals, patients are discharged to a variety of settings depending on their clinical needs, patient and caregiver preferences and the availability of resources to care for them. Their discharge plan takes into account complex personal and institutional relationships, medical and rehabilitative needs plus psychosocial supports.[20] Post-acute care settings vary, from relatively high intensity 24-hour facility-based care to relatively low intensity home care services. These settings are described in more detail in Appendix 1. It should be noted that matching patients with settings that reflect needs, preferences and resources can be challenging and often results in delayed discharge from hospital.

Available data from Canada indicates that approximately two-thirds of ALC patients are waiting for a transfer to another healthcare facility,[1] though the proportion is higher in Ontario.[3] While waiting for discharge, 11% of all ALC patients die in the hospital.[2] Of those discharged alive, 44% are waiting for

placement into long-term care, 28% are waiting for home care, and 13% are awaiting rehabilitation.[2] Since a patient's discharge location is not necessarily the destination originally intended at the time of ALC designation, these figures represent the change in a patient's condition during the ALC stay.

While the focus of this report is on patient flow from the acute to post-acute setting, ALC utilization is not unique to acute care. Patients in post-acute hospital beds also wait for placement. For example, the Canadian Institute of Health Information (CIHI) reports that in the Greater Toronto Area, 4% of rehabilitation beds and 15% of complex continuing care beds are occupied by patients waiting for the appropriate discharge setting.[2]

Waiting is not without risks. Remaining in the hospital prolongs exposure to a hazard-filled environment with more than 70,000 avoidable adverse events each year [21] that come with considerable economic and social costs.[22, 23]

2.3 Dimensions of continuing care

Continuing care is a general term used to describe the system of care that provides health, social and other supportive services to incapacitated seniors and people with disabilities. Continuing care is most commonly delivered in long-term care, supportive living settings and home care (though there are many other forms). The point of first contact with continuing care is commonly home care. Continuing care services may be provided on an intermittent basis or over a prolonged period, depending on the patient's need and their level of (or risk of) impairment,[24] and may be represented by a mix of publicly and privately funded services.

A pan-Canadian description and comparison of the transition to (and utilization of) different continuing care settings is complicated by differences in terminology representing equivalent intensities of continuing care across provinces. These differences in nomenclature are not surprising given that the organization and delivery of continuing care has evolved separately in each province and territory and that it is not described in the Canada Health Act. For example, long-term care may be described as residential care in one province and nursing home care in another, as it is, respectively, in British Columbia and New Brunswick. Moreover, similar names can represent distinct services. For example, in Manitoba, personal care homes provide 24-hour professional nursing; whereas in Saskatchewan and Newfoundland, personal care homes do not provide 24-hour professional nursing and those that do are called supportive living.

It is important to define the terminologies used throughout this report, recognizing that terms may be used interchangeably and that readers will have to contextualize the definitions to their province. These differences challenge inter-provincial comparisons of all aspects of continuing care.[24] To contrast provincial nomenclature, Table 1 in Appendix 1 provides a summary description of provincial terms.

Consensus for defining 'intensity' or 'level' of continuing care would be a valuable step forward in the ability to compare the characteristics and utilization of continuing care across provinces and territories, and facilitate peer-based benchmarking of providers on quality of care and financial performance.

Facility-based continuing care: Based on very recent data, facility-based continuing care is the most common discharge location for ALC patients. Due to their complex needs, at least two-thirds of patients are awaiting discharge to a facility-based bed.[1] The most common types of facility-based continuing care are complex continuing care, long-term care and inpatient rehabilitation, and may include facility-based hospice care.

Community-based continuing care: Approximately one-third of ALC patients are waiting to be discharged into community-based continuing care. For these patients, the most common discharge locations are supportive living, home (with and without support services) and community support services.

For complete definitions of the various types of facility-based and community-based continuing care, see Appendix 1.

3 STRUCTURAL FACTORS AFFECTING HOSPITAL DISCHARGE LOCATION

Continuing care in Canada is comprised of a range of settings, intensities of care and types of service providers. This complicated environment has created different silos of post-acute care providers, where areas of responsibility are defined by care setting rather than by the condition of patients.[25] These silos have resulted in a fragmented delivery system[26] with little continuity between providers (i.e., horizontal fragmentation) or care settings (i.e., vertical fragmentation). Generally speaking, delivery-system fragmentation is characterized by a lack of coordination between health and social services, a mismatch between care needs and the intensity of care[27] and poor patient outcomes.[28] In some cases, fragmented care has been reinforced by adding regional administrators to support the coordination of care and varying policies regarding access to, and use of, continuing care.[29, 30, 31] Since this report is examining the effects of ALC utilization, the focus is on vertical fragmentation.

What little we know regarding the consequences of fragmented care comes from other healthcare systems, like the Medicare program in the United States, which has seen wide geographic variations in the use of, and payments for, continuing care.[32, 33, 34] These differences are attributed to both practice style (which may be influenced by local regulatory agencies or local cultural norms) and availability of continuing care resources.[32, 35] While access to resources and local competition in the U.S. makes generalizing difficult,[35, 20] this research highlights that there are few objective clinical guidelines or treatment protocols, little evidence in terms of the intensity of care needed after discharge, and a lack of objective metrics upon which the delivery of continuing care can be assessed.[36]

Additional research in the U.S. has shown that the tension between healthcare funders, each interested in limiting costs, can lead to higher overall costs and suboptimal outcomes in access to services.[37] The frail elderly are particularly vulnerable in this situation, as delays in matching services, and rapid deteriorations in health can result in unnecessary acute hospitalizations or early admission to long-term care.[24] Moreover, fragmented care can result in weak accountability for quality and performance,[38] such as unnecessary readmissions to acute hospitals[39] and inferior outcomes for some patients.[20]

Applied to the Canadian context, this research has implications for ALC utilization and patient flow. For instance, some hospitalized patients waiting for a specific continuing care setting could have access to equally appropriate alternative settings except for their inability to pay. Secondly, the supply-sensitive nature of many aspects of continuing care indicate that unchecked expansion of capacity could result in higher utilization, not all of it efficiently used.

There are few objective clinical guidelines or treatment protocols regarding the intensity of care needed after discharge from acute care. The lack of evidence makes it difficult to evaluate when and what type of care is appropriate for many patient types.

There is also evidence that geography plays an important role in ALC utilization across Canada. When urban and rural settings are considered separately, rural areas tend to have a higher ALC utilization [40] and a lower case mix.[41] This indicates that rural hospitals serve an important role in providing complex continuing care and long-term care (in the absence of availability of these types of care). These findings suggest that some strategies for reducing ALC may have to be tailored for urban and rural regions.

3.1 Restructuring care

If increasing continuing care capacity is not the only answer to more efficient acute hospital use, can existing resources be reorganized to improve patient flow? One proposed concept receiving attention, both in Canada and internationally, is that of integrated models of care. Integrated care can take different forms but, generally, falls into one of two categories: real or virtual.[42] Real integration involves the merger of healthcare service providers; their services, information technology (IT) services and administration are organized under one entity. Virtual integration involves providers joining networks or alliances, which may share common practice guidelines, care pathways and IT.

Closer integration, whether real or virtual, between acute hospitals and continuing care providers has been proposed as a means to improve the utilization of appropriate, effective and more efficient care,[42] which would likely lead to reduced ALC utilization. Pilot projects in the U.S.,[28] Australia,[43] and Canada,[38] have demonstrated that integrated programs offering both health and social services through community-based interventions, operating as quasi-managed care programs, can reduce hospital and nursing home utilization.

In the U.S., the Program of All-Inclusive Care for the Elderly (PACE) is being evaluated by the Centers for Medicare and Medicaid Services (CMS). Specifically designed to provide integrated acute and long-term care delivery (and financing) for the frail elderly, PACE also includes adult day care programs, home care and meals-on-wheels. PACE programs are based on a capitated (per person) payment from CMS to providers.[28] PACE involves an interdisciplinary team of primary care physicians, nurses, social workers, physical and occupational therapists, recreational therapists and health aides, and periodically includes pharmacists, nutritionists, psychiatrists and transportation coordinators. Evidence regarding the effect of PACE is mixed. While the program provides improvements in some areas of preventative care and healthcare management, it does not necessarily improve physical or mental health outcomes, nor does it receive higher levels of satisfaction compared to fee-for-service models.[44]

In Australia, the 'Patients First Model of Care' for elderly patients with complex care needs was developed and evaluated. Over a 20-month period, enrollees into the program demonstrated a significant reduction in presentation to the emergency department (-20.8%), acute admissions (-27.9%), and inpatient bed days (-19.2%) relative to the control group. The project was estimated to have generated approximately $1 million in annual savings for the 231 enrollees.[43]

The province of Quebec developed the multidisciplinary SIPA (Services intégrés pour les personnes âgées en perte d'autonomie) program. A recent study compared the SIPA program to usual care for a cohort of elderly patients. Results found that costs associated with community-based services (e.g., use of primary care, home care, etc.) were higher for the SIPA patients: $12,695 compared to $9,301 per patient in usual care over the 22-month study period. However, costs associated with facility-based services were lower for SIPA patients: $23,544 compared to $27,314 in usual care.[38] The SIPA group also experienced a 50% reduction in ALC utilization compared to the usual care group.[38]

Recent attention has been paid to several 'high performing' healthcare systems in the U.S.[45, 46] The Veterans Health Administration, Kaiser Permanente, and Geisinger Health System, among others, are all examples of integrated systems that combine hospitals and physicians, from a multitude of specialties, to deliver care across the continuum. Unlike fragmented models of health services delivery, which are often funded through global budgets or fee-for-service, these large integrated health systems are remunerated through enrollment-based payments. Within these systems, providers are remunerated based on combinations of salary and performance-based payments. For providers, performance-based remuneration creates financial incentives to provide lower-cost and reduce unnecessary care.[47]

Rigorous analyses of these integrated systems seem to indicate that these incentives do not come at the expense of quality;[48] thus these systems appear to be operating on a more efficient basis than their fragmented peers.[47]

These integrated health systems are similar to regionalized care delivery in Canada, characterized by the vertically integrated health services delivery model—everything from primary care, to acute hospitals, to palliative care.[49] In contrast to the Canadian settings, these integrated provider models have invested in technology infrastructure and data collection platforms[49] which allow them to share information across different settings; providing physicians with patient information at the point of care, and continuing care providers with information about the acute episodes, thus reducing errors and keeping patients out of hospital.

> High-performing health systems tend to be characterized by unique remuneration models including accountability for total costs and quality across providers, as well as an integrated health information infrastructure.

Integrated systems have been recognized as suffering from two limitations. Since these systems consolidate health services to a specific provider-level for medical management, this has been viewed as limiting patient choice. This is prevalent in areas with small populations, or where there may be few providers to choose from—such as rural areas. Second, an integrated delivery system can distort financial incentives. For example, patients may be shifted to the lowest cost provider rather than the most appropriate one.[50]

Whether or not these integrated systems offer comprehensive solutions for ALC utilization has yet to be determined; there does not appear to be any research directly linking the vertical integration of health services delivery with improved patient flow, nor is there evidence of how to effectively address the known limitations. However, vertically integrated processes aimed at improving quality,[51] such as improved discharge processes to speed the safe discharge to post-acute care, are expected to reduce the use of inappropriate hospital care.[52]

There is much to be gained from comparing inter-provincial structural factors, processes and how ALC patients are transitioned through the continuum of care. For example, clarifying what objective criteria (regional or provincial) and decision-making processes are used to determine admission into home care or long-term care.

4 FUNDING CONTINUING CARE

Funding policies can be extremely powerful in changing the delivery of care[4] by creating incentives for providers to act in a desirable manner. However, setting funding policies incorrectly, such as setting the wrong price for care, can result in unintended consequences and the over - or under - provision of care.[53, 54, 34] Creating incentives for one provider will affect other providers. Consequently, addressing funding policy in continuing care cannot be done in isolation.

Two common funding policies are: activity-based funding (ABF) and pay-for-performance (P4P). ABF can be considered a fee-for-service funding model for hospitals, whereby each hospitalization is funded at a predetermined amount based on the patients' characteristics or activities. P4P is expressed as incentive (performance) payments to healthcare providers to achieve a certain benchmark. Measures are created to be aligned with process or outcome measures considered to be representative of high quality care.

4.1 A review: Funding acute care

The global budget remains the predominant method for funding acute care in Canada because of its positive attributes: they are effective at containing cost growth and providing budget predictability for funders and hospitals (providers). However, historically-based global budgets for hospitals tend not to take into account changes in volume or changes in patient complexity. This leaves the funder open to complaints from hospitals of inequity and under-funding. Moreover, hospitals respond to cost pressures by reducing services, a mechanism that lengthens waiting lists.

The incentive structure of global budget funding affects hospital behaviours and the prevalence of ALC patients. Specifically, global budgets provide no financial incentive for hospitals to discharge lower-cost ALC patients and replace them with higher-cost, higher acuity patients.

Under global budgets, hospitals have no financial incentive to discharge ALC patients and replace them with higher acuity and higher-cost patients.

For acute care, ABF has become the international norm.[6, 5] First developed in the 1980s,[55, 56] ABF is a method for attributing a funding amount to each patient's hospitalization. In a two-step approach, clinical and demographic information is first used to assign each patient to a unique group, where the groups are

designed so that each group has clinically similar patients. Secondly, each group is associated with a predetermined funding amount. As a result, the hospital is funded with the amounts associated for all patients (groups are designed so that patients in the same group tend to have similar costs)—essentially, a fee-for-service funding model for hospitals. These methods are commonly referred to as diagnosis related groups (DRG). Variants of DRG have been implemented in many countries across the globe,[57, 58] including Canada, where the system is known as CMG+. Though CMG+ is not used for funding hospitals in any significant manner, it is used by hospitals to understand variations in efficiency.

By funding each hospitalization at a predetermined amount, ABF can provide powerful incentives for hospitals to improve technical efficiencies, achieved by reducing lengths of stays and decreasing episode costs. Given the ability of hospitals to retain surpluses with ABF, this system is renowned for focusing the attention of hospitals on the production process and funders on the volume, quality and cost of hospital care.[59] Internationally, the motivations for implementing ABF for funding hospitals are varied, but they include reducing waiting lists, stimulating productivity, increasing transparency in funding and accelerating the shift of activity to same-day surgery.[4, 6, 60]

While ABF programs are being developed for hospital-based care in Canada, in their current form, they do not include financial incentives for hospitals to ensure that patients receive appropriate, safe or high-quality continuing care. In fact, there may be perverse incentives for the hospital, such as poor transitions to continuing or community-based care so as to generate a new episode of care (and payment). The evidence regarding the effects of hospital-focused ABF on facility- and community-based continuing care is very incomplete, representing a significant knowledge gap in health services research.

> New policies for ABF for acute care are creating incentives for shortening lengths of stay and increasing the volume of hospital care, "quicker and sicker". How these hospital-focused policies will shape the need and demand for continuing care is unknown.

4.2 Funding continuing care

Policy tools that create financial incentives for providing efficient acute care are well developed in many countries, yet they are in a nascent stage in Canada. The same is true in continuing care. Internationally, there have been broader efforts to reform funding policies, whereas comparatively little has been done by the Canadian provinces to create financial incentives to improve the provision of efficient continuing care. Australia and the U.S., for example, have implemented ABF for funding skilled nursing facilities, inpatient rehabilitation, nursing homes and long-term care, respectively.[61, 62] These hospital-based continuing care funding policies operate separately from the hospital's own acute ABF program, only providing funding for continuing care within their respective silo.

Activity-based funding systems have been implemented for some sectors of hospital-based continuing care. They are widely used in the U.S. as a means to create incentives for providers to change behaviours to provide cost-efficient care.

The largest change to the funding of hospital- and community-based continuing care in any healthcare system in the world was undertaken in the U.S. through the *Balanced Budget Act* of 1997 and the *Balanced Budget Refinement Act* of 1999. From 1993 to the introduction of the *Balanced Budget Act* in 1997, post-acute care grew 96%—from $18.2 billion to $35.7 billion in Medicare expenditures.[67] The funding reforms introduced by the Acts were designed to create incentives to change provider behaviour so as to promote more efficient and effective utilization of continuing care services. In tandem, these Acts phased-in a move from a fee-for-service funding model to a prospective payment model over the course of several years: skilled nursing facilities (1998), home health agencies (2000), inpatient rehabilitation (2002) and long-term care hospitals (2002)[20, 32] Post-acute care costs increased to $42.1 billion by 2005, an 18% increase from 1997 levels.[64, 63]

The reduction in cost growth seemingly had little effect on clinical outcomes,[65, 20] but the aim of reducing inappropriate use of continuing care may have been missed. Evidence suggests that instead of reducing utilization of continuing care, patients were just shifted from one setting to another—a move away from home health and into more long-term care, skilled nursing, and inpatient rehabilitation.[66] This substitution effect, having no impact on quality, underscores an earlier point: many aspects of continuing care are lacking evidence-based guidelines for the appropriate use and setting for care.[66, 67]

ABF for hospital-based continuing care does not resolve the issue of provision of appropriate care. The lack of evidence-based guidelines will hamper monitoring efficient and effective continuing care.

Despite these limitations, several countries have proceeded with ABF programs for continuing care, clearly believing that there are significant opportunities to reduce cost growth by improving technical efficiency. A review of the evidence regarding the effectiveness of these programs is provided below.

Inpatient rehabilitation: In the U.S. Medicare system, inpatient rehabilitation is funded with an episodic-based payment system entitled case mix groups (CMG; not to be confused with CIHI's acute care classification system). With CMG, funding amounts are based on patients' cognitive and physical impairments, as measured with the functional independence measure (FIM) instrument at admission.[68] Episode-based funding systems for inpatient rehabilitation have also been developed in Australia.[61]

Under global budgets, hospitals have no financial incentive to discharge ALC patients and replace them with higher acuity and higher-cost patients.

Increasing the number of episodes, constraining episode costs and decreasing lengths of stay are the three primary motivations for introducing ABF in the inpatient rehabilitation setting. Evidence from the U.S. Medicare system has observed the introduction of ABF to be associated with 1) reduced inpatient rehabilitation episode costs and lengths of stay[69, 70]; and, 2) mixed effects on access to intensive

rehabilitation,[71, 70] moderated by the relative profitability of patient types.[71, 64] The former has not been associated with higher mortality.[72] The latter is known to vary across clinical conditions with some evidence of earlier discharge at lower functional levels.[73] There is some evidence that quality of rehabilitative care is subject to forces of market competition,[20] even though patients and families find it difficult to evaluate the quality of rehabilitation providers.[74]

The ability to generalize from the evidence cited above is limited by not having included the rehabilitative services obtained after discharge from inpatient rehabilitation (such as outpatient or home-based rehabilitation). Thus, deriving definitive statements regarding the effects of ABF for inpatient rehabilitation on cost reduction and quality is difficult.

Implementation of ABF for episodes of inpatient rehabilitation is associated with shortened lengths of stay, though evaluating quality remains elusive.

Could similar ABF policies be initiated for inpatient rehabilitation care in Canada? Currently, the data collection efforts are not in place with the exception of Ontario. In that province, hospitals comprehensively collect and submit inpatient rehabilitation activity to CIHI. Without these data, implementing ABF is not possible.

Ontario maintains a population-based case mix information system for inpatient rehabilitation. It is phasing this information into its Health Based Allocation Model and uses this information for benchmarking and peer comparisons.

Long-term care: From the perspective of the funder, long-term care funding tends to be split into two components: health services and accommodation services. The health services component of long-term care tends to be publicly funded (though other insurance mechanisms are in use such as Workers Compensation and private insurance programs). It may include a per-day amount (per diem) or apply mixed methods (some combination of global budgets and per diem). Accommodation services are intended to be funded by the resident (a co-payment amount); though, in practice, provinces tend to apply a means-testing process to adjust the co-payment amount.[75]

In the U.S., ABF for long-term care is based on the Minimum Dataset (MDS 2.0) clinical assessment instrument. Unlike episode-based case mix systems, such as DRG, ABF for long-term care funding is based on per diem funding. The case mix system in the U.S. is known as resource utilization groups (RUG) and distinguishes between rehabilitative services and medical conditions.[62] There is a fairly robust literature regarding the validity and reliability of MDS 2.0 and the characteristics of RUG.[76, 77, 78] Known as case mix indices (CMI), these relative funding amounts emulate per diem costs of long-term care patients, and they are based on measures of intensity of staff time of different provider types, such as nursing and therapies.[62, 79] An ongoing Canadian study is replicating Medicare's measures.[80] In funding long-term care on a per diem basis, there is no incentive to discharge patients to more appropriate or less costly settings; instead, providers aim to reduce their costs below the per diem funding amount.

The introduction of prospective payment for long-term care across the U.S. has been adversely associated with cost-efficiency, but findings are mixed with regard to care quality.[81, 82, 83] In for-profit long-term care facilities, change to case mix-based funding has been associated with a decrease in nurse staffing levels,[84]

a concern given the finding of a positive relationship between staffing levels and quality of care.[85, 86] In public long-term care facilities, there is mixed evidence regarding the directionality of the relationship between long-term care funding and quality.[87, 88, 84, 89] ABF for long-term care has been associated with a reduction in rehabilitative services and with more substantial effects in private facilities.[90] However, there is mixed evidence regarding changes in access to long-term care for some patient types.[83, 64]

The implementation of ABF for long-term care has been related also to an increase in administrative nursing costs of approximately 4%, though this increase has not been linked to a shift in nursing resources from clinical care to administrative duties.[91] In addition, there is some evidence to suggest that more intense competition between facilities is associated with higher scores on quality measures.[92, 93, 94]

In Canada, long-term care data is collected and submitted to CIHI in many provinces. For these residents, the RUG and (relative) per diem expected costs are assigned by CIHI. At the writing of this report, Alberta and Ontario are (partially) using ABF for long-term care funding. In Alberta, ABF for long-term care is being phased-in over a six-year period, starting first with public facilities and engaging private facilities at a later date.[18] In Ontario, a multi-year implementation is currently underway. [95]

ABF for long-term care is proceeding in Ontario and Alberta. Elsewhere, the evidence regarding the policy's effect on efficiency and quality are mixed. At this time, there are no incentives to link the funding of long-term care to expedite the discharge of ALC patients from acute care.

Pay-for-performance (P4P) is another funding policy being carefully considered in the U.S. P4P adjusts long-term care funding amounts by rewarding facilities when desired clinical outcome targets are achieved. For example, a proposal for long-term care funding in Minnesota endorses adjustments to funding amounts based on staffing and quality measures.[96] However, a recent review of P4P initiatives across long-term care facilities found that the evidence was mixed.[97]

Using a P4P framework, and where comprehensive data exist, there are opportunities to create incentives for long-term care providers to expedite ALC patients' discharge from acute care.

Currently, there is no evidence regarding the efficacy of incentives to discharge of ALC patients to other settings earlier (ABF may change this incentive structure). Bearing this lack of evidence in mind, there are opportunities to create incentives for expeditious acute care discharge based on the P4P framework that involves continuing care providers.

Home care: In the U.S., the introduction of Medicare's prospective payment system for home care provided financial incentives to reduce the number of visits and induce risk selection to avoid potentially high-cost individuals. The funding model is based on a 60-day episode of home care which is aimed at restorative care and therapy. In this home care funding system, funding levels are adjusted for clinical characteristics collected within the Outcome and Assessment Information Set tool (commonly referred to as OASIS). Collected for each patient, OASIS includes data elements for outcome monitoring, clinical assessment

and care planning. Upon introduction of this funding system in the U.S., the policy induced financial distress on many home health providers,[98] and the volume of home care visits was observed to have decreased (the intended effect).[99, 100, 101] Moreover, the effects on care quality have been mixed.

Traditionally, home care clients in Canada receive their home care services from a government-approved agency contracted to provide the appropriate level of service (i.e., the mix of home healthcare and home support). This level is typically determined by a government-appointed agent, such as a social worker or designated healthcare professional, who is responsible for assessing a patient's clinical condition and needs on an ongoing basis.

Some provinces, such as Alberta, are moving toward a remuneration model centred on the Resident Assessment Instrument for Home Care (RAI-HC). In home care, CIHI chose not to adopt Medicare's dataset for collecting nationally-reported home care client information, but chose one that is congruent with long-term care and complex continuing care datasets.[102] The data from RAI-HC is used to place clients into one of 23 distinct service-use/intensity categories known as the Resource Utilization Groups III/ Home Care (RUG-III/HC).[103, 104] Data generated from the RAI-HC can also be incorporated into a clinical quality monitoring system known as Home Care Quality Indicators (HCQIs).[105] Variants of case mix-based remuneration models for home care are being evaluated in Ontario and B.C.

ABF for home care is widespread in the U.S. even though the evidence regarding its effects on effectiveness and quality are mixed. Although in a very early stage, several provinces are examining options for funding home care clients based on their needs and characteristics using the RAI-HC.

One region in B.C. has begun to experiment with a form of P4P in home care through a program known as the Accountability, Responsiveness and Quality for Clients Model of Home Support (ARQ Model).[106] The ARQ Model focuses on clustering clients into higher-density living facilities, or neighbourhoods, and sets reporting requirements for privately-funded home care providers. It also includes performance-based funding incentives for meeting objectives. Evaluation of this model found that it achieved higher efficiency (i.e., more clients in clustered housing), greater system competency (i.e., better match between clients' needs and caregiver abilities), and higher levels of patient satisfaction than the ARQ Model's original objectives.[106] Although there is no direct link between the ARQ Model and reducing ALC, P4P policies may improve efficiencies in home care delivery.

P4P has been introduced for home care in B.C. on a very limited basis. The incentives of the program target technical efficiency of home care delivery; however, the generalizability of its successes is unknown.

4.3 Funding mechanisms and fragmented care

No provinces or regions are currently offering financial incentives to hospitals to reduce ALC utilization. Current funding mechanisms do little to encourage the coordination of care across providers or ensure that continuing care is received in a timely fashion. If policy-makers choose to move in that direction, they should be aware that changing the financial incentives in one setting will induce behaviours that result in shifting patients between settings[65] or between providers,[107] although contradictory work in the U.K. shows that price plays only a small role in determining the setting of care.[108] Moreover, there is little evidence to guide policy-makers on how to redistribute existing healthcare resources across the acute care and continuing care sectors (allocative efficiency), a subject that requires additional empirical research.

Capitated managed care: Capitated managed care remunerates providers with a single payment for each enrollee to cover all costs of healthcare. Known as managed care organizations, development of this type of integrated care provider was motivated by the desire to reduce utilization and cost in the U.S. (also referred to as Health Maintenance Organizations).[109] In this model, providers are usually integrated (either real or virtual) in order to better manage the delivery of care. At the time of their development in the 1980's, it was reasoned that by creating a profit incentive, managed care organizations could negotiate competitive prices with other providers, control waste, and limit unnecessary care.[109] They have been examined in the Canadian context.[110]

Capitated managed care organizations have demonstrated the ability to keep healthcare costs down. In the early 1980s, a randomized experiment undertaken by RAND in the U.S. allocated 1,580 patients to receive free care from physicians operating either under a fee-for-service plan or a managed care plan (capitated). The authors found that costs were approximately 25% lower for those in the managed care group, achieved largely by 40% fewer hospital admissions.[111] The evidence—both from the U.S. and internationally—in terms of the quality of care is far more mixed.[112, 113] Specifically, certain vulnerable populations, such as the elderly, lower income, or those with pre-conditions may have less favorable outcomes under managed care plans than under conventional fee-for-services.[114]

While the capitated payment model incorporated by managed care organizations simplifies the remuneration system, it has withered under considerable criticism that the funding model is no longer popular. The point of most criticism was the financial incentive for providers to pocket the difference between capitated payments and the cost of care, an effect which creates incentives for under-treating patients. Moreover, enrollees disliked the restrictions associated with closed provider networks, the need for preapproval of treatments and perceived (or actual) limited choice in providers.[50]

Shared savings: Shared savings is in the funding spectrum between fee-for-service and capitated payments. Under shared savings models, providers share the difference between the total costs of care and a benchmark funding amount. That is, if patient total costs of care are lower than a pre-established benchmark, providers share in the virtual savings. Shared savings creates incentives for improving communication, safely transitioning from one setting to another and improved care planning.[115] While it is conceivable that shared savings models could be applied to funding continuing care, there are no rigorous studies evaluating this model of funding currently published.

Shared savings models, for example, have been proposed in the context of Accountable Care Organizations (ACOs),[116] where a variety of provider types assume responsibility for caring for patients across the continuum of care.[117, 118, 119] As discussed above, integrating continuing care providers in these models requires restructuring the delivery system, an experiment that has yet to demonstrate efficiency gains in terms of hospital and ALC utilization.

While the effectiveness of these programs in the context of Canada's publicly funded hospital and physician care is unknown, the possible nature of the relationships between existing regions, ministries and provider networks is difficult to predict.

Bundled payments: A more complex proposal for overcoming system fragmentation through funding reform is bundling payments to a single entity for the provision of care across settings for a specific condition or episode. Medicare proposes bundling payments to hospitals for a patient's stay plus 30 days post-discharge. Bundling continuing care funding into a single payment has been suggested as a means to contain costs and link to outcome measures.[32, 120] Some view this approach as a way to increase efficiency and coordinate inpatient and continuing care.[33] A more nuanced view suggests competition may affect prices for bundles due to varying levels of competition in different settings of care.[20] The development of bundled payments has financial and clinical modeling of episodes progressing.[120, 121]

Pay for performance (P4P): P4P is a payment mechanism whereby providers are rewarded for achieving targets on a pre-established list of process or outcome measures. These measures typically involve indicators of quality or safety seen as being important to patient care.[122] In practice, the evidence regarding the impact of P4P on improving quality in primary and acute care settings is mixed,[123, 124] though synthesis of successful P4P programs reveals commonalities: strong political and management support, leaving room for innovation and a strong health information system.[124]

There is a dearth of published evidence regarding whether P4P could be used to improve quality in continuing care. A recent systematic review of the literature regarding P4P programs and nursing home care identified only 13 published programs between 1980 and 2007, seven of which remained active at the time of the review.[125] The review found little evidence supporting P4P as a basis for improving the quality (generally defined by clinical outcomes and utilization measures) or efficacy (generally defined by surveys and staff turnover) of care delivered by nursing homes. Many of the studies, however, were plagued with design and measurement issues. More rigorous investigation is needed before P4P can be recognized as a successful policy alternative. This is particularly true if it is to be implemented as a specific mechanism to address ALC utilization, where there is currently no supporting evidence.

There are opportunities to create incentives for providing more efficient continuing care, such as rehabilitation and long-term care. However, the lack of evidence-based guidelines for continuing care will continue to frustrate efforts to monitor the effectiveness of care.

While there is solid evidence regarding the unintended consequences of ABF, less is known regarding the effects of P4P, bundled payments and shared savings models on continuing care. Moreover, changes in funding will be challenging to implement in an environment based on a history of silos unaccustomed to measurement on cost and quality.

5 PROCESS ISSUES: REVIEW OF THE DATA

Much ALC utilization can be viewed as representing uncoordinated transitions between acute and post-acute settings, resulting from poorly integrated clinical information, communication systems,[126] provider relationships and informal caregiving. Consequently, the data and reporting systems for continuing care are examined from the perspective of their role in ALC utilization.

5.1 Data reporting systems

There is comprehensive information regarding what type of activity occurs in acute care hospitals; using the patient chart as a basis, clinical, demographic and administrative information is summarized in a standardized manner. Specific information includes age, sex, diagnosis, procedures, length of stay and discharge location, but does not include information regarding a patient's function. Though reporting activity in acute hospitals is voluntary for the province, the entire population of acute care hospitalizations in Canada is reported to CIHI's Discharge Abstract Database (DAD). This information is valuable for many aspects of managing hospital care, but it is also essential for calculating ALC utilization and rates of transitioning through hospital care (readmission and end-of-life care).

In contrast, information regarding activity that occurs after the acute hospitalization varies considerably by sector and province and it is far less comprehensive than hospital-based care in terms of coverage of the population. A significant effort to collect patient-level, facility-based continuing care information has been emphasized in several provinces, notably Ontario and Alberta. To support these efforts, service-specific reporting systems have been developed by CIHI to collect and report patient-level continuing care activity. The reporting systems are based on setting-specific clinical assessment instruments; some attributes of the most common information systems used for collecting data regarding ALC patients are described below.

Continuing Care Reporting System (CCRS): CIHI's CCRS contains standardized clinical and administrative information on facility-based continuing care patients. Based on the Resident Assessment Instrument (RAI) Minimum Data Set (MDS 2.0)© assessment instrument, the CCRS contains over 500 data elements for each continuing care patient documenting clinical conditions and functional characteristics.[127] Quality and resource utilization indicators have been developed based on the clinical data items in MDS[128, 129] and are now routinely reported on.[130, 131] This continuing care reporting system includes information from facilities of two types:

- Hospitals that have beds designated and funded as complex continuing care beds
- Long-term care facilities (publicly and privately-funded)

For patients residing in facility-based continuing care on an extended basis, this data is collected and reported longitudinally, typically every 3 months, or more often in cases of significant clinical change.

Since collecting and reporting this information is voluntary by province or, in some provinces, by region, the coverage is incomplete. In Ontario, all complex continuing care and long-term care facilities collect and report these data, for each resident, on a quarterly basis. Collection of this dataset occurs in a portion of long-term care facilities in B.C., Alberta, Saskatchewan, Manitoba, Nova Scotia, Newfoundland and Labrador and the Yukon.

National Rehabilitation Reporting System (NRS): CIHI's NRS contains information collected on adult inpatient rehabilitation activity in specialized rehabilitation facilities, hospital rehabilitation units and designated rehabilitation programs. The basis for the NRS is the 18-item FIM™ patient assessment instrument—a two dimensional assessment instrument that evaluates cognitive and physical function collected at admission and discharge. Resource utilization indicators have been developed and validated based on data items from admission functional scores.[132, 133, 134]

Collecting and reporting inpatient rehabilitation information to the NRS is voluntary by province and coverage of Canadian hospitals is very incomplete; all 69 of Ontario's facilities participate, as does Newfoundland's one facility. However, in many provinces, inpatient rehabilitation is regarded as a continuation of the acute episode, and it is not reported separately, inhibiting comparisons between provinces.

Home Care Reporting System (HCRS): Developing data to evaluate the effectiveness, efficiency and appropriateness of home care is difficult. As a result of the mix between publicly- and privately-funded home care, data on the provision of home care is sparse and incomplete. Since a large portion of home care is provided informally (by the client's family or friends), the population-based measurement and evaluation of home care in Canada is difficult. The most reliable assessment of home care in Canada is based on a 2007 report by CIHI.[135] This report describes the publicly-funded home care industry, which CIHI claims comprises approximately 78% of formal home care expenditures. In 2003-2004, total public spending on home care services was $3.4 billion (all figures in 1997 dollars), or $93.60 per capita. Growth in spending has averaged 6% per year since 1994–1995. The number of clients receiving home care services grew by approximately 1% per year over that same time period (from 23.9 clients per 1,000 to 26.1 clients per 1,000).

In spite of these limitations, there are efforts to standardize aspects of home care information. CIHI's HCRS contains information on clients served by publicly funded home care programs including: demographic, clinical (such as treatments and medications), function, and resource utilization. HCRS also collects information on informal caregiving. The clinical and resource utilization information is based on the RAI-HC© assessment instrument and includes preferences, needs and strengths of clients. It is normally completed for long-stay (60 days or longer) adult clients who are non-palliative. Quality and resource utilization indicators have been developed based on the data items in the HCRS[105, 103] and form the basis of some reporting systems. To complement HCRS, the interRAI Contact Assessment (interRAI CA©) collects a brief profile of all people served through screening or home care intake processes.

Although coverage is gradually expanding, standardized home care data is incompletely collected and reported across Canada. In Ontario, information is collected and reported for all home care clients. In British Columbia, Manitoba, Nova Scotia, and the Yukon, it is collected for a portion of home care clients. Moreover, there is variation across provinces regarding the comprehensiveness of the information submitted; in some provinces clinical information is not submitted (i.e., RAI-HC information is not submitted), whereas in others, administrative information is not submitted.

Patient level cost data: An important role of case mix-based funding systems, such as those described above, is to estimate the expected costs of patients or residents. To generate expected costs based on clinical characteristics, a sample of patient level cost data is required. Using these case mix systems, cost data then is not required for the population of patients.

Patient cost data takes two forms: that which is based on aggregating the costs for all aspects of patient care, or that which is based on the staff time consumed to provide care. Neither is based on provincially- or nationally-standardized methods. Acute care is based on the former, while continuing care tends to be focused on combinations of both.

Patient cost data for acute care is difficult to obtain despite its being intrinsically valuable to hospitals and provincial ministries of Health to support their acute-based activity-based funding programs.[4] In the same manner, in Ontario and Alberta several hospitals generate patient-level cost data for complex continuing care and inpatient rehabilitation. In Ontario, this data source is also being developed for home care clients

(which is distinct from billed services records). However, the amount of information currently generated is minimal and lacking in comprehensive standards. Patient cost data based on staff-time measurements has also been collected in research settings to support continuing care case mix systems.

> Patient-level cost data is rarely generated outside of acute care. Moreover, there are no incentives for providers to develop this data source, nor are there national standards for collecting or validating patient-level cost data.

Accuracy of reported ALC data: Quality of reported information is an important issue related to assessing healthcare utilization. Though managed by guidelines,[136] and affected by local variations[137] and hospital characteristics,[138] there are often discrepancies in the concordance between the patient's clinical information and reported information.[139] As described elsewhere, due to variations in reporting, ALC is presumed to be under-reported.[1, 137] While many data discrepancies are attributable to random factors, some information is susceptible to gaming to increase revenue, even in Canada.[140, 141] Consequently, more intensive reporting of ALC utilization should be based on evaluated adherence to standards. Lack of information regarding the quality of data remains a weak point not unique to Canada, as other countries have identified gaps within their own continuing care data collection systems.[126, 142] Nonetheless, limitations in understanding the quality of the data have not inhibited their use for public reporting or activity-based funding in many settings.

> ALC reporting is subject to the same forces that create variability in other information abstracted from the patient chart. Intensive use of ALC information should be based on accurate information, subject to provincial standards and validated through clinical data audits.

In summary, person- and client-level information is inconsistently collected and reported across provinces and territories. While the CCRS collects complex continuing care and long-term care information, and the HCRS collects home care client data, comprehensive reporting of long-term care and home care information is lacking. In addition there are significant gaps in the collection of other levels of continuing care data—most notably regarding supportive living and community support services, such as respite care and day care programs (although, Ontario is implementing the interRAI Community Health Assessment for community support services, representing in excess of 800 agencies). The issue of continuing care is further confounded by the largely unmeasured and unfunded role of family and informal caregiving.

Without even the most basic utilization information, gaps in standardized and reliable data make it challenging for policy-makers to make decisions that improve allocative efficiencies between sectors and what follows directly is inefficient hospital utilization. To address this gap, some provinces use demographic and utilization data to crudely project population need.[143] This approach is only appropriate when the current utilization and spending accurately reflect the need of the underlying patient population; otherwise, this approach serves only to perpetuate current mismatches in utilization, expenditure and cultural patterns. Furthermore, when implemented in single settings, these specialized datasets for collecting and monitoring continuing care activity support setting-specific, or silos of, care rather than promote information sharing or national electronic health record standards.[144]

While there are comprehensive information sources available to monitor utilization and expected cost of health resources across the spectrum, the data is incomplete. Moreover, even setting-specific data collection systems do not provide information regarding appropriateness of care, or how to reallocate resources across settings to reflect need.

There are some bright spots. For provinces having implemented continuing care reporting in multiple settings, shared definitions for clinical and demographic items have been developed. These shared definitions for information including functional status and medical management are due to CIHI's use of interRAI's assessment instruments, and they will lead to consistent and comparable data across settings.

5.2 Data reporting and care transitioning

Effective and efficient care transitions are important for reducing the demand for hospital-based care and subsequent ALC utilization. To achieve these outcomes, information needs to be standardized and integrated, not only within a setting's various healthcare providers,(e.g., between physicians and nurses)[145] but also across the settings themselves (e.g., between hospital and post-acute settings).[126] Failings of the system (and data) at this vulnerable time miss an opportunity to decrease the likelihood that the frail elderly become future ALC patients by reducing readmissions, reducing costs and increasing the move from one setting to another.[146] For example, poor discharge planning has been linked to adverse clinical events, unmet care needs and poor satisfaction with care.[147] Discharge transitions are gaining recognition as important measures of high quality and performance of a healthcare system.[148]

Naylor and colleagues demonstrated that comprehensive and coordinated hospital discharge, and home follow-up by advanced-practice nurses, can significantly reduce rates of hospital readmission, increase time until readmission and reduce costs of care in elderly adults.[149] The randomized study involved 383 patients admitted to hospital with one of eight different medical or surgical diagnoses. Upon discharge, half the sample received standard follow-up care, and the other half received the more-comprehensive discharge and follow-up care. Significant differences between the two groups were observed in 24-week readmission rates and in the length of stay of those who were readmitted. Functional status for both groups improved and satisfaction rates were similar; however, in neither case were any significant differences observed. Twenty-four week post-acute costs differed significantly between groups: $6,600 vs. $3,600 for the control and intervention groups, respectively.

Building on this seminal study, substantial research has been conducted in disrupting the cycle of hospitalization, discharge, and re-hospitalization. Though the strength of the evidence is uneven, five components of re-hospitalization have been identified through a systematic review[150] that could reduce the potential for ALC utilization:

- Comprehensive assessment of discharge and medication needs
- Enhanced patient (and caregiver) education and self-management
- Complete communication at discharge between clinicians from hospital and clinicians at discharge setting
- Early post-discharge follow-up for high-risk patients

- Early post-discharge nurse, pharmacist phone calls or home visits to confirm understanding of self-management
- Appropriate referral for home care and community support services when needed

> Reducing demand for hospital care affects ALC utilization. There is a body of evidence guiding the type of information (data) and processes required for effective and safe care transitions. This knowledge provides an evidence-based opportunity to add data elements to existing reporting systems.

Comprehensive transition planning alone may not be sufficient to mitigate problems with patient flow. Nonetheless, effective processes for managing care transitions have been validated and linked to reducing the demand for hospital care. This, in turn, could have a positive impact on ALC utilization. These findings are complementary with broader initiatives designed to reduce the demand for acute care, such as chronic disease management.

6 PROVINCIAL INITIATIVES

Between four and six stakeholders were contacted in each of the provinces of Ontario and B.C. to discuss aspects of ALC utilization. In a semi-structured interview format, stakeholders from hospitals, local health integration networks (LHINs, Ontario), health authorities (B.C.) and ministries of Health were identified and contacted. Anonymity of responses was assured for all respondents. Open-ended questions were developed regarding the following:

- monitoring of ALC utilization
- most common reason for delaying discharge (and discharge location)
- relative importance of decreasing ALC utilization
- factors affecting target levels of ALC utilization
- ongoing or planned initiatives to decrease ALC utilization
- incentives provided to hospitals or continuing care providers to reduce ALC utilization
- other opportunities that exist to reduce ALC utilization
- how acute hospitals would change activity if ALC utilization were decreased

6.1 British Columbia

In B.C., hospital and continuing care services are managed and delivered by five regional health authorities (HAs, specialized programs are coordinated by a separate Provincial Health Services Authority). ALC utilization is a high-priority issue for the B.C. Ministry of Health Services (MoHS) and HAs. With acute care occupancy remaining close to 100% and emergency departments routinely backlogged, ALC statistics are closely monitored within HAs; standardized reports are generated for each of the 13 reporting periods and are shared with HA managers, acute hospitals and continuing care providers. Importantly, efforts are underway to ensure that ALC reporting is standardized across hospitals and that reported ALC data is reliable.

ALC utilization is in excess of 10% of acute care capacity in B.C., though significant variation exists between HAs and hospitals. Within HAs, multidimensional plans are being implemented to target reductions in ALC utilization, from short-term decreases below 8% to long-term plans targeting ALC utilization of less than 3%. In contrast to the national figures, B.C.'s HAs report that approximately one-half of ALC patients are awaiting discharge into long-term care; others are waiting for home care, assisted living, rehabilitation or are residing in acute care due to inefficient transfer processes. Performance indicators representative of ALC utilization include percent of transitional care patients returned to the community and percent of community-based residents who meet the criteria for long-term care. In B.C., strategies for reducing ALC utilization are aimed at reducing demand for hospital services and substituting for long-term care.

System level initiatives to reduce demand for hospital-based care include rapid access clinics, outreach teams and active care management. HAs are also providing transitional care beds. These beds are a lower-cost alternative to acute care, but still provide the proximity of hospital-based support. In some HAs, constraints in the capacity of long-term care are addressed by supplementing home care support until a long-term care bed opens. Patient-level programs to reduce demand for hospital-based care include increasing supports for 'revolving door patients' and people at risk for ALC, such as patients suffering from delirium and provision of guideline-concordant care to reduce the volume of ineffective care.

Specific programs designed to substitute for long-term care include bolstering respite care, palliative care, adult day services and the breadth of services available through home care (including expanded training for home care staff). In some HAs, demand for long-term care capacity is actively managed through increased convalescent care, including reactivation, for the frail elderly.

While there are significant initiatives to collect and report standardized ALC information, as well as substantial investments in the supports underpinning continuing care, there are no financial incentives being used to change the behaviour of acute or continuing care providers (with the exception of the regional P4P program for home care). Moreover, there are no plans for formal evaluation of the components previously described in relation to their ability to reduce ALC utilization.

In B.C., HAs are taking many steps to reduce ALC utilization, such as expanding community-based continuing care and developing new programs; however, evaluation of initiatives that work singularly, or in combination, to reduce ALC is ad hoc.

6.2 Ontario

The Ontario Hospital Association reported than 17% of hospital beds were consumed by ALC patients, a figure that has remained fairly constant over the past three years.[40, 3] Within this figure there is significant variability between LHIN ranging from 24% of acute hospital capacity in the North East LHIN to less than 10% in the South East LHIN. While ALC utilization is reported publicly on a routine basis,[40, 3] no target rates are available. Approximately two-thirds of these patients are awaiting discharge to long-term care; numbers range from 80% waiting for long-term care in the Erie St. Clair LHIN to 34% in the Central West LHIN. These figures are contributing to close to 100% occupancy in acute care hospitals in Ontario. ALC is cited as a critical factor contributing to delays in admissions from emergency departments.

There are a multitude of reasons provided for the very high ALC utilization rate in Ontario, including a lack of processes for highly active discharge planning from acute care and late involvement of community care access centres (CCACs). Another explanation cites the role of organizational relationships and cultural factors, such as weak partnerships across provider types, and physicians' beliefs that long-term care patients should wait in hospital for a long-term care bed. Lastly, there are some perceptions that inaction on ALC utilization is a cost growth containment strategy employed by hospitals (ALC patients tend to be the least expensive acute care patients).

The Aging at Home strategy of the Ontario Ministry of Health and Long-Term Care (MoHLTC)[151] is being used to reduce inefficient and ineffective hospital care. Under this strategy, initiatives linked to ALC utilization are being aimed at reducing demand for (all) hospital and long-term care, improving patient flow between provider types, and increasing capacity for some types of continuing care.

Reducing the demand for hospital and long-term care beds is based on several province-wide initiatives. First, the breadth of services offered by home care is being expanded, as is the intensity of supportive services (for example, by the removal of service maximums). Specifically, regulatory changes have been made to increase the amount of personal support, homemaking and nursing services available in the home to deter hospitalizations or long-term care placements. The initiative is targeting high-risk, frail and cognitively impaired seniors. Demand reduction strategies also include emergency department diversion programs and establishment of evidence-based practices of care. The latter are being formulated with expert clinical panels, and they are intended to reduce variations in unwarranted utilization (in all sectors). Initially, they are being focused on high-volume pathways of care.

To improve patient flow, the Home First initiative integrates hospital care with the home care providers from community care access centres (CCACs). The program is used to expedite the transition of patients from hospital to home by providing enhanced/intensive home care supports including restorative care. Performance indicators include: percent of ALC patients moved to long-term care and fewer ALC days. For patients awaiting long-term or complex continuing care beds, vacancy matching services are attempting to expedite patients' moves from acute care. Patients with skin/wound care needs, palliative patients and the frail elderly are the focus of the integrative programs.

The Aging at Home strategy is also responding to high ALC utilization by altering the current capacity of the health system; transitional care beds are being added to acute care hospitals, temporary long-term care beds are being created and specialized continuing care programs for hospitalized dementia patients are being expanded.

Initiatives to reduce ALC are LHIN-based and their potential for system-wide reform hinges upon the MoHLTC's ability to propagate best-practices (such as those featured by Mississauga Halton LHIN). Moreover, Ontario's costly additions of new programs to reduce ALC utilization do not currently include the evaluation of program effectiveness or efficiency. As well, other than long-term care, there are no financial incentives currently used to change the behaviour of continuing care providers. Lastly, it is not clear how Ontario's long-term care funding initiatives will shape admission patterns to long-term care, long-term care utilization, or ALC utilization.

In Ontario, ALC utilization is a very expensive health system issue being addressed with a multitude of programs. Identification, evaluation and dissemination of initiatives that work singularly, or in combination, to reduce ALC utilization and improve patient care should continue to be coordinated between LHINs.

7 CONCLUSION

ALC utilization is pervasive across Canadian provinces and reflects inefficient and ineffective use of scarce and costly hospital resources, the effects of which detrimentally ripple throughout the healthcare system. Clearing hospitals of many of these patients will improve timeliness of access.

As highlighted by this study's focus on the efforts of two provinces, there is a dearth of evidence indicating which programs, or investments, are effective at reducing ALC utilization. While adding continuing care capacity may address some important constraints, it may not solve the ALC issue. Adding capacity is not likely to lead to an increase in the effective use of continuing care.

Arriving at more feasible solutions is difficult; in some provinces, there is scant information regarding the nature of care provided beyond the hospital. Data systems which provide timely and relevant information to caregivers to reduce demand on hospital and continuing care are needed. Commensurate with their investments, some provinces have made substantial strides in this area. Even with these investments, however, there is lack of evidence to project needs for effective, efficient and safe continuing care.

The immediate challenge is to overcome barriers to identifying solutions that successfully address ALC utilization; once this is accomplished, the challenge will be to refocus on how to manage acute care capacity effectively. One strategy might be to fill these newly-available beds with new patients. In this case, replacing (low cost) ALC patients with (higher cost) acute care patients will increase hospital costs substantially. Also, it will pressure the skill mix used to staff these beds. Another strategy might be to keep these beds unoccupied; however, the literature from supply-sensitive care suggests that keeping these ALC-vacated beds unoccupied will be challenging, even though reducing occupancy has been linked with improved nurse productivity and quality. Alternatively, consideration might be provided to redirecting acute care resources associated with these ALC beds (by closing acute care beds) to continuing care, or to primary care, to reduce demand for hospital-based care.

Overall, there remains much work to be done to address inefficient hospital use. In provinces where there is comprehensive data and information on continuing care, effects of targeted initiatives to reduce ALC can start to be measured (inside and outside of the hospital). In other provinces, first steps can focus on standardized, population-based data collection. In conjunction, in all provinces, reduction in hospital demand will help curtail future ALC utilization. ALC utilization is an inefficient and costly use of a scarce resource; thoughtful and persistent efforts are needed by provinces (and regional authorities) to reduce its prevalence.

7.1 Recommendations

1 Reducing ALC utilization should remain a high-priority objective for health systems

The delivery of continuing care services in hospitals is an inefficient use of healthcare resources and has downstream consequences of negatively affecting hospital admission and access to elective surgery.

While there is no evidence to suggest an optimum level of ALC which includes some flexibility for hospitals for surge capacity, it must be less than the 7,500 hospital beds currently consumed daily.

Performance indicators based on ALC reporting should be developed and included in a standardized evaluation of the performance of hospitals and health systems. Not unlike 'DRG-creep' used to increase revenue, the same mechanism can be used to appear to create the illusion of efficient utilization. Clinical data audits must be used to mitigate gaming or fraudulent behaviour.

2 Align funding mechanisms and financial incentives with policy objectives

The costs and consequences of the current approaches to funding hospitals in Canada contribute to ALC utilization; there are currently no incentives for hospitals to shorten lengths of stay or improve discharge processes. Moreover, under global budgets, there may be disincentives for discharging the least costly patients.

Without changes to methods for funding continuing care, financial incentives created by ABF for acute hospitals may be moot; if there are no discharge locations available, hospitals will be unable to adequately adjust their activities to realize the incentives. Therefore, ABF should be accompanied by incentives for expediting access to continuing care.

Activity-based funding policies have been implemented for non-acute hospital-based care in other countries to create incentives to provide cost-efficient care (within silos). While they are currently not feasible (outside of Ontario, Alberta and Saskatchewan) due to data availability, they should be explored. Specific opportunities exist for:

- *Inpatient rehabilitation:* Activity-based funding policies for inpatient rehabilitation provide opportunities for decreasing lengths of stay, contributing to decreasing ALC and reducing unwarranted variations in rehabilitative care.
- *Complex continuing care and long-term care:* Activity-based funding policies for complex continuing care and long-term care provide opportunities to align funding with patient characteristics, reduce unwarranted variation in cost and monitor care quality. While not directly creating incentives for decreasing ALC, reducing variation in cost will lead to more efficient utilization in these settings which can be directed to improving access.

A P4P framework can be used to create incentives for acute care and long-term care providers to expeditiously discharge ALC patients from acute care. However, there is no evidence from other health systems regarding how these incentives should be structured.

As with acute care, funders should concurrently develop patient-level sources of cost data to provide insight into how prices for continuing care should be determined. National standards for collecting and validating patient-level cost data should be established by CIHI. Techniques for auditing (verifying) the accuracy of reported data will need to be developed.

3 *Strategies to reduce ALC should be focused on*

1) discharging patients from acute care earlier to the appropriate setting
2) reducing demand for future hospital-based care

For ALC patients, there are initiatives targeting earlier discharge including intense home care support, expanded respite care, palliative care and adult day services programs. In addition, transitional care or long-term care beds are being added in some provinces. The effectiveness and cost-efficiency of these programs is unmeasured, and it is unclear whether these programs will result in sustainable ALC reductions.

The evidence is equally sparse for upstream efforts aimed at reducing demand for hospital services. These efforts include new rapid access clinics, outreach teams and increased home care supports. Evaluation of these programs to reduce hospital demand, and whether this indirectly affects ALC, is needed.

There is a gap in the evidence regarding how, and at what rate, to move towards allocative efficiency between sectors. In other words, how should public funds be allocated between sectors to maximize health? Policy-makers will be faced with the difficult issues associated with trade-offs in the face of pressure from multiple stakeholders, advocates and patients.

4 *Data reporting systems need to be integrated and comprehensive*

In many provinces, data regarding utilization of continuing care is incomplete. A pragmatic approach to managing continuing care will include enhancement of data collection and reporting. The benefits of more comprehensive data collection and reporting have to be emphasized from the perspective of provision of effective and efficient care across the continuum.

CIHI's continuing care data holdings should be expanded to include indicators of effective care where standards of evidence exist, as information regarding ineffective or inefficient care would be valuable for managing patient care across the entire continuum.

To complement setting-specific reporting systems, emphasis should be placed on identifying patient needs and delivering continuing care that is aligned with their (or their family's) preferences.

5 *Establish pan-Canadian evidence-based guidelines and standardized definitions*

Greater emphasis needs to be placed on investigating the level of care that is needed for the most common causes of continuing care admission. An evidence-base should be established for each level of care upon which financial and quality performance can be assessed.

There is an absence of standardized definitions for intensity or levels of continuing care. The creation of standardized definitions would be a very valuable step to comparing the design characteristics and utilization of continuing care across provinces and territories. As well, it would facilitate peer-based benchmarking of providers on quality of care and financial performance. As a national health information organization, CIHI should coordinate development and implementation of standardized definitions for intensity or levels of continuing care.

6 Emphasize knowledge translation and cross-jurisdiction learning

Several provinces are developing and implementing new policy tools for acute care that are designed to shorten lengths of stay and increase the volume of hospital care. Since these incentives will shape the need and demand for continuing care in unknown ways, rigorous and comprehensive studies that monitor changes in demand, appropriateness and quality of continuing care services are needed.

Currently, multiple programs, at varying intensities, are being implemented to reduce ALC utilization without consideration for measuring the program's efficacy, cost-efficiency or generalizability. Comparative evaluation of policies that work singularly, or in combination, to reduce ALC and improve patient quality of life is needed.

Many programs to reduce ALC are locally or regionally based and never become broadly known. There is a need for greater knowledge-translation activities, wherein evidence regarding identification and evaluation of policies designed to reduce ALC and improve patient quality of life are made widely available in an easy-to-digest manner.

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APPENDIX 1: SUMMARY OF PROVINCIAL POST-ACUTE CARE PROGRAMS AND TERMINOLOGIES

Table 1: Summary of provincial terminology for long-term care and supportive living

	LONG TERM CARE*	SUPPORTIVE LIVING*
British Columbia	Residential Care Facilities	Assisted Living Residences Groups Homes Family Care Homes
Alberta	Long Term Care Facilities	Supportive Living Accommodations Enhanced Living Designated Assisted
Saskatchewan	Special Care Homes Nursing Homes	Personal Care Homes
Manitoba	Personal Care Homes	Supportive Housing
Ontario	Long Term Care Homes	Supportive Housing Retirement Homes
Quebec	Centre Hospitalier de Soins de Longue Durée (CHSLD)	Résidences pour Personnes Âgées
New Brunswick	Nursing Homes	Special Care Homes
Nova Scotia	Nursing Homes or Homes for the Aged	Residential Care Facilities Community Residences Small Option Homes
Prince Edward Island	Long-term Nursing Care Facilities/Homes	Community Care Facilities
Newfoundland	Nursing Homes	Personal Care Homes
Yukon	Continuing Care Facilities	Continuing Care Facilities
Northwest Territories	Long Term Care Facilities	Long Term Care Facilities
Nunavut	Long Term Care Facilities	Elder Home

** The Long Term Care category includes the presence of 24 hour a day professional nursing, Supportive Living does not.*

APPENDIX 2:
DEFINITION OF FACILITY-BASED CONTINUING CARE

Two-thirds of ALC patients are waiting for a facility-based continuing care bed that matches their care needs, preferences and availability. The primary discharge locations are: complex continuing care, long-term care and inpatient rehabilitation, and may include facility-based hospice care.

Complex continuing care

Complex continuing care provides continuous, hospital-based specialized medical care to patients. Admission is through a physician, and care tends to be provided to patients over extended periods. These complex patients cannot be cared for in long-term care facilities and are typically afflicted with illnesses or disabilities requiring skilled or technology-based care, such as a ventilator. Patients in this setting usually range across the age spectrum, and their illnesses include conditions such as advanced multiple sclerosis (MS) and Lou Gehrig's disease (ALS). These patients are also designated as extended, auxiliary, or chronic care patients in some provinces. These beds tend to be funded through a global budget (described in more detail below), though at a lesser amount than acute inpatient beds.

Long-term care

Long-term care is facility-based continuing care that provides personal support and physical, social and health services in a secure setting. Its objective is to maintain or improve the quality of life of residents, and it is intended for people with long-term functional or cognitive disabilities. Residents of long-term care facilities have complex medical needs that cannot be provided for in their home, or in supportive living settings, and require case management. Examples of types of care provided in long-term care facilities include end-of-life care and behavioural management for residents with severe dementia.

Long-term care integrates the functions of health services and accommodation in a single setting. In long-term care facilities, there is registered nursing care available (often available 24 hours) which is supported by a range of professionals, such as licensed practical nurses, healthcare aides and other providers. Health services obtainable include nursing care, pharmacy management, physical therapy and ulcer management. Non-nursing health services include assistance with activities of daily living and recreation. In some long-term care facilities, there are specialized programs for residents with special needs, such as severe dementia or Alzheimer's disease. Also, in some provinces, long-term care provides convalescent care which assists residents recovering from a serious illness, trauma or surgery.

Entry into long-term care is through a care coordinator (or equivalent, such as a government- or regionally-employed health professional) that ensures eligibility, applies means or income testing, matches patient and caregiver preferences to facility selection and applies clinical judgment based on risk, health and functional status. Current location (home or hospital) and informal caregiving also affects entry into long-term care. Long-term care is provided to residents through a mix of public and private providers (government, for-profit, not-for-profit, and religious-based)[25] . The terms nursing home, intermediate care home and residential care facilities are used interchangeably with long-term care facilities.

Inpatient rehabilitation

Inpatient rehabilitation provides a combination of intensive, hospital-based rehabilitative and complex medical services that cannot be provided in a community setting. Inpatient rehabilitation may occur within acute care hospitals or specialized rehabilitation hospitals. Inpatient rehabilitation involves a combination of medical and rehabilitative professionals such as registered nurses, occupational, physical, speech and respiratory therapists, dieticians and those employed in support services. Admission into inpatient rehabilitation is generally from an acute inpatient hospital and is intended to be episodic in nature. Common patient types include: traumatic injuries, post-surgical orthopedic aftercare and stroke rehabilitation. Average lengths of stays in inpatient rehabilitation range from 10 days (stroke) to 90 days (spinal cord injury).[26] Inpatient rehabilitation tends to be funded through a global budget.

Community-based continuing care: Approximately one-third of ALC patients are waiting to be discharged into community-based continuing care as they do not need facility-based care. Access to the array of community-based continuing care services is through a care coordinator. For these patients, the most common discharge locations are supportive living, home (with and without support services) and community support services. They are described below.

Supportive living: Supportive living facilities are settings in which the residents have care needs that cannot be met in their homes, and where residents need moderate assistance with the activities of daily living, but they do not require continuous health or nursing services. Residents in supportive living settings may require the intermittent medical services of a visiting professional, or case management services, or are considered at risk in their current environment.[25] The diverse services provided in supportive environments include light housekeeping, meals, assistance with grooming and hygiene and, in some provinces, limited personal care or health services. Supportive living is known as assisted living in some provinces.

Home care: Home care is used to describe the collection of services delivered to individuals in the home which may be defined as a dwelling, supportive living facility, or other residence type. Care usually includes, at minimum, assistance with daily activities such as bathing, dressing, grooming and light household tasks that maintain a safe environment and quality of life. It may include nursing, therapies, dietetics or social work. The objectives of home care are several-fold: maintain the ability of people to live independently (including rehabilitative, maintenance and preventive functions), and act as a substitute for hospital or long-term care and avoid acute care hospitalizations.

In addition, a great deal of informal caregiving is provided by spouses, children, friends and neighbours—anyone who is providing care and not being remunerated. A recent CIHI study of informal caregiving reports that 98% of seniors who receive publicly-funded home care also had one or more informal caregivers.[27] Overall, informal care is estimated to represent $25 billion in uncompensated services each year, a figure which is likely underreported.[28] Informal caregiving is relevant to ALC utilization for two reasons: first, informal caregiving can limit or expand available discharge locations, and secondly, informal caregivers can suffer from distress and subsequently use hospital admissions as a form of respite.[27] While recognizing the significant effects of informal care, this report focuses on policy levers available to publicly funded health services to reduce ALC utilization, an effect which limits its discussion in this report.

Hospice: Hospice care refers to the different aspects of palliative and end-of-life care provided to the terminally ill. Hospice care includes medical care, pain management and social services intended to provide comfort and support to the patient and caregivers. Hospice care is provided by physicians, nurses, social worker and therapists. A significant proportion of hospice care is provided in the home, though it may also be offered in acute care or long-term care facilities.

While ALC patients use other types of community-based continuing care other than those listed, the available information indicates that *community support services* and retirement homes play an important, but less prominent, role in the care of ALC patients discharged from acute care into the community (relative to those described above).

Community support services describe the broad array of supportive services provided in the home (or place of residence) that differ from the typical home care services, including social work, nursing, therapies and dietetics. Examples of community services are respite care and day care programs, and include recreational programming, meals on wheels, and transportation programs. Community support services are used to delay long-term care or avoid admittance to hospital-based care.

Retirement homes are private residences for seniors requiring minimal support. In some instances, residents receive home care services in retirement homes. The services provided in retirement homes are limited to laundry, light housekeeping and communal meals and do not include health services.