Canadian Society of Hospital Medicine

Core Competencies in Hospital Medicine

Care of the Medical Inpatient

Phase 1 – September 2015

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Core Competencies in Hospital Medicine

Table of contents

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Table of contents

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Letter from the Canadian Society of Hospital Medicine

September 2015

Dedicated Hospital Medicine programs emerged across Canada in the late 1990's as a response to the evolution of complexity and acuity of hospital care, to an increase in resource constraints and shifts in physician work patterns, and to a growing demand to understand and deliver quality in-patient care. Physicians of various specialties and training backgrounds led the way. As the Hospital Medicine movement evolved, these physicians, and the care communities in which they practiced, identified a need for a cohesive professional identity and for a more clearly defined scope of practice and competencies around which to learn, to teach, to create knowledge, and to develop their careers.

In this context, the Canadian Society of Hospital Medicine (CSHM) was established over a decade ago. Initially, the Society was nurtured through national Continuing Medical Education (CME) events and through close collaboration with the American Society of Hospital Medicine (SHM). Subsequently the CSHM incorporated formally; it continues to build a truly national organization.

Even in its earliest stages, the CSHM identified the need to take a leadership role in articulating competencies to support high quality Hospital Medicine practice. A collaborative, iterative, clinician-led approach culminated in this document, the Core Competencies in Hospital Medicine: Care of the Medical Inpatient – Phase 1 *(CCHM 2015)*, which describes core work that is performed by hospitalists in most programs across the country.

We wish to express our great appreciation to the contributors and pioneers who poured their time, energy, and wisdom into this task, and to the many medical community leaders across this country that create innovation in Hospital Medicine, and who contribute to the CSHM's development. Most particularly, however, we wish to thank Dr. Marcel Doré, whose passion and leadership with the Core Competencies in Hospital Medicine project has been critical to achieving this important milestone.

We commend this document to your use with confidence and great enthusiasm!

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Introduction

Preface

Marcel Doré – Chair, CCHM 2015 Executive Committee

The development of Canadian Society of Hospital Medicine (CSHM) *Core Competencies in Hospital Medicine: Care of the Medical Inpatient Phase 1 – September 2015 (CCHM 2015)* began officially in September 2013, at the CSHM Annual Conference. Since then, more than 100 practicing hospital physicians contributed to this document through written and verbal feedback in focus groups held at national meetings, through writing, editing, and reviewing frameworks, or by writing original articles. This document is truly a *grass-roots description* of Canadian medical inpatient care in a non-critical care setting, written by individuals who work in a hospital setting. This document, put together in a framework of competency roles (Royal College of Physicians and Surgeons (RCPSC) CanMEDS 2015), reflects elements of care that go well beyond a knowledge base. At this point in time, it is DESCRIPTIVE and not a PRESCRIPTIVE document. It *describes* hospital inpatient care, regardless of hospital size. It seeks to focus on care needs of patients, while describing a high bar for quality of care on most responsible physicians (MRPs), their clinical teams, as well as hospital systems. In fact, it relies on highly functioning hospital systems and does not isolate physicians out of this system, nor exclude/include them based on their medical specialty.

This document is intentionally named a **Phase 1 document**; it is only the beginning of a process, a design of a live document that will necessarily develop further and improve over time. The CSHM presents this document to commence the discussion and practice of supporting those individuals and groups dedicated to providing hospital medical inpatient care (in a non-critical care setting) in Canada. Looking forward, the Canadian Society of Hospital Medicine will be seeking collaboration with national, provincial and regional groups to ensure that, as a national society, the CSHM provides guided leadership to physicians who deliver hospital medical inpatient care.

As Chair of the CCHM 2015 Executive Committee, I would like to express my sincere gratitude to the Board of the Canadian Society of Hospital Medicine for initiating and funding this project. Thank you to all individuals who dedicated time to providing us with ongoing input regarding the hospital practice of medicine. A very special thank you goes out to Saskia van Tetering, who, as Project Manager and Editor, was able to herd us "cats" through hours of writing, reviewing and editing. Also, a sincere note of appreciation to the CCHM 2015 Expert Committee members who brought forth their experience and expertise to help build the foundation of this groundbreaking project. Finally, I offer a very personal thank you to my colleagues on the CCHM 2015 Executive Committee, who were solid in their determination, guidance and support in making sure this project was completed to this very important stage.

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Introduction

CSHM Core Competencies in Hospital Medicine: Definitions and future directions

Marcel Doré, Bill Coke, Pieter Jugovic, Jean Maskey, Mireille Norris, Stavros Savvopoulos, Serge Soolsma, Christine Soong, Diana Stancu [CCHM 2015 Executive Committee]

Hospitalist programs have been developing in Canada for more than 15 years. Yet, we still lack a clear definition of what a *hospitalist* is, and what constitutes a *hospitalist program*. Since its inception in 2013, the Canadian Society of Hospital Medicine (CSHM) has unified "hospitalists" across the country, primarily through the CSHM Annual Continuing Medical Education Conference as well as through membership in this national society and partnership with the well-established Society of Hospital Medicine (SHM) in the United States. Provincial representation for physicians who practice mainly in a hospital setting occurs mainly through the provincial medical associations, with a primary purpose of negotiating with ministries of health with respect to physician compensation, and more recently, to incentives and accountabilities. Local and regional Models of Hospital Care continue to vary throughout the country and are extremely dependent on local health care needs, resources and hospital management.

A seminal article by Scott D. Smith and Khalil Sivjee, *Defining training needs, core competencies and future certification for Canadian Hospitalists* (CMAJ, October 2, 2012, 184(14)), put forth eloquently the case for undertaking a discussion that *"must address future training needs, certification, core competencies and scope of practice for hospitalists, as well as methods of measuring the impact and quality of the care they deliver."*

The CSHM starting in 2013 developed this *Core Competencies in Hospital Medicine: Care of the Medical Inpatient Phase 1 – September 2015 (CCHM 2015)* document in order to define the core work that is performed by hospitalists in most programs across the country. This document does not define *all* work that is performed by hospitalists, nor does it define work performed *only* by hospitalists. Hospitalists are a mixed breed of physicians, and hospitalist programs are as variable as the work environments in which they developed. The growth of Hospital Medicine in Canada has been a grassroots, local and regional needs-based evolution, arising in response to several factors. As a result, considerable variability exists between individual hospitalist responsibilities and scopes of practice in individual hospitalist programs across Canada.

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How, then, does one develop a set of Canadian Core Competencies in Hospital Medicine that will serve multiple purposes?

- Describe a general scope of practice that will help to define the work performed by hospitalists and by other inpatient physicians?
- Address further training needs of newly graduating residents (mostly in Family Medicine and Internal Medicine), foreign graduates, practicing hospitalists, and other physicians who are looking for continuing medical education (CME) in Canadian Hospital Medicine?
- Recognize (at a national level) those physicians who developed a special expertise in care of the medical inpatient through experience and training?
- Provide a framework for developing measures for quality of patient care and safety in the hospital setting?
- Provide a framework for working in a current hospital setting that necessitates practicing in an interdisciplinary setting, which includes measures of accountability?
- Define the work of a hospitalist such that regulatory bodies, ministries of health, national associations, hospital administrators, and regional authorities may understand how hospitalists form natural allies for health care system leaders and managers in their quest to find solutions for improved quality care?
- Define the work of a hospitalist so that out-dated methods of physician remuneration (such as fee-for-service) may be replaced by mechanisms of funding, which fit in with local and regional needs, which maintain fiscal accountability, and which bring value to modern hospital efficiencies?

As a starting point in defining hospitalist work and hospitalist programs, we elected to describe the core hospitalist work as care of the hospitalized acutely ill adult in a non-critical care setting. As described above, this core definition does not define *all* work performed by hospitalists, nor does it define work performed *only* by hospitalists. However, this definition serves as a practical starting point that will subsequently assist in developing physicians, hospitalist programs and funding mechanisms.

Secondly, while most core competency documents and definitions are centred around physician competencies, this document focuses on competencies required to provide *excellent care for the defined patient population*, regardless of the background training of the physician. This difference is more than semantic; the defined patient is the most unifying element in this discussion. In fact, because of the high degree of variability between hospitals across the country, it would be impossible to describe a uniform standard of delivery relevant to all hospital settings. Therefore, the only constant is the defined patient population. By approaching the document in this manner, "turf" disagreements are reduced, and individual hospitals with different physician resources are

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assisted in identifying strengths and gaps in their system of care provision. Additionally, physician performance can be measured for quality initiatives, and training programs developed in a consistent manner. It will also lead discussion for resource planning at local and regional levels in order to provide *the best care by the best caregivers at the most appropriate time.*

The third unique element of this document is that we intentionally describe *Hospital* responsibilities with respect to taking care of the defined patient population. The provision of medical care in a hospital setting is an interdisciplinary process; neglecting hospital system elements, which support excellent patient care and safety would ignore elements necessary for the development and sustainability of strong hospitalist programs. Hospitalists and hospitalist programs require a fully integrated system to provide excellent care.

Finally, a very conscious effort was undertaken to ensure *CCHM 2015* follows current nationally accepted and modern standards that exemplify the complex medical environment in which we deliver care and in which we develop educational programs.

The Canadian Society of Hospital Medicine fully endorses these standards and used the following frameworks to develop *CCHM 2015:*

- *The Draft CanMEDS 2015 Physician Competency Framework – Series IV Royal College of Physicians and Surgeons physician competency framework*.[1] This resource is extremely practical in describing the care and quality of physician roles and is also well positioned to provide a framework for ongoing education, definitions for levels of expertise (through the Milestones initiative) and a guidance for measurement of competence.
- *The Safety Competencies: Enhancing Patient Safety Across the Health Professions*.[2] This document is a highly relevant, clear, and practical framework designed for all health care professionals. Created by the Canadian Patient Safety Institute (CPSI), The Safety Competencies has six core competency domains. These six domains have also been included in the CSHM *CCHM 2015* document.
- *CMPA Good Practices Guide (see link below)*.[3] With respect to training standards and directions, the Canadian Society of Hospital Medicine endorses a program developed by the Canadian Medical Protective Association (CPMA), the *CMPA Good Practices Guide*, as one program reflecting the values and practices described in the two documents listed above.

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CCHM 2015 does not seek to "reinvent the wheel." Most physicians arrive into this kind of work from Family Medicine training or from Internal Medicine training. Both residency-training programs develop physicians who are capable of working as full time hospitalists and have acquired many, if not most, of the competencies required. There is, however, a demand from residents and practicing physicians for further training in Hospital Medicine specifically. This *CCHM 2015* document covers the range of physician competencies within a hospital setting and highlights the special skills, which stand out in the taking care of the complex patient, many of whom are aged, palliative, have multiple comorbidities, and are usually on multiple medications. It is more than just about managing specific diseases; this document serves to supplement the excellent work already completed in training family physicians and internists, though it is not limited to these two specialties.

In order to lay the groundwork for this document, a few articles will precede the Frameworks section of *CCHM 2015.* These introductory articles describe the past and current Canadian health care climate, and will serve as a contextual background devoted to the role of the hospitalist within a hospital system in the provision of care to the defined patient population. The bulk of this document is the last section, *General skills, Common clinical conditions, and Procedures,* laid out in frameworks that reflect stages of hospitalization described alongside the CanMEDS physician competency framework, which outlines competencies required as a medical expert taking care of the hospitalized acutely ill adult in a non-critical care setting. The first of these frameworks (*Management of a standard medical admission*) describes meticulously competencies common to all situations that require hospitalization; therefore, these competencies are not repeated in the descriptions for each clinical condition.

Much work is required moving forward if this document is to prove itself as a living and usable resource for the ambitious purposes it has identified. The CSHM will be requesting internal reviews and feedback from Canadian physicians who have an interest in improving care of the medical inpatient. These physicians may or may not identify themselves as hospitalists; however, their input is critical in order to address more comprehensively the needs of patients within the hospital system. Secondly, partnerships in the review and feedback process will be initiated with relevant associations, societies, educators, patient advocacy groups, regulatory groups, and others in refining this Phase 1 document.

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Starting now, with Phase 1, individual physicians and physician groups may begin the process of "testing" this *CCHM 2015* document in live environments. Such "testing" could include the development of curricula for enhanced training in Hospital Medicine, of resources evaluations within hospital systems, and of presentations regarding current state of practice reality for many hospital physician groups, not the least of which are Hospital Medicine teams. Other immediate applications could include organization and planning of CME for inpatient physicians, and development of CME research in competency-based education for practicing physicians. Ultimately, *CCHM 2015* and its subsequent phases will form the basis for enhanced skills recognition in Hospital Medicine and will support further the important work being made to provide high quality and safe patient care in the hospital.

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1. *The Draft CanMEDS 2015 Physician Competency Framework – Series IV Royal College of Physicians and Surgeons physician competency framework.* (Frank JR, Snell L, Sherbino J, editors. The Draft CanMEDS 2015 Physician Competency Framework – Series IV. Ottawa: The Royal College of Physicians and Surgeons of Canada; 2015 March.)
2. *The Safety Competencies: Enhancing Patient Safety Across the Health Professions* (Frank JR, Brien S, [Editors] on behalf of The Safety Competencies Steering Committee. The Safety Competencies: Enhancing Patient Safety Across the Health Professions. Canadian Patient Safety Institute, 2008.)
3. Canadian Medical Protective Association (CPMA) *Good Practices Guide* (https://www.cmpa-acpm.ca/serve/docs/ela/goodpracticesguide/pages/index/index-e.html).

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Introduction

A brief history of Hospital Medicine programs in Canada

Scott D. Smith and Bill Coke

Two decades ago no one had heard of hospitalists or Hospital Medicine programs. In the early 1990s, hospitals in the United States (US) began to experience mounting difficulties finding physicians willing to serve as the most responsible physicians (MRPs) for patients requiring hospitalization, particularly patients with multiple chronic conditions, admitted for acute exacerbations or complications.[1-4] Multiple factors precipitated this shortage, including growing pressure on physicians working within hospitals to diagnose and to manage inpatients as efficiently as possible, all without compromising standards of care. At the same time, medical subspecialists and surgeons became concerned about providing optimal care for progressively more complex inpatients, often with co-morbidities outside these physicians' areas of expertise. Inadequate fee-for-service remuneration for this increasingly demanding work, relative to what physicians could earn in other areas of clinical practice, contributed further to the shortfall.

In response, physicians and hospitals in the US collaborated to create a new approach to inpatient care, using teams of physicians termed hospitalists to manage optimally these unmet needs. Hospitalists initially were defined as physicians spending at least 25% of their clinical practice working as MRPs, as an alternative to traditional inpatient care provided by primary care physicians and specialists.[1-4] Although hospitals had to supplement significantly physician incomes, usually through direct salary support,[4-6] Hospital Medicine programs proved to be cost effective through standardization of clinical practices, reduced resource utilization, and shorter durations of stay. Moreover, as Hospital Medicine programs matured over time, they demonstrated additional benefits, including enhancements in quality of care provided.[6-11]

Since the 1990s, inpatient care has become a full-time commitment for most hospitalists; Hospital Medicine programs are now the predominant model for inpatient care across the US.[10,11] Greater reliance on interprofessional teams to manage optimally patients with chronic conditions has never been more crucial. This reliance requires effective communication amongst hospitalists, with other health care professionals, hospital administrators, patients, families, and primary care physicians in the community. The Society of Hospital Medicine (SHM), the American national association, currently comprises almost 15,000 members, and advocates for improvements to health care services in that country.

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The SHM's activities include:

- Developing and implementing guidelines for managing chronic illnesses[15-18]
- Assessing new staffing models in hospitals including co-management strategies[19-21]
- Studying patient safety and prevention strategies[22-24]
- Improving discharge planning processes[25-29]

Since its inception in the US twenty years ago, the Hospital Medicine model-of-care has become an international movement, adopted in countries around the world including Australia, Argentina, Brazil, Singapore, Spain – and with impressive vigour in Canada.[30-32]

The Canadian experience

Hospital Medicine programs first appeared in Canada in the late 1990s, for many of the same reasons as in the United States. In response to changes in federal-provincial funding arrangements for health care, provincial governments in the mid-1990s reduced dramatically the number of acute care hospital beds per capita – by close to 50% in some provinces.[33] Concurrently, the numbers of medical students and residents being trained across Canada decreased significantly with a resulting shortage of physicians in some communities.[34]

At the same time, increasing numbers of acutely ill patients requiring admission to hospital started to overwhelm Emergency Departments. Medically complex patients, most with multiple chronic comorbidities, started comprising the majority of hospital admissions in this country.[35-37]

Many of these patients did not have a family physician, or if they did, had a family physician without active hospital privileges. These admissions, often termed "orphan" patients, and their arrival *en masse* in Emergency Rooms, are identified in the literature as the crisis that precipitated the need for Canadian hospitalists and Hospital Medicine programs. The impact was felt most strongly in medium-sized community hospitals, which did not have interns or residents to assist with growing workloads, in addition to being hardest hit by shortages of family physicians.[38] Currently, many teaching hospitals are facing similar challenges, as demand for patient

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admissions continue to rise, and programs must respond to new workload restrictions for house staff. Hospital Medicine programs are now beginning to appear in academic centres as well.

In addition to the health care system factors outlined above, a number of physician factors contributed to the development of Hospital Medicine programs in Canada. Over the past two decades, many family physicians have become more office-based, and less involved with inpatient care. Family physicians identify progressively more demanding outpatient workloads, inadequate remuneration for inpatient care, and challenges maintaining competencies in acute care medicine as factors for deciding to withdraw from hospital care.[39-42] The importance of maintaining a stable work-life balance also contributed to family physicians choosing to opt out of shuttling back-and-forth between busy office practices and hospital wards. Additionally, there is a growing recognition among family physicians that traditional aspirations to provide cradle-to-grave care may not be sustainable. As a result, family physicians are considering more specialized careers paths such as Hospital Medicine.[43]

The distinction of being Canada's first Hospital Medicine program goes to Calgary's Peter Lougheed Centre, which started as a one-year pilot project in July 1998.[44] Hospital Medicine programs subsequently spread rapidly across the country over the next ten years, with the greatest number of programs in BC and in Alberta (which were facilitated by the introduction of alternate funding agreements for Hospital Medicine programs in those provinces), and in Ontario.[45-47] There are now over 100 Hospital Medicine programs in Canada with the total expected to increase in the future.

In 2001, the Canadian Society of Hospital Medicine (CSHM) was founded to advocate for issues affecting Canadian hospitalists and Hospital Medicine programs, and to help promote best practices and standards-of-care for the inpatients for which hospitalists are responsible. The CSHM defines a hospitalist as "a physician whose primary professional focus is the general medical care of hospitalized patients."

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Hospitalists in Canada are skilled generalists acting either individually or as part of a group, as the most responsible physician (MRP) for part or all of a patient's stay in hospital. Hospital Medicine programs can include acute medical admissions, as well as rehabilitation and/or complex continuing care. More and more, Canadian hospitalists are involved in co-management with specialists such as surgeons, psychiatrists, and pediatricians, in addition to taking on expanding roles in medical education, research, quality improvement, and in hospital leadership.

In summary, Canadian Hospital Medicine programs have expanded dramatically in numbers, size, and in the scope of services they now provide. While most hospitalists in Canada are family physicians, physicians from a variety of backgrounds including internists and pediatricians are choosing Hospital Medicine as career paths. Within this context, the Canadian Society of Hospital Medicine recognizes the need to define more clearly the foundational competencies needed by clinicians to practice effectively as hospitalists. The release of the *Core Competencies in Hospital Medicine: Care for the Medical Inpatient (CCHM 2015),* by the CSHM is an exciting step to delineate further the roles hospitalists will continue to play in inpatient care in the years ahead.

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Introduction

Current climate of Hospital Medicine in Canada

Vandad Yousefi, Ritesh Mistry

Introduction

The emergence of the hospitalist model has been a major development in the Canadian health care landscape over the past two decades. Since the first programs were established in late 1990's,[1] the hospitalist movement has enjoyed an exponential growth.[2] The present article aims to provide an overview of the current state of Hospital Medicine in Canada and the emerging evidence for the impact of the hospitalist model on health care outcomes and resource utilization. It will also discuss some of the future challenges involved with its continued adoption.

What do we know about the current state of Hospital Medicine in Canada?

Our knowledge about the current prevalence of Hospital Medicine programs in Canada and other attributes of the model are primarily informed by surveys undertaken by the Canadian Society of Hospital Medicine and the consortium responsible for the National Physician Surveys. Additional work carried out by various provincial health ministries and other physician associations are not publicly available.

The Canadian Society of Hospital Medicine has been conducting surveys of self-identified hospitalist individuals and Hospital Medicine program leaders since 2006.[3] For their 2012 survey, the CSHM identified 102 hospital corporations with active Hospital Medicine programs in Canada, although some of these institutions are multi-site organizations with unique hospitalist programs in each of their member facilities. The results of this survey (in which over 1000 self-identified hospitalists were invited to participate) revealed that the majority of programs are a decade into their development. About 50% of self identified hospitalists in the survey have been working in this field for 10 years or more, with the majority of respondents working in large community hospitals. Over 86% percent of survey participants were credentialed by the College of Family Physicians of Canada, and 11.5% percent had undergone advanced training in Hospital Medicine. Most respondents indicated that their Hospital Medicine program's scope of practice went beyond what had traditionally been provided by community-based general practitioners, and up to 80% of respondents were involved in non-clinical activities such as quality improvement initiatives, hospital committee participation and teaching.

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Introduction

Current climate of Hospital Medicine in Canada

The National Physician Survey (NPS), a collaboration between the Canadian Medical Association, the College of Family Physicians of Canada and the Royal College of Physicians and Surgeons, provides another source of information about hospitalists in Canada.[4] Unlike the CSHM survey that only includes self-identified hospitalists, the NPS targets all practicing physicians in Canada and provides information on their demographic attributes and clinical work patterns. The survey asks respondents to identify their areas of focus. In the 2013 survey, 18.2% of participants in the "Family Physicians/General Practitioner" category identified Hospital Medicine as their area of focus. Of these, 66.5% identified their main work setting as something other than a hospital (e.g., family practice clinics or community health centres), suggesting that a sizable number of those who participate in hospitalist work are "part-time or intermittent" hospitalists.

While the above surveys provide useful information about individuals who self identify as hospitalists, they suffer from a number of important limitations such as sampling bias, lack of consistent definitions of the terms "Hospitalist" and "Hospital Medicine", and an inability to identify important aspects of hospitalists' clinical activities such as scope of practice. Emerging evidence from cross sectional research is beginning to address some of these limitations. For example, White and colleagues used provincial administrative databases (such as provincial billing registries and the Hospital Discharge Abstract Database) to define hospitalists based on service volumes and to describe the prevalence of the model in Ontario.[5]

They defined a hospitalist as a physician who generated at least 80% of their clinical volume from the care of hospital inpatients, and who provided 500 or more inpatient services annually. They also defined a group of providers (referred to as "mixed-practice physicians"), whose main clinical focus was not hospital-based, but who still provided a substantial level of inpatient services annually. They identified 211 full-time and 126 part time hospitalists who were responsible for 10% of all inpatient care in the province. Of these, 70% were identified as Family Physicians/General Practitioners, and 30% were General Internists. An additional group of 512 physicians were defined as mixed-practice physicians.

The researchers described a clear trend towards more hospitalists providing inpatient care from 2003 to 2010. Similar research from other Canadian jurisdictions is needed to provide a better estimate of the number of hospitalists nationally and their contribution to hospital-based care of medical patients.

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Finally, Canadian institutions have been an early adopter of the hospitalist model in many tertiary pediatric hospitals,[6] with the Canadian Pediatric Society's Section of Acute Care Pediatric providing a venue for pediatric hospitalists. The model is also being adopted in some larger community hospitals, although prevalence of the model in Canada is unknown.

What does the research evidence suggests about effectiveness of the model?

Despite the presence of Hospital Medicine programs in the Canadian health care landscape for many years, our understanding of their contribution to the health systems performance is only emerging in the recent years. Most program evaluations of Hospital Medicine programs have been performed by hospitals locally and lack robust scientific methodology. For example, an early publication described a hospitalist-run short stay unit designed to improve congestion from the emergency department by identifying patients with short expected length of stay.[7] Another study described the impact of a hospitalist program in a medium-sized community hospital on length of stay (LOS) and found significant improvements in efficiency, with a 27.4% reduction in LOS and improvements in discharge patterns, readmission rates and staff satisfaction.[8] However, these studies were limited by their design and by their lack of controls for various confounders.

More robust evidence is beginning to emerge about the impact of hospitalists on various health care outcomes. For example one of us recently described the impact of hospitalist programs on efficiency and quality of care in a large community hospital in Ontario.[9] In this retrospective observational study of 35,000 admissions to the facility from 2003 to 2010, hospitalist care was associated with similar or lower LOS, readmission rates and mortality compared to traditional providers (defined as community-based family physicians with active hospital privileges and medical subspecialists). In another study of the economic impact of a hospitalist program in Saskatchewan from 2007 to 2010, hospitalists demonstrated similar LOS compared to non-hospitalists for patients with typical hospitalizations.[10] The study also showed that over time, hospitalist LOS declined by about 15% annually, although the regression analysis could not confirm whether observed reductions were a direct result of the performance of the hospitalist program or due to secular trends.

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Other studies have begun to explore the impact of Canadian hospitalists on clinical quality of care and inter-professional collaboration. In a qualitative semi-structured survey study of health care workers in an academic hospital in Ontario, Gotlib and colleagues uncovered higher positive experiences with GIM hospitalists' inter-professional communication levels amongst health care providers compared to consultants.[11] Similarly, hospitalist use of pre-printed order sets and treatment algorithms for treatment of pneumonia along with an audit-feedback process resulted in a three-fold improvement in adherence to treatment guidelines in a large community hospital in Saskatchewan.[12]

Canadian hospitalists have followed their American counterparts by taking on a leading role in patient safety and quality movement. In many organizations, hospitalists are involved in systemic quality improvement projects and are at times early adopters of such efforts. For example, in one Ontario organization, hospitalists were the first group in Canada to participate in an international collaborative designed to improve care transitions.[13] Similarly, hospitalists in British Columbia led the implementation of a province-wide initiative to improve significantly venous thromboembolism prophylaxis rates.[14] Since 2010, the Canadian Society of Hospital Medicine's Quality Improvement (QI) Committee has organized workshops and courses on principles of quality improvement, in which over 100 individuals participated. These QI Committee initiatives provide opportunities for hospitalists from across the country to share their QI projects with their colleagues and to contribute their learnings.

The emerging body of evidence suggests that Canadian hospitalists impact positively on various aspects of hospital-based care, such as resource utilization, staff satisfaction and overall quality of care.

What are the current challenges and future directions?

While the hospitalist model appears to be well established within the Canadian health care system, hospitalists continue to face ongoing challenges despite nearly two decades of steady growth. In addition to unsustainable funding mechanisms, surveys conducted by the Canadian Society of Hospital Medicine continue to demonstrate that workload, increasing patient acuity, and shortages of resources (primarily bed capacity and access to specialist care) continue to remain top challenges for Hospital Medicine providers.

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Current funding mechanisms in almost all jurisdictions in Canada require Hospital Medicine programs to be dependent on their host organizations for significant levels of financial support.[2] Organizations need to tap into their global budgets in order to supplement hospitalist compensation. While the degree of financial support provided by organizations varies, diversion of money from the global budget to physician compensation has at times resulted in tensions between hospitalists, their institutions, and ministries of health.[15] Finding an equitable compensation formula is made all the more challenging by the significant variability amongst programs in scope of practice, workload and coverage model, as well as lack of a clear definition for who hospitalists are and what they do across the country.

Despite recent advances in hospitalist workload measurement and development of various workload models, in our experience, most Hospital Medicine programs continue to use rudimentary measures (such as patient census volumes) to assess workload and distribute clinical duties. Even when workload models are utilized as part of program management, disagreements can arise when increases in workload are not matched by corresponding adjustments in program staffing (and financial support). This discrepancy can lead to adversarial negotiation cycles and to continued erosion of mutual trust between physicians and managers.[15]

Increasing patient acuity and complexity are widely recognized as factors contributing to pressures faced by the health care system. With disproportionate allocation of resources to and expectations of the hospital sector, such pressures are felt strongly by those operating in acute care settings. hospitalists look after increasingly older and sicker patients, requiring them to spend large amounts of time working with inter-professional teams to coordinate care and to help patients and their families navigate the complex system. These added challenges might explain partially why Canadian hospitalists spend the majority of their time on indirect patient care activities.[16]

Finally, Canadian hospitals have some of the highest bed occupancy rates and lowest numbers of per capita hospital beds in the world.[17] High numbers of alternate level of care (ALC) patients exacerbate the problem. Hospitalists are directly affected by these challenges, and hospitalist leaders in successive surveys consistently identify the lack of bed capacity as a serious challenge.

For Hospital Medicine to deliver on the promise of better quality and higher system efficiency, it is imperative for hospitalists and other stakeholders to find collaborative solutions to the challenges outlined in previous paragraphs.

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Conclusions

The development of national core competencies by the Canadian Society of Hospital Medicine is an important step in the continued maturity of Hospital Medicine in Canada, and can play a large role in addressing some of the challenges identified by practicing hospitalists. For example, the Core Competencies in Hospital Medicine document can pave the way for a uniform definition of hospitalist work and for the development of a formal recognition pathway. This improvement could in turn lead to development of specialty fee codes or other financial mechanisms to facilitate sustainable funding that does not rely on organizational global budgets. Additionally, the Core Competencies in Hospital Medicine document can provide a framework for defining the care provided by hospitalists to a large and complex population within variable types of inpatient settings, of resources and of physician mixes.

By defining more accurately the care required, local and regional health authorities can collaborate with frontline hospitalists to delineate more efficiently the scopes of practice and to manage better physician and other health provider resources. This precision can facilitate measurement of hospitalist workload, and provide a basis for better understanding of workload variation between institutions. It can also provide an opportunity of benchmarking by allowing for identification of peer groups and for more meaningful comparisons in areas of quality, resource utilization and compensation. Finally, inclusion of non-clinical Competencies in areas of health care system performance and quality can allow present and future hospitalists to enhance their capacity not only to provide high quality clinical care, but also to become better stewards of the broader health care system, as they strive to meet the relentless demands for more and better services. These enhancements can solidify the role of Canadian hospitalists as the natural allies for health care system leaders and managers in their quest to find innovative solutions for better value delivery and patient-centred care.

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Introduction

Canadian hospitalists: Working in teams to provide quality inpatient care

Marcel Doré, Marguerite Chevalier, Jean Maskey, Serge Soolsma, Diana Stancu

Introduction to hospitalists and hospitalist programs

Hospitalists in Canada are generalist physicians who focus their practice in hospital, whether they blend this practice with a community office practice or have it function as their only place of work. Hospitalists admit and direct care of acutely medically ill patients either as "Most Responsible Physician" (MRP) or in a supportive role providing consultative or concurrent supportive care. They work in teams with a variety of other health care professionals and physician colleagues ensuring seamless transitions into and out of hospital with the goal of providing efficient, high quality, and comprehensive medical care.

Every hospitalist program across Canada developed to fill a need for generalist physician presence in hospitals, based on available local and regional medical resources, analogous to the physicians and communities that created them. Each program's unique qualities reflect both the skills and practice experience of physicians who focus their practices to become hospitalists, and the complement of family physicians (in community and hospital settings) and specialists available in hospital.

Of particular note is that even as hospitalist programs continue to improve and expand, they are becoming the standard care in many institutions. In fact, these programs are now an integral part of not only direct patient care, but also of the development of system improvements, of enhanced quality of care, of patient safety, and of education of future physicians within health care systems nationwide.

Examples of hospitalist programs from various provinces

The growth of Canadian hospitalist programs is grassroots in nature, nimble in response to needs expressed by the community and its institutions, and thus, is very heterogeneous. It is stated: "Once you have seen one hospitalist program, you have seen one hospitalist program." (source unknown). Throughout the country, there is a wide diversity of hospitalist programs; here are some sample programs from various provinces.

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Introduction

34 **Canadian hospitalists: Working in teams to provide quality inpatient care**

In South Western Ontario, there is an urban centre where there is one organization with two acute care sites providing full-time services. Interestingly, their programs are structured, staffed, and remunerated based on very different models. These hospitalist services are managed by the Department of Family Medicine and deliver very busy and dynamic Most Responsible Physician (MRP) services.

In one of the acute care sites, there are three teams into which hospitalists rotate for 7 days at a time. With an admission and diagnostic unit (Short Stay Unit [SSU]), they front-load care for all hospitalist admissions, with the goal of discharge back to the community within 72 hours. This SSU is a very dynamic unit and truly multidisciplinary; the pace is very intense and the results have been quite impressive. When early discharge is not achievable, patients are transferred to the Long Stay Unit (LSU) for further treatment and preparation for discharge. The Long Stay Team also handles all transfers from other services, including the Intensive Care Unit (ICU).

The other acute care site comprises a more traditional model of full-time equivalents (FTE) with both full-time and part-time hospitalists. In this system, the hospitalist team manages admissions and transfers. Additionally, their acute psychiatry unit includes a hospitalist program whereby hospitalists are not the MRP; however, in a concurrent care model, they manage medical issues for all admissions to the psychiatry unit.

Interestingly, most hospitalist patients have an attached family physician in the community, who choses to not have hospital privileges. This distinction is notable because at the inception of hospitalist programs, as a result of a significant physician shortage in communities, many patients were truly “orphaned” without a primary care provider. Since that time, the creation and development of local Family Medicine Residency programs have helped ease the burden by recruiting both community family physicians as well as hospitalists.

In British Columbia, hospitalist programs exist in several medium-to-large urban centres, including in three Okanagan Valley communities, in several Lower Mainland and Vancouver urban centres, and in three communities on Vancouver Island.

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In the Lower Mainland of BC, the Fraser Health Hospitalist Program has developed into one of the largest regional programs in Canada. Almost 180 hospitalists provide care in eight out of 12 acute care sites across the region. Hospitalists manage patients by taking the MRP role or by working in a supportive role (consultation only or consultation with co-management). In the majority of the acute care sites, hospitalists provide '24/7' on-site care to complex patients with multiple co-morbidities. Hospitalists are successful physician leads in formalized discharge processes on all medicine units, and in quality improvement projects (e.g., VTE Prophylaxis, delirium protocols or Regional Pre-printed Orders for COPD Exacerbation).

At the same time, hospitalists are accountable for the service they provide and "must account appropriately for their time." According to the Fraser Health Authority in British Columbia, "a focus on accountability of the hospitalist program improves accountability to the public." For instance, improving the quality of billings submitted by hospitalists has led to an increase in the recovery of hospital general revenue spent on hospitalist programs. Hospitalists working in the Fraser Health Authority are also involved in MD Undergraduate Education and in Postgraduate Medical Training Programs (Residency) teaching. The Surrey Memorial and Royal Columbian hospitalist teams are part of the R3 Enhanced Skills in Hospital Medicine program, and Residents may spend 3 to 6 months in this training program.

Since 2001, some well-established family physicians in Victoria, British Columbia, began to focus their practices in the hospital only. This hospitalist program began with one full-time position; it currently employs over 60 physicians. Hospitalists provide '24/7/365' coverage in the two large tertiary-care centres in Victoria. They admit and care for approximately 400 patients on any given day, either as the MRP or in a supportive role, accepting patients both through the Emergency department as well as from ICU and transfers from other physicians both locally and from other jurisdictions. Attendance at intercurrent medical emergencies for any admitted patient in the hospital system provides on site support for nursing staff and residents.

Hospitalists provide co-management and discharge planning for complex patients with multisystem co-morbidities, for adult and geriatric psychiatry patients, for neurology, and for some surgical, rehabilitation, and sub-specialty medical inpatients. Likewise, hospitalists are extensively involved with teaching medical students, family medicine residents and first-year Royal College residents (as part of the residents' core Family Medicine experience).

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Calgary, Alberta, is served by four primary hospitals. The Foothills Hospital, the largest of four sites, has, at any given time, approximately 160-200 acute inpatients under the hospitalist service, as well as 70-80 sub acute (ALC) patients awaiting placement. A team of approximately 30 or more hospitalists will manage these patients during their hospital stay. Hospitalists' responsibilities include emergency admissions to the service, transfers from more acute services (e.g., intensive care, general surgery, trauma surgery, etc.), management of the patients' ward stay, and coordination of discharge. They may also supplement medical management of patients under psychiatry and physiatry services.

Quality inpatient care

Is it the complexity of patients admitted to hospital that defines the scope of a hospitalist service, or is it the particular skill set of hospitalists in hospitalist programs that influences services provided? It could be argued both ways. The usual patient admitted into a Canadian hospital today has a multitude of comorbidities and medical issues; therefore, hospitalists will manage daily numerous patients with complex and difficult conditions.

For example, hospitalists will care for patients with overlapping and complicated diagnoses ranging from sepsis, IHD, diabetes, cellulitis, osteomyelitis, delirium, pneumonia, pancreatitis, GI bleed, COPD, CHF, generalized weakness, failure to thrive, non-surgical fractures, CVA, dementia with other co-morbidities, malignancy without tissue diagnosis, malignancies with oncological complications, to name a few. Additionally, they manage much of the palliative care for both malignant and non-malignant diagnoses. A large portion of a hospitalist's work also includes transfers from other services. Therefore, the complexity of patients admitted to hospital drives the development of hospitalist programs. Continuing education with grand rounds, a supportive team of hospitalists with varying ranges of experience and practice, quality improvement projects, and teaching rounds continue to strengthen and expand the scope of practice, in a unique way at each site.

Because of their unique position in the hospitals, hospitalists are champions of efforts to develop excellence in patients' transitions of care, whether between hospital services or different hospitals, or from hospital to community. A core value for a hospitalist is to ensure that 'the right patient is served in the right bed by the best service available to treat the diagnosis requiring admission.'

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Role of the Most Responsible Physician (MRP)

In the past, relationships between practitioners were well defined, with community physicians responsible for their own patients in the hospital. Today, clarification of the boundaries, roles and responsibilities of physician groups is pivotal to the organisation of quality care within the hospital setting. These changes led to specific requirements to define the "Most Responsible Physician (MRP) role," particularly when there may be many physicians who are involved with the care of a patient during their stay, in collaboration as well as sequentially.

Hospitals in Canada have well delineated Medical Staff Bylaws and structures describing roles and responsibilities of different practitioners, to ensure quality and patient safety along nationally accredited standards. Most MRP Policies describe the boundaries of these interdependent relationships, and are part of the Medical Staff Rules and Regulations. A clear definition of the MRP is important to all involved in order to facilitate and to expedite medical care, and to establish clear communication channels between medical personnel, allied health care professionals, and patients and their families. These concepts are now well defined by the institutions, provincial licensing bodies, and the Canadian Medical Protective Association (CMPA), in order to ensure clarity around roles and scopes of practice and patient safety. It is also vital that the patient has a "point person" with whom to communicate, thereby ensuring involvement of patients and their families in care decisions.

The MRP is usually the most qualified physician for the central problem that necessitated the patient's admission to hospital, and is ultimately responsible for directing the overall care of the patient through the hospital stay. This responsibility may be transferred as the clinical situation changes. Best practice indicates that handovers should involve direct verbal communication from one type of physician to another as the clinical situation demands.

The CMPA developed clear guidelines to define the role of the MRP, as this function has medico-legal implications, particularly when many physicians are involved with the care of a patient. With an aging population with multiple co-morbidities, the MRP responsibilities may be delegated most appropriately to a generalist hospitalist, who needs to be the central co-ordinator. The MRP has the duty and the ability to collaborate and to communicate with various other physicians and health care providers, in order to coordinate care and advocate for the patient. Commitment to continuity and communication is a cornerstone of the importance and the value delegated to hospitalists when they are MRP.

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Introduction

38 **Canadian hospitalists: Working in teams to provide quality inpatient care**

Hospitalist roles are in constant evolution as individual physicians' expertise develops for this focused practice. Additionally, there are constraints imposed by the licensing bodies. The Colleges of Physicians and Surgeons in the various provinces and territories stipulate very clearly that all physicians should be wary of placing themselves in the position of accepting responsibility for patients who have conditions considered beyond their scope of practice.

Specialist groups have requested a greater involvement of hospitalists with their admitted patients. There is recognition that many patients with multisystem failure benefit from a generalist consultation for the co-management with the specialist MRP, particularly when the specialist lacks current generalist medical expertise and skills. The MRP designated at admission can request consultation for co-management or transfer of care. The most appropriate MRP designation can thus be negotiated during the course of the hospital stay, with a collegial discussion regarding transfer of MRP designation from one physician to another during the course of the hospitalization.

It is understood that the consulted physician may decline MRP transfer if the patient is unstable and/or out of the scope of their practice. Also implied is that any patient under co-management will be attended in a timely fashion by both MRP and consultant physicians, consistent with the needs of the patient as determined by the attending registered nursing (RN) staff and/or physicians involved. The impact of co-management on the hospitalist workload must be acknowledged, accepted and resourced by the hospital administration.

As institutions develop and incorporate hospitalist physicians, a functional MRP policy and daily working arrangement, consistent with the current Medical Staff Rules and Regulations, must be established, along with some guiding principles. Patient safety and assurance of optimal, excellent care must be the first priorities in the assignment of MRP status. In addition, scopes of practice and the expertise of the physicians involved, collegiality with respectful communication and support, and mutual agreement regarding co-management arrangements are all key elements in assigning MRP status. No physician should be expected to be MRP when that physician feels the expertise required is out of their scope of practice or skill set, particularly when specialist, expert care is available within this hospital setting.

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The decision by a physician to accept MRP status is influenced by a number of factors, including, but not limited to the locale of the practice (rural vs. urban), the availability of local medical expertise and the need for speciality intervention. The local medical community's culture, the willingness of specialists to become involved once a patient is admitted under another practitioner, code status, a patient's age and multiplicity of other co-morbidities, and patient and family preferences are all factors in making this decision.

Hospitalists are thus able to provide optimal medical care for patients, as both the MRP and in co-management situations. Boundaries are defined regarding appropriate scope of practice in part by the training and licensing of the various physicians, but also by their practice experience and individual unique training, and clinical exposure. The decision of which practitioner is best suited to be the MRP is thus dependent upon both the physical practice environment, and upon the complement of differing specialists in a particular institution. For the hospitalist who becomes adept at caring for extremely ill, complex, hospitalised patients with multiple co-morbidities, "scope creep" can be reduced by defining clearly the "core" hospitalist scope of practice and the related Competencies, in concert with appropriate conversations about the application of local MRP guidelines.

Quality of the patient experience

Once the decision is made to admit the patient to the hospitalist service, the hospitalist is the primary orchestrator and manager of that patient's hospital stay. Although the hospitalist may not be the primary action person for all of the key components to the patient's stay, the hospitalist must maintain awareness of all the issues surrounding the patient's experience.

The factors that define the quality of the patient's journey are complex and dependent on the patient and the illnesses associated with his/her admission. The ability of the hospitalist to attend to medical care, psychosocial requirements, and advocacy for resources available to assist in the treatment and recovery of the patient is a critical asset to the patient journey while in hospital.

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Introduction

Canadian hospitalists: Working in teams to provide quality inpatient care

The patient experience can be broken down into several parts. These elements include:

1. Admission to the hospitalist service, which includes a full history comprising psychosocial, medical, surgical, and familial histories, as well as any previous admissions. Additionally, a full medication review should be conducted. Timely communication with community physicians/care providers is critical to both share and to glean information pertinent to the patient's care.
2. Addressing of patient expectations, fears, biases and understanding of his/her illness. Developing an understanding of expectations surrounding possible treatments and length of stay are also important to the quality of the patient's stay. These conversations should also incorporate discussion on Goals of Care and careful elaboration on existing Advance Care Directives. In fact, Goals of Care and Care Directives discussions may be ongoing during the patient's transition through hospital, should there be any changes in the patient's status.
3. Managing the ward stay includes location and duration of stay, as well as issues surrounding patient safety and care. On the ward, importance must be placed on appropriate ordering of investigations and referrals, specific directions and guidelines for nursing care with respect to specific patient issues, in addition to providing reliable and timely updates of results and findings, to the patient and family members or Substitute Decision Makers (SDM).
4. Communications with the patient and family members, which includes the SDM, should be conducted in a clear, concise, confident, reassuring, and sensitive manner, using the appropriate skills and methods. Additionally, the patient may expect the hospitalist team members to be available at reasonable times for patient and designated family discussions and formal care and discharge planning meetings.
5. Discharge planning and communications (to other treating physicians, and to patients and their families/SDMs), including an appropriate hospital stay summary comprising dates, duration, responsible diagnoses, procedures, treatment, complications, discharge medications and follow-up recommendations for support services, and with whom, where and when follow-up appointments are to occur, as well as an assessment of available family and community support.

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Ultimately, the quality of the patient journey during his/her hospital stay is the responsibility of the medical person designated as the most responsible physician (MRP). When a patient is admitted to the hospital service, it is critical that the hospitalist be aware of not only the patient's medical needs, but also of his or her psychosocial issues, and of the care requirements. The hospitalist should be cognizant of the allied health care team members involved with this patient's care, as well as what additional care needs and services the patient may need upon discharge. Attention to details of the state of this patient's experience will ultimately enhance the quality of the patient's journey and will lead to the best possible outcomes.

Elements of a successful hospitalist team

Defining the elements of a successful hospitalist team, even if it appears to be a complex task, becomes easier to articulate if we consistently refer to the CanMEDS roles and competencies.

The **hospitalist,** as a member of a **hospitalist team**, works as a:

1. **Medical Expert** in the care of the acute non-critically ill medical inpatient by:
    - Integrating all of the CanMEDS Roles and applying medical knowledge, clinical skills, and professional values in their provision of high-quality and safe patient-centred care
    - Having a clearly defined vision and central role in serving and linking the patient, the community (local or regional), the health administration/hospital and other health care provider groups.

The **hospitalist,** as a member of a **hospitalist team**, works as a:

2. **Communicator** in the care of the acute non-critically ill medical inpatient by:
    - Forming relationships with patients and their families that facilitate the gathering and sharing of essential information for effective health care
    - Promoting patient and family engagement in the delivery of health care throughout the hospital stay.

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Elements of a successful hospitalist team ***(cont'd)***

The **hospitalist,** as a member of a **hospitalist team**, works as a:

3. **Leader** in the care of the acute non-critically ill medical inpatient by:
   - Engaging with others to contribute to a vision of a high-quality health care system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars, or teachers
   - Demonstrating transparency and accountability in the use of available resources
   - Improving job satisfaction through participation in development of collegial, effective, and supportive working relationships
   - Recruiting and retaining hospitalists with shared vision and goals
   - Understanding the dynamics between individual, group, and organizational roles and goals.

The **hospitalist,** as a member of a **hospitalist team**, works as a:

4. **Health Advocate** in the care of the acute non-critically ill medical inpatient by:
   - Contributing their expertise and influence as they work with communities or patient populations to improve health
   - Working with those they serve to determine and understand needs, speak on behalf of others when required, and support the mobilization of resources to effect change
   - Participating in improving processes or systems of care
   - Participating in hospital operation improvement teams
   - Participating in quality improvement initiatives
   - Participating in ongoing reviews of mortality, readmission rates and lengths of stay in hospital.

The **hospitalist,** as a member of a **hospitalist team**, works as a:

5. **Scholar** in the care of the acute non-critically ill medical inpatient by:
   - Demonstrating a lifelong commitment to excellence in practice through continuous learning and by teaching others, evaluating evidence, and contributing to scholarship
   - Practicing evidence-based medicine (best evidence)
   - Development of quality improvement initiatives, clinical protocols and pathways
   - Teaching medical students, residents and other health care provider groups
   - Engaging in Continuing Medical Education programs, local hospital rounds, or team cases reviews.

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Elements of a successful hospitalist team ***(cont'd)***

The **hospitalist,** as a member of a **hospitalist team**, works as a:

6. **Professional** in the care of the acute non-critically ill medical inpatient by:
    - Being committed to the health and wellbeing of individual patients and society through ethical practice, high personal standards of behavior and accountability to the profession and society, physician-led regulation, and the maintenance of personal health.

In summary, a successful hospitalist is part of a successful hospitalist team, recognizes this teamwork, and practices within a defined framework for quality and safety. A hospitalist team is a group of physicians with a shared vision in providing excellent care to hospitalized non-critically ill patients while working in partnership with other stakeholders. A hospitalist team has the central role of serving individual hospital patients, in the context of the local or regional community, with the support of the lo
cal or regional health administration/hospital and other health care providers groups. Hospitalists bring added value to the Team's service by being actively involved in teaching and inpatient care training, and by providing supportive care to patients under the care of other teams. A hospitalist team evolves and refines its roles continuously, in the interest of ongoing improvements in the quality of patient care in the hospital setting.

References:

1. *The Draft CanMEDS 2015 Physician Competency Framework – Series IV Royal College of Physicians and Surgeons physician competency framework.* (Frank JR, Snell L, Sherbino J, editors. The Draft CanMEDS 2015 Physician Competency Framework – Series IV. Ottawa: The Royal College of Physicians and Surgeons of Canada; 2015 March.)

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General clinical skills, common clinical conditions, and procedures frameworks

How does the CCHM Document numbering system work?

The CCHM Document numbering system was based in part on the RCPSC *Draft CanMEDS 2015 Physician Competency Framework – Series IV* system. The reader can drill right down into the exact Core Competency in the Framework referenced, and allow precise communications about the Competency specified. This system will be especially important once the CCHM Document is electronic, and online.

Here is how it works:

- Each **Chapter** is numbered **1 (General Admission)** through **40 (Procedure: Thoracentesis)**.
- Each CanMEDS Role is numbered:
  - **Medical Expert** is **1, Communicator** is **2**, **Collaborator** is **3**, **Leader** is **4**, **Health Advocate** is **5**, **Scholar** is **6**, and **Professional** is **7**
- Each Stage of Patient Stay in Hospital (PSiH), and its competencies are a specific numbering:
  - **Admission** competencies are numbered **10 -19**
  - **Inpatient Care** competencies are numbered **20-29**
  - **Transitions of Care** are numbered **30-39**
  - Competencies considered effective over **all PSiH stages** are numbered **40-49**

Therefore, if we were looking in the Framework Chapter on Shock **(15)**, under Communicator **(2)**, in Transitions of Care **(30-39)**, referring to the **second bullet point**: *Discuss and review clearly with patient and family/SDM signs and symptoms of shock redeveloping to ensure that diligent follow-up is maintained once patient is discharged, as there is a high risk of shock reoccurring,* then the numbering system would state: **15.2.31**

Reference:

1. *The Draft CanMEDS 2015 Physician Competency Framework – Series IV Royal College of Physicians and Surgeons physician competency framework.* (Frank JR, Snell L, Sherbino J, editors. The Draft CanMEDS 2015 Physician Competency Framework – Series IV. Ottawa: The Royal College of Physicians and Surgeons of Canada; 2015 March.)

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General clinical skills, common clinical conditions, and procedures frameworks

1. General clinical skills: Management of a standard medical admission

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1.Medical Expert	10. Identify/confirm primary clinical problem(s) and urgency. 11. Obtain comprehensive but focused clinical history, relevant physical exam findings, initial lab results, etc. 12. Consolidate list of problems to be addressed, and their priorities. 13. Develop comprehensive plan for investigation and treatment recognizing priorities. 14. Communicate plan effectively with patient and family/substitute decision maker (SDM), other health care providers, and complete accurately written documentation.	20. Modify/consolidate management plan based on lab results, consultations, and clinical course. 21. Solicit additional history, physical findings, and investigations as needed. 22. Address additional clinical problems as identified, by priority. 23. Document problems, clinical course management changes in progress notes. 24. Anticipate, recognize and manage situations that place patients at risk. 25. Recognize and respond appropriately in situations that require transfer of patient to another level of care.	30. Consolidate updated problem list. 31. Plan for transition care and follow-up. 32. Plan discharge prescription (discharge medication reconciliation) post discharge investigation, follow-up arrangements. 33. Initiate discharge summary. 34. Confirm patient status stable for discharge. 35. Confirm and complete accurately and completely discharge summary, discharge prescription(s), and follow-up.
2. Communicator	10. Establish professional therapeutic relationship with patient and family/SDM. 11. Clarify treatment goals and ensure patient and family/SDM understands and agrees with management plan. 12. Document database and management plan clearly in medical record.	20. Establish ongoing communication with patient and family/SDM to confirm: 20.1. goals of care 20.2. management plan 20.3. update results, course, prognosis, etc.	30. Confirm goals of care post discharge with patient and family/SDM. 31. Inform patient and family/SDM of planned discharge. 32. Identify any unmet needs of patient re: education, follow-up, etc. 33. Contact community physicians as required. 34. Work with hospital and community agencies to ensure adequate support post discharge. 35. Ensure patient, family/SDM and community physician have required information and instructions. 36. Ensure medical record will be completed in a timely manner.

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General clinical skills, common clinical conditions, and procedures frameworks

1. General clinical skills: Management of standard medical admission

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
3. Collaborator	10. Verbally present above information clearly and concisely as needed to other health care providers. 11. Establish and maintain effective working relationships with other health care providers in emergency department (ED). 12. Identify and consult other health care professionals/providers needed for optimal patient care, recognizing priorities. 13. Communicate effectively with other members of health care team. 14. Provide handover of care as needed.	20. Communicate with consultants, other health care providers re: Course, revisions, diagnosis management, etc. 21. Initiate planning discharge. 22. Ensure effective handover. 23. Work within interprofessional teams to optimize both patient safety and quality of care. 24. Promote patient safety through effective health care communication.	30. Confirm with other health care providers patient ready for discharge. 31. Ensure patient education completed. 32. Ensure mechanism of transportation suitable for medical condition. 33. Ensure home care service in place as needed 34. Confirm patient status stable for DC.
4. Leader	10. Recognize barriers to providing optimal care, and work with team to improve system. 11. Work with team to ensure optimal utilization of limited resources. 12. Engage in institutional quality assurance (QA)/quality improvement (QI) activities. 13. Monitor personal performance and plan CPD accordingly.	20. Work with team to promote optimal care within resource constraints. 21. Assess regularly to identify opportunities to improve systems. 22. Continue engagement in QA/QI initiatives. 23. Continue monitoring personal performance for CPD planning.	30. Promote optimal use of inpatient facilities and services. 31. Promote optimal use of resources in community to minimize hospital stay, avoid re-admission. 32. Confirm patient status stable for discharge.
5. Health Advocate	40. Negotiate effectively for additional resources needed for optimal care including community resources post discharge. 41. Participate in hospital initiatives to meet needs of community more effectively. 42. Promote health equity. 43. Commit to applying core patient safety knowledge, skills and attitudes to everyday work. 44. Manage the relationship between individual and environmental characteristics in order to optimize patient safety. 45. Teach students and residents by providing a safe learning environment with focus on maintaining patient safety as well when learners are health care providers.		
6. Scholar	40. Reflect on experience to identify own CPD needs and priorities. 41. Participate actively in comprehensive CPD program to meet personal and institutional needs. 42. Base clinical practice on best available evidence. 43. Search and appraise literature critically and effectively. 44. Become actively involved in teaching patients, families, and other health care providers to promote optimal care. 45. Contribute to development and implementation of best practices across organization.		
7. Professional	40. Recognize one's own limitations and when it is appropriate to seek assistance. 41. Demonstrate best clinical practice including ethical, collaborative, collegial, and respectful behaviour, reflecting standards of the profession and the hospital. 42. Recognize occurrence of an adverse event or close call, and respond effectively to mitigate harm to patient, to ensure disclosure, and to prevent recurrence. 43. Demonstrate sensitivity to ethnic and cultural diversity. 44. Demonstrate best professional standards in soliciting informed consent, breaking bad news, conflict resolution, acknowledging and addressing medical errors, and managing adverse occurrences, etc. 45. Recognize importance of work/life balance on performance, and act accordingly.		

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2. General clinical skills: Antimicrobials – Preventing resistance

CanMEDS Role	Admission	Inpatient Management	Transitions in Care
1. Medical Expert	10. Understand nature and classification of microbial pathogens and diseases they cause. 11. Understand how specific infectious pathogens are transmitted (i.e., contact, droplet, airborne, etc.) and which protective countermeasures are needed for each type of transmission. 12. Appreciate differences between infection and colonization, and how these factors influence the need for patient isolation and ultimately how they influence patient care. 13. Demonstrate understanding of why, how, and when to provoke or to change a patient's isolation status based on patient's historical factors, clinical presentation and laboratory findings. 14. Retain a high level of situational awareness when entering a patient's room, making note of isolation indicators outside room, and taking appropriate protective precautions. 15. Integrate infection control practices early in a patient's admission as a complement to antimicrobial stewardship practices.	20. Appreciate that infection control practices (preventing resistance) and antimicrobial stewardship are complementary of one another and when used together can be exceptionally powerful tools in fight against nosocomial infection and bacterial resistance to antibiotics. 21. Understand when and how to properly wash one's hands verses when and how to use hand sanitizer products. 22. Don and doff personal protective gear in appropriate sequence including proper disposal of used or soiled materials.	
2. Communicator	10. Communicate properly and document infection or colonization requiring isolation with appropriate staff, i.e., nursing staff, infection control, admitting, etc. 11. Educate patient and family/SDM regarding nature of infection, reasons for isolation and how to protect themselves and other patients.	20. Communicate effectively with patient and family/SDM concerning patient's isolation status. 21. Use communications strategies that help patient and family/SDM make informed decisions regarding patient's health status, including advanced care directives, resuscitation wishes, etc.	30. Upon transition of care, communicate any isolation requirements to: 30.1. Patient's primary care provider 30.2. New facilities receiving patient in transfer 30.3. Community health services 30.4. Patient's health record.

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General clinical skills, common clinical conditions, and procedures frameworks

2. General clinical skills: Antimicrobials – Preventing resistance

CanMEDS Role	Admission	Inpatient Management	Transitions in Care
3. Collaborator	10. Activate early involvement of infection control team in order to limit spread of specific pathogens within the hospital.	20. Collaborate with members of infection control team to manage need for isolation of patients with specific pathogens as patient's clinical condition changes. 21. Provide support and negotiate overlapping and shared responsibilities with other physicians and health care team regarding ongoing infection control issues.	30. Determine when care of patient should be transferred to another unit or facility to ensure continuity of patient care.
4. Leader	10. Advocate for infection control within health care team/hospital, providing guidance and support for ongoing improvements in antimicrobial stewardship and infection control protocols.	20. Set a good example in following appropriate infection control practices, such as use of personal protective equipment and regular hand washing.	
5. Health Advocate	10. Understand institution's current infectious disease concerns and associated screening detection tools. 11. Ensure these screening tools are applied to all patients upon admission. 12. Demonstrate understanding of protocols to follow in event of positive screens. 13. Utilise other personal protective measures include an annual TB skin test, and mask-fit testing.	20. Promote regular infection control practices to patients and their families/SDMs and to health care team members, e.g., hand washing before and after leaving a patient's room. 21. Promote appropriate use of prophylactic measures such as staff participation in annual influenza vaccinations (or alternative of wearing a mask during flu season).	
6. Scholar	40. Summarize and communicate to professional and lay audiences, including patients and their families, findings of relevant research, new and emerging knowledge and practices, and breakthroughs concerning infection control and antimicrobial stewardship.		
7. Professional	40. Ensure own vaccinations are up to date including annual influenza vaccination. 41. Demonstrate a commitment to physician health and well being by exhibiting self-awareness of personal health, and by managing personal/professional stressors, especially in periods of seasonal illnesses. 42. Integrate feedback and take corrective actions based on any feedback received from other staff about one's adherence to proper infection control practices. 43. Demonstrate a commitment to patient, hospital and personal safety and quality improvement by reviewing best practices in infection control, including one's own infection control practices.		

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3. General clinical skills: Antimicrobials – Stewardship

CanMEDS Role	Admission	Inpatient Management	Transitions in Care
1. Medical Expert	10. Utilize and demonstrate institutional standards re: hand hygiene at all times 10.1. for patient contact 10.2. all hospital locales 10.3. at points of care/transition. 11. Recognise differences between contamination, colonization, and infection. 12. Understand basic microbiologic testing, including diagnostic criteria, therapeutic options and guidelines for common infections. 13. Utilise local regional antibiogram for delineating antimicrobial resistance patterns, to guide appropriate medication choices. 14. Understand when not to prescribe systemic antibiotics and when to use alternatives, e.g., removal of urinary catheter. 15. Comprehend different classes of antimicrobial agents, with respect to: 15.1. spectrums of activity 15.2. indications/contraindications 15.3. monitoring parameters for common and serious adverse effects 15.4. drug interactions. 16. Anticipate and limit use of potentially harmful devices related to nosocomial infections (e.g., indwelling catheters and lines). 17. Identify indications and measure requirements for isolation precautions (Standard, Contact, Droplet, Airborne).	20. Understand how antimicrobial pharmaceuticals induce resistance and how these drugs can disrupt healthy commensal host-microbiota interactions. 21. Reassess patients daily, identifying pathogens (and associated resistance patterns) to avoid unnecessary broad-spectrum antimicrobial use. 22. Comprehend when to step down to targeted oral antibiotic therapies, at most appropriate times, and at doses for shortest possible treatment durations. 23. Identify when antibiotic treatments are failing and when to escalate treatment. 24. Modify antimicrobial therapies to account for local resistance patterns, infection location, and characteristics. 25. Adjust antimicrobial therapies to account for individual patient or drug characteristics (previous recent use of a similar antibiotic class, allergies/drug intolerances, renal and/or hepatic failure, adjusting for therapeutic drug levels.) 26. Update patient record with new adverse reactions experienced by patient, antibiotic, and nature of adverse reaction. 27. Communicate and document confirmed infection, outlining course of treatment and narrower spectrum step-down antibiotic prescribed.	30. Specifically document any infections treated, with the antibiotics used, along with any adverse effects or outcomes or allergies developed, to facilitate ongoing care in the community, for both the hospital document as well as the community primary health care practitioner. 31. Recommend any specific follow-up regarding the infection itself, or required lab or other monitoring for systemic effects followed in hospital. 32. Document any immunizations given during hospital stay.

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General clinical skills, common clinical conditions, and procedures frameworks

3. General clinical skills: Antimicrobials – Stewardship

CanMEDS Role	Admission	Inpatient Management	Transitions in Care
2. Communicator	10. Communicate properly and document clearly the hypothesized infection for which the empiric antibiotic is prescribed, to both patients/families and physician/allied health care colleagues. 11. Convey clearly when assessment indicates change in/need for contact precautions regarding potentially transmissible conditions to infection control staff. 12. Explain to patients, hospital visitors and family re: importance of and need to respect contact precautions.	20. Communicate proper indications, limitations, side effects and complications with the use of antibiotics to patients and their family members.	30. Communicate any serious antibiotic allergies, toxic reactions or serious drug interactions that arose as a consequence of antibiotic use, to both the patient/family and the primary caregiver. 30.1. Could also include the promotion of a personal drug alert system (i.e., medic alert jewelry).
3. Collaborator	10. Appreciate and consider how early involvement of Infection Control Teams and implementation of their effective practices can augment antimicrobial stewardship by preventing spread of antimicrobial resistance and nosocomial infections (i.e., *C. difficile*, methicillin-resistant staphylococcus aureus [MRSA], vancomycin-resistant enterococci [VRE], etc.). 11. Collaborate with all resources, locally, regionally, provincially, and nationally regarding policies and procedures for infection control.	20. Educate members of medical team about prudent use of antimicrobial agents (appropriate indications, possible drug toxicities, etc.). 21. Collaborate with health care team members including infectious diseases (ID) experts, nurses, pharmacists, antimicrobial stewardship teams, infection control practitioners, lab technicians, and public health workers, to optimize and implement most effective antibiotic regimes for patients.	30. Collaborate with community pharmacies and health care providers to ensure awareness of any adverse reactions.
4. Leader	10. Become an antimicrobial stewardship program champion and promote "use of right drug, for right bug at right time, and for right duration." 11. Engage through role modeling/example, communication/collaboration with colleagues and allied health care professionals, as well as patients/visitors, efforts to promote best practices regarding infection control (e.g., Hand hygiene, infection control, sensible prescribing).	20. Demonstrate leadership regarding the culture of safe antimicrobial stewardship practice in the institution.	30. Alert community practitioners to resources developed regarding antibiotic stewardship in the local community

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CanMEDS Role	Admission	Inpatient Management	Transitions in Care
5. Health Advocate	10. Determine and balance priorities of providing best antimicrobial therapy for individual patients while recognizing need to preserve efficacy of treatments for future patients by minimizing development of resistant organisms.	20. Advocate for a community culture of safe antimicrobial stewardship practice in institution, by involving patients and their families in discussion. 21. Consider appropriate immunization.	30. Recommend and promote appropriate use of prophylactic measure, e.g., vaccinations, alternatives to indwelling catheters, or regular urinary catheter changes, etc.
6. Scholar	40. Use local antibiograms, in conjunction with local & regional microbiology laboratories to adapt the empirical therapeutic choices, protocols, order sets, of organization. 41. Participate in scholarly activity promoting antimicrobial stewardship. 42. Participate in creating and executing of educational measures and interventions (e.g., updating local antibiotic guidelines, participating in stewardship rounds and/or prospective audit and feedback, assist in design of alerts, decision aids, etc.		
7. Professional	40. Become self-aware of one's prescribing habits for antimicrobial agents and how they influence one's prescribing behaviors over course of any admission. 40.1. Includes both internal factors (fatigue, prescribing bias, etc.) and external factors (patient and family expectations, formulary restrictions, etc.). 41. Integrate feedback and consider altering personal antimicrobial prescribing practices based on information from adverse events, susceptibility reports, and antibiotic prescribing audits, etc.		

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4. General clinical skills: Complex and frail elderly

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Assess for presence of common geriatric medical comorbidities, including acute delirium, falls, polypharmacy, dementia and depression. 11. Consider a broad scope of differential diagnoses, with awareness that elderly patients often present with common illnesses in atypical manners. 12. Develop a treatment plan that anticipates risk of declining cognition with acute delirium. 13. Investigate and treat proactively medical causes of delirium. 14. Consider patient's falls risk and anticipate patient safety considerations. 15. Complete accurately medication reconciliation and review all pharmacological agents that may adversely impact patient care. 16. Develop a plan for medication management to adjust or to eliminate medications with potentially adverse drug interactions in the elderly. 17. Demonstrate principles of "Choosing Wisely," and effectively evaluate Risk Benefit Ratio of potential medical treatments for a hospitalized older patient. 18. Individualize a care plan that navigates conflicting best practice ideals of common disease management for the elderly. 19. Identify and document patient's Advance Directives and Goals of Care.	20. Maintain awareness and practices within Geriatric Best Practice Guidelines for prevention of hospital acquired medical complications with frail elderly including falls, delirium and physical deconditioning. 21. Participate in Best Practice Strategies for Fall Prevention including judicious use of physical or chemical restraints, facilitating early mobilization, judicious use of indwelling Foley catheters. 22. Direct patient care to include a physical environment conducive to clearance of delirium including reduction of noise stimulation, appropriate lighting, visible clocks and calendar placement, familiar items at the bedside, and treatment plan orders that promote continuation of patient's usual routine. 23. Appropriately assess cognitive functioning of patient over time and adjusts care plan as cognition warrants. 24. Promote early mobilization practices to reduce deconditioning and associated risks such as decubitus ulcer formation and falls. 25. Evaluate medication related side effects, avoiding prescription cascades and managing therapeutic competition in the older hospitalized patient. 26. Adjust the treatment care plan with declining patient health, complying with patient's/SDM goals of care when appropriate. 27. Provide quality care to the older hospitalized patient despite cognitive and functional decline, maintaining the dignity of the frail complex older adult.	30. Demonstrate knowledge of unique issues involving transitions of care of older hospitalized patient, such as rehabilitation needs and effective discharge planning. 31. Carefully assess the elderly patient as medically and functionally ready for discharge. 32. Develop a discharge plan that incorporates level of Cognitive functioning and physical limitations of frail elderly patients. 33. Identify risk factors for recurrent admission and hospitalization in older hospitalized patients, and institute measures to reduce this risk.

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CanMEDS Role	Admission	Inpatient Management	Transitions in Care
2. Communicator	10. Demonstrate sensitivity to presence of cognitive, functional and sensory impairment in the complex older patient. 11. Communicate clearly with the elderly patient, family, caregivers, and/or substitute decision makers (SDM) regarding admitting diagnosis. 12. Seek patient/family/SDM participation in treatment plan recommendations. 13. Communicate promptly with hospital health care team including Emergency Department (ED) staff regarding a geriatric patient with anticipatory management of delirium and falls risk. 14. Discuss effectively goals of care with health care team so as to respect the wishes of the elderly patient and his/her family members/SDM.	20. Communicate appropriately with patient and family/SDM for participation in the elderly patient's treatment plan and understanding of disease progression. 21. Consult geriatric medicine and/or geriatric psychiatric specialist when appropriate to assist in assessment and management of the complex frail older patient. 22. Participate effectively in inter-professional team meetings and family care conferences on goals of care for the elderly patient, including wishes of the elderly patient and his/her family members/SDM.	30. Communicate diligently with health care providers outside of hospital for collaboration and continuity of care including primary care physicians and providers, community visiting nursing and allied health support agencies. 31. Work effectively with other inter-professional team members, i.e., physiotherapist, occupational therapist and nursing, to determine functional and cognitive status prior to discharge. 32. Ensure clear medication reconciliation and prescription, with consideration for blister packing, and for supervision of medication for elderly patients. 33. Consider specific assessments of competency and driving safety post discharge of the elderly patient.
3. Collaborator	10. Seek consultation promptly from geriatric specialties where appropriate, including geriatricians, geriatric psychiatry, and geriatric clinical nurse specialists. 11. Involve proactively multidisciplinary team members for early assessment and interventions to prevent patient decline. 12. Cooperate and collaborate with social workers and liaison nurses early in admission, planning for safe repatriation to community settings as soon as possible. 13. Engage community agencies for alternative patient management instead of hospital admission, in order to avoid risk to frail elderly patients, who have been placed unnecessarily into a hospital environment.	20. Collaborate with allied team members on the medical unit for Best Practice Initiative (BPI) implementation 21. Apply a collaborative inter-professional model in the care of elderly patients. 22. Re-evaluate reasonable goals of hospitalization and discharge planning on an ongoing basis with hospital team, patient and family/SDM. 23. Provide consideration to optimal discharge plan, whether returning to home (with increased equipment and support), or transitioning to a formal assisted living or long-term care setting for increased care.	

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General clinical skills, common clinical conditions, and procedures frameworks

4. General clinical skills: Complex and frail elderly

CanMEDS Role	Admission	Inpatient Management	Transitions in Care
4. Leader	40. Educate hospital health care team members regarding care of the complex and frail elderly as a distinct subset of hospitalized patients with unique treatment and management needs. 41. Lead, coordinate, or participate in multidisciplinary quality improvement projects as they relate to improved care of the hospitalized older patient. 42. Appropriately utilize finite health care resources available to elderly hospitalized patients including referral to other health care professionals and community resources, balancing effectiveness, efficiency and access with optimal patient care.		
5. Health Advocate	40. Identify gaps in health care delivery to the hospitalized complex frail older adult and utilize opportunities for advocacy, health promotion and disease prevention in this population. 41. Advocate for sensible prescribing to avoid polypharmacy and unnecessary medications and drug interactions or side effects that adversely affect hospitalized older patients. 42. Promote health of the hospitalized older patient through effective communication and institute measures to prevent hospitalization-associated disability. 43. Respect choices of capable elderly patients who have chosen to live at a degree of risk for quality of life benefit. 44. Mediate for capable elderly patients in situations where their decisions may be in conflict with their adult children regarding medical care choices. 45. Understand and apply relevant legislature as it relates to the health care system such as Advance Care Planning and Adult Guardianship and Trusteeship Act.		
6. Scholar	40. Demonstrate continuous development in knowledge of recent advances in the care of the hospitalized older adult. 41. Maintain awareness of new and emerging treatments that may benefit the elderly patient population. 42. Critically evaluate and research best evidence concerning care of the complex and frail elderly patient in hospital.		
7. Professional	40. Demonstrate a commitment to provision of quality care to the complex elderly patient. 41. Recognize personal limits to mental, emotional, spiritual and physical energies particularly in dealing with complex elderly patients.		

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5. General clinical skills: Diagnostic decision making

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Generate a relevant differential diagnosis that incorporates both common and potentially serious diagnostic possibilities based on a patient's initial presentation. 11. Focus on relevant questions that rule in or out diagnostic possibilities in the differential diagnosis. 12. Perform an accurate physical examination and orders appropriate diagnostic investigations. 13. Integrate findings to test most probable diagnostic possibilities 14. Demonstrate effective hypothesis testing (Effective testing of a hypothesis for any given diagnosis includes challenging its coherence, adequacy, & parsimony in addition to rational elimination of other competing hypotheses). 15. Utilize moments to reflect on diagnostic certainty and adjust diagnoses accordingly.	20. Challenge diagnostic possibilities when faced with additional information. 21. Incorporate newly acquired contextual, psychosocial and cultural factors of a patient to refine diagnostic decision-making.	
2. Communicator	10. Execute efficiently active listening and incorporate the illness experience of patient and his/her goals. 11. Transition successfully between modalities of general survey to more specific and focused questioning when appropriate.		
3. Collaborator		20. Utilize diagnostic powers of other clinical experts and health care providers to converge upon a diagnosis through collaboration. 21. Understand and appreciate that such collaborations have potential to correct errors, to fill knowledge gaps and to address reasoning flaws.	

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General clinical skills, common clinical conditions, and procedures frameworks

5. General clinical skills: Diagnostic decision making

CanMEDS Role	Admission	Inpatient Management	Transitions in Care
4. Leader	10. Understand and exemplify how a clinical expert arrives at a diagnosis through interchange of different modes of reasoning – both inductive and deductive. (*Heuristics* are examples of inductive reasoning; they are diagnostic short cuts that are often made through use of pattern recognition. Heuristics can maximize diagnostic efficiency; however, they are limited in atypical presentations and rare conditions). 11. Recognize and appreciate value of subconscious and of clinical intuition. This awareness includes positive and negative influences the subconscious and clinical intuition may have on diagnostic decision making (Affective bias are factors that can impact on a clinician's unconscious emotional reactions to a patient, thereby limit achieving a correct diagnosis, e.g., stereotypes that provoke prejudgment include patients with mental illness, substance abuse, obesity, or poor treatment adherence, etc.). 12. Incorporate an awareness of both affective and cognitive biases that might influence decision-making (Cognitive biases are said to be distortions in thinking, e.g., anchoring premature closure, search satisfaction, availability bias, etc.).	20. Possess a self-awareness, mindfulness or metacognition concerning strengths and weaknesses of one's own reasoning abilities. 21. Self-reflect in order to enhance abilities to inquire, comprehend, apply and evaluate processes of own clinical decision making. Additionally, lead by example and encourage others to also self-reflect. 22. Utilize just-in-time learning, strategic reading and focused learning modalities in conjunction with self-reflection to augment diagnostic acumen.	
5. Health Advocate		20. Understand and incorporate a patient's goals and expectations that influence a diagnostic assessment (Goals of both patient and clinician must align; e.g., if a patient is not interested in pursuing an invasive work-up for a possible malignant condition, clinician's diagnostic work-up and subsequent patient management would change dramatically).	

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CanMEDS Role	Admission	Inpatient Management	Transitions in Care
6. Scholar	40. Understand practical applications of tests and their limitations in making diagnoses. 41. Integrate evidence-based medicine into decision-making by balancing it against unique patient characteristics, presentations, and circumstances to arrive at correct diagnoses. 42. Use clinical decision aids (paper and electronic) in determining diagnostic possibilities.		
7. Professional	40. Recognize personal limitations such as how stress and fatigue affect diagnostic decision-making and outcomes. 41. Recognize how systemic factors, i.e., time constraints, resource limitations, process errors, etc., influence diagnostic decision-making process. 42. Implement strategies to mitigate personal and professional limitations. 43. Distinguish when diagnostic uncertainty is from a lack of common and accessible medical knowledge verses when from personal unawareness and inexperience. 44. Use mitigation strategies to optimize patient safety while promoting diagnostic process (e.g., 'watchful waiting' is one such strategy whereby a physician continues to check in with a patient over time to see how their clinical presentation evolves and uses these changes to influence generation of a diagnosis). 45. Demonstrate vigilance in diagnostic uncertainty.		

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6. General clinical skills: Drug safety and medication reconciliation

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Elicit Best Possible Medication History (BPMH) by identifying and utilizing sources for clarification of/changes in medications (home or institution) used in previous six months, e.g.: 10.1. Patient and/or family/SDM. 10.2. Medication administration record (MAR) from institutions or from provincial pharmacy databases. 10.3. Blister packs, or pill bottles, etc. 11. Ascertain and identify any over-the-counter and herbal medications and supplements. 12. Confirm and investigate medication compliance issues. 13. Elicit review of allergies or adverse drug reactions. 14. Identify and determine any medications, which may impact presenting problems or may have adverse effects.	20. Ensure careful attention is given to co-morbidities when prescribing medications for elderly, or acutely ill patient with multi-system diseases. 21. Confirm that any required inpatient monitoring for efficacy or adverse effects of the intended medication regimen are complete.	30. Review current medication in hospital and reconcile with BPMH from home, to produce a Best Possible Medication Discharge Plan (BPMDP). 31. Verify clear and accurate documentation of medications prescribed is provided upon discharge: 31.1. Reconcile outpatient medication with any changes made in hospital 31.2. Verify patient's medication regimen for discharge is clearly written in prescription *exactly as intended*. 32. Arrange for follow-up outpatient monitoring of efficacy or adverse effects of discharge medication regimen. 33. Comprehend whether or not to continue, hold, or change home medications.
2. Communicator	10. Utilise open-ended and prompting questions with patient or family/SDM, to determine how medications are taken. 11. Employ culturally and literacy appropriate communication concerning medications and patient outcomes. 12. Specify and clarify to patient and family/SDM regarding any follow-up required in monitoring medication during hospital stay as well as upon discharge.	20. Confirm and implement proper medication protocols through proper notes and orders, verbal communication with patient and family/SDM, and interaction with members of the health care team. 21. Communicate tactfully with patient and family/SDM where medications with potential for harm are discovered. 22. Disclose as soon as possible with patient and family/SDM, any medication errors and possible adverse effects, including solutions to mitigate any problems. 23. Teach patient and family/SDM about medications and their indications, along with explanations of potential for harm with incorrect use, or sudden discontinuation.	30. Review with patient and family/SDM understanding of need for medication prescribed, and explain any planned medication changes and additions. 31. Confirm availability of home care and community supports. 32. Verify with patient and family/SDM proper record keeping regarding medications to ensure ongoing safety. 33. Communicate with family/SDM concerning safe drug administration upon discharge (and that prescriptions are patient friendly. 34. Comprehend if medication adherence tools are needed for patient and family/SDM, and where/how to access them. 35. Address any financial issues with patient and family/SDM that could hinder or affect medication compliance.

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CanMEDS Role	Admission	Inpatient Management	Transitions of Care
3. Collaborator	10. Collaborate with community and hospital pharmacists, and primary care provider to verify BPMH. 11. Document in orders/chart, link between community medications and Admission Orders 11.1. specify medications continued 11.2. dosages changed, discontinued, etc. 12. Document in clear, concise language, intentions and rationale of treatment plans at the time of admission. 13. Recognize and address where communication gaps may exist in prescribing, e.g.: 13.1. multiple prescribers 13.2. errors in medication lists 13.3. discrepancies between prescribed doses and patient medication use, etc.	20. Identify and document links and rationale between medical issues treated, and home medications used. 21. Document in clear, concise language, intentions and justification of ongoing treatment plans. 22. Establish strong working relationships with pharmacists and nursing staff to resolve discrepancies, and to review best prescribing practices. 23. Demonstrate professionalism when 23.1. disclosing medication errors 23.2. considering changes in another professional's prescribed medication list.	30. Where there are changes to home medications, document change, and reason for change, in discharge summary to inform next care provider. 31. Collaborate with pharmacists regarding availability and accessibility of drugs to avoid missed doses/duplicate doses, especially on day of discharge. 32. Verify timely discharge summary with reconciled medication list is available to primary care provider. 33. Follow up with next community care provider, if medication changes are complex, or if follow-up/cognition may be challenging for patient. 34. Collaborate with both hospital and community pharmacists to ensure medication reconciliation is properly completed.
4. Leader			30. Understand need for health care team collaboration on a continuous basis, both in and out of hospital to improve medication safety. 31. Contribute to and promote regular audits/quality assurance measurements to improve patient safety. 32. Implement accreditation recommendations for best practice, in collaboration with hospital pharmacists and community practitioners.
5. Health Advocate	10. Participate in system-wide approach regarding safe and systematic approaches to obtain BPMH efficiently, and implement effective medication reconciliation.	20. Improve awareness of safety challenges for patients regarding medication errors at all times during transitions into, through, and out of hospital systems. 21. Lead through example regarding importance of safe medication practice to reduce harm and adverse events.	30. Advocate for supports on discharge and in community to ensure patients' success, and reduce readmissions and/or adverse medication events. 31. Advocate with provincial drug coverage programs for assistance to offset cost of new medications. 32. Identify and address gaps in hospital and community processes creating barriers to patients' success in taking their medications properly: e.g., funding, medication compliance surveillance.

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General clinical skills, common clinical conditions, and procedures frameworks

6. General clinical skills: Drug safety and medication reconciliation

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
6. Scholar	40. Contribute to medication safety protocol development as a key quality improvement area. 41. Understand concepts and practice of dangerous drugs in elderly (e.g., BEER's Criteria). 42. Develop ongoing quality assurance projects and culture around medication safety during transitions during hospital stay. 43. Review literature; develop local ongoing research and study regarding areas where practice can be improved (Plan-Do-Study-Act [PDSA] Cycles). 44. Partake in collaborative and innovative projects and research into medication safety, both within hospital, as well as on transitions back to community.		
7. Professional	40. Demonstrate commitment to excellence by participating in quality assurance projects in conjunction with other health care professionals.		

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7. General clinical skills: Information management

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Obtain pertinent information from different sources, available in hospital, e.g., emergency department (ED) physician's note, ED nursing notes, consultant reports, etc. 11. Recognize and utilise appropriately electronic systems in documenting admission notes. 12. Evaluate role of computerized physician order entry (CPOE) and pre-set admission order sets in terms of applicability and appropriateness in context of patient admission. 13. Utilise new health information presented routinely to revise patient diagnoses rapidly and effectively as hospital stay evolves. 14. Elicit from other sources, additional information on patient not immediately provided from ED. 15. Appraise accuracy, quality, and relevance of information presented on admission.	20. Retrieve and interpret increasing volumes of electronic health information (labs, imaging, etc.). 21. Evaluate continuously individual patient care plan with best practice to provide evidence-based care where applicable. 22. Apply probability and uncertainty concepts to diagnostic and clinical decision-making.	30. Communicate clearly most medically salient and relevant points to other clinicians/health care providers during transitions of care.
2. Communicator	10. Document in electronic progress notes (where available), using clear, concise, accurate wording, progress of patient, itemizing various relevant medical issues where applicable. 11. Summarize pertinent events in hospital through appropriate channels (telephone dictation, electronic discharge summary tools, discharge forms, etc.).	20. Ensure patient's and family/SDM's understanding of relevant health information and clarify issues prior to discharge. 21. Ensure patient and family/SDM understand relevant health information using techniques such as allowing time for questions or having them teach what they have heard from health team back to physician.	30. Encourage patient engagement in health care (e.g., explain importance of knowing what happened in hospital, what they were diagnosed with, what treatments were received, and what details of their follow-up plan after discharge). 31. Notify in-hospital team of pertinent health information during patient transition. 32. Inform relevant parties outside of hospital during patient transition (e.g., contact primary care provider on discharge). 33. Update community care resources concerning patient's current clinical issues, inpatient management, and transition follow-up issues.

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General clinical skills, common clinical conditions, and procedures frameworks

7. General clinical skills: Information management

CanMEDS Role	Admission	Inpatient Management	Transitions in Care
3. Collaborator	10. Employ most effective means available (e.g., secure messaging, phone, email, etc.) to communicate pertinent health information to extended health care team. 11. Collaborate with multidisciplinary health care team (pharmacist, emergency physician, emergency nursing, etc.) to ensure all necessary health information is collected accurately during admission.	20. Synthesize suggestion(s) from consultant physician(s) and other health care providers to provide patient care where appropriate in context of evolving hospitalization of individual patient. 21. Coordinate information readily and appropriately from patient's health care team in hospital. 22. Ensure consistency and integrity of health information being collected from various health care providers, and aid in resolving any discrepancies. 23. Work with IT and health records to facilitate best practices of electronic info management.	30. Communicate effectively with consulting and allied health services to expedite care and facilitate appropriate patient discharges. 31. Work with hospital health professionals (e.g., discharge planner, social worker, etc.) to ensure integrity and completeness of health information during patient transition. 32. Permit means of contact by receiving health care providers (e.g., family doctor, hospitalist in accepting hospital, etc.), should there be need for clarification or further information.
4. Leader	10. Advocate for best practices in data quality and process in health information acquisition on admission. 11. Research and apply local, provincial, and national regulations on health information protection, both at admission and throughout other stages of hospitalization.	20. Promote consistent and appropriate documentation of daily progress notes. 21. Seek and evaluate novel means of documenting progress notes that improve data quality and workflow efficiency (e.g., electronic clinical notes, trending lab results, data mining, etc.). 22. Utilise clinical decision aids (at point of care), as well as reports on metrics and performance to enhance diagnostic, prognostic and management outcomes. 23. Explore how diagnostic, prognostic, and management outcomes can be incorporated back into daily practice.	30. Master steps involved in transfer of health information during transition of care. 31. Advocate for improvement in maintaining data quality and integrity on patient transition (e.g., improved discharge summaries). 32. Advocate for systems that improve timeliness of health information exchange during transfer.

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CanMEDS Role	Admission	Inpatient Management	Transitions in Care
5. Health Advocate	40. Understand infectious disease/transmission implications associated with different means of gathering health information (e.g., use of clipboards taken into isolation rooms, use of mobile devices such as tablets for patient self-reported histories, cleaning of hands prior to using a hospital computer after having examined a patient, etc.) 41. Promote institutional capture of relevant health information, both at individual level (e.g., encourage clinicians to capture appropriate travel history during times of outbreak or where else appropriate) and at an organizational level. 42. Provide patients and their families/SDMs with useful sources of health information relevant to their illness in a variety of methods best suited to patients (e.g., paper/electronic handouts, websites, etc.). 43. Advocate patients and families/SDMs to take increased ownership in personal health information. 44. Promote public health initiatives, at individual and organizational level, that improve health literacy in population served by the hospital. 45. Promote communication of health information around pertinent outbreaks and general hand hygiene behaviors to patient and hospital staff population. 46. Develop an awareness of new means of health information dissemination (e.g., social media) in promoting health of population served by the hospital where appropriate.		
6. Scholar	40. Access efficiently and refer promptly to reputable sources of health information (UpToDate, PubMED, etc.). 41. Appraise new health information, research and guidelines for quality of data and level of evidence. 42. Participate in knowledge translation activities within hospital (e.g., CME, hospitalist rounds, teaching of students/residents, etc.) to help promote best practice. 43. Engage in clinical research that utilizes health information collected by hospitalist group, or make health data available to promote clinical research where appropriate and where consent has been received. 44. Develop an understanding of concepts such as: Data quality, "big data" and data aggregation. 45. Remain up-to-date on current and upcoming technologies used by general public in collecting health information (e.g., advanced fitness trackers, other health monitoring devices, etc.) and appreciate how these technologies may or may not be appropriate sources of health information for hospitalists.		
7. Professional	40. Demonstrate a commitment to patient safety and quality improvement by using clinical decision aids (at point of care) as well as reports on metrics and performance to enhance diagnostic, prognostic and management outcomes. 41. Recognize and demonstrate an awareness of limitations to accessing medical information under relevant privacy legislation, e.g., what information can be gather, by whom, and under what circumstances, etc. 42. Apply best practices of information transfer and storage. 43. Know appropriate safe guards for health information to prevent privacy breaches 44. Understand what constitutes a breach and steps required if such a breach were noted.		

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8. General clinical skills: Nutrition and the hospitalized patient

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Consider malnutrition as part of the complex presentation of any patient being hospitalized. 11. Adopt and utilize consistently available screening tools to assess if malnutrition exists. 12. Assess if a nutritional evaluation by a registered dietitian is required based on outcome of screening tool. 13. Assess biological/physiological barriers to reestablishing nutritional balance and consider various modes of nutritional intervention (e.g., oral, enteral, parenteral).	20. Prescribe appropriate individualized modified diet and mode of delivery based on patient's medical condition. 21. Monitor for potential refeeding syndrome and if necessary, treat for electrolyte imbalances associated with refeeding syndrome. 22. Monitor progress using pre-defined measure outcome indicators.	30. Arrange for follow-up as an outpatient at predetermined times based on severity of admission malnutrition. 31. Arrange for home care if patient is on long-term/life-long enteral-tube feeding or parenteral nutritional support.
2. Communicator	10. Communicate with patient and family/SDM concerning barriers associated with malnutrition. 11. Communicate with patient and family/SDM re: acute goals of care plan associated with malnutrition.	20. Communicate with patient and family/SDM mode of nutritional intervention (oral, enteral, parenteral) and benefits/risks associated with each mode. 21. Determine through communication with patient and family/SDM about dietary restrictions.	30. Communicate with patient and family/SDM concerning long-term goals of care plan based on medical condition of patient and potential need for continued nutritional intervention.
3. Collaborator	10. Collaborate with registered dietitian, when necessary, in assessing patient's nutritional status upon admission.	20. Collaborate with gastroenterology specialists as appropriate and where available. 21. Consult with registered dietitian, nurse, and pharmacist, when necessary, to devise an effective nutrition care plan.	30. Collaborate with therapists, social workers, and other health care professionals when necessary in transition of care outside hospital setting.
4. Leader	10. Lead, coordinate, or participate in efforts to evaluate malnutrition and screening tools, and implement mechanisms to enhance consistent use.	20. Lead, coordinate, or participate in multidisciplinary initiatives aimed at improving patient progression to nutrient sufficiency, which may look at modified diets, mode of delivery, outcome indicators, etc. 21. Lead, coordinate, or participate in multidisciplinary initiatives to improve care pathways for individuals requiring enteral or parenteral nutrition.	30. Coordinate follow-up nutritional care as part of discharge plans for patients requiring nutritional support.

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CanMEDS Role	Admission	Inpatient Management	Transitions of Care
5. Health Advocate	10. Recognize importance of timely assessment of nutritional sufficiency during admission.	20. Recognize and understand importance of nutritional sufficiency in hospitalized patients. 21. Comprehend importance of a team approach in attaining and maintaining nutrient sufficiency of patient, while using a patient-centric approach.	30. Work with patient and family/SDM to increase opportunity to adopt healthy eating behaviours. 31. Work with community/population to identify opportunities and barriers associated with support for nutritional sufficiency.
6. Scholar	40. Predict patients' risk of morbidity and mortality from malnutrition using evidence-based screening tools. 41. Engage in evaluation of effectiveness of screening tools for malnutrition. 42. Identify risk factors and barriers that may alter course of patients' nutrient sufficiency. 43. Reflect and evaluate critically on successes and shortcomings of patient nutrition care plans that will contribute to scholarly work. 44. Inform and update outpatient team members of successes and shortcomings of nutrition care plans and collaborate for effective transition now and in future.		
7. Professional	40. Recognize overarching importance of good nutrition in treatment of acute and chronic disease, as well as primary and secondary prevention of illness.		

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9. General clinical skills: Hospice palliative care

Hospice Palliative Care engages individuals and their families in planning for the care they want at different stages in their illness based on their own goals and values and on a clear understanding of their prognosis and treatment options *(A Model to Guide Hospice Palliative Care 2013)*

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Within the context of a patient's illness (acute and chronic), identify patient's risk of dying (life expectancy) using a validated tool for patients admitted to hospital in order to initiate a detailed discussion regarding goals of care. 11. Evaluate risks and benefits of life-sustaining therapy for patient. 12. Identify and review patient's goals of care designation in context of underlying medical illness, or prognosis. 13. Review options for end of life care where further active investigations and treatment are not indicated/desired. 14. Identify and optimize treatment options for pain and symptom management in end of life care. 15. Write orders for diagnostic tests and treatments consistent with patient's goals of care designation and level of care. 16. Establish and document decisions about goals of care in medical record, including discussions regarding risks and benefits of life-sustaining therapy.	20. Continue advance care planning discussions including but not limited to 20.1. artificial nutrition 20.2. artificial respiration 20.3. mechanical life support 20.4. medication use, e.g., antibiotics 20.5. diagnostic and therapeutic interventions: hydration, extent of diagnostics. 21. Assess function and symptoms using standardized evaluative tools. 22. Assess and manage pain, cognition, fluid status, nutrition status, wounds, addictions, etc. 23. Identify and manage common palliative symptoms, e.g., dyspnea, anxiety, nausea, constipation, etc. 24. Provide prognostication in malignant and non-malignant conditions on basis of best level of evidence and utilization of indicators. 25. Assess for signs and symptoms of depression, anxiety, and delirium. 26. Arrange family/SDM and/or team meeting if appropriate.	30. Identify need for involvement and/or ongoing involvement of palliative care or hospice teams. 31. Identify and refer to appropriate community resources. 32. Provide a detailed discharge plan including final recommendations and follow-up plan. 33. Assist and encourage patient and family/SDM to follow-up with their community health care providers and family/friends to continue discussion regarding Advance Care Planning. 34.

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CanMEDS Role	Admission	Inpatient Management	Transitions of Care
2. Communicator	10. Using available communication strategy tools (e.g., SPIKES, SPEAK), initiate a process with patient and family/SDM to discuss: 10.1. patient's values 10.2. patient's prognosis 10.3. risks and benefits of life-sustaining therapy including resuscitative measures 10.4. goals of acute care 10.5. power of attorney(ies) for personal and financial decisions. 11. Assist patient and family/SDM to arrive at decisions on goals of care for acute hospitalization. 12. Assess patient's and family's/SDM's level of understanding of current illness and prognosis. 13. Communicate prognosis while being sensitive to cultural and individual preferences.	20. Provide regular updates to patient and family/SDM (as appropriate) with respect to any changes in condition. 21. Reassess goals of care if necessary. 22. Regularly assess signs and symptoms of loss, grief, mourning, etc. 23. Be aware of cultural beliefs, values and practices. 24. Facilitate access to legal processes (e.g., referral to social worker) that will help patient formalize his/her wishes.	
3. Collaborator	10. Determine appropriate inpatient or other destination in consultation with ED and consultants.	20. Coordinate ongoing care with oncology specialists or other specialists as required (e.g., respirologists, cardiologists, family physicians, etc.). 21. Arrange consultation with palliative care services if/when appropriate. 22. Enlist other health care workers and spiritual leaders as necessary to provide spiritual, psychological, ethical and social support.	
4. Leader	40. Recognize an acute care hospitalization is in spectrum of care, and begin or continue Goals of Care discussions with all patients. 41. Establish a culture of practice where Goals of Care discussions are the norm rather than the exception. 42. Assist in development of organizational practices that lead to regular practices of patient centred goal-directed care.		
5. Health Advocate	40. Engage when appropriate, involvement of all patients and families/SDMs in advance care planning. 41. Be aware and sensitive to patients' cultural and individual preferences to avoid stereotyping and incorrect assumptions. 42. Advocate for and seek to practice high quality of end of life care.		
6. Scholar	40. Participate in programs that enhance and improve processes and delivery of high quality end of life care. 41. Participate in ongoing education to establish standards for prognostication and end of life protocols to improve quality of end of life care.		
7. Professional	40. Be aware of professional associations' stance or guidelines regarding life saving and life sustaining interventions. 41. Be aware of legislation regarding: Capacity to consent, age of consent, competency, etc.		

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10. Clinical conditions: Acute life or limb threatening emergencies on the ward: Acute coronary syndrome (ACS)

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Confirm Acute Coronary Syndrome (ACS) diagnosis and appropriately risk stratify patient to determine disposition (home vs. ward vs. critical care unit (CCU): 11. Recognize signs and symptoms of ACS and categorize as angina, non-ST segment elevation myocardial infarction (NSTEMI) or ST-segment elevation myocardial infarction (STEMI). 12. Distinguish cardiac from non-cardiac presentations. 12.1. Recognize risk factors for coronary artery disease (CAD). 12.2. Diagnose ACS by reviewing history, physical exam, laboratory and EKG results. 12.3. List acute treatment of ACS, role of thrombolytics and interventional cardiology. 12.4. Consider and screen for risk factors such as illicit drug use or diabetes (new or established). 13. Define ACS with cardiac complications such as congestive heart failure (CHF), acute pulmonary edema, acute mitral regurgitation (MR), arrhythmias or cardiogenic shock, and determine appropriate management and disposition. 14. Elucidate on changes to approach with ACS with non-cardiac complications such as above-the-knee amputation (AKA), acute-on-chronic kidney disease (AoCKD), diabetic ketoacidosis (DKA), and anxiety. 15. Consider using hospital-adapted orders for ACS if present, starting with management in emergency department (ED).	20. Recognize ACS in hospitalized patient and initiate appropriate management. 21. Validate ACS as an etiology with presentation of delirium, particularly in elderly, high-risk vasculopathic patients, and in perioperative setting. 22. Comprehend role of noninvasive cardiac tests such as Holter monitoring, echocardiography, Nuclear Medicine myocardial perfusion scan (MIBI scan) and stress testing. 23. Recognize signs and symptoms of decompensation. 24. Understand and initiate secondary prevention strategies for ACS and all other patients with coronary artery disease (CAD).	30. Institute evidence-based long-term secondary prevention medications. 31. Prepare discharge summary with specific details regarding risk stratification, interventions, complications and recommendations for primary care provider, regarding lifestyle, medications and follow-up. 32. Consider post discharge cardiac rehab.

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CanMEDS Role	Admission	Inpatient Management	Transitions in Care
2. Communicator	10. Communicate with patient and family/SDM to explain diagnosis and prognosis of ACS. 11. Explain to patient and family/SDM management options available in your institute, and consider transfer to another service or institution. 12. Implement patient's goals of care in adaptation of ACS treatment goal, taking into consideration patient's age, co-morbidities, and past history. 13. Establish and communicate clearly patient's preference regarding "Code Status," resuscitation, and intensive care unit (ICU) admission.		30. Confirm appropriate location of discharge (i.e., inpatient rehab vs. home) and communicate importance of medication compliance and signs and symptoms of recurrent angina.
3. Collaborator	10. Engage in appropriate communication with ED physician, catherization lab physician, and ward charge nurse (to facilitate admission). 11. Collaborate with ED staff including ED nurses to ensure prompt receipt of therapy (i.e., heparins, thrombolytics, anti-platelets, antianginals) 12. Deliberate on consulting cardiology, whether or not intervention considered. 13. Consult with invasive cardiologists, when appropriate, to discuss interventional approaches. 14. For optimal patient care, provide clear and detailed written and verbal handover if the patient is: 14.1. admitted to a critical care unit 14.2. taken for intervention 14.3. transferred to a specialist service. 15. Co-ordinate between ED staff, cath lab staff and inpatient staff to ensure smooth transition from one location to another.	20. Provide clear and detailed handover if patient admitted to a critical care unit or taken for intervention. 21. Consider accompanying patient if unstable, to CCU or to Cath Lab, for optimal handover.	

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General clinical skills, common clinical conditions, and procedures frameworks

10. Clinical conditions: Acute life or limb threatening emergencies on the ward: Acute coronary syndrome (ACS)

CanMEDS Role	Admission	Inpatient Management	Transitions in Care
4. Leader	10. Lead or participate in developing protocols to ensure rapid, evidence-based treatment is provided at institution.		
5. Health Advocate	10. Advocate for early-evidence supported therapies based on patient's choices/health care values.	20. Work with patient and family/SDM for access to rehab, dietician, etc. 21. Recognize role of cardiac rehab and inter-professional team.	30. Work with patients to address determinants of health that affect them and their access to needed outpatient health services or resources.
6. Scholar	40. Identify and integrate risk stratification tools into treatment of ACS. 41. Communicate lifestyle interventions to registered nurse (RN) teams to ensure that they are aware of these interventions, which are subsequently communicated to patients. 42. Educate house staff and non-cardiology colleagues on ACS management.		
7. Professional	40. Demonstrate a commitment to patient safety and quality improvement in ACS management throughout the patient's inpatient journey.		

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11. Clinical conditions: Acute life or limb threatening emergencies on the ward: Acute spinal cord compression (ASCC)

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Elicit full history, raise suspicion and establish diagnosis of Acute Spinal Cord Compression (ASCC). 11. Describe presentation of ASCC and assess: 11.1. patient's ability to ambulate (highly predictive of chance of recovery) 11.2. a sensory level, which may help to focus on suspected level of cord compression 11.3. reflexes, which may be absent at level of compression and hyperactive below 11.4. digital rectal exam, which may demonstrate a lax anal sphincter tone in late stage spinal cord compression 11.5. possible etiology (e.g., metastatic disease (Metastatic Spinal Cord Compression [MSCC]); infectious: epidural abscess, osteomyelitis, disciitis; or mechanical: spinal stenosis or spondylolisthesis). 12. Order appropriately and rapidly indicated tests required to evaluate suspected ASCC, e.g., MRI of whole spine within 24 hours (or sooner if emergency surgery is contemplated). 13. A CT scan can also be used if MRI is contraindicated or not available. 14. Blood cultures if infectious causes are suspected. 15. Promptly recognize, discuss and refer to appropriate specialists such as neurosurgery, oncology, and infectious disease specialists: 15.1. refer immediately and consider administering corticosteroids and antibiotics, depending on etiology, as soon as SCC is suspected, with any of following symptoms/signs: • Pain localized to spine or radicular pain,	20. Provide supportive care and rehabilitation treatment plan to include: 20.1. thromboprophylaxis 20.2. prevention/management of pressure ulcers 20.3. bladder and bowel continence management 20.4. maintaining circulatory and respiratory functioning 20.5. access to specialist rehabilitation and transition to care at home 20.6. supportive counseling 20.7. nutritional support to promote best outcomes. 21. Describe prognosis of ASCC and probability of patient's retaining or regaining ability to walk with various treatment modalities. 22. Evaluate and document prognostic indicators for ambulatory outcomes such as pre-treatment motor function and immediate initiation of referral for therapy and/or surgery.	30. Discharge planning and ongoing care, including rehabilitation. 31. Supportive care in collaboration with appropriate specialist care and intervention/treatment. 32. Titrate/adjust steroid and other medications appropriately in preparation for discharge. 33. Ensure access to rehabilitation as necessary.

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CanMEDS Role	Admission	Inpatient Management	Transitions of Care
	• pain that worsens with movement, lying down, coughing, sneezing or straining, • limb weakness or heaviness, difficulty walking, numbness, tingling, or pins and needles • sensory loss or bladder/bowel dysfunction • signs of spinal cord or *cauda equina* compression. 15.2. Refer <u>urgently</u> (within 24 hours): • pain in middle or upper spine • progressive lower spinal pain • severe unremitting lower spinal pain • spinal pain aggravated by straining • localized spinal tenderness • nocturnal spinal pain preventing sleep. 16. Initiate and verify that discharge planning and ongoing care, including rehabilitation are begun on admission.		
2. Communicator	10. If related to a cancer diagnosis, notify patient's oncologist or hematologist and treating cancer clinic of patient's hospitalization and current status. 11. Ensure patient and family/SDM are fully informed and active participants in care. 12. Confirm and verify that decision whether or not to take emergency action is guided by patient's overall condition, nature of cancer and its prognosis, burden associated with any proposed treatment, distress caused by symptoms and patient's and family's/SDM's desires.	20. Demonstrate clear and consistent communications with patient with known or suspected ASCC. 21. Ensure that family/SDM and caregivers are fully informed and involved in all decisions about treatment. 22. Ensure timely and effective communication between all relevant health care professionals, including primary oncology site team, rehabilitation team and community support, families and caregivers, primary care and palliative care.	30. Ensure that patient with MSCC and family/SDM know who to contact if symptoms progress.

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CanMEDS Role	Admission	Inpatient Management	Transitions of Care
3. Collaborator	10. Seek immediate referral to neurosurgery, predominantly in cases where SCC is related to an undiagnosed malignancy or other (infectious, or mechanical) process. 11. Seek early consultation with Infectious Disease Specialists, if infectious process. 12. Seek immediate referral to radiation oncology, predominantly in cases where SCC is related to a previously diagnosed malignancy.	20. Collaborate with rehabilitation team early in admission process and throughout hospital stay, to ensure optimal rehabilitation and best prognosis. 21. Depending on need initiate referral(s) to health care professionals/departments such as mental health, social worker, psychosocial oncology team, Cancer Patient Navigator (CPN), psychiatrist, psychologist, social worker, advanced practice nurse or spiritual care as appropriate.	
4. Leader	40. Participate in, coordinate or lead multidisciplinary initiatives to promote patient safety and optimize cost-effective diagnostic and management strategies for patients with ASCC. 41. Perform frequent clinical reviews of patients with cancer who develop lower spinal pain that is clinically thought to be of non-specific origin, and of patients without a prior diagnosis of cancer who develop suspicious spinal pain with or without neurological symptoms.		
5. Health Advocate	40. Participate at network level in development of care pathways for ASCC/MSCC. 41. Support and implement available care pathways and disseminate information about early diagnosis and management of patients with known or suspected ASCC. 42. Every centre treating patients with MSCC should ensure 24-hour access to senior clinical oncologists, neurosurgeons and radiologists with experience and expertise in treating patients with MSCC to give advice and support to clinicians. 43. Inform decision-making process and undertake treatment where necessary.		
6. Scholar	40. Help raise and maintain awareness and understanding of new and emerging treatments of ASCC by dissemination through inter-hospital presentations, CME, etc.		
7. Professional			

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12. Clinical conditions: Acute life or limb threatening emergencies on the ward: Acute stroke/TIA

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Elicit history from patient and family/SDM to distinguish a suspected transient ischemic attack (TIA) with symptom duration of 20 minutes or less from a suspected stroke. 11. Perform a detailed neurologic exam sufficient to localize suspected cerebral vascular accident (CVA). 12. Differentiate acute ischemic CVA from acute hemorrhagic CVA for appropriate management. 13. Employ appropriate imaging and laboratory evaluation to exclude conditions that mimic stroke such as subdural hematoma, seizures. 14. Assess for risk factors associated with stroke, and optimize medical managements, i.e., glycemic control, appropriate BP management, smoking cessation, atrial fibrillation assessment. 15. Describe indications and contraindications for thrombolytic therapy in setting of acute stroke. 16. Initiate evidence-based medicine therapeutic agents in a timely manner, e.g., antiplatelet agent, thrombolytic, glucose control. 17. Discontinue pharmacologic agents contraindicated with acute stroke. 18. Discuss prognosis with patient and family/SDM. 19. Initiate end of life care when appropriate.	20. Order evidence-based stroke prevention testing: carotid doppler, holter monitoring, echocardiograms 21. Arrange repeat imaging to confirm suspected CVA with 72-hour computer tomography (CT) head or magnetic resonance imaging (MRI) head scan. 22. Initiate secondary stroke prevention. 23. Closely monitor and manage glucose and blood pressure for best practice and patient outcomes. 24. Follow evidence-based Order Sets. 25. Initiate patient swallow assessment delegating to speech therapists or nursing staff as available. 26. Re-assess often patient with suspected repeat stroke or stroke extension. 27. Modify treatment plan daily as patient deteriorates or improves. 28. Begin mobilization/physiotherapy as appropriate as soon as possible.	30. Refer to appropriate rehabilitation/ management program or long-term care, as appropriate or as resources allow. 31. Provide information regarding expected patient activity level on discharge, any limitations suggested and when to seek medical attention if new symptoms develop. 32. Provide referrals for smoking cessation options, and drug and addiction treatment programs when appropriate. 33. Facilitate appropriate discharge planning.

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CanMEDS Role	Admission	Inpatient Management	Transitions in Care
2. Communicator	10. Address and document resuscitation status and degree of intervention with patient and family/SDM. 11. Facilitate admission to appropriate in-patient location including intensive care unit (ICU), designated stroke unit, medical unit, or palliative care area. 12. Provide information to patient and family/SDM regarding type, location and prognosis of stroke. 13. Explain potential risk for new stroke formation or stroke extension.	20. Provide regular updates to patient and family/SDM regarding treatment plan and patient progress. 21. Communicate with patient and family/SDM that therapeutic agents given in hospital management may reduce risk of stroke but may not prevent all stroke occurrences. 22. Discuss nutritional supports including feeding tubes with patient and family/SDM as appropriate when indicated. 23. Update family/SDM regarding patient care received in hospital and provide opportunity for answering questions regarding care received prior to patient discharge. 24. Educate patient and family/SDM of benefits of lifestyle interventions and medication compliance for long-term wellness.	30. Educate patient of benefits of lifestyle interventions and medication compliance for long-term wellness. 31. Assist patient and family/SDM with compassion to accept disability and functional decline with discharge planning. 32. Communicate promptly to primary care provider any notable events of hospital and discharge needs, including new pharmacology agents such as Coumadin, which need ongoing monitoring. 33. Assist patient and family/SDM with obtaining formal capacity assessments when required.
3. Collaborator	10. Communicate with other specialists such as internists/intensivists for timely initiation of thrombolytic agents when appropriate. 11. Consult appropriate specialties including stroke neurologist/internist, neurosurgery and radiology services when required. 12. Consult palliative and spiritual care specialties when appropriate.	20. Consult appropriate specialties when indicated. 21. Refer to in-patient rehab programs when appropriate.	30. Refer to transitional stroke clinic for patient follow-up and prevention. 31. Refer to community home care agencies for ongoing outpatient therapy and supports. 32. Assist patient and family/SDM with insurance forms or employment documentation as appropriate to facilitate patient's financial wellness post stroke/TIA.
4. Leader	40. Support staff education of early recognition of TIA/stroke and the timely initiation of appropriate initial therapies. 41. Identify barriers to best practice initiates and coordinate patient management in stroke/TIA.		
5. Health Advocate	40. Facilitate access to resources including imaging technology, neurosurgical interventions, admission to dedicated Stroke Units and thrombolytic agents when indicated and where available. 41. Ensure patient has access to both pharmacologic and non-pharmacologic interventions and advocate for access to rehab, dietician, etc. 42. Assist family members with obtaining formal capacity assessments when required. 43. Recognize barriers to follow-up care of stroke patients and involve Hospital staff to tailor medication and transition of care plan to overcome barriers.		
6. Scholar	40. Participate in educational programs on appropriate TIA/stroke management including Provincial Stroke Rounds where available. 41. Participate in initiatives to rapidly identify stroke patients and minimize the time to intervention. 42. Participate in development and implementation of Evidence Based Stroke Management Order Sets.		
7. Professional	40. Respect patient's and family's/SDM's decisions regarding initiation and discontinuation of treatment options. 41. Assist family/SDM to make urgent medical care decisions including surgical consent, feeding issues, resuscitation status and initiation EoL decisions. 42. Assist patient and family/SDM with compassion to accept disability and functional decline. 43. Respect competent patient's choice for living at risk for quality of life benefit.		

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13. Clinical conditions: Acute life or limb threatening emergencies on the ward: Severe drug adverse or allergic reactions

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Recognize and triage anaphylactic, anaphylactoid, and severe reactions promptly. 11. Perform a focused physical exam for signs and symptoms of anaphylaxis. 12. Consider the differential diagnosis such as severe asthma, congestive heart failure (CHF) or hypotension due to other causes. 13. Recognize impending respiratory distress or shock and resuscitate patient accordingly. 14. Ensure early referral to critical care if necessary. 15. Properly use epinephrine, antihistamines, corticosteroids, i.v. fluids +/- bronchodilators+/- glucagon (in setting of beta blockers). 16. Identify and immediately discontinue causative agent(s). 17. Recognize other severe reactions such as Stevens Johnson syndrome or toxic epidermal necrolysis.	20. Recognize biphasic anaphylaxis and other late drug reactions. 21. Initiate alternative drug to replace offending agent as necessary. 22. Monitor new medications and ensure no reactions to new regimen for effect and side effects. 23. When appropriate, consider other severe drug reactions in inpatient population such as heparin induced thrombocytopenia (HIT).	30. Review new medications and ensure no reactions to new regimen. 31. Provide new list of medications and ensure no offending drug is among them. 32. Inform patient and family/SDM of need to wear medical bracelet. 33. Provide instructions on how and when to self-administer auto epinephrine in given proper circumstances.
2. Communicator	10. Verify which drug has caused this reaction. 11. Understand reason for its prescription.		30. Communicate promptly and effectively with pharmacist concerning medications changes. 31. Notify community health care providers of this severe reaction. 32. Provide sufficient information about this reaction to patient and family/SDM, and other involved health care providers. 33. Educate patient and family/SDM about triggers, prevention and treatment of anaphylaxis or other severe reaction.

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CanMEDS Role	Admission	Inpatient Management	Transitions in Care
3. Collaborator	10. Request early specialty consultation such as critical care or dermatology		30. Notify primary care provider and community pharmacist of this severe reaction. 31. Consider referral for allergy testing and/or immunotherapy.
4. Leader	10. Ensure proper use of (alarming signs) ALERTS in patient record to prevent future reoccurrence(s).		
5. Health Advocate	40. Educate and support patients re: Need for early recognition and early treatment of anaphylaxis. 41. Educate and support patients re: Indication for and proper use of EPI®pens.		
6. Scholar	40. Explain pathophysiology of anaphylaxis and anaphylactiod reactions. 41. Recognize indications for ongoing monitoring. 42. Stay up to date on new and emerging treatments of anaphylaxis.		
7. Professional			

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14. Clinical conditions: Acute life or limb threatening emergencies on the ward: Sepsis and systemic inflammatory response syndrome (SIRS)

CanMEDS Role	Admission	Inpatient Management	Transitions in Care
1. Medical Expert	10. Recognize patients with early sepsis and/or the system inflammatory response syndrome (SIRS), severe sepsis and septic shock. 11. Identify risk factors for sepsis: Advanced age, immunosuppression, intravenous (IV) drug use, recent invasive procedures or surgery, indwelling catheters, and infected IV lines. 12. Perform focused physical exam to identify potential source of infection. 13. Ensure appropriate investigations including blood cultures and lactate. 14. Write orders that reflect current thinking on importance of early-goal directed therapy, especially early and aggressive fluid resuscitation AND early and appropriate antibiotics. 15. Request early specialty consultation such as critical care and infectious diseases when appropriate. 16. Arrange plan for prompt source control if drainable source of infection. 17. Ensure that code status is determined.	20. Continue to have a heightened clinical suspicion for early sepsis identification even when sepsis is not admitting diagnosis. 21. Ensure close monitoring of vital signs. 22. Ensure close monitoring for acute organ dysfunction. 23. Monitor fluid status. 24. Ensure regular laboratory studies ordered. 25. Adjust antibiotic therapy to susceptibility-directed agents when culture results are available. 26. Institute appropriate glycemic control if indicated. 27. Ensure that preventative measures are in place. 28. Mobilize as early as appropriate. 29. Consider instituting alternate routes of nutrition if oral intake not possible or inadequate.	30. Ensure appropriate duration of antibiotic therapy. 31. Arrange outpatient IV antibiotic clinic follow-up (where available) to minimize hospital stay.
2. Communicator	10. Communicate with patient and family/SDM about history, treatment and prognosis of sepsis, severe sepsis and septic shock.	20. Continue to communicate with patient and family/SDM, and interdisciplinary team members regarding code status.	
3. Collaborator	10. Consult intensive care unit (ICU) promptly for patients with severe sepsis or septic shock. 11. Consult infectious diseases specialist, microbiologist, and pharmacist in sepsis caused by multidrug resistant organisms (MDROs).	20. Involve relevant health care professionals such as OT, PT, dietician, SLP and SW where appropriate, and in a timely manner.	30. Collaborate with other members of interdisciplinary health care team re: need for post discharge follow-up, i.e., OT or PT. 31. Arrange for appropriate specialist consult post discharge follow-up, home health for e.g., wound or indwelling catheter care.

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CanMEDS Role	Admission	Inpatient Management	Transitions in Care
4. Leader	40. Participate in development and utilization of sepsis early identification and treatment protocols in institution. 41. Participate in institution-wide, evidence-based sepsis protocols.		
5. Health Advocate	40. Advocate for vaccination uptake in appropriate patient populations, i.e., pneumococcus, meningococcus and influenza. 41. Ensure inpatient consult and outpatient follow-up with addictions services for IV drug users.		
6. Scholar	40. Describe current theories of sepsis including (i) a dysregulated inflammatory response and (ii) early identification and aggressive early fluid resuscitation and antibiotic therapy. 41. Describe risk factors for acquiring sepsis such as advanced age and immunosuppression 42. Follow the literature on Early Warning Systems (EWS) for sepsis and SIRS, and collaborate on implementation if appropriate		
7. Professional	40. Continue to participate in continuing medical education opportunities regarding sepsis and SIRS management		

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15. Clinical conditions: Acute life or limb threatening emergencies on the ward: Shock

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Obtain a thorough and relevant history to identify risk factors for and symptoms of shock. 11. Perform a complete physical examination to identify signs that foretell presence of shock. 12. Recognize type of shock based on history/physical and ancillary testing (hypovolemic, cardiogenic, obstrutive, distributive). 13. Identify shock-based clinical, hemodynamic and biochemical signs, including vital sign abnormalities, markers of poor tissue perfusion, and laboratory abnormalities. 14. Start ventilatory and fluid resuscitation as needed. 15. Obtain vascular access if required. 16. Recognize and refer patients requiring advanced support and/or monitoring, including vasopressors, ionotropes, vasodilators.	20. Start ventilatory and fluid resuscitation as needed. 21. Obtain vascular access if required. 22. Recognize and refer patients requiring advanced support and/or monitoring, including vasopressors, ionotropes, vasodilators.	30. Before a transition of care occurs confirm that shock state has been reversed, and that causes have been understood and relayed clearly. 31. When shock is not reversed, in which case transition involves transfer to a higher level of care, ensure appropriate and current specifics of patient to shock state, interventions and management thus far are thoroughly conveyed to next care provider.
2. Communicator	10. Discuss appropriate inpatient destination based on monitoring needs with intensive care unit (ICU) and emergency department (ED) physicians. 11. Address goals of care early (with patient and family/SDM), as shock is associated with high morbidity and mortality. 12. Communicate to admitting unit important signs and symptoms that may indicate decompensation.	20. Review shock patient specifics with nursing and junior stuff to predict, identify early and confirm signs of patient improvement or deterioration.	30. Review goals of care based on illness experience and level of recovery. 31. Discuss and review clearly with patient and family/SDM signs and symptoms of shock redeveloping to ensure that diligent follow-up is maintained once patient is discharged, as there is a high risk of shock reoccurring. 32. Work with patient and family/SDM to identify environmental risk for recurrence.
3. Collaborator	10. Work with inter-professional teams to deliver care including respiratory therapy, physical therapy, speech-language pathology (SLP). 11. Use principles of crisis resource management (CRM) to guide team in priorities of resuscitation 12. Work with staff to prioritize patient within ED.	20. Review patient with Intensivist and other specialties in a timely manner based on clinical scenario as needed. 21. Work with inter-professional/ multidisciplinary teams to maximize patient's function. 22. Refer to subspecialty care as appropriate.	30. Work with outpatient services to ensure care in community. 31. Discuss admission and treatment history with patient's primary care physician.

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CanMEDS Role	Admission	Inpatient Management	Transitions in Care
4. Leader	40. Lead efforts to enhance staff knowledge around important signs and symptoms of early recognition of shock, treatment of shock and early signs of compensation. 41. In areas where necessary, lead innovative efforts to create systems of early response to conditions of shock (e.g., Quick Response Teams, etc.). 42. Develop pathways to encourage best practice(s) in recognition and management of shock. 43. Develop advanced skills in diagnosis/therapeutic interventions including advanced techniques in airway management, vascular access and bedside ultrasonography, and assist team members in improving skills.		
5. Health Advocate	40. Address determinates of health that contributed to acute illness. 41. Advocate for appropriate resources for diagnosis and management of shock. 42. Advocate for appropriate transfer of patients who have been hospitalized but decompensate and require advanced support/management. 43. Review living will and goals of care prior to discharge.		
6. Scholar	40. Ensure familiarization with new and advancing management/treatments of common forms of shock especially Sepsis and Hemorrhagic. 41. Stay current on literature surrounding common causes of shock (sepsis/ACS/trauma). 42. Understand basic interventions for shock. 43. Participate in Quality Improvement (QI) reviews of pre-ICU patients.		
7. Professional			

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16. Common clinical conditions: Assessment of acute abdominal pain

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. When seeing a patient with acute abdominal pain, elicit a focused history and physical examination to identify cause of acute abdominal pain: 10.1. new acute abdominal pain causes 10.2. acute episode in the context of chronic abdominal pain 10.3. complication of recent surgical, procedural intervention or trauma 10.4. adverse drug reaction 10.5. surgical and nonsurgical disorders (e.g., referred pain, functional disorders and extra-abdominal causes of pain). 11. Identify life-threatening etiologies of acute abdominal pain. 12. Initiate hemodynamic resuscitation and empiric antibiotic therapy if needed. 13. Order and interpret 13.1. results of appropriate laboratory tests 13.2. imaging pertinent to acute abdominal pain. 14. Identify cases with indications for: 14.1. urgent surgical consultation/intervention 14.2. endoscopy/colonscopy/ERCP 14.3. urgent blood transfusion 14.4. nasogastric tube or urinary catheter insertion 14.5. poercutaneous drainage (e.g., cholecystostomy tube). 15. Identify patients who are immunocompromised, and pregnant women who may have an atypical presentation or a complicated course. 16. Provide appropriate analgesia to patients with acute abdominal pain.	20. Pursue more detailed investigations and interventions appropriate to initial presentation, course in hospital, and patient goals of care. 21. Monitor response to treatment. 22. If infectious, identify organ/site specific pathogens and adjust antibiotic therapy. 23. Identify cases that need more invasive testing and require subspecialties consults. 24. Recognize patient nutritional needs and select and initiate supplementation as required.	30. Refer to competencies outlined in General Medical Admission

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CanMEDS Role	Admission	Inpatient Management	Transitions in Care
2. Communicator	10. Communicate to patient and family/SDM re: diagnosis, acuity, goals of care, and management plans. 11. Begin process of informed consent regarding further investigations and interventions.		
3. Collaborator	10. Collaborate with emergency physician in initial management plan, request for urgent consultations, and admission destination. 11. Identify need and timing for specialist consultant involvement. 12. Collaborate with infection control team to reduce transmission of infectious pathogens of the GI system.	20. Arrange consult with nurse educator/RNs for teaching patients about care of tubes/drains/catheters. 21. Provide care planning with nursing regarding pain assessment scales, urinary retention, constipation or narcotic use, etc.	
4. Leader	40. Promote the development of hospital or regional protocols or pre-printed admission orders for patients with acute abdominal pain to provide high standard of care with minimum of hospital stay and adequate follow-up post discharge.		
5. Health Advocate	40. Advocate for behavioral modification e.g.: 40.1. nutrition or glycemic control in diabetic patients 40.2. prevention of constipation 40.3. substance use, e.g., narcotics or alcohol.		
6. Scholar	40. Participate in CME programs for achieving and maintaining knowledge in assessing and managing acute abdominal pain. 41. Practice according to latest guidelines for managing acute abdominal pain in the inpatient population with multiple comorbidities and polypharmacy. 42. Mentor and teach medical students and residents, RNs and other health care providers about care of a hospitalized patient with acute abdominal pain.		
7. Professional	40. Refer to competencies listed in General Medical Admission.		

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17. Common clinical conditions: Anemia and transfusion medicine

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Identify anemia severity, etiology and acuity. 11. Consider other patient co-morbidities such as congestive heart failure or coronary artery disease that could have some impact on patients' need for blood transfusion and/or volume overload risk. 12. Identify type and etiology of anemia through appropriate investigations. 13. Establish the level of hemodynamic stability (or instability). 14. Promptly diagnose and treat life threatening severe anemia. 15. Identify and diagnose other concurrent blood component abnormalities (e.g., neutropenia, thrombocytopenia) and investigate possible etiologies.	20. Investigate anemia (or other blood component abnormalities) and treat as appropriate. 21. Identify need for transfusion and/or other modalities for blood conservation taking into consideration individual patient characteristics. 22. Select and apply blood conservation strategies in order to minimize need for transfusion of blood products: 22.1. reassess medications that increase risk of bleeding 22.2. prescribe iron when necessary (oral or intravenous) 22.3. consider autologous transfusion when appropriate and available 22.4. use erythropoietin analogues judiciously when indicated 22.5. use prothrombin complex concentrate judiciously when indicated. 23. Be aware of both infectious and non-infectious risks of blood component therapy. 24. Transfuse with blood components only when the benefits outweigh the risks. 25. Monitor, identify and treat acute or delayed and life threatening transfusion reactions.	30. Review medications that will affect patient's hematological profile and discontinue any offending medications. 31. Recommend most appropriate follow-up to monitor patient's hematological profile. 32. Organize outpatient referrals and further investigations as appropriate.
2. Communicator	10. Obtain informed consent for transfusion when required, outlining risks and benefits and explanation of possible transfusion reactions. 11. Be aware of and provide suitable alternative solutions to patients who, for religious or other reasons, refuse transfusion of allogeneic blood or blood products.		30. Document and report clearly any new blood product adverse reactions that occurred during admission.

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CanMEDS Role	Admission	Inpatient Management	Transitions in Care
3. Collaborator	10. Coordinate urgent referral with specialists (e.g., surgeons, endoscopists, etc.). 11. Refer to hematologist or other medical specialist when appropriate.	20. Communicate with the staff (particularly nursing) regarding transfusion reactions and management. 21. Effectively collaborate with other health care providers re: management plans and future anemia treatment for patient.	30. Coordinate further post discharge treatment and follow-up with primary and other health care providers. 31. Notify other health care providers with discharge and follow-up plan including blood work monitoring, etc.
4. Leader	40. Participate in development and support of blood conservation strategies. 41. Apply current evidence and order appropriately with respect to blood components, blood conservation, and patient safety.		
5. Health Advocate	40. Participate in preparation and revision of transfusion guidelines and protocols in your hospital.		
6. Scholar	40. Participate in continuous medical education regarding anemia and transfusion medicine.		
7. Professional	40. Regularly review case management and reassess ways to provide ongoing quality care for anemia patients requiring blood component transfusions.		

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18. Common clinical conditions: Asthma

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Elicit a focused history to identify triggers of asthma and symptoms, and perform a targeted physical examination to identify signs consistent with asthma exacerbation. 11. Recognize and differentiate clinical presentation of asthma exacerbation from other acute respiratory and non-respiratory syndromes or illnesses. 12. Select and interpret appropriate diagnostic studies to assess and evaluate severity of asthma exacerbation. 13. Identify comorbid conditions associated with increased severity of asthma attacks. 14. Describe evidence-based therapies for treatment of asthma exacerbation, which may include bronchodilators, systemic corticosteroids, oxygen, helium/oxygen mixtures, and magnesium. 15. Demonstrate an understanding of appropriate antibiotic stewardship when considering use of antibiotics in acute asthma exacerbations. 16. Recognize symptoms, signs of impending respiratory failure and coordinate necessary measures (i.e., intubation) when indicated.	20. Identify potential extra-respiratory complications, including electrolyte abnormalities, cardiac arrhythmias and increased intracranial pressure. 21. Modify treatment based on clinical response, or lack thereof, and monitor carefully for treatment side effects. 22. Understand indications for invasive ventilatory support. 23. Demonstrate knowledge of alternative treatment strategies when standard treatments do not yield expected results. 24. Comprehend when to ask for expert consultation in treatment instances.	30. Ensure patient and family/SDM have resources to develop and carry out a tailored management plan that they and their caregivers understand. 31. Reinforce compliance with medications, smoking cessation, exercise and oxygen where indicated 32. Arrange for home care and other follow-up as an outpatient (primary care provider, specialists etc.). 33. Provide handouts on written action plan for asthma management. 34. Explain goals for hospital discharge, including specific measures of clinical stability 35. Identify risk factors for poor outcomes at discharge and use these to tailor discharge plan

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CanMEDS Role	Admission	Inpatient Management	Transitions in Care
2. Communicator	10. Use patient-centred interviewing skills to gather relevant medical and historical information on asthma condition, incorporating perspective of patient and family/SDM, with patient's consent, if possible. 11. Facilitate timely and accurate discussions with patient and family/SDM concerning patient's status, next steps, goals of care, asthma treatment options, ensuring a clear understanding by patient and family/SDM. 12. Determine and communicate appropriate inpatient destination in consultation with Emergency Department (ED) physician and specialty consultations, including respirology and ICU medicine. 13. Understand and communicate clearly risk factors for disease severity and death from asthma to patient and family/SDM, and other health care team members.	20. Should patient suffer respiratory deterioration, communicate clearly with patient and family/SDM as patient's status changes and reassess goals of care, ideally prior to imminent respiratory failure. 21. Keep team members informed of patient's response to therapy and consider adjustments to treatment based on response.	30. Communicate with patients and families to explain goals of care plan, including clinical stability criteria, preventive measures such as smoking cessation and modification of environmental exposures, and required follow-up care. 31. Ensure that prior to discharge, patients and families receive clearly understood information on discharge medications, potential side effects, duration of therapy and dosing, taper schedule. 32. Demonstrate to patient and family/SDM proper training on indications and appropriate use of daily use inhalers and rescue inhalers, and peak flow techniques. 33. Communicate clearly with patient and family/SDM concerning symptoms and signs of asthma exacerbations that should prompt emergency medical management.
3. Collaborator	10. Collaborate with primary care physicians, emergency physicians, and respiratory consultants, in making admission decision. 11. Collaborate with health care team members regarding treatment plan upon admission to hospital. 12. Recognize indications for specialty consultation, which may include respirology. 13. Support standardized approach to treatment of patients with asthma exacerbation.	20. Employ a multidisciplinary approach to management of patients with asthma, including respirology, respiratory therapy, nursing and social services. 21. Collaborate with health care team members regarding changes to asthma treatment plan based on their assessment of patient's responses to treatment.	
4. Leader	10. Develop educational modules, order sets, and/or pathways that facilitate use of evidence-based strategies for asthma exacerbation in ED and inpatient care, with goals of improving outcomes, decreasing length of stay, and reducing re-hospitalization rates.	20. Lead efforts to educate hospital health care team members on management of asthma, recognition of treatment failure and understanding of stages of improvement. 21. Provide leadership by investigating and providing evidence-based clinical information on new and emerging treatments for asthma, including injectable biologic agents available for long-term management of asthma.	30. Lead, coordinate or participate in multidisciplinary initiatives to promote patient safety and cost effective diagnostic and management strategies in care of patients with asthma. 31. Create standardized discharge instructions for patients with asthma, including stepwise approach to self-treatment and indications when to seek immediate medical attention.

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General clinical skills, common clinical conditions, and procedures frameworks

18. Common clinical conditions: Asthma

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
5. Health Advocate	10. Advocate for patient and family/SDM for access to resources both in hospital and in the community for relieving asthma exacerbations, including home health care, respirology services, etc.	20. Be aware of alternative asthma treatment modalities and when to consider initiation. 21. Promote preventive strategies including smoking cessation, Influenza vaccination and, if indicated pneumococcal vaccine to patient and family/SDM prior to transition or discharge. 22. Facilitate information sharing between patient with asthma and health care team for coordinated care and timely management changes.	30. Understand and consider potential precipitants of asthma exacerbation in home or work environment including infections and non-infectious etiologies, and communicate clearly to patient and family/SDM, and community health care team members prior to discharge. 31. Be aware of resources available to younger patients with asthma, who are without financial means to purchase necessary medication as an outpatient.
6. Scholar	40. Explain indications, contraindications and mechanisms of action of pharmacologic agents, used to treat asthma. 41. Appreciate emerging concepts of phenotyping and endotyping in asthma, as well as new and emerging treatments, and share knowledge with health care team members, and other colleagues through CMEs, rounds, etc. 42. Promote and engage in clinical research to improve inpatient management of asthma where available and appropriate. 43. Be aware of best practice management of outpatient asthma and adjust discharge instructions and medication choices based on these best practices.		
7. Professional	40. Demonstrate an approach to patients with asthma that includes issues of cultural sensitivity. 41. Recognize and respond to resuscitation issues early on in hospital stay to clarify goals of care for patients and families/SDMs in a manner suitable for each patient and family. 42. Understand and demonstrate appropriate professional behaviour when addressing goals of care according to patient condition throughout hospital stay.		

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19. Common clinical conditions: Chronic obstructive pulmonary disease (COPD)

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Define chronic obstructive pulmonary disease (COPD) and its pathophysiologic processes leading to small airways obstruction and alveolar destruction. 11. Elicit a focused history and physical examination consistent with COPD exacerbation and its possible precipitants, including smoking and drug history. 12. Recognize symptoms, signs and severity of impending respiratory failure and select indicated evidence-based ventilatory approach, which is appropriate and acceptable to that particular patient. 13. Recognize and differentiate clinical presentation of COPD exacerbation from other acute respiratory and non-respiratory syndromes, understanding that there may be significant overlap between these conditions. 14. Consider potential precipitants of COPD exacerbation, including infections and non-infectious etiologies. 15. Select and interpret appropriate investigations and tests to evaluate severity of COPD exacerbation. 16. Describe evidence-based therapies for treatment of COPD exacerbation. 17. Explain indications, contraindications and mechanisms of action of pharmacologic agents used to treat COPD. 18. Describe and differentiate means of ventilatory support, including outcome benefits of non-invasive positive pressure ventilation in COPD exacerbation. 19. Recognize potential risks of supplemental oxygen therapy, including development of hypercarbia in patients with chronic respiratory alkalosis.	20. Identify and modify factors that have contributed to acute exacerbation. 21. Review goals of treatment and estimate length of stay. 22. Utilize latest guidelines for inpatient treatment of COPD and modify treatment based on clinical response. 23. Manage acute decompensation and co-morbidities commonly associated with COPD such as heart failure, osteoporosis, depression, and nutritional deficiency. 24. Recognize situations where specialty consultation with respirology would benefit. 25. Involve physiotherapy, occupational therapy, respiratory therapy and nutritionist early on to improve functional status. 26. Evaluate COPD in peri-operative risk assessment, recommend measures to optimize peri-operative management of COPD, and manage postoperative complications related to underlying COPD. 27. Appreciate and modify ongoing risks from sedating medications (benzodiazepines, antipsychotics, and narcotics), excessive oxygen (CO_2 retention), and silent aspiration, and recognize these as possible underlying causes of sudden deterioration in a previously stable COPD patient.	30. Identify optimal long-term COPD management methods. 31. Ensure community respiratory therapist, physiotherapist and family physician have worked with patient and family/SDM to develop a tailored management plan that the patient and family/caregivers will understand. 32. Consult outpatient rehab services where available and necessary. 33. Identify patients that may need long-term oxygen therapy and ensure tests are done that qualify patients for this therapy 34. Reinforce compliance with medications, smoking cessation, exercise and oxygen where indicated. 35. Arrange for home care, home oxygen, and other follow up as an outpatient (primary care provider, specialists, etc.).

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General clinical skills, common clinical conditions, and procedures frameworks

19. Common clinical conditions: Chronic obstructive pulmonary disease (COPD)

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
2. Communicator	10. Address resuscitation issues in a sensitive way early on in the hospital stay to clarify goals of care for patient and family/SDM. 11. Establish and maintain an open dialogue with patients and/or families/SDMs regarding care goals and limitations, including palliative care and end-of-life wishes.	20. Discuss disease trajectory and prognosis in patients with advanced disease. 21. Keep team members informed of how to measure response to therapy.	30. Communicate with patient and/or family/SDM regarding goals for COPD care, and signs that might indicate he/she needs to have therapy adjusted and/or seek urgent medical attention. 31. Reinforce compliance with medications, smoking cessation, exercise and oxygen where indicated. 32. Advise patient and family/SDM about community respiratory physiotherapy and oxygen resources, home visits, etc.
3. Collaborator	10. Recognize indications for specialty consultation, which may include respirology.	20. Facilitate information sharing between the patient with COPD and the team for co-ordinate care and timely management changes. 21. Seek appropriate specialty consultation where needed.	30. Arrange consult with dietician, pharmacist and respiratory therapist where needed. 31. Coordinate medication reconciliation/ communication of new medications with patient and family/SDM, and caregivers, as well as community physicians and pharmacy. 32. Liaise with primary care provider especially with patients at high risk for re-admission.
4. Leader	10. Facilitate and establish standard admission order sets for patients with acute exacerbation of COPD. 11. Develop educational modules, and/or pathways that facilitate use of evidence-based strategies for COPD exacerbation in the ER and hospital, with goals of improving outcomes, decreasing the length of stay, and reducing re-hospitalization rates.	20. Support standardized approach to COPD patients and lead multidisciplinary team initiatives to reinforce uniform hospital strategy. 21. Lead, coordinate or participate in multidisciplinary initiatives, which may include collaboration with respirologists to promote patient safety and cost-effective diagnostic and management strategies in the care of patients with COPD.	10. Lead, coordinate or participate in multidisciplinary initiatives to promote patient safety and cost effective diagnostic and management strategies in the care of patients with COPD.
5. Health Advocate	10. Promote venous thromboembolism (VTE) prophylaxis and smoking cessation and nicotine replacement therapy (NRT) in smokers.	20. Support self-management through use of inter-professional teams that may include the primary care provider, respiratory therapist, dietician, and rehabilitation specialists.	30. Promote preventive strategies including smoking cessation, indicative *streptococcal pneumoniae* and influenza vaccination and VTE prophylaxis.
6. Scholar	40. Identify and critically evaluate new and emerging treatments for COPD. 41. Contribute to the application, dissemination, translation, and creation of knowledge and practices applicable to treatment of COPD for multidisciplinary team members.		
7. Professional	40. Demonstrate an ethical approach to patients with COPD that incorporates cultural sensitivity and is free of bias. 41. Be aware of evidence for best practices guidelines in discharging patients to community after acute care hospital stay for COPD. 42. Continue to enhance knowledge of COPD treatments, best practices guidelines through ongoing educational activities.		

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20. Common clinical conditions: Congestive heart failure (CHF)

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Perform a history and physical exam of sufficient completeness to diagnose congestive heart failure (CHF) and to differentiate CHF from other concurrent comorbid conditions that may require immediate treatment (e.g., arrhythmia, cardiac ischemia, valvular disease, infection, renal disease, etc.). 11. Recognize low perfusion states and other threatening conditions that require emergent stabilization and high-intensity treatment in a critical care environment. 12. Order appropriate investigations sufficient to differentiate type of heart failure, causes and contributing factors for HF exacerbation, and acuity and severity of presentation. 13. Identify and discontinue those pharmacological agents and interventions that are contraindicated in the presence of acute heart failure. 14. Select appropriate agents for treatment of acute heart failure including medications for pre-load and after-load reduction, hemodynamic stabilization, and optimization of fluid volume status. 15. Risk stratify patient to determine appropriate level of care. 16. Identify those patients who can be safely discharged from Emergency Department (ED) after initial CHF care for follow-up in a lower-intensity outpatient setting. 17. Identify special populations who may require timely interventions and/or additional resources that exceed those which are locally available.	20. Set realistic patient-specific goals of treatment for CHF. 21. Order investigations wisely for effective disease assessment, monitoring and management (i.e., echo, cardiac cath, non-invasive cardiac imaging, etc.) 22. Utilize evidence-based guidelines for inpatient treatment of CHF (i.e., initiation of bipap, use of telemetry, diuretic monitoring and other pharmacotherapy, etc.) 23. Assess and modify treatments daily or as required in order to transition effectively patients through acute and sub-acute phases of stabilization. 24. Manage acute co-morbidities commonly associated with CHF (i.e., ischemia, arrhythmia, hypertension, acute kidney disease, liver disease, urinary tract infection [UTI], etc.). 25. Adjust pharmacological agent dose in setting of acute kidney disease. 26. Review in-patient medical record for iatrogenic contributions to decompensated CHF development. 27. Encourage and facilitate early mobilization. 28. Recognize acute decompensation and initiate timely patient transfer to a critical care or other specialty setting (e.g., dialysis unit, catheter unit, etc.) when indicated. 29. Recognize opportunities for employment of highly specialized CHF therapies (e.g., implantable cardioverter-defibrillator [ICD] implantation, cardiac resynchronization therapy, surgery, etc.). 30. Recognize end stage decompensated heart failure and initiate palliative care when indicated and appropriate.	30. Optimize diuretics and other pharmacologic agents in an evidence-based fashion. 31. Ensure that pre-discharge functional capacity, mobility, and cognitive and social assessments are completed. 32. Anticipate post discharge care needs (additional investigations, consultations, referrals, supportive services etc.), and ensure that a sufficient transitional plan is formulated. 33. Confirm that patient is medically stable and suitable for a safe discharge. 34. Participate in medication reconciliation while preparing discharge prescriptions. 35.

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General clinical skills, common clinical conditions, and procedures frameworks

20. Common clinical conditions: Congestive heart failure (CHF)

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
2. Communicator	10. Effectively communicate diagnosis and treatment options to patient and family/SDM. 11. Engage patient and family/SDM in process of informed and ethical decision making when care directives and resuscitative matters require clarification. 12. Effectively communicate care issues, care plan and resuscitative status to other members of care team.	20. Communicate patient progress with treatment and expected length of stay to patient and family/SDM. 21. Facilitate information sharing between patient with CHF and care team for coordinated care and timely decision-making. 22. Inform family/SDM when end-stage patient not responding to treatment, clarify advance directives and discuss palliative options. 23. Communicate with team members expected discharge date for coordinating timely 24 hour discharge planning.	30. Communicate with patient and family/SDM regarding goals for CHF care, and signs that might indicate patient needs to have therapy adjusted and/or seek urgent medical attention. 31. Communicate directly with specialist, primary care provider and/or other provider as appropriate so as to facilitate and expedite outpatient management. 32. Complete a discharge summary in timely fashion, i.e., document discharge medications, status (e.g., weight, serum creatinine, etc.) and transitional care strategies/arrangements.
3. Collaborator	10. Obtain relevant background information from external providers (primary care provider, community pharmacy, outpatient clinic, etc.) as required. 11. Recognize indications for urgent or early specialty/subspecialty consultation. 12. Appreciate roles and collaborate with other interdisciplinary care team members so as to optimize care and minimize hazard.	20. Consult physicians and other professionals when indicated for urgent specialty/subspecialty consultation. 21. Collaborate with inpatient dieticians, pharmacists, physiotherapy and occupational therapy, etc., as these allied health professionals have big roles to play in admitted patients with CHF.	30. Initiate outpatient referrals for homecare and other services (dietician, pharmacist, respiratory therapist, etc.) as indicated. 31. Co-ordinate with home care access teams to optimize post discharge management of CHF patients. 32. Arrange timely specialist and primary care appointments. 33. Refer to outpatient cardiac rehab services where available.
4. Leader	10. Coordinate patient centered treatment care plan. 11. Mobilize resources on admission for best possible patient outcome. 12. Secure unambiguous transitions of Most Responsible Physician (MRP) care.	20. Contribute to unit rounds and interdisciplinary CHF case conferences in order to coordinate care, identify concerns, clarify information and plan for discharge. 21. Ensure that critical interventions are undertaken in a timely fashion. 22. Appreciate and deploy institutional CHF-related protocols as indicated.	30. Work with the hospital and community partners to develop a consistent transitional care strategy for all CHF patients. 31. Work with hospital and community partners to develop and support an outpatient CHF clinic in order to facilitate timely discharges and avoid preventable admissions.

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CanMEDS Role	Admission	Inpatient Management	Transitions of Care
5. Health Advocate	10. Consider risk factors for CHF in all patients and screen appropriately 11. Counsel to avoid smoking in Hospital and offer suitable smoking cessation aids. 12. Ensure that the designated inpatient environment will adequately meet the care needs of the patient.	20. Support self-management through use of inter-professional teams that may include the primary care provider, cardiologist, dietician, rehab specialists.	30. Advise patient and SDM about community resources available to prevent readmission e.g., CHF clinics, home visits, etc. 31. Counsel or ensure counseling around the issues of medication management, lifestyle (alcohol, smoking) daily weight and self-monitoring, diet, physical activity and advance care directives.
6. Scholar	40. Participate in programs to improve outcomes and reduce length of stay and readmissions for CHF. 41. Develop evidence-based clinical pathways and order sets as well as interdisciplinary hospital protocols in order to improve outcomes in CHF. 42. Provide educational support for best practice to nursing and allied health team members including pathophysiology, treatment options, and expected exercise tolerance at different grades of heart failure. 43. Provide educational support to care givers regarding disease management and progression of disease and risk. 44. Participate in programs to improve outcomes and reduce length of stay and readmissions for CHF.		
7. Professional	40. Demonstrate an ethical approach to patients with CHF and cultural sensitivity. 41. Maintain compassion and patience with patients and families/SDMs adjusting to realistic discharge plans with advanced disease. 42. Address resuscitation issues in a sensitive way early in hospital stay to clarify goals of care for patients and families/SDMs. 43. Maintain a respectful demeanor towards patients and families/SDMs who make informed choices around issues of risk/benefit and quality of life.		

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21. Common clinical conditions: Delirium

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Identify patients who are at high risk of delirium using standardized assessment tools. 11. Diagnose delirium in acute illness, including hypoactive delirium (that is difficult to recognize). 12. Differentiate delirium from dementia. 13. Distinguish causes of delirium and initiate workup to evaluate for possible reversible causes. 14. Recognize potential impact of delirium on rates of hospital death, length of stay, ultimate disposition, and reversibility of cognitive impairment.	20. Treat reversible triggers of delirium (e.g., medications, infections, etc.). 21. Screen inpatients for delirium early and repeatedly using standardized assessment tools. 22. Optimize management of: 22.1. cognitive impairment (e.g., dementia types) 22.2. sleep, mobility 22.3. vision, hearing 22.4. hydration. 23. Classify types of dementia and understand management options of each type. 24. Understand how underlying dementia can impact delirium and its presentation/outcome. 25. Assess nutritional and hydration status and identify risks of malnutrition, dysphagia, and aspiration. 26. Identify and reassess/modify medications that impact negatively on delirium (e.g., Beers List). 27. Employ non-pharmacological and pharmacological methods for management of delirium and dementia. 28. Understand risks and benefits of medications used to treat difficult behaviours. 29. Understand and follow practice guidelines and protocols for safer use of pharmacological and non-pharmacological restraints.	30. Recognize benefits and implement early discharge planning including multidisciplinary team evaluations, communicating with families/SDMs and primary follow-up care, and outpatient support. 31. Identify patients who require an increased level of care. 32. Recognize caregiver burnout and consult/refer as appropriate. 33. List specific measures of stability for a safe discharge. 34. Review and reconcile discharge medications to prevent further delirium or to enhance recovery from prolonged delirium.
2. Communicator	10. Communicate with patient and family/SDM concerning history and prognosis of delirium, as well as its relationship to dementia. 11. Describe diagnosis, prognosis, and risk factors for delirium and communicate these issues effectively with patient and family/SDM. 12. Determine goals of care and whether a personal directive or guardianship/trusteeship agreements exist.	20. Engage family/SDM and caregivers to assist with non-pharmacologic interventions to manage delirium. 21. Obtain informed consent prior to utilization of medications for delirium, particularly anti-psychotics. 22. Discuss enteral feeding, if appropriate. 23. Discuss indications and possibilities for higher level of care.	30. Educate family/SDM on natural progression of delirium and dementia and give advice re: signs of delirium and indications for re-admission. 31. Discuss importance of advanced care planning and communicate any changes to other outpatient care coordinators. 32. Advise family/SDM of role of genetic testing for early-onset dementia.

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CanMEDS Role	Admission	Inpatient Management	Transitions of Care
3. Collaborator		20. Recognize when to seek geriatric or palliative care consultation. 21. Recognize role of inter-professional team in prevention of delirium. 22. Engage multi-disciplinary team to assess risk of falls and prevent functional decline.	30. Collaborate with primary care providers and home care groups/community agencies to plan for safe transition to community.
4. Leader	40. Lead and involve inter-professional teams to develop system procedures to prevent delirium. 41. Engage hospital systems to improve quality of care of patients with dementia and delirium (e.g., preventing use of restraints).		
5. Health Advocate	40. Engage in discussions regarding advanced care planning and end-of-life care. 41. Recognize and plan for outpatient management of dementia through patient and family-centred care. 42. Support and identify caregivers at risk for caregiver burnout and list community specific resources to support.		
6. Scholar	40. Employ evidence-based recommendations to guide prevention, diagnosis, and treatment of delirium. 41. Participate in quality improvement (QI) programs that identify iatrogenic risk factors for development of delirium in all inpatients and propose systematic improvements in care and standard order sets.		
7. Professional	40. Understand and appreciate clinical course of dementia, address responsibly, and respect end-of-life care wishes.		

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22. Common clinical conditions: Diabetes mellitus

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Recognize and manage/refer patients with Type 1 and Type 2 diabetes. 11. Recognize and manage/refer patients with diabetic ketoacidosis (DKA) and hyperglycemic hyperosmolar state. 12. Identify and modify (where possible) factors that exacerbate hyper- or hypoglycemia. 13. Understand and write orders for optimal glycemic control in different states of oral intake.	20. Identify goals of glycemic control in a patient with diabetes during hospital stay. 21. Modify orders for glycemic control depending on clinical situation and oral intake, considering patient-directed insulin orders where appropriate. 22. Adjust medications to achieve optimal glycemic control and minimize adverse effects. 23. Utilize evidence-based recommendations (i.e., current guidelines) in treatment of inpatient with diabetes. 24. Manage acute conditions commonly associated with diabetes: hypertension, neuropathy, gastroparesis, nephropathy, cardiac and vascular disease, and diabetic foot ulcers and infections.	30. Before transitions, whether out to community or long-term care facility identify optimal glycemic control methods: Dietary, medication and educational requirements. 31. Titrate/adjust diabetes and cardiovascular medications in preparation for discharge.
2. Communicator	10. Determine appropriate inpatient destination in consultation with Emergency Department (ED) physician and consultant(s). 11. Establish factors that led to poor glycemic control through appropriate interviews of patient and family/SDM, with patient's consent. 12. Share rationale for admission (if necessary) to patient and family/SDM, while checking for patient and family/SDM understanding. 13. Use communication skills and strategies that help patient and family/SDM make informed decisions regarding patient's admission and subsequent hospital stay.	20. Explain clearly and effectively with health care team members, patient and family/SDM goals of glycemic control, and methods of achieving those goals. 21. Clarify and explain blood pressure control goals.	30. Communicate with patient and family/SDM, in addition to responsible community physician, with respect to self-management and testing, including clear targets for glycemic control, medication management (e.g., potential adverse effects) and proper follow-up. 31. Ensure patient and family/SDM follow up with diabetic outpatient clinic and/or primary care physician. 32. Consider referral to ophthalmologist and podiatrist post discharge. 33. Ensure education is provided, and understood by patient and family/SDM, on emergency situations such as hypoglycemia and hyperglycemia.

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CanMEDS Role	Admission	Inpatient Management	Transitions of Care
3. Collaborator	10. Plan hospital admission with ED physician and consultant(s). 11. Engage in respectful shared decision-making with health care team members regarding management of patient with diabetic complications, including when to consult specialists.	20. Utilize multi-disciplinary approach including dietician and pharmacist to optimize disease management and patient education. 21. Seek endocrinologist consultation when appropriate.	30. Arrange consult with dietitian, Diabetic Nurse Educator (DNE), and other appropriate community health services such as Community Care Access Centre (CCAC).
4. Leader			
5. Health Advocate	40. Consider diabetes risk factors for all of patients and screen appropriately for diabetes. 41. Support patient self-management through use of inter-professional teams, including primary care provider, diabetes educator, dietitian, nurse, pharmacist and other specialists. 42. Facilitate information sharing between patients with diabetes and team for coordinated care and timely management changes.		
6. Scholar	40. Participate in a program to establish and improve glycemic control in inpatient setting according to best evidence and practice guidelines. 41. Participate in ongoing professional education, establish/use insulin protocols and order sets to improve adherence to optimal insulin use and glycemic control.		
7. Professional	40. Maintain awareness of cultural differences in perceptions of diabetes and tailor patient management program.		

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23. Common clinical conditions: Intoxication, overdose and withdrawal

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Recognize and understand syndromes of intoxication, overdose and withdrawal for common substances of abuse including ETOH, opioids, cocaine, THC, benzodiazepines, and over-the-counter (OTC) or prescription drugs. 11. Differentiate scenarios of social use vs. dependency vs. addiction. 12. Identify common complications of longstanding ETOH, opioid, cocaine, THC, benzodiazepine use, and OTC or prescription drugs. 13. Assess for co-morbidities and effects of drugs and alcohol on medical illness and effects of medical illness on substance withdrawal. 14. Screen for concomitant infectious diseases (STDs, HIV and hepatitis). 15. Distinguish drug and alcohol intoxication or withdrawal from other causes of delirium. 16. Identify relevant physical, psychological and social contributors to substance abuse, dependency and addiction. 17. Consider psychiatric illness and suicide risk as co-morbidities to this particular presentation to hospital. 18. Utilize an institutional standardized treatment plan (Clinical Order Sets/protocols) for individuals who require medical detoxification considering co-morbid conditions, age, and socio-psychological circumstances, etc.	20. Supervise patient's care appropriate in-hospital environment during withdrawal or treatment of overdose and/or drug toxicity, to allow for safe and effective care. 21. Ensure appropriate monitoring for scenarios of intoxication, overdose or withdrawal including appropriate uses of electronic monitoring, constant care and close nursing (1:1 attendance), observation and/or restraint. 22. Ensure that visitors and contacts are appropriately screened so as to allow for an optimal and expedient recovery. 23. Modify therapeutic strategies in concert with patient's course of recovery from intoxication, overdose or withdrawal. 24. Recognize, investigate and treat evolving complications that may arise. 25. Follow appropriate lab work to anticipate and treat adverse effects of overdose and/or intoxication/withdrawal (e.g., critically low calcium, magnesium; prolonged QT).	30. Recognize and determine opportunities for early and safe discharge. 31. Assess risks for relapse and readmission and consider/employ strategies to mitigate risk to extent possible. 32. Establish primary goal of post-discharge care addiction as either abstinence or alternatively, harm reduction. 33. Consolidate updated problem list and determine which conditions will require prioritized outpatient follow-up. 34. Anticipate whether controlled substances will need to be prescribed in post discharge setting and if so, establish a plan for safe prescribing and medication use, and effective monitoring in transitional phase. 35. Consider arrangements such as "Daily witnessed ingestion" of medications at community pharmacies, and "single Prescriber/Single pharmacy" restrictions to promote harm reduction once patient is repatriated to community.

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CanMEDS Role	Admission	Inpatient Management	Transitions of Care
2. Communicator	10. Communicate with respect, compassion and discretion with patient and family/SDM, and inter-disciplinary team members regarding nature of addiction and withdrawal as a medical condition. 11. Communicate and consult with psychiatry if required regarding concerns about patient safety and suicide risk surrounding overdose.	20. Review treatment goals and continue to engage patient in current and long-term management plan. 21. Utilize hospitalization as an opportunity to counsel patient and family/SDM regarding future abstinence, recovery, and long term risks of alcohol and drug use. 22. Establish and maintain communication and dialogue with both patient and family/SDM regarding goals of care for both hospital stay and future transitions. 23. Address limitations and requirement for patient engagement for success. 24. Update family/SDM as appropriate within a context of patient-sanctioned confidentiality.	30. Contract with patient re: expectations regarding discharge prescriptions and/or post discharge follow-up care. 31. Communicate effectively with patients to engage them, if possible in long-term treatment of addictions and or psychiatric co-morbidities. 32. Engage family/SDM as appropriate regarding discharge plan within a context of patient-sanctioned confidentiality. 33. Ensure that patient understands his/her plan for outpatient care including any pending investigations, consultations and follow-up. 34. Discuss risks for relapse to substance use and strategies for early intervention.
3. Collaborator	10. Develop and implement Clinical Order sets and treatment protocols/pathways based on objective assessments to streamline safe withdrawal for patient, in collaboration with addiction specialists and pharmacists.	20. Collaborate with social workers for additional support for patient and family/SDM, both during hospital stay, and upon discharge. 21. Collaborate with specialist colleagues as appropriate for patient's condition and co-morbidities (addiction specialists, psychiatry, gastroenterology, nephrology, etc.).	30. Anticipate date of discharge so as to ensure an orderly transition. 31. Contact community addiction services as appropriate so as to facilitate transition to ongoing outpatient treatment. 32. Arrange for additional medical and psychiatric consultations as indicated. 33. Arrange for expedited follow-up with primary care provider. 34. Ensure with interdisciplinary team members that all planned interventions and care planning tasks have been completed.
4. Leader	10. Promote and utilize facility specific relevant protocols and policies that streamline treatment of intoxication, overdose and withdrawal, incorporating accepted best practices. 11. Recognize opportunities for safe admission avoidance or safe early discharge, with appropriate support and follow-up.	20. Apply relevant protocols and policies that address issues of intoxication, overdose and withdrawal. 21. Initiate development and promotion of care pathways that facilitate timely evaluation and treatment of patients with drug and alcohol withdrawal.	30. Employ standard practices for safe prescribing of controlled substances and minimize risks for prescription medication diversion. 31. Critically review any aspects of care that may have contributed to additional morbidity or a prolonged length-of-stay process.

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100

General clinical skills, common clinical conditions, and procedures frameworks

23. Common clinical conditions: Intoxication, overdose and withdrawal

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
5. Health Advocate	10. Appreciate, encourage and promote active engagement in community-based addiction treatment strategies. 11. Notify Ministry of Transport, Children's Aid Society (CAS) or other agencies as appropriate or legally mandated.	20. Appreciate, encourage and promote active engagement in community-based addiction treatment strategies. 21. Counsel patients about medical risks of drug and alcohol use. 22. Offer non-judgmental support and encouragement for safe choices and lifestyle improvement.	30. Notify Ministry of Transport, Children's Aid Society (CAS) or other agencies as appropriate or legally mandated. 31. Recognize and address issues that could impair safety in workplace, community or in home environment. 32. Offer support and encouragement for safe choices and lifestyle improvement.
6. Scholar	40. Understand neuro-cognitive, community-based and social determinants of addiction. 41. Appreciate local trends in illicit drug use. 42. Critically review relevant inpatient protocols and policies that address issues of intoxication, overdose and withdrawal. 43. Critically review existing discharge planning strategies including means for communicating information and transitioning care to outpatient setting. 44. Critically review and support any hospital-based intervention that appears to assist in care of addicted population. 45. Critically review and discuss amongst interdisciplinary team members any aspect of hospitalization that could be adversely contributing to ongoing substance misuse or health system dependency.		
7. Professional	40. Exhibit professional behaviors in all aspects of practice and respond to ethical issues encountered in practice.		

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24. Common clinical conditions: Gastrointestinal (GI) bleeding

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Identify if potential urgent nature of gastrointestinal (GI) bleed. 11. Provide initial management to stabilize patient. 12. Perform clinical examination and investigations that indicate severity of disease. 13. Consider potential etiologies or pathophysiologic processes that lead to GI bleeds. 14. Differentiate clinical features and presentations of upper and lower GI bleeds. 15. Assess patient for risk factors for GI bleeds, and indicators of patients at high risk for complications.	20. Initiate preventive measures including avoidance of harmful medications, ulcer treatment/prophylaxis, dietary modification, and other evidence-based medical therapies. 21. Manage according to best practices in transfusion medicine and blood conservation. 22. Recognize and treat signs of clinical decompensation and recurrent bleeding. 23. Formulate an evidence-based treatment plan including nutritional recommendations, pharmacologic agents, and coordination of endoscopic and surgical interventions tailored to the individual patient.	30. Confirm patient is clinically stable, with resolution of GI bleed prior to discharge.
2. Communicator	10. Clarify goals of care with patient and family/SDM, including blood transfusions and their risks, end of life discussion, with possibility of ICU transfer, including palliative care and end-of-life wishes. 11. Communicate with patient and family/SDM to explain disease etiology, prognosis, risk reduction strategies, and symptoms of recurrent GI bleed. 12. Communicate with patient and family/SDM to explain risks, benefits, and alternatives to transfusion therapy. 13. Communicate with patient and family/SDM to explain tests and procedures.		30. Communicate with patient and family/SDM to explain specific measures of clinical stability for safe care transition, discharge instructions and management after discharge.
3. Collaborator	10. Work with ED team to ensure optimization in terms initial patient management, transfer to appropriate ward and delivery of essential urgent interventions. 11. Recognize indications for early specialty consultation, which may include interventional radiology, gastroenterology and surgery. 12. Refer for an urgent endoscopy or surgery if appropriate.	20. Employ a multidisciplinary approach, which may include nursing, pharmacy and nutrition services.	30. Employ multidisciplinary teams to facilitate discharge planning and communicate notable events of hospitalization and anticipated post-discharge needs to outpatient providers, especially risk of recurrent GI bleeds.

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CanMEDS Role	Admission	Inpatient Management	Transitions of Care
4. Leader	10. Lead, coordinate or participate in the development and promotion of guidelines and/or pathways that facilitate efficient and timely evaluation and treatment of patients with GI bleeds. 11. Lead, coordinate or participate in multidisciplinary teams, which may include emergency medicine physicians, gastroenterologists and nurses, to develop quality improvement initiatives that promote early identification of GI bleeds and reduce preventable complications.		
5. Health Advocate	10. Participate in outcomes research, institution-specific laboratory policies, and hospital formulary to create indicated and cost-effective diagnostic and management strategies for patients with GI bleeds.		
6. Scholar	40. Participate in CME and teaching and research that focus on improving competency and outcomes in the management of patients presenting with GI bleeds.		
7. Professional			

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25. Common clinical conditions: Liver disease – Acute

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Recognize general symptoms that may be compatible with acute liver disease (acute hepatitis) regardless of etiology (fever, malaise, fatigue, myalgia, anorexia, nausea, vomiting, diarrhea, abdominal pain). 11. Recognize jaundice through careful physical examination. 12. Identify other signs and physical findings that are associated with acute hepatitis (e.g., dark urine, light stools, hepatic tenderness, hepatomegaly, splenomegaly, lymphadenopathy, encephalopathy, coagulopathy, others) and for signs of chronic liver disease (e.g., ascites, spider nevi, palmar erythema, others). 13. Obtain investigations that will assist in diagnosis and prognostication in a patient with acute hepatitis. 14. Establish a working differential diagnosis for a patient presenting with acute hepatitis. 15. Recognize conditions/etiologies that may benefit from diagnosis-specific therapy in acute hepatitis.	20. Obtain ongoing investigations for a patient with acute hepatitis in order to monitor status or clarify more specific diagnoses, e.g.: 20.1. viral hepatitis 20.2. drug-induced hepatitis 20.3. other causes. 21. Prevent complications of acute hepatitis through avoidance of aggravating factors: 21.1. sedative hypnotics 21.2. constipation 21.3. infection prone catheters 21.4. hepatotoxic drugs. 22. Treat specific presentations regardless of etiology, such as: 22.1. encephalopathy 22.2. coagulopathy 22.3. infection 22.4. renal failure 22.5. hypoalbuminemia 22.6. acidosis 22.7. hypo/hyperglycemia 22.8. gastrointestinal bleeding. 23. Consult a gastroenterologist or a hepatologist as appropriate 24. Recognize when a patient is deteriorating and seek an appropriate higher level of care.	30. Recognize that all signs and symptoms of acute hepatitis may not normalize for several weeks 31. Recognize when patient's condition has stabilized to point of being "ready" for transition into a different level of care or home, e.g.: 31.1. coagulopathy stabilized 31.2. infections treated 31.3. mental status stabilized. 32. Identify and avoid any toxins, drugs and substances that need to be avoided by patient recovering from acute hepatitis. 33. Discontinue (on the discharge prescription) any drugs that are contraindicated in setting of acute hepatitis and in its recover y phase.
2. Communicator	10. Perform a thorough history of patient and presentation, specifically including questions on intoxication, suicidality, and ingestion of unusual substances, over-the-counter medications, alcohol, alternative medical therapies and prescribed drugs. 11. Discuss specific diagnosis of acute hepatitis with patient and family/SDM (when appropriate) and indications for hospitalization.	20. Provide regular follow-up explanations to the patient and family/SDM with respect to acute progression and expected course of acute hepatitis. 21. Counsel with respect to any behaviours that may have caused or exacerbated patient's condition.	30. Provide sufficient information to the patient/SDM in order to prevent a recurrence or worsening of acute hepatitis, counseling specifically on any toxins, drugs and substances that need to be avoided by patient recovering from acute hepatitis 31. If indicated, counsel patient/SDM with respect to alcohol abuse and other substance abuse.

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10 4 General clinical skills, common clinical conditions, and procedures frameworks

25. Common clinical conditions: Liver disease – Acute

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
3. Collaborator	10. Using a validated prognostication model (e.g., King's system), identify early a patient with an extremely poor prognosis that may require liver transplantation for survival or immediate referral to a higher level of care than a general medical ward. 11. Recognize conditions/etiologies that warrant immediate referral to a specialist. 12. Recognize when a patient with acute hepatitis requires a higher level of care such an intensive care or transfer to a higher level of care centre such as a Liver Transplant Unit. 13. Communicate any concerns with the referring physician and/or receiving specialist.	20. Seek consultations and/or transfer from specialists when appropriate (e.g., nephrologist, psychiatrist, infectious disease specialist, etc.). 21. Request collaboration from other health care professionals as appropriate, especially dietitian, pharmacist, rehabilitation team.	30. Refer to other health professionals for follow-up when indicated: 30.1. alcohol and drug abuse counseling 30.2. psychiatry or counseling 30.3. dietitian. 31. Request follow-up with primary care professional and/or specialist to ensure resolution of acute hepatitis and clear understanding on its future prevention and treatment (if chronic hepatitis or cirrhosis).
4. Leader	10. Order appropriate investigations for establishing an accurate diagnosis and establishing an accurate prognosis for the patient with acute hepatitis.		
5. Health Advocate	40. Work with patients and families/SDMs to address factors that may have led up to a hospitalization with acute hepatitis and to adopt healthier behaviours.		
6. Scholar	40. Recognize and teach different severities of acute hepatitis, when to recognize that a patient is severely ill, deteriorating and when urgent or immediate referral is warranted. 41. Integrate and assess the use of validated assessment tools for acute liver disease in practice.		
7. Professional	40. Undertake a non-judgmental attitude when managing a patient with serious psychiatric issues (leading to acute hepatitis) and/or a patient with significant alcohol or drug abuse.		

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26. Common clinical conditions: Liver disease – Chronic

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Use a broad differential for chronic liver disease including alcoholic-associated, viral, non-alcoholic steato hepatitis (NASH), and non-alcoholic fatty liver disease (NAFLD), hemochromatosis, Wilson's disease, autoimmune hepatitis, etc. 11. Understand assessment tools to estimate liver disease severity, e.g., Model for End-Stage Liver Disease (MELD), Child-Pugh scores. 12. Assess the stage of fibrosis and grade of liver inflammation. 13. Acknowledge accelerated disease with viral co-infection and rule it out (hepatitis B/C, HIV). 14. Recognize extrahepatic complications of chronic liver disease. 15. Assess for signs of hepatic decompensation including ascites, portal hypertension, variceal bleeding, encephalopathy, SBP, jaundice, etc. 16. Understand precipitants of hepatic encephalopathy. 17. Order hepatic imagery studies and monitor laboratory tests to evaluate liver status as appropriate. 18. Recognize the role the patient's medications have played in exacerbating chronic liver disease.	20. Perform paracentesis when clinically indicated and understand risks associated with it (particularly risk of hepatorenal syndrome). 21. Review medications and minimize ones with hepatic clearance or toxicity. 22. Manage hepatic encephalopathy including use of current evidence-based treatments. 23. Have a basic understanding of advanced treatment options for chronic liver disease, e.g., transcutaneous intrahepatic portosystemic shunt (TIPS), transplantation.	30. Refer patients for alcohol rehabilitation if appropriate. 31. Recognize poor survival with decompensated cirrhosis and consider referral for liver transplantation, and consider referral to appropriate follow-up, e.g., hepatology, GI, palliative care, etc.
2. Communicator		20. Educate patient and family/SDM re: symptoms of chronic liver disease including fatigue, nausea, weakness, myalgia, arthralgia, and weight loss. 21. Educate patient and family/SDM re: transmission of viral hepatitis. 22. Educate patient and family/SDM re: alcohol consumption and progression of liver disease.	30. Discuss high incidence of hospital re-admission and review preventive strategies. 31. Educate re: role of weight loss, good control of diabetes mellitus (DM), nutrition, and alcohol abstinence in treatment of NAFLD/NASH. 32. Establish target weight in patients with ascites. 33. For patients with encephalopathy, establish targeted number of bowel movements daily. 34. Educate patients on role of alcohol and

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CanMEDS Role	Admission	Inpatient Management	Transitions of Care
			tobacco use, obesity, and DM in increasing risk of hepatocellular cancer.
3. Collaborator	10. Assess for signs of malnutrition and consult dietician if needed. 11. Ensure routine screening for hepatocellular cancer is in place.	20. Refer appropriate patients with confirmed hepatitis B or C infections for consideration to start antiviral therapies.	30. Consult gastroenterology if required for management and to follow up with the patient in the community.
4. Leader			
5. Health Advocate	40. Advocate for patient and staff immunization for hepatitis A/B. 41. Participate in staff education re: post-exposure prophylaxis of viral hepatitis. 42. Screen for viral hepatitis in high-risk patients and in patients with increased transaminases, nonspecific chronic fatigue and/or rheumatic, hematological, endocrine or dermatologic disorders. 43. Screen for inappropriate alcohol use routinely in all patients.		
6. Scholar			
7. Professional			

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27. Common clinical conditions: Oncology management including emergencies

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Recognize signs and symptoms that are suggestive of a possible malignancy diagnosis: 10.1. fatigue, lump or area of thickening that can be felt under the skin, weight changes, including unintended loss or gain, etc. 10.2. skin changes, such as yellowing, darkening or redness of the skin, sores that won't heal, or changes to existing moles 10.3. changes in bowel or bladder habits 10.4. persistent cough or trouble breathing, difficulty swallowing, hoarseness 10.5. persistent indigestion or discomfort after eating 10.6. persistent, unexplained muscle or joint pain, persistent, unexplained fevers or night sweats 10.7. unexplained bleeding or bruising 10.8. splenomegaly, lymphadenopathy 10.9. anemia, neutropenia, leukocytosis, pancytopenia, etc. 11. Initiate investigations for suspected malignancy or malignancy of unknown primary. 12. Recognize and initiate emergency management/referral for oncological complications/emergencies: 12.1. brain metastases 12.2. spinal cord compression 12.3. meningeal carcinomatosis 12.4. pericardial tamponade 12.5. superior vena cava syndrome 12.6. hypercalcemia 12.7. tumour lysis syndrome 12.8. Syndrome of inappropriate antidiuretic hormone (SIADH). 13. Recognize adverse effects of chemotherapy. 14. Recognize adverse effects of radiation therapy.	20. Order appropriate further diagnostic interventions as required for: 20.1. diagnosis of malignancy 20.2. identification of primary site of malignancy 20.3. staging of existing malignancy. 20.4. Initiate therapy for specific conditions as warranted: 20.5. fluid resuscitation 20.6. antibiotics 20.7. bisphosphonates 20.8. steroids 20.9. blood or component transfusions 20.10. plasma exchange 20.11. radiation 21. Assess and manage pain and other issues related to malignancy or malignancy treatments such as (not all-inclusive list): 21.1. different types of pain 21.2. radiation effects such as proctitis, esophagitis, skin effects 21.3. lymphedema 21.4. vte treatment and prevention 21.5. ascites, pleural effusion. 22. Recognize sign, symptoms and investigations that may require transfer to a higher level of care.	30. Outline goals of care post discharge and ensure appropriate referrals are in place. 31. Identify need for involvement of palliative care or hospice. 32. Recommend medication regimen that will address current and expected symptoms.

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General clinical skills, common clinical conditions, and procedures frameworks

27. Common clinical conditions: Oncology management including emergencies

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
2. Communicator	10. Initiate Goals of Care discussion as outlined in **Hospice palliative Care** framework. 11. Establish status of any current Advance Care Directives.	20. Communicate with patient and family with respect to Goals of Care as outlined in **Hospice palliative care** framework. 21. Communicate carefully with respect to decisions on investigations and management to ensure they are within the spectrum of wishes expressed by patient and family/SDM.	30. Educate patient and family/SDM of appropriate signs of deterioration. 31. Ensure patient, family/SDM, and physicians are aware of any ongoing monitoring requirements.
3. Collaborator	10. Determine appropriate inpatient destination in consultation with ED physician and consultants. 11. Determine timeliness of specific interventions if required with consultants.	20. Collaborate/complement care of patient with patient's oncologist(s). 21. Seek appropriate consultant for the medical condition: e.g., nephrology, infectious diseases, hematology, radiation oncology, interventional radiology, cardiology, medical oncology.	30. Ensure follow-up with oncologist and/or family physician. 31. Ensure treating oncologist is aware of continuing management plans at discharge, e.g., antibiotics, fluids, medications, etc. 32. Arrange consultation with palliative care services if appropriate.
4. Leader	40. Establish treatment protocols for oncological emergencies to ensure timely access to diagnostics, consultants and interventions.		
5. Health Advocate	40. Engage when appropriate, involvement of all patients and families/SDMs in advance care planning. 41. Be aware and sensitive to patients' cultural and individual preferences to avoid stereotyping and incorrect assumptions. 42. Advocate for and seek to practice high quality of end of life care.		
6. Scholar	40. Maintain ongoing awareness of new treatments in patients with cancer, and their associated complications.		
7. Professional	40. Be aware of and participate in evidence-based guidelines and standards to support quality improvements in cancer care.		

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28. Common clinical conditions: Pain management – Acute and chronic

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Understand neuro-cognitive, emotional, physical and social/cultural determinants of pain perception. 11. Recognise and categorize pain in terms of acuity (acute, chronic or acute-on-chronic) and broad subtype (nociceptive, neuropathic or widespread soft-tissue/fibromyalgia). 12. Complete a thorough pain inventory, a relevant history and a focused clinical exam. 13. Identify important contributors to patient's experience of pain (physical, psychological and/or social-cultural). 14. Formulate an appropriate pain treatment plan incorporating pharmacologic and non-pharmacologic modalities as indicated. 15. Appreciate patient's severity of pain, and select most appropriate potency and route of delivery of analgesic agents to manage patient's pain safely in most expedient manner. 16. Understand indications for and pharmacology of common non-narcotic (acetaminophen, non-steroidal anti-inflammatory drug (NSAID), steroid, etc.), and neuropathic (gabapentin, tricyclic antidepressant [TCA]) analgesics, and adjuvant agents. 17. Comprehend indications for and pharmacology of common narcotic agents. 18. Appreciate relative dose equivalencies of common opioids including route of administration and strategies for substituting opioids when indicated. 19. Appreciate indications for and appropriate use of aggressive acute pain management modalities including patient controlled analgesia (PCA) and local/regional blocks.	20. Re-evaluate and adjust pain management strategy on a daily basis to ensure effectiveness and safety. 21. Address all active issues and important comorbidities in light of their impact upon patient's experience of pain. 22. Recognise opportunities for introduction of non-opioid analgesics as well as non-pharmacological means for effective pain management. 23. Appreciate common strategies for escalating and weaning opioid analgesics. 24. Appreciate relative dose equivalencies of common opioids including route of administration and strategies for substituting opioids when indicated. 25. Recognise and respond to scenarios of analgesic intolerance, withdrawal, overdose and poly-pharmacy. 26. Recognise new and emerging treatments are available for resistant acute and chronic pain management. 27. Recognise when patients are more appropriately managed on a palliative care plan for pain management.	30. Evolve an appropriate post-discharge pain management strategy in light of anticipated disposition (e.g., community residence, chronic care facility, palliative care hospice, etc.). 31. Transition parenterally rendered analgesia to non-parenteral route as able. 32. Wean opioid dosing as tolerated and employ sustained release formulations when possible in scenarios of chronic pain. 33. Reconcile multiple analgesic and/or sedating medications to avoid poly-pharmacy. 34. Evolve appropriate post-discharge strategies for management of other important active conditions with specific attention to mental health and addictions issues. 35. Select and prescribe analgesics from within patient's financial ability to obtain medications in community. 36. Assess risks for readmission before discharge of patient, and consider/employ strategies to mitigate risk to extent possible.

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General clinical skills, common clinical conditions, and procedures frameworks

28. Common clinical conditions: Pain management – Acute and chronic

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
2. Communicator	10. Explain patient's pain to him/her in terms of most likely cause while addressing any other important contributors. 11. Discuss and negotiate treatment goals and expected outcomes with patient and family/SDM where appropriate. 12. Communicate pain treatment plan with nursing and other members of care team.	20. Continue to explain patient's pain to him/her in terms of most likely cause while addressing any other important contributors. 21. Reinforce treatment goals and expected outcomes with patient. 22. Communicate pain treatment plan with nursing and other members of care team. 23. Consults specialists in pain management when required.	30. Contract with patient re: expectations regarding discharge prescriptions and/or post discharge follow-up care. 31. Provide timely documentation of treatment plan in hospital medical record for best medical pain management if patient retreated in Emergency Department or readmitted to hospital.
3. Collaborator	10. Collect available information that may signal/verify treatment failure, substance abuse or polypharmacy, taking care to involve community providers as appropriate. 11.	20. Ensure that initial pain management strategy is re-evaluated by care team in a timely fashion to ensure effectiveness and safety. 21. Collaborate with team members who provide expert advice to patients on pain and symptom management such as clinical nurse specialists and palliative care professionals.	30. Arrange for expedited follow-up with primary care provider. 31. Communicate with community-based providers to ensure patient can be reviewed in a timely manner and have his/her medications renewed. 32. Ensure that all planned interventions and care planning tasks have been completed. 33. Communicate with Community Pharmacists discharge treatment plans.
4. Leader	10. Appreciate relevant protocols and policies that address issues of safe and effective pain management.	20. Support nursing staff education/training and engagement in provision of medication delivery modalities not within usual scope of practice on units, e.g., CADD™ pumps, epidurals, peripherally inserted central catheter (PICC) lines. 20. Participate on Committees reviewing ongoing and novel treatment protocols for chronic and acute pain management in a Hospital setting.	30. Support and enhance employment of standard practices for safe prescribing of controlled substances and minimize risks for prescription medication diversion/abuse.

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CanMEDS Role	Admission	Inpatient Management	Transitions of Care
5. Health Advocate	10. Recognise and educate about risk factors or aberrant behaviors that could lead to/suggest opioid misuse/abuse. 11. Appreciate lifestyle choices and their impact upon patient's experience of pain. 12. Assist patient and family/SDM in accessing pain management resources while in hospital and in community.	20. Introduce and encourage active engagement in comprehensive and sustainable pain management strategies. 21. Offer support and encouragement for safe choices and lifestyle improvement.	30. Recognise and address issues that could impair safety in workplace or in home environment. 31. Review identified lifestyle choices that may continue to impact upon patient's experience of pain. 32. Offer support and encouragement for safe choices and lifestyle improvement. 33. Advocate with community partners for patients who have difficulty navigating system for community access to analgesics in an ethical manner.
6. Scholar	40. Know recommendations of major consensus guidelines/research that address acute and chronic pain management. 41. Critically review and present to care team members relevant inpatient protocols and policies that address issues of acute and chronic pain management. 42. Comprehend recommendations of major consensus guidelines/research that address acute and chronic pain management. 43. Critically review and develop solutions to any aspect of hospitalization strategies that could be causing pain or contributing to pain escalation for patients. 44. Review and critique existing discharge planning strategies and protocols including means for communicating information and transitioning care to outpatient setting. 45. Critically review to care team members those hospital-based interventions that appear to minimize patient's experience of pain.		
7. Professional	40. Treat patients' experience of pain and perceived need for analgesics with compassion and without judgment. 41. Maintain an attitude of patience and respect towards patient compliance with challenging pain management and treatment goals. 42. When required, display a willingness to extend a treatment plan that is responsible and ethical to patients with acute and chronic pain challenged by system.		

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29. Common clinical conditions: Pneumonia – Community-acquired (CAP)

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Elicit a focused history to identify symptoms of Community-Acquired Pneumonia (CAP) and demographic factors that may predispose patient to CAP. 11. Perform a targeted physical examination to signs consistent with CAP and differentiate it from other mimicking conditions. 12. Select and interpret indicated laboratory, microbiologic and radiologic studies to confirm diagnosis of CAP, and risk stratify patient. 13. Differentiate CAP from other processes that may mimic CAP or other causes of infiltrates on CXR. 14. Apply evidence-based tools such as the pneumonia severity index (PSI), or CURB-65 to triage decisions and identify factors that support the need for intensive care unit (ICU) admission. 15. Integrate Pneumonia Patient Outcomes Research Team (PORT) score/PSI in conjunction with patient specific factors and clinical judgment into the admission decision. 16. Initiate empiric antibiotic selection based on exposure to long term or group care, severity of illness, and evidence-based national guidelines, taking into account local resistance patterns. 17. Identify patient with immunocompromising co-morbidities (such diabetes mellitus, HIV or cancer, or extremes of age) who is risk of a complicated course of CAP.	20. Identify specific pathogens that predispose patients to a complicated course of CAP. 21. Be aware of the indications for invasive testing that may require specialty consultation with respirology 22. Recognize and address complications of CAP and/or inadequate response to therapy including respiratory failure and complicated parapneumonic effusions. 23. Formulate a subsequent treatment plan that includes narrowing antibiotic therapy based on available culture data and patient response to treatment.	30. Monitor and assess response to treatment once patient is closer to discharge from the hospital. 31. Address need for vaccination against future pneumonia. 32. Reinforce compliance with medications, smoking cessation, and exercise. 33. Arrange for home care and other follow-up as an outpatient (primary care provider, respirology specialists etc.).

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CanMEDS Role	Admission	Inpatient Management	Transitions of Care
2. Communicator	10. Communicate with patient and family/SDM to explain the history and prognosis of CAP. 11. Communicate with patient and family/SDM to explain the goals of care plan, including clinical stability criteria, importance of prevention measures such as smoking cessation, and required care while patient is hospitalized. 12. Explain indicators for respiratory isolation.	20. Keep team members informed of patient's respiratory status and response to therapy. 21. Employ a multidisciplinary approach, which may include pulmonary medicine, respiratory therapy, nursing and social services, to care of patient with CAP. 22. Communicate with patient and family/SDM to explain tests and procedures, and use and potential side effects of pharmacologic agents.	30. Communicate with patient and family/SDM to explain goals of care plan, including clinical stability criteria, preventive measures such as smoking cessation and modification of environmental exposures, and require follow-up care. 31. Prior to discharge, ensure communication with patient and family/SDM to explain discharge medications, potential side effects, and duration of therapy and dosing schedule. 32. Advise patient and family/SDM about community respiratory, physiotherapy and oxygen resources, home visits, etc.
3. Collaborator	10. Collaborate with primary care physicians and emergency physicians, and respirology if needed in making admission decision.	20. Recognize indications for specialty consultation including respirology, infectious disease, and critical care. 21. Facilitate information sharing between patient with CAP and multidisciplinary team for co-ordinate care and timely management changes.	30. Collaborate with family physician team on discharge for safe transition of care into the community including necessary follow-up to ensure successful disease resolution. 31. Participate in process for medication reconciliation on discharge with hospital team and community pharmacists for safe transition back to the community.
4. Leader	10. Lead, coordinate or participate in efforts to identify, address and monitor quality indicators for CAP including assessing oxygenation, obtaining blood cultures prior to administration of antibiotics, prompt administration of antibiotics, and providing indicated vaccinations and smoking cessation education. 11. Be aware of and communicate to team members concerning current pathogenic organisms in institution and the policies and procedures for maintaining infection control, etc.	20. Consider a multidisciplinary approach, which may include respiratory therapist, nursing, and physiotherapist to the care of patients with CAP.	30. Lead, coordinate or participate in multidisciplinary initiatives to promote patient safety and cost effective diagnostic and management strategies in the care of patients with CAP.

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General clinical skills, common clinical conditions, and procedures frameworks

29. Common clinical conditions: Pneumonia – Community-acquired (CAP)

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
5. Health Advocate		20. Lead, coordinate or participate in multidisciplinary initiatives, which may include collaboration with infectious disease and respirology specialists, to promote patient safety and cost effective diagnostic and management strategies for patients with CAP. 21. Lead team to educate staff on importance of smoking cessation counseling and other prevention measures.	30. Promote preventive strategies including smoking cessation, indicative *Streptococcal Pneumoniae* and influenza vaccination.
6. Scholar	40. Educate team members on how to predict patient risk for morbidity and mortality from CAP using an evidence-based tool such as the Pneumonia Patient Outcomes Research Team (PORT)/Pneumonia Severity Index (PSI) validated risk score. 41. Describe indicated therapeutic modalities for CAP including oxygen therapy, respiratory care modalities and antibiotic selection. 42. Identify patient-specific risk factors and presence of specific organisms that predispose patients to a complicated course of CAP.		
7. Professional	40. Utilize evidence-based recommendations for the treatment of patients with CAP. 41. Demonstrate an ethical approach to patients with CAP that incorporates cultural sensitivity and is free of bias. 42. Maintain awareness of evidence for best practice guidelines in discharging patients to community after acute hospital stay for CAP. 43. Enhance knowledge of CAP treatments, best practice and prevention guidelines through ongoing educational activities.		

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30. Common clinical conditions: Pneumonia – Hospital-acquired (HAP)

CanMEDS Roles	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Recognize profile of local institutional organisms and resistance patterns. 11. List common organisms associated with HAP. 12. Identify patients at risk for developing HAP. 13. Elicit a thorough and relevant history, and perform a targeted physical examination to signs consistent with hospital-acquired pneumonia (HAP). 14. Order and interpret indicated laboratory, microbiologic and radiologic studies to confirm diagnosis of HAP, and determine etiologic agent. 15. Differentiate HAP from other processes that may mimic HAP or other causes of infiltrates on CXR. 16. Initiate empiric antibiotic selection based on patient history and underlying co-morbid conditions. 17. Utilize evidence-based recommendations and protocols and risk stratification tools for treatment of HAP.	20. Identify patient specific risk factors, presence of specific organisms or pathogens that predispose patients to a complicated course of HAP. 21. Tailor antibiotic regime based on microbiology culture and sensitivity data as soon as possible. 22. Manage complications, which may include respiratory failure, pleural effusions and empyema. 23. Describe role of mechanical ventilation as a potential treatment option for HAP. 24. Identify patients who require thoracentesis, perform or coordinate procedure, and interpret results. 25. Recognize indications for specialty consultation, which may include microbiology, infectious disease and/or respirology services.	30. Recognize implications of HAP on discharge planning. 31. Appreciate risk factors that led to HAP and attempt to mitigate them. 32. Select appropriate antibiotics for use in the community where indicated. 33. Assess for home oxygen use and facilitate provisions on discharge where appropriate.
2. Communicator	10. Communicate clearly with patient and family/SDM to explain etiology, management plan and potential outcomes of HAP.	20. Explain clearly to patient and family/SDM need for mechanical ventilation if need as treatment option for HAP. 21. Facilitate information sharing between patient with HAP and team members to co-ordinate care and timely management changes.	30. Explain to patient and family/SDM prophylactic measures commonly used to lower risk of HAP. 31. Reinforce compliance with medications, smoking cessation, exercise and oxygen where indicated.
3. Collaborator	10. Coordinate care for patients requiring mechanical ventilation. 11. Describe and follow up with health care team members concerning infection control practices to prevent spread of resistant organisms within hospital.	20. Employ a multidisciplinary approach, which may include respiratory therapy, nursing, nutrition and pharmacy services, to care of patient with HAP through all care transitions. 21. Recognize indications for specialty consultation, which may include infectious disease, microbiology and/or pulmonary services. 22. Keep team members informed of patient's respiratory status and response to therapy.	30. Promote prevention strategies, which may include smoking cessation and indicated vaccinations.

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General clinical skills, common clinical conditions, and procedures frameworks

30. Common clinical conditions: Hospital-acquired pneumonia (HAP)

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
4. Leader	40. Lead, coordinate or participate in multidisciplinary initiatives, which may include collaboration with critical care, microbiology, infectious disease and respirology services to reduce incidence of HAP in ventilated patients. 41. Lead, coordinate or participate in quality improvement initiatives to reduce ventilatory days, rates of HAP, and variance in antibiotic use. 42. Lead staff to educate staff on importance of smoking cessation counseling and other prevention measures. 43. Implement systems to ensure hospital wide adherence to national standards. 44. Lead, coordinate or participate in multidisciplinary initiatives to promote patient safety and cost effective diagnostic and management strategies in care of patients with HAP.		
5. Health Advocate	40. Recognize steps that can be employed to limit emergence of antibiotic resistance. 41. Collaborate with local infection control practitioners to reduce spread of resistant organisms within institution.		
6. Scholar	40. Describe local and national resistance patterns for HAP. 41. Maintain awareness of current treatment standards for HAP. 42. Maintain awareness of new and emerging treatment modalities of HAP.		
7. Professional	40. Demonstrate an ethical approach to patients with HAP that incorporates cultural sensitivity and is free of bias. 41. Maintain awareness of evidence for best practice guidelines in discharging patients to community after acute hospital stay for HAP. 42. Enhance knowledge of HAP treatments, best practice and prevention guidelines through ongoing educational activities.		

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31. Common clinical conditions: Renal failure – Acute

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Identify patients with acute renal failure (ARF) and indication for specialty consultation: 10.1. nephrologists 10.2. critical care 10.3. urology. 11. Identify signs of uremia: coma, confusion, asterixis and urgent need for dialysis. 12. Identify (early management in possible reversible causes of ARF 13. Ensure optimization of volume status and hemodynamic parameters. 14. Order appropriate labs/ investigations for AKI. 15. Assess volume status, hyperkalemia, oliguric/anuric uremia, with possible urgent need for dialysis. 16. Write orders for medical management of electrolyte, acid-base abnormalities, with close monitoring.	20. Solicit cause of ARF, identify through history/physical: 20.1. pre-renal causes (vomiting, diarrhea, edema from cirrhosis or heart failure, medication, contrast dye) 20.2. intrinsic renal (vasculitis, trauma, vascular) 20.3. post-renal obstruction (distended bladder, enlarged prostate, pelvic mass, renal calculi). 21. Reduce further kidney injury by monitoring closely renal function, acid-base status, and serum electrolytes. 22. Recognize and respond to early signs of sepsis, including temperature measurements. 23. Recognize acute nephrotic syndrome, malignant hypertension, or renal crisis of scleroderma. 24. Assess and document daily weights, and in/out fluid balance. 25. Adjust medication dosing as required. 26. Understand and avoid nephrotoxins.	30. Initiate and review with hospital and community pharmacy medications and dietary restrictions due to AKI prior to discharge/transition.
2. Communicator		20. Communicate with patient and family/SDM the history, tests and procedures, prognosis of acute renal failure (ARF) and goals of care.	30. Share information in a clear and accurate manner, and solicit feedback from patient and family/SDM about ARF, possible disease progression, dietary restrictions, avoidance of nephrotoxic medications, and any follow-up consultations required. 31. Communicate with patient and family/SDM, and primary care provider discharge instructions and management following hospital discharge. 32. Communicate any final recommendations to patient and family/SDM concerning CKD, and write Rx for discharge medications.

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General clinical skills, common clinical conditions, and procedures frameworks

31. Common clinical conditions: Renal failure – Acute

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
3. Collaborator		22. Refer patient to dietician for nutritional assessment and support, including evaluation of high risk of malnutrition and of vitamin deficiency.	
4. Leader			
5. Health Advocate	40. Work with patients with ARF and their families/SDMs to determine and advocate access to health services and resources such as: 40.1. community support groups, including peer support 40.2. dialysis support groups 40.3. transportation organizations for patients' daily/weekly visits to dialysis, etc. 40.4. educational programs on nephrotoxic medications. 41. Advocate for and improve access to registered nutritionists and pharmacists for patients and families/SMDs concerning education on diet/avoidance of over-the-counter nephrotoxic medications. 42. Improve monitoring of medications that are effected by renal impairment, in hospital and in community.		
6. Scholar			
7. Professional			

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32. Common clinical conditions: Renal failure – Chronic

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Perform a complete physical exam to identify, e.g., hypovolemia, hypervolemia, or signs of infection, possible obstruction. 11. Comprehend and recognize other chronic diseases with chronic kidney disease (CKD)/chronic renal failure (CRF) and monitor closely to maintain and preserve renal function, i.e., heart failure, diabetes 12. Understand and determine need for early consultation of relevant specialists, i.e., nephrologists, urologists, etc. 13. Identify and manage nephrotoxic medications. 14. Recognize need for dosage adjustments of certain medication due to decrease in creatinine clearance. 15. Evaluate indications and limitations of certain diagnostics tests, e.g., CT scan with contrast.	20. Understand and determine treatment of reversible causes, e.g., infection, hypovolemia, hypervolemia, gastrointestinal (GI) losses, or hemorrhage. 21. Evaluate need for further investigations, cessation of certain medications prior to contrast dye. 22. Preserve renal function by identifying and treating relevant comorbidities. 23. Monitor and document volume and electrolyte status. 24. Recognize and respond to worsening uremia. 25. Demonstrate an understanding of higher cardiac risk in a patient with CKD/CRF. 26. Assess and review potential nephrotoxic medications, toxicities, and medication interactions. 27. Evaluate anemia and assess need for erythropoiesis-regulating medication.	30. Prioritize and obtain early referral to nephrology and/or to multidisciplinary CKD clinic. 31. Initiate and review with hospital and community pharmacy re: Medications and dietary restrictions due to CKD prior to discharge/transition. 32. Ensure community pharmacy is aware of CKD challenges, and provides patient education in over-the-counter nephrotoxic medications, their avoidances, symptoms, etc.
2. Communicator		20. If renal failure permanent, communicate with team to implement early education and support for patient and family/SDM.	30. Share information in a clear and accurate manner, and solicit feedback from patient and family/SDM about CKD progression, dietary restrictions, avoidance of nephrotoxic medications, and any follow-up consultations required. 31. Communicate any final recommendations to patient and family/SDM concerning CKD, and write Rx for discharge medications.
3. Collaborator		20. Refer patient to dietician for nutritional assessment for protein restriction, salt restriction, low K diet and adequate caloric intake.	
4. Leader			
5. Health Advocate	40. Promote initiatives aimed at optimizing management strategies for CRF. 41. Advocate for and assist in implementation for smoking cessation programs for patients with CKD, and their families/SDMs.		
6. Scholar			
7. Professional			

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33. Common clinical conditions: Seizures

CanMEDS Role	Admission	Inpatient Management	Transitions in Care
1. Medical Expert	10. Start emergency management to terminate current seizures/status epilepticus. 11. Obtain a history regarding medication use, past medical history to include, head injury, stroke, Alzheimer disease, intracranial infections, alcohol and illicit drug use; family history of seizures. 12. Perform a complete physical examination to identify the etiology of seizures. 13. Recognize that patient admitted with syncopy, especially if elderly, may have seizure, as early detection will save time. 14. Obtain detailed history to differentiate first seizure from epilepsy. 15. If known history with seizures obtain history regarding medication compliance. 16. Classify the type of seizure using International League Against Epilepsy (ILAE) classifications. 17. Identify whether seizure resulted from a treatable systemic disorder, metabolic abnormalities or brain pathology. 18. Obtain Anti Epileptic Drug (AED) levels where appropriate or commence on AED where applicable (start with mono-therapy). 19. Order and interpret results of neuroimaging pertinent to seizures. 20. Recognize symptoms and signs of meningitis and sepsis, and order/perform and interpret LP (esp. in HIV patients) and septic work-up (pan-culture). 21. Assess need for urgent referral to critical care or neurosurgery. 22. Recognize indications for hospitalizations: First seizure with prolonged postictal state/status epilepticus, systemic illness/sepsis, persistent metabolic abnormalities, or traumatic head injury. 23. Order inpatient seizure precautions.	20. Review if patient is eligible for AEDs, and follow current guidelines. 21. Monitor clinical response to AED. 22. Start on AED mono-therapy considering: drug effectiveness for seizure type, potential adverse effects, interactions with other medications, comorbid medical conditions (esp. liver and renal conditions), age, childbearing plans, and cost. 23. Manage recurrent seizures. 24. Monitor AED drug levels, and adjust accordingly. 25. Identify, monitor closely and manage AED side effects and toxicity. 26. Monitor for depression/suicide ideation especially with certain AED. 27. Have high index of suspicion regarding seizures in all inpatients with history of stroke and dementia.	30. Identify optimal seizure control before discharge. 31. Titrate seizure medication and confirm discharge doses. 32. Review driving restrictions with patient and family/SDM. 33. Review with patient and family/SDMall AED side effects including effects which affect driving. 34. Arrange for AED and other drug levels needed to be monitored closely after discharge, and inform community GP for follow-up. 35. Reiterate fitness for driving and need for regular reassessment.

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CanMEDS Role	Admission	Inpatient Management	Transitions in Care
2. Communicator	10. Discuss events surrounding seizure with witnesses who were present with patient. 11. Review with patient and family/SDM factors that led to poor seizure control (AED compliance, seizure triggers, drug and alcohol use). 12. Obtain records from GP and neurologist. 13. Review with neurologist when to commence AED and when to add new agents.	20. Communicate with patient and family/SDM: 20.1. seizure management, investigations results, course in hospital and prognosis 20.2. AED side effects and interaction with other medication/OTC medications. 21. Communicate with clinical pharmacist concerning AED dosages. 22. Monitoring medication levels and AED dosage adjustment, and medication interactions. 23. Communicate with patient and family/SDM, and bedside nurse need for documentation of seizures in the seizure calendar	30. Communicate with patient and family/SDM concerning: 30.1. keeping a seizure calendar 30.2. awareness of seizure triggers 30.3. seizure precautions and seizure first aid 30.4. wearing a seizure medical alert or id bracelet 30.5. implications of AED in women of childbearing age (e.g., possible teratogenic effects and need for contraception and folic acid supplementation) 30.6. non-adherence with AED leading to increase mortality and hospitalization 30.7. substance use (alcohol and other drugs) 30.8. fitness to drive 30.9. consideration to discontinue AED in certain individuals if they have been seizure free for 2-4 years.
3. Collaborator	10. Work efficiently with ED physician and be available to co-manage patient with seizures in ED in order to decrease ED crowding and to improve patient flow. 11. Collaborate with ED physician in initial management plan and admission destination. 12. Identify need for specialty consultant involvement in patient care (neurology, neurosurgery, addiction and critical care).	20. Request neurologist re-assessment in cases without optimal seizure control or drug-resistant epilepsy. 21. Provide consultation and supportive care for a hospitalized patient with seizures under care of another (Most Responsible Physician [MRP]) if required.	30. Communicate with community physician (discharge planning, follow-up arrangements, etc.). 31. Facilitate a multidisciplinary approach: OT/PT/HH to clear for discharge and ensure follow-up arrangements completed, such as home equipment, OT assessment, medication management, etc. 32. Ensure follow-up post discharge with: 32.1. home health for urinary catheter care or other needs 32.2. primary care physician. 33. Organize specialist consultant post discharge.
4. Leader	40. Demonstrate leadership in developing hospital or regional preprinted ordersets for inpatient seizure management in order to provide high standard of care with minimum hospital stay and adequate follow-up post discharge. 41. Lead quality improvement or assurance initiatives to prevent falls and injuries of patient with seizures.		

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General clinical skills, common clinical conditions, and procedures frameworks

33. Common clinical conditions: Seizures

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
5. Health Advocate	40. Advocate for behavioral modification, e.g.: 40.1. nutrition or glycemic control in diabetic patients 40.2. substance use 40.3. activity and lifestyle (esp. in known epilepsy) 40.4. contraception in patients on AED. 41. Promote equal access to resources to all patients with seizures. 42. Support patient's access to community resources post discharge, e.g., Epilepsy Canada, local Epilepsy Society and epilepsy support groups.		
6. Scholar	40. Participate in continuing medical education (CME) programs for achieving and maintaining knowledge in seizures management. 41. Practice according to latest guidelines for treating seizures in the inpatient population with multiple comorbidities. 42. Mentor and teach medical students, residents, RNs and other health care providers concerning management of a hospitalized patient with seizures.		
7. Professional	40. Provide an ethical approach to patients with seizures. 41. Identify early in ED, patient's advance directives for health care. 42. Address patient's resuscitation status in ED if possible. 43. Provide an ethical approach to Patient Safety Incidents in patients with seizures (identification, analysis, reporting and disclosure). 44. Reassess resuscitation status of admitted patients.		

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34. Common clinical conditions: Skin and soft tissues infections

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Identify and manage simple cellulitis/erysipelas and complicated or deeper tissues infections (e.g., abscess, necrotizing fasciitis, or osteomyelitis). 11. Elicit a thorough history and perform a physical examination to identify clinical indicators for skin and soft tissues infections. 12. Recognize and treat urgently severe infections, e.g., necrotizing fasciitis, pre-septal and orbital cellulitis, cellulitis in immunocompromised patients. 13. Identify and manage early signs of sepsis. 14. Identify any risk factors for skin and soft tissue infections: 14.1. diabetes mellitus 14.2. tinea pedis 14.3. eczema 14.4. animal/human bites 14.5. intravenous/Intramuscular drug use 14.6. neutropenia 14.7. trauma, recent surgery, venous and arterial insufficiency. 15. Order and interpret results of imagining pertinent to skin and soft tissue infections and their risk factors. 16. Initiate empiric antibiotic treatment according to risk factors, clinical presentation, and evidence-based guidelines for covering most common skin pathogens. 17. Identify comorbidities that require treatment.	20. Choose appropriate antibiotics according to culture and sensitivity and local community resistance patterns. 21. Monitor clinical and laboratory response to antibiotics and other treatments. 22. Identify and manage side effects of antibiotic use. 23. Recognize skin and soft tissues infections (cellulitis) as re-infection versus relapse and manage accordingly. 24. Address recurrent skin and soft tissues infections (cellulitis) risk factors: 24.1. consider methicillin-resistant staphylococcus aureus (MRSA) eradication 24.2. consider prophylactic antibiotics 24.3. manage diabetes mellitus 24.4. treat skin ulcers and tinea pedis 24.5. manage venous and arterial insufficiency.	30. Change intravenous antibiotics to oral form as soon as clinically indicated.

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CanMEDS Role	Admission	Inpatient Management	Transitions of Care
2. Communicator			30. Inform community physician and/or nursing home of discharge planning. 31. Provide patient with discharge instruction (required follow-up(s), possible adverse effects of antibiotics and symptoms that need medical attention). 32. Provide family physician with discharge summary that includes antibiotic course in hospital, medication reconciliation including antibiotic use/duration and needed follow-up(s) post discharge.
3. Collaborator	10. Identify and manage need for specialty consultant involvement in patient care (infectious diseases, plastic surgery, otolaryngologist [ENT] or ophthalmology).	20. Collaborate with Infection control team to reduce transmission of multi-resistant organisms. 21. Recognize when collaboration is required for skin and soft tissue infections caused by multi-resistant organisms or in patients with multiple allergies or comorbidities with: 21.1. clinical pharmacist 21.2. infectious diseases specialist 21.3. microbiologist.	30. Arrange consult with nurse educator for teaching patients skin ulcer care. 31. Ensure follow- up post discharge with: 31.1. home health care for wound/ulcer care or other needs 31.2. primary care physician/specialist consultant.
4. Leader	40. Lead quality improvement or assurance initiatives to prevent hospital-acquired skin and soft tissue infections. 41. Promote development of hospital or regional protocols or pre-printed admission orders for patients with skin and soft tissue infections in order to provide high standard of care with minimum of hospital stay and adequate follow up post discharge.		
5. Health Advocate	40. Advocate for behavioral modification, e.g.: 40.1. nutrition or glycemic control in diabetic patients 40.2. diabetic foot care 40.3. substance abuse.		
6. Scholar			
7. Professional			

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35. Common clinical conditions: Urinary tract infection (UTI)

CanMEDS Role	Admission	Inpatient Management	Transitions in Care
1. Medical Expert	10. Recognize and differentiate between asymptomatic bacteriuria, uncomplicated versus complicated urinary tract infection (UTI), recurrence versus relapse, and prostatitis. 11. Identify risk factors for UTI. 12. Identify and manage early signs of urosepsis. 13. Assess volume status and IVF as necessary. 14. Identify comorbidities that require treatment in the Emergency Department (ED) including pregnancy and immunosuppression. 15. Order and interpret results of appropriate laboratory. 16. Review prior culture results, antibiotic use history and local resistance patterns. 17. Initiate empiric antibiotic treatment according to risk factors, clinical presentation and evidence-based guidelines for covering most common uro-pathogens. 18. Order and interpret imaging pertinent to UTI and its risk factors. 19. Avoid unnecessary urinary catheterization in ED.	20. Adjust antibiotics according to urine culture and sensitivity, and determine appropriate duration of treatment. 21. Monitor clinical and laboratory response to antibiotics and other treatments. 22. Identify and manage complications of UTI (e.g., sepsis, peri-nephric abscess, emphysematous pyelonephritis etc.). 23. Identify and manage adverse effects of antibiotic use. 24. Recognize UTI as re-infection versus relapse and manage accordingly.	30. Ensure removal of unnecessary urinary catheters and assess post void residual afterwards. 31. Change intravenous antibiotics to oral as soon as clinically indicated.
2. Communicator	10. Identify early in ED the patient's advance directives for health care. 11. Address the patient's resuscitation status in ED if possible.	20. Educate patient and family/SDM with regard to urologic issues such as asymptomatic bacteruria, recurrent UTI, intermittent catheterization strategies.	30. Inform community physician and/or nursing home of discharge planning. 31. Provide patient with discharge instruction (required follow-up(s), possible adverse effects of antibiotics and symptoms that need medical attention). 32. Provide family physician with discharge summary that includes antibiotic course in hospital, medication reconciliation including antibiotic use/duration and needed follow-up(s) post discharge.

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General clinical skills, common clinical conditions, and procedures frameworks

35. Common clinical conditions: Urinary tract infection (UTI)

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
3. Collaborator	10. Identify need for specialty consultant involvement in patient care (urology, nephrology or infectious diseases).	20. Collaborate with Infection control team to reduce transmission of multi-resistant organisms. 21. In UTI caused by multi-resistant organisms, or in patients with multiple allergies or comorbidities, ensure collaboration with: 21.1. Clinical pharmacist 21.2. Infectious disease specialist 21.3. Microbiologist. 22. Provide consultation and supportive care for UTI in a hospitalized patient under care of another MRP if required.	30. Arrange consult with nurse educator to teach patient and family/SDM proper urinary catheter care. 31. Ensure follow up as required post discharge with: 31.1. Home Health for urinary catheter care or other needs 31.2. Family physician 31.3. Specialist consultant.
4. Leader	10. Lead multidisciplinary discharge team from ED by: 10.1. Providing discharge planning goals 10.2. Avoiding unnecessary admissions (e.g., uncomplicated cystitis, asymptomatic bacteriuria or UTI that can be managed at home or in LTC facilities) 10.3. Providing an estimated day of discharge if possible. 11. Coordinate and lead transition of care process from community or ED to hospital.	20. Lead quality improvement or assurance initiatives to prevent hospital-acquired UTI. 21. Promote development of hospital or regional protocols, Decision Support Tools and pre-printed admission orders for patients with UTI, in order to provide a high standard of care, minimize length of stay and optimize follow-up post discharge. 22. Promote care planning with nursing regarding urinary retention, intermittent catheterization and toileting strategies.	
5. Health Advocate		20. Advocate for behavioral modification such as: 20.1. Nutrition or glycemic control in diabetic patients 20.2. Limit use of spermicide-containing contraception products 20.3. Post-coital voiding and antibiotics.	30. Advocate for equal access to resources for all patients with UTI.
6. Scholar	40. Participate in CME programs for achieving and maintaining knowledge in UTI management. 41. Practice according to latest guidelines for treating UTI in the inpatient population with multiple comorbidities. 42. Mentor and teach medical students and residents, RNs and other health care providers care of a hospitalized patient with UTI.		
7. Professional	40. Provide an ethical approach to patients with UTI. 41. Reassess resuscitation status of admitted patient if not done in ED. 42. Provide an ethical approach to Patient Safety Incidents in patients with UTI (identification, reporting and disclosure).		

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36. Common clinical conditions: Venous thromboembolic (VTE) disease

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Obtain a thorough and relevant history to identify risk factors for and symptoms of venous thromboemboic (VTE) disease. 11. Perform a complete physical examination to identify signs that foretell presence of VTE. 12. Utilize clinical prediction rules (e.g., Wells Criteria score for deep vein thrombosis [DVT]/pulmonary embolism [PE]) to determine pretest probability of VTE to guide diagnostic process. 13. Evaluate indications and limitations of specific diagnostic tests, not limited to D-dimer, venous Doppler, PE-protocol CT, pulmonary ventilation/perfusion (V/Q) scan, etc., to determine most appropriate testing for diagnosing or ruling out VTE. 14. Recognize need for early consultation with interventional radiology, vascular surgery or other specialties. 15. Ensure that patient with suspected VTE is offered an interim dose of anticoagulation therapy if diagnostic investigations are expected to take 4+ hours for DVT, and 1+ hour for PE, from time of first clinical suspicion. 16. Consider novel anticoagulant in certain patient population (normal kidney function test [KFT], difficult to control INR, etc.).	20. Evaluate need for additional investigations to assess disease, including troponin, echocardiogram, malignancy workup, thrombophilia work-up, etc. 21. Interpret results of investigations to inform diagnosis and management, health promotion with regards prophylaxis/treatment of VTE. 22. Appraise need for urgent invasive treatment modalities. 23. Evaluate bleeding risk and negative prognostic factors for VTE. 24. Formulate a treatment plan for hospitalized patient at risk for VTE or with acute VTE including choice of a specific anticoagulation regimen, required monitoring and duration of treatment utilizing evidence-based recommendations. 25. Anticipate and address any complicating factors, which may arise from prophylaxis or management of VTE such as bleeding, HIT, warfarin induced skin necrosis, supratherapeutic INR, cardiopulmonary compromise, anticoagulation failure.	30. Recognize when to provide extended VTE prophylaxis to patients being discharged to rehabilitation facilities, nursing homes or home immobile. 31. Identify and select appropriate resources for patient and families to learn about VTE prophylaxis and treatment. 32. Provide clear discharge instructions for patient regarding anticoagulation, monitoring and follow-up.
2. Communicator	10. Explain to patients and families the natural history and prognosis of VTE, tests and procedures, the use and potential side effects of medications.	20. Educate patient and family/SDM about indications, contraindications and side effects of pharmacologic agents and other therapeutic modalities such as IVC filters, embolectomy, graduated compression hose, sequential compression devices, etc., used to prevent or treat VTE	30. Communicate to patient and family/SDM findings of applicable studies and reports regarding treatment and prophylaxis of VTE. 31. Explain to patient and family/SDM need for extended duration prophylaxis when indicated. 32. Work with patient and family/SDM how they can improve determinants of health, in order to ameliorate health and outcomes with regards to VTE.

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CanMEDS Role	Admission	Inpatient Management	Transitions of Care
3. Collaborator	10. Engage others to work collaboratively to improve systems of monitoring VTE prophylaxis and implementing early treatment protocols.	20. Negotiate overlapping and shared responsibilities with the patient, specialists, pharmacy, nursing, OT, PT for ongoing care of the patient, follow-up on investigations, response to treatment, consultations and ensure that agreed follow-up occurs. 21. Address pain management in patients with VTE.	30. Facilitate co-management of VTE prophylaxis and treatment. 31. Ensure adequate resources for monitoring of anticoagulation between hospital discharge and arranged outpatient follow-up. 32. Document and communicate plan of care and clear discharge instructions for receiving primary care givers/specialists responsible for monitoring anticoagulation and follow-up.
4. Leader	10. Institute appropriate VTE prophylaxis regimens for hospitalized patient groups. 11. Participate in systems improvement to promote VTE prophylaxis in all admitted patients.	20. Contribute to strategies that improve value of delivery of VTE prophylaxis and treatment such as early discharge, outpatient management of VTE.	
5. Health Advocate	10. Assess VTE risk factors and bleeding risk for all patients admitted into the hospital 11. Initiate appropriate prophylactic measures to reduce likelihood of VTE.	20. Influence patient populations served to promote VTE prophylaxis, healthy habits and health protection regarding VTE.	30. Identify and select appropriate resources for patients and families/SDMs to learn about VTE prophylaxis and treatment. 31. Review patient and family/SDM roles in monitoring condition and active self-management to improve VTE treatment/prophylaxis outcomes.
6. Scholar	40. Identify and select appropriate resources for other health care team members to learn about VTE prophylaxis and treatment.		
7. Professional			

Well Criteria Calculation links:
For DVT: http://www.mdcalc.com/wells-criteria-for-dvt/
For PE: http://www.mdcalc.com/wells-criteria-for-pulmonary-embolism-pe/

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37. Procedures: Arthrocentesis

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Recognize different disease processes that may lead to joint effusions. 11. Understand indications, contraindications, risks and complications for arthrocentesis. 12. Identify patients with potential high bleeding risks due to abnormal coagulation and platelet parameters and/or those being treated with anticoagulants and antiplatelet drugs. This identification process includes: 12.1. knowing how to modify these treatments pre and post procedure 12.2. knowing who may require fresh frozen plasma and/or platelets. 13. Safely and effectively complete arthrocentesis, through fundamentals of arthrocentesis. 14. Order appropriate diagnostic tests for synovial fluid based on differential diagnoses.	20. Manage patients' discomfort during and after arthrocentesis. 21. Interpret results and outcomes from arthrocentesis.	30. Recognize potential complications of arthrocentesis post-procedure and implement corresponding treatments 31. Understand when it is safe to discharge a patient home after arthrocentesis.
2. Communicator	10. For purposes of informed consent discuss and summarize discussion about procedure with patient and family/SDM including indication(s) for its use, anticipated outcomes and potential complications with patient and family/SDM. 11. Summarize completed arthrocentesis procedure in patient's medical record. 12. Summarize the following elements in a Procedural Note: 12.1. Name of procedure: 12.2. Indication(s): 12.3. Patient consent: 12.4. Lab tests: (CBC- Hgb, iv. Platelets, INR) 12.5. Local anaesthesia: 12.6. Description of procedure: 12.7. Complications: 12.8. Estimated blood loss: 12.9. Required follow-up: 12.10. Name and signatures of those involved in completion of procedure.	20. Educate patient and family/SDM on rules of monitoring post procedure.	30. Incorporate relevant information about arthrocentesis, its findings, outcomes and necessary follow-up in discharge summary and transfer notes.

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General clinical skills, common clinical conditions, and procedures frameworks

37. Procedures: Arthrocentesis

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
3. Collaborator	10. Make early referrals for orthopedic consultation to treat an effusion in a prosthetic joint. 11. Refer to appropriate specialty services including rheumatology, orthopedics or infectious disease.	20. Engage multidisciplinary teams including physical and occupational therapy when appropriate for rehabilitation.	
4. Leader	40. Improve safety and reduce institutional complication rates using quality improvement methods. 41. Standardize safe performance of arthrocentesis. 42. Lead in creation of ordersets, institutional protocols, information pages, etc.		
Health Advocate	40. Work with and advocate for patient and family/SDM before, during and after arthrocentesis to ensure patient's needs and experience while in hospital and in transition are met, and consider how role of hospitalist contributes in improving patient experience to maximum standards.		
6. Scholar	40. Create educational materials to explain and inform patients and their families/SDMs about arthrocentesis. 41. Incorporate best teaching practices when supervising learners during arthrocentesis. 42. Monitor hospitalists' performances (and/or their supervision of trainees during arthrocentesis) to improve safety. 43. Review, incorporate and improve performance of arthrocentesis on an individual and institutional level by assimilating knowledge and trends from observations and from procedural journals kept by hospitalist clinicians.		
7. Professional	40. Track and self-reflect about details of arthrocentesis in a personal procedure journal. 41. Create solutions and improvements to enhance practice of arthrocentesis both on a personal and on a group/institutional level. 42. Monitor one's competency, and utilize tools can be used to identify positive and negative aspects of performance of this procedure. 43. Use information gathered as feedback to improve safety and efficiency of this procedure as well as identifying continuing professional development training needs.		

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38. Procedures: Lumbar puncture (LP)

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Appreciate signs and symptoms and their associated disease processes that require lumbar puncture (LP). 11. Understand indications, contraindications and complications for LP. 12. Apply indications for brain imaging prior to LP. 13. Know which disease states require assessment of opening pressures and how to obtain them accurately. 14. Identify patients with potential high bleeding risks due to abnormal coagulation and platelet parameters and/or those being treated with anticoagulants and antiplatelet drugs. 15. Safely and effectively complete LP, through fundamentals of a lumbar puncture. 16. Order appropriate diagnostic tests for cerebrospinal fluid based on differential diagnoses.	20. Recognize potential serious and common complications of LP (i.e., post LP headache.) and implement corresponding treatments. 21. Interpret results and outcomes from diagnostic work-up completed. 22. Manage discomfort during and after LP.	30. Understand when it is safe to discharge a patient home after a LP.
2. Communicator	10. For purposes of informed consent, discuss LP, indication(s) for its use, anticipated outcomes and potential complications with patient and family/SDM. 11. Summarize discussion and completed LP procedure in patient's medical record. 12. Include the following elements in a Procedural Note: 12.1. name of procedure: 12.2. indication(s): 12.3. patient consent: 12.4. lab tests: (CBC- Hgb, iv. platelets, INR) 12.5. local anaesthesia: 12.6. description of procedure: 12.7. complications: 12.8. estimated blood loss: 12.9. required follow-up: 12.10. name and signatures of those involved in completion of procedure.	20. Discuss with patient and family/SDM treatment options to manage discomfort during and after LP such as headache, including use of an epidural blood patch.	30. Incorporate relevant information about LP, its findings and resultant outcomes in discharge summary.

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General clinical skills, common clinical conditions, and procedures frameworks

38. Procedures: Lumbar puncture (LP)

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
3. Collaborator	10. Know indications for involving interventional radiology in performing LP. 11. Refer to appropriate specialty services including neurology, infectious disease, anesthesiology, and/or interventional radiology when indicated.		
4. Leader	40. Improve safety and reduce institutional complication rates of LP using quality improvement methods. 41. Standardize safe performance of LP. 42. Lead in creation of ordersets, institutional protocols, information pages, etc.		
5. Health Advocate	40. Educate patient and family/SDM on rules of monitoring post procedure. 41. Work with and advocate for patient and family/SDM before, during and after LP to ensure patient's needs and experience while in hospital and in transition are met, and consider how role of hospitalist contributes in improving patient experience to maximum standards.		
6. Scholar	40. Create educational materials to inform patients and their families/SDMs about LP. 42. Incorporate best teaching practices when supervising learners during a LP. 43. Monitor hospitalists' performance (and/or their supervision of trainees performing LP) to improve the safety of a LP. 44. Review, incorporate and improve performance of a LP on an individual and institutional level by assimilating knowledge and trends from procedural journals kept by each hospitalist clinician.		
7. Professional	40. Track and self-reflect about details of LP in a personal procedure journal. 41. From these details and trends, create solutions and improvements to enhance practice of LP both on a personal and on a group/institutional level. 42. Monitor one's competency, and utilize tools can be used to identify positive and negative aspects of performance of this procedure. 43. Use information gathered as feedback to improve safety and efficiency of this procedure as well as identifying continuing professional development training needs.		

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39. Procedures: Paracentesis

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	15. Appreciate signs and symptoms and their associated disease processes (including those associated with spontaneous bacterial peritonitis), which require paracentesis. 16. Understand indications, contraindications and complications for paracentesis for both diagnostic and therapeutic purposes. 17. Identify patients who would benefit from therapeutic paracentesis and removal of a large volume of ascites. This identification process includes understanding role of intravenous albumin. 18. Know indications for image-guided paracentesis by ultrasound to assess location, quantity and accessibility (i.e., loculation status) of ascites fluid. 19. Identify patients with potential elevated bleeding risks due to abnormal coagulation or platelet parameters and to understand what circumstances would delay a diagnostic paracentesis. 20. Understand how to modify treatment of patients on anticoagulants and antiplatelet drugs pre and post procedure. 21. Understand role of fresh frozen plasma and/or platelets in reducing risk associated with procedure. 22. Safely and effectively complete paracentesis, through fundamentals of paracentesis. 23. Order appropriate diagnostic tests for analysis of ascites based on differential diagnosis and characteristics of ascites.	20. Understand how common therapies like anticoagulation and antiplatelet treatments affect paracentesis and know best practices regarding their management before, during and after paracentesis. 21. Recognize potential serious and common complications of paracentesis including bleeding, infection and persistent ascites leak. Implement corresponding treatments. 22. Interpret results and outcomes from diagnostic work-up completed. A standard ascites assessment includes cell count, differential, gram stain and culture, and serum-ascites albumin gradient (SAAG). 23. Understand how SAAG is used in diagnostic work-up of ascites.	30. Understand when it is safe to discharge a patient home after paracentesis.

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General clinical skills, common clinical conditions, and procedures frameworks

39. Procedures: Paracentesis

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
2. Communicator	10. For purposes of informed consent, discuss (and document) paracentesis, indication(s) for its use, anticipated outcomes and potential complications. 11. Summarize completed paracentesis procedure in patient's medical record. 12. Include the following elements in a Procedural Note: 12.1. name of procedure/indication(s): 12.2. patient consent: 12.3. lab tests: (CBC- Hgb, iv. platelets, INR) 12.4. local anaesthesia: 12.5. description of procedure: 12.6. complications: 12.7. estimated blood loss: 12.8. required follow-up: 12.9. name and signatures of those involved in completion of procedure.	20. Educate patient and family/SDM on rules of monitoring post procedure.	30. Incorporate relevant information about paracentesis, its findings, outcomes and necessary follow-up in discharge summary.
3. Collaborator	10. Consult Interventional Radiology under appropriate clinical circumstances to perform paracentesis. 11. Know and apply indications for referral to appropriate specialty services including gastroenterology and/or oncology.		
4. Leader	40. Develop Hospital Procedural Note Form and champion its use in hospital. 41. Improve safety and reduce institutional complication rates of paracentesis using quality improvement methods. 42. Standardize safe performance of paracentesis. 43. Lead in creation of ordersets, institutional protocols, information pages, etc.		
5. Health Advocate	44. Work with and advocate for patients and families/SDMs before, during and after paracentesis to ensure patient's needs and experience met.		
6. Scholar	40. Create educational materials to explain and inform patient and family/SDM about paracentesis. 41. Incorporate best teaching practices when supervising learners during paracentesis. 42. Monitor hospitalists' performances (and/or their supervision of trainees during paracentesis) to improve safety. 43. Review, incorporate and improve performance of paracentesis on an individual and institutional level by assimilating knowledge and trends from observations and from procedural journals kept by each hospitalist clinician. 44. Consider how role of hospitalist contributes in improving patient experience to maximum standards.		
7. Professional	40. Track and self-reflect about details of paracentesis in a personal procedure journal. 41. From these details and trends, create solutions and improvements to enhance practice of paracentesis both on a personal and on a group/institutional level. 42. Monitor one's competency, and utilize tools can be used to identify positive and negative aspects of performance of this procedure. 43. Use information gathered as feedback to improve safety and efficiency of procedure as well as identifying continuing professional development training needs.		

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40. Procedures: Thoracentesis

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
1. Medical Expert	10. Appreciate signs and symptoms and their associated disease processes that require thoracentesis. 11. Identify patients who would benefit from therapeutic thoracentesis and removal of a large volume of pleural fluid. Appreciate how basic diagnostic imaging (i.e., chest x-ray) can help in this process. 12. Understand indications, contraindications and complications for both diagnostic and therapeutic thoracentesis. 13. Know indications for image-guided thoracentesis by ultrasound or computed tomography to assess location, quantity and accessibility (i.e., loculation status) of pleural fluid. 14. Identify patients with potential elevated bleeding risks due to abnormal coagulation and platelet parameters and/or those being treated with anticoagulants and antiplatelet drugs. This includes knowing how to modify these treatments pre, and post procedure and knowing who may require fresh frozen plasma and/or platelets. 15. Safely and effectively complete thoracentesis, through fundamentals of thoracentesis. 16. Based on differential diagnosis and appearance of pleural fluid, order appropriate serum and pleural diagnostic tests for analysis.	20. Understand how common therapies like anticoagulation and antiplatelet treatments affect thoracentesis and know best practices regarding their management before, during, and after thoracentesis. 21. Recognize potential serious and common complications of thoracentesis including pneumothorax, re-expansion pulmonary edema, etc. Implement corresponding prevention methods and/or treatments. 22. Treat post-procedure pain. 23. Interpret results and outcomes from diagnostic work-up including how to differentiate transudative versus exudative fluid. 24. Understand indications for insertion of a chest tube and/or pleurodes is based on patient's clinical status and post procedure diagnostic imaging. 25. Manage patient's discomfort during and after thoracentesis.	30. Understand when it is safe to discharge a patient home after a thoracentesis.

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General clinical skills, common clinical conditions, and procedures frameworks

40. Procedures: Thoracentesis

CanMEDS Role	Admission	Inpatient Management	Transitions of Care
2. Communicator	10. For purposes of informed consent, discuss thoracentesis, indication(s) for its use, anticipated outcomes and potential complications. 11. Clearly document this discussion in patient record. 12. Summarize completed thoracentesis procedure in patient's medical record. 13. Include following elements in a Procedural Note: 13.1. name of procedure/indication(s): 13.2. patient consent: 13.3. lab tests: (CBC- Hgb, iv. platelets, INR) 13.4. local anaesthesia: 13.5. description of procedure: 13.6. complications: 13.7. estimated blood loss: 13.8. required follow-up: 13.9. name and signatures of those involved in completion of procedure.	20. Discuss treatment options to manage discomfort during and after thoracentesis.	30. Incorporate relevant information about thoracentesis, its findings, outcomes and necessary follow-up in discharge summary.
3. Collaborator	10. Refer to appropriate specialty services including respirology, infectious diseases and thoracic surgery when indicated.		
4. Leader	40. Improve safety and reduce institutional complication rates of thoracentesis using quality improvement methods. 41. Standardize safe performance of thoracentesis. 42. Lead in creation of ordersets, institutional protocols, information pages, etc.		
5. Health Advocate	40. Work with and advocate for patient and family/SDM before, during and after thoracentesis to ensure patient's needs and experience while in hospital and in transition are met, and consider how role of hospitalist contributes in improving patient experience to maximum standards.		
6. Scholar	40. Create educational materials to explain and inform patients and their families about thoracentesis. 41. Incorporate best teaching practices when supervising learners during thoracentesis. 42. Monitor hospitalists' performances (and/or their supervision of trainees during thoracentesis) to improve safety. 43. Review, incorporate and improve performance of thoracentesis on an individual and institutional level by assimilating knowledge and trends from observations and from procedural journals kept by hospitalist clinicians.		
7. Professional	40. Track and self-reflect about details of thoracentesis in a personal procedure journal. 41. From these details and trends, create solutions and improvements to enhance practice of thoracentesis both on a personal and on a group/institutional level. 42. Monitor one's competency, and utilize tools can be used to identify positive and negative aspects of performance of this procedure. 43. Use information gathered as feedback to improve safety and efficiency of this procedure as well as identifying continuing professional development training needs.		

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