General Practice Services Committee

GPSC Literature Review

What are the characteristics of an effective primary health care system for the future?

Question 3:

What are innovative ways to deliver in-hospital care?

Prepared for the GPSC Workplan & Budget Working Group

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Executive Summary

The overarching theme of this review is how an effective primary health care system will look in the future. This review is focused particularly on innovative ways to deliver in-hospital care as it relates to primary care providers.

The search for this particular topic did not yield a significant number of results, and the majority of information contained within this report came from the grey literature and there were very few articles in the peer-reviewed literature.

Community-based family physicians' involvement in inpatient care in Canada, the United States and the UK has been declining for many years. This trend has been more evident in urban settings over rural settings with only 16% of family physicians involved in inpatient hospital care in cities, compared with over 54% in rural areas. Many reasons were cited for family physicians withdrawal from inpatient care including increased physician workload, low remuneration for hospital work, lack of respect and support from other specialists, increased knowledge and skills required and a lack of hospital privileges.

Many suggestions were made that may encourage family physicians to provide care in a hospital setting. Several articles cited the need for increased communication and coordination between family physicians and hospitals including privileging of family physicians as well as a better remuneration for hospital work. In the US, a white paper on Workforce Roles in a Redesigned Primary Care Model stressed the use of the Primary Care Delivery Model where primary care should be centered around the patient and family in all aspects of practice and the workforce should be educated within the context of inter-disciplinary learning teams. Several articles also talked about the use of general practitioners who have increasingly been employed by hospitals as hospitalists in the US and the UK, although this role has been debated particularly in the US.

What are innovative ways to deliver in-hospital care?

Introduction

The public continue to have high regard for the quality of care provided by family physicians. However, with the evolution of community-based family practice and the changing roles of family physicians and hospitals in the Canadian healthcare system, it has become increasingly challenging for family physicians to care for their patients in hospital. This report explores the changes in in-hospital care provided by primary care providers. The full list of questions that guided this report can be found in Appendix B.

Methodology

This section on primary care which focused on "what are innovative ways to deliver in-hospital care?" did not generate many results in the peer-reviewed literature sourced through PubMed and other sources. A total of 34 article abstracts from the peer-reviewed literature and 3 from the grey-literature were provided. Of the 37 abstracts provided, a total of 14 full articles were requested for further inspection. Of these 14 articles a total of 9 were used in this section of the review.

In-Hospital Care

The key findings related to provision of services by Family Physicians to inpatients in hospitals are:

- *Family physicians involvement in inpatient care in Canada, the United States and the UK has been declining for the last few decades*
- *The declining trend has been more evident in urban settings over rural settings*
- *The causes of this decline include:*
    - *increased physician workload*
    - *low remuneration for hospital work*
    - *lack of respect and support from other specialists*
    - *increased knowledge and skills required*
    - *lack of hospital privileges*
- *Possible solutions included:*
    - *improved coordination between FPs and hospitals*
    - *better remuneration for hospital work*
    - *increased and flexible hospital privileges for FPs*

- *General practitioners have increasingly been employed by hospitals as hospitalists, particularly in the United States.*
- *The decline in FP involvement in hospital care pre-dates the growth of the hospitalist specialty*

In-Hospital Care as it Relates to Primary Care Providers

Community-based family physicians' involvement in inpatient care in Canada has been declining for many years. The "Family Physicians, Caring for Hospital Inpatients" discussion paper from 2003 identified that in 2001, the College of Family Physicians of Ontario (CFCP) commissioned a National Family Physician Workforce Survey to explore the status of family physicians providing inpatient hospital care and their reasons for withdrawing from that service. The survey identified that on a national level, 34.5% of family physicians (FP) provided care for their patients in hospital units and wards, with an average of 7.3 hours per week managing inpatients. However it was also noted that that there was significant variation across the country for family physicians providing inpatient care in hospitals. For example, family physicians in small towns (51%) and rural areas (54%) were much more likely to provide inpatient hospital care than FPs practicing in cities (16%) and suburban areas (26%). Age was also a factor. Involvement in hospital care decreased as physician age increased, both in the number of FPs offering that type of care, and the number of hours provided. In light of the 2001 survey, the 2003 paper examined the role of the family physician in hospital care, the ways in which this role is changing, and how members of the family practice community in Canada feel this role should develop. The paper included a literature review, semi-structured interviews and focus groups with physicians and other stakeholders.

The findings of the review indicated that there were several benefits for both patients and their FPs to remain involved in hospital care, including positive patient outcomes, developing and remaining part of the any care strategy and using resources more efficiently.

However, reasons given by FPs for their withdrawal from hospitals included:

- Limited opportunities for hospital privileges
- Limited access to hospital beds
- Impact of hospital restructuring and regionalization
- Increased office workloads/diminished time available for hospital work
- Increased acuity and complexity of patient problems in both the community and the hospital
- Increased hospital workloads with increasing numbers of orphan patients
- Frustration of attending numerous orphan patients (i.e. hospital inpatients where their family doctors are unable to attend to their care)
- Feeling unwelcome and not respected in some hospital settings
- Low remuneration for hospital work
- Enhanced skills required to care for increasingly complex hospitalized patients.

Based on their review and interviews, the CFPC recommended the following:

1. To improve the continuity and coordination of patient care:
    a. Hospitalized patients should have their own family physician participating in their hospital care whenever possible
    b. Appropriate communication should be maintained by hospitals with family physicians
    c. All hospitals should have privileging criteria that recognize and support the role of family physicians in caring for their patients in hospital and family physicians should be permitted and encouraged to apply to any hospital in their community for medical staff privileges
2. Family physicians should:
    a. Be represented in the development of hospital policies that affect their patients.
    b. Organize themselves into networks or groups of an appropriate size to share the responsibilities and workload of managing hospital inpatients
3. Appropriate remuneration and/or incentives for all hospital responsibilities should be available to family physicians to support their ongoing involvement in inpatient hospital care
4. The role of family physicians in hospital should be augmented in all medical schools, ensuring family physician role models for all medical students, family practice residents and specialty residents
5. All family practice residency programs should include training in hospitals with family physician role models, as a condition for full program accreditation
6. Medical schools and university departments of family medicine should offer enhanced skills training and accredited continuing education programs in areas related to in-hospital care for family medicine residents and practicing family physicians
7. Where hospitalists are required, to actively encourage and welcome family physicians to maintain their privileges and care for their own hospitalized patients
8. Hospitalists should be an educational resource for family physicians seeking further education in inpatient hospital care
9. Upon discharge, patients should continue to be cared for by their own family physician. If they do not have a family physician, they should be supported in finding a community family physician for their ongoing care
10. Inpatient hospital care should be considered an integral part of a patient's continuum of care that includes office-based care, home care, rehabilitation and long term care provided by interdisciplinary teams with family physicians in leadership and key caregiver roles
11. More research, both qualitative and quantitative, should be conducted to evaluate the involvement of family physicians in inpatient hospital care in Canada
12. The CFPC should promote the importance of family physician involvement in inpatient hospital care to the public, hospitals, medical schools, governments, and all other stakeholders in the Canadian health care system.

How to Get Doctors Back into Providing Care in a Hospital Setting

Calam and Thorsteinson (2001) reported in their editorial that the declining trend of family physicians in hospital care has been more evident in urban settings over rural settings. They noted that family doctors holding hospital privileges undertook less responsibility for their inpatients, spent fewer hours per week in hospital, and were less likely to believe in the overall relevance and effect of their work and presence in hospital. However, there are many benefits for community-based family doctors to stay involved in

hospital activities. The benefits include better patient care, patient-physician relationship and satisfaction, reduced resource use and improved compliance to medical advice. The authors strongly asserted that barriers to care for inpatients by their own family physicians must be removed.

Some recommendations that would make family physicians more involved in hospitals included:

- Providing inpatient care more systematically as groups and retaining a community base, but participating in hospital care in rotation
- Remuneration to cover the time or costs lost in the office when providing hospital care
- Cooperation between hospital services to admit and manage unassigned emergency patients
- Flexible privileging system to allow physicians to attend patients in the hospital

In the College of Family Physicians of Canada's (CFPC) 2004 opinion piece, the College echoed the importance of the involvement family physicians in caring for hospital inpatients. Family physicians are facing many challenges in the hospital system, including insufficient remuneration for inpatient care, training and professional support. Solutions however, must also address the prevailing problem of insufficient physicians. The editorial made similar recommendations as Calam and Thorsteinson, which included:

- Hospital privileges need to support FPs
- FP need to be appropriately remunerated for hospital care
- All medical students and residents need to be exposed to family practice role models during hospital training
- Stronger links between hospitalists and FPs are needed, and more research into inpatient care by FPs need to be conducted

Farrar et al (2006) also reported that in Canada, as in the United States, the role of the family physician within hospitals has decreased over the last 30 years. However, community-based family physicians (FPs) and hospitals would benefit from mutual support and collaboration, which would improve health in their communities. The authors discussed the benefits of the linkages between family physicians and hospitals in their paper. While there are many reasons why family physicians have reduced their involvement with hospitals, such as lifestyle, training and systemic issues, there are many benefits both for the FPs and hospitals. Improving collaboration can result in:

- better communication between different service providers
- increased continuity and quality of care
- resources used more efficiently
- and increased patient and physician satisfaction

Strategies outlined by the authors to improve this collaboration included improving continuity of care through discharge and pre-admission planning, avoiding unnecessary admissions by supporting family physicians with education and patient management, and supplementing acute care with support for chronic care.

The authors examined the Trillium Health Centre, a 750-bed community hospital in Mississauga Ontario, and their strategy to increase the involvement of the family physicians, and integrate hospital, primary care and community-based health services. The hospital organized a panel to study and review linkages between the hospital, family physicians and community agencies. The panel made 26 recommendations. Some of their recommendations that involved getting family physicians to provide care in a hospital setting were:

- The hospital to develop and maintain a strong family practice network that provides comprehensive family care that links community and institutional components into an integrated continuum
- Shared care models be formally developed by the hospital. Four top priorities should be geriatrics, mental health, specialized cardiology and adult diabetes
- Establishing after-hours and/or walk-in clinics, staffed by family physicians and complementing and enhancing access to care for patients of these providers
- Focus efforts on outreach and community development
- Establish a number of new primary healthcare clinics and support services with the active participation of family physicians
- Develop and support the specialty interests and skills of family physicians
- Develop learning plans to support family physicians in their pursuit of continuing medical education and new skills development
- Address physical barriers to accessing primary healthcare services

Temple et al (2012) remarked that the UK and the United States have been undergoing a transformation with respect to the organization of hospital care. Increasing costs, the need to provide quality care and the restriction on residents in the US and junior doctors in the UK are common drivers for this change. One of the results of these changes has been an increase in number of hospitalists in the US and the UK. In the UK and in Europe, doctors trained in general internal medicine are most similar to the US hospitalist model because they provide continuing care to inpatients who are not managed by subspecialty care. Unlike in the US however, the UK has two kinds of hospital based generalists: doctors who provide general internal medicine alongside their subspecialty and geriatricians who specialise in the care of older people. However, the choice of general internal medicine as a career has been declining in recent years in the UK. In 2010, 61% of doctors from the six major medical subspecialties practised general internal medicine, down from 76% in 2002. The decrease has been blamed on increasing workload, lack of specialist prestige, out-of-hours work and increasing service duties.

There is an emerging body of research that shows that general medical care delivered by hospitalists in the USA has reduced length of hospital stay and costs, but the impact on quality of care is variable. Kirthi et al (2012) reviewed the role of the generalist physician in hospital settings in the UK. The authors examined how the organization of care in hospital and the structure and skills of the medical staff can meet the needs and demands of the aging population. With the rise of life expectancy in the last decades, the number of individuals with a chronic illness has increased significantly and is expected to double in the next 20 years, which has caused acute care to become increasingly a service for older patients.

As mentioned by Temple, there are two kinds of generalists in the UK, physicians contributing to general internal medicine and geriatricians. Echoing Temple's findings, Kirthi et al note that consultant general internal medicine duties have been reported to be unpopular because of increasing service requirements, particularly out-of-hours duties, increased workload volume, and the extent of medical knowledge and diagnostic skills required to practice general internal medicine to a high standard. However, while the generalist practice in the UK is declining, it has been increasing in the United States. In point of fact, the authors reported that the hospitalist was the fastest growing specialty in the US. Hospitalists in the US and general internal medicine in the UK have similar working schedules but the main difference is that the hospitalist functions as the responsible physician for patients throughout their hospital stay, whereas general internal medicine physicians are only responsible for the patient's care for the first 48–72 hours of hospitalisation. The authors suggest that a restructuring of the general internal medicine teams in the UK might be required since most patients would benefit from continuing care by a generalist. However, studies to guide best practice in delivering acute care are limited and more research was suggested to evaluate which services and organization of care would best impact patient outcomes.

Additionally, there has been much debate around the growth of hospitalists in the United States and their effect on general internal medicine. Meltzer and Chung (2010) examined the trends in the rate of hospitalization and the level of generalist staffing before and after the arrival of the hospitalist specialty in the US. The purpose of their study was to explore the influences that are contributing to these trends. The data studied were from the pre-hospitalist period of 1980-1994 and the post-hospitalist period of 1995-2005. The effects of the change in hospitalizations, probability of admission, hospital length of stay, and the number of generalists working were also examined. The data indicated that the average inpatient encounters relative to the generalist workforce declined between 1980 and 1994 but remained steady after 1995. These findings suggest that inpatient activity of generalist physicians were declining well before the arrival of the hospitalists. As such the authors concluded, hospitalists have not been "crowding out" traditional generalists from inpatient care. Instead, the authors stated, the findings indicated that the rapid growth in the number of generalists during the 1980s and 1990s, and declines in hospitalization and length of stay, reduced the volume of generalist inpatient activity. Moreover, inpatient activity has become economically demanding for many generalists as the costs of travelling back and forth to hospitals and maintaining skills in inpatient medicine have been rising over the years.

Adler (2013) stated in his editorial that more and more physicians, including primary care physicians, are becoming employed by hospitals in the United States. Hospitalists are becoming more and more prevalent, and from 2000 to 2010, hospital employment of physicians increased by 32%. Roughly 20% of all physicians are now employed by hospitals, and 40% are employed by hospitals and other health systems providers. For physicians, increasing costs, regulations, and the complexity of managing a practice are driving many to give up their practices. The demands for capital costs and infrastructure investments of private practice are also much greater than in the past, Practices must now invest in additional technologies such as electronic health records systems, e-prescribing tools, and patient portals.

In light of the Patient Protection and Affordable Care Act (ACA), aimed at providing access to insurance coverage to an estimated additional 32 million Americans, there has been significant focus on primary

health care in the United States. In September 2011, the American Hospital Association convened a roundtable of clinical and health systems experts to examine the future primary care workforce needs of patients, as well as the role hospitals and health care systems can play in effectively delivering primary care. The white paper (American Hospital Association. Workforce Roles in a Redesigned Primary Care Model. 2013) highlighted assumptions, related to the current state, attributes that contribute to success and issues that are impacting progress. In addition, they discussed emerging provider roles that would help strengthen the system, the future primary care workforce, the impact of Information Technology, and primary care in rural areas. The round table also addressed the continuum of care across a patient's lifetime including prevention and wellness, acute care, chronic illness and palliative care. A summary of the recommendations is as follows:

- Workforce: All healthcare professionals should be educated within the context of inter-disciplinary learning teams.

- Primary Care Delivery Model: Primary health care should be centered around the patient and family in a user-driven design, in all aspects of practice.

The report suggests that hospitals should evolve from traditional "hospitals" to "health systems," partnering with community organizations and patients in order to advance the community's wellness and health needs. The document suggest that hospitals or health systems can serve as catalysts for linking and integrating the various components of health and wellness together for patients in a way that provides a sustainable infrastructure of health care for patients and the community. Finally, they note that in order to mitigate rising health care costs, a fundamental shift in reimbursement will need to occur.

Appendix A: Acronyms Used in this Document

AHA – American Hospital Association
CFPC – College of Family Physicians of Canada
FP – Family Physician

Appendix B: Questions Guiding the Preparation of this Report

What are innovative ways to deliver in-hospital care?

- In-hospital care as it relates to primary care providers.
- What does it take to have doctors go back into providing care in a hospital setting?
- Is there a generational difference regarding “on call” service?
- Is there a creative way to deal with this? (E.g., team approach; models; technology?) How are other jurisdictions dealing with GPs vacating hospitals?

References

1. Adler KG. Making sense of the trend toward hospital employment. Family practice management. 2013;20(4):5. Available from: http://www.aafp.org/fpm/2013/0700/p5.pdf.
2. American Hospital Association. Workforce Roles in a Redesigned Primary Care Model. 2013 http://www.aha.org/content/13/13-0110-wf-primary-care.pdf
3. Calam B, Thorsteinson J. Hospital care by family physicians. Exodus or opportunity? Canadian family physician Medecin de famille canadien. 2001;47:925-7, 34-7. Available from: http://www.cfp.ca/content/47/5/925.full.pdf.
4. Physicians at the bedside. Family physicians caring for hospital inpatients. Canadian family physician Medecin de famille canadien. 2004;50:664, 7-8.
5. College of Family Physicians of Canada 2003
   Family Physicians Caring for Hospital Inpatients. Discussion Paper
   http://www.cfpc.ca/uploadedFiles/Resources/Resource_Items/FPs20Inpt20Hosp20Care_En.pdf
6. Farrar S, Collins-Williams D, Kingston J. Improving linkages between family physicians and hospitals. Healthcare quarterly (Toronto, Ont). 2006;9(3):56-9, 2.
7. Kirthi V, Temple RM, Patterson LJ. Inpatient care: should the general physician now take charge? Clinical medicine (London, England). 2012;12(4):316-9. Available from: http://www.clinmed.rcpjournal.org/content/12/4/316.full.pdf.
8. Meltzer DO, Chung JW. U.S. trends in hospitalization and generalist physician workforce and the emergence of hospitalists. Journal of general internal medicine. 2010;25(5):453-9. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2855010/pdf/11606_2010_Article_1276.pdf.
9. Temple RM, Kirthi V, Patterson LJ. Is it time for a new kind of hospital physician? BMJ (Clinical research ed). 2012;344:e2240.