ASSOCIATION MÉDICALE CANADIENNE | CANADIAN MEDICAL ASSOCIATION

CMA POLICY

Appropriateness in Health Care

Summary

This paper discusses the concept of appropriateness in health care and advances the following definition:
The Canadian Medical Association adopts the following definition for appropriateness in health care: It is the right care, provided by the right providers, to the right patient, in the right place, at the right time, resulting in optimal quality care.

Building on that definition it makes the following policy recommendations:

- **Provinces and territories should work with providers to develop a comprehensive framework by which to assess the appropriateness of health care.**
- **Provinces and territories should work with providers to develop robust educational products on appropriateness in health care and to disseminate evidence-informed strategies for necessary changes in care processes.**
- **Provinces and territories should work with providers to put in place incentives to decrease the provision of marginally useful or unnecessary care.**

Introduction

As health systems struggle with the issue of sustainability and evidence that the quality of care is often sub-optimal, increasing attention is focused on the concept of appropriateness. A World Health Organization study published in 2000 described appropriateness as "a complex, fuzzy issue"[1]. Yet if the term is to be applied with benefit to health care systems, it demands definitional clarity. This policy document presents the Canadian Medical Association definition of appropriateness which addresses both quality and value. The roots of the definition are anchored in the evolution of Canadian health care over the last two decades. The document then considers the many issues confronting the operationalization of the term. It concludes that appropriateness can play a central role in positive health system transformation.

Definition

At the Canadian Medical Association General Council in 2013 the following resolution was

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adopted:

The Canadian Medical Association adopts the following definition for appropriateness in health care: It is the right care, provided by the right providers, to the right patient, in the right place, at the right time, resulting in optimal quality care.

This definition has five key components:

- right care is based on evidence for effectiveness and efficacy in the clinical literature and covers not only use but failure to use;
- right provider is based on ensuring the provider's scope of practice adequately meets but does not far exceed the skills and knowledge to deliver the care;
- right patient acknowledges that care choices must be matched to individual patient characteristics and preferences and must recognize the potential challenge of reconciling patient and practitioner perceptions;
- right venue emphasizes that some settings are better suited in terms of safety and efficiency to delivering a specific type of care than others;
- right time indicates care is delivered in a timely manner consistent with agreed upon bench marks.

It is essential to appreciate that the "right cost" is a consequence of providing the right care, that it is an outcome rather than an input. In other words, if all five components above are present, high quality care will have been delivered with the appropriate use of resources, that is, at the right cost. Equally, however, it should be cautioned that right cost may not necessarily be the affordable cost. For example, a new drug or imaging technology may offer small but demonstrable advantages over older practices, but at an enormous increase in cost. Some might argue that right care includes the use of the newer drug or technology, while others would contend the excessive opportunity costs must be taken into consideration such that the older practices remain the right care.

An Evolving Canadian Perspective from 1996 to 2013

In a pioneering paper from 1996 Lavis and Anderson wrote:

…there are two distinct types of appropriateness: appropriateness of a service and appropriateness of the setting in which care is provided. The differences between the two parallel the differences between two other concepts in health care: effectiveness and cost-containment…An appropriate service is one that is expected to do more good than harm for a patient with a given indication…The appropriateness of the setting in which care is provided is related to cost effectiveness[2].

This very serviceable definition moved beyond a narrow clinical conception based solely on the therapeutic impact of an intervention on a patient, to broader contextual consideration focused on venue. Thus, for example, the care provided appropriately in a home-care setting might not be at all appropriate if given in a tertiary care hospital. Significantly, the authors added this important observation: "Setting is a proxy measure of the resources used to provide care"[2]. This sentence is an invitation to expand the original Lavis and Anderson definition to encompass other resources and inputs identified over the ensuing decades. Three elements are especially important.

Timeliness became an issue in Canadian health care just as the Lavis and Anderson paper appeared. In 1997 almost two-thirds of polled Canadians felt surgical wait times were excessive, up from just over half of respondents a year earlier[3]. By 2004 concern with wait times was sufficiently pervasive that when the federal government and the provinces concluded the First Ministers' Agreement, it included obligations to provide timely access to cancer care, cardiac care, diagnostic imaging, joint replacement and sight restoration[4]. These rapid developments indicate that timeliness was now considered an essential element in determining the appropriateness of care.

A second theme that became prominent in health care over the last two decades was the concept of patient-centredness. When the Canadian Medical Association released its widely endorsed Health Care Transformation in Canada in 2010, the first principle for reform was building a culture of patient-centred care. Succinctly put, this meant that "health care services are provided in a manner that works best for patients"[5]. To begin the process of operationalizing this concept CMA proposed a Charter for Patient-centred Care. Organized across seven domains, it included the importance of: allowing patients to participate fully in decisions about their care; respecting confidentiality of health records; and ensuring care provided is safe and appropriate. This sweeping vision underscores the fact that care which is not matched to the individual patient cannot be considered appropriate care.

A third significant development over the last two decades was heightened awareness of the importance of scopes of practice. This awareness arose in part from the emphasis placed on a team approach in newer models of primary care[6], but also from the emergence of new professions such as physician assistants, and the expansion of scopes of practice for other professionals such as pharmacists[7]. As the same health care activity could increasingly be done by a wider range of health professionals, ensuring the best match between competence required and the service provided became an essential element to consider when defining appropriateness. Under-qualified practitioners could not deliver quality care, while overly-qualified providers were a poor use of scarce resources.

To summarize, as a recent scoping review suggested, for a complete conceptualization of appropriateness in 2013 it is necessary to add the right time, right patient and right provider to the previously articulated right care and right setting[8].

Why Appropriateness Matters

The most frequent argument used to justify policy attention to appropriateness is health system cost. There is a wealth of evidence that inappropriate care – avoidable hospitalizations, for example, or alternative level of care patients in acute care beds – is wide spread in Canada[9]; eliminating this waste is critical to system sustainability. In Saskatchewan, for example, Regina and Saskatoon contracted in 2011 with private clinics to provide a list of 34 surgical procedures. Not only were wait times reduced, but costs were 26% lower in the surgical clinics than in hospitals for doing the same procedures[10].

There is, however, an equally important issue pointing to the importance of ensuring appropriate care: sub-optimal health care quality. In the United States, for example, a study evaluated performance on 439 quality indicators for 30 acute and chronic conditions.

Patients received 54.9% of recommended care, ranging from a high of 78.7% for senile cataracts to 10.5% for alcohol dependence[11]. A more recent Australian study used 522 quality indicators to assess care for 22 common conditions. Patients received clinically appropriate care in 57% of encounters, with a range from 90% for coronary artery disease to 13% for alcohol dependence[12]. While no comparable comprehensive data exist for Canada, it is unlikely the practices in our system depart significantly from peer nations. Focusing on appropriateness of care, then, is justified by both fiscal and quality concerns.

Methodology: the Challenge of Identifying Appropriateness

While there is a clear need to address appropriateness – in all its dimensions – the methods by which to assess the appropriateness of care are limited and, to date, have largely focused on the clinical aspect.

The most frequently used approach is the Rand/University of California Los Angeles (Rand) method. It provides panels of experts with relevant literature about a particular practice and facilitates iterative discussion and ranking of the possible indications for using the practice. Practices are labeled appropriate, equivocal or inappropriate[13]. A systematic review in 2012 found that for use on surgical procedures the method had good test-retest reliability, interpanel reliability and construct validity[14]. However, the method has been criticized for other short-comings: panels in different countries may reach different conclusions when reviewing the same evidence; validity can only be tested against instruments such as clinical practice guidelines that themselves may have a large expert opinion component[2]; Rand appropriateness ratings apply to an "average" patient, which cannot account for differences across individuals; and, finally, Rand ratings focus on appropriateness when a service is provided but does not encompass underuse, that is, failure to provide a service that would have been appropriate[9].

The Rand method, while not perfect, is the most rigorous approach to determining clinical appropriateness yet devised. It has recently been suggested that a method based on extensive literature review can identify potentially ineffective or harmful practices; when applied to almost 6000 items in the Australian Medical Benefits Schedule, 156 were identified that may be inappropriate[15]. This method also presents challenges. For example, the authors of a study using Cochrane reviews to identify low-value practices note that the low-value label resulted mainly from a lack of randomized evidence for effectiveness[16].

Assessing the appropriateness of care setting has focused almost exclusively on hospitals. Some diagnoses are known to be manageable in a community setting by primary care or specialty clinics. The rate of admissions for these ambulatory care sensitive conditions (ACSCs) – which fell from 459 per 100,000 population in 2001-02 to 320 per 100,00 in 2008-09 – is one way of gauging the appropriateness of the hospital as a care venue[9]. A second measure is the number of hospital patients who do not require either initial or prolonged treatment in an acute care setting. Proprietorial instruments such as the Appropriateness Evaluation Protocol (AEP)[17]or the InterQual Intensity of Service, Severity of Illness and Discharge Screen for Acute Care (ISD-AC)[18] have been used to assess the appropriateness of hospital care for individual patients. While these instruments have been applied to Canadian hospital

data[19,20], there is a lack of consensus in the literature as to the reliability and utility of such tools[21-23].

Benchmarks exist for appropriate wait times for some types of care in Canada through the work of the Wait Time Alliance[4]. These include: chronic pain, cancer care, cardiac care, digestive health care, emergency rooms, joint replacement, nuclear medicine, radiology, obstetrics and gynecology, pediatric surgery, plastic surgery, psychiatric illness, and sight restoration. The recommendations are based on evidence-informed expert opinion.

The other two domains of appropriateness – right patient, right provider – as yet have no objective tools by which to assess appropriateness.

Barriers

Determining appropriateness demands a complex and time-consuming approach, and its operationalization faces a number of barriers.

The availability of some health care services may be subject to political influence which will over-ride appropriateness criteria. For example, recommendations to close smaller hospitals deemed to be redundant or inefficient may not be implemented for political reasons.

Patient expectations can challenge evidence-based appropriateness criteria. In a primary care setting, for instance, it may be difficult to persuade a patient with an ankle sprain that an x-ray is unlikely to be helpful. The insistence by the patient is compounded by an awareness of potential legal liability in the event that clinical judgment subsequently proves incorrect. Choosing Wisely Canada recommends physicians and patients become comfortable with evidence-informed conversations about potentially necessary care[24].

Traditional clinical roles are difficult to revise in order to ensure that care is provided by the most appropriate health professional. This is especially true if existing funding silos are not realigned to reflect the desired change in practice patterns.

Finally, and perhaps most importantly, even if agreed upon appropriateness criteria are developed, holding practitioners accountable for their application in clinical practice is extremely difficult due to data issues[25]. Chart audits could be conducted to determine whether appropriateness criteria were met when specific practices were deployed, but this is not feasible on a large scale. Rates of use of some practices could be compared among peers from administrative data; however, variation in practice population might legitimately sustain practice variation. For diagnostic procedures it has been suggested that the percentage of negative results is an indicator of inappropriate use; however, most administrative claim databases would not include positive or negative test result data[26]. This data deficit must be addressed with health departments and regional health authorities.

Important Caveats

There are several additional constraints on the use of the concept by health system managers.

First, the vast majority of practices have never been subject to the Rand or any other appropriateness assessment. Even for surgical procedures clinical appropriateness criteria exist for only 10 of the top 25 most common inpatient procedures and for 6 of the top 15

ambulatory procedures in the United States. Most studies are more than 5 years old[27].

Second, while the notion is perhaps appealing to policy makers, it is incorrect to assume that high use of a practice equates with misuse: when high-use areas are compared to low use areas, the proportion of inappropriate use has consistently been shown to be no greater in the high-use regions[28,29].
Finally, it is uncertain how large a saving can be realized from eliminating problematic clinical care. For example, a US study modeling the implementation of recommendations for primary care found that while a switch to preferentially prescribing generic drugs would save considerable resources, most of the other items on the list of questionable activities "are not major contributors to health care costs"[30]. What is important to emphasize is that even if dollars are not saved, by reducing inappropriate care better value will be realized for each dollar spent.

Policy Recommendations

These methodological and other challenges[31] notwithstanding, the Canadian Medical Association puts forward the following recommendations for operationalizing the concept of appropriateness and of clinical practice.

1. Provinces and territories should work with providers to develop a comprehensive framework by which to assess the appropriateness of health care.

Jurisdictions should develop a framework[32] for identifying potentially inappropriate care, including under-use. This involves selecting criteria by which to identify and prioritize candidates for assessment; developing and applying a robust assessment methodology; and creating mechanisms to disseminate and apply the results. Frameworks must also include meaningful consideration of care venue, timeliness, patient preferences and provider scope of practice. International examples exist for some aspects of this exercise and should be adapted to jurisdictional circumstances. Necessarily, a framework will demand the collection of supporting data in a manner consistent with the following 2013 General Council resolution:

The Canadian Medical Association supports the development of data on health care delivery and patient outcomes to help the medical profession develop an appropriateness framework and associated accountability standards provided that patient and physician confidentiality is maintained.

2. Provinces and territories should work with providers to develop robust educational products on appropriateness in health care and to disseminate evidence-informed strategies for necessary changes in care processes.

Both trainees and practicing physicians should have access to education and guidance on the topic of appropriateness and on practices that are misused, under-used, or over-used. Appropriately designed continuing education has been shown to alter physician practice. Point of care guidance via the electronic medical record offers a further opportunity to alert clinicians to practices that should or should not be done in the course of a patient encounter[33].

An initiative co-led by the Canadian Medical Association that is designed to educate the profession about the inappropriate over use of

diagnostic and therapeutic interventions is Choosing Wisely Canada. The goal is to enhance quality of care and only secondarily to reduce unnecessary expenditures. It is an initiative consistent with the intent of two resolutions from the 2013 General Council:

The Canadian Medical Association will form a collaborative working group to develop specialty-specific lists of clinical tests/interventions and procedures for which benefits have generally not been shown to exceed the risks.

The Canadian Medical Association believes that fiscal benefits and cost savings of exercises in accountability and appropriateness in clinical care are a by-product rather than the primary focus of these exercises.

3. Provinces and territories should work with providers to put in place incentives to decrease the provision of marginally useful or unnecessary care.

Practitioners should be provided with incentives to eliminate inappropriate care. These incentives may be financial – delisting marginal activities or providing bonuses for achieving utilization targets for appropriate but under-used care. Any notional savings could also be flagged for reinvestment in the health system, for example, to enhance access. Giving physicians the capacity to participate in audit and feedback on their use of marginal practices in comparison to peers generally creates a personal incentive to avoid outlier status. Public reporting by group or institution may also move practice towards the mean[30]. In any such undertakings to address quality or costs through changes in practice behaviour it is essential that the medical profession play a key role. This critical point was captured in a 2013 General Council resolution:

The Canadian Medical Association will advocate for adequate physician input in the selection of evidence used to address costs and quality related to clinical practice variation.

Conclusion

When appropriateness is defined solely in terms of assessing the clinical benefit of care activities it can provide a plausible rational for "disinvestment in" or "delisting of" individual diagnostic or therapeutic interventions. However, such a narrow conceptualization of appropriateness cannot ensure that high quality care is provided with the optimal use of resources. To be truly useful in promoting quality and value appropriateness must be understood to mean the right care, provided by the right provider, to the right patient, in the right venue, at the right time.

Achieving these five components of health care will not be without significant challenges, beginning with definitions and moving on to complex discussions on methods of measurement. Indeed, it may prove an aspirational goal rather than a completely attainable reality. But if every encounter in the health system - a hospitalization, a visit to a primary care provider, an admission to home care – attempted to meet or approximate each of the five criteria for appropriateness, a major step towards optimal care and value will have been achieved across the continuum. Viewed in this way, appropriateness has the capacity to become an extraordinarily useful organizing concept for positive health care transformation in Canada.

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