

Towards the delivery of appropriate health care in Australia

A challenging proposal draws on the lessons learnt from the CareTrack study to pave the way towards better health care

For decades, there have been concerns about the extent to which the health system provides the right care to those who need it in a cost-effective, timely manner. In Australia, there has been much discussion¹ and marked improvements in some areas,²⁻⁴ but the provision of highly variable and often inappropriate care remains a nationwide problem.^{1,5-7}

We designed the CareTrack Australia study to determine the percentage of health care encounters at which Australians receive appropriate care (ie, care in line with evidence-based or consensus-based guidelines).⁸ Key results published in this issue of the Journal demonstrate that, although there are areas of excellent practice, there are also large gaps in the provision of appropriate care.⁹ Such gaps have been identified before,^{1,3,4} but not in a population-based study across 22 of the most common conditions.⁹

In the long term, there is a clear need to move from one-off studies such as CareTrack towards making the measurement of appropriateness of care routine and prospective. This would allow the community, health professions and payers such as government to better calibrate their approaches to health services improvement. Here, we discuss the operational lessons of the CareTrack study, identifying barriers to the surveillance of appropriate care, and make recommendations as to how they might be overcome at a national level.

Barriers to measuring appropriate care

Access to medical records

Currently, to gain access to medical records for a population-based study, it is necessary to gain ethics approval, to recruit participants, and to obtain their consent and that of their health care providers.

For CareTrack, ethics approval had to be obtained from more than 220 health care facilities or providers. Although there is a National Ethics Application Form, each human research ethics committee required site-specific information or consent, or both, with changes to documentation needed to satisfy local requirements. Approval sometimes required full review by a committee after provision of both an electronic submission and paper copies for every committee member. Some jurisdictions required prior consent from the health department or a local authority, and some facilities invoiced the study for as much as \$3500 for granting ethics approval.

Details of participant recruitment and gaining of consent for CareTrack have been published elsewhere.⁸

The information sheets and consent forms for participants demanded by ethics committees made up an intimidating package that had to be read, signed and returned to the study. Less than half of the 7649 consent packages were returned signed. Gaining consent from health care providers was also problematic. Some participants were vague about the names of the practitioners they had seen and the names and locations of practices, making it difficult to identify and locate providers. Of the health care providers who were identified, less than half gave consent for access to participants' medical records.

As Australia currently does not have a mature mechanism for accessing and sharing electronic records, most clinical providers operate isolated record systems that can be accessed only by physically visiting individual sites. For CareTrack, trained surveyors had to liaise with practice managers and hospital medical record departments to extract the information on-site using a tool that encrypted the data.

These formidable logistical requirements and their attendant costs constrained the CareTrack study. We were limited to aiming for a sample of 1000 participants, which in turn restricted the number of conditions that could be meaningfully studied to 22 of the most prevalent.⁸ Although the conditions chosen account for nearly half the burden of disease in Australia, determining the appropriateness of care received for these conditions alone is an inadequate basis for monitoring or planning the provision of national health care services.

These logistical difficulties and considerable costs (over \$2 million for CareTrack) would largely disappear if medical record reviews could be carried out over a national shared electronic health record system that provided mechanisms for approved access to records. As such an endeavour would take years to implement, a shorter-term approach is to develop tools that permit extraction of key data fields from local electronic record systems — an approach that is increasingly common in population studies in primary care.¹⁰ Developing a common, nationally agreed data extraction tool that satisfies local requirements for audits with respect to privacy and confidentiality would thus be invaluable. Such reviews and audits would be further facilitated if ethics approval could be provided at a national level for projects that use a standard approved methodology.

Guidelines and indicators

CareTrack used an iterative process for the adoption or adaptation of existing guidelines and indicators, modified by the opinions of expert reviewers.⁸ Thirty-seven sources of information were used, some hosting or citing many hundreds of guidelines and/or indicators. It was necessary to develop and adhere to a set of criteria to

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1 Problems with clinical guidelines and indicators

Large number of repositories and guidelines: The National Health and Medical Research Council (NHMRC) clinical practice guidelines portal contains 558 guidelines,¹¹ the Australian Council on Healthcare Standards has 338 indicators,¹² and the Royal Australian College of General Practitioners' *Guidelines for preventive activities in general practice* contains guidelines in 41 clinical areas.¹³ The United Kingdom's National Institute for Health and Clinical Excellence has 147 guidelines,¹⁴ and the United States Agency for Healthcare Research and Quality has more than 5000.¹⁵

Duplication and overlap: The NHMRC portal has guidelines on reperfusion after myocardial infarction from both the National Heart Foundation and the Australian Resuscitation Council.¹¹ One or the other of these is commonly adapted for use in local facilities, creating additional versions.

Different recommendations for care practices: Two guidelines for community-acquired pneumonia are available from the NHMRC site.¹¹ Although similar, they contain differences for what should be standard treatment, according to the Australian *Therapeutic guidelines: antibiotic*.¹⁶

Lack of currency: Many guidelines are out-of-date and/or due for review.¹¹

Inconsistent structure and content: The NHMRC portal contains documents labelled guidelines (258), journal articles (121), summaries (39), protocols (29), reviews (26), policy directives (23), position statements (23), websites (10), and posters, flow-charts or standards (5).¹¹

Hard-to-use, voluminous documents: Several guidelines are over 50 pages long and are difficult to assimilate.^{17,18}

Hard-to-measure recommendations: Some guidelines are not amenable to reliable routine measurement. For example, a recommended parameter may not usually be documented or be difficult to access. ◆

2 Definitions for clinical standard, indicator and tool

A clinical standard:

- is an agreed process that should be undertaken or an outcome that should be achieved for a particular circumstance, symptom, sign or diagnosis (or a defined combination of these)
- should be evidence-based,* specific, feasible to apply, easy and unambiguous to measure, and produce a clinical benefit and/or improve the safety and/or quality of care, at least at the population level.

If a standard cannot or should not be complied with, the reason/s should be briefly stated.

A clinical indicator:

- describes a measurable component of the standard, with explicit criteria for inclusion, exclusion, time frame and setting.

A clinical tool:

- should implicitly or explicitly incorporate a standard or a component of a standard
- should constitute a guide to care that facilitates compliance with the standard
- should be easy to audit, preferably electronically, to provide feedback
- should be able to be incorporated into workflows and medical records.

Language and structure

Standards, indicators and tools should have a consistent structure and language, with an emphasis on being succinct and useable. If necessary, a separate consumer version should be developed.

* Includes Level 4 evidence where necessary.¹⁹ ◆

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”

overcome some of the problems encountered with existing guidelines and indicators (Box 1). These criteria are reflected in the definitions of clinical standards, indicators and tools provided in Box 2.

We propose using the term “standard” instead of “guideline”, as guidelines are often dismissed by clinicians because they are hard to access, difficult to interpret, cumbersome, and not thought to be relevant to, or appropriate for, everyday practice.²⁰ We believe that the term “clinical standard” implies that its development has been subject to strict criteria (Box 2), that there is national agreement on the content, that it would be kept up to date, and that it would be backed up by unambiguous indicators and an easy-to-use tool developed by both providers and consumers. National clinical standards, and tools to facilitate their use, have been called for previously in Australia.²¹⁻²³ Furthermore, Part 2.2 of the *National Health Reform Act 2011* mandates that the Australian Commission on Safety and Quality in Health Care's functions are to include developing standards and indicators, and supporting and monitoring their implementation.

Obtaining national agreement

Although much work has been done on developing guidelines and indicators, there is significant overlap, duplication and variation in structure and content, and there are no Australian clinical guidelines for some common conditions (Box 1). We propose a coordinated systematic approach that is designed to progressively address common conditions and the gaps in care identified by CareTrack and the National Institute of Clinical Studies.²⁴ To this end, we are seeking groups of experts to oversee the adoption and development of clinical standards, indicators and tools for each condition, and to keep them up to date. These experts, plus representatives of relevant national bodies, jurisdictions, health care providers and consumers, will be invited to a face-to-face meeting, and anyone with an interest in or experience of the condition in question will be able to register for the meeting.

The aim will be for the experts, in collaboration with the relevant national bodies, to develop a draft of proposed national clinical standards, indicators and tools for the condition in question before the meeting. Ideally, this content will be incorporated into a collaborative “wiki” website,^{25,26} such as that under joint development by the *Medical Journal of Australia* and the Cancer Council Australia. Wikis are powerful public resources enabling anyone with an interest to develop online documents, reach rapid consensus, and finetune them over time as circumstances or evidence change.²⁵ Comments will be invited from interested parties both at the meeting and for a defined period of time afterwards. Responses by the oversight group to these comments will be posted on the wiki. After an iterative improvement process, and receipt of final comments from the relevant interest groups, the standards, indicators and tools will be published in peer-reviewed literature.

3 Recommendations

Recommendation 1: Routine monitoring of the appropriateness of care should be carried out using nationally agreed, approved tools at health care facility and practice level as an ongoing audit function that satisfies local ethics and privacy requirements.

Recommendation 2: A national ethics approval process should be developed for secondary use of data for public health projects of national significance.

Recommendation 3: A systematic approach should be used to progressively develop standards, indicators and tools for common conditions and identified gaps in care. This process should be inclusive and overseen by experts and people with firsthand experience of the conditions, who would ensure that the material stays easy to use and up to date. After an iterative refinement process using a collaborative wiki website, the standards, indicators and tools should be published in peer-reviewed literature.

Recommendation 4: Redundant or out-of-date guidelines or indicators should be retired by negotiation. Wherever possible, new guidelines or indicators should be designed to fulfil the purposes intended for the old ones. ♦

4 Example of a proposed standard, indicator and tool for surgical antibiotic prophylaxis³³

The standard

Antibiotic prophylaxis should be administered 30–60 min before surgery for the placement of prostheses and clean-contaminated or contaminated procedures

The indicator

Appropriate antibiotic administered 30–60 min before skin incision

The tool

Antibiotic administered	Cephazolin
Dose administered	1g
Time of administration	1245
Time of skin incision	1330
Reason not administered	—
For clinical audit	
Minutes from administration to incision	45

Overall governance by an appropriately constituted group, with subgroups for each condition, will be necessary, with support provided by a secretariat. Complex dynamic organisms and organisations cannot simply keep adding new structures and processes without deleting old ones.²⁷ Retiring out-of-date or redundant indicators and guidelines would be undertaken by negotiation in parallel with the development of new ones. Wherever possible, new guidelines and indicators would be designed to fulfil the purposes intended for the old ones.

We propose that consumers with the conditions in question would contribute to the development and maintenance of indicators and tools, and ensure that they are comprehensible and useable. Web-based applications (“apps”) should be developed as tools for use on handheld electronic devices and for incorporating into medical records. Our recommendations are summarised in Box 3.

A way forward

Although substantial effort has gone into incorporating evidence into guidelines and indicators, the results of CareTrack suggest that about half the care delivered in Australia is not in line with these.⁹ In 2009, the Australian Institute of Health and Welfare developed 55 national indicators for measuring the quality of care.²⁸ However, a review concluded that these covered only a few clinical conditions and that routine monitoring of appropriateness would not be possible without extensive further development of both indicators and data systems.⁵ We have proposed a process for addressing the first of these needs for common conditions — a prerequisite for addressing the second. This will not diminish the well argued need for registries for complex areas of medicine that require sequences of care from different practitioners (such as organ transplantation) or the long-term monitoring of special devices (such as joint prostheses), treatments or drugs.⁵ The tools we propose complement registries and are intended for guiding and monitoring more routine care across the full spectrum of health care.

Tools, which may take the form of checklists,²⁹ reminders,³⁰ decision or action algorithms,³¹ or bundles of care,³² have been missing from many existing guidelines. An example is given in Box 4. By incorporating agreed tools into electronic records held by both health care providers and patients, there would be a common, transparent understanding of what is required, together with the capacity to document reasons why certain aspects of recommended care could or should not be complied with in particular contexts. Adequately powered, rigorously designed trials should be undertaken to obtain a progressively better understanding of what works and what does not.

Following this path will necessitate changing some work practices, which will require negotiation and inevitably be inconvenient for busy clinicians, but the looming alternative to self-regulation — heavy-handed external regulation — should provide an incentive.³⁴ Our proposal represents a huge challenge, but without integrating nationally agreed standards, indicators and easy-to-use tools into routine care, it will not be possible to monitor appropriateness of care or identify where improvements are needed. It is surely time to do things better, as well as doing better things.⁷ Doing what we know, better, using agreed tools, could pave the way for guiding care, informing patients and providers, allowing feedback, and providing an objective basis for evidence-based planning for the delivery of appropriate health care across Australia.

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