

Australian E-Guidelines for Health Facilities Workshop Design

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Synopsis

Is it possible for a health facility guidelines system to be a 'lifejacket' that enables the briefing, design and delivery of a greater number of better quality health facility buildings with resulting high levels of user satisfaction, designed using targeted and effective client consultation, meeting available budgets and delivered in accordance with realistic programs? Or.....

Is a health facility guidelines system inevitably a 'straight jacket' that stifles innovation and creativity, with the result being poorer quality health facility buildings with lower user satisfaction, designed with poor levels of client consultation, unrealistically low budgets and highly improbable delivery programs?

This paper sets out lessons learnt in the development of health facility guidelines for NSW and Victoria, which will be translated during 2005 into Australasian National Guidelines. These lessons include conclusions regarding the nature of health facility guidelines, and what they should contain. They also include knowledge gained from developing a practical and efficient guideline creation process and the setting of protocols for guideline use.

Taking heed of these lessons should ensure that the outcomes from the use of health facility guidelines are those of a 'lifejacket', rather than a 'straight jacket'. As a result better, more appropriate health care facilities will be created achieving higher levels of client satisfaction and delivered within available capital budgets and asset development programs.

Background

Australia has a population of nearly 20 million people and, in 2002, an annual health budget of \$66.6 billion. Of this approximately \$3.8 billion was related to capital expenditure i.e. about 5.8%. (AIHW, 2004, Appendix Table S43) Australia is a Federation of seven States and Territories. Almost all capital expenditure on health facilities is the responsibility of the States and a set of autonomous health systems

has resulted. Historically, design guidelines to assist in the planning of health facilities have been developed in many States of Australia. For many reasons, including the high cost of maintenance and keeping them current in paper hard-copy format, they have tended to become out of date, to lose credibility with industry users and as a result have not been as well utilised as was expected. Although approved in principle for several years, the development of a national set of health facility guidelines is only now about to commence.

In 2002, the Victorian Department of Health and Human Services developed a set of design guidelines for the regulation of private hospital and day procedures facilities in that State. These guidelines were created in an electronic database format, with the intention of making them available via an interactive web page. Following an initial review by industry Victoria issued its guidelines for further review in mid 2003 and has recently issued an updated version via the web for industry-wide use.

At the time of the first release of the private hospital guidelines in 2002, Victoria made available to NSW the database format and its contents as a contribution to the initiation of a national health facility guidelines project. The national project had previously been endorsed by the capital works managers from the majority of Australian States, and the development of the Victorian database offered the opportunity to move this forward.

Using the Victorian database as a starting point for development, NSW Health initiated a project that resulted in the development of a NSW Health Facility Guidelines system that in 2004 issued a first set of Health Facility Guidelines to guide the planning and development of public hospital facilities in that State.

In 2005, both Victoria and NSW Health will undertake further work on their guidelines, whilst

in parallel the Centre for Health Assets Australasia (CHAA) will commence work on an Australasian set of guidelines that will draw on the Victorian and NSW projects to create guidelines for use in all the States of Australia and in New Zealand.

Introduction

Health Facility Guidelines are standards for the design, construction and equipping of new and renovated healthcare facilities. These are generally interpreted as 'minimum' standards for the design of physical spaces that accommodate and support clinicians in the delivery of health services to their patients.

The need for health facility guidelines has been agreed by a range of diverse health industry participants that includes health service organisations, design consultants, contracting organisations and public funding bodies such as Health Departments. The reasons behind this need include the differences between health building design and construction projects and other more general types of building project.

The design of health buildings reflects the nature of the health service delivery environment which is increasingly complex and multi-faceted. It reflects the characteristics of the highly paid, highly trained health service staff who work within it using increasingly complex and expensive technology, and the increasing demands of an ageing population placed upon it. All of these characteristics must be accommodated within the limitations of increasingly finite community resources.

The nature of the health service delivery environment directly affects the design of the physical settings for health service delivery - the health service buildings. Health buildings are complex to design and there is little space for the 'beginner' in the process; the level of technical knowledge required from a designer is high and there is little room for error.

There is rarely a larger body of organisational knowledge available within a health service organisation. This is often the result of high levels of staff turnover and the pressures of also performing in their 'real jobs' for those staff assigned to assist in the development of capital projects.

Ongoing reductions in capital budgets or the expectation of the achievement of better value for money in the expenditure of available funding have required that greater efficiency in project delivery throughout all its stages is pursued. However, pursuing efficiency in project delivery cannot occur without an understanding of how far this can be pushed without impacting on the quality of buildings required for patient care.

Setting the 'minimum' or acceptable standards is the main purpose of health facility guidelines, and requires an understanding of design, plus research into both the quality and quantity of space provision accepted as the 'norm' by the wider health service delivery industry and an investigation of the evidence sustaining this 'norm'. Wider investigative research can enable the recognition of patterns that may be extrapolated in terms of commonly accepted minimum, and then as preferable standards for healthcare facility design and operation; these standards are then documented by health facility guidelines. Ideally, these standards are also comprehensively cross referenced to a body of evidence that underpins them and that can be challenged, tested and reviewed as circumstances change over time.

To be a 'lifejacket', rather than a 'straight jacket', health facility guidelines must be widely available, used and endorsed by those designing, building and using healthcare facilities. They should be flexible enough to accommodate the needs of individual projects, but not so flexible that they become a launching pad for endless claims for special treatment and exemptions from their application. Nor should they be

slavishly applied to every project without consideration of specific project needs and requirements. Used in this way, they become a 'straight jacket' that stifles innovation, with the associated risk of delivering dysfunctional healthcare buildings unfit for purpose.

The following case study outlines the development of health facility guidelines by the States of Victoria and New South Wales that will be translated to Australasian National Guidelines in 2005. It illustrates the lessons learnt regarding guideline development and the design of the associated systems for their use that should be heeded in achieving the desirable objective of guidelines as 'lifejacket' rather than 'straight-jacket'.

Health Facility Guidelines as a System for Delivering Healthcare Buildings

Health facility guidelines are part of a wider system for the delivery of appropriately designed healthcare buildings that support and facilitate the delivery of high quality healthcare services. As part of this system, they have an important role to play but they are not the only factor that ensures the desired outcomes are achieved.

Other components of this system include:

- The regulatory environment within which healthcare facilities are designed;
- The requirements of both public and private healthcare funders in terms of project delivery processes that may include the use of user groups, particular sign off provisions, staged setting of capital budgets, etc;
- The roles assigned to professional consultants in the design of healthcare facilities;
- Feed back loops aimed at ensuring ongoing quality improvement in the delivery of healthcare projects;
- Current and anticipated political issues/climate that can have a disproportionate effect on the delivery and outcomes of healthcare facility projects.

These components must be accounted for in the development of health facility guidelines and in managing their use.

‘Lifejacket’ versus ‘Straight Jacket’

The ideal situation is clearly one where health facility guidelines act as a ‘life jacket’ rather than a ‘straight jacket’ in the delivery of health-care building projects. Yet what are the characteristics of each of these alternatives and how can the process be skewed towards the first outcome? In summary, health facility guidelines with the qualities of a ‘lifejacket’ should be a well designed standards framework and decision support system that ensures that:

- Minimum functional performance requirements are met on every project;
- Sufficient flexibility is available to respond to the needs of individual projects, enabling design professionals to innovate and respond creatively within overall guideline parameters;
- The setting and achievement of realistic project capital and operational budgets is possible for every project;
- There is a transparent hierarchy of rules governing facility design that are first and foremost performance based, with a prescriptive approach included either only as a last resort or where particularly appropriate in response to an individual problem or situation.
- Evidence of investigation, research and cost-benefit analysis is provided for key guidelines requirements, especially where these may be more costly or controversial than past commonly accepted practice
- In the future, the opportunity will always be available to change and adapt the guidelines in response to evidence based research
- Confidence is inspired in those using the guidelines, without ‘slavish’ adherence ever being necessary or required.

Clearly, health facility guidelines with the qualities of a ‘straight jacket’ have many characteristics quite different to those above. However,

even the best ‘lifejacket’ guidelines system can quickly become a ‘straight jacket’ if applied inappropriately or without tailoring or adequate thought about their use.

In reality, there are two main issues that determine whether health facility guidelines become a ‘life jacket’ or a ‘straight jacket’ in the delivery of projects. These are:

1. The content of the guidelines and how they are initially developed, reviewed, adapted and updated over time.
2. How they are used in the design and delivery of projects.

The next section of this paper examines these issues in more detail by referring to the lessons learnt in the development of both the Victorian and NSW Health Facility Guidelines.

Lessons Learnt from the Victorian and NSW Health Facility Guidelines Projects

Need for Health Facility Guidelines

The Victorian project arose from the need to regulate private hospital facilities in that State, whereas the NSW one began from a public sector perspective. However, fundamentally both the NSW and Victorian projects were intended to positively influence the production of more and better facilities within available health capital budgets, without the endless rounds of negotiation regarding space and regulatory requirements that occur on many projects. Some of the ways they do this are as follows.

- The production and use of endorsed guidelines will successfully contain the many ‘ambit claims’ for space and other resources by clinicians and other users by streamlining the negotiations embodied in traditional user group processes. In this context, accurate clinical spatial needs are more easily defined in response to evidence-based benchmarks for space utilisation.

tion that demonstrably support best clinical and operational practice.

- By extrapolating from the benchmarks, industry accepted standards for space provision are defined by guidelines and these can be regarded as a ‘minimum’ level of provision for acceptable and safe clinical practice.

These standards can also be regarded as an ‘optimal’ provision or a ‘maximum’ provision depending on the attitude of the funding authority in the jurisdiction where they are applied. However, there are dangers associated with the ‘maximum’ or ‘optimal’ approach including the provision of inadequate and inflexible spaces unable to accommodate, for example, specific local cultural requirements or even quite small changes in clinical practice over time.

To some extent, these dangers can be overcome by developing a special appeals system to review guideline provisions on the basis of a one-off situation or a specific need to cater for future foreseeable changes in practice in a particular location. However, this appeal system should always be seen as a last resort, and part of achieving this is to use a high level filtering process to ensure that only the genuine ‘special cases’ are reviewed and not those merely put forward by disgruntled user groups whose space demands have been curtailed.

Functions of Health Facility Guidelines

The NSW and Victorian guidelines were produced with the following key functions in mind. These functions were and continue to be considered essential for the proper use of guidelines in the design of health care projects. The guidelines must:

- Be ‘useable’ standards and guidelines that apply to most, if not all, health facility types including public, private or a mix of the two.
- Offer a range of facility briefing and planning

solutions that relate to the classification of a facility in terms of the sophistication of its services and the volume of activity or throughput it accommodates.

- Provide endorsed and challengeable standards and guidelines that can be referenced by electronic and other proprietary briefing systems produced for interpretation of the guidelines for users, designers and contractors.
- Provide information for health service managers, clinicians and designers regarding functional space utilisation that reflects current accepted operational practices without making the resulting spaces so inflexible that they cannot accommodate future changes in practice
- Enable facilities to be built that respond to and anticipate the health service needs of the target population including responding to cultural issues such as ethnicity, and different locales such as metropolitan or rural situations.

Producing Guidelines to Fulfil these Functions

The following lessons were learnt from the Victorian and NSW projects about how to produce guidelines to fulfil the above functions.

1. *Information regarding the development, structure and content of the guidelines must be made explicit and available to all those involved in the Guideline development process.*

For the NSW and Vic HFG projects (which are intended to eventually result in an Australasian set of guidelines), a Design Framework document has been produced that sets out the reasons behind and processes used for the development of the guidelines.

2. *The reasons behind ‘contentious’ guidelines decisions must be made transparent and challengeable.*

Just as clinicians are expected to act on the basis of evidence-based practice, so guidelines for physical space provision must be evidence-based and this evidence must be the result of appropriately documented research by reputable and unbiased researchers.

3. It must be recognised and stated that guidelines are a briefing tool and are only the 'starting point' for a facility design.

Guidelines are not a substitute for an individual facility design. They are never intended to replace the need for specific project analysis and a detailed project brief developed by an experienced designer.

4. Although guidelines are never intended to be a template for a 'final' design, their provisions must be as realistic as possible, and tested to ensure that they are translatable into 'real' physical space and that they never mandate incompatible or mutually exclusive parameters.

Where the guideline defined spaces are adjoining or form part of a much larger whole, the spatial allocations should be practically tested alone and in combination before the spatial allocations are recommended in the guidelines themselves.

5. Guidelines should be written in a way that encourages user groups to explore their options in defining an operational model for the unit or facility. It should be possible to use defined spaces to support more than one operational model.

6. Guidelines must look towards the future and not only respond to what is happening now locally, they should anticipate likely trends already foreseeable in other locations.

Steps in the Process for Developing Guidelines

The Victorian and the NSW guidelines projects have both demonstrated that the following essential steps should be followed and refined in the guideline development process.

1. Review the needs of those who will use the guidelines i.e. review the needs of the target audience which may include experienced & inexperienced designers, clinicians, health service managers, professional bodies, etc.

2. Develop the guidelines using a process that allows for input, review and endorsement by those who are experts in their field, whether they are managers, clinicians, or designers. In addition allow for input by other stakeholders such as clients, patients, relatives and families of patients.

3. Ensure that all guidelines are useable by building designers - make them realistic, and develop them in the language that designers understand. While never intended to replace a good designer, they may be used by a client to help them recognise good design.

4. Never consider the guidelines finished – they will at best only ever be 80-90% complete. Guidelines are a living system that needs to be used, reviewed and refined continuously. Therefore a timetable for continuous evaluation and feedback must be built into their development and ongoing use.

5. Make the guidelines readily and easily available to the target audience. In the case of both Victoria and NSW the guidelines will be accessible via a dedicated website. It is intended that the guidelines are issued to industry users free of charge, to ensure wide use and acceptance of initial and updated versions.

Use of Guidelines in the Design and Delivery of Projects

There are many cautionary notes to be raised regarding the use of health facility guidelines in the design and delivery of healthcare projects. Many different people, from a variety of professional backgrounds and with diverse experi-

ence, use the guidelines in developing a project and the needs of these diverse groups require recognition and addressing.

This paper has already addressed some of these needs including those of managers and consultants attempting to contain excessive space demands made by highly experienced clinical staff with little experience in designing and building physical facilities. It is one of the major challenges of the guidelines to convince these experienced clinicians and other health service users that there is almost always a great deal more common ground between all health projects than may first appear significant at the initiation of their own user group process. These clinicians are often aided and abetted in this initial misconception by the many 'helpful' design consultants who have been professionally trained to believe that the client is always right!

The other fundamental problem that arises in the use of guidelines can perhaps, perversely, be noted as the problem of 'slavish' adherence to their provisions. This is more likely to occur when inexperienced design consultants are engaged or worse still where no design consultants at all are involved, perhaps in an attempt to save money in delivery of the project.

Guidelines are intended as a framework for design, and an indicator of safe and best practice spatial provision. However, it should be remembered that they illustrate this, rather than reproduce it in a literal way that requires no further project specific interpretation.

To achieve the best outcomes, projects need both a well structured and well developed set of guidelines and the skill of a thoughtful and experienced designer to translate project requirements into an appropriate project brief that will then inform the creation of a well designed and functional facility. This is the best and most efficient use of guidelines and is, in essence, their intended purpose.

Summary and Conclusions

Guidelines best serve their purpose when they inspire confidence in those using them that the fundamentals are correct and that a careful, considered and thoughtful process including widespread consultation with health industry professionals such as designers, managers and clinicians, followed by expert review of all recommendations has been followed in their development. To ensure continued confidence in their use, a process should also be in place that ensures all guidelines are tested and reviewed over time, and that they are never regarded as 'finished' and unalterable.

A documented evidence base for contentious recommendations, and cost benefit analysis of proposed major changes are other elements that will also inevitably increase user confidence. Only when these conditions are met, can guideline use be safely mandated as a starting point for every project.

In use, departures from the guidelines at the briefing stage of a project must be tightly controlled and allowed only on the basis of evidence that in a particular situation, there is sufficient justification for a different approach. In reality, there should be such trust in the guidelines in their generic application, that only truly special cases seek dispensation.

This is the real challenge in guideline creation and use, defining the difference between the characteristics of guidelines as either 'life jacket' or 'straight jacket'. It should be readily apparent that guidelines as 'life jacket' are infinitely preferable to those that act as a 'straight jacket'. Within the parameters defined by guidelines, innovation in the design of health facilities must be encouraged as one of the paths contributing towards continuous quality improvement.

Producing guidelines that act as a 'life jacket' will assist them to fulfil both their original and ultimate purpose of creating a greater number of

high quality functional health facilities, implemented within their funders' capital programs and budgets. The facilities created will meet more closely the requirements of their expert clinician users and their health service managers.

Most importantly, they will also more closely respond to and meet the needs of their patients, ultimately the highest purpose of healthcare buildings.

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