

DEVELOPMENT AND IMPLEMENTATION OF AUSTRALASIAN HEALTH FACILITY GUIDELINES–LESSONS LEARNT

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ABSTRACT

A health facility must satisfy the needs of many and diverse stakeholders. Those who fund the development, procurement and operation of public health facilities, including hospitals, have a particularly important stake holding that must be acknowledged and supported. Design guidelines are an information tool available to these stakeholders to assist them in achieving their strategic business objectives. In 2005, the Health Departments of the Australian States and Territories together with the New Zealand Ministry of Health commissioned the Centre for Health Assets Australasia (CHAA) within the Faculty of the Built Environment (FBE) at the University of New South Wales (UNSW), Australia to develop a free web-based health design guidelines tool that would be available via a web interface for downloading and use on all health projects across the Australasian region. The guidelines were endorsed by the health jurisdictions and issued for industry use and ongoing review in November 2007. This required an intensive consultation process with multiple stakeholders using a project management framework modelled from the Guide to the Project Management Body of Knowledge (PMBOK) (Project Management Institute, 1996), with particular attention paid to Project Integration Management. Particular emphasis was placed on both 'internal' and 'external' stakeholder consultation and management. The challenges faced, and processes developed, to successfully deliver this project are lessons transferrable to other complex multi stakeholder projects managed within similarly politically sensitive, operational environments. In particular, early and comprehensive identification of the project stakeholders and open and transparent communication with these stakeholders throughout the project was determined to be a critical factor for success. In addition, early and robust needs analysis, careful and comprehensive project planning, plus clear and transparent governance structures were also deemed essential for project success.

Keywords: design guidelines, health facility design, project integration management, stakeholder management.

INTRODUCTION: THE NEED FOR AUSTRALASIAN HEALTH FACILITY GUIDELINES

In 2005-2006, Australian health capital expenditure, or investment, in health facilities and equipment was estimated to be over \$5billion (2006). The potential impact of delivering efficiencies in the project management of health facility projects is thus huge and continues to be an initiative supported by both government and the health facility procurement industry. Design standards are seen as an integral approach to maximising returns on capital investment, and of ensuring equity across the Australian community by delivering a consistently high standard of built facilities in all locations whether these are urban, rural or remote. Facilities must also meet the needs of the populations they serve, the patients, their friends and families who use them, and the clinicians and other workers who staff them. As a result, the development of guidelines requires a high level of consultation across many disciplines. Those to be consulted range from clinicians and other health workers, building maintenance and facility management officers, building contractors, design consultants, health system managers, bureaucrats through to those who use and pay for health facilities as members of the wider community. The needs of all these stakeholders must be considered, addressed and incorporated into the guidelines before they are endorsed for use. This requires a high level of organisation and negotiation skills plus the ability to synthesise and respond to received commentary, government policy directions and a constantly evolving healthcare environment. Implementation of the guidelines in use then requires appropriate and transparent project governance that includes rigorous documentation of the evidence informing guideline development and the discussion and

documented agreement of contentious decisions. Finally, it requires working with public officers to achieve official endorsement at State/Territory Health Department level.

The following case study outlines the development of the Australasian Health Facility Guidelines (AusHFG) since commencement of this nationally focused project in 2005. Since its inception, the project management principles of the project management framework outlined in PMBOK have been used to guide its activities. This paper illustrates and discusses the lessons learnt regarding guideline development and the design of the associated systems for their use that may be applied to projects of a similar complexity and politically sensitive nature. In particular it looks at the processes used to manage the visions, goals and interest of key project stakeholders and how these are incorporated into the project integration management processes of project plan development, project plan execution, and overall change control (Project Management Institute, 1996, p.39). It offers lessons for similar information management and dissemination projects such as guidelines or technical standards that require high level endorsement by major government stakeholders as an essential step in the implementation such systems into everyday use by industry practitioners. For the AusHFG project, clinicians, health service staff and health facility procurement practitioners also formed important groups of project stakeholders whose needs and requirements had to be accommodated in the project development, implementation and ongoing processes for future review of the design guidelines.

BACKGROUND

In 2005, the AusHFG project was initiated as the first major project of CHAA, UNSW. CHAA is a university-based research centre with major funding from the Health Capital Asset Managers' Consortium of Australia and New Zealand (HCAMC), a body that represents the interests of all the State/Territory Health Departments of Australia and the New Zealand Ministry of Health. The project began as an initiative of the Victorian Department of Health and Human Services who in 2001 engaged a consultant, Health Projects International, to develop a web-based guideline tool for the production of design guidelines for private hospital facilities in that State. Subsequently, as a result of a resolution by the HCAMC, the project was relaunched as an Australasian initiative and the UNSW was awarded the contract to develop the AusHFG from the Victorian guidelines, and guideline information made available by other HCAMC member jurisdictions, in particular, NSW and Western Australia.

The AusHFG are a web-based information tool that is free to download for the briefing and design of health facility-related projects. As such, they represent a new era in guideline development and delivery. This new format required a departure from the long tradition of State-based paper-format health facility design guidelines that often duplicated effort, were expensive to maintain, frequently out of date, had to be purchased, and were thus only reluctantly used by many design consultants. In particular, the duplication of effort, much of the maintenance expenses and the off-perceived lack of currency has been overcome by the move to a database format with associated web dissemination. Further, by requiring their use on all public health facility projects and offering them at no cost, the reach of the guidelines has increased greatly and most, if not all, Australasian health facility design consultants are now familiar both with their existence and content.

PROJECT MANAGEMENT FRAMEWORK – LITERATURE REVIEW

Maher stated that “a project is commonly regarded as having a life cycle, a number of phases or stages. Project Managers have developed a variety of models, with variations in the number of phases and in the demarcation points between phases” (Maher, 1997, p.1). In particular, he refers to the model used in PMBOK published by the Project Management Institute, USA and notes that although models such as this are useful, every project is unique and involves some risk. Otherwise, there would be no progress or innovation. He considers that such models should not be regarded as infallible check lists, but rather as frameworks for guidance.

Project Integration Management is a framework for the proper coordination of all project elements. The processes described as part of this include project plan development, project plan execution and overall change control. These processes interact with each other over the whole project life cycle and are often iterative over the project life. Project planning is essential because it creates a road map to a project-defined destination, enables assessment of the chances of success and provides a

benchmark against which all such future success may be measured (Hobbs, 1999). Fundamental to the success of project integration management is the ability to understand the objectives of all the project stakeholders. Project stakeholders often have many different needs and expectations and thus it becomes the responsibility of the project manager to carry out a process of needs analysis prior to project commencement. The agreed objectives and priorities of these stakeholders will then inform and facilitate later decisions regarding tradeoffs that may need to be made between competing objectives during the execution phase whilst delivering the project in a manner that continues to meet or exceed stakeholder expectations.

Thus one of the first and most essential roles of the project manager is the identification and management of project stakeholders. PMBOK defines project stakeholders as “individuals and organizations who are actively involved in the project, or whose interests may be positively or negatively affected as a result of the project execution or successful project completion” (Project Management Institute, 1996, p.15). A further definition of project stakeholders is offered by Bourne and Walker (Bourne & Walker, 2005a, 2005b, 2006) and by Cleland (1998), both of which are inclusive of all those with an interest in the project. Cleland notes that many of these stakeholders may be “outside the authority of the project manager and often present serious management problems and challenges” (Cleland, 1998, p.275). Sutterfield et al. (2006), in discussing the failure of a US defence project considers the management of stakeholders from the perspective of stakeholder theory including social science stakeholder theory, instrumental stakeholder theory and convergent stakeholder theory. His definition of project stakeholders is similarly inclusive and specifically refers to these being “any individual or group of individuals that is directly or indirectly impacted by a project” (Sutterfield et al., 2006, p.27). Sutterfield goes on to note that these people may be external or internal to the project team, or to the project scope. The project manager must understand the needs and objectives of all project stakeholders in order to effectively manage their impact on the project and the achievement of project goals and objectives. He further contends that “in order to achieve a successful project outcome, the project manager must be adept at managing the interests of multiple stakeholders throughout the entire project management process” (Sutterfield et al., 2006, p.27).

However, the above definitions differ from that proposed by J.R. Turner who identifies project stakeholders as “all the people or groups whose lives or environment are affected by the project, but who receive no direct benefit from it” (Turner, 1999, p.51). He draws a distinction between those immediately involved as part of the project team whether as client, user, supporters such as contractors and sub-contractors, and “project stakeholders” as noted above. Conversely, Cleland and Sutterfield would classify all these parties as either “internal” or “external” project stakeholders. Finally, Meredith and Mantel in a project management text regard project stakeholders as “parties-of-interest” requiring management by the project manager. Their broad description of this term covers “outsiders, top management, functional departments, clients and a number of other such ‘parties-of-interest’ to the project, as well as...members of the project team itself” (Meredith & Mantel, 2000, p.103). Notwithstanding Turner’s viewpoint on the definition of project stakeholders, this paper uses the definition given by PMBOK, Bourne and Walker, Cleland, Sutterfield and others in taking a broader view of project stakeholders (internal and external) in the discussion of the AusHFG project that follows.

Notwithstanding the definition of stakeholder adopted, all the authors above do agree that while it is often difficult to identify all project stakeholders, it is important to do so and to determine their needs and expectations in order to manage and influence these to ensure a successful project. Noting this, various tools are available that may assist the project manager in identifying who the stakeholders are and the best way to manage them including the Stakeholder Circle proposed by Bourne and Walker (Bourne & Walker, 2005b). Other tools or processes proposed by Cleland, Sutterfield and Hobbs (Hobbs, 1999) include methods for identification of stakeholders and their power over the project. For example, Cleland and Hobbs both use matrices as a tool for determining levels of interest, authority and influence possessed by identified project stakeholders that could affect project outcomes and for suggesting ways to neutralise negative impacts or to capitalise on positive aspects of stakeholder behaviour.

The potentially positive input of stakeholders is often less discussed than the more commonly identified negative consequences requiring pre-emptive or anticipatory responses, yet well chosen stakeholder input can add value and vision to a project as Christensen and Walker discuss in reviewing the role of leadership on multi-stakeholder projects. They recommend the use of a well

chosen stakeholder reference group in developing a well considered project vision, associated goals and work plan. Such a strategy offers the opportunity to harness “wider experience, diversity of knowledge and perspective and fuller appreciation of stakeholder constituencies” by using a “truly representative and intelligent reference group” (Christenson & Walker, 2004, p.43). Referring to the visions and goals identified by project stakeholders is important in developing the project plan and form a benchmark against which to measure the project during its implementation phase. These vision and goals also form a reference point and assist in decision-making when the project manager is engaged in active change control as the project unfolds.

Stakeholder input is thus essential to project integration management where the first major outcome is the definition of a project action plan, and to scheduling which is the conversion of a project action plan into an operating time table (Meredith & Mantel, 2000). Where resources are limited, budgeting and cost estimation are also essential to ensure that the project is completed within the approved budget. As outlined in PMBOK, the project manager can tackle the cost management task by using resource planning, cost estimating, budgeting and control processes. Cost, time and product quality are absolutely central to the activities and priorities of a project manager. Hobbs notes that “Defining the quality of a project is a combination of art and science. Success depends on asking the right people the right questions, understanding the responses and recording them in an easily accessible format” (Hobbs, 1999, p.31). The scoping of a project defines the deliverables of a project. The project manager must allocate appropriate resources to achieve these deliverables within the specified time frame and to satisfy the quality requirements. Human resource management requires organisational planning, staff acquisition and team development to make the most effective use of project stakeholders involved with the project and to allocate the available human resources in the most appropriate manner to ensure project success.

Rowe describes “the most important of a project manager’s skills is the ability to communicate clearly, crisply and concisely in writing and orally. Communication has many purposes. It may be intended to describe an idea or concept; to offer services for a fee; to report facts and opinions; to record agreement for the purpose of formalising a contract; to direct an action or course of action. In a word, it is used to convey idea and intentions” (Rowe, 1997, p.15). Successful communication for any project-related purpose should be direct and appropriate and offer as little opportunity for misunderstanding as possible. Processes recommended to achieve successful communication include communication planning, information distribution, performance reporting and administrative closure (Project Management Institute, 1996).

Where project stakeholders are involved in project planning whether via formal or informal reference groups, the project manager has a further role to play in communicating the ongoing project progress, both successes and failures, to this group in an appropriate format and in a timely manner. Clarke in discussing successful project management of change projects emphasises the critical importance of the role of communication in ensuring project success whilst noting how often it is neglected. She notes that the best communication is focused rather than broad brush and used effectively it can “reduce non-productive effort, avoid duplication and help eliminate mistakes. It can help manage uncertainty, may lead to problems being identified sooner or may generate ideas that lead to better solutions” (Clarke 1999, p.140). Teamwork will be enhanced along with levels of motivation and involvement of key players. Good communication is essential for a project to meet its objectives within its time, cost and quality parameters and to satisfy its key stakeholders – all forming part of the definition of ‘project success’.

Finally, critical factors for project success have been discussed in great detail by Pinto and his colleagues (Pinto & Slevin, 1988; Pinto & Prescott, 1990; Pinto, 1998) as follows and are “listed and briefly described (as):

- (1) *Project Mission*. Initial clarity of goals and general directions.
- (2) *Top management support*. Willingness of top management to provide the necessary resources and authority/power for project success.
- (3) *Project schedule/plans*. A detailed specification of the individual action steps required for project implementation.
- (4) *Client consultation*. Communication, consultation, and active listening to all concerned parties and potential users of the project.
- (5) *Personnel*. Recruitment, selection, and training of the necessary personnel for the project

team.

- (6) *Technical tasks*. Availability of the required technology and expertise to accomplish the specific technical action steps.
- (7) *Client acceptance*. The act of 'selling' the final project to its ultimate intended users.
- (8) *Monitoring and feedback*. Timely provision of comprehensive control information at each stage in the implementation process.
- (9) *Communication*. The provision of an appropriate network and necessary data to all key actors in the project implementation.
- (10) *Trouble-shooting*. Ability to handle unexpected crises and deviations from plan."

(Pinto & Prescott, 1990, p.307)

These processes and associated critical success factors have been applied to the successful completion of the AusHFG project. As discussed below, where necessary, the processes were modified to satisfy specific project needs in accordance with a model of Project Integration Management that required high levels of stakeholder consultation and input prior, and throughout, the project implementation phase.

COMPLETION OF THE AUSHFG PROJECT – DISCUSSION AND FINDINGS

1. Project Plan Development

At the commencement of the AusHFG project, the primary project deliverable was the creation of a national health facility guideline endorsed, implemented and used in each HCAMC jurisdiction within an assigned time frame. The first challenge that confronted the project team was the requirement to align all stakeholders' expectations, and to design a product that would meet their needs. Stakeholders and stakeholder groups were identified and are mapped in Figure 1 with 'internal' and 'external' stakeholders shown in the concentric figures. The major 'internal' stakeholder, and project client, was HCAMC which consists of representatives from each participating Australian and New Zealand health jurisdictions. UNSW as the organisation hosting the HCAMC project management team is also included as a major 'internal' stakeholder because it made available the resources for use by the project team including premises, communications and other infrastructure.

Needs analysis was undertaken with each participating jurisdiction in order to define the project, including its vision and scope. One of the key questions used during this consultation period was: "How will the AusHFG be used in your jurisdiction?" As a result, it was identified that each jurisdiction had different intentions regarding their specific use of the AusHFG. In particular, this related to their use in either a mandatory or purely advisory capacity. A further distinction became whether the AusHFG would be used for only public health facilities or for private facilities as well. These two major distinctions (in intention and applicability) led to different implications for guideline development and their anticipated use for these different purposes. In particular, the issue of the potential for mandatory use had to be addressed and an endorsed guidelines structure was implemented by CHAA to achieve this requirement. The needs analysis confirmed the original decision to create the AusHFG as a clearly structured technical document that could be implemented for both advisory and mandatory purposes. Issues were prioritised for the project action plan with urgent issues identified for addressing in the early stages of the project. The team gained a much greater understanding of the problem and developed a flexible and adaptable response in the project action planned in order to accommodate the needs of the major stakeholders. Early high levels of open and transparent consultation ensured that the project could proceed with the implied confidence of these key stakeholders in the achievement of the required outcomes. This consultation then continued throughout the development, endorsement and implementation phases.

The needs analysis process was completed in 2006 with confirmation of the objectives and scope of the project. The processes for project implementation were then developed as the next task. In ongoing consultation with the major project stakeholders, the following issues were addressed and controlled the subsequent conduct and delivery of the project:

- a clear governance structure was endorsed by all jurisdictions that met the requirements of their political sponsors (see Figure 3)
- an overall structure of the guidelines was defined and agreed so that some parts could be

- mandated whilst other parts remained advisory only
- a realistic guidelines review and release program was approved
- A representative working group (PCWC) was constituted to implement the agreed strategies
- An 'AusHFG Project Communication Plan' was produced to enable smooth adoption of the guidelines by industry users and health service stakeholders
- An 'AusHFG Development and Review Process' was developed to consider ongoing issues in maintaining the currency of the guidelines
- The 'AusHFG Standard Components Revision Process' was defined
- The 'AusHFG Website Adoption and Revision Issue' procedures were implemented
- An 'AusHFG Enquiry and Clarification Communication Process' was proposed to streamline use of the guidelines once launched and in use by industry.

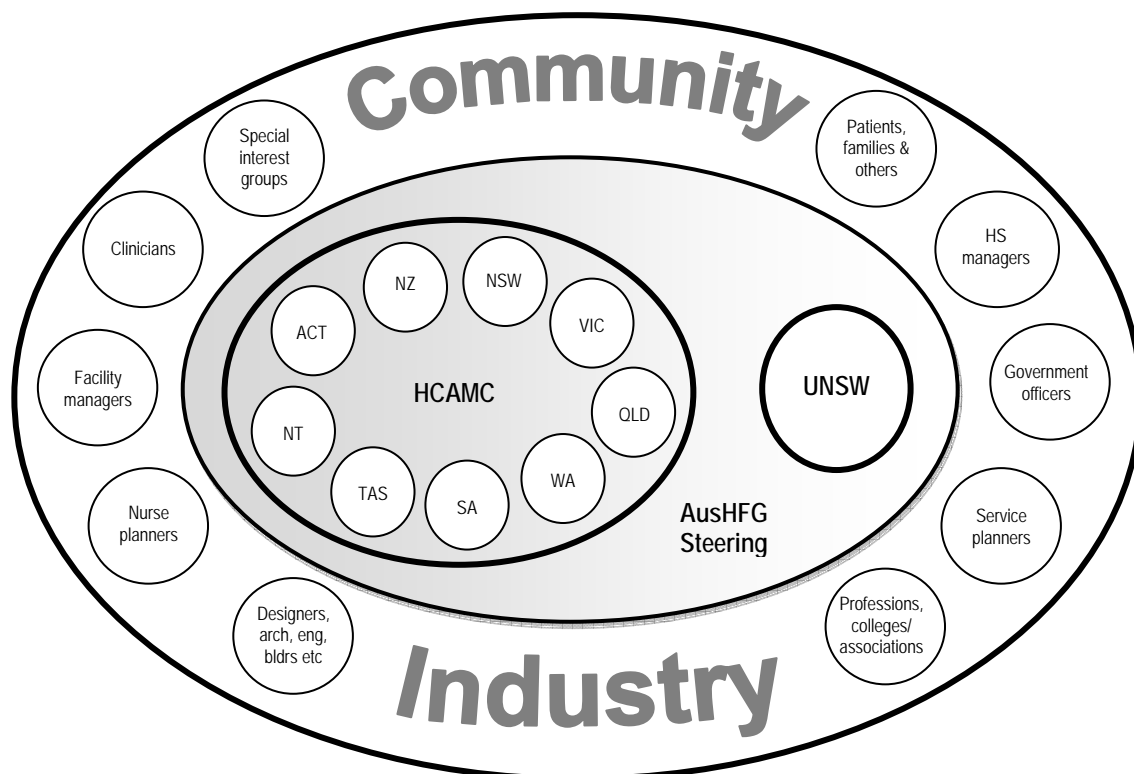


Figure 1: AusHFG Stakeholders

2. Project Plan Execution

A number of cost effective strategies were used to ensure that project deadlines were met, including the engagement of external contractors to assist in particularly busy periods, in-house website and data management, and the streamlining and allocation of internal resources as required. Cost control was maintained and the project adequately resourced in the face of university-sector and wider industry skill shortages and this was supported by all stakeholders. Special skills are indeed required for the production of the AusHFG and the supply of such staff is limited. The work is truly cross disciplinary and requires an appreciation of clinical issues, design issues, management issues and building procurement issues. The ability to network with high level representatives from government and the health services is also very important. Project staff comes from a range of backgrounds including clinical, clinical/architectural design, architecture/construction, information technology, university research, health service planning and management.

The project was delivered on time and on budget and in accordance with the work plan and schedule developed with the high level Steering Committee and implemented via a Project Coordination Working Committee (PCWC).

Figure 2 below is a diagram of the process followed for guideline development showing the input by project stakeholders to the development and review phases of the project. Industry reviewers were invited to formally register their interest in reviewing guideline components but were also able to comment on guideline use with respect to current project experience. Other reviewers were invited to participate in guideline review in accordance with a set of criteria agreed with the AusHFG Steering Committee. It was a requirement that all commentary was submitted using a standard commentary template and, on receipt, was formally recorded in a ledger. Following review of received commentary by the project team, all responses and actions subsequently taken were also recorded in the ledger. This document is thus an auditable trail of user input to guideline development and will be available to answer questions regarding this in the future.

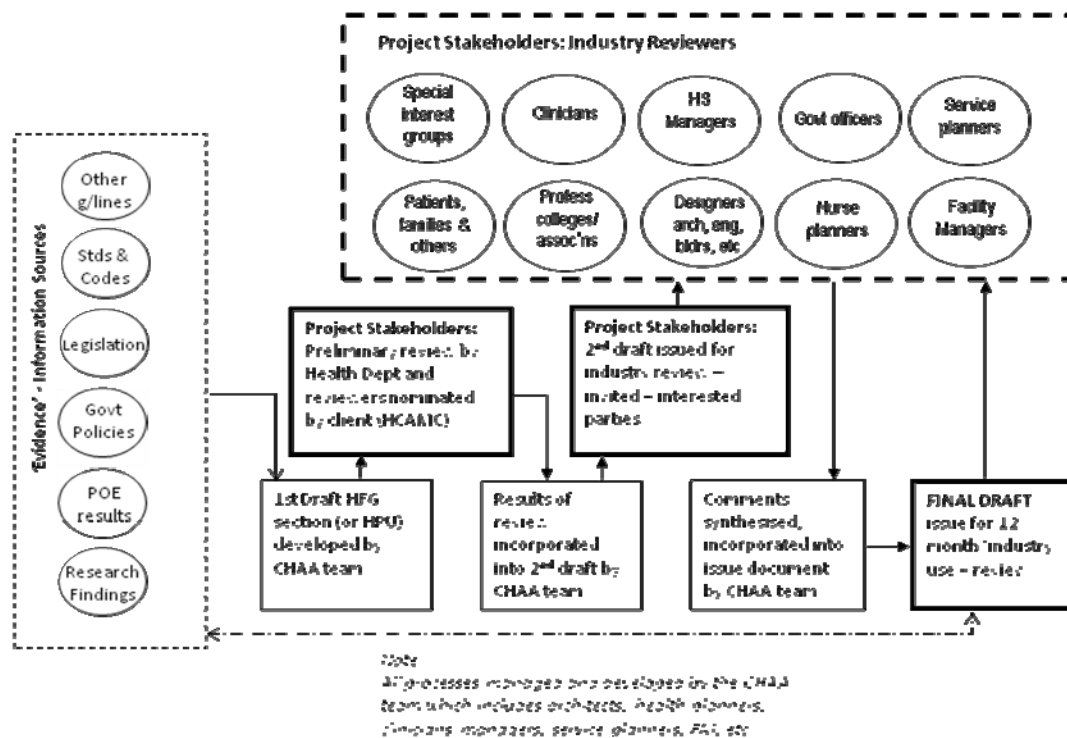


Figure 2: AusHFG Development Process

3. Integrated Change Control

The project was initially overseen only by a Steering Committee which comprised high level membership from all the funding jurisdictions (see Figure 3). In early 2006, a PCWC was also formed to implement the AusHFG Development and Review Process. This Committee met at least once per month and more often as necessary and was where most of the 'real work' and discussions occurred. Working with the project manager, the jurisdiction-nominated members of the PCWC became the conduit between the project team and each jurisdiction specific working committee. The PCWC was formed to assist with the implementation of a robust review process for the guidelines that would meet the needs of the product end users – the 'external' stakeholders. The project manager maintained records of all meetings and as discussed above, created registers of all enquiries and queries to ensure that all reviewers' comments are traceable for future reference and audit purposes.

Clear lines of governance and communication have been absolutely critical to the success of this project. Lessons learnt included the need to make stakeholder management the highest priority and to constantly remind stakeholders of the need to communicate with the project team and with each other outside of project steering meetings. On a multi-stakeholder project there is a high level of time commitment required from stakeholder representatives and this should be recognised and acknowledged from commencement.

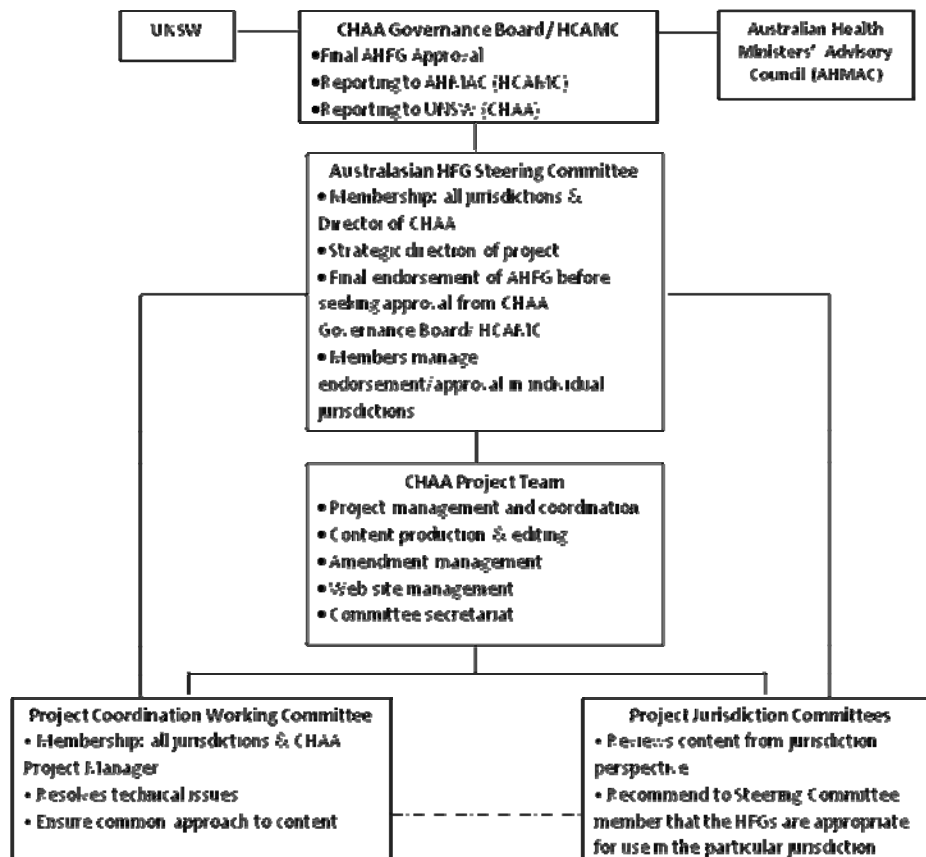


Figure 3: AusHFG Project Governance Structure

4. Lessons Learnt

The AusHFG is a web based information tool, freely and publically accessible via the internet. The widespread availability of user-friendly database programs and webpage production software enabled the Guidelines development team to produce web-based guidelines in house in an easily updated format for use by all those involved in health facility projects. Their development required management of multiple stakeholders and clear definition of their needs, goals and objectives. The use of a project management framework for delivery posed several challenges and the successful completion of the project resulted in the identification of some specific lessons learnt. These lessons included:

- Although a standardised methodology and framework is useful, every project is unique and all processes require tailoring for specific project needs.
- Needs analysis at the earliest planning stages is essential in order to align stakeholders' expectations and objectives.
- Clearly defining expectations and outcomes to confirm the agreed objectives will contribute to project success.
- Early establishment of clear lines of communication and project governance is important to gain stakeholder confidence and support.
- It is imperative to establish stakeholders' project ownership by inviting their participation in the development of project implementation processes and regularly reporting progress to them.
- Project risks should be identified early and effective control strategies implemented to ensure project stakeholder confidence in the achievement of project outcomes.

The final close-out of the project occurred in late 2007 when the project was declared complete with the endorsement of the AusHFG website and its component documents by the HCAMC jurisdictions. This was celebrated with an official launch of the AusHFG for Australasia-wide use in November 2007 and project stakeholders were subsequently notified by newsletter and email of the guidelines availability for use (UNSW & HCAMC, 2007).

CONCLUSION

This paper has discussed the concepts embodied in PMBOK, in particular the issues of stakeholder consultation and management, prior to and during the project development and implementation phases of the AusHFG project. The AusHFG are essential to the successful briefing and design of Australasian publicly funded health facilities and are widely used on most Australian health projects. Therefore, the AusHFG impact on industry and community stakeholders who range from building professionals, clinicians, health service managers through to the general tax-paying and health facility-using wider community. Thus, this project had a particularly complex set of stakeholders, both 'internal' and 'external', with a range of differing agendas requiring accommodation. By systematically working through these issues in a collaborative manner, a project plan was developed and implemented that satisfied the myriad goals and requirements of the majority of these stakeholders and ensured effective completion of the project to the satisfaction of all involved. The lessons learnt can be applied to similarly complex multi-stakeholder projects conducted in a politically sensitive environment similar to the health industry.

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