

2007 NSW Health Awards Entry

Entry Title
Prioritised Clinical Assets Replacement Plan
Abstract
<p>The Children’s Hospital at Westmead’s (CHW) Medical Staff Council had previously compiled a multi-million dollar list of equipment requiring replacement which had no prioritisation. It was therefore essential to establish a prioritised five year Clinical Equipment Replacement Plan that allocated the Hospital’s limited equipment funds as efficaciously and fairly as possible.</p> <p>To avoid departments focusing solely on their own equipment needs and not appreciating the potential importance of equipment not immediately applicable to their specific field of medicine, a prioritisation method was implemented which was as objective as possible to enable the Hospital to make smart choices about equipment purchases.</p> <p>It became mandatory that all departments use the same process and the overall plan with ranked prioritisation was made accessible on the Hospital intranet site, ensuring the process is as transparent as possible.</p>
Aim
To establish a five year clinical equipment replacement plan using a blind weighted score (requester can not see individual scores) to prioritise requested equipment according to clinical needs.
Nature of the Problem
<p>Previously there was no prioritised clinical replacement plan. Funding to enable the Hospital to replace aging equipment was an ongoing issue.</p> <p>A culture of learned helplessness was beginning to develop that needed to be overcome. Scarce funding or limited ability to escalate critical assets requiring replacement had become a barrier to equipment replacement. Another issue was departments needed to be able to voice when clinical equipment was needed urgently. A survey of Women’s and Children’s Hospitals Australasia found one out of 13 respondents used a weighting system to determine ‘relative importance’, however none used a blind weighted scoring method.</p>
Extent of the problem
Replacement of several high value assets was becoming critical for continued efficiency of patient care and access to services. The existing Equipment List was a wish list by doctors with no real priorities or relevance to clinical strategic planning or actual associated clinical or operational risks. Therefore there was no way for Senior Management to know which item was more important or urgent than others on the list. An extract of the old list shown below shows the limited information available to assist decision making. In many instances funding was allocated to those who complained the most.

EXTRACT from old EQUIPMENT LIST

Equipment Description	Current Age	To be replaced within 1-5 years	Purchased
Occupational Therapy			
<i>Hoist and Slings</i>		\$ 17,500.00	
Pharmacy			
<i>Laminar Flow Cabinet x 2</i>	8 years	\$ 14,000.00	
Physiotherapy			
<i>3 Plaster saws</i>	8 years	\$ 4,500.00	
Social Work			
<i>Dual focus video camera system</i>	9 years	\$ 12,000.00	
Anaesthesia Dept			
<i>S5 Life Platform Monitore x 26</i>	8 years	\$ 1,229,000.00	
Nuclear medicine			
<i>Triple head/coincidence gamma camera</i>	8 years	\$ 1,200,000.00	
Radiology			
<i>U/S Image System</i>		\$ 110,000.00	
<i>Fluroscopy Room</i>	9 years	\$ 550,000.00	
<i>MRI</i>		\$ 2,500,000.00	
<i>Fluroscopy Room</i>		\$ 1,000,000.00	
<i>Mobile X Ray Machines [4]</i>	9 years	\$ 240,000.00	

Strategic importance

The Clinical Asset Replacement Plan ensures that the Hospital is able to make smart choices about the costs and benefits of equipment to be purchased. It also allows us to integrate our clinical equipment needs with the overall goals and strategic directions of NSW Health. As an example, one of the major weightings for assessing the equipment for funding priority is that the equipment contributes to reducing the waiting lists for our Hospital. This ensures that staff focus on key NSW Health and Hospital strategies in any equipment placed on the plan.

Planning and implementing solutions

Within the Equipment Committee, two project teams were formed. The first worked on the process governing how equipment would be placed on the Clinical Asset Replacement Plan. The second team developed a set of clinical and financial questions that could be used to determine an overall score for prioritising the equipment.

A number of clinically relevant questions were formulated, based on the Hospital's Vision,

Mission and Values statements, as well as NSW Health's Quality and Safety policies. The utility of using the Analytical Hierarchy Process was investigated and a commercially available software program (Expert Choice) was briefly trialled. Based on this research, a prioritisation matrix was developed by the Project Team using an analytical criteria method (The Memory Jogger Plus+®, GOAL/QPC 1989) which compared the relative importance of the criteria in a pair-wise fashion to assign weights.

An online electronic form (easily accessible via the Intranet) was designed, allowing departments to register assets requiring replacement. Requesters complete a series of questions to determine the overall importance of each replacement request. These questions include impact on: safety; patient treatment; disruption to service delivery; number of patients affected per annum; impact on the surgical waiting lists; and likely outcome of not proceeding, based on the NSW Health SAC Matrix.

The weights assigned to each criterion are not displayed. Individual scores are then multiplied by the weight assigned to each criterion to generate a final score for each piece of equipment. The output is a ranking of equipment according to either perceived clinical priority, predicted date of failure, or cost.

The prioritised requests are reviewed by the Equipment Committee. The individual scores are used to determine the overall replacement urgency. The submission is discussed with the requester as necessary, which enables peer review external to that department. High-risk replacement requests can be escalated by direct appeal to the Committee. The Equipment Committee makes final recommendations to the Senior Management Group.

Fundraising was included in the process to ensure that only items on the list were funded and to ensure that Departments did not bypass the new process.

Outcomes and Evaluation

Measuring results included the total cost of urgently needed clinical assets still remaining on the list, measurement of prior activity based on the old Equipment List and equipment purchased in previous three years. Overall the equipment purchased during 2006/07 increased 300% compared to previous years.

ACTUAL MEASURE OF EQUIPMENT PURCHASED

Actual Measure	Description	Qtr 1 06/07	Qtr 2 06/07	Qtr 3 06/07
Clinical Weighted Score \geq 85.0 or Corporate high	Planned High Priority	\$8,989,189	\$8,866,789	\$11,143,771
	Funded High Priority	\$134,660	\$287,200	\$2,136,616
Clinical Weighted Score \geq 70.0 or Corporate Medium	Planned Medium Priority	\$2,046,761	\$2,000,836	\$2,338,751
	Funded Medium Priority	\$0	\$350,000	\$9,500
Clinical Weighted Score $<$ 69.9 or Corporate Low	Planned Low Priority	\$1,413,729	\$1,580,451	\$1,497,755
	Funded Low Priority	\$0	\$0	\$0

More items are being added to the list each quarter and the items funded have all been from the high or medium priority level. This process has wide acceptance at all clinical levels in all specialties within the Hospital. Many new items are being added to the list and we are now able to demonstrate to the Executive the urgency of those items which require replacement. Feedback from the Equipment Committee, Fundraising Department and requesting departments has been extremely positive. We believe that a fair, objective and proactive process has been developed to prioritise all clinical equipment requests.

We have also been able to set up a contingency fund where if an item requires replacement urgently then we allocate funding prior to any risk occurring. This gives the clinical staff a voice to be heard when critical issues occur with equipment for unforeseen reasons.

The process has also improved our ability to match clinicians more urgent requirements to donors by having prioritised equipment within agreed price points.

Sustaining change

There is wide acceptance of the new process, regular meetings to review and discuss issues also occur. We now have an agreed transparent list which is not bypassed. The refinement of this process and the improved list allows clinical staff and fundraising to allocate potential donors to equipment according to the value of the donation they are willing to fund. Fundraising, in conjunction with clinical staff, are able to provide the donor with a one page summary of equipment in that funding range. The success of the process ensures that staff will continue to use it.

Future Scope

Other organisations may find this program valuable. The individual questions/criteria used in the prioritisation matrix can be easily modified to reflect local priorities and can therefore be applied to any healthcare setting. Already within our Hospital, the prioritisation matrix methodology has been used to allocate resources for clinical service planning.

This process could easily be used in any large Area Health Service or across NSW Health or by a worldwide health organisation.