Productivity Commission Review of Acute Health Services

In the process of assessing and comparing the costs of hospital services there are a number of areas the Commission will compare and draw conclusions from in the provision of services to patients and their costs. When considered at face value a procedure of one classification with a successful outcome in a private hospital, a level 4 public hospital or a level 5 public hospital would appear to be directly comparable. Costs of providing the specified services will vary for a range of reasons which may include efficiency and reference will be made to competitiveness as a driver of efficiency, cost minimisation and continuous improvement in the quality of outcome for the patient.

In many respects a procedure performed in a private hospital and the same procedure performed in a public hospital are comparable however, as is often the case, the devil is in the detail. Of particular interest to the Commission in this regard may be the comparisons of cost per procedure payments made since 2002 through the UK National Treatment Purchase Fund (NTPF) reviewed by Comptroller and Auditor General for Northern Ireland in 2005 which found challenges in comparisons including limited data, commercial in confidence limitations and issues of paying for 'spare capacity' in the public sector.[1]

Undoubtedly the Commission will pursue the many differences down their respective holes and develop a complex but fair comparison. I would like to draw the attention of the Commission to some of the issues associated with one aspect of hospital service provision which may not other wise be considered but which can make an appreciable difference to the quality of health outcomes- the quality of capital investment.

The provision of capital in health care and particularly in the public sector has not always been marked by regular systematic investment. Frequently capital and even maintenance and major equipment replacement have been regarded as discretionary expenditure and have been known to be linked more closely to political cycles than to system or patients needs.

Capital development has the ability to shape service delivery and the reverse is also true- the absence of sustained capital investment has the effect of eroding services. When comparing service costs it is necessary therefore to acknowledge the investment platform they are being provided from. Winston Churchill famously said that "We shape our buildings and afterwards our buildings shape us." Hospitals are environments where this statement is powerfully proven.

[1] H.Maase C. Normande Market Competition in European hospital care Ch 6 in B Rechel, S Wright ,N Edwards, B Doddswell and M. McKee Investing in hospitals of the future. Observatory Studies Series No 16 WHO 2009 page 111

Background

Hospital services in the main have grown out of a tradition of general hospitals with a strong specialist based culture. The strongest have developed powerful cultures which attract high quality staff, develop profiles in research and teaching, encourage fundraising and attract capital. Through dedication and hard work over many years they frequently establish national and international reputations. They also compete in attracting capital with less well endowed, less well recognised services. Within the same hospital there can be examples of services which fall behind their more prominent companions in capital investment to the detriment of patients and staff attraction and retention. In the public imagination it is for example more difficult to raise money for older adult mental health than for neonatal intensive care, for outpatients than for cardiology, for general medicine than for cancer services.

These disparities exist in hospitals, between hospitals, between inner city and suburban services and most obviously between city and country services. While there are important issues for staff attraction and retention in the less advantaged services which may have been instrumental in the centralisation of services to the high end hospitals over the past decade, the most important concern is the effect on staff and patients safety.

In the public sector and to an extent in the private sector the resourcing of capital is both public and private, Commonwealth and corporate, State and local community based.

It is noted that the Commission is to propose developments to improve the feasibility of future comparisons.

Points arising from discussion paper

The Commission has observed that:

"Current expenditure of one of the largest components of health expenditure is hospital services — accounting for $34 billion or almost 40 per cent of Australia's health spending in 2006-07 (equivalent to about 3.5 per cent of gross domestic product) — and it is expected to remain relatively significant in coming decades

The consequences of inefficiency in the health system, and hospitals in particular, could therefore potentially be significant. Such inefficiency would mean that spending is more than necessary to deliver the current level of services, and that there is an opportunity to treat more people and/or improve service quality without using more resources".

The reports of the NH&HRC have identified efficiencies which can be achieved within hospitals and between the health services through better co-ordination and communications. In its final report the NH&HRC acknowledges that there is considerable work to be undertaken to reduce waste and inefficiencies in the

hospital system which results in great costs to patients and to taxpayers. While focusing on the public hospital sector these inefficiencies are not the monopoly of that sector.

Capital

In the case of capital resources used for buildings and equipment in health services it could be argued that there are significant inefficiencies associated with insufficient and unbalanced resource allocation.[2] There is evidence to confirm that the poor retention rates for nurses and the relatively high injury rates for nurses and other hospital staff is related to poor investment strategies[3]. In short the facilities do not facilitate the operation of the hospital but impede the effective work.

Health facilities have been known to last for a very long time and staff are encouraged to adapt to manage within the existing building fabric. Potentially the consequences of the adaptations can result in lower levels of supervision of junior staff, less professional support, confusions in shared care arrangements, poor or non-existent discharge planning, misinformation associated with transfers, errors and delays in care pathways.[4] Augmenting and updating facilities to minimise the capital outlay also tends to inhibit the ability of staff to respond to new modalities of care.

Health care capital is seen as a one off expenditure rather than a strategic asset requiring investment, management and development to maintain its functionality. Rarely is the life cycle cost of a hospital component considered when the capital budget is becoming established. The hospitals which are the result of short-term thinking are not environments which attract young people to careers in nursing or the other hospital based caring vocations.

In addition the distribution of capital tends to respond to the well prepared business case which inevitably favours the better resources and more sophisticated areas of health care. An intensive care unit or an emergency department are more likely to mount a well argued case for improved or new facilities than a diabetes support unit in a rural area or a child health service in an outer suburb or sexual health services in an area with a young indigenous population. However investment in early intervention health services working with at risk populations and easily available to them have the potential to achieve significant health improvements and prevent the dramatic admissions to higher cost services. Without the capital seed funding the smaller services cannot

2 There are a number of reports ranging from asset condition audits on Australian hospitals, hospital master plans and clinical service plans to the UK Design Review evaluations, evidence based design research reports from the USA and Canada to the most recent report of the WHO, European Health Property Network and European Observatory on Health Systems and Policies authoured by B Rechel, S Wright ,N Edwards, B Doddswell and M. McKee Investing in hospitals of the future. Observatory Studies Series No 16 WHO 2009

3 International Council of Nurses Positive Practice Environments: quality workplaces, quality patient care. Information and Action Tool Kit. Geneva International Council of Nurses 2007

4 A Joseph, The role of the physical and social environment in promoting health safety and effectiveness in the healthcare workplace. The Centre for Health design Issue Paper #3 November 2006

function or in some cases begin. There is a need for outcome focused health capital funding
These issues are discussed in some detail in a submission to the NH&HRC which can be found at
http://www.health.gov.au/internet/nhhrc/publishing.nsf/Content/312/$FILE/312%20-%20SUBMISSION%20-%20%20Capital%20-%20Rhonda%20Kerr.pdf

Australia is not unique in not realizing the potential of capital as a tool in efficient health service delivery. As doddswell and argue The UK has established Health Trusts to allocate and manage funds for local health areas with varying levels of success. The mounting volume of regulation which has evolved in relation to health building has caused radical change and the adoption of PFI models of procurement. The effectiveness of these buildings for their function and the potential of the model to deliver responsive and appropriate facilities in the future is the subject of evaluation. Amongst the first of these is the work of Prof. James Barlow of Imperial College Business School in London and Martina Keoberle-Gaiser who examined how effectively the PFI projects delivered a built product which would support innovation in hospitals now and in the future. Additional evaluations of the functionality of the buildings for delivering contemporary health care are found through the NHS Design Reviews undertaken under the auspices of Lord Warner. An influential series of reviews have been collected and authored by Paul Hyatt and John Jenner and are published as Tomorrows Hospitals NHS Design Review Programme. Under the heading of design, the reviews look at the effectiveness of the built solutions to the clinical and human needs of patients and staff. The outcomes do not endorse the PFI solution as the best solution to the challenge of capital in health care.

A range of capital financing options are being explored internationally. Perhaps the best outline of the options in Europe is presented in the recently published book Investing in Hospitals of the Future by Bernd Rechel, Stephen Wright, Nigel Edwards, Barrie Dodswell and Martin McKee published by the European Observatory on Health systems and policies. A copy of which can be found at http://www.euro.who.int/observatory/Publications/20090323_1

Amongst private sector investors in Europe the example of the private for-profit German hospital provider The Rhön Klinikum Group may be of interest. This Group have developed a highly profitable system by taking over inefficient hospitals, redesigning and then reconstructing hospital facilities to improve their efficiency. In a recent report on the operation of the Rhön Klinikum Group the Chairman announced that improvements in productivity were achieved by using more efficient layout and patient logistics, a more focused business culture, and reductions in the number of staff required for support functions. The level of initial investment in facilities and then subsequent reinvestment in maintaining and upgrading facilities over time to fit their clinical and business needs are significantly higher than their public sector comparators. Rhön Klinikum Group

would appear to be an interesting example of the direct substitution of capital for the relatively expensive labour component. Their business strategy identifies that every metre a nurse walks unnecessarily costs money.[5] Yet numerous studies show that one of the most time consuming elements of contemporary nursing is the constant 'hunting and gathering' materials, medications and information in a hospital.[6]

The Productivity Commission observed that monitoring and comparing hospital performance has the potential to drive improvements in efficiency, as well as service quality, particularly given the limited role of competitive markets in the health sector.

As the Commission is aware the competitive model in the health sector is significantly constrained by regulation necessary for public, patients and staff safety, confidentiality and security. That being said there are also areas in which a more competitive window would improve sensitivity to patients, ensure a more contemporary view of investment and may result in lower costs per patient. In this interesting area I would draw the Commissions attention to the recently published work of Prof. Hans Maarse of the University of Maastricht and Prof Charles Normande of Trinity College Dublin which neatly reviews the recent experience of competitive impediments in the various health care environments in Europe.

The absence of a freely completive market suggests that:

- There is a need for greater transparency of decision making and focus on outputs and quality.
- To some extent the public and private services complement one another, yet in effect they compete for resources particularly staff. Increasingly the competition for clinicians is on a national and international basis.
- In health services the product may be procedure A on patient Δ at the simplest level. This event will be the consequence of a series of interconnected services, some of which are included in the cost structures of the hospital and some of which are not
- The nature of the product Procedure A on patient Δ in a public hospital is different to procedure A on patient Ω in another public hospital or a private hospital. Why?
- While it may seem possible to compare a DRG across all jurisdictions and the private and public sectors the commission should be aware that often the patients are not directly comparable.

[5] S Bjorberg M Verweij Life-cycle Economics: cost, functionality and adaptability. Chapter 8 in by B Rechel, S Wright ,N Edwards, B Doddswell and M. McKee Investing in hospitals of the future. Observatory Studies Series No 16 WHO 2009 page 152

[6] Tucker, A., and S. Spear. 2006. Operational failures and interruptions in hospital nursing. *Health Services Research 41*(3): 643–662.

When material form the AIHW is examined it can be seen for example that public patients have higher levels of Co-morbidities and this is particularly relevant for WA where 47% of patients have 2 or 3 diagnoses and a further 32% have 4 or more diagnoses at the time of treatment. In contrast only 37% of private hospital patients in WA have 2 or 3 diagnoses while only 19% have 4 or more diagnoses at the time of treatment[7]. When comparing private hospitals and their work and that of public hospitals even for the same procedure say a normal birth other factors need to be acknowledged. For example where there are aboriginal patients there may be a need for additional services to be provided for the mother and/or the baby. Private hospitals will not manage the cost of antenatal care while public hospitals will include antenatal care in the cost of the birth. Some aboriginal women will not present for antenatal care and may therefore have a greater requirement for other services such as imaging, social work, pathology and pharmacy than another woman delivering in a public or private hospital. At risk mothers from rural and urban areas Public hospitals also manage prisoners and other high risk patients such as the homeless, people with drug and alcohol problems, mental health patients with physical health problems, refugees and recent migrants.

- The tasks of a hospital can be identified as providing a familiar range of services and procedures and these vary modestly from year to year but contain a core of services which largely remain unchanged. Therefore there is potential to consider more extensive streaming of patients with 'known' requirements particularly in the areas of stroke, orthopaedics, obstetrics, mental health, surgery and medicine. This can go beyond the separation of elective and emergency patients to deliver rapid treatment systems for patients presenting at emergency with strokes, orthopaedic problems, infections etc. Appropriate capital investment can facilitate developments which match changes in workforce design to provide safe and efficient treatment at a lower recurrent cost and with better outcomes for patients.
- There is an opportunity to focus on these known requirements and to identify capital and recurrent assets which can be honed to effectively deliver efficient and effective services.
- To an extent the hospital system seeks to provide a 'bespoke' quality to service provision. Identifying where bespoke and routine differ depends on the nature of the institution and the nature of the patient.

[7]AIHW Australian Hospital Statistics 2006-07 Table A1.5 page 309 Separations by Number of Diagnoses Codes Reported and Hospital Sector, States and Territories, 2006-07 AIHW Australian Hospital Statistics 2006-07

- The patient differences come with access to health care, age, socio-economic status and co-morbidities
- The differences for services come from resourcing and the quality of the direct and the subtle connections which support the service.
- Relative Efficiency in terms of health care needs to contain a dimension which reflects time and access. Ultimately the measure of success is the best outcome for the patients with the minimum time spent in hospital.
- For example trauma to a person the in country which results in a broken limb is most efficiently managed locally rather than requiring transfer to a major city hospital for treatment. This requires access to medical staff, radiology facilities and staff for comprehensive diagnosis, appropriate treatment facilities and post-treatment follow-up.
- Patients costs and time have not always been considered in costing health services. Narrow interpretation of costs frequently relates only to expenditure by governments and institutions. However there are real economic costs associated with increasingly centralised services for people who live outside inner metropolitan areas. Again taking example of a the broken limb of a country resident, the costs to the patients and their family are lower if they can have equally good outcomes from a local service. The economic costs in the rural community resulting from costs to patients and family members of travel and time from rural areas needs to be included in comparators. If the rural patient J with the broken limb has to travel to the city for private hospital treatment there would be greater costs (time, travel, time lost to work, accommodation and other costs) to that community than if the patient J were treated locally. The cost locally is the capital to maintain a facility in the country and staff it. If the facility is built and staffed to meet the projected needs of the community including broken limbs such as patient Js' the costs should be lower for the institution, the community and the patient than transferring patient J to a regional or city hospital.
- Both the Allocative and Dynamic efficiency of health services are critically important. The dynamic efficiency requires appropriate planning, design and capital resourcing to support efficient service delivery in the future.

Data

The Commission asked:
"What, if any views, do you have about the Commission's proposed use of NHCDC and HCP data to compare hospital and medical costs for clinically

similar procedures performed by public and private hospitals? Where you identify problems, what suggestions do you have to address them?
What, if any, other sources of cost information do you recommend that the Commission consider? What are the strengths and weaknesses of those data?"

- Capital in terms of data management infrastructure and systems, buildings and equipment for these are not reflected in public sector costs
- The cost of radiology, pharmacy and pathology for private hospitals is more problematic as patients costs reflect service cost plus other factors including profit, corporate overheads, superannuation, and capital payments with tax off-sets, tax, insurance, funds build-up for the acquisition of new equipment and corporate growth.

Cost of Capital

The Productivity Commission observed that:

"The cost of capital consists of depreciation and the user cost of capital (UCC), both of which should be included when comparing the total cost measures of public and private hospitals. Both depreciation and the UCC are implicitly included in the charge data in the HCP, and thus the cost of capital for private hospitals is already accounted for.
Depreciation is the reduction in value of an asset due to usage and obsolescence.
The NHCDC reports depreciation costs by DRG for public hospitals in Australia except Victorian public hospitals (DOHA 2008a). There is however a statewide measure of depreciation for Victorian public hospitals, which is published by SCRGSP (2009). One possible option would then be to somehow apportion this statewide measure of depreciation for Victoria to individual DRGs.
The UCC is the opportunity cost of the capital used to deliver services (that is, the return that could be generated if the funds were employed in their next best use).
The Commission proposes to calculate the UCC for public hospitals using the same method employed by the AIHW (2009) and SCRGSP (2009). This involves multiplying the value of assets by a UCC rate of 8 per cent to calculate the UCC.
Interest payments represent a user cost of capital, so are deducted from capital costs in all jurisdictions to avoid double counting.
The value of public hospital assets is not included in the NHCDC data. The Commission therefore intends to source asset values for public hospitals from the states and territories. The Commission proposes to apportion the

UCC for public hospitals to specific DRGs using the depreciation weights of the NHCDC.
What, if any, comments do you have about the proposed approaches to dealing with the cost of capital? What alternative approaches could be used, and what are the strengths and weaknesses of those approaches?"

Comparisons

There may be a challenge for the Commission to use a figure for the whole of a States public health assets and apportion them to activity based and procedure costings. Capital has traditionally been undervalued as a contributor to service provision. Capital is not always differentiated to include both major capital equipment and built assets.

The Commission in examining the contribution of capital might like to test the robustness of the depreciation figures provided in the NHCDC and the relationship of this figure to hospital infrastructure. The figure needs to reflect the age and quality of assets. The depreciation figure should also reflect the ability of assets to optimize the efficiency of hospital services. Capital effectiveness rather than volumes are the measure. It is good that the Productivity Commission chose to not include the value of land. Are capital overheads to be included where for example there are regional officials sited in the hospital? How will the Commission consider the very important areas of training and education? In some public hospitals an area of 25% of the total floor area would be allowed for education and training. Those private hospitals with an education component may have smaller physical areas for education and training.

The essential question which must be tested for both the depreciation and the asset value composite figure is what is the functional effectiveness or the efficiency of capital in that place. As the Commission has witnessed the rate of change in health service delivery and the inflation of costs for those services is marked. In part the costs are associated with rapid technological change, augmented services and in part it is the cost of successful treating patients who continue to require investigations and treatments.

One challenge when comparing services between hospitals is that some buildings were designed for purposes other than those they currently provide or for times when staff were more plentiful and patients were cared for over a longer time.

For example when Royal Perth is considered there are wards which are functionally unchanged from their time of building during WWII; the imaging department is split between 3 sites within the hospital because of space limitations in the WWII building. These will impact the effectiveness of the department but also the time taken to diagnose, admit, treat, monitor and discharge a patient along with the number of staff required to co-ordinate that patients care. When this is multiplied by the number of patients each year transported between hospitals and around the same hospital the cost to the system mounts.

The proposed method for including capital offers a simple way of distributing the asset base but in reality it is not an even distribution. Nor are the specific procedures automatically able to reflect the same distribution of resources. Hospital capital for both buildings and major equipment have individual histories dependant on a range of historic factors including:

- Electoral location
- Degree of community involvement
- Method of procurement
- Original purpose and assumptions made at time of building.

The key factors for capital associated with capital for specific procedures are:

- Age of facility and equipment
- Support and connectedness of capital
- Fitness for purpose
- Flexibility for future demand and changes

The Commission undoubtedly recognises that each procedure and indeed each medical diagnosis and treatment do not sit in isolation from other services in the hospital setting.

In the same way efficiency and effectiveness of each medical or surgical occasion of care depend on the work of that specialty unit they are also dependent on the work of hotel services, Emergency Department , Intensive Care, Coronary Care (in some cases), Imaging, Pathology, Outpatients and other services. Also critical to the effectiveness of one procedure is the quality of the linkages between these services, in good times and in stressed times. A private hospital will not have to manage the cost of clinical pharmacy, Imaging and Pathology are likely to be provided by an external contactor, ICU and CCU are not universally accessible in private hospitals and only a few private hospitals provide Emergency Departments so the overhead costs per procedure will be different.

Adequacy of Capital Investment

The capacity of a hospital to deliver a service is dependent on the quality of human and capital resources in each of these areas. When one area has been starved of funds such as the distribution of intensive care beds it has flow on implications for the effectiveness of all inpatient clinical services for the people of that area and potentially for people from other areas when patients are transferred due to insufficiencies of facilities and equipment.

With the singular exception of the public hospitals, it is difficult to identify an efficient enterprise with high labour costs where capital is regarded as a discretionary or occasional expenditure. Contemporary managers of large and successful enterprises would be more likely to consider the right mix of capital for buildings, capital for major equipment and high cost labour when providing services to the public. Industries with an emphasis on quality and safety of customer service are the most likely to actively review their capital needs on a regular basis.

Further it cannot be assumed that the amount of capital that has been allocated in the past is the correct amount of capital(K) – it is as expressed above as historically capital is allocated for political and health reason

What should the level of k be to promote the most efficient use of resources in the health system and the best return for the Australian people? This requires allocation of k for their best possible use to achieve the best outcomes ie improvements in health outcomes and overall population health. Again over the past 50 years there have been prominent attempts to allocate funding on a population basis. In the case of capital in the UK for example this has led to a system with many flaws which has produced some enhanced health outcomes. The hospital-based SARS epidemic was a recognised example of a cost from insufficient health investment acknowledged in a number of countries most particularly in Canada, Hong Kong and Singapore. Facilities in those and other places have required investment to reduce the rates of infection and prevent the spread of disease between staff and patients.

In general private health providers spend more on capital, capital redevelopment and maintenance than the public sector is inclined to spend. While there are a number of examples of higher expenditure of capital to improve efficiency in the body of evidence based health care design perhaps the most striking example is from Germany. The German system has an overarching legislative environment set by the Government and capital financing of hospitals is a Government responsibility. Services to patients are however provided by private providers and paid for through universal health insurance.[8]

[8] Eskrine, J., Dowdeswell, B., & Watson, J. (2006). How the health sector can contribute to regional development: the role of capital investment: Health ClusterNET

The work of Prof Roger Ulrich[9] and the US Center for Health Design, amongst others[10], demonstrates the adverse consequences for efficiency, staff retention, infection control, length of stay and patients outcomes of health facilities which do not have the appropriate capital investment.

The SA Health submission refers to the work of COAG in moving towards Activity Based Funding for hospital services. When capital is considered as a component of a health care procedure and of an Activity Based Funding method it is important that the method of determining the capital amount both:

- Reflects the capital necessary to support an efficient service maximising the effectiveness of the most expensive staff resources, and
- Is calculated in a way which provides incentives for the appropriate level of treatment of the patient and
- Does not contain disincentives for efficiency.

At the moment the lack of targeted capital funding mechanisms by default finds patients referred to higher levels of care than they may require. For example again at Royal Perth it was recently reported that patients with swine 'flu were being moved from Intensive Care to another hospital at considerable risk to the patients due to insufficient equipment to sustain the patients lives. Other routine examples are of patients referred from peripheral or country hospitals to large city hospitals because they lack imaging equipment or operating theatre resources.

Therefore by simply using the existing capital stock as a surrogate for the appropriate level of capital will be misleading. The method for calculating capital proposed by the Commission would:

- Not allow for the interconnectedness of capital between departments and in support of the procedures being costed
- Not allow for the lifespan of specific elements of the suite of hospital capital
- Not address issues of fitness for purpose and might therefore perpetuate an unequal distribution potentially containing perverse incentives
- Not match national and international best practice but rather adopt an undifferentiated historic average and
- Not address contemporary cost of capital potentially undervaluing the capital across the economy.

Issues of energy efficiency and environment impact of the capital cannot be ascertained using the proposed method.

[9] Faculty of Health Architecture, Texas A&M University
[10] Netherlands Board for Health Care Institutions, European Health Property Network, Health and Care Infrastructure Research and Innovation Centre at the Imperial College London

In response to these problems and the need to address appropriate capital costing to act as a dynamic element in transforming hospital based and other health services some work has taken place on a model for capital in health care.

A Mechanism for Appropriately Costing Capital by DRG

The mechanism being developed for costing the capital component necessary for the efficient use of staff and the effective treatment of patients in the Australian health care system is based on DRG costing by jurisdiction.

Advantages

It uses contemporary or projected costings from specialist health based Quantity Surveyors to make a dynamic model which is contemporary or can be predictive.

The model distinguishes between alternative uses for the capital and costs them appropriately for example costing offices, wards and operating theatres specifically. The individual elements of the health service used for the diagnosis and treatment or the support of services (Sterile Supply Department, Pathology Blood Bank, waste management) are costed to include whole of life use. The viable life of a 10m2 office in a medical suite and 10m2 in Emergency Department will be different. They should be costed and constructed differently. The mechanism proposed provides for Whole of Life Costing for the major health building elements and major equipment.

It will be possible to develop models from this method to assess the energy use and environmental impact of components of capital used to provide specific procedures or manage particular diagnoses.

The proposed mechanism draws on contemporary best practice models being developed in Scandinavia, Holland and on research in innovation in the UK and the USA.

The method aims to permit substitution of capital components to activate innovative service delivery directed at patient focussed care in lower cost settings. For example where capital is identified for patients in terms of the number of days per bed after a procedure(K+Eq) or for monitoring(K+Eq) that capital could be alternatively used for patients monitoring equipment in a medihotel or in their own homes(Eq) or through telemetry (Etq) and savings achieved.

Disadvantages

The mechanism is in development and has not been tested.

Due to the individual focus on DRGs and their costing it may require a team to develop the necessary tools. Initial conceptual development has taken place and individual DRG costings are being developed.

Method

The mechanism suggested is a very simple one for providing a true cost for sustainable health facilities and is largely already funded by the Australian Governments through:

- The Hospital Cost Data Collection
- Diagnosis Related Groups (AR_DRG)
- Australasian Guidelines for Health Facility Design
- AIHW data collection by State and Territory by DRG and
- Population and morbidity based utilisation projections.

It involves adding 2 lines of capital cost information to the existing Hospital Cost Data by State by AR-DRG. These capital items would incorporate prevailing capital costs for the main health building elements and an additional line for the cost of major equipment.

The main building elements being investigated fall into 4 main groups:

- wards (including outpatients departments),
- offices,
- treatment and investigation areas (which may be further sub-divided into theatres, imaging, ED, ICU and CCU) and
- public and hotel areas.

To add the capital cost of each DRG (by State and Territory) to the existing hospital cost data would require the work of a group with knowledge of existing capital costs and would use evidence based material on the life expectancy of specific facilities and major pieces of equipment. Appropriate costs for capital can be calculated for wards, outpatients areas and theatre and imaging suites representing their useful lifespan to provide an indicator of funding for replacements at the appropriate time.

Using the capital component, projected lifespan of each capital element and projected demand by DRG (all State authorities have undertaken this analysis), Treasuries will be able to have:

- confidence in the basis for capital costs,
- realistic comparators for costs shared between States and Commonwealth
- programmed renewal and replacement for expensive health buildings and
- a direct relationship between demand, recurrent and capital costs.

This results in a mechanism to systematically sponsor investment in health infrastructure and thereby provide better quality, safer working conditions for nurses and other health care providers. For patients, there is an opportunity to

reduce the stress and trauma associated with poor access, in both time and geography, to necessary services which is the consequence of insufficient and irregular health investment. Significantly, patients will benefit from regularised capital funding by receiving care in safer facilities with contemporary equipment. For the Commonwealth Government adding information on capital costs will provide a more complete measure of inputs to measure against desirable health outcomes. Using the formula for capital future Health Care Agreements between the States and Commonwealth tied to specified outcomes can:

- ensure appropriate levels of investment to sustain medical, nursing and allied health training and workforce retention
- access to acute health services is similar for all Australians
- the health status of marginalised people can be improved
- investment in health is strategic and forward looking, patient rather than institutionally based
- permit the development of models of care where capital and recurrent funding follow the patients to the most appropriate treatment modality for specific components of care(such as community based rehabilitation and post acute care)
- permit investment decisions to be based on data aligning recurrent and capital costs in a real way and
- ensure redundant equipment makes way for technologically effective equipment purchases.

Conclusion

In health the devil is in the detail because the volume of services is vast and increasing. Even relatively small inefficiencies in the provision of health care have the potential to be very costly because they are multiplied in that setting with each patient every day and in similar settlings all over the nation. When these problems are large such as in the case of workforce recruitment and retention, they deserve the full attention of insightful policy makers.

While it is less palatable, health system costings will be more sensitive and useful if they can be developed from the basic level of information up rather than using top down costing approaches. So many costs associated with a diagnosis or treatments are expensive due to the highly specialised nature of labour in the health system multiplied by the volumes. At this stage in Australian health care the function of capital should be to enhance the effectiveness of the relatively scare and expensive labour inputs, support the practice of health professionals and ensure both improved safety and patients' outcomes. By effectively valuing capital in the health costs equation, greater efficiencies can be achieved in the use of the scarce and expensive labour resources. For example appropriate investment in e-health records will reduce wasted time for medical practitioners and speed the communication of vital information. This has been well addressed by the NH&HRC.

I ask that the Productivity Commission is sensitive to the issues raised in this paper when undertaking the comparative costings of private and public DRGs. For the future development of Activity Based funding for health services it is important that a realistic costing of capital in the Australian health care system is included. Continuation of depreciation as a surrogate for an accurate capital figure will condemn our health system to repeat old system resource allocation practices with an increase in the consequent inefficiencies. The method suggested in this submission for capital costing would provide a dynamic element which would facilitate the necessary transitions in health service provision in Australia.

I thank the Commission for the opportunity to bring these issues to their attention and would be eager to discuss any matter raised in this submission of interest to the Commission.