

## **An Alternative to Acute Bed Hospitals Based on the Day Surgery**

### **Principle**

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### **INTRODUCTION**

Day surgery centres, free-standing and hospital-based, continue to expand as does the scope of operations and procedures that may be carried out in these centres/units. The expansion of free-standing day surgery centres is indicated in Table 1.

The remarkable development of therapeutic and diagnostic technology in recent years has effected a major change in operative techniques such that even major operations, which previously required many days as inpatients, are now being carried out on a day surgery basis.

This modern technology is very expensive and is placing strain on the delivery of healthcare services, however it is essential that it be available to all sections of the healthcare system, both inpatient and outpatient. It is evident that chronic underfunding of public hospitals is depriving this sector of some of these technological advances.

The overall costs of maintaining beds in both public and private hospitals continues to rise and in recent years there has been increasing pressure on administrators to limit patients' duration of stay in hospital. There is concern within the medical profession that this is impacting adversely on the standards of practice.

The provision of procedural services in day surgery is now having a significant impact on containing this element of costs, while maintaining high standards of safety and quality of service.

| POPULATION 18 MILLION  | JAN. 93   | JAN. 96    | JUN. 98    | FEB. 99    |
|------------------------|-----------|------------|------------|------------|
| Day Surgery Centres    | 36        | 67         | 71         | 76         |
| Endoscopy              | 23        | 29         | 34         | 45         |
| Day Plastic Surgery    | 10        | 7          | 11         | 19         |
| Day Eye Surgery        | 3         | 18         | 24         | 25         |
| Day ENT Surgery        | –         | 1          | 1          | 2          |
| Day Medical Centres    | 11        | 17         | 25         | 20         |
| In Vitro Fertilization | 2         | 3          | 3          | 2          |
| Oncology               | 1         | 1          | 3          | 4          |
| Cardiac Clinic         | 1         | 1          | 2          | 2          |
| Sleep Disorders        | 1         | 2          | 4          | 5          |
| Sports Medicine        | 1         | 1          | 1          | –          |
| Rehabilitation         | 1         | –          | –          | –          |
| Dental                 | –         | 1          | 3          | 3          |
| Medical/Diagnostic     | 4         | 8          | 9          | 4          |
| <b>TOTAL</b>           | <b>83</b> | <b>139</b> | <b>166</b> | <b>187</b> |

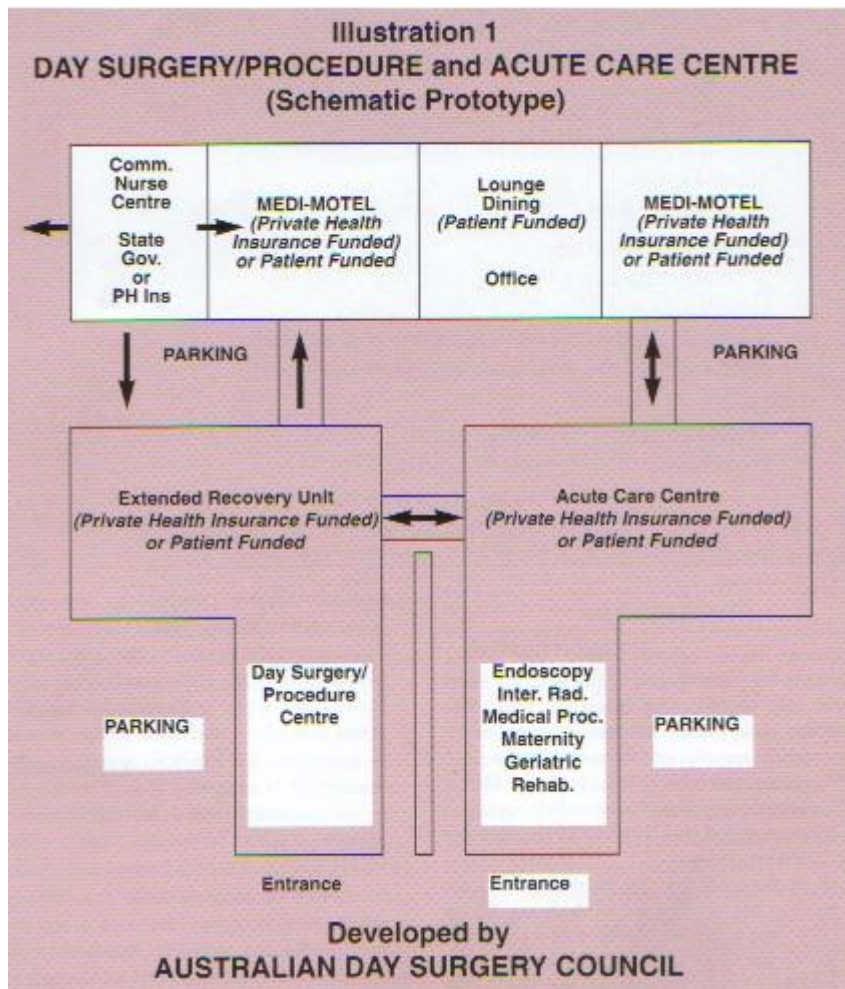
The Australian Day Surgery Council (ADSC), recognising the further potential of day surgery to include more major procedures, has identified a number of important initiatives which have the unanimous support of council. These principles have been forwarded to healthcare authorities and other interested organisations, and are as follows:

- The National Day Surgery Committee (now the Australian Day Surgery Council) supports the concept of extended recovery in day surgery centres/units, free-standing and hospital-based. (October 12, 1996)
- Appropriately selected patients with acute surgical problems, including trauma, may be treated in day surgery centres/units, free-standing or hospital-based, provided there is no compromise to clinical, administrative or discharge standards. (October 18, 1997)
- Council supports the development of free-standing or hospital-based post-discharge convalescent accommodation for day surgery patients. (March 7, 1998)
- Council supports the concept of home nursing and other services which encourage day surgery for those patients who would otherwise require inpatient care, subject at all times to supervision by the treating clinician and consistent with best practice standards. (July 4, 1998)
- Council fully supports and encourages a pre-operative assessment process for all day surgery patients. This assessment process should address the medical, nursing, educational, financial and discharge requirements of the patient. (October 24, 1998)

How can these important initiatives be introduced into the healthcare delivery system so that day surgery/procedure services can reach their potential while maintaining the high standards of safety and quality of service that are expected, and must be provided?

In October 1998, the ADSC unanimously supported, in principle, the Prototype Model of a Day surgery/Acute Care Complex incorporating these initiatives. (Illustration 1, below) It is modular in concept, but the complete complex

presents an alternative to the acute bed hospital for a wide range of surgical and other acute care services.



### **PROTOTYPE MODEL BASED ON THE DAY SURGERY PRINCIPLE AS AN ALTERNATIVE TO ACUTE BED HOSPITALS**

The Prototype Model is presented as a "private" free-standing complex on its own site, however it can be incorporated into public or private hospitals, either as a separate or an integrated unit (vide infra).

- The primary module is a day surgery/procedure centre which may be constructed with or without an extended (overnight) recovery unit.
- The primary module is connected to a post-discharge convalescent motel-medi-motel. This provides basic, comfortable accommodation with an en-suite facility (essentially the same as a commercial motel). Each unit could have two beds, or a cot and bed, to accommodate a relative or other carer. Simple drinks and food preparation facilities would be included, however meals would be served in a common dining room providing a wide range of services from the simplest to full restaurant meals.
- A community nurse and allied service centre is located at the end of the medi-motel. This could provide the following services:
  - nurses for an extended recovery unit;
  - community nurses (24 hours on call) for the medi-motel patients;
  - community nurses and allied domiciliary services for patients after discharged home, either directly from the day surgery centre

- or from the medi-motel;
  - day surgery pre-admission assessment clinic.
- Adjacent, and in close proximity with the day surgery centre, could be another (non-surgical) acute care centre which would also provide its services on the day-only principle (except maternity).

There is a wide choice of acute care services for such a centre, e.g., endoscopy, sports medicine, IVF programmes, oncology, haematology, renal dialysis, interventional radiology, rehabilitation, geriatrics, etc. Where considered appropriate these acute care centres could be supported by a medi-motel.

A maternity centre could be considered. However this should include all the facilities of such centres, including operating rooms. It would not function on a day-only basis although it is acknowledged that many mothers e.g., multiparas, require only a short time (one day) in the maternity unit. The support of a "maternity motel" would seem particularly appropriate for such a centre.

As mentioned above, the Prototype Model is a stand-alone private free-standing centre. It is recommended that funding of the services be shared, as follows:

- All professional fees for surgical/acute care services are eligible for a Medicare rebate (75%) and a private health insurance rebate (25%), for those patients who have private insurance. Any balance of fee above the rebate(s) is paid by the patient. The fees for some patients are paid by WorkCover, Third Party or other insurance.
- The day surgery centre/unit facility fee is also covered by private health insurance, WorkCover or other insurance. However there may be a residual amount to be paid by the patient. Increasingly in recent years, many (up to 50%) private uninsured patients are paying the full facility rebate – self (insured) paying patients. With the introduction of extended (overnight) recovery units a specific, higher rebate should be included to cover the extended service. A similar funding arrangement would apply to day-only acute care centres specifically modified to apply to the particular service provided by the centre. Some patients might require a day or several days convalescence in the medi-motel before discharge home, and this would particularly apply to patients having more major procedures and those whose recovery is prolonged for medical, social or other reasons. It is suggested that a medi-motel accommodation rebate be introduced in private health insurance tables (also WorkCover, Third Party and other insurance) for these patients. A relative or other carer occupying the second bed in a medi-motel unit would be required to pay for the accommodation and this would not be eligible for any health insurance rebate. Patients, relatives and carers would pay for their meals (dining room) without rebate. Uninsured patients would pay for their accommodation (self paying patients).

This funding arrangement is unanimously supported by the Australian Day Surgery Council (which includes representatives of private health insurers) and the principle of sharing the medi-motel financial responsibilities between private health insurers and the patients (and relative/carers) was most favourably supported.

- Community nursing services would be provided on an on-call basis utilising a patient call system built into the medi-motel. Although these

nursing services might be financed by the State Governments (an extension of the principle of sharing the financial responsibility), an appropriate community nurse rebate might be paid by the private health insurers (including WorkCover, Third Party and other insurers). Uninsured patients would be responsible for the payment of these nursing services (self paying patients).

## COMMENTS

### Flexibility and Adaptability

The Prototype Model has a modular structure which allows any section or combination of sections, up to the complete Model, to be constructed. This flexibility is particularly advantageous and will assist in its adaptation to all elements of the health care delivery system.

The features of the Model described above apply to a private free-standing complex on its own site. However, it could also be co-located on the campus of a public or private hospital, either as a free-standing unit, or as a free-functioning unit separate from the acute bed section of the hospital.

Although the majority of centres are of the multi-disciplinary type, the Model can also be constructed as a uni-disciplinary day surgery/acute care complex. There are many advantages of uni-disciplinary day surgery centres, one of the most important being the capacity to concentrate all the modern technological equipment at the one site, which can then be made available to groups of specialists and larger numbers of patients. Ophthalmology day surgery centres provide one of the best examples of these centres, however the same principle applies to other uni-disciplinary specialty services.

### Rural Day Surgery

Rural cities and most towns have a public hospital. However only the largest rural cities/regional centres can support a private hospital. The great majority of free-standing day surgery centres in Australia are located in the capital and larger Australian cities. However, there are a few in rural areas e.g., Albury, Wagga Wagga, Cairns, Bega, Lismore. Many of these larger and intermediate sized towns could support a day surgery centre or even a day surgery/acute care complex with their low capital and ongoing cost structure compared with an acute bed hospital.

The medi-motel would have particular advantages for rural day surgery centres, especially for patients who live long distances from town. These patients should not make the journey home immediately following discharge from the day surgery centre. Similarly, patients from even more remote areas could be admitted to the medi-motel on the day before their operation, as well as remaining one or two days afterwards. The cost saving compared to two or more days admission into an acute-bed hospital is obvious.

An added advantage of such a day surgery centre in country towns might be to attract specialist services, either on a full-time or part-time basis.

### Funding

The Prototype Model discussed above is a private free-standing centre on its own site and a funding arrangement has been outlined.

However, the Model can be adapted and located in a private hospital, either as a separate adjacent free-standing complex or integrated into the existing hospital. The funding arrangements would be the same as for a free-standing centre on its own site.

Similarly the Model could be located at a public hospital, again as a separate adjacent complex or integrated into the existing hospital. Public patients treated in such a centre would be funded by State/Federal Governments.

### Patient/Medical Profession Relationship

Surgical and medical care in acute-bed hospitals is very largely provided by specialists and it is only in some rural hospitals that general practitioners are able to admit and treat patients. For all practice purposes, general practitioners, other than as mentioned above, have been excluded from admitting and treating patients in acute-bed hospital and this is virtually absolute in metropolitan hospitals.

The Prototype Model provides an acute care surgical/medical complex where both specialists and general practitioners may treat their mutual patients together. Specialists will continue to be largely responsible for operative and other acute care services in the day surgery/acute care centres. However, general practitioners would be eligible and encouraged to participate in the post-operative care in medi-motels or in the patient's home. Such an arrangement would be of great advantage both to the patient and the medical profession.

### Cost Efficiency

The capital cost of construction of the outlined Prototype Model would be very low compared to the construction of an acute-bed hospital. Similarly, the ongoing running costs of a day surgery/acute care complex are very low compared to the running costs of acute bed hospitals. This is largely due to two factors:

- The day surgery/acute care complex operates only five days a week – it does not function on weekends and public holidays. The majority of day surgery/acute care procedures are provided on a same-day basis with no overnight recovery, and this provides a major cost saving compared to acute-bed hospital services which function 24 hours a day, seven days a week. Only a minority of day surgery patients would require extended (overnight) recovery, although they are still classified as day surgery patients (24 hours).
- It is the cost efficiency of the medi-motel which is so favourable compared to the acute bed hospital e.g., an estimated cost of one night in a medi-motel might be \$150 compared to an average \$600 in an acute-bed hospital.

### Models (Modules) of Day Surgery Centres and Services

As mentioned above, the Prototype Model is modular in structure and it is this modularity which provides day surgery centres and services with their flexibility

and adaptability – surgical (procedural) and medical (non-procedural). The range of structural and service modules is indicated in Table 2 (below).

| <b>Table 2 – INDIVIDUAL MODELS (MODULES) OF DAY SURGERY CENTRES AND SERVICES</b> |                                      |
|--|--------------------------------------|
| • Design/Structure   |                                      |
| – Day Surgery Centre – Same Day  |                                      |
| – Day Surgery Centre with Extended Recovery                                      |                                      |
| – Medi-Motel   |                                      |
| – Prototype Model of Day Surgery/AcuteCare Complex                               |                                      |
| • Professional Service   |                                      |
| – Multi-disciplinary   |                                      |
| – Uni-disciplinary   |                                      |
| – Surgical (procedural) – elective and acute/trauma                              |                                      |
| – Medical – other acute care (non-procedural)                                    |                                      |
| • Location   |                                      |
| – Freestanding   | – stand alone                        |
| – Hospital   | – public and private                 |
|  | – separate unit (free-standing)      |
|  | – integrated unit (free-functioning) |

A maternity centre could be constructed with the day surgery complex and supported by a "maternity motel". This would be a fully equipped maternity centre with its own operating theatres and capable of treating any complications. It would not function on a day-only basis, although a majority of mothers having normal births require only a short time in the acute care centre. The adjacent "maternity motel", with comfortable, low cost accommodation would allow several days recovery before returning home, and husbands could be accommodated with them. This arrangement would have particular advantage in rural areas and expectant mothers from outlying areas could be accommodated in the maternity motel before delivery. The funding arrangements would be the same as the day surgery medi-motel.

### Medical Education

At the present time there is little if any undergraduate or postgraduate teaching in day surgery centres, although recently there is anecdotal evidence of postgraduate surgeons visiting private free standing day surgery centres.

There is a large and increasing volume of patients being treated in day surgery centres having the more common and straightforward procedures, ideal for teaching purposes. The development of large day surgery/acute care complexes co-located with public hospitals would provide excellent teaching centres for undergraduates and postgraduates. Consideration should also be given to utilising private day surgery centres, free-standing and hospital-based, for postgraduate education.

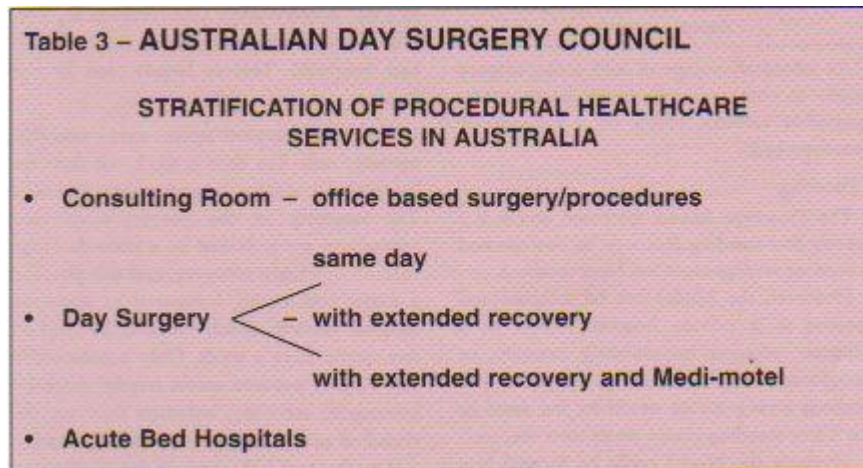
Introduction of formal teaching into undergraduate and postgraduate curricula deserves urgent consideration.

### **STRATIFICATION OF PROCEDURAL HEALTH SERVICES**

Up until a decade ago, procedural services were provided by a two-tier system – minor procedures were carried out in consulting rooms/outpatient departments, while all other patients were admitted to acute-bed hospitals. With the

continuing expansion of day surgery services, which have yet to reach their ultimate potential, there is now an imperative to re-stratify the delivery of procedural services.

The previous system should be expanded to a three-tier system by the inclusion of day surgery/acute care services. A subdivision of day surgery services should also be recognised, as set out in Table 3 (below).



Day Surgery, with its various modules, has the potential to become the largest of the three tiers, and it is not an exaggeration that 70% of procedural services will ultimately be provided on a day surgery/acute care basis, quite likely within ten years.

## CONCLUSION

The greatest challenge to the health care system in Australia, and other countries, is the escalating cost of technological advances, diagnostic and therapeutic, together with the costs of acute-bed hospital accommodation. It is obvious that only the largest hospitals can afford to provide all the complex expensive diagnostic technology, yet it is essential that it should be available to all levels of the Australian community. This can only be achieved by providing these services in the community (outside the hospital system) with private funding. The large hospitals, generally of teaching hospital status, can offer these services, but only to a very small proportion of the population.

The average daily cost of acute hospital beds (now approximately \$600 per day) continues to rise and this has forced administrators to reduce the length of stay, with the threat of compromising quality and standards of service. The provision of services, both procedural and non-procedural, on a day-only basis provides a system of safe, high quality service to address this increasing cost challenge. All of the pre-operative diagnostic work-up of the day surgery/procedure patient is completed before admission for the operation, and the post-operative convalescence, either at home or in medi-motels, avoids the high cost of acute-bed hospital accommodation.

The acute-bed hospital, public and private, will always be the central pillar of procedural and non-procedural services, including accident and emergency. However, day surgery, and in particular the Prototype Model, offers a highly cost-efficient system for the treatment of up to 70% of procedural (and other) services as an alternative to the very high capital and ongoing cost structure of

the acute-bed hospital.

Over the past decade or so there has been a move to centralise procedural services, especially in the teaching and large metropolitan public hospitals, which have now become huge complexes. Day surgery centres including the Prototype Model are essentially small and more simple structures which can be community based and offer a system to decentralise the provision of procedural services on the fundamental principle of "taking health care to the people and not making people come to the health care'.

The Australian Day Surgery Council has identified, and presents these initiatives, for consideration by the medical profession, government and all other organisations associated with the delivery of health care.