

Hospital Topics

Selecting equipment for elderly patients in hospital

JAMES ANDREWS, LEIGH ATKINSON

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The equipment used in wards caring for elderly patients, whether admission or continuing care wards, can, if correctly chosen, benefit both the elderly handicapped and the ward staff responsible for their rehabilitation. All too often, however, the wrong equipment is bought and is therefore misused or unused, either because of its inherent unsuitability or because no forethought has been given to repair and maintenance or to the availability of spare parts.

We have considered the types of ward furniture and equipment that are essential on geriatric wards and have divided them into three categories: (a) equipment needed on admission to hospital during an acute illness; (b) equipment needed during rehabilitation; and (c) equipment for continuing care departments. Many of the items under each of these headings will, however, be needed throughout the patient's stay in hospital, irrespective of the type of ward.

The letters in the following sections refer to the equipment listed in Appendix 1.

Equipment needed on admission

Patients often suffer much pain through being manhandled—from ambulance to bed, from bed to trolley to x-ray table, and back again. Elderly patients also often have severe pain from locomotor or internal medical lesions. A scoop-stretcher (a) in these circumstances is of great benefit and should be much more widely used.

BEDS

All beds used on geriatric wards should be height-adjustable, low enough for the patients to sit with their feet on the floor to enable them to transfer to a chair, commode, or wheelchair and high enough for the full nursing care that is usually required after emergency admission to hospital.¹

There has been much justifiable criticism of the King's Fund bed,² but the height adjustment, which allows a very low position, is a great asset. Many elderly patients are obese, and many are considerably incapacitated after such illnesses as cerebrovascular accidents, which prevents them from being able to sit up in bed unaided. These patients need to sit up for physiotherapy, to eat their meals, and to entertain their visitors, but they tend to slide down a conventional bed, which causes a shearing strain on the buttocks and heels and predisposes to pressure sores (see figure).^{3,4} When ordering general-purpose beds it is unnecessary to order the full King's Fund model:

Hounslow Health District

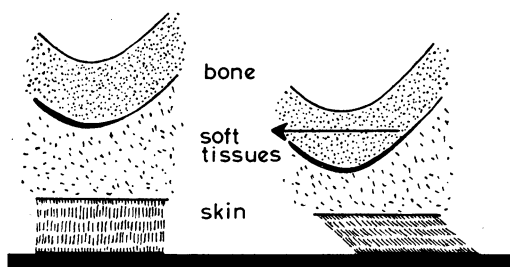
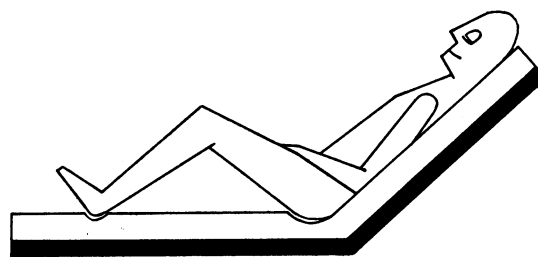
JAMES ANDREWS, MD, consultant physician to the geriatric service

London School of Occupational Therapy, London

LEIGH ATKINSON, MBAOT, TDIP, tutor

modern beds with adjustable heights, often referred to as King's Fund type, are quite adequate (b, c, d).

Anti-pressure-sore beds—These include tilting and turning (e) and multisectional beds, which are used mainly to prevent pressure sores. Four-sectioned beds that can angle to form a back rest, knee-flexion, and foot elevation^{3,4} have been popular in Scandinavia and North America for some time, though only three-sectioned beds are made in Britain (f, g, h). These beds go some way towards preventing excess pressure being forced on to the heels and buttocks, and their



Shearing strain on buttocks and heels that occurs when patients slide down a conventional bed. Reproduced with permission of the editor of *Health and Social Service Journal* (formerly *British Hospital Journal and Social Service Review*).

height is easily adjustable so that patients can put their feet on the ground when sitting on the bed. Even though some departments of geriatric medicine pride themselves on not allowing patients to develop pressure sores, they have to care for patients with established sores being transferred from other departments or from home. Each admission ward therefore probably needs one or two special beds for prevention and treatment of multiple sores, such as the net suspension bed (i) the flotation water bed (j), or the low air-bed (k). The flotation water bed (j) may cause problems for the physiotherapist attempting to prevent contractures of hips and knees in patients who cannot be moved out of bed easily. Therefore low air loss beds should be reserved, when they are in short supply, for patients with pressure sores who are apt to develop contractures or who already have them and cannot be removed from their beds for treatment. Nurse administrators who cannot guarantee at least three-hourly turning throughout

day and night for patients at risk will also need these specialised beds for prophyllaxis.

OTHER ITEMS

Anti-pressure-sore devices—Many items other than beds have been designed to prevent sores, and many firms will hire these out to hospitals. They include cushions made of jelly, sheepskin rugs, ripple beds, and sheepskin booties used to prevent heel sores. Water beds on the market which do not attain any degree of flotation are, in our view, of very limited value.

Safety sides may be needed by patients who are comatose or restless, but they should be used to protect and not restrict the patient. They should also not be more than three-quarter length to allow a patient who is determined to get out to do so without having the climb over the side and perhaps fall. Safety sides should be used sparingly,¹ as they not only give the public a picture of old age as a second childhood but also suggest to patients that they are considered to be "senile."

Bed cradles—Some patients will need these on admission, particularly those with peripheral vascular disease and leg ulcers and some with rheumatoid arthritis. Cradles are often underused because they are cumbersome and difficult to store, but a folding cradle is available (*l*). Compactness is also an advantage because bulky cradles can cause patients to feel cold.

Duvets—If duvets (*m*) supersede blankets in hospitals, cradles may be needed much less. The freedom and lightness produced by a duvet is a great asset in reducing the likelihood of flexion contracture at the ankle and makes it easier for the seriously ill to follow their physiological instinct to turn frequently, thus helping to reduce pressure sores.

Lockers—On admission personal toilet items must be stored, and items such as dentures, hearing aids, and spectacles must be safely identified. As the patient progresses his locker should accommodate personal clothing and should allow for a display of photographs and cards. Lockers in acute and rehabilitation wards need hanging space and compactness and must also be reversible so that they may be used on either side of the bed (*n*).

Cantilever, height-adjustable over-bed tables—There is a wide range of over-bed tables. The report by the Research Institute into Consumer Affairs on over-bed tables makes good recommendations.⁵ Before purchase it must be decided whether the table is to be used solely over the bed or over a chair as well; if it is to be used over a chair the base must not get in the way of the patients' feet or the chair legs. It must also be decided whether a drawer for personal belongings, including a looking glass, is needed, and if so then there should be room for the patient to flex his knees in bed.

Equipment needed during rehabilitation

CHAIRS

A variety of chairs is needed on all geriatric wards and day rooms so that a chair is available for particular patients' individual physique and pathology. Besides stability, variety in height of seat and angle of back and rake are needed.⁶ In addition to static chairs (*o*, *p*, *q*) mobile chairs (*r*) must also be available, or nurses will in desperation drag immobile patients in static chairs from the bed area to the day area.⁷

Trays should not be attached to chairs, as they may prevent the patients from sitting in small groups and may cause withdrawal and isolation. Specialist chairs include the Buxton (*s*) for patients with poor balance who are liable to slide out of chairs; the Chesterfield (*t*), which has removable arms so that patients can be transferred easily from chair to bed and from chair to toilet⁸; reclining chairs (*u*, *v*), which are useful for patients recovering from recent serious cardiovascular or respiratory illnesses; and the David Morgan chair (*w*) for patients who need a good lumbar support.⁸ The adjustable height Easy-to-Rise chair (*x*) is good for assessment purposes.

When equipping an admission or rehabilitation ward the number and type of geriatric chairs must be considered carefully. For example, in a 20-bedded ward there should be perhaps seven compact mobile chairs—for example, the Tyne chair (*r*)—which could double up for use beside the bedside and in the day room; about three patients would need self-propelling wheelchairs; and the remaining 10 patients, generally those who had progressed some way towards mobility, would need firm, stable, static chairs beside each bed⁷

for dressing and eating. These patients would also need suitable static chairs in the day room. There should also be a few of the specialised chairs.

OTHER ITEMS

Tables in day rooms should be stable and large enough to take four patients eating easily, but not too large to sit more than one patient on each side.

Toilets—It is obviously best for patients to go to the ward lavatory, which should have been adapted for the handicapped. But if this is not possible they may be placed on a sani-chair and taken to the lavatory. If for medical reasons patients must stay in the ward or need to urinate at night a bedside commode of the same height as the bed can be used; one firm has designed a chair that can be used either as a sani-chair or as a commode (*y*). As a last resort a disposable bed pan may be needed for the severely ill (*z*).

Baths—On rehabilitation and admission wards conventional baths are needed (not boxed in so as to prevent the use of a hoist) as well as baths for the handicapped.⁹ Showers in new units should be purpose-designed for use with or without a shower chair.

Equipment needed in continuing care wards

Lockers—Lockers in long-stay units should be larger than those in acute and rehabilitation units and can, if necessary, be used as permanent cubicle dividers. There are many types available—for example, (*aa*).

Lavatories—In these units it is often an advantage to have a Clos-o-mat for coping with patients who cannot carry out their own personal hygiene because of physical incapacity or mental state. There is now a model available in Britain that can be attached to existing lavatories (*bb*).

Baths—In continuing care units a variety of baths is still important to deal with patients with different types of handicap. The baths should be higher than in rehabilitation wards so that nurses can bath at the optimum height. A raised conventional bath and a Ladywell bath (*cc*), used in conjunction with the Ambulift Hoist (*dd*), are a good combination.⁹

Discussion and recommendations

Many factors lead to the wrong equipment being bought for elderly patients. These include the notorious spending sprees that occur at the end of each financial year; lack of consultation with geriatricians; and lack of opportunity for nurses to test equipment before buying it. When new units are established the choice of equipment is sometimes left to staff who have no clinical contact with the patients, and delays in authorisation and delivery often mean that new staff who receive the equipment are unacquainted with the reasons for the original choice. Overenthusiastic hospital authorities sometimes provide equipment that was not asked for and therefore does not get used; or administrators provide standard chairs and beds for an upgraded ward, forgetting that patients do not come in standard sizes or with standard disorders.

To overcome some of these problems there needs to be much more co-operation between designers of furniture and equipment and the hospital staff who will use them. Such co-operation could be fostered by an organisation such as the Association of Disabled Aids Manufacturers (ADAM).^{*} ADAM might also be a suitable body to try to rationalise the sales of equipment for the handicapped. At present many firms which once sold direct to hospitals now do so through agencies, and some which sell through agencies in Scotland sell direct in England. It is not clear whether the introduction of a middleman increases the chances of quick maintenance and provision of spare parts, but the present state of confusion does not help the user.

^{*}British Surgical Trades Association (Rehabilitation Aids Section), 21 Tothill Street, London SW1H 9LP.

Among users there is still much ignorance about the type of equipment available and its advantages and disadvantages. Too often doctors, nurses, and therapists request items of equipment without realising that several firms make similar products at different prices, and they often have no opportunity to try equipment for themselves. Academic departments of geriatric medicine and of rehabilitation should take on the task of systematically evaluating equipment, and staff must be able to evaluate equipment for themselves before buying it. Staff should visit the aid centres (see Appendix 2) in various cities, where equipment is displayed and information is available, and then they should be able to see the equipment in use in hospitals or borrow items so that they can evaluate them in their own wards.

Good communication and better financial planning are needed so that money available for furniture and equipment can be spent more effectively, with greater benefit for the patients. To improve communication and liaison, supplies officers should spend a period in clinical departments as part of their hospital training.¹⁰ One clinical professional person should be in overall charge of the equipment for a geriatric unit.¹¹

Most of those patients in non-psychiatric beds (excluding paediatric and obstetrics) are aged over 65 and are liable to develop physical handicaps that restrict their activities and often delay their discharge from hospital. Those on general medical and orthopaedic wards need well-chosen equipment as much as patients on geriatric wards.

Appendix 1

ITEMS OF EQUIPMENT

- (a) Ferno-Washington Scoop/Stretcher, FW Equipment Co Ltd, Whitehall Properties, Towngate, Wyke, Bradford, Yorkshire BD12 9JQ.
- (b) Ellison King Style ED6007, Ellison Hospital Equipment Limited, Willhead Lane, Perry Barr, Birmingham B42 2TD.
- (c) Nesbitt Evans Model 8600 (variable height), J Nesbitt-Evans and Co Ltd, Holyhead Road, Wednesbury, Staffs WS10 7BL.
- (d) Hoskins, 95 range adjustable height, Hoskins Limited, 77/89 Upper Trinity Street, Bordesley, Birmingham B9 4EQ.
- (e) Egerton Stoke Mandeville Tilting and Turning Bed, Egerton Hospital Equipment Limited, Horsham, Sussex RH13 7JT.
- (f) Hoskins, model No 9565, Hoskins Limited, 77/89 Upper Trinity Street, Bordesley, Birmingham B9 4EQ.
- (g) Power Operated Adjustable Posture Bed, The Medical Supply Association, Bourne Road, Bexley, Kent DA5 1NX.
- (h) Profila Bed, J Nesbitt Evans Ltd, Holyhead Road, Wednesbury, Staffs WS10 7BL.
- (i) Net Suspension Bed, Egerton Hospital Equipment Ltd, Horsham, Sussex RH13 7JT.
- (j) Beaufort-Winchester Flotation Bed, Beaufort (Air-Seal) Equipment Ltd, Wren Nest Mill, High Street West, Glossop, Derbyshire SK13 8E2.
- (k) Low Air Loss Bed System, Watkins and Watson Ltd, Westminster Road, Industrial Estate, Wareham, Dorset BH20 4SP.
- (l) Foldaway Bed Cradle, Masterpeace Products, Turbiton House, Medlock Street, Oldham, Lancs OL1 3HF.
- (m) Scan Bed Flame Retardant Products, Centrex, Kingsbridge Road, Harpurhey, Manchester, M19 1SP.
- (n) Locker Model 2288, Calthena Ltd, Nassau Mills, Patricroft, Eccles, Manchester 30.
- (o) Selectapaise chairs, B Cartwright and Son Ltd, Mendy Street, High Wycombe, Bucks HP11 2EU.
- (p) Highworth and Castell chairs, Parker Knoll Contracts Ltd, The Courtyard, Frogmoor, High Wycombe, Bucks HP13 5DJ.
- (q) Ward chair, J S Smith, Copyground Lane, High Wycombe, Bucks HP12 3BT.
- (r) Tyne Chair, New Equipment, Crosedale, Durham DH6 5HT.
- (s) Buxton Chair, G McLoughlin Ltd, Victoria Works, Oldham Road, Rochdale, Lancs OL11 1DF.
- (t) Chesterfield, G McLoughlin Ltd, Victoria Works, Oldham Road, Rochdale, Lancs OL11 1DF.
- (u) Rest-a-Gest, 38 Upper Clapton Road, London E5 8BJ.
- (v) Nimrod, Parker-Knoll Contracts Ltd, The Courtyard, Frogmoor, High Wycombe, Bucks HP13 5DJ.

(w) David Morgan chair, David Morgan Ltd, The Hayes, Cardiff CF1 1UG.

(x) Easy-to-Rise chair, Doherty and Sons Ltd, Eedee House, Charlton Road, London N9 8HS.

(y) New Oxford Commode and Shower Chair, F J Payne and Sons Ltd, Mill Street, Osney, Oxford OX2 0DH.

(z) Vernaid System, Vernon and Company, Pulps Ltd, Slater Street, Bolton, Lancs BL1 28P.

(aa) St Helen's Locker, Edward Doherty and Sons Limited, Charlton Road, Edmonton, London N9 8HS.

(bb) Medic-Loo, Medic Bath Company, Ashfield Works, Hall Lane, Manchester M10 8AZ.

(cc) Ladywell Bath System, G McLoughlin and Co Ltd, Victoria Works, Oldham Road, Rochdale, Lancs OL11 1DF.

(dd) Ambulift Hoist, Mechanoids Ltd, Mercia Road, Gloucester GL1 2SL.

Appendix 2

CENTRES WHERE INFORMATION ON EQUIPMENT IS AVAILABLE

Disabled Living Foundation, 346 Kensington High Street, London W14 8NF.

Disabled Living Centre, 84 Suffolk Street, Birmingham 1.
Leicester Red Cross Society, Medical Aids Department, 76 Clarendon Park Road, Leicester LE2 3AD.

Merseyside Aids Centre, Youens Way, East Prestcote Road, Liverpool L14 2EP.

Newcastle upon Tyne Council for Disabled Centre, Mia House, Ellison Place, Newcastle upon Tyne NE1 8XS.

Scottish Information Service for the Disabled, 18 Claremont Crescent, Edinburgh EH7 4QD.

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- ² King's Fund Working Party, *Design of Hospital Beds*. London, King Edward VII Hospital Fund for London, 1967.
- ³ Gainsborough, H, *British Hospital Journal and Social Services Review*, 1967, **77**, 859.
- ⁴ Andrews, J, *Lancet*, 1971, **1**, 442.
- ⁵ Research Institute into Consumer Affairs, Comparative Test Report No 11 Bed/Chair Tables. National Fund for Research into Crippling Diseases, Vincent House, Springfield Road, Horsham, West Sussex RH12 2PN.
- ⁶ Bramwell-Jones, S, *British Hospital Journal and Social Services Review*, 1968, **78**, 155.
- ⁷ Atkinson, L, *Occupational Therapy*, 1971, **1**, 442.
- ⁸ Andrews, J D B, *British Journal of Hospital Medicine*, 1970, **3**, suppl No 1, p 21.
- ⁹ Andrews, J, *World Medicine*, 1971, **6**, 88.
- ¹⁰ Harbridge, E, *Hospital Equipment and Supplies*, 1976 (June), **15**, 8.
- ¹¹ Andrews, J, and Atkinson, L, *Hospital Equipment and Supplies*, 1975 (February), **13**, 29.

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WORDS ANGL0-SAXON- and GRAECO-ROMAN-derived anatomical adjectives.

For many of the common parts of the body there is a choice of adjectives, which may be of either Graeco-Roman or Anglo-Saxon origin. In each instance there is an important difference in meaning between the two adjectives pertaining to the relevant part, and it is the Graeco-Roman adjective that conveys the direct meaning. For example, the adjective of hand is manual, not handy; of tooth, it is dental, not toothy; of throat it is pharyngeal, not throaty; and of leg crural, not leggy. (It is curious that the corresponding Anglo-Saxon-derived adjective is usually pejorative and often denotes a feature of the personality of the owner.) Similarly, the adjective of nose is nasal, not noseny; of heart cardiac, not hearty; of head cranial, not heady; of cheek malar or buccal, not cheeky; of skin dermal, not skinny; of blood haemic or haematological (depending on context), not bloody; and of cock, the adjective is penile, not cocky. Alas, more pitfalls for foreigners. A difficult language, English.