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FOD Inspectors, SG Medical Inspectors

PATIENT HANDLING RISKS: MAKING THE BUSINESS CASE

This SIM summarises the work of a NHS trust to make a financial case for investment in better management of equipment and maintenance. The steps taken, leading up to approval of a Total Equipment Managed Service, are described and the outcomes quantified.

BACKGROUND

1 This case study is taken from Surrey and Sussex Healthcare NHS Trust, an 850 bed acute trust. It has been written from information provided by the former trust Senior Back Care Advisor (BCA) who initiated the project, and been produced in collaboration with the trust.

2 The Senior BCA had assessed risks in clinical areas of the trust and identified 21 major risks which were due to equipment, resulting in actual or potential injuries to staff or patients. Equipment was often outdated, poorly maintained or insufficient.

3 The vision was to introduce a Total Managed Equipment contract (TME) into the trust with a view of reducing sickness absence from musculoskeletal disorders, saving staff time spent moving/handling patients and enhancing patient care.

Step 1: A working group

4 A working group was set up to steer the process of data gathering, drawing up the requirements for the contract and oversee its implementation.

5 The group consisted of: BCA, Trust Board Member, Purchasing Manager, Finance Manager, Tissue Viability Nurse, Nurse manager, Infection Control Nurse and representatives of Estates, Portering and Therapies.

6 The group first visited a trust that had already implemented a similar programme, to see first hand what can be achieved and learn about some of the pitfalls.

7 The group then identified existing sources of funding that were currently being used for equipment that could be transferred to finance the contract. It was intended that the costs would be met within existing budgets. For example the current contract for lease/rental of beds and pressure relieving mattresses cost £420,000. (The final costs of a TME contract came to £320,000 per annum, giving an immediate saving)

Step 2: A pre-tender meeting

8 The main suppliers of equipment management were invited to a pretender meeting to explain the range of equipment and services they can offer. At the time, there were 2 main suppliers. By now, the working group was beginning to formulate the aims of a contract:

- Comply with health and safety legislation / reduce manual handling injuries;
- Save money annually;
- Reduce infection and pressure ulcer rates, and resultant additional patient care costs;
- Have suitable equipment for bariatric patients available.

9 Both main suppliers offer a service to audit all existing equipment in the trust and quantify its suitability and condition. One supplier will do this free of charge, the other makes a charge that is refundable against the first contract payment.

Step 3: Data collection

10 An audit of equipment was carried out, looking at beds, trolleys, couches, static and dynamic mattresses, dynamic cushions, wheelchairs and bedside chairs, fire evacuation sheets, hoist slings and electric socket provision.

11 The audit revealed weaknesses and failure to comply with statutory requirements in a number of areas, including:

- Equipment often not suitable for the task;
- Much equipment in poor condition, some beyond repair;
- No control over equipment, bed accessories often not compatible with the bed;
- Little pre-planned maintenance;
- The rental system for dynamic mattresses did not meet the needs and there was a regular monthly overspend of £15 - 20,000;
- No regular decontamination of mattresses;
- Lack of knowledge amongst staff of when to use certain items.

12 An audit of patient pressure ulcers was also carried out. The incidence rate was 11%.

Step 4: Quantify costs

13 The costs of pressure sores was calculated to include the costs of dressings and drugs together with dietary supplements given to patients as over £33,500 over year. Additional costs were staff costs associated with the extra care needed that worked out at 321 days during 1999. It was calculated that the opportunity costs for this equated to an extra 36 medical cases or 4 elderly care patients, resulting in shorter waiting lists.

14 Two aspects of manual handling were identified and costed as far as possible:

- The time spent assisting patients with mobility needs that could be reduced/eliminated by use of better beds was calculated to be 486 hours daily, and costed at around £2 million, although this cost could not be realised, such savings would be used on other

nursing duties;

- Sickness absence from work related manual handling injuries was recorded as 212 days annually at a cost of £15,114 for staff replacement costs only.

Step 5: Trial equipment

15 It is common practice for equipment suppliers to provide equipment on loan for a trial period. An evaluation of each item should be carried out to include suitability for the task, user and patient views, and ergonomic evaluation.

16 The features of each item were ranked and scored with weightings for certain features e.g. ease of patient getting out of bed was considered more necessary than ease of steering and using brakes. This process allowed selection of equipment by a structured approach.

Step 6: Draw up the tender specification

17 The working group began to put together the facilities that the contract should contain. The priorities were:

- Provision of new equipment;
- Planned maintenance of current bed stock and chairs;
- Equipment moving and tracking;
- Technical and clinical support;
- Cleaning of dynamic mattresses between patients;
- Laundry of all manual handling equipment;
- Collection and audit of pressure ulcer statistics.

18 There are 2 main types of contract: Total Managed Equipment (TME) and Total Bed Management (TBM). The options were appraised, with a recommendation for the former.

19 Performance indicators were specified e.g.:

- Equipment placement within 2 hours of request;
- Faulty equipment repaired or replaced within 4 hours of request;
- 6 monthly mattress audit and annual equipment audit;
- Monthly equipment breakdown and maintenance reports

Step 7: Obtain tenders

20 Having received Board approval for the tender specification, an advertisement was placed in the European Journal and tenders reviewed.

21 The business case for the preferred contract was put to the Clinical and Trust Board for approval.

Example of cost of TME contract [1]		

	Lease	Annual cost £
500 beds	10 year	110,000
435 mattresses + dynamic	2 x 5 years	60,000
470 chair & wheelchairs	2 x 5 years	35,000
Manual handling equipment	2 x 5 years	2,300
Technical support	2 x 5 years	15,000
Management of beds	2 x 5 years	32,000
Management of mattresses	2 x 5 years	44,000
Infection control	2 x 5 years	750
Contract management	2 x 5 years	20,000
	Total costs	**320,000**

1 These figures were current in 1999 and based on the specific requirements of the contract with the supplier. They should be treated as illustrative only.

Step 8: Implement proposals

22 An implementation plan was drawn up to include the practicalities of equipment change including provision of facilities such as electric sockets and training of staff. Planned change management is necessary for such large-scale projects.

Outcomes

23 The trust took delivery of over 500 electric profiling beds plus mattresses, a range of chairs for general use and 135 specialised ones for stroke rehabilitation, traction equipment and oxygen holders.

24 Benefits after 1 year of operation were identified as follows:

- 69% saving of nursing time assisting or moving patients equal to 16,741 days or £1,440,808 p.a., which is utilised for other aspects of nursing care. This money cannot be identified as a cost saving. More importantly, there is a reduction in the cumulative effect of musculoskeletal disorders;
- RIDDOR reportable injuries associated with caring for patients in bed/or when moving beds and accessories fell from 5 in 1998/99 to 3 in 2001/02. These figures are too small to be statistically significant. All reported MSD injuries i.e. including non-RIDDOR reportable, fell from 28 to 4 over the same period;
- Bariatric patients are now more commonly seen in hospitals e.g. 27 patients over 20 stone on one day, in a survey in this trust. Equipment for bariatric patients was made available as part of the contract eg. beds, mattresses, chairs, hoists;
- A recent clinical audit (2003) demonstrates the incidence of pressure ulcers is approximately 3% (11% in the original audit). This will reduce the numbers of patients requiring longer-term care and will give rise to savings in the pharmacy budget for dressings and drugs for pressure sore healing.

Application to care homes

25 Possible costs for implementing a similar scheme for care homes are shown in the table

below. The figures are illustrative only, and will depend on the terms and conditions of the individual contract:

Example of cost of TME contract for a Care Home		
	Lease	**Annual cost £**
50 beds	10 year	9,000
50 mattresses	2 X 5 years	2,200
5 dynamic mattresses	2 X 5 years	1,546
20 riser/recliner chairs	2 X 5 years	2,246
Maintenance of above	2 X 5 years	7,000
	Total costs	**21,992**

26 This type of contract has also been used in community trusts and home loan stores.

Comment

27 This SIM gives inspectors an insight into how equipment leasing contacts can be set up and managed. An increasing number of health care providers are using this and similar routes to obtain new equipment with ancillary services such as laundering and maintenance.

28 Whilst some of the outcomes, relating to clinical care, are beyond the scope of the application of Health and Safety at Work Act, inspectors may wish to use the information in this SIM to illustrate the broader advantages of effective risk management for delivering good patient care.

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