NB 1 for Hey Groves exclude VAT

Cardiac Anaesthesia & Intensive Care Equipment Required ('95/96)

S Pryn 12/94

Intensive Care Ventilators (including humidifier)	Siemens Servo 300	x 2	£25,600 each	
	Siemens Servo 900C	x 1	£16,900 each	£68,100 total

Cardiac Intensive Care (ward 5B) has 11 ventilators at present to service 10 intensive care beds. (This excludes two ventilators only capable of ventilating infants). Of these ventilators, four are Servo 900B's purchased between 1979 and 1985. Siemens are withdrawing all servicing and spare part support from these obsolete designs from 1995. It is thus imperative that these ventilators are replaced prior to any sudden irreparable failure in service.

Priority (1)

It is our intention on 5B to standardise on the Siemens Servo family of ventilators so that only one control interface is used. We at present have two Servo 300's, and have been very pleased with their flexibility, especially for long term patients with pulmonary problems. The 300 also has the added safety feature of a short term battery back-up, thus the sickest patients are not exposed to major changes in ventilation should a temporary mains power failure occur. As the 300 is expensive, we would see it as our ventilator of choice for long term patients only, and as such would require a total of four.

The Servo 900C is entirely suitable for our other, more routine, cardiac surgical patients. The replacement, outlined above, will bring our complement to five.

From autumn 1995 paediatric cardiac will move from 5B to BCH. The infant ventilators, and one Servo 900C will follow the move. This will leave 5B with 9 ventilators to service 8 intensive care beds (300 x 4, 900C x 4, 900D x 1).

Ideally all three ventilators should be purchased in 1995; however, if the board is willing to take the risk of continuing to use an obsolete and irreparable 900B beyond manufacturer's support, then it may be possible to delay the purchase of one of the 300's until 1996.

Patient Monitoring System (Theatre)	HP Merlin modular	x 2 theatre	£26,000 each	
	Pump Base Displays	x 3	£5,650 each ≈	£68,950 total

Our present theatre monitoring system, though only purchased in 1988, is obsolete and does not enable us to offer patients the standard of clinical care that they can expect in nearby centres. Major (design) faults in our current system include:

- Very poor filtration of electrical interference - such that when diathermy is used the patient is essentially unmonitored.
- No on-line ST segment analysis - resulting in delayed or missed diagnosis and treatment of myocardial ischaemia - a factor shown to influence outcome.
- No colour coding of wave forms - this has resulted in several errors of judgement when decisions have been made on the wrong wave form.
- No facilities to measure cardiac output - inappropriate decisions concerning patient management have often been made when cardiac output and SVR have been guessed on discontinuation of cardiopulmonary bypass.
- No facilities to accurately measure pulmonary artery wedge pressures at end expiration. These are guessed at present - highly inaccurate!
- Inadequate trending facilities (none !)

Priority (2)

Surgeons and anaesthetists alike are keen that this monitoring system is replaced as soon as possible. The HP Merlin modular system is entirely appropriate and would have the advantage that it would bring cardiac in line with other theatres in UBHT (e.g. Hey Groves).