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CASE STUDY

1 COMPANY



Established in 1848, the Royal Melbourne Hospital (RMH) is one of Victoria's oldest and leading teaching hospitals operating across two city campuses. First rate equipment helps the RMH enhance the quality of health care provided to patients. Benefits include faster diagnosis, less invasive surgical procedures, and reduced hospital stays.

The Clinical Engineering Department's role is to ensure that all clinical equipment is maintained, tested, and in a reliable working condition at all times. This extends from electric power points to which the equipment is plugged in, through to the machinery and consumable parts such as batteries. A lot of the equipment is portable, allowing doctors to assess critical care patients in Emergency Departments, enabling the right treatment faster.

Over 13,000 individual assets are maintained by the department. The responsibility often lies within the department to ensure all equipment is thoroughly checked, repaired and recommended for disposal once past its working life.

The nature of equipment movement, limited number of expensive equipment units, and broad range of critical through to non-critical equipment, has meant that the Clinical Engineering Department are often under a lot of pressure to prioritise work in a time sensitive manner.

2 ISSUE

According to Ms Nicola Donaldson, Quality and OH&S Manager, Clinical Engineering Department, one of the biggest challenges was that they could not trust the integrity of the information on their old database.

Although the equipment was barcoded prior to the introduction of Hardcat, there was no way of confirming where the equipment was, the status of its repair, or the ability to prioritise work.

Testing of equipment is often done in teams of two, following a two week cycle. Work order information was written up on sheets of paper, and manually re-entered when someone had time. When staff were away or repair work was not fully completed the first time around, it was difficult to know the procedural status for another person to pick up.

"Access to some wards such as the Intensive Care Unit is difficult at the best of times. So the priority was to get people out there to do the repair, and then think about the paperwork after. This posed a risk to both the patients and the hospital." – Nicola Donaldson, Quality and OH&S Manager

With the limited number of resources – both staff and medical equipment, this issue had the potential to escalate out of control.

"Non-critical equipment risked being left on shelves for months, because we couldn't easily prioritise work. We also had problems finding the equipment on our old database due to keying in errors such as spelling and not being able to search on multiple fields."

Medical device recalls by the manufacturers or regulatory bodies are a common occurrence within the hospital, so being able to identify affected equipment and its current location posed a huge problem. The Clinical Engineering Department services 9 floors within the Royal Park campus, satellite clinics, and a number of Aged Care facilities.

3 SOLUTION

Clinical Engineering Director, Mr Jack Davie, put a business case together for the Board of the Royal Melbourne Hospital on the critical need to upgrade their Asset Management database capabilities. The existing system was written in-house, and would no longer be supported.

The Collier Foundation kindly donated the funds required for a 2013 implementation, which included Hardcat's Core Asset Register, Preventative Maintenance and Help Desk modules, as well as Barcoding/Catscan licenses allowing for in-field Work Order Management via PDAs.

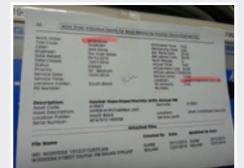
RMH assessed several different asset management solutions, before singling out their preferred supplier – Hardcat.

The solution had to be able to support 2 barcodes per asset – one for the Clinical Engineering Department, and the second for the Finance Asset label. It also had to solve all the issues highlighted, as well as assist the department meet its KPIs which was to repair equipment within a designated timeframe.

Being ISO9001 accredited, there was a minimum requirement for the following reports to be generated both proactively, and upon demand:

1. Incident management reports – identifying the ticket number, job status, email trigger when jobs are completed, and the ability for feedback.
2. Canned reports for management use – with domain control, restricting the equipment shown
3. Clinical Engineering 'In Store' equipment reports – identifying which equipment is currently being held by the Clinical Engineering Department but owned by another department (ie Emergency/ Theatre / ICU). The reports had to be specific and relevant to the department, and produced at different times according to the reporting requirements of the owning department.

Hardcat met all of the criteria, with ongoing development scheduled for a multi-stage roll out.



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4 BENEFITS

"Before, we were working for the database, whereas now, the database works for us! Having Hardcat has got rid of truckloads of paperwork."

The Clinical Engineering Department's reputation was a risk due to their inability to know where assets were, its repair status, and not knowing how to prioritise work with limited resources and access to wards.

Hardcat's solution has provided:

- Support mechanism for OH & S checklists, which now appear as presets. Easy to manage, and assurance procedures are being followed.
- Ease of finding out an asset's location and repair status, at anytime, by anyone in the department.
- Ability to accurately track equipment and raise alerts when maintenance is due. Proactive asset management rather than reactive – which can pose unnecessary risk to patient care.
- Time efficiencies and an always up-to-date database, via the effective use of PDA's. Repair procedures can be checked off in real time and synchronised out in the hospital wards or in a matter of seconds upon attaching the PDA to a synch dock.
- Ability to prioritise Work Orders based on Critical versus Non-Critical equipment status. Things are not left on shelves for months, or lost. Technicians can't just pick and choose.
- Ability to set repair procedures within the Work Order, and to know which step has been completed, or yet to complete should a repair job have to be suspended due to equipment access (ie. In ICU or Emergency departments).
- Efficiency gains achieved through visibility of replacement cycles and accurate forecasting of costs. "Batteries are expensive – often \$400 each and 2 batteries required per device. That's \$'000's of dollars per year just on batteries."
- Supports ISO9000 process. Inbound complaints are now handled more effectively. Transparent, responsibility spread throughout the department, and ensures proper follow up. Anyone can look up a case and know its repair status. Who repaired it, When, and the procedure followed.
- Hardcat's ability to "Copy a job" has resulted in hours of time saved in re-keying in repetitive processes. Time efficiencies – what used to take hours, now takes seconds or minutes

Another unplanned benefit for the Clinical Engineering Department has been the ability to now on-charge other departments for repairs and maintenance. This was never possible on the previous system. Equipment ownership is tracked by cost centre number, which is part of each asset record.

"We take the Hardcat data and give it to the Finance Department. It has been so reliable that RMH plan to use the information we can pull out of Hardcat's Asset Management Register for next year's forecast budget."

– Jack Davie, Director – Clinical Engineering, Royal Melbourne Hospital

5 REASONS FOR CHOOSING HARDCAT

- Supports ISO9000 procedures – easily and with minimal fuss
- Fast and easy deployment as a solution
- Speed – speed of searching, reporting, logging jobs and repair status
- Team efficiencies – no one needs to be an expert to use the Hardcat system. Once it is configured for our procedures, the system is intuitive.
- Mobility solution. Catscan and PDAs save hours of unnecessary back office work.
- Ability to pull cost information (cost codes) from other systems into Hardcat, so we can allocate charges more reliably

6 THE SAVINGS

Man hours for mandatory audits reduced by approx. 70%. This has meant surpassing the Department's KPIs of "85% repair on time" by 8-9% each period.

