



Vocera Communications System improves staff efficiency by up to 22% at Christchurch Hospital, New Zealand

SUMMARY: Since installing the Vocera Communication System in their Emergency Department, Christchurch hospital has seen significant improvements in communications. Vocera has enabled them to make the most of staff resources by reducing time spent in wasteful tasks such as overhead paging and walking about trying to locate other staff members. By regaining time previously lost through delays, the staff in Christchurch Hospital's Emergency Department are now free to devote time to more productive and purposeful activities. The net result is better patient care, improved clinical safety, happier staff and better overall efficiency.

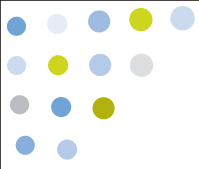
FACTS: Christchurch Hospital, a 650 bed facility, is the largest tertiary teaching and research hospital in the South Island of New Zealand. It provides a full range of emergency, acute, elective and outpatient services to over 35,600 inpatients each year. Approximately two-thirds of these patients are admitted acutely. There are over 197,000 outpatient attendances at the hospital, excluding those for radiology and laboratory services. In addition, Christchurch Hospital has the busiest

Emergency Department in Australasia treating more than 70,000 patients a year. Christchurch is part of the Canterbury District Health Board.

PROBLEM: Christchurch's Emergency Department operates in an environment with significant constraints on human resources, physical space and time. One of the biggest challenges faced was facilitating effective communication in a workplace that spans 4 separate geographic areas and has over 150 employees. Before installing Vocera, Christchurch's emergency staff had to rely on inefficient overhead paging and walking long distances in order to reach other staff members.

SITUATION: Hospital management recognised the need to provide a more effective communications system for an extremely busy Emergency Department. Their intent was not to reduce staff but to increase efficiency, thus driving up productivity and easing the pressure on a limited nursing and medical staff. Increased safety was also seen as an inherent by-product of these improvements.





“The Vocera Communication System has had benefits for our Emergency Department that are immediately evident. This system has had a direct impact on improving workflow and saving time in a way that is both measurable and significant.”

Dr. Paul Gee
Emergency Specialist
Christchurch Hospital
Canterbury District Health Board

SOLUTION: The Vocera Communication System was implemented in Christchurch’s Emergency Department. Each staff member was given a Badge to wear while on duty so that they could instantly call and locate other members on the system. The Vocera Telephony Solution Software was also installed so that calls to internal and external phones could be made from the Badge.

A program of surveys, activity logs and audits was put in place to study work practices before and after the installation of the Vocera system. Specific work roles and tasks were targeted because they were known to have communication difficulties. The outcomes were:

- **Efficiency**—reduction in distances walked and time spent contacting other staff members on shifts
- **Effectiveness**—improved ability to successfully contact appropriate staff members
- **User Satisfaction**—improved user-satisfaction based on a qualitative 10-minute survey

According to the ED quantitative studies, using Vocera to call directly between users and locate staff members produced efficiency gains of up to 22%. The ergonomic studies showed that gains of 3.5-7% were being achieved, with even higher gains anticipated following additional staff training. A conservative cost benefit analysis estimated significant productivity gains per annum due to time-saving efficiencies. It was estimated that these gains could rise with further deployments and additional user training.

Overall user acceptability and satisfaction of the system was very high. Furthermore, it was anticipated that by expanding the number of users, using more of the advanced functionality, and further integrating Vocera into the hospital environment, additional improvements could be realized. These improvements were identified in terms of better work-flow, decreased delays and faster delivery of care.



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