Safe implementation of hospital wireless networks using international standards

Project Title: Safe implementation of hospital wireless networks using international standards.
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Wireless technology has become a constituent part of technology solutions in the hospital environment in Australia. However, as part of the overall governance structure, the technology convergence associated with wireless is in its early stages. It is often misunderstood by implementers and those maintaining wireless networks in the complex healthcare environment. Currently, there is no comprehensive and accessible risk analysis or complex system guidance to address these issues from a systems perspective.

The objective of the research is to develop recommendations on how to deliver a program of safe wireless deployment in hospitals. Further, it aims to ensure that best practice mitigation strategies are used, to minimize, if not eliminate, potential patient safety incidents linked to deployment of wireless networks in hospitals.

The project will design, develop and validate a practical risk-based, systems perspective, methodology (protection framework) for the safe implementation of wireless networks based on international standards. It will use ISO 80001-2-3 *Application of risk management for IT-networks incorporating medical devices – Part 2-3: Guidance for wireless networks* as a foundation.

The framework resulting from this research will enable designers and implementers of hospital wireless networks to employ informed, best and relevant industry practice. It will provide a guide for hospitals, designers and implementers to work together to minimise issues in wireless network deployment

More specifically, this will equip hospitals to build skilled teams to articulate improved requirements specifications, understand the ramifications and impact of choices made in design, manage the project across its lifecycle, and ensure the technical needs and administrative and clinical outcomes are met. Consequently, this will provide hospital executives a level of governance over the process and assurance of safe Wi-Fi deployment, ultimately reducing patient safety issues due to the change process including installation faults and Wi-Fi issues.

The research will also lead to the development of a strategy to increase awareness of these issues across the hospital sector in Australia by informing a program to assist Cisco to engage and advise users and provision partners to deliver a risk-based assessment of safe wireless deployment.
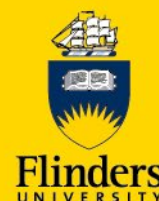
Further, the research will inform the international standards community on the impact and use of ISO/IEC 80001 standards and their future development.

Funding: $240,000 Cisco Australia.
Project timeline: 2017-2022
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