



The hidden pandemic: surgical wound complications and the use of technology for early detection and prevention

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Cite as: Sandy-Hodgetts K. The hidden pandemic: surgical wound complications and the use of technology for early detection and prevention. *Impact Surgery*. 1(4). 122-123. DOI:10.62463/surgery.85

The global volume of surgery is considerable and growing. It was estimated that 312.9 million surgical procedures were performed in 2012, which represented a 33.6% increase over 8 years¹. Despite advances in surgical technique, infection control practices and wound care, surgical wound complications such as surgical site infection and surgical wound dehiscence are unwanted outcome following surgery. With growing rates of obesity, an ageing population and preexisting comorbidities, patient complexities will remain in the surgical population for the foreseeable future. Moreover, healing after surgery is often compromised due to these complexities. The frequency of wound complications varies between disciplines, countries and regions; however, evidence suggests that surgical wound complications are the most managed wound type, more so than pressure injuries or diabetic foot complications.^{2,3}

Worldwide, the prevalence of SSI ranges from 2%⁴ to 38%⁵, with higher prevalence reported in low to middle-income countries^{6,7}. Furthermore, emerging work has revealed they are more commonly managed in community or primary care settings and a paucity in the data remains in understanding the burden of surgical wound complications following discharge⁸. Since the COVID-19 pandemic there has been a considerable increase in the use of telemedicine and digital technologies regarding patient management.

Remote incision care in the home setting is steadily growing as part of health services delivery using digital technologies. Remote care has improved the ability for post discharge surveillance, whilst still in the formative years for clinical practice.^{9,10} Studies have utilised patient enabled smart phone technologies for early detection in the home care setting with promising findings¹¹⁻¹³, however scalability of these technologies warrants further investigation¹⁴. With much discourse regarding digital technologies, the moral to the story is that maybe

one size doesn't fit all, and technologies need to be fit for purpose and accessible for every patient. More importantly is the education of patients, their family, crucial to increase health literacy for surgical wound care. This will be key for prevention of these unwanted outcomes into the future.¹⁵

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