

Clinical audits: gathering the evidence for informed clinical practice

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The wound care landscape in the UK is one dominated by a number of trends and talking points. Some have seen continued discussion in the frontline, in the case of pressure ulcers and their preventability. Others, such as the role of evidence-based wound care, have seen some impassioned discussion, especially regarding the relative merit of each particular type of evidence. Are randomized controlled trials the be-all and end-all? What weight should be placed on Cochrane reviews? When did the concept of the clinical audit even manifest itself? The former two questions are far beyond the scope of this column, though we can shed light on the third.

IGNORED AND CELEBRATED PIONEERS

As has been seen in this column over the past years, there have been a number of enlightened minds who have, often posthumously, changed the course of medical history through the belated acceptance and adoption of their practices by their successors. As we saw in the case of Ignaz Semmelweis (1818–1865), these individuals fought alone against a trenchant and hidebound establishment; their work belittled and ignored, fantastic careers ending in disgrace and obscurity (White, 2016). For others, their work was celebrated within their lifetime, achievements held in high regard, honours bestowed upon them. Surgical luminary Christian Albert Theodor Billroth (1829–1894) is an example of the latter case, the irony being that both he and Semmelweis are regarded as being members of the same Vienna School of Medicine.

INTRODUCING CLINICAL AUDITS

What relevance is this to evidence-based practices? Theodor Billroth was an exemplary surgeon of his time and is credited with the first esophagectomy, laryngectomy, and gastrectomy — for which he developed the eponymous procedures Billroth I and Billroth II (Wong, 2014). However, it is a lesser-known aspect of his career that I would like to focus on and celebrate. It could be said that Theodor Billroth is partly responsible for that most

trusted tenet of modern wound care — evidence-based medicine. While professor and director of the University of Zürich 1860–1867, Billroth introduced the concept of clinical audits (Kazi and Peter, 2004). This involved the publishing of all results, irrespective of outcomes, such that frank discussions on morbidity, mortality, and technique could take place, and lessons could be learned. Indeed, through auditing his treatment outcomes, Billroth ultimately stopped performing thyroidectomies due to what he deemed to be unacceptable mortality rates (Becker, 1977), thus influencing patient selection (Kazi and Peter, 2004). Whilst cause of death differed, parallels can indeed be drawn with Semmelweis's observations (and fastidious records) on hand washing and incidence of puerperal fever in 1847 — were it not for the establishment disregarding his findings until the eventual acceptance of germ theory. Incidentally, Billroth was no stranger to investigating infection, arguably pioneering sepsis research through his 1874 “Investigations into the Vegetal Forms of *Coccobacteria septica*” (Lagerkvist, 2003).

NOT JUST DOCTORS

Credit for the inception of auditing and the heeding of evidence must also be paid to that doyenne of nursing, Florence Nightingale. Her work in Scutari in 1854 was of similar application and significance to that of Semmelweis — through strict hygiene practices and the keeping of meticulous records, she was able to show a reduction in mortality rates from 40% to 2% (International Council of Nurses, 2013).

It is an interesting understory that Semmelweis, Billroth, and Nightingale all made strident efforts to understand infection, and to catalogue patient cases in an attempt to solve what had been a most devastating riddle. It is unfortunate that the establishment chose to heed certain individuals but not others. It is yet more unfortunate that it took until the arrival of germ theory to prove beyond doubt a chain of causation which had already been largely solved.



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