

Application: Semmelwies & Medical Hygiene

Ignaz Semmelweis was one of the primary leaders in the field of medical sanitation and clearly shows the importance of how practical skills like handwashing produced life-saving outcomes before medical theory fully developed to explain why these skills were working. According to a book titled the Principles of Nursing Infection Prevention Control, Semmelwies' orders for doctors and nurses to wash that hands between patient and to do the same with the medical tools they were using, the mortality rate in the maternity ward where Semmelwies worked went from 13-18% of women who gave birth dying of childbed fever in 1846 to just 1.2% less than two years later in 1848. There was no scientific theory to support Semmelwies' conclusions as germ theory and the understanding bacteria had yet to be developed, and he was even let go of from his position largely due to skepticism, but he saved countless lives nonetheless, doing with practical skills what theoretical knowledge refused to accept.

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Ignaz Semmelweis (1818—1865) may not have a well-known name, but today's healthcare settings benefit greatly from his work. He was born in Buda (now Budapest) in Hungary and obtained his medical degree at the University of Vienna in 1844. He later worked at the Vienna General Hospital, where he made ground-breaking observations regarding the transmission of puerperal fever. When he started working as an assistant to a professor in the maternity ward, the First Department in 1846, he was confronted with a dire situation; 13–18% of women delivered by physicians and medical students died as a result of childbed fever (puerperal fever). In the second department, there were no doctors or students and women were assisted during delivery by midwives and trainee-midwives', and the mortality rate was approximately 2% [1]. Semmelwies managed to solve this mystery when he learned that his colleague and friend Jakob Kolletschka, who supervised medical students in the mortuary room, sustained a cut injury and eventually died from puerperal fever. Semmelweis concluded that this was transmission of the disease from the mortuary room, as the medical students were not washing their hands when they were attending women in labour [2]. Semmelweis not only discovered the source of all evil (Fig. 11.1) but also developed a set of precautions. From mid-May 1847, large bowls of bleach stood at the entrance to the maternity clinic so that everyone who attended a birth would do so with clean hands. During the next 7 months, only 56 of 1841 women who gave birth died of maternity fever—a decrease of 3%, which was comparable to that of the midwives in the Second Department. In 1848, the figures for both departments fell to 1.2%, partly because Semmelweis demanded that the instruments used were also washed. It is still too early to discuss "disinfection" here; we have to wait over 10 years for this, until Joseph Lister developed hygienic surgery. Ignaz Semmelweis, the founding father of hygiene's motto was "Doctors, wash your hands".

By Charis Baker