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Epidemiological Surveillance

Wound Infection Surveillance of War Wounds in British Forces Personnel

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Introduction: Deployed British military personnel sustaining battlefield wounds enter a single aeromedical evacuation pathway with rapid repatriation to a sole UK civilian hospital in Birmingham. A prospective wound infection surveillance system was established to identify true clinical wound infection in these patients.

Methods: All military patients admitted to the UK civilian hospital with battlefield wounds were included and followed-up on until hospital discharge. Wounds were clinically and objectively assessed for infection using Surgical Site Infection Surveillance (UK definitions). Variables possibly affecting outcome such as type of injury and surgical interventions also were recorded.

Results: In the 12-month period (April 2008–April 2009) 162 patients were captured by WISS. Thirty-six distinct wound infection episodes occurred in 27 individuals—a wound infection rate of 16%. A total of 75% of these were classified as "deep" infections. All were contaminated at time of injury, most often blast injury (88%). No deaths resulted from wound infection. Microbiology varied, but *Acinetobacter species* caused no clinical infections despite significant rates (37%) of colonization.

Conclusions: The low clinical wound infection rate reflects the quality of primary surgical care. The results are a critical performance indicator of surgical and post-trauma care, forming an integral part of patient management. The wound infection surveillance system now will be extended to include long-term follow-up.

Keywords: British forces; infection; military personnel; wound; wound infection; war
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Impact of Medical Intelligence for Non-Medical Users

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The NATO-accepted definition of *Medical Intelligence (Renseignement Médical)* is "intelligence derived from medical, bio-scientific, epidemiological, environmental and other information related to human or animal health. This intelligence, being of a specific technical nature, requires medical expertise throughout its direction and processing within the intelligence cycle." (AJMedP-3)

By combining inputs from several collecting methods and processing medical intelligence predict intentions, threats, risks, and future developments.

Medical intelligence contributes to an integral intelligence picture that highlightes threats and risks. For example:

1. Two countries are in a state of dispute that seems to be escalating. Suddenly, the border between the two countries is closed and all communication by road is ceased.
2. As medical intelligence signaled one of the countries has an outbreak of foot-and-mouth disease, and closed its border per OIE regulations.
3. The information confirmed that there was no escalation of foot-and-mouth disease, some of the bureaucratic systems functioned, and the country demonstrated commitment to international obligations.

Keywords: impact; medical; medical intelligence; non-medical
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Medical Evacuation

A Pilot Study of Performance of LTV1000 and TbirdVSO2 Ventilators Stimulated at Altitude: Study of Tidal Volume

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Introduction: Military air evacuations require a great amount of flexibility in terms of ventilator options, without alteration of tidal volume across a wide range of hypo-barometric conditions. The performance of two ventillators was studied using an advanced turbine delivery system: (1) a LTV1000; and (2) a TbirdVSO2. The ventilators' abilities to deliver a set tidal volume (V_t set) in the face of cabin altitude change and variable compliance and resistance were compared.

Methods: A decompression chamber was used to mimic the hypo-barometric environment at a range of cabin simulated