



US DEPARTMENT OF DEFENSE BLAST INJURY RESEARCH PROGRAM COORDINATING OFFICE

Wound Infection

Invasive Fungal Infection (IFI) Clinical Decision Support

In FY14, a clinical decision support tool (CDST) for IFIs was developed by researchers at SC2i at USUHS, and validated collaboratively with the IDCRP-TIDOS Group (Figure 1). This tool, designed to facilitate early diagnosis of patients with or at risk of IFI, enables early or prophylactic treatment with the aim of improving outcomes. Although they are usually uncommon, trauma-related IFIs in previously immuno-competent individuals are associated with considerable mortality (e.g., as high as 38 percent) and morbidity, often resulting in either permanent disability and/or extensive rehabilitation. The impact of IFI complications has also become increasingly relevant among wounded military personnel as advances in combat care during the recent conflicts in Iraq and Afghanistan improved the survivability of severe trauma, including blast-related traumatic amputations. The IFI CDST will assist providers in controlling and preventing trauma-related IFIs in wounded Service Members. In FY16, the IFI CDST was completed and deployed for use by military surgeons to assess casualties within the Continental US and outside the Continental US. In addition, the use of the IFI CDST has been incorporated into the Joint Trauma System Clinical Practice Guideline (CPG) for “Invasive Fungal Infection in War Wounds”.¹ As part of a process-improvement exercise, SC2i will monitor the use of the tool in FY17 and will provide improvements to the predictive model and user-interface as needed.

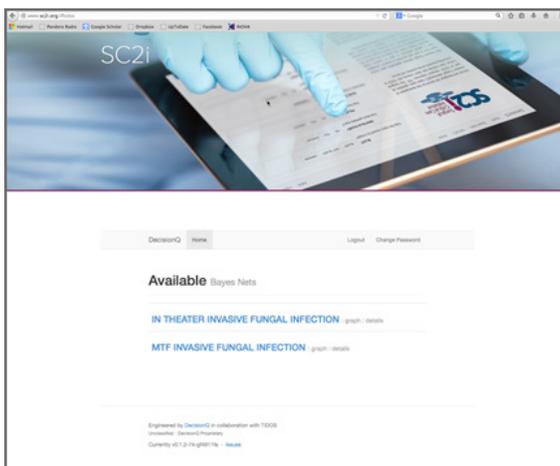


FIGURE 1: Invasive fungal wound infections CDST predicting risk for developing invasive fungal wound infections.

1 Rodriguez, C. J., Tribble, D. R., Murray, C. K., Jessie, E. M., Khan, M., Fleming, M. E., ... Shackelford, S. A. (2016). Invasive Fungal Infection in War Wounds (CPG: 28) (Joint Trauma System Clinical Practice Guideline). Retrieved from http://www.usaisr.amedd.army.mil/cpgs/Invasive_Fungal_Infection_04_Aug_2016.pdf

