Background: Stenotrophomonas maltophilia is an emerging pathogen in critically ill trauma patients. This study identifies S. maltophilia distribution, susceptibility, and risk factors for resistance in a military trauma population.

Methods: All S. maltophilia isolates prospectively collected during the Trauma Infectious Disease Outcomes Study (TIDOS) were included (2009-2014). Unique initial isolates were defined as differing in isolate, resistance, and pulse-field gel electrophoresis (PFGE) patterns.

Results: Of 2,659 patients, 67 patients with 67 unique initial isolates were included. The majority of isolates were resistant to levofloxacin and ciprofloxacin, with intermediate susceptibilities to tigecycline and moxifloxacin. All initial to serial isolates, except for TS (from 99% to 81%), CZ (42% to 36%), and intermediate susceptibility results were considered non-susceptible.

Conclusions: A high percentage of initial resistant S. maltophilia isolates show susceptibility to tigecycline or moxifloxacin. Levofloxacin and ciprofloxacin MICs were higher than expected for initial and serial isolates. S. maltophilia resistance may be more likely with higher injury severity, longer post-injury duration to isolation, and serial collection of isolates. Future analyses are needed to assess antibiotic exposure in relation to S. maltophilia resistance.