

Country Medical Risk Rating and its Correlation with Medical Evacuation: A Useful Tool for Military Organisations to Assess Medical Risk.

Authors: Craig G. Stark, MD, FFTM RCPS(Glasg)
Regional Medical Director, Government Services
International SOS

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Introductions

Military organizations are deploying service members to increasingly remote destinations and austere environments. Operating in these regions can pose significant health challenges specific to the geographic location. Despite advances in developed countries, the global medical infrastructure remains severely limited in the majority of the world and many service members and their families accessing healthcare abroad will require medical assistance or evacuation.

Discussion

In an attempt to quantify medical risk, International SOS assigns risk ratings to countries by assessing a broad range of factors such as the standard and accessibility of local medical care, the risk of infectious disease and cultural, language or administrative barriers to accessing healthcare. International SOS classifies countries as being Extreme, High, Medium and Low Medical Risk.

International SOS assigns an Extreme or High medical risk rating to countries where healthcare infrastructure is limited and access to international levels of medical care almost non-existent. In these countries, basic emergency services may not be accessible and patients with moderate to severe illness or injuries are likely to require an international evacuation.

In our analysis of 600,000 medical cases in 2013, over 40% occurred in Extreme or High risk countries. Further analysis of our data revealed that as the country risk rating increases, the need for an Aero Medical evacuation increases as well. Patients requiring medical assistance in Extreme risk countries have a 25-fold increased likelihood of Aero Medical evacuation compared to low risk countries. Nearly 50% of visitors hospitalized in high risk countries required a medical evacuation. In extreme risk countries, that figure rose to nearly 80%.

An analysis of 9,000 medical assistance cases performed on the behalf of military organizations in 2013 revealed that 19% occurred in Extreme and High risk countries. When we categorize these cases as evacuation, inpatient and outpatient we see a distinct pattern. Evacuation cases in Extreme, High, Medium and Low risk countries accounted for 23%, 11%, 4% and 2% of cases respectively.

For military cases that required a medical evacuation (2% of all cases), nearly 60% occurred in Extreme and High risk countries. The top causes for evacuations occurring in Extreme risk countries were gastrointestinal disorders, mainly for acute appendicitis. The top causes for evacuation in High risk countries were trauma from accidents and injuries (23%) followed by cardiac disease (16%) and gastro intestinal disorders (14%). For military cases that were managed locally with inpatient hospitalization without evacuation, 77% occurred in Medium and Low risk countries.

Conclusion

Overall, the data suggests that the Country Medical Risk Rating correlates with the need for medical evacuation. Patients requiring medical assistance in lower risk countries are more likely to be able to rely on the local medical infrastructure for treatment. However, as the Medical Risk rating increases, the risk of an evacuation increases as well. The addition of a Medical Risk Rating tool can be a useful pre-deployment measure to assist military organizations in managing health associated risks when sending service members and their families overseas.