

## **Title: Virtual technical support improves laboratory equipment performance in military health centers in Sub-Saharan Africa**

Congress Theme: Military Health Laboratory Networks

Author: Remi Charlebois, MS

Co-Authors: Jorge Martins, BA; Rachel Crane, PMP; Michele Merkel, MS

Institution: Global Scientific Solutions for Health, GSSHealth

### **Summary**

Military health systems are instrumental to the well-being of service personnel, their families, and communities. Infectious diseases adversely impact military readiness and personnel health, reducing capacity to respond to disasters and perform peacekeeping operations. Strong military health systems are underpinned by functional equipment and trained staff; these requirements are challenged by equipment failures and lack of service engineers in geographically isolated locations. Recognizing the importance of military health systems, the US Department of Defense HIV/AIDS Program (DHAPP) established remote solutions to support laboratory equipment operations among partner militaries globally.

### **Methods-Results**

As an implementing partner for DHAPP diagnostic and clinical initiatives in military systems across 20 sub-Saharan African countries, Global Scientific Solutions for Health (GSSHealth) adapted training approaches from on-site to remote online support during the COVID-19 pandemic.

A military virtual community of practice (vCoP) [1] was developed to provide real-time technical support for lab equipment installation, use, and maintenance. The vCoP was supported by frequent participant outreach, direct technical support, and live online training. From 2020-2022, 37 virtual equipment trainings and support sessions were provided to participants from 17 countries. Trained experts guided lab staff through equipment installation, use, repair, and maintenance, supervising the process with virtual methods. This vCoP resulted in operational improvements for molecular and hematology equipment and enabled military sites to expand their diagnostic test menu to conduct first-time testing for priority diseases such as TB and HIV. Sustainable maintenance practices reduced service interruptions and improved timely disease diagnoses.

### **Conclusions**

The success of this initiative to provide real-time equipment support provides an opportunity for replication of this approach across different military fields. The deployment of virtual equipment technical assistance resulted in identifying best practices including the use of multiple communication channels, employment of digital visual methods, and provision of self-service resources to enhance personnel self-efficacy.