PROTECTING the WARFIGHTER

Rapid biorisk mitigation in low-resource environs

Infectious disease risks pose serious concerns for warfighters that must be addressed throughout the mission.

- Infections that result from combat-inflicted wounds
- Endemic/epidemic exposure to diseases from local populations
- Enzootic/epizootic exposure to diseases that jump from animals to humans (zoonotic diseases)
- Pathogen exposure from vectors (insects)
- Pathogen exposure from the environment (water, food, soil, and air)
- Intentional exposure / biological warfare

Protect warfighters from infectious diseases

Preparedness
Risk is understood prior to deployment.
- Povide prophylaxis
  - Establish risk mitigation plans
    - Equip teams properly to treat most likely exposures

Early treatment and remediation

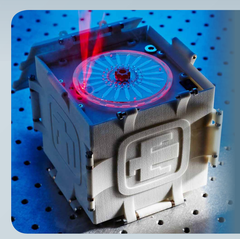
Robust monitoring capabilities
Includes the correct tools to characterize risks facing warfighters on the ground

Early Warning

Risk Characterization
Validates the data collected under the system CONOPS

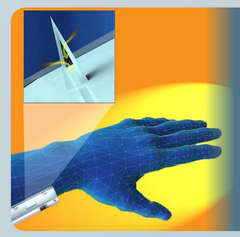
Tools

are lightweight, flexible, and selected based on the assessed risk.



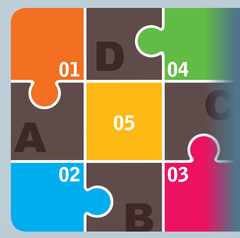
SpinDx is a compact battery-powered "lab-on-a-disk" that reads a range of key diagnostic signatures from a single sample. Applications include rapid field diagnostics for warfighters who have fallen ill, as well as biosurveillance of local animal populations for the presence of zoonotic diseases. Low sample preparation requirements make SpinDX an ideal tool for line and field medics.

BaDx, a credit card-sized field-deployable anthrax detection cartridge, requires no electrical power to operate and can identify the presence of anthrax spores from small samples. The BaDx design can be repurposed to provide field sanitation specialists with a means to conduct environmental surveillance for pathogens in soil, water, and food.



Microneedles enable monitoring of warfighters for disease exposure and provide a means of early detection outside Combat Support Hospitals. The system consists of wearable diagnostic patches the size of a 3" long strip of tape. These are scanned by a handheld reader the size of a large smartphone that weighs less than one pound.

Remote Arthropod Sensing technology increases biorisk situational awareness by sampling local insect populations for diseases that pose a threat to warfighters. The unit is slightly larger than a shoebox, weighs only five pounds, and can be deployed to operate and report autonomously for up to a month at a time.



Technologies for emerging threats are developed on top of a solid R&D and operational foundation informed by actions under the biorisk mitigation Concept of Operations.

Concept of Operations

Risk Assessment: Modeling and Simulation	**Local Biosurveillance**	**Warfighter surveillance and infectious disease diagnosis**	**Apply treatments and risk mitigation measures**
Plan		***Deploy***	***Perform***

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