



U.S. Army Medical Research and Development Command (USAMRDC)

Medical, Biomedical and Biodefense: Support to the Warfighter

CDR Christopher Steele

Director, Military Operational Medicine Research Program

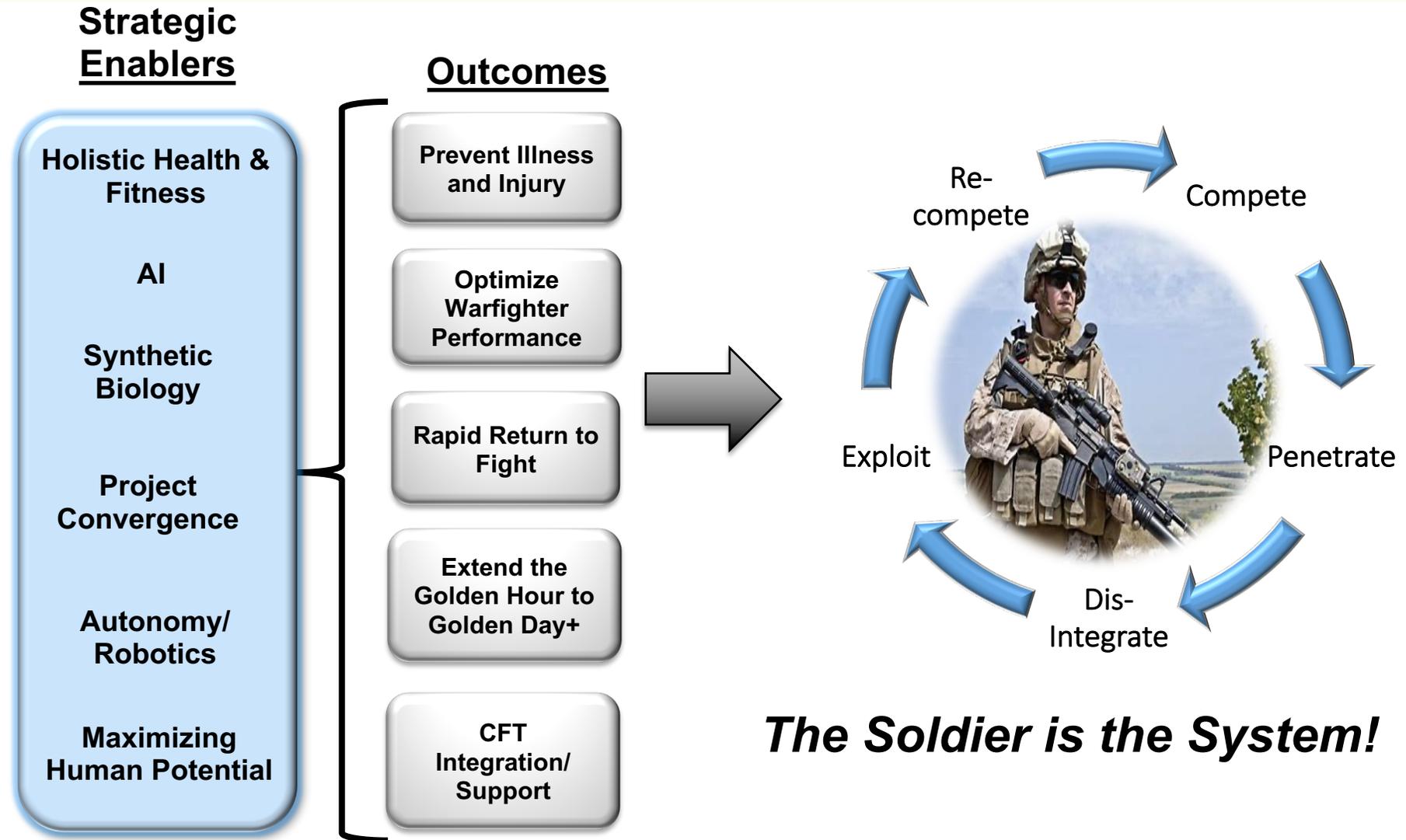


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Medical Strategic Vision for Multi-Domain Operations (MDO)





Overview Of S&T Strategy

USAMRDC Addressing Medical Gaps



Medical Readiness

- ▶ Future Vertical Lift Medical Advanced Technology (CJ5)
- ▶ Blast & Head Impact Exposure Monitor (Injury Criteria for Informing Development of New Tactical Headborne Systems) (MN6)
- ▶ Musculoskeletal Injury Screening Tool (Leader and Medical Provider Tools to Prevent and Reduce Musculoskeletal Injury in all Settings) (MN7)
- ▶ Far Forward Behavioral Health Care (MN9)
- ▶ Expeditionary Performance Nutrition (Medical Strategies to Sustain Soldier Alertness & Performance in all Settings) (MO8)
- ▶ Physiological Chemical Toxicity Assessment System (Solutions to Sustain Warfighter Performance in Extreme Environments) (MP3)

Medical Readiness/ Infectious Diseases

- ▶ Rapid Diagnostic & Detection Devices (CJ2)
- ▶ Prophylactic for Endemic Diarrheal Diseases (CJ3)



Prolonged Field Care

- ▶ Prophylactic to Prevent Infection in Battlefield Wounds (CJ4)
- ▶ Enabling Medical Capabilities to Support Dispersed Operations (MM7)
- ▶ Battlefield Sustainment of Critical Organ Function Cap Set 1 (MN4)
- ▶ Improved Bone Repair Advanced Technology (MO7)

Severe Burns

- ▶ Rapid Burn Injury Treatment and Return to Duty Cap Set 1 (MO4)

Blood and Blood Products

- ▶ Next Generation Human-Derived Blood Replacement (MN5)

Tactical Combat Casualty Care

- ▶ Tactical Combat Casualty Stabilization System Cap Set 1 (MN3)

Brain Trauma

- ▶ Drugs to Prevent and Treat Brain Injury (MO2)



Program Area Directorates (Science & Technology [S&T])



Dr. Mark
Dertzbaugh

PA(R&T) Fort Detrick, MD

**Principal Assistant to
the Commanding
General for Research &
Technology**

Program Area Directorates (PADs) – Functions

- Lead the strategic planning and programmatic aspects of Army and DHP medical S&T portfolios
- Responsible for devising research strategies (portfolios) to develop solutions for validated requirements and Army/Joint priorities
- Fund intramural and extramural research and technology
- Collaborate with industry, academia and professional societies

Program Coordinating Offices

- CBRN Defense Coordinating Office
- DoD Blast Injury Research Program Coordinating Office (BIRCO)
- Joint Trauma Analysis and Prevention of Injury in Combat (JTAPIC)

Military Infectious Diseases Research Program (MIDRP) – *COL Stuart Tyner*

- Prevent, diagnose & treat Combat Wound Infections
- Prevent Bacterial Diarrheal Diseases
- Prevent and treat Viral diseases (including HIV)
- Prevent Dengue Virus
- Prevent, diagnose & treat Emerging Infectious Diseases



Combat Casualty Care Research

Program (CCCRP) – *CAPT Travis Polk*

- Battlefield Resuscitation & Immediate Stabilization of Combat Casualties
- Prolonged Care
- Neurotrauma
- En Route Care
- Medical Assist Support Technology
- Military Medical Photonics



Military Operational Medicine Research

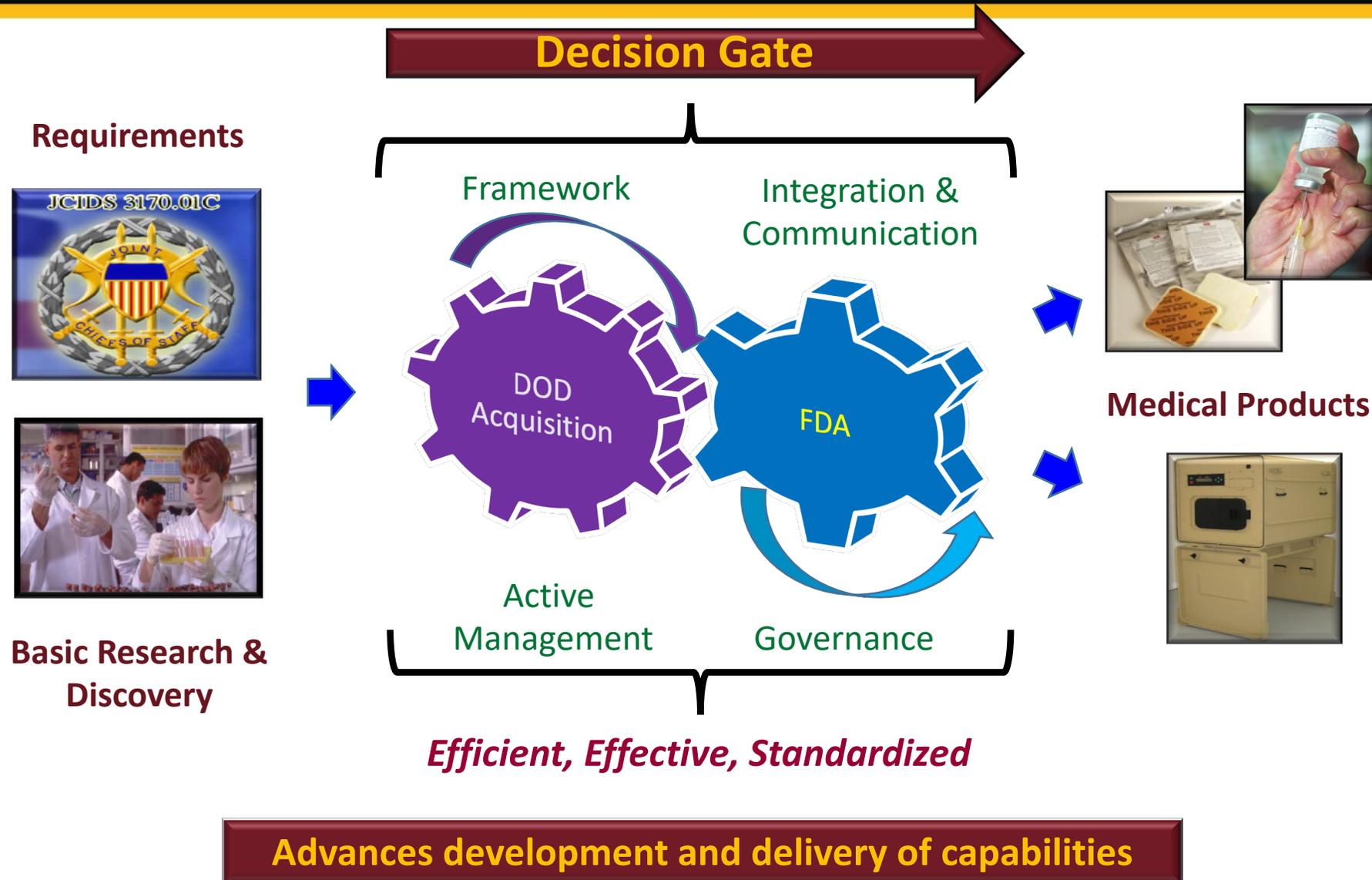
Program (MOMRP) – *CDR Christopher Steele*

- Blunt/Blast Neurosensory Injury Prevention
- Musculoskeletal Prevention & Treatment
- Environmental Health & Protection
- Physiological Health & Performance
- Psychological Health & Resilience





How Do We Move From Science To The Field?





WHEN – Throughout Soldier Lifecycle

Sustaining Soldier Lethality in Multi-Domain Operations



1 **Compete**

2 **Penetrate**

3 **Dis-Integrate**

4 **Exploit**

5 **Return to Competition**

-Armed Conflict-

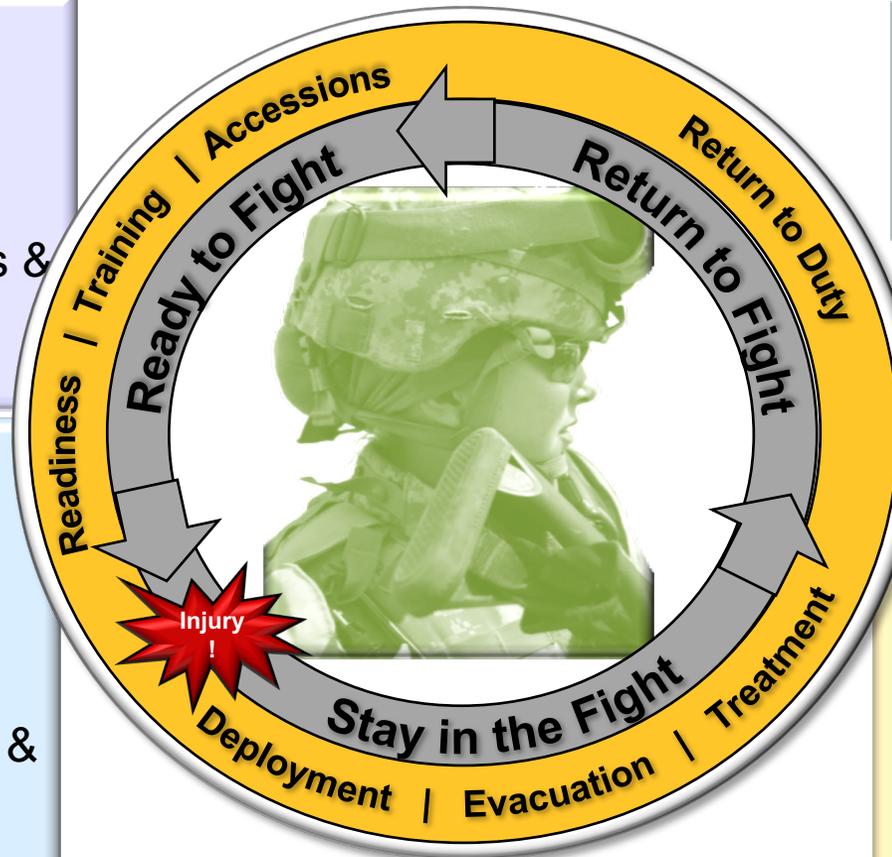
Strategic Support Area	Operational Support Area	Tactical Support Area	Close Area	Deep Maneuver Area	Operational Deep Fires Area	Strategic Deep Fires Area
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Warfighter Protection and Acute Care

- » Vaccines
- » Battlefield Pain Mgmt
- » Infectious Disease Prophylaxis & Diagnostics
- » Blood Products

Warfighter Expeditionary Medicine & Treatment

- » Hemorrhage Control & Detection
- » Imaging
- » Sensory Systems Acute Injury & Treatment



Warfighter Brain Health

- » PTSD
- » TBI
- » Sleep Disorders

Warfighter Deployed Medical Systems

- » Medical Unit Assemblages
- » Obsolescence Management
- » New MED technology

Warfighter Health, Performance & Evacuation

- » Telemedicine
- » Hospital Infrastructure
- » Sensors & Mobile Apps
- » Ground/Air Evacuation



MRDC Opportunities



Partnering

- » Cooperative Research and Development Agreements (CRADA) and Licensing Agreements

Funding Opportunities

» Intramural Awards:

- DoD Laboratories, MTFs, Uniformed Services University of the Health Sciences

» Extramural Awards:

» Contracts

- » Small Business Programs (SBIR/STTR)

» Broad Agency Announcement (BAA)

- » FY19-FY22 BAA, posted 1 October 2018
- » Continuously open through 30 September 2022
- » Announcement lists Topic Areas of current interest

» Medical Technology Enterprise Consortium (MTEC) <https://mtec-sc.org/>

Congressionally Directed Medical Research Programs
<https://cdmrp.army.mil>

Postings

USAMRAA: <http://www.usamraa.army.mil/> FedBizOps: <http://fbo.gov> (keyword search: USAMRMC) Grants.gov: <http://www.grants.gov> (F.O. Number W81XWH18SBAA1)