

Headquarters U.S. Air Force

Integrity - Service - Excellence

Achieving Breakthrough Performance The Learning Healthcare System *Healthcare to Health*



Lt Gen C. Bruce Green
Surgeon General
USAF

CMSgt Charlie Cole
AF/SG CMEF
USAF

U.S. AIR FORCE



U.S. AIR FORCE

We are "All In"



AF Mission

The mission of the United States Air Force is to *fly, fight and win...in air, space and cyberspace*



AFMS Mission

World-Class Healthcare for Our Beneficiaries Anywhere, Anytime

AFMS Vision

Seamless Health Service Support to USAF and Combatant Commanders



Global Vigilance, Reach, and Power!

Integrity - Service - Excellence





U.S. AIR FORCE

Saving Life & Limbs Today Evidence Based Care at Its Best!

San Antonio, Tx USA



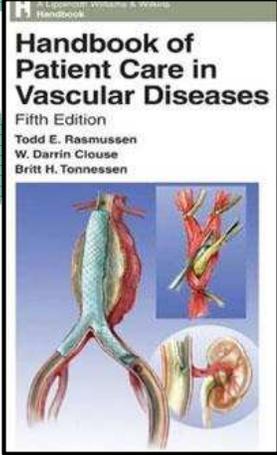
Afghanistan (OEF)



Translational Combat
Casualty Care Research



Effect of temporary shunting on extremity vascular injury: An outcome analysis from the Global War on Terror vascular injury initiative
Capt. Shaun M. Gifford, MD,^{a,d} Major Gilbert Aidinian, MD,^b Lt. Col. W. Darrin Clouse, MD,^{a,c} Lt. Col. Charles J. Fox, MD,^{b,c} Chantel A. Porras, RN, BSN,^a W. Tracey Jones, MD,^a Lee Ann Zarzabal, MS,^d Joel E. Michalek, PhD,^d Capt. Brandon W. Propper, MD,^{a,c,d} Capt. Gabriel E. Burkhardt, MD,^{a,c,d} and Lt. Col. Todd E. Rasmussen, MD,^{a,c} Lackland Air Force Base and San Antonio, Tex; Washington, DC; and Bethesda, Md



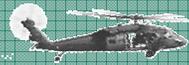
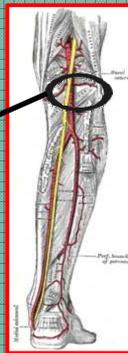
AFMS Vascular Injury Management Program
17 Peer Reviewed Articles Published since 2005
Patent Pending: Trauma Specific Vascular Injury Shunt



MRAP hit IED
injured US Marine



Popliteal artery
injuries with
pulseless legs



Camp Bastion



Bagram AB



World Class Research Translating into World Class Casualty Care

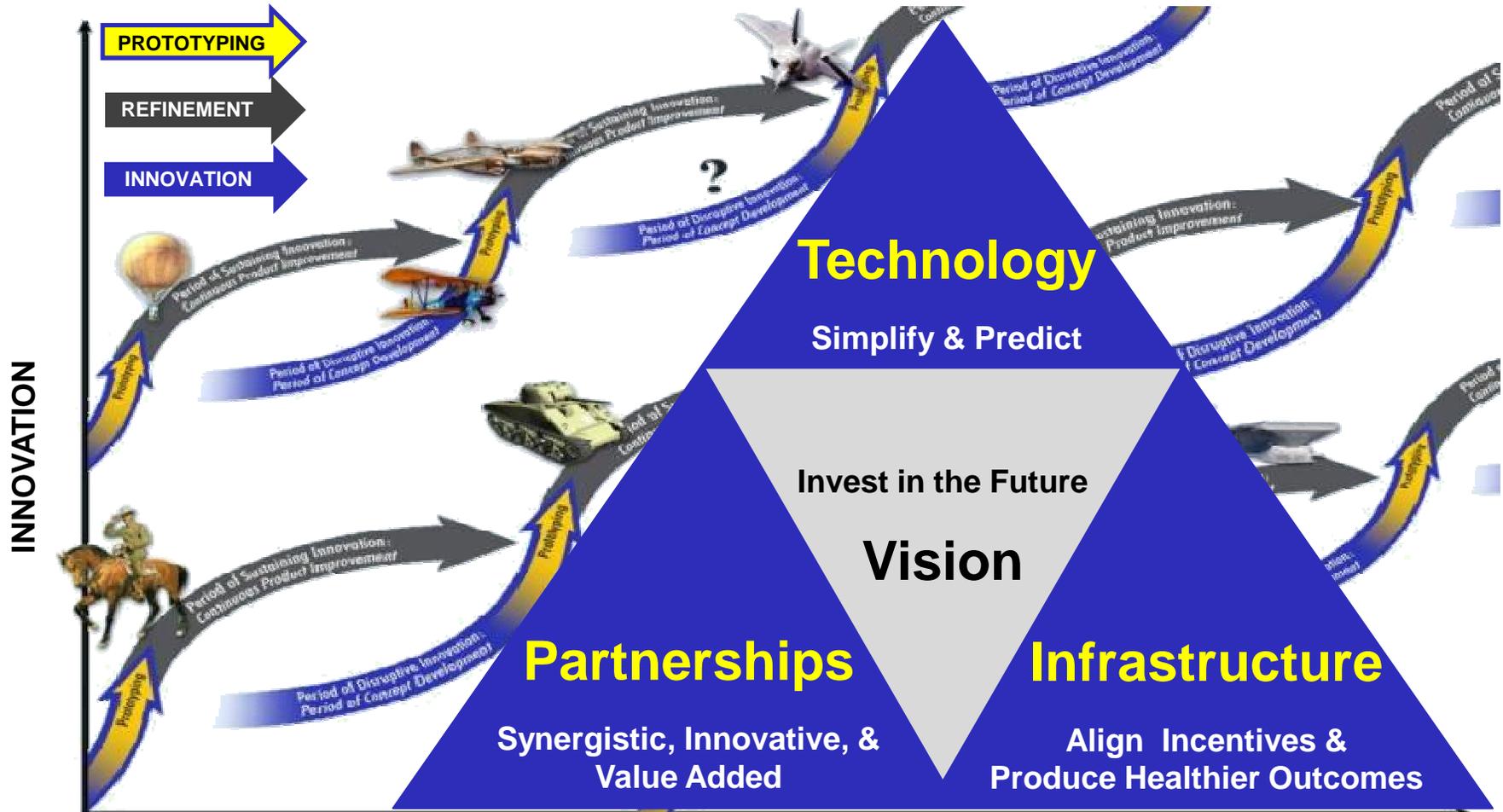
Integrity - Service - Excellence





Innovator's Prescription: Disruptive Innovations Challenge the Status Quo

U.S. AIR FORCE



Dilemma Is How To Integrate Disruptive Innovations

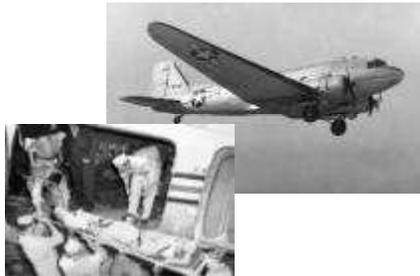
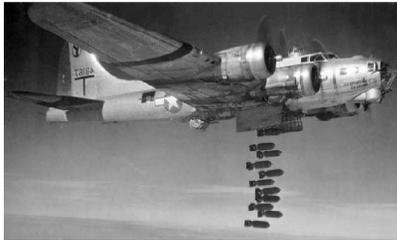




Heritage of Innovation

U.S. AIR FORCE

Past Conflicts



Military Transformation



Today



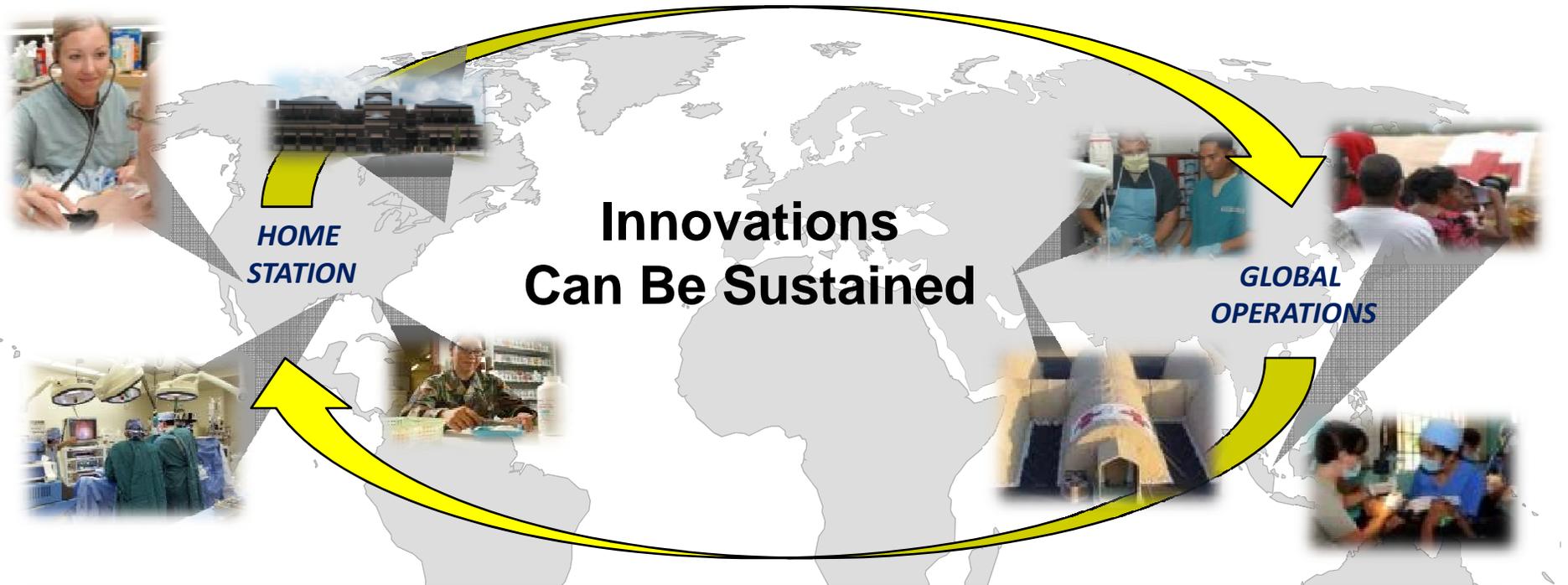
**Disruptive Innovations Have Shaped The Conduct Of War
& Safely Brought Our Heroes Home For Decades**

Integrity - Service - Excellence



U.S. AIR FORCE

Our People are the Key to Success ...at Home and Deployed



Readiness is Job # 1

***We exist to deploy clinically current medics and
keep AF personnel deployable for global operations***

Delivering Home Station Healthcare Underpins Readiness

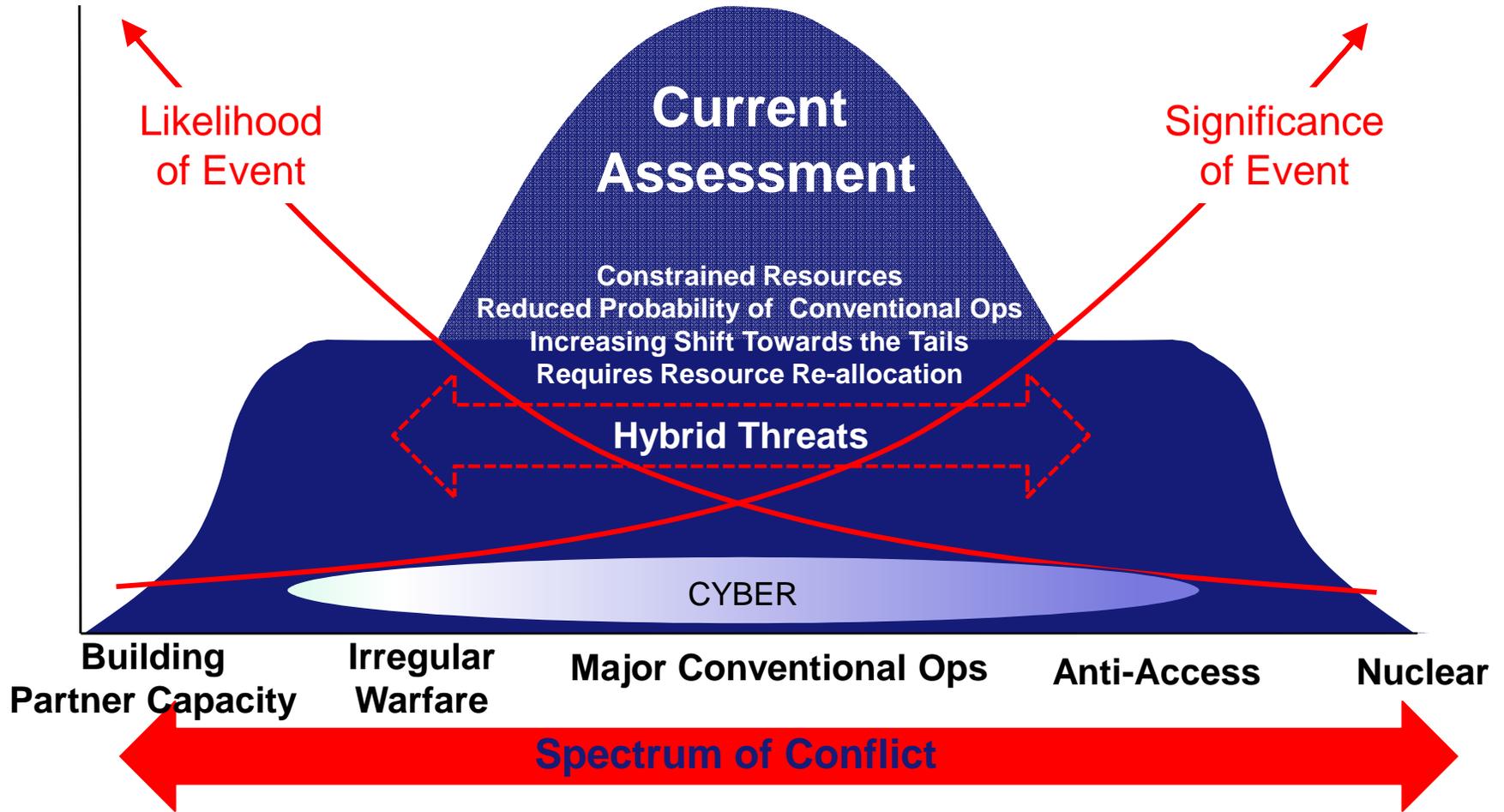
Peacetime care sustains clinical skills and continuity to do Job #1

Integrity - Service - Excellence



U.S. AIR FORCE

Agile Organizations Balance Risk & Future Capabilities



Anticipate the Unknown, Overcome the Unexpected, & Shape the Future

Integrity - Service - Excellence





U.S. AIR FORCE

We Must Be Realistic: These are Turbulent Times for Health

**US Spends 18% of GDP (#1)
yet...US Life Expectancy (#50)
Obesity Doubled since 1987**

Chronic Diseases:
#1 Cause of Death
75% of Total Health Costs
Majority of Diseases Are Preventable
Most Patients Unaware of Risk

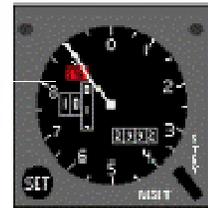
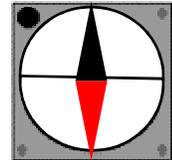
Integrity - Service - Excellence



U.S. AIR FORCE

How We Got Here

- Americans have chosen the “Path of Least Resistance”
 - Reactive vs. Proactive approach to medicine
 - We can “fix” you...no need to change your ways
- We followed suit focusing on “Care Delivery” vs. “Delivery of Care”
 - Chased productivity, RVUs, & business plans
 - Measured processes instead of outcomes
 - Perverse incentives perpetuate our flawed system



“Growth in healthcare spending outpaces the growth in the economy
....the rising Medicare budget will crowd out all other spending except
Defense ... chronic disease accounts for 70% of healthcare costs ...”

Clayton M. Christensen, Dr Jerome H. Gross, and Dr Jason Hwang,
The Innovator's Prescription, 2009

We Delivered “Healthcare” and Hoped for “Health”

Integrity - Service - Excellence



U.S. AIR FORCE

Our Strategy for the Future: Aligns with Quadruple Aim

Invest in Education, Training & Research

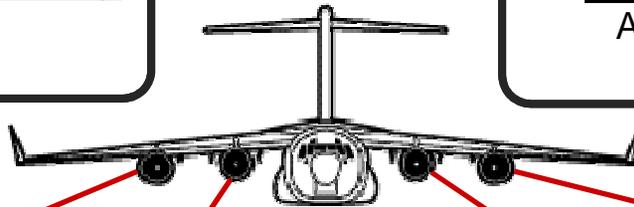
Sustain Our Future Capabilities

Transform Deployable Capability

Rapid Response to Any
Worldwide Contingency

Build Patient-Centered Care

Access, Continuity, Prevention
to Optimize Health

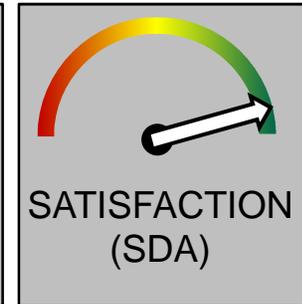
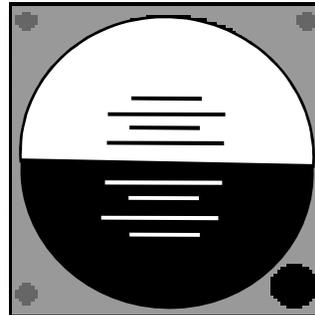
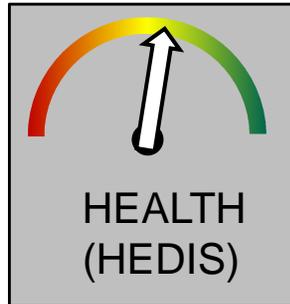


Leadership

Strategy

Common Practice

Culture



Strategy Provides the Organizational Blueprint for Success!

Integrity - Service - Excellence





U.S. AIR FORCE

COMPASS: Improves Practice Management

- AHLTA-based workflow tool to help healthcare teams personalize care with standardized tools and templates
 - Improves readability of providers notes
 - Automatically captures credit for accurate coding
 - Tracks preventive services at point of care w/ Electronic-2766

AIM - COMPASS CORE

Prevention & Counseling

NOTE: DO NOT ERASE information in free text boxes. You see words or lines, type after it. If you see squiggly line(s) type before it.

Chief Complaint / History of Present Illness

The Chief Complaint is:

History of Present Illness (2000 Character Limit)

Additional Hx: Pain Severity / 10 NOT Deployment Related Deployment Related [YES, enter Deployment Location / Date]

If the Patient is taking an Antidepressant, Go to the Social History Section. Click on the [S] Button Next to Depression and Complete the Social Question

Past Medical / Surgical History and Medications

Medical History Surgical History Family History

Current Medications

Current Allergies Reviewed

Preventive Services

None of the Above

All of the Above

Some of the Above

All of the Above

Preventive Medicine Services

A Cervical Cancer Screening - Women who are sexually active

A Chlamydia Screening - Women Ages 24 and Younger OR Women Ages 25 and Older at Increased Risk

A Folic Acid Supplementation - All Women Planning or Capable of Pregnancy

A HIV Screening - Adults and Adolescents at Increased Risk

A High Blood Pressure Screening - Adults 18 and Over

A Lipid Disorders in Adults Screening - Women 45 and Older, Increased risk for CHD

A Syphilis Screening - Men and Women at Increased Risk

B Alcohol Misuse Screening and Behavioral Counseling - Men, Women, and Pregnant Women

B BRCA Mutation Testing for Breast and Ovarian Cancer - Women, Increased Risk

B Breast Cancer Preventive Medication Discussion - Women, Increased Risk

B Breastfeeding Primary Care Interventions to Promote - All Pregnant Women and New Mothers

B Depression Screening - Adults age 18 and over - When staff-assisted depression care supports are in place

B Gonorrhea Screening - Pregnant Women and Women at Increased Risk

B Healthy Diet Counseling - Adults with Hypertension and Other Risk Factors for CVD

B Obesity Screening and Intensive Counseling - Obese Men and Women

B Sexually Transmitted Infections Behavioral Counseling - Sexually Active Adolescents and Adults at Increased Risk

B Type 2 Diabetes Mellitus Screening Men and Women - Sustained BP 135/80+

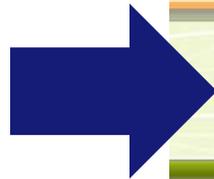
Integrity - Service - Excellence



CarePoint

Data Transparency & Simplified Reports

- Web-based application: Leverages MHS Population Health Portal
- Providing near real-time data to expedite evidence-based prevention
- Enables targeted prevention directly to the provider and patient



Transforming Data into Actionable Information

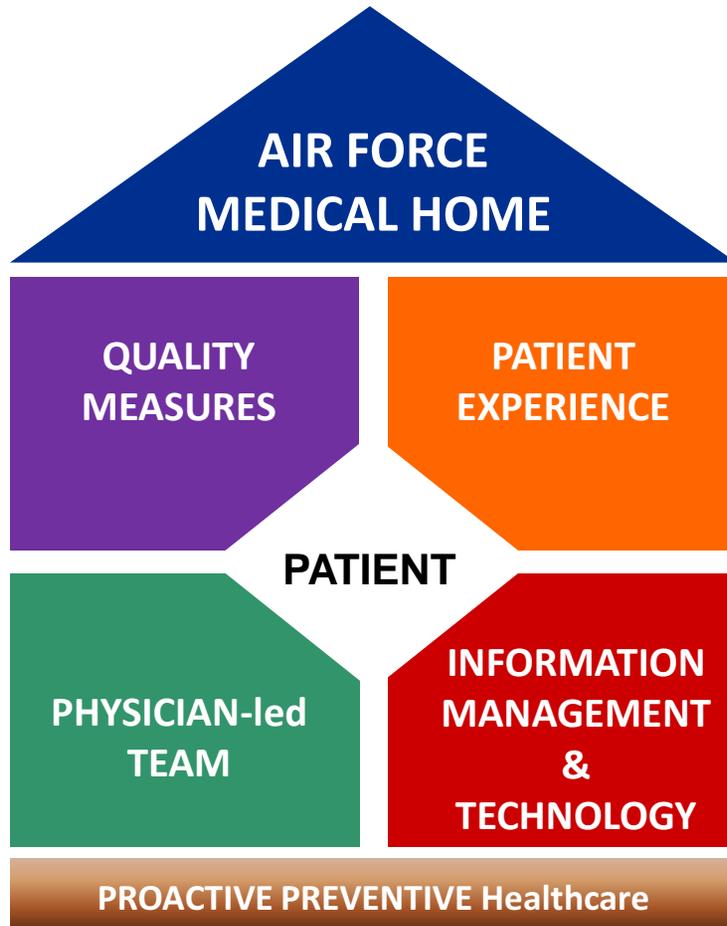
Integrity - Service - Excellence





U.S. AIR FORCE

AF Medical Home: Model for Improving Health



■ Family Health Initiative

- Improve Pt/Provider Relations
- Provide Decision Support Tools
- Reduce Practice Variations
- Realign Incentives & Metrics
- Change Pt/Provider Behaviors



Key to Maximize Readiness and Deliver World Class Care

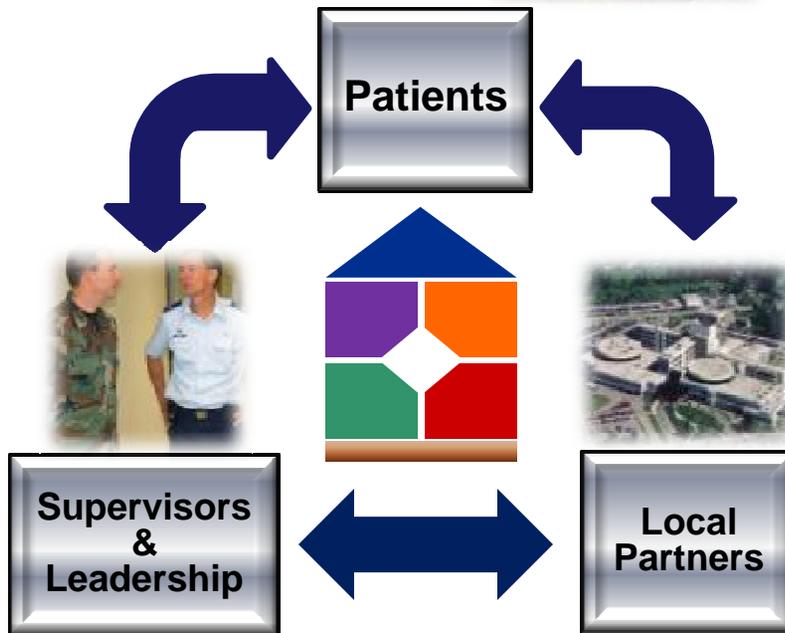
Integrity - Service - Excellence





U.S. AIR FORCE

Partnerships Lead To Agile Solutions & Improved Outcomes



- **Patients: Owning Their Health**
 - Build “trust” thru continuity
 - Shared decision making
 - Reinforce healthy choices
- **Supervisors & Leadership**
 - Help carry & reinforce messages
 - Support healthy lifestyles & patient behavior modifications
- **Local Partners: Solution Shops**
 - Federal/Private Organizations
 - Academic and R&D Institutions

We Can No Longer Afford To Tackle This Problem Alone

Integrity - Service - Excellence



U.S. AIR FORCE

Joint, Coalition, & Interagency Team Provide Opportunity for Innovation



Integrity - Service - Excellence





Many Opportunities for Synergy

U.S. AIR FORCE

North Campus



South Campus

METC



WRNMMC



FBCH

Joint Capability Greater Than Any Single Service Capability

Integrity - Service - Excellence



Coalition Partner Synergy - Interfly

U.S. AIR FORCE



ASIC: Aerospace Interoperability Council

- Partners provide more options to bring our heroes home with “Interfly” on US/UK C-17s
 - Expands capability of critical care patient movement
 - Increases capability to respond to worst case event
- Greatest hurdle is equipment approval
 - US Critical Care Air Transport Team (CCATT) has UK OEC clearance/waiver to fly US equipment on UK C-17 aircraft
 - UK Critical Care in the Air Support Team (CCAST) is pending equipment approval for flight on US C-17 aircraft (Feb 2010)
- Teams to share ideas common practices & exploit interoperability opportunities

“Sometimes it does get bad, but when you see who you’ve brought back to the UK then you feel proud to have been part of getting them here and making sure the troops are getting the best possible treatment.” --Corporal Ian Booth

Integrity - Service - Excellence





U.S. AIR FORCE

Humanitarian Assistance Rapid Response Team (HARRT)



Medical Capabilities:

Emergency & Resuscitative Care, Ambulatory Care, Pharmacy & Limited Lab, Public Health, Bioenvironmental

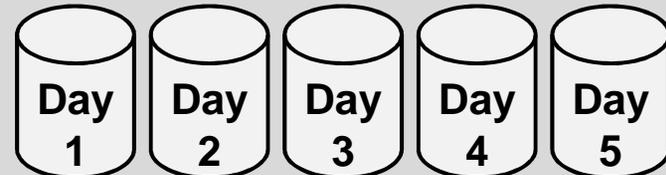


Airlift/Deployment Requirements:

< 24 HRS + 



Self-Sustaining Capabilities:



Food/Water/POL/Billeting



Our People Are Averting International Health Crises Through Rapid Response and Innovative Capabilities

Integrity - Service - Excellence





U.S. AIR FORCE

Investing In Our Future Inspires Creativity



Physician Education (GME)

- Stand alone programs
- Masters with civilian universities
- Integrated/affiliated with Federal partners



Research

- Diabetes
- Telepathology
- Teleradiology



USAF Dental Hygiene Program

- 10 scholarships per year
- Trident Technical College (SC)
- St. Petersburg College (FL)



Nurse Education (Transition Program)

- Increasing to 241 enrolled students in FY10
- Two new sites: Cincinnati, OH & Scottsdale Healthcare, AZ

***Education & Research – Absolutely Critical to Inspiring
Innovation and Sustaining the AFMS!***

Integrity - Service - Excellence



An Airman's Dream Realized

U.S. AIR FORCE

- Nurse Enlisted Commissioning Program (NECP)
 - 50 Airmen per year with school of their choice



Numerous Programs Before NECP



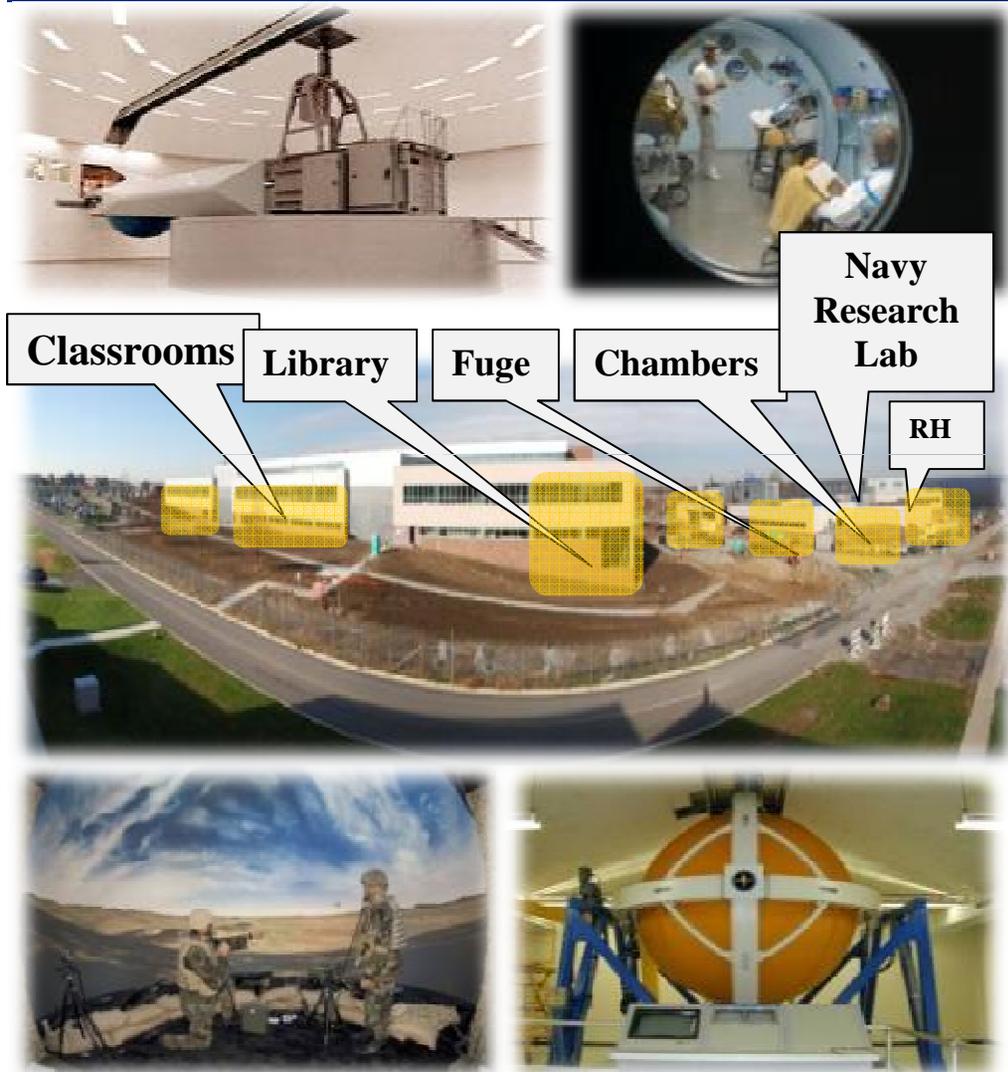
"I fulfilled my goal set as a young Airman... to be commissioned as a nurse!" – 2LT Barr

Integrity - Service - Excellence



U.S. AIR FORCE

Developing Excellence... Human Performance & Systems Integration



BRAC Directed Actions to Be Completed by Sep 2011:

- Create an Aerospace Medicine Center of Excellence at WPAFB – unique in DoD
- USAF School of Aerospace Medicine and AF Human Performance / Effectiveness Directorates
- Naval Aeromed Research Lab (NAMRL)

Resources:

- HPW 2.1K Personnel / \$368M Budget
- New 700K Sq Ft Complex @ \$195M
- NAMRL: Moves 55 Personnel with specialized expertise / Proj. Bgt: \$3.2M
- Construction within schedule & budget

Staff, Students, Courses, Content:

- 5K Grads yr / 230 Avg Daily Student Load
- Tech school thru GME; Joint & International
- Flight Med, Public Health, BEE, AE, CCATT

State of the Art Research and Human Performance Testing Complex:

- Centrifuge/Access to Hyperbaric chambers
- Research and Training Altitude chambers
- Advanced Disorientation device
- Multiple simulation centers in 1 location





U.S. AIR FORCE

Applying Innovation To Education, Training & Currency

- **Virtual Air Force Theater Hospital**
 - Balad, Bagram
 - Expeditionary Medical System
- **Virtual Medical Campus**
 - Recruit, Retain, Educate Public
 - Patient Education
- **“Serious Gaming” alone or w/team**
 - Pre-Deployment Operational Rehearsals
 - Hospital/Medical Equipment Familiarization
 - Virtual Patients & Trauma/Burn Management
 - Joint Theater Trauma System-Clinical Practice Guidelines



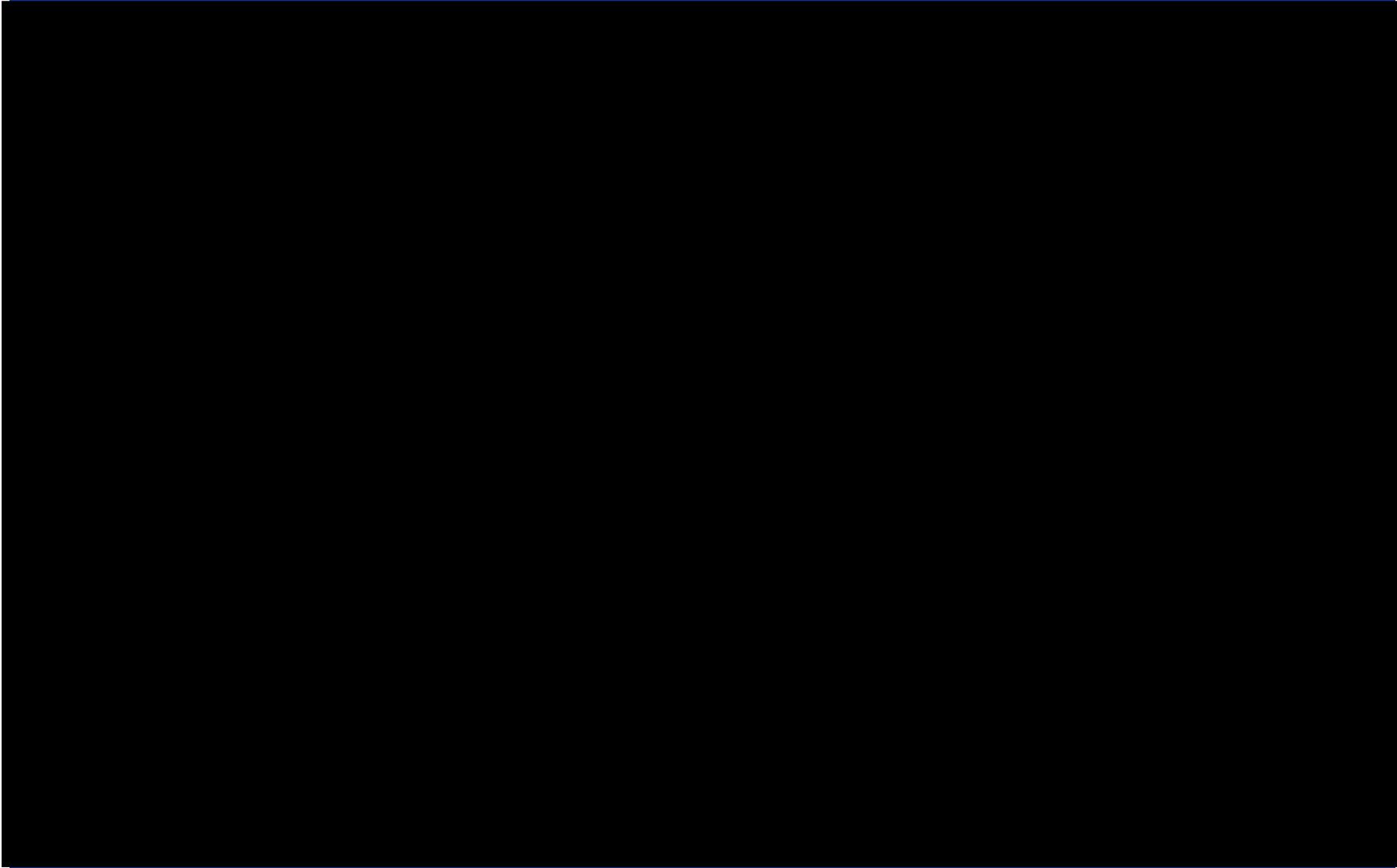
Sustained Preparation & Training Enhances Readiness

Integrity - Service - Excellence



U.S. AIR FORCE

Aeromedical Evacuation Virtual Reality C-17 Walkthrough



Integrity - Service - Excellence



U.S. AIR FORCE

Leveraging Technology: Via Applied Clinical Epidemiology (ACE)

- Transform Health Through Personalized Medicine
 - Reduce generalization risk when applying best evidence
 - Shorten timeline of evidence discovery to evidence in clinic

Notification Delivery: Months → Minutes



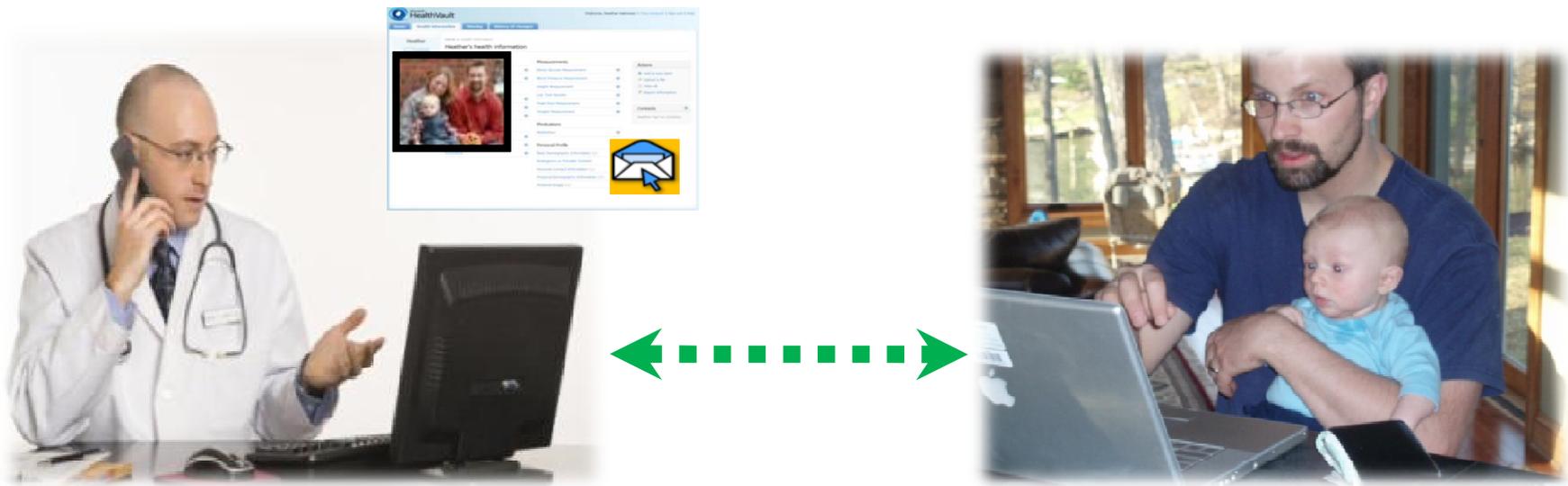
Deliver Best Evidence-Based Medicine To The Hands That Need It!

Integrity - Service - Excellence





Personal Health Record and Secure Messaging Improves Continuity



- Personalizing care with patient-provider communication options
 - Web-based *Microsoft HealthVault* Pilot test at Elmendorf AFB
 - Patients selected by presence of select medical conditions
 - Patients control their own health and wellness record

Enhance Patient Care by “Pushing & Pulling” Information

Integrity - Service - Excellence



U.S. AIR FORCE

Applied Genomics: Targeting Prevention to your Genetic Code

- Optimize treatment outcomes through prediction and prevention
- Evaluate emerging genetic variants associated with disease
- Actionable with clinical utility
 - Plavix (clopidogrel)
 - Effectiveness requires P-450 enzyme
 - 30% have reduced function due to genetics
 - 142K treated in CY08—target to responders with genotyping
- Targeted Prevention has military operational relevance
 - Sudden death—long QT syndrome
 - Clotting disorders—factor V Leiden
 - Malignant hyperthermia—ryanodine receptor



Harnessing Technology to Deliver Precision Guided Medicine

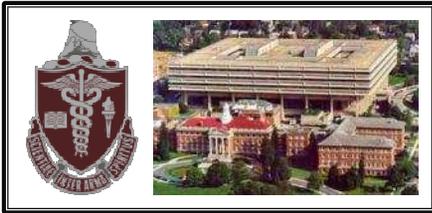
Integrity - Service - Excellence





U.S. AIR FORCE

It Takes the Entire Team: Advances in Regenerative Medicine



WRAMC



Landstuhl
RMC



Afghanistan



The Washington Post

Walter Reed performs rare transplant of pancreas cells
 Procedure on airman wounded in Afghanistan may be first of its kind

By David Brown
 Washington Post Staff Writer
 Wednesday, December 16, 2009

Airmen shot in back (3x)
Undergoes surgery (2x)
Transported to Germany

Leveraging Capabilities Across the Globe for Innovative Solutions

Integrity - Service - Excellence



U.S. AIR FORCE

Seeking Disruptive Innovations: Transforming Healthcare to Health

Invest in Education, Training & Research

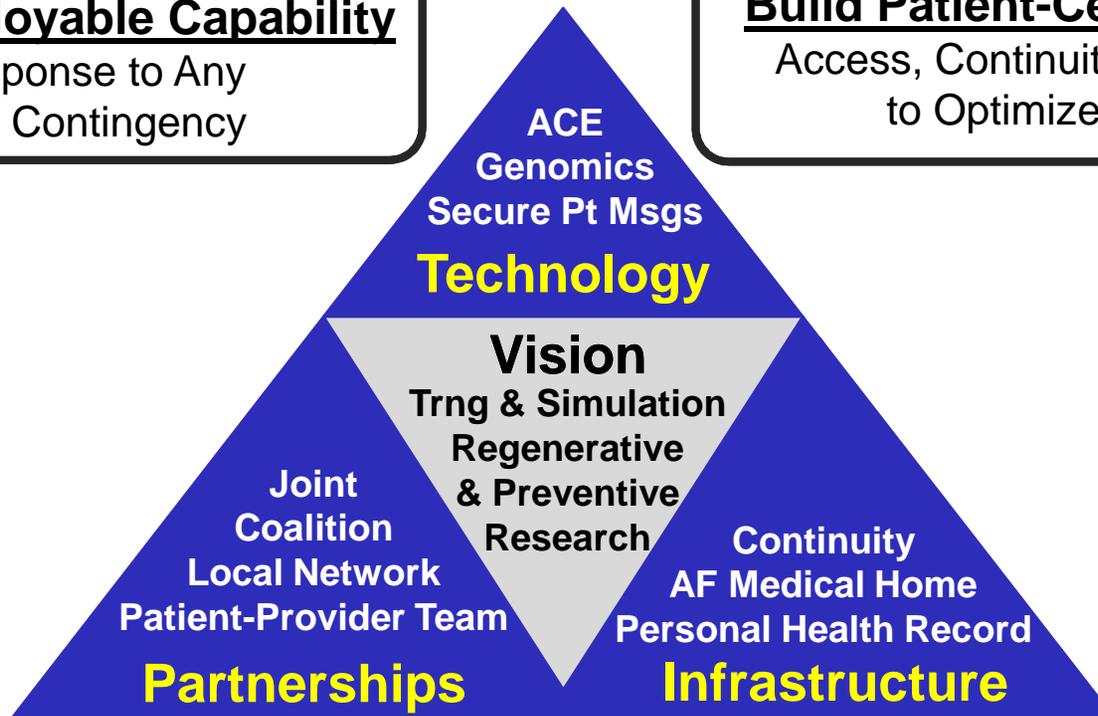
Sustain Our Future Capabilities

Transform Deployable Capability

Rapid Response to Any
Worldwide Contingency

Build Patient-Centered Care

Access, Continuity, Prevention
to Optimize Health



Innovation is Critical to Precise Personalized Care

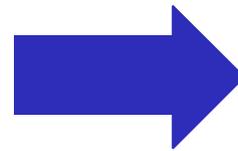




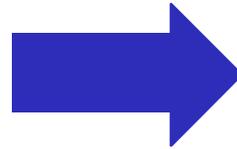
U.S. AIR FORCE

Fast Forward

Today



Disruption



2045



**Medical
Tricorder**

Transform from Detect & Treat → Predict and Prevent

Integrity - Service - Excellence



U.S. AIR FORCE

Shaping Our Future Today



***Patient-Centered Care
Technology Integration
Synergy – Joint & Coalition
Precision Healthcare
Organizational Agility***



***“Victory smiles upon those who anticipate the changes in the character of war...not upon those who wait until after those changes have occurred.”
-- Giulio Douhet***



TRUSTED CARE ANYWHERE™

