



Recovering Warrior Taskforce

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Background



“...continuance of residual knowledge, clinical practices, and extensive research, plus the opportunity to advance the art and science of medical practice and research in the inter-war years, would be of great benefit to care for future generations of the Joint Force” General (Ret.) Frederick M. Franks, Jr.

Challenge: For the Nation to maintain amputee and extremity trauma care capability the DoD must sustain competency, advance treatment, optimize rehabilitation, enhance prosthetic innovations, and continue clinically relevant research in the inter-war years.

1. Background
2. Facts and Assumptions
3. DoD Synergy of Effort
4. Options
5. Way Ahead



Congressional Mandate for the EACE



The center shall have the responsibilities as follows:

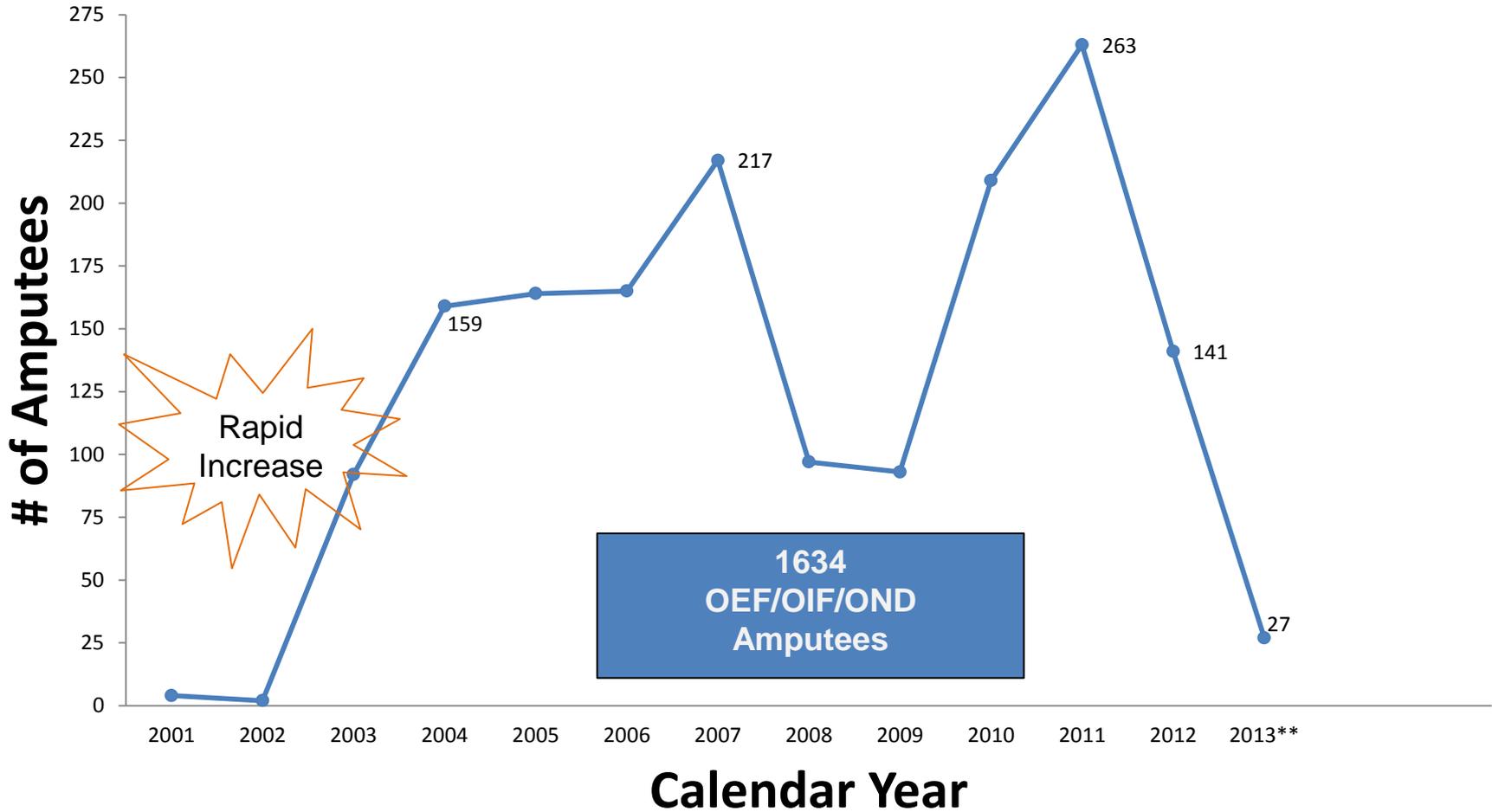
- (1) To implement a comprehensive plan and strategy for the Department of Defense and the Department of Veterans Affairs for the mitigation, treatment, and rehabilitation of traumatic extremity injuries and amputations.
- (2) To conduct research to develop scientific information aimed at saving injured extremities, avoiding amputations, and preserving and restoring the function of injured extremities. Such research shall address military medical needs and include the full range of scientific inquiry encompassing basic, translational, and clinical research.
- (3) To carry out such other activities to improve and enhance the efforts of the Department of Defense and the Department of Veterans Affairs for the mitigation, treatment, and rehabilitation of traumatic extremity injuries and amputations.

Public Law 110-417, NDAA 2009, Section 723





Amputation Trends



Source: Amputee Database, 01NOV13, all Services, only OIF/OND/OEF, based on date injured, excludes finger(s), thumb(s), toe(s)
**2013 is a partial year (January through October)

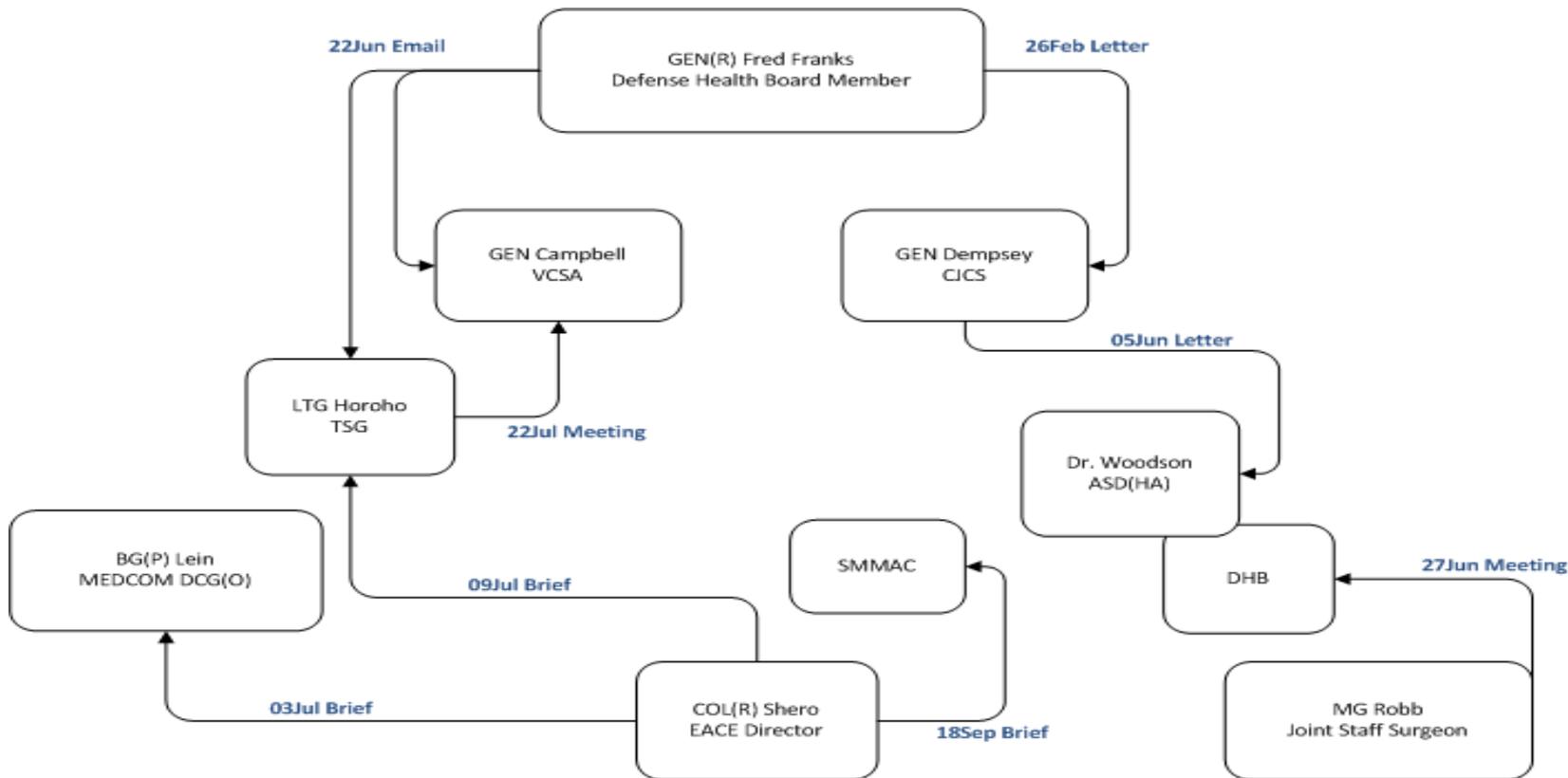




DoD Leadership Situation



“Our future generations of war fighters and Wounded Warriors deserve these capabilities to be there for them when needed.” *General (Ret.) Frederick M. Franks, Jr.*





Facts and Assumptions



FACTS:

- We are leading the Nation and international militaries in extremity trauma and amputee science/care. Researchers are embedded at the point of care and the EACE provides oversight to translate research findings into clinical care.
- DoD has achieved a formidable level of care and rehabilitation for military amputees, returning them to the highest level of function (i.e. X3 Knee, IDEO, etc.) through a multi-disciplinary team approach.

463 return to duty and 68 redeployed

- DoD lost the ability to care for these Service Members after the Vietnam era and it took years to regain the current capability for OIF/OEF/OND.
- As a volunteer force, DoD cannot rely on civilian (drafted) expertise to maintain our capability, as we did in previous conflicts (Vietnam, Korea, WWII)
- Models exist to capture non-beneficiary patient populations to sustain and advance DoD medical capabilities (such as BAMC Trauma Services Cooperative Agreement; ISR Burn Center model)
- Civilian populations sustain extremity trauma and amputations and desire the level of care available in the DoD/VA Joint Amputation System of Care (i.e. Boston Marathon amputees)

ASSUMPTIONS:

- DoD is committed to maintaining amputee care capability in the three Advanced Rehabilitation Centers (ARCs) (WRNMMC-MATC/SAMMC-CFI/NMCSD-C5).
- The VA Amputation System of Care (ASoC) and the DoD amputee care program will each continue to have a relevant, collaborative mission caring for the total population of dysvascular amputees and extremity trauma patients.
- The young military medical retiree (average age 25) has a sense of belonging/family at the ARCs. The emotional support and “warrior family” dimension of continued treatment/rehabilitation in the ARCs is very significant. Further, DoD believes that the family dynamic and family integration has a central role in the rehabilitation process.
- Budget constraints will demand more efficient, not simply effective/efficacious, clinical operations.
- Because DoD is recognized as a world leader in extremity trauma and amputee care, the civilian sector (along with our international military partners) will continue to seek our expertise in this field.





EACE Synergy of Effort

Clinical Care

Research

Global Outreach



Goals:

- Return to Duty
- High performance lifestyle
- Blast Injury Expertise
- Expand patient base
- Sustain competency
- Limb salvage
- ISR Burn Center model
- Sports medicine rehab



Team Approach

ARC Multi-disciplinary team

Family-centric rehab

VA collaboration

Academia

Industry

Research Consortia

Advancing the Science

Patient Registry

Medical/Surgical Interventions

Advanced Rehabilitation

Prosthetics and Orthotics

Regenerative Medicine

Community Reintegration

National/International Leadership





Key ARC Support Relationships

DoD Advanced Rehab Center (ARC) TRICARE Region Alignment

TRO West

C5

San Diego

TRO South

CFI

San Antonio

TRO North

MATC

Washington D.C.

NORTHCOM



EUCOM



CENTCOM



AFRICOM



PACOM



SOUTHCOM



West

North

South

MATC

C5

CFI





Pre-Decisional Courses of Action and Analysis

PROS

CONS

1. Implement "Burn Center Model" of care for extremity trauma and amputees at all three DoD ARCs

- Provides for care to Wounded Warriors from today and the future
- Best option to maintain current ARC competency/skills/capability
- Retains advanced rehabilitation through a multi-disciplinary team approach
- Eliminates ramp-up time for next conflict
- Retains amputee care capability aligned with Unified Commands and TRICARE regions
- Retains family-centric rehabilitation model and ongoing commitment to Service Members
- Opens care to the Nation; extends expertise to the community and globally
- Employs a proven, effective model to sustain appropriate patient population
- Retains the research laboratories to advance the science of amputee care

- Requires DoD enterprise strategy
- Requires extensive agreements/coordination to maintain proper patient base at three ARCs
- Resource intensive to sustain care at three DoD facilities
- Resource intensive to sustain research at three DoD facilities

2. Keep all three ARCs, but with reduced operational capability

- Next best option to maintain current ARC care/competency/skills/capability
- Retains advanced rehabilitation through a multi-disciplinary team approach
- Reduces ramp-up time for next conflict
- Amputee care capability aligned with unified commands and TRICARE regions
- Retains family-centric rehabilitation model and ongoing commitment to Service Members
- Retains the research laboratories to advance the science of amputee care

- Requires DoD enterprise strategy
- Quality of extremity trauma and amputation research will suffer with reduced operational capability
- Resource intensive to sustain care at three DoD facilities
- Resource intensive to sustain research at three DoD facilities

3. Re-mission at least one ARC to serve as a sports medicine and wellness center and/or reduce the number of DoD ARCs

- Retains advanced rehabilitation through a multi-disciplinary team approach at one or two sites
- A sports medicine and wellness center may enhance access and therefore readiness

- Quality of extremity trauma and amputation research will suffer and scientific advances will be greatly limited
- Does not keep faith with the individual contributions across America for the care of combat wounded patients
- Will involve Service competition for missions
- Does not facilitate TRICARE Region and Unified Command support
- Reduces ability to maintain competency and skills.

4. Utilize VA/civilian sites for rotational training of military staff to maintain competency/skills of DoD clinicians

- Allows for greater collaboration with VA/civilian community
- Minimal cost
- Provides some training sustainment

- Amputee care system will have to be completely rebuilt for next conflict
- Loss of multi-disciplinary sports medicine approach
- Breaking apart the team to train does not sustain the rehabilitation approach
- Loss of family-centric rehabilitation model
- No TRICARE Region or Unified Command support
- Loss of DoD research platform





Way Ahead



Remembering September 11th 2001

- ...we now have a lifetime responsibility to a generation of Service Members, Veterans, and their Families.
- As we have increased the likelihood of survival and the opportunity for rehabilitation, we have gladly accepted the responsibilities for ensuring a lifetime of quality care.
- Our responsibility is to be ready. For anything.

September 11 2013 message from Jonathan Woodson, M.D., ASD(HA) to the Health Affairs / TRICARE Management Activity Staff

- **Expand our national and international leadership role by continuing to advance care for the high performing extremity trauma and amputee population**
- **Pioneer a national extremity trauma and amputation system of care with certification modeled after the Joint Trauma System**
- **Seek recognition that the ARCs are National-level resources and are vital to America**
- **Keep faith with current and future Wounded Warriors by providing world-class care, now and into the future**
- **Plan for care of delayed amputees; enhance momentum and expand boundaries of limb salvage care**
- **Plan for post conflict ARC practices in the face of declining combat casualties. Define optimal patient base for sustainment of extremity trauma and amputee staff competency will lead to quality outcomes and maximum functional capability of future combat casualties.**
- **Improve clinical care through clinically relevant research and translation to clinical practice.**
- **Seek support from the SMMAC and Dr. Woodson for continued resourcing of this key DoD mission**





Updates since September 2013 Presentation to Senior Military Medical Advisory Council



- Under Secretary of Defense (Personnel & Readiness) asked the Defense Health Board (DHB) to:
 - review the full spectrum of amputee care, and define a strategy for preserving and continuing these advancements, identifying the best possible care to our beneficiaries
 - DHB Subcommittee on Healthcare charged with this task
- DHB Subcommittee visited MATC, WRNMMC in September 2013 and will visit CFI, SAMMC in December 2013. A visit to C5 is projected for Spring 2014
- The DHB will prepare a report based on the USD(P&R) request .



Questions or Guidance?



EACE

*Extremity Trauma and Amputation
Center of Excellence*



RWTF Business Meeting December 9-10, 2013



Back-Up Slides





EACE Staffing Update

IOC Attained November 2013 FOC Target = 1 October 2014



On Board		
Position	Grade	Loc
Executive Director	GS-15	HQ
Chief of Staff	GS-14	HQ
Chief Division for Informatics/Tech	GS-14	HQ
Health System Specialist	GS-13	HQ
Policy Plans and Program Analysis HSS	GS-13	HQ
Chief Division for Research & Surveillance	GS-15	HQ
Epidemiologist (in lieu of GS)	CTR	HQ
Administrative Assistant (in lieu of GS)	CTR	HQ
SharePoint Content Manager	CTR	HQ
Deputy Director	GS-15	Crystal City
Assistant, Chief Division for Clinical Care	GS-14	Crystal City
Administrative Officer	GS-11	Crystal City
Facility Research Director	GS-14	C5
Biomedical Engineer MS	GS-11	C5
Clinical Research Protocol Coordinator	GS-9	C5
Facility Research Director	GS-14	CFI
Site Senior Scientist (Dual Hat CFI Civ)	GS-14	CFI
Physical Therapist PhD	GS-13	CFI
Prosthesis Technology Specialist	GS-13	CFI
Occupational Therapist PhD	GS-13	CFI
Biomedical Engineer PhD	GS-13	CFI
Physical Therapist (Research Assistant)	GS-12	CFI
Biomedical Engineer MS	GS-11	CFI
Clinical Research Protocol Coordinator	GS-9	CFI
Biomedical Engineer (Sr Research) (PhD)	GS-14	MATC
Physical Therapist PhD	GS-13	MATC

Vacant			
Position	Grade	Loc	Status
Chief Division for Clinical Care	GS-15	HQ	Pending Announcement
Assistant Chief for Informatics/Tech	GS-13	HQ	Pending Announcement
Administrative Officer	GS-11	HQ	Pending Announcement
Assistant, Deputy Director for Research	GS-14	Crystal City	VA Hired (pending)
Chief for Division for Global Outreach	GS-14	OTSG	Reannounce
Chief of Training, Education and Simulation	GS-11	OTSG	HOLD
Site Senior Scientist	GS-14	C5	HOLD
Physical Therapist Phd	GS-13	C5	ETP approval
Senior Prosthetist	GS-14	HQ	Pending Announcement
Biomedical Engineer BS	GS-9	CFI	HOLD
Facility Research Director	GS-14	MATC	Announced
Site Senior Scientist	GS-14	MATC	Interviewing
Prosthesis Technology Specialist	GS-13	MATC	Announced
Biomedical Engineer BS	GS-11	MATC	HOLD
Biomedical Engineer MS	GS-11	MATC	Announced
Clinical Research Protocol Coordinator	GS-9	MATC	Pending Announcement

On Board Summary	
CIV (DA)	17
CIV (VA)	3
MIL	3
CTR	3

Locations	
C5	San Diego, CA
CFI	San Antonio, TX
Crystal City	Arlington, VA
HQ	San Antonio, TX
MATC	Bethesda, MD
OTSG	Falls Church, VA





Leadership Changes and Pending Decisions/Approvals



- Key leadership changes

- Research and Surveillance Division Chief (CAPT Lanny Boswell March 2014)
- Clinical Informatics Program Coordinator (Mr. Fred Swiderski July 2013)
- Facility Research Director CFI (MAJ Owen Hill September 2013)
- Deputy Director, Clinical Affairs (Dr. Leif Nelson, Manhattan VAMC, November 2013)

- Pending Decisions/Approvals

- Potential Center of Excellence realignment under Defense Health Agency
- Unfinanced Requirement for Civilian Pay
- Manpower Concept Plan
- VA and DoD in hiring process for key positions
 - VA Assistant Chief, Research and Surveillance Division
 - Clinical Affairs Program Coordinator
 - VA Assistant Program Coordinator, Clinical Affairs
 - Global Outreach Program Coordinator
 - Facility Research Director and Site Senior Scientist, Military Advanced Training Center, Walter Reed National Military Medical Center





DoD-VA Upper Extremity Amputation Rehabilitation Clinical Practice Guideline



- The EACE obtained authorization in FY2012 for a DoD-VA Upper Extremity Amputation Rehabilitation Clinical Practice Guideline (CPG).
- Will be the first clinical pathway/standard of care for this population of patients.
- The workgroup has prepared and edited the first draft of the CPG and is on track for delivery of the final CPG May of 2014.
- Use of this CPG will culminate in reduced practice variance, an enhanced standard of care, accelerated research translation into clinical practice, and ultimately lead to improved health, quality of life, and satisfaction for this population of patients.



DEKA Arm Home Use Study

- Funded July 1, 2012 by the VA to examine the feasibility, acceptance, and benefits of home use of an advanced upper limb prosthetic device as well as the logistical support requirements utilized during three months of home usage.
- Two VA sites and one DoD site participating in the study.
- To date, 27 subjects have been screened for potential participation.
- Fifteen subjects have been or are currently enrolled for the in-laboratory portion of the study (nine have completed).
- Seven subjects have been or are currently enrolled in the three month at-home portion of the study (five have completed).
- Recruitment and enrollment will continue for the next two years.





Health and Functional Outcomes Assessment Toolkit



- DoD EACE and VA personnel collaborated with the DoD funded Bridging Advanced Developments for Exceptional Rehabilitation (BADER) research consortium team to successfully develop and receive \$1.4M in funding for a study that builds on FY2012 NATO recommendations to further develop a functional outcomes assessment toolkit.
- Toolkit will provide a set of reliable and valid metrics that can be used to standardize outcomes measurement across DoD and VA.
- Execution efforts are underway for this study, which will collect data across five DoD and VA sites. Literature review/information gathering phase is projected for completion in October 2014, to be followed by an expert panel assessment and determination of the actual outcome metrics for the toolkit.



Amputee Database (EACE-R) and Integrated Electronic Health Registry Framework (“Federal” EACE-R)



Amputee Data Base + Upgrade = EACE Registry

- Optimize Legacy Architecture
- EACE Database of Record for Amputee Reports
- Phase One launch 9 Dec 13
- Phase Two underway:
 - Human Body Injury Graphics
 - Improved User Tools (ICD code list, full patient file view)



“Federal” EACE Registry (formerly JTEIAR)

- Integrated Health Registry Framework –DoD and Joint DoD/VA COE Standard
- Vision Center of Excellence (VCE) pilot; oversight and policy development transferred to Force Health Protection and Readiness (FHP&R) - **Back End**
- EACE Application Development Underway (EACE, VCoE, FHP&R) - **Front End**
 - EACE CONOPS and Business Use Cases
 - Technical Requirements
 - Acquisition Process





EACE FY13 Research Productivity



EACE Site	Active Studies (n = 92)					
	<i>Studies in Development</i>	<i>Number in IRB Review</i>	<i>Data collection</i>	<i>Collection complete</i>	<i>Number of Articles in Peer-Reviewed Publications</i>	<i>Number of Poster/Podium Presentations</i>
Center for the Intrepid/SAMMC	6	1	18	11	10	11
Military Advanced Training Center/WRNMMC	12	5	8	14	11	6
Comprehensive Combat and Complex Casualty Care/NMCS	5	2	7	3	1	14
TOTAL	23	8	33	28	19 (3*)	31

* Denotes # with collaborative authorship between ARCs





Extremity Trauma and Amputation Practices that Research Indicates Should Change



- The practice of amputation following limb salvage procedures can be reduced. Research findings suggest that use of an innovative bracing solution Intrepid Dynamic External Orthosis (IDEO) combined with an advanced level physical therapy program (Return to Run) can result in functional improvements that equal or exceed outcomes following amputation.
- Research assessing the benefits of advanced prosthetic devices such as the BIOM powered ankle and the Genium X2 knee significantly changed the practice of prosthetic prescription by providing clinical evidence to support individualized prescription based on patient need.



Methods of Disseminating Research Discoveries to DoD



- Research translation product summary: prepared annually for all accepted and published peer-reviewed manuscripts
- Presentations at clinical and scientific conferences and seminars
- Federal Amputation System of Care monthly teleconferences
- DoD-VA Virtual Rehabilitation Grand Rounds
- Federal Advanced Amputation Skills Training
- EACE SharePoint site



Summary of EACE Influence



- Identified and summarized clinically meaningful research gap areas to facilitate DoD and VA research funding decisions.
- Executed clinical research and provided science-based evidence to clinicians to support prosthetic prescription of advanced prostheses such as the Genium X3 knee and the BiOM ankle
- Development of Comprehensive High-level Activity Mobility Predictor (CHAMP) by a VA researcher with collaborative DoD-VA publications supporting validity of this tool. Tracks progress in rehabilitation and aids in setting realistic goals for full function potential following lower limb loss.
- Development of second edition of VA-DoD Collaboration Guidebook for Healthcare Research which will facilitate continued development of collaborative human subject research relationships between VA and DoD. Results will include improved research initiatives and pooled financial and human resources.
- Aligned EACE key research initiatives with defined gap areas.



EACE Accomplishments since January 2013



- 16 Institution Review Board (IRB) approved new EACE research studies
- 19 publications in peer-reviewed journals on topics of interest for advancement of extremity trauma and amputation rehabilitation
- 32 International/National/ Local presentations on topics of interest for advancement of extremity trauma and amputation rehabilitation
- Assessment of amputee system of care in Colombia at request of Commander, SOUTHCOM
- Collaboration with DoD and VHA clinical and education programs to produce Virtual Rehabilitation Grand Rounds
- Significant progress in developing the first clinical pathway/standard of care for upper extremity amputees



EACE Accomplishments since January 2013



- Upgrade of the legacy amputee database to a more robust, stable environment with an increased capacity for more secure data linkages and an improved database design and functionality.
- Establishment of a web presence on health.mil and introduced an EACE SharePoint portal to further facilitate DoD-VA collaboration and provide a future platform for collaboration with academia and industry.
- Report to the Committees on Armed Services of the Senate and the House of Representatives on Standards for Production and Performance of Prostheses and Prosthetic Sockets for Military Amputees
- Leading the shaping of the strategic plan for the future of amputee care in conjunction with the Defense Health Board and Senior Military Medical Advisory Committee



Areas of Change to Facilitate EACE Mission



- Right of First Refusal (ROFR) Policy for active duty amputees to receive rehab at ARCs
- * Active Duty and VA referral process for dual eligible
- Streamlined interagency contracting
 - Clinical Practice Guidelines
 - Centralized Prosthetic Ordering (Denver Acquisition Logistics Center)
- Longitudinal Amputee Assessment
 - Policy to require DoD to use G-codes to document functional outcomes
 - Template/means to capture amputee outcomes in AHLTA, CarePoint Portal and Vista

* NOTE – This issue is from DoD’s perspective

