# Improving Population Mental Health Impact
# The Role of Primary Care Integration

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# Learning Objectives

- Define how intervention reach and effect size relate to population health impact
- Describe the components of effective primary care mental health integration models

# Overview

- Why Reach Matters
- Reach & Primary Care
- Mental Health Integration Components
- Making It Work

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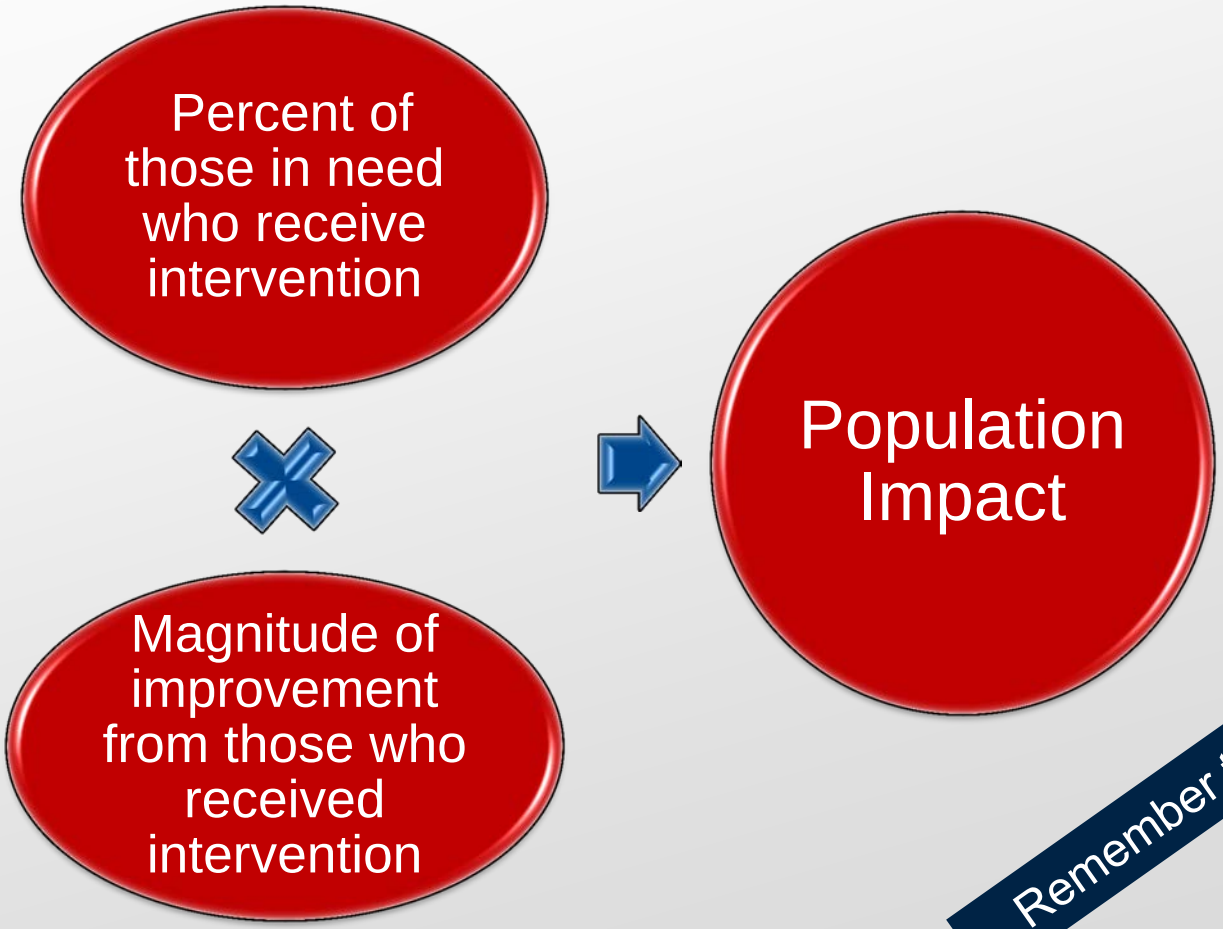
# Population Impact




Zatzick et al., 2009

# A Tale of Two Trials

| | CBT | Collaborative Care |
|---|---|---|
| Target Population | 10,000 | 10,000 |
| Reach | 27 | 1762 |
| PTSD Prevention | 50% | 7% |
| Impact (cases prevented) | 13.5 | 123.3 |

Reach and effectiveness are needed to impact a population.

Zatzick et al., 2009

# Better Known Examples of Reach and Health Impact

Flouride treatment of water supply and improved dentition

Speed limit reductions & deaths due to motor vehicle accidents

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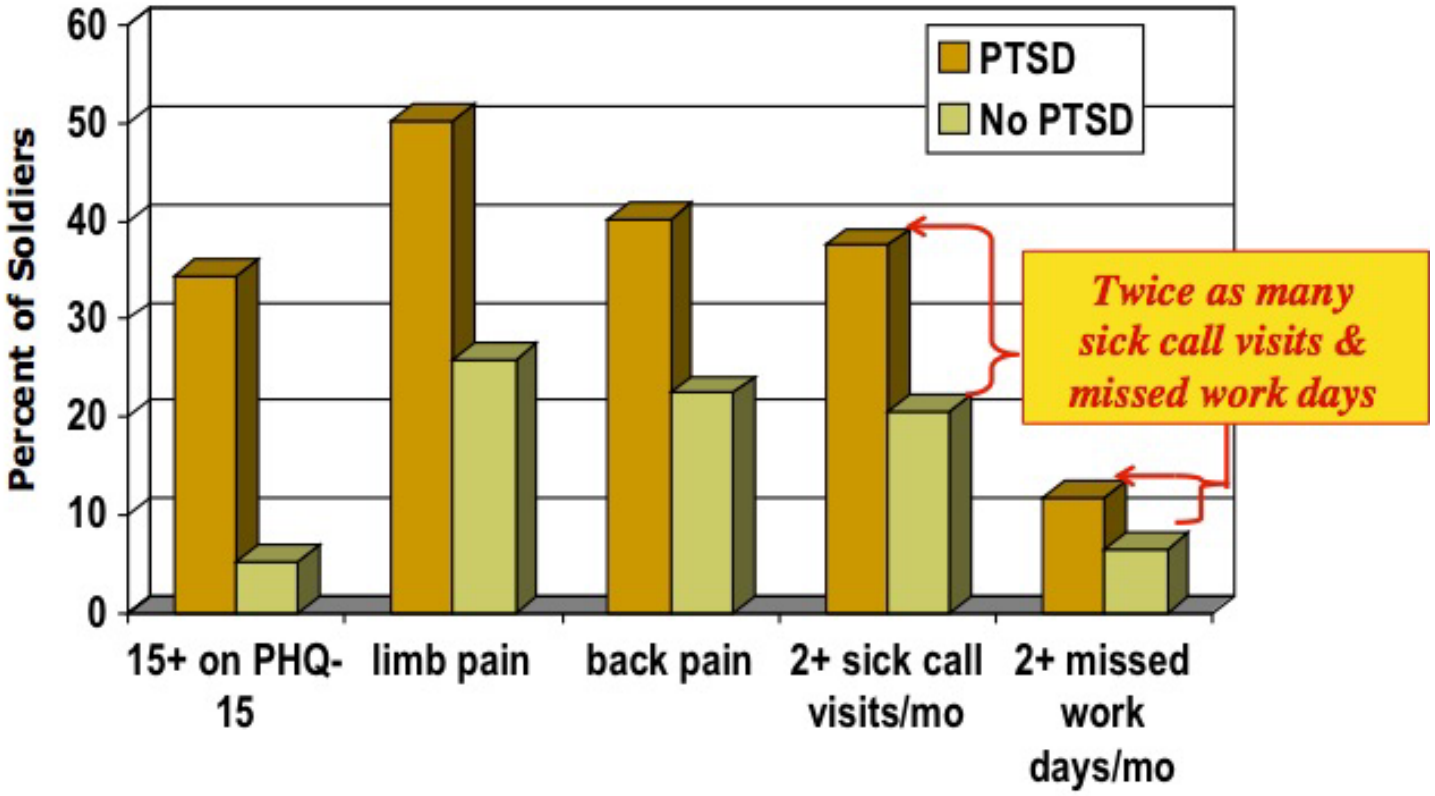
# Example of Mental Health in the Military

- ★ Approaching 3 million American men & women have deployed & returned since 9/11
- ★ Depression & anxiety disorders are common after combat deployment (e.g., Tanielian et al, RAND, 2008)
- ★ Most service members with disorder do not receive adequate mental health services (e.g., Hoge et al, Psychiatr Serv, 2014)
- ★ Half or less of those receiving services obtain minimally adequate care (e.g., Tanielian et al, RAND, 2008)
- ★ Stigma and barriers reduce or delay access to needed care (e.g., Hoge et al, N Engl J Med, 2004)

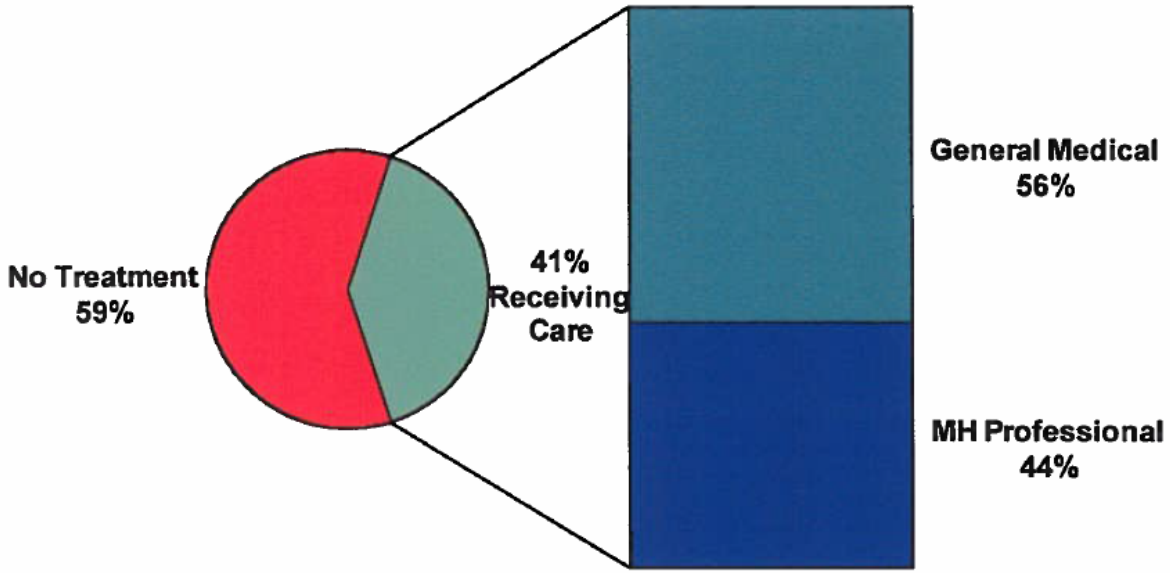
# PTSD, physical symptoms, primary care utilization & absenteeism

## 2,863 Iraq War returnees one-year post-deployment




*Hoge et al, Am J Psychiatr, 2007*

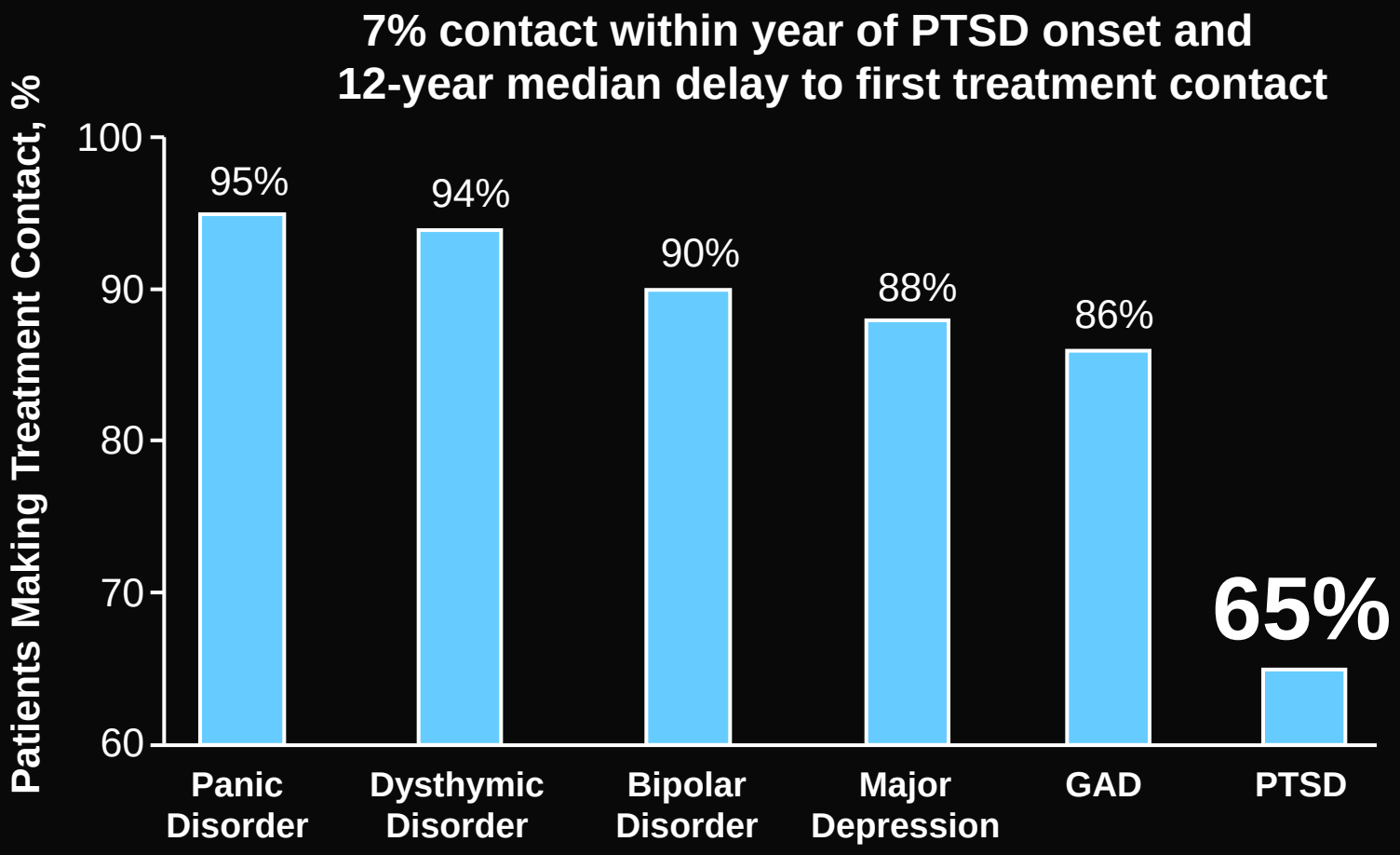
# Primary Care is the 'De Facto' Mental Health System




Wang P, et al., Twelve-Month Use of Mental Health Services in the United States, Arch Gen Psychiatry, 62, June 2005

# *Systems & Access for PTSD*

## Lifetime Probability of Treatment Contact




GAD, generalized anxiety disorder.

Wang PS, et al. *Arch Gen Psychiatry.* 2005;62:603-613.

# How Can We Improve Mental Health Service Reach?

- Increase the reach of effective treatments
- Intensify efforts to engage those with needs
- Maximize continuity once treatment is initiated

# Overview

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- Reach & Primary Care
- Mental Health Integration Components
- Making It Work

## Collaborative care for depression and anxiety problems

Archer J, Bower P, Gilbody S, Lovell K, Richards D, Gask L, Dickens C, Coventry P

- seventy-nine RCTs met criteria for inclusion
- 24,308 participants

"Collaborative care is associated with significant improvement in depression and anxiety outcomes compared with usual care, and represents a useful addition to clinical pathways for adult patients with depression and anxiety."


*Cochrane Database Syst Rev. 2012 Oct 17;10:CD006525. doi: 10.1002/14651858.CD006525.pub2.*

# Primary care and collaborative mental health care - Randomized controlled trial evidence

- ★ **Depression and anxiety** (e.g., Archer et al, Cochrane, 2012)
- ★ **Suicidal ideation and depression** (e.g., Bruce et al, JAMA, 2004)
- ★ **Depression & chronic illnesses** (e.g., Katon, et al, N Engl J Med, 2010)
- ★ **Chronic pain** (e.g., Kroenke et al, JAMA, 2015)
- ★ **Somatic symptoms & related syndromes**
  (e.g., Smith et al, Arch Gen Psychiatry, 1995)
- ★ **Dementia and their caregivers** (Callahan et al, JAMA 2006)
- ★ **Hazardous alcohol use among men**
  (e.g., Kane, et al, Drug Alcohol Rev, 2009)
- ★ **Mixed results for PTSD** (Fortney et al, Arch Gen Psychiatry, 2010, Schnurr et al, J Gen Intern Med, 2013, Meredith et al, J Gen Intern Med, 2016)

# What is Collaborative Care?

"Collaborative Care is a specific type of integrated care that operationalizes the principles of the chronic care model (E. Wagner, 2001) to improve access to evidence based mental health treatments for primary care patients."

2015 American Psychiatric Association/Academy of Psychosomatic Medicine Report on Dissemination of Integrated Care.

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# Principles of Collaborative Care

**Patient-Centered Collaboration.** Primary care and mental health providers collaborate effectively using shared care plans.

**Population-Based Care.** A defined group of patients is tracked in a registry so that no one falls through the cracks.

**Treatment to Target.** Progress is measured regularly and treatments are actively changed until clinical goals are achieved.

**Evidence-Based Care.** Providers use treatments that have research evidence for effectiveness.

**Accountable Care.** Providers are accountable and reimbursed for quality of care and clinical outcomes, not just volume of care.

# BUT: not all programs are effective.

**Approaches that <u>don't work</u>:**

- Screening without adequate treatment
- Referral to specialty care without close coordination: 50 % fall through the cracks
- Co-located behavioral health specialists without effective oversight or evidence-based treatments
- Lack of accountability: patients 'fall through the cracks' or stay on ineffective treatment for too long.

# RESPECT-Mil

*Re-Engineering Systems of Primary Care Treatment in the Military*

**Defense Centers of Excellence for Psychological Health & TBI**

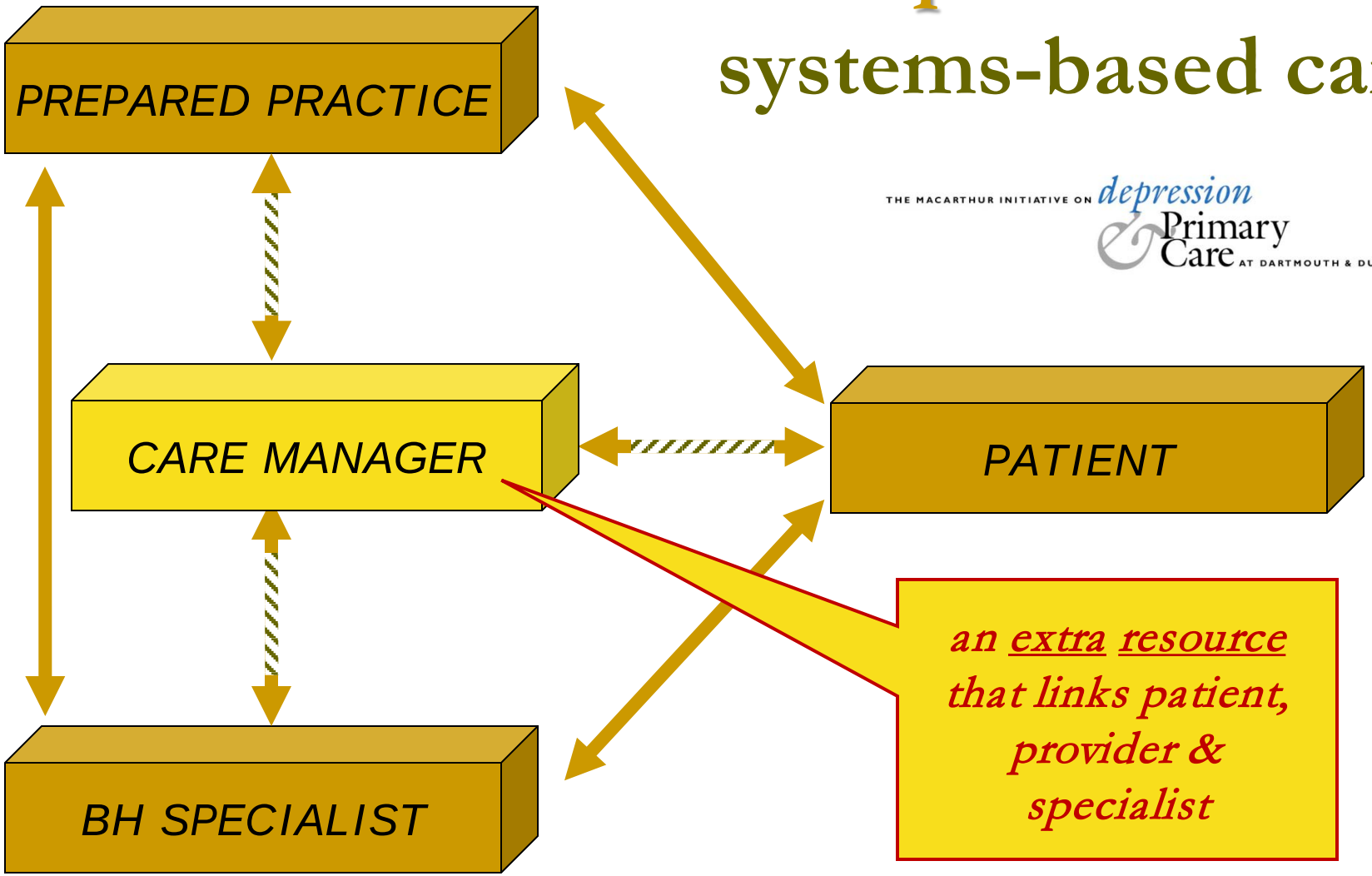
**Office of The Surgeon General, Army**

**Deployment Health Clinical Center**

**Uniformed Services University**

**3CM®**

# 3 Component Model
## systems-based care




THE MACARTHUR INITIATIVE ON depression & Primary Care AT DARTMOUTH & DUKE

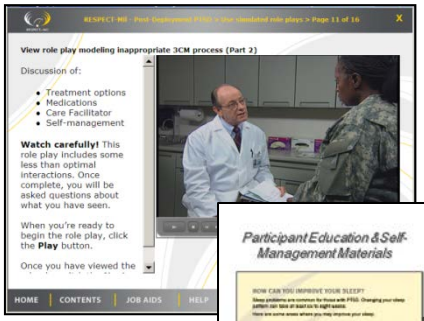
*Oxman et al, Psychosomatics, 2002;43:441-450*

RESPECT-Mil

# RESPECT-Mil

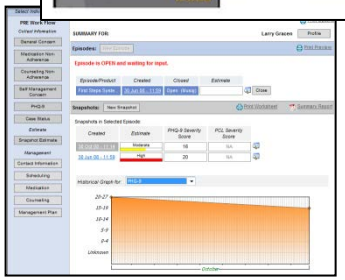
## *Evidence-based systems approach to PTSD & depression care*

- ★ Codified hardcopy manuals
- ★ Web-based provider training
- ★ Military self-help materials
- ★ PHQ-9 and PTSD Checklist used to monitor outcome
- ★ Uses ‘FIRST-STEPS’ web registry to track treatment effects in real time
- ★ 97 worldwide Primary Care clinics
- ★ Screening for PTSD and depression rose from 2.5% to 93% of PC visits
- ★ ~3.5M visits screened (2007-2013)




***Provider Web Training***

***Patient Self-Help materials***

***Web-Based Care Management Support & Benchmark Metric Reporting***



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# Implementing Collaborative Primary Care for PTSD and Depression in the Military Health System

## A Pragmatic Randomized Trial with Cost & Qualitative Analyses

**STEPS UP**

Stepped enhancement of
PTSD services using primary care

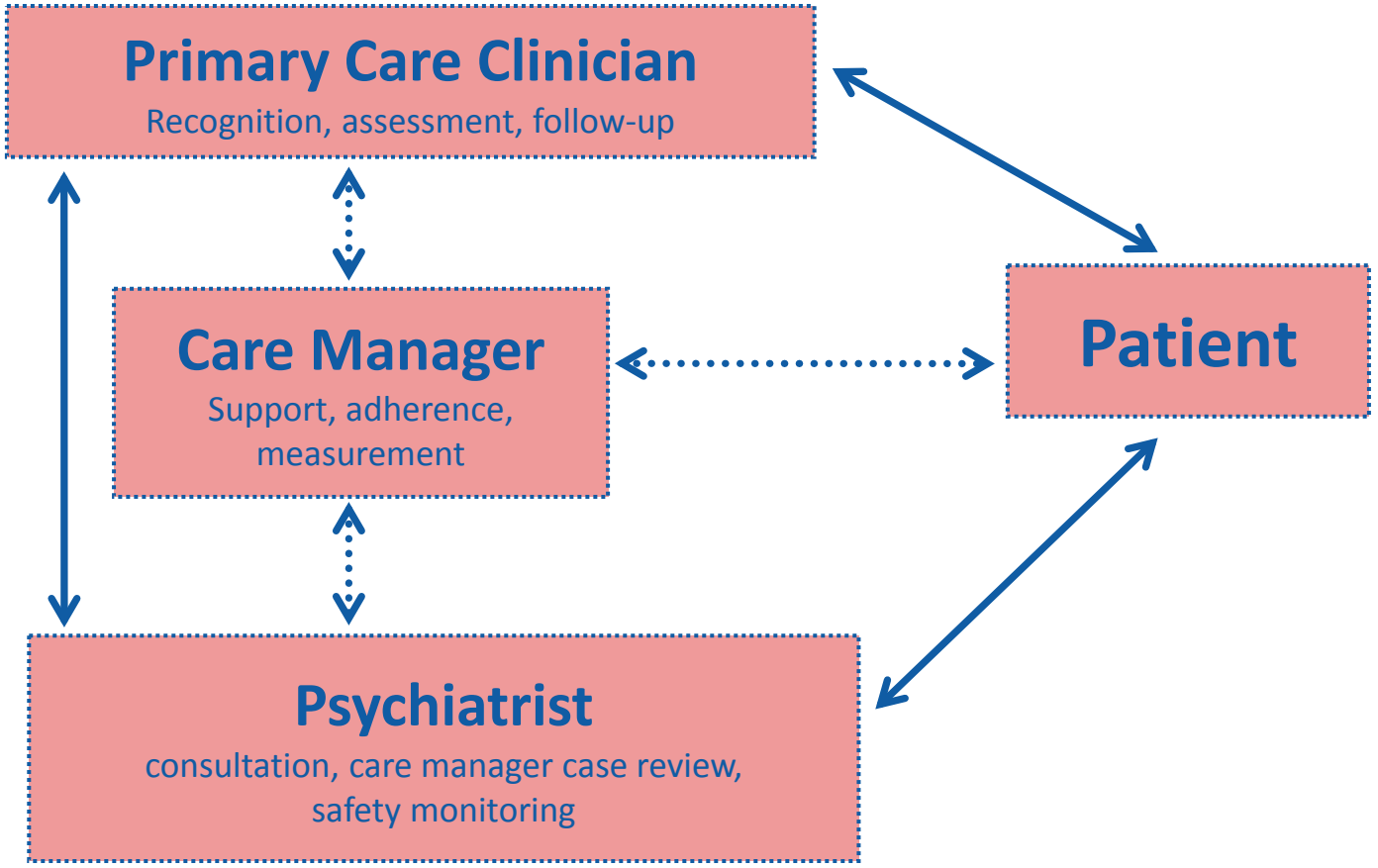

**Charles C. Engel, Lisa Jaycox, and Terri Tanielian**

**for the STEPS-UP Trial Team**



**Supported by a DoD grant (DR080409) from the Congressionally-Directed Medical Research Program (CDMRP)**

# “Three Component” integration model




STEPS UP

Stepped enhancement of
PTSD services using primary care

**Oxman et al, Psychosomatics, 2002**

# Intervention Description

## *STEPS-UP Adds…*

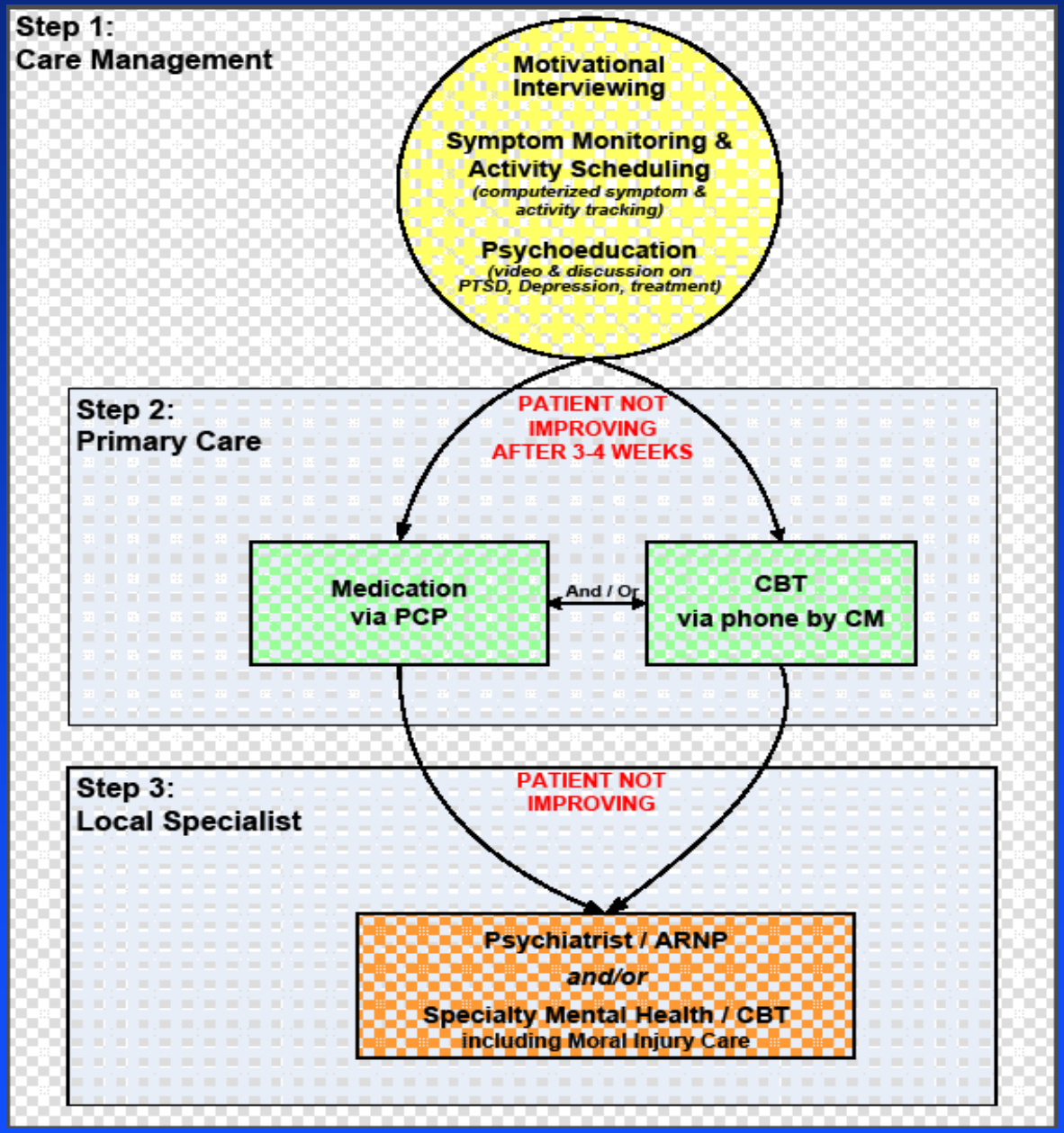
1. Central assistance to maximize model fidelity and scalability and to extend hours and resources for clinics
   - ☆ central program implementation assistance
   - ☆ centrally assisted care management for difficult or mobile patients
   - ☆ centrally delivered phone therapy approach
   - ☆ central program psychiatrist completes weekly case reviews with nurse care managers
2. Ongoing care manager training in engagement to maximize duration and continuity of follow-up
   - ☆ motivational interviewing
   - ☆ behavioral activation
   - ☆ problem solving therapy

# Intervention Description

## *STEPS-UP Adds…*

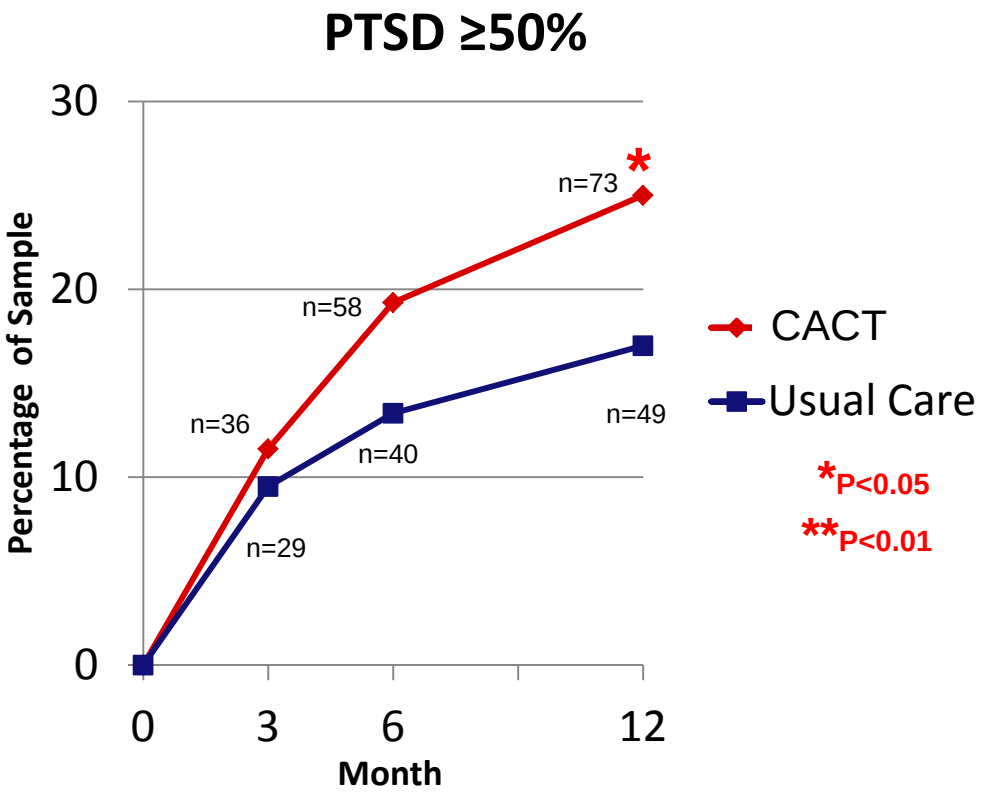
3. **Stepped psychosocial treatment options for primary care**
   - ☆ web-based, nurse assisted self-administered CBT
   - ☆ phone-based CBT with flexible, modularized delivery sequence
   - ☆ face-to-face brief therapy with a mental health specialist working in primary care
4. **Population emphasis bolstered with web-based decision support**
   - ☆ produces registries that stratify risk and monitor outcomes
   - ☆ supports timely stepping of care for non-response
   - ☆ speeds time to treatment
   - ☆ increases treatment duration and continuity

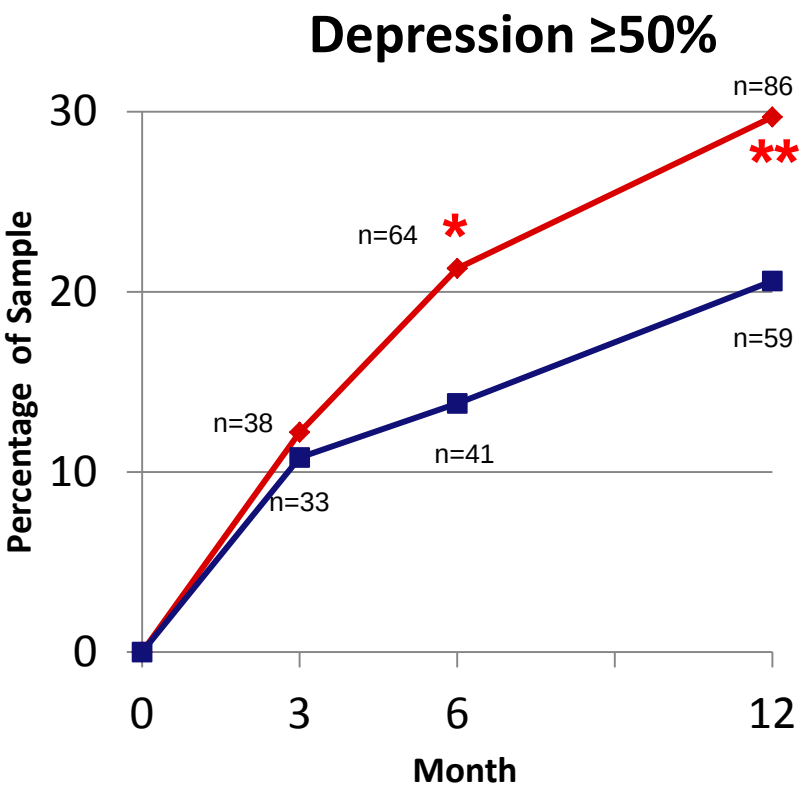
# STEPS-UP Three Step Intervention Protocol Targeting PTSD and Depression



| | *Usual Care* | *CACT* |
|---|---|---|
| **Implementation** | installation responsibility | central assist: clinical services and implementation |
| **Clinical Screening** | PTSD<br>depression | PTSD<br>depression<br>alcohol<br>mania |
| **Nurse Case Management** | local | local<br>central |
| **Stepped Care** | psychoactive medications | psychoactive medications<br>psychosocial therapies |
| **Online Self Management** | no | yes |
| **Health IT Support** | clinical status | clinical status<br>panel registry |
| **Measurement-based Care** | yes | yes |
| **Psychiatrist Case Review** | installation assist | central assist |
| **Primary Care-based Mental Health Specialist** | yes | yes |

# CACT improvements in depression & PTSD were clinically significant



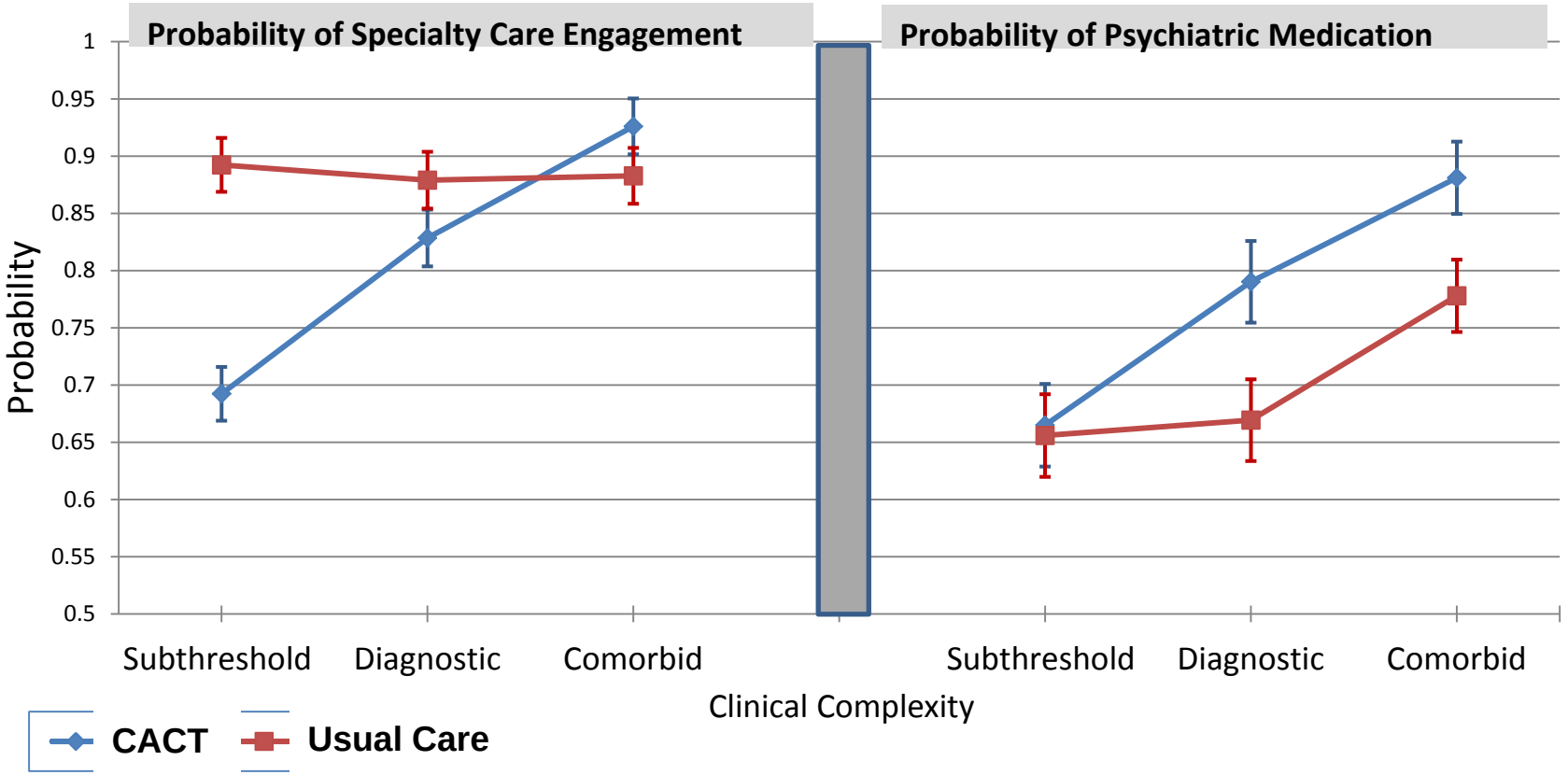




| PTSD | 12-Month NNT "Number Needed to Treat" | Depression |
|---|---|---|
| 12.5 (95% CI, 6.9 – 71.9) | | 11.1 (95% CI, 6.2 – 50.5) |

| >50% Improvement, PTSD | Odds Ratio (95% CI) |
|---|---|
| 0-3 Months | 1.25 (0.74, 2.09) |
| 0-6 Months | 1.55 (0.99, 2.40) |
| **0-12 Months** | **1.62 (1.08, 2.43)** |

| >50% Improvement, Depression | Odds Ratio (95% CI) |
|---|---|
| 0-3 Months | 1.14 (0.70, 1.88) |
| **0-6 Months** | **1.70 (1.11, 2.61)** |
| **0-12 Months** | **1.65 (1.13, 2.42)** |

# CACT linked to improved matching of complexity to specialist referral & med management

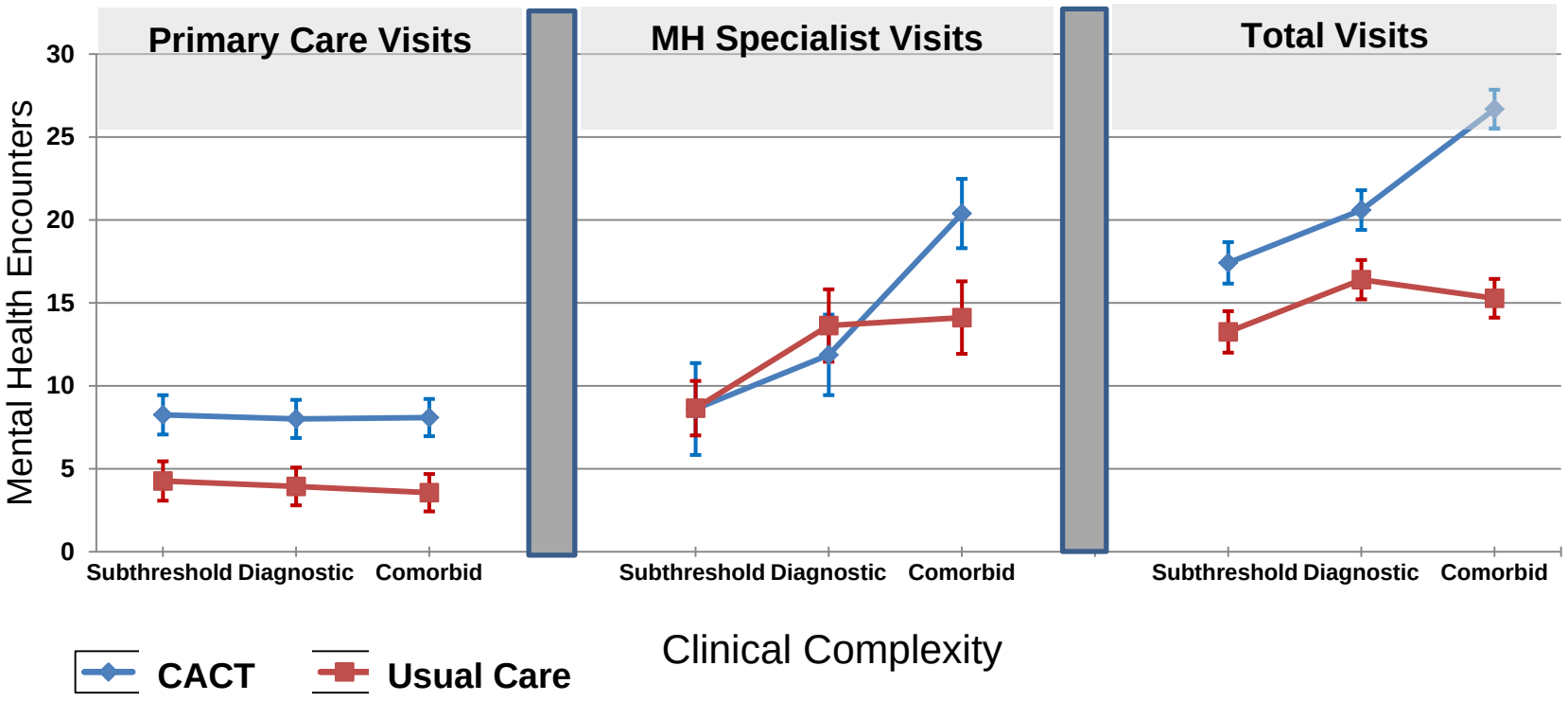



**Belsher et al, Med Care, 2016**

STEPS UP

Stepped enhancement of
PTSD services using primary care

# CACT linked to greater number of visits across primary and specialty care

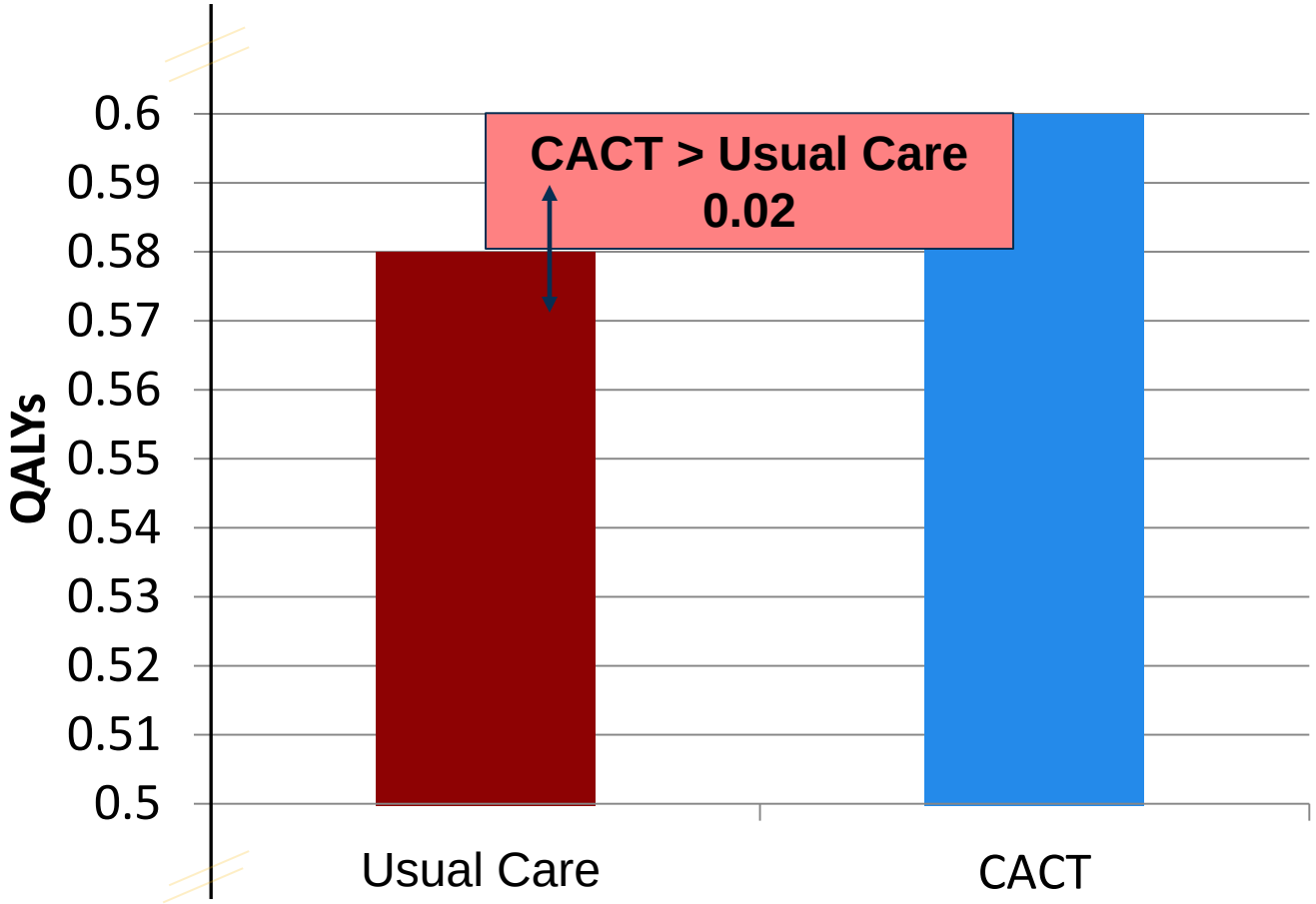



**Belsher et al, Med Care, 2016**

STEPS UP

Stepped enhancement of PTSD services using primary care

# 12-month participant QALYs*




STEPS UP

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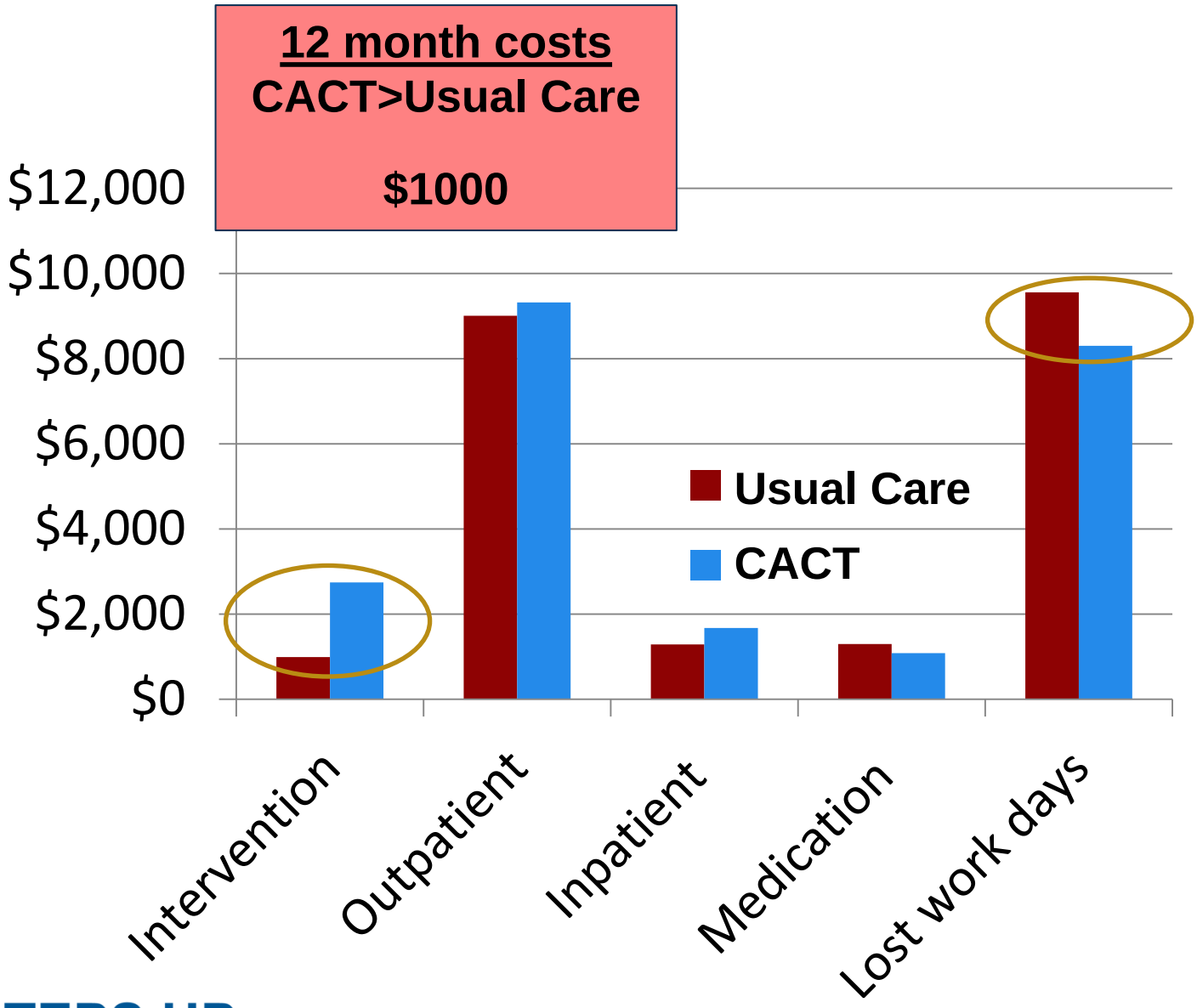
* from SF-12 converted to SF-6D




STEPS UP

Stepped enhancement of
PTSD services using primary care

# Results were sensitive to our decision to include productivity costs…

| Perspective | Δ Cost | Δ QALY | ICER |
|---|---|---|---|
| Health Care | $2200 | 0.02 | $110,000 per QALY |
| Societal | $1000 | 0.02 | $50,000 per QALY |

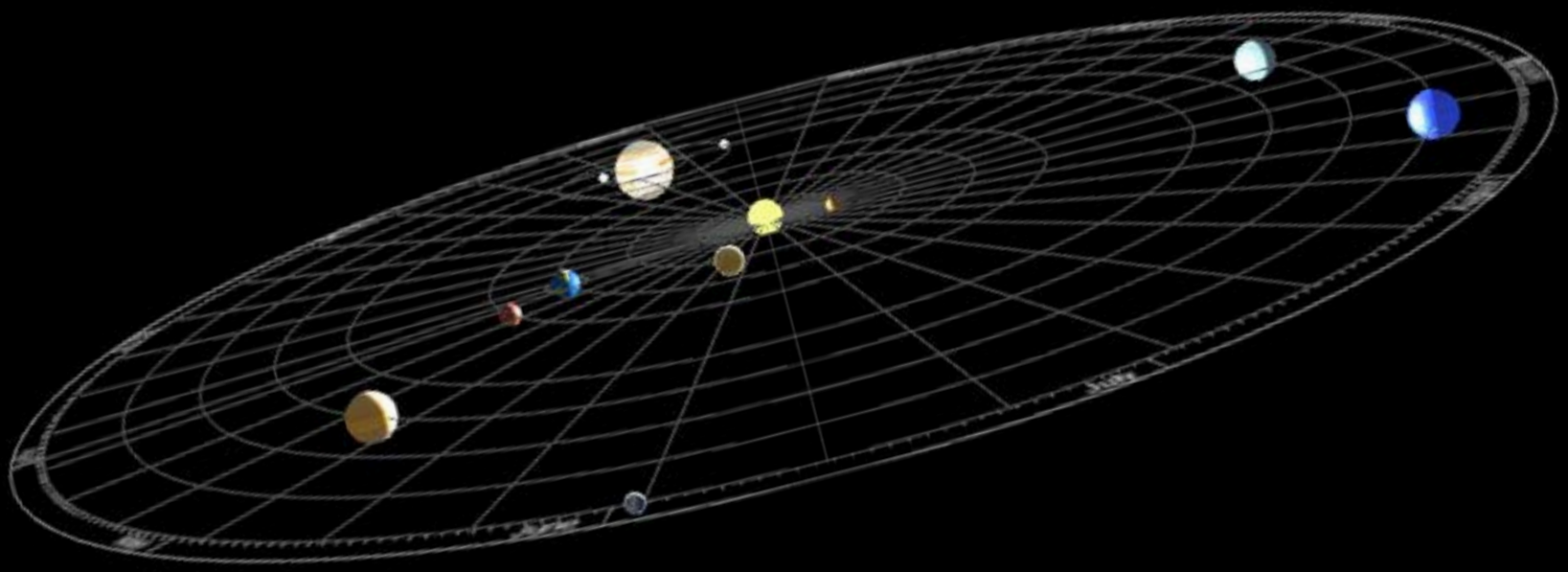
STEPS UP

Stepped enhancement of
PTSD services using primary care

# Core Elements of Collaborative Care

- Behavioral health case management
- Self management support
- Measurement-based care
- Population registries
- Stepped care
- Routine psychiatrist case review
- Remote/central implementation assistance

# Central Assistance Helps Practices Remain In Orbit



Research

*JAMA Intern Med*. 2016;176(7):948-956. doi:10.1001/jamainternmed.2016.2402
Published online June 13, 2016.

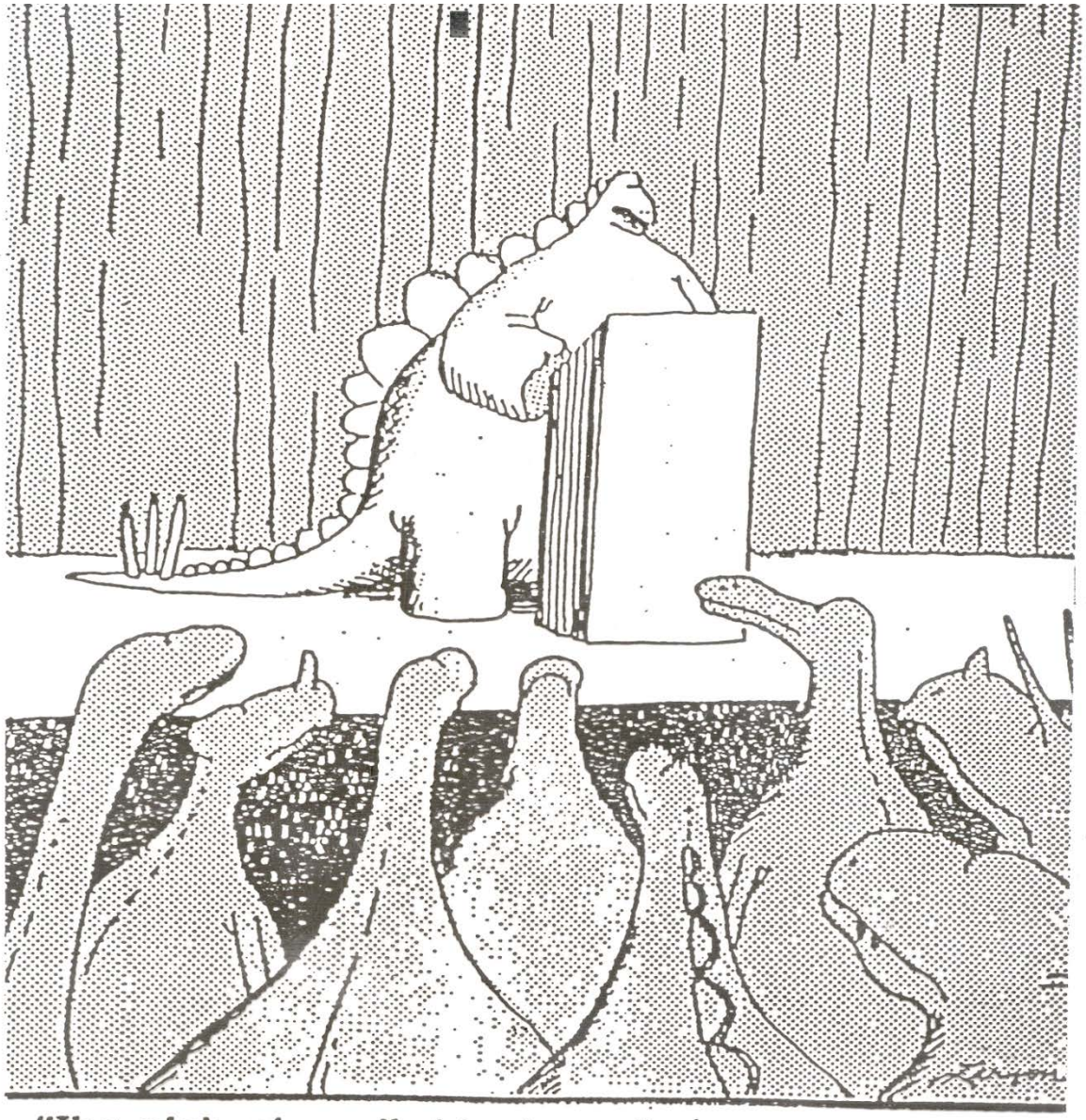
Original Investigation

# Centrally Assisted Collaborative Telecare for Posttraumatic Stress Disorder and Depression Among Military Personnel Attending Primary Care
## A Randomized Clinical Trial

Charles C. Engel, MD; Lisa H. Jaycox, PhD; Michael C. Freed, PhD; Robert M. Bray, PhD; Donald Brambilla, PhD; Douglas Zatzick, MD; Brett Litz, PhD; Terri Tanielian, MA; Laura A. Novak, BS; Marian E. Lane, PhD; Bradley E. Belsher, PhD; Kristine L. Rae Olmsted, MSPH; Daniel P. Evatt, PhD; Russ Vandermaas-Peeler, MS; Jürgen Unützer, MD; Wayne J. Katon, MD†

# Overview

- Why Reach Matters
- Reach & Primary Care
- Mental Health Integration Components
- Making It Work



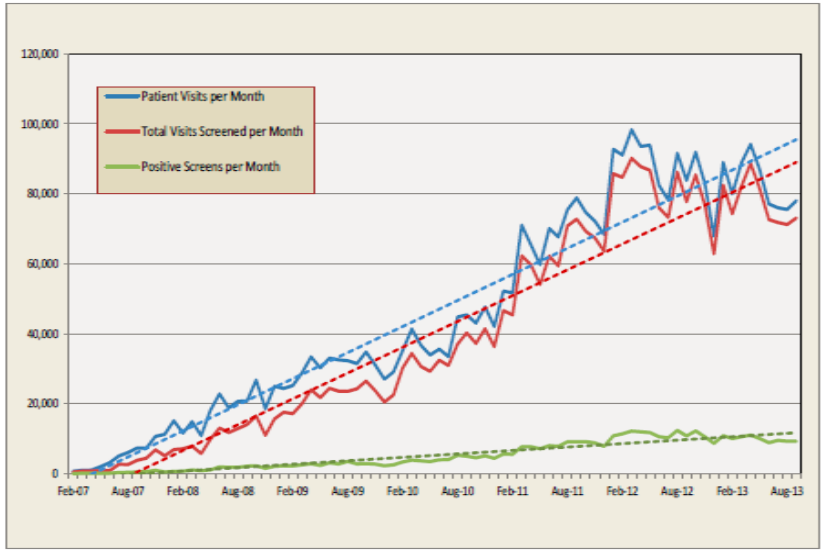
"The picture's pretty bleak, gentlemen. ... The world's climates are changing, the mammals are taking over, and we all have a brain about the size of a walnut."

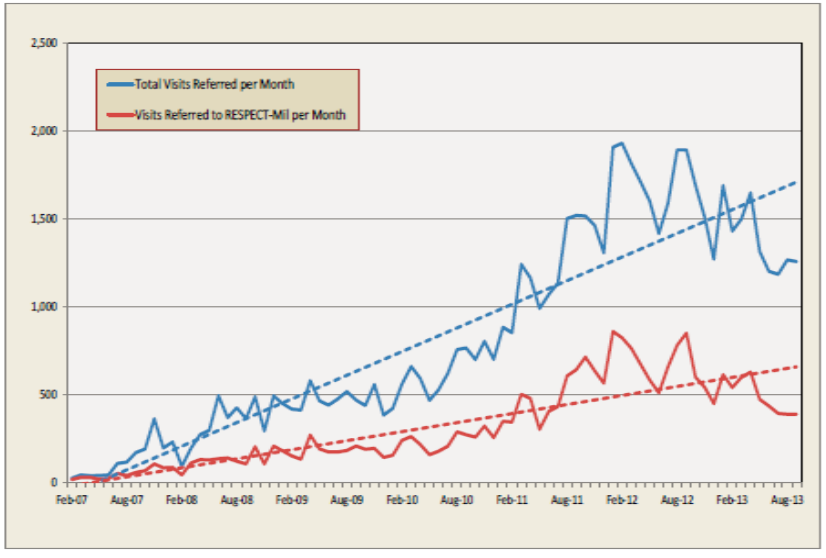
# How do we evolve into mammals?

Or

How can we truly implement effective “integrated care”?

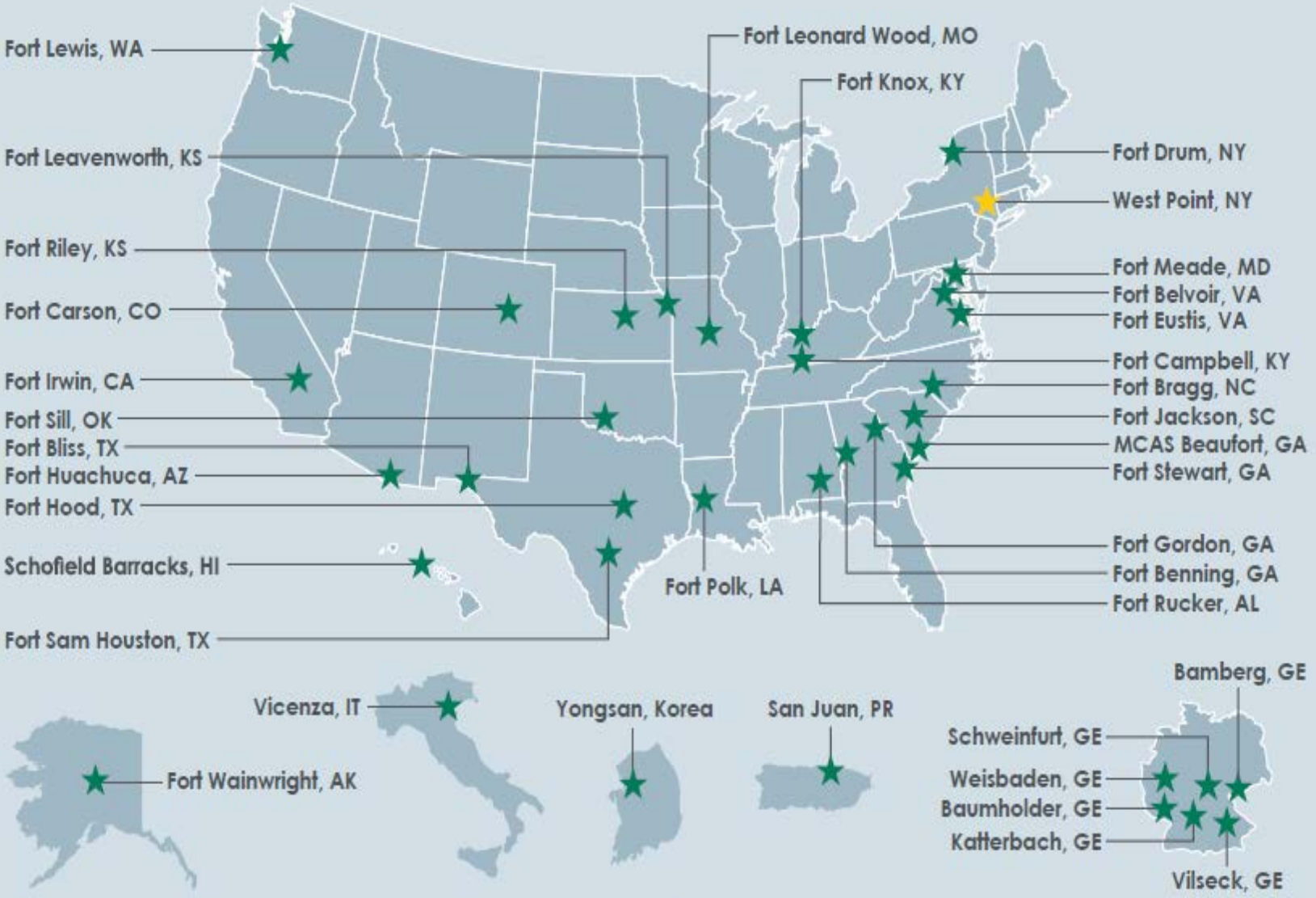
# Scaling




| Indicator | Feasibility Study | September 2013 |
|---|---|---|
| # Clinics | 1 | 108 |
| # Installations | 1 | 40 |
| # Patient Visits Screened | 4,159 | 3,238,810 |
| # of Positive Screens | 404 (9.7%) | 424,042 (13.1%) |
| # Referred to RESPECT-Mil | 80 (19.8%) | 65,863 (15.5%) |
| Engagement Rate | 56.7% | 65.3% |

# RESPECT-MIL WORLDWIDE SITES



# *RESPECT-Mil*
# Implementation Approach

- ★ Micro: Clinic level implementation
- ★ Meso: Site level implementation (R-SIT)
- ★ Macro: Program implementation (R-MIT)



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# Behavioral Health in the Patient Centered Medical Home

## 12-Month Program Status Report (October 1, 2012 - September 30, 2013)

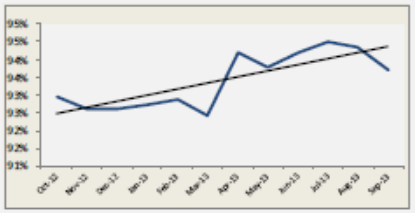
*As of September 30, 2013, the Patient Centered Medical Home - Behavioral Health initiative is/was:*

- Carrying out and reporting on screening for behavioral health conditions at 35 of 41 targeted installations.
- Conducting behavioral health care facilitation activies at 38 of 41 targeted installations.

### Program Scale (Key Statistics)

| | |
|---|---|
| Number of primary care visits thru participating clinics: | *988,436* |
| Number of primary care visits screened: | *923,083* |
| Number of screened primary care visits screening positive for Depression and/or PTSD: | *121,577* |
| Number of screened primary care visits diagnosed with Depression and/or PTSD: | *57,458* |
| Number of screened primary care visits endorsing positive suicidal ideation: | *4,950* |
| Number of screened primary care visits referred (includes declines) for BH services: | *26,244* |

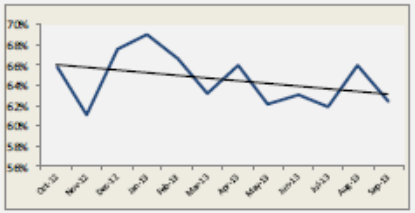
### Screening Rate



| | |
|---|---|
| Program Average: | 93.39% |
| Unweighted Installation Average: | 92.39% |
| Installation Range: | 80.03% – 100.00% |
| Installation Standard Deviation: | 5.56% |

| Highest Performing Installations | | Lowest Performing Installations | |
|---|---|---|---|
| Vilseck | 100.00% | MCAS Beaufort | 83.93% |
| Ft. Campbell | 99.19% | Ft. Belvoir | 82.64% |
| Ft. Leavenworth | 99.02% | Ft. Drum | 81.87% |
| Ft. Stewart | 98.93% | Joint Base Elmendorf-Richardson | 81.62% |
| Yongsan | 98.84% | Camp Casey | 80.03% |

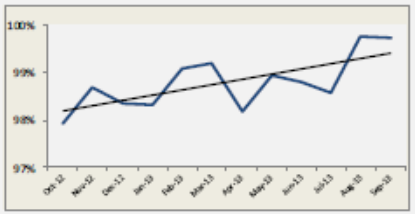
### Accepted Referral Rate



| | |
|---|---|
| Program Average: | 64.62% |
| Unweighted Installation Average: | 64.88% |
| Installation Range: | 35.00% – 100.00% |
| Installation Standard Deviation: | 14.98% |

| Highest Performing Installations | | Lowest Performing Installations | |
|---|---|---|---|
| Ft. Bucharan | 100.00% | Ft. Riley | 47.83% |
| Vilseck | 100.00% | Ft. Meade | 46.15% |
| Ft. Benning | 88.89% | Ft. Sill | 43.84% |
| Ft. Rucker | 81.25% | Wiesbaden | 42.86% |
| Ft. Leavenworth | 75.00% | Ft. Wainwright | 35.00% |

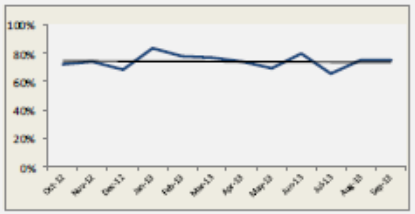
### Suicide Risk Documentation Rate



| | |
|---|---|
| Program Average: | 98.77% |
| Unweighted Installation Average: | 98.30% |
| Installation Range: | 70.59% – 100.00% |
| Installation Standard Deviation: | 5.20% |

| Highest Performing Installations | | Lowest Performing Installations | |
|---|---|---|---|
| Bamberg | 100.00% | Ft. Drum | 94.87% |
| Baumholder | 100.00% | Vilseck | 94.12% |
| Camp Casey | 100.00% | Ft. Rucker | 93.22% |
| Ft. Belvoir | 100.00% | Ft. Sill | 88.66% |
| Ft. Benning | 100.00% | Parris Island | 70.59% |

### Rate of Initial Contact within 14 Days



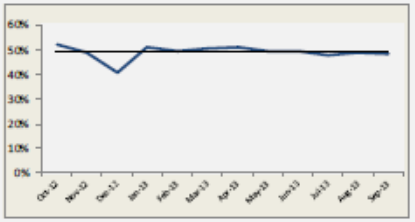
| | |
|---|---|
| Program Average: | 74.41% |
| Unweighted Installation Average: | 75.48% |
| Installation Range: | 60.00% – 100.00% |
| Installation Standard Deviation: | 8.37% |

| Highest Performing Installations | | Lowest Performing Installations | |
|---|---|---|---|
| Ft. Carson | 100.00% | Joint Base Langley-Eustis | 68.18% |
| Schweinfurt | 100.00% | Schofield Barracks | 67.31% |
| Katterbach | 85.71% | Camp Casey | 66.67% |
| Ft. Drum | 83.33% | Ft. Gordon | 62.50% |
| Ft. Rucker | 82.81% | Joint Base San Antonio | 60.00% |


# Behavioral Health in the Patient Centered Medical Home

## 12-Month Program Status Report (October 1, 2012 - September 30, 2013)

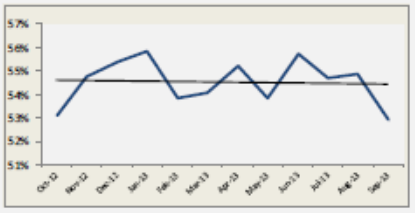

### Monthly Case Contact Rate



| | |
|---|---|
| Program Average: | 48.89% |
| Unweighted Installation Average: | 45.36% |
| Installation Range: | 0.00% – 96.91% |
| Installation Standard Deviation: | 21.34% |

| Highest Performing Installations | | Lowest Performing Installations | |
|---|---|---|---|
| Ft. Buchanan | 96.91% | Joint Base Langley-Eustis | 15.14% |
| Ft. Stewart | 73.24% | Yongsan | 2.37% |
| Camp Casey | 68.06% | Baumholder | 0.00% |
| Ft. Rucker | 66.92% | Ft. Belvoir | 0.00% |
| Ft. Gordon | 65.90% | Vicenza | 0.00% |

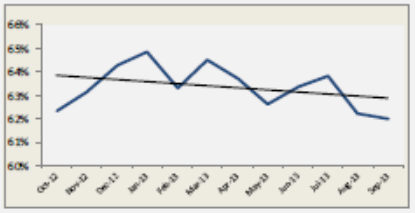
### Depression Improvement Rate



| | |
|---|---|
| Program Average: | 54.54% |
| Unweighted Installation Average: | 57.61% |
| Installation Range: | 21.95% – 100.00% |
| Installation Standard Deviation: | 15.41% |

| Highest Performing Installations | | Lowest Performing Installations | |
|---|---|---|---|
| Baumholder | 100.00% | Ft. Wainwright | 38.28% |
| Joint Base Langley-Eustis | 91.37% | Ft. Rucker | 37.39% |
| Joint Base San Antonio | 81.54% | Wiesbaden | 37.36% |
| Parris Island | 77.21% | Ft. Huachuca | 36.25% |
| Yongsan | 76.32% | Ft. Jackson | 21.95% |

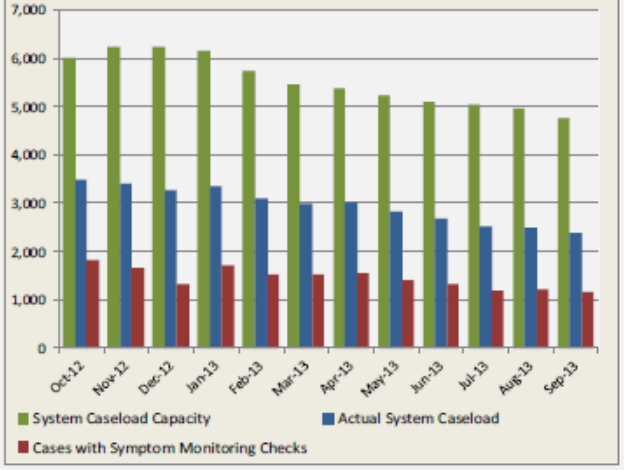
### PTSD Improvement Rate



| | |
|---|---|
| Program Average: | 63.38% |
| Unweighted Installation Average: | 65.34% |
| Installation Range: | 33.33% – 100.00% |
| Installation Standard Deviation: | 13.51% |

| Highest Performing Installations | | Lowest Performing Installations | |
|---|---|---|---|
| Baumholder | 100.00% | Wiesbaden | 51.69% |
| Joint Base Langley-Eustis | 96.39% | Ft. Rucker | 51.15% |
| Joint Base San Antonio | 88.57% | Camp Casey | 50.00% |
| Vilseck | 82.65% | Bamberg | 43.48% |
| Parris Island | 82.13% | Vicenza | 33.33% |

### Care Facilitation Capacity & Load




### Caseload & Activity Metrics

| | |
|---|---|
| Average # of BHCFs/Month: | 79 |
| Average BHCF Monthly Caseload: | 37 |
| Average BHCF Monthly Caseload with Symptom Monitoring Checks: | 18 |
| Average Monthly Unused System Capacity: | 47% |

| Number of Installations where Average Monthly BHCF Caseload is: | |
|---|---|
| *Above Targeted Range:* | 2 |
| *Within Targeted Range:* | 3 |
| *Below Targeted Range:* | 35 |

*Recommended caseload for Behavioral Health Care Facilitators (BHCF) is between 60 and 80 active patients.*

*System Capacity estimated at 70 active cases per BHCF*

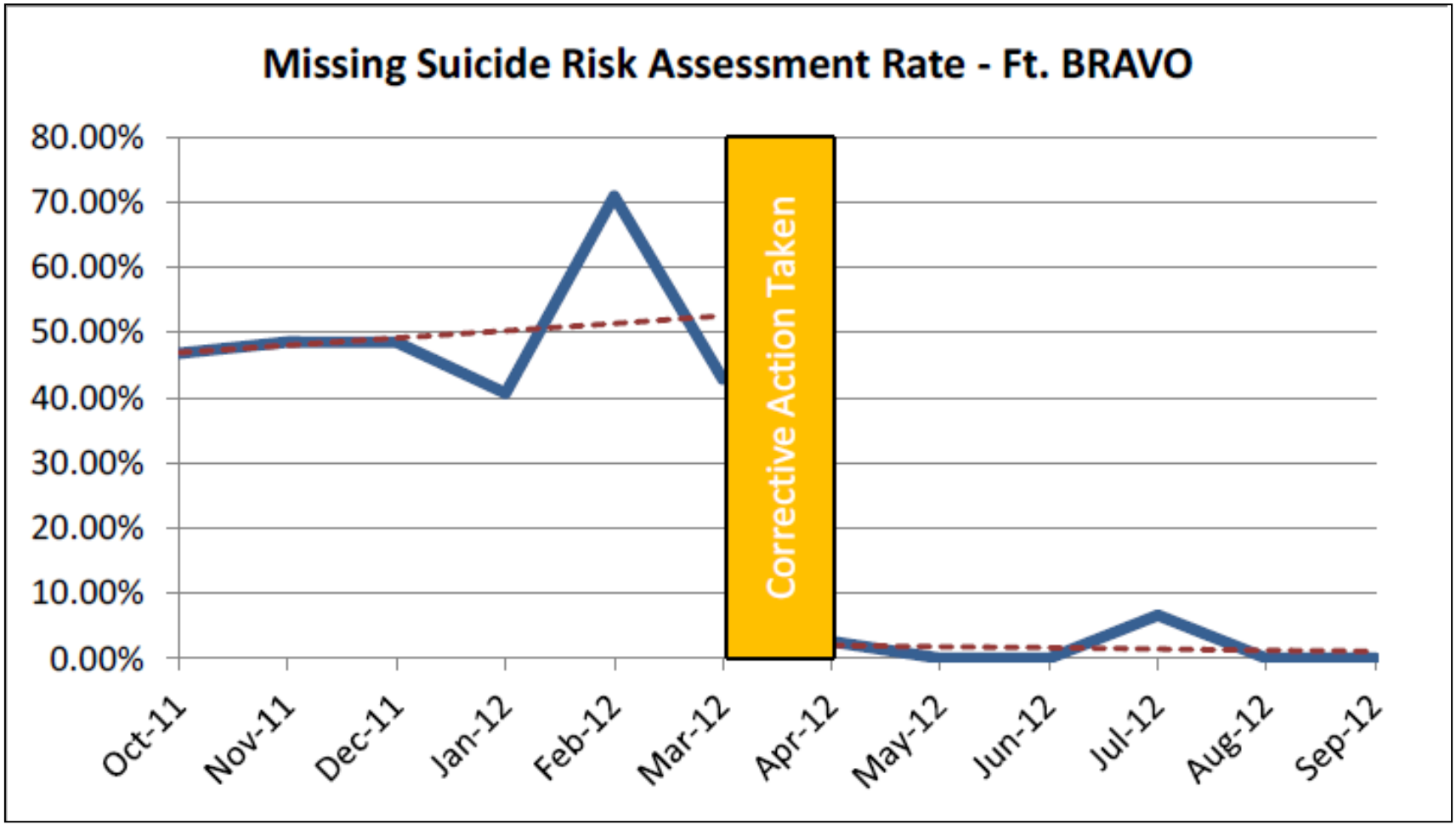
*Benefits of Central Assistance*

# Suicide Assessment Monitoring

- ★ Performed semi-annual monthly centralized monitoring of missed primary care suicide assessments by site
- ★ Discovered one high volume installation that performed poorly
- ★ RSIT notification, site visit, command brief
- ★ Increased frequency of monitor to monthly

RESPECT-Mil

# Program Monitoring



# 10 Key Organizational Practices

1. Formalized Partnerships (Co-location?)*
2. Population Management /Predictive Modeling*
3. Effective Communication*
4. Care Management with Relentless Follow-Up*
5. Clinical Registries for Tracking and Coordination*
6. Decision Support for Measurement-Based/Stepped Care*
7. Access to Evidence-Based Psychosocial Services
8. Self-Management as Part of a Recovery Framework*
9. Link with Community Services/Resources*
10. Data-Driven Quality Measurement and Improvement*

* = Health Information Technology-sensitive practice

# Dissemination

- In the Civilian Health System
  - Capacity
  - Fidelity
  - Coordination
  - Incentives
  - Accountability
  - Culture!

# Summary Points

- Collaborative care is a systems approach to behavioral health care integration
- Goal is to improve the routine the quality and outcomes of behavioral health care in medical settings
- Trials to date suggest that greater emphasis on psychosocial intervention may lead to improved outcomes
- Exclusive intervention focus in improving medication prescribing and greater sample heterogeneity appears to reduce intervention effect

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# Behavioral Health Integration Extends the Reach of Evidence-based Treatment

# Thank You!

# Questions?

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