



Automated Behavioral Health Clinic

**A Technology Solution for
Building a Quality Mental Health Care System**

MAJ Millard Brown, MD
Joseph Etherage, PsyD
Matthew Rein

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BRIEFING OUTLINE

PURPOSE: The purpose of this briefing is to present the Automated Behavioral Health Clinic (ABHC): a foundation for **outcomes tracking, improved clinic efficiency, and better patient care.**

1. Identify Obstacles to Optimal Behavioral Healthcare
2. Provide Background on the Automated Behavioral Health Clinic (ABHC)
3. Identify Solutions through ABHC Implementation



ABHC

- Computerized self-report web application of demographic info and standardized clinical measures
 - Patients sit at computer prior to seeing provider
- Depression, Anxiety, PTSD, Substance Abuse
- Combat exposure, Unit Cohesion
- Anger/Hostility, Suicidality/Dangerousness, Relationships
- 30-45 minutes at intake
- 5-10 minutes at each follow-up appointment
- Data pushed to provider in real time



Quality Mental Health Care

- **How do we know we are doing any good?**
- **Are we achieving any benefit for our resources and efforts expended?**
- **What types of “benefits” are important in MH Care in the military?**
 - Other more “real-world” functional benefits?
 - Institutional benefits?
 - Resolution of individual Diagnoses and Sx?



MH OUTCOME MEASURES

- **Functional Military Outcomes**

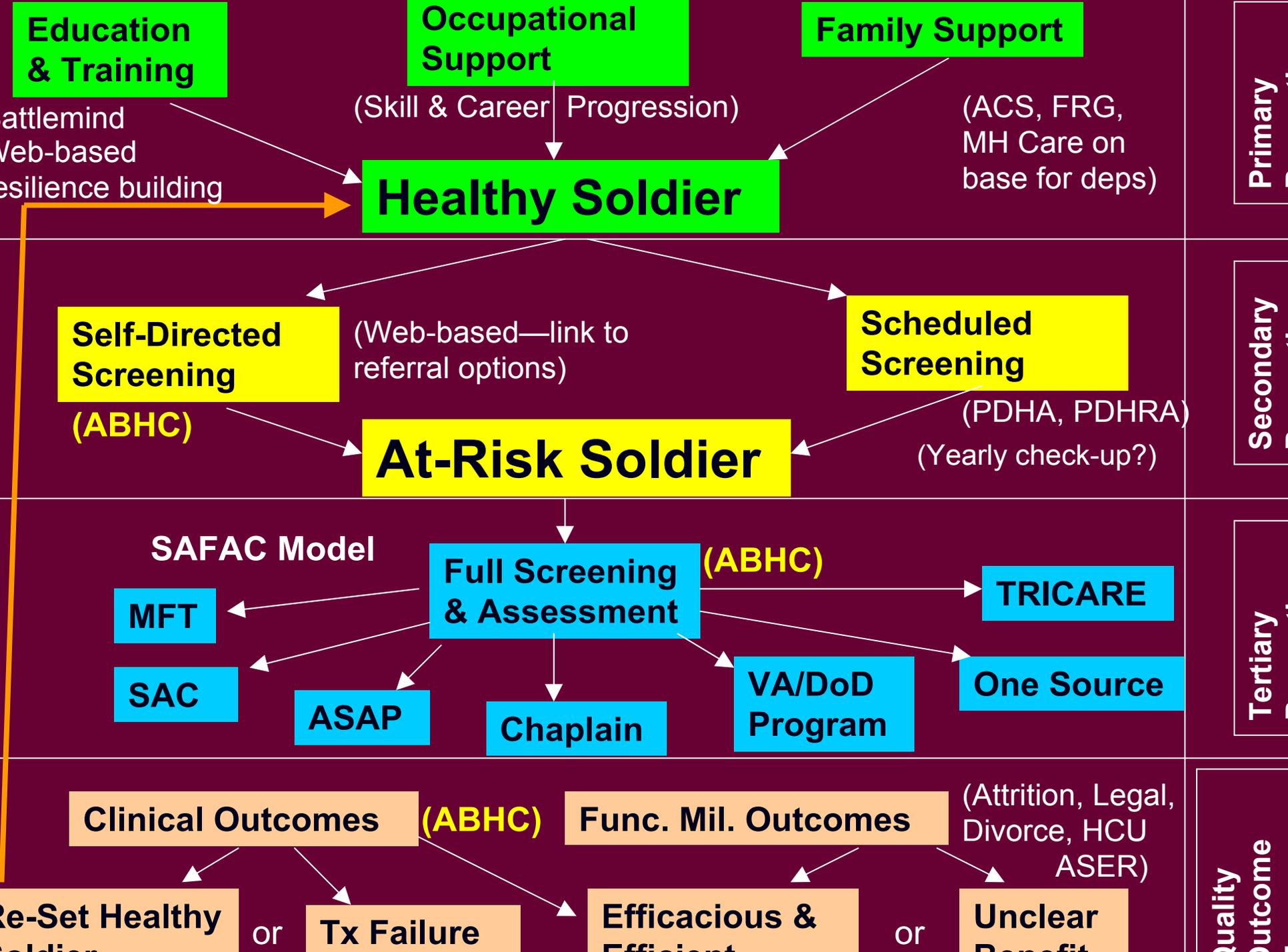
- Lost work days, UCMJ actions, Sick call rates
- Family Advocacy, Substance Abuse referrals
- Attrition rates, Divorce rates, Domestic Violence rates
- Medical Board (MEB) rates and Suicide Rates

- **Health Care Utilization Levels**

- Those in poor mental health have elevated HCU rates
- Increased access to / utilization of MH care can reduce HCU

- **Clinical Outcomes**

- Demonstrate reduction in symptoms and resolution of clinical illness





OBSTACLES TO OPTIMAL CARE

- **Mental Health has no labs, x-rays, vitals to follow for evidence of clinical improvement**
 - No BP to track like in HTN management
 - No glucose to track like in DM management
 - Objective MH assessment tools exist, ABHC makes them accessible.

- **Absence of Reliable Outcome Measurements in our Current System**
 - No systematic use of standardized measures
 - Current metrics not useful
 - Validity of diagnoses (related to perceived AHLTA confidentiality issues – stigma – MEBs)



OBSTACLES TO OPTIMAL CARE

- **Many types and levels of MH providers**
 - 68X's – Social Work – Psychology – Psychiatry
 - Variability in case identification ability and technique
 - Variability in training philosophies & methods
- **Variability in case identification**
 - Leads to missed diagnoses
 - Decreased patient / family safety
 - Delays accurate treatment
- **No reliable baseline status established**
 - Different levels of severity and complexity of cases
 - Difficult to know when people truly get better



OUTCOME SYSTEM ELEMENTS

- **Implement a standardized method of assessing SMs/dependents in MH venues:**
 - Objective and standardized in all MH venues
 - Allows for all training programs to train to the same standard
 - Research supported, validated
 - Computerized – allows for analysis of data
 - Adaptable to military-specific clinical needs
 - Proven to work in real-world field testing
 - Does not rely on providers for implementation during the clinical encounter
 - Allows for various intervention methods while focusing on patient-centered functional outcomes



PRODUCT DEVELOPMENT

“Necessity is the mother of invention”

Necessity

Use software to automate the patient intake process, improve access to data relevant to patient care.

Invention

Screen waiting soldiers with comprehensive questionnaire. Generate report of questionnaire results to assist Mental Health providers and clinic managers.



PRODUCT DEVELOPMENT

Version 1: Paper Scanning Software

Include publicly available, statistically validated scales to assess mental health symptoms, including: Depression, Anxiety, PTSD, etc.

Paper scanning software solution "BH Screener":

- Used at Psychology clinics
- Effective, but awkward technology
- Great concept, needed something better



PRODUCT DEVELOPMENT

Survey of Available Technology

- AHLTA:** COL Gahm forwarded requirements through AHLTA development process.
- » Too complex
 - » Low priority, relatively
- Other:** Evaluated ICDB, FASOR, SUAT, iBHR. No other DoD systems/development efforts underway that would work in time.
- Decision:** Hire software developers, build it at Madigan.



PRODUCT DEVELOPMENT

Invention Version 2: Intranet Application

Available from Provider workstations and patient touch screen kiosks, using Internet Explorer web browser.

Technical Specification:

- Web Application, available to many clinics and MTFs via secure network connectivity.
- Open Source/Standards: Java, XML, XHTML
- Army Enterprise licensed software: Oracle
- Dynamic questionnaire: skip rules, periodicity, etc.



PRODUCT DEVELOPMENT

Custom Software Development (what?!)

Ambitious undertaking:

- Received Funding from TATRC
- Hired software developers
- Security: DITSCAP

Getting Software Right

How we are doing it:

- Co-located software developers
- Agile, iterative, spiral development process
- SME **use** product and give feedback
- SME feedback **drives** software development
- Great people!



DEMONSTRATION

Clerk & Patient Portals

Provider Portal



POTENTIAL ABHC DELIVERABLES

- Establishment of standardized clinical & functional baseline and outcome measurements for MH care delivery
- More efficient care – similar or improved outcomes in fewer appointments
- Decreased overall HCU for well-treated MH cases
- Built-in system in place to measure potential success of new and existing MH programs



SUGGESTED COURSE OF ACTION

- **Support funding of further Phases of Development for the ABHC**
 - Multi-site development phase (TAMC / Alaska?)
 - Adding functionality for different populations
 - Program evaluation for effectiveness of ABHC
- **Support funding for eventual integration into AHLTA**
- **Adopt the ABHC system as a primary means of assessing effectiveness of existing / new MH programs and serve as the standard for all MH training**



Back-Up Slides





OBSTACLES TO OPTIMAL CARE

- **Information Difficult to Share Between Clinics, MTFs, or VA**
 - Objective Assessment Materials and Detailed Patient Intake History is kept on paper within the clinic
- **Continuity of care, preventing drop-outs is labor intensive**
 - Contractors, deployments, training programs, PCS
- **No Process to Ensure Hand-off of patients between Clinic, Services, MTFs, DoD/VA**
- **Patients considered At-Risk are not Tracked**