



Introduction to The Brief Addiction Monitor (BAM):

A Tool to Support Measurement-based Care for People with Substance Use Disorders

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Slides Courtesy of the

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Our agenda...

- Background & Development of the BAM
- What is the BAM?
 - Contents, Administration, Scoring
- Who gets the BAM and when do they get it?
- Treatment Planning
- Integrating the BAM into your practice and program



What is Measurement Based Care?

Measurement Based Care (MBC) is:

“Enhanced precision and consistency in disease assessment, tracking, and treatment to achieve optimal outcomes”

Harding, Rush, Arbuckle, Trivedi, & Pincus (2011). *Journal of Clinical Psychiatry*



Origin of The Brief Addiction Monitor (BAM)

- Originally prompted by need to assess patient “outcomes” in the VA
- Efficient system also needed to monitor patient progress and provide guidance on modifications to treatment when necessary (the MBC part)
- Emphasis of measuring clinically useful factors:
 - Substance use
 - Other indicators of relapse risk
 - Recovery-oriented behaviors



Initial Instrument Development

- 25 potential monitoring items selected from existing instruments and reviews of literature on treatment outcome predictors
- Initial version of instrument administered to VA SUD patients, followed by interviews to determine process of interpreting and responding to items
- Protocol yielded 17 items, labeled the Brief Addiction Monitor (BAM)



Pilot Study Procedures

- Patients given BAM at their disposition appointment (formal start of outpatient treatment) by a counselor
- Follow-up:
 - Participants in Group A were administered a 3 month follow-up by a clinician (i.e., their counselor or an ARU outreach clinician) and then a week later by a research tech
 - Participants in Group B were first administered their 3 month follow-up by a research tech and then by a clinician one week later (Test-Retest)
 - Participants were paid \$20 at the 3 month follow-up (only if they completed all assessments with both the clinician and the research tech)



Change from Baseline to the Three Month Follow-up (N= 74) - Sensitivity

	Baseline Mean (SD)	3 mo. FU Mean (SD)	t	p
Items (past 30 day time frame)				
Days Trouble Sleeping	15.81 (11.24)	11.38 (10.92)	2.94	0.004
Days Depressed	13.90 (10.34)	8.81 (9.76)	4.47	<.001
Days Drink Alcohol	6.68 (9.55)	2.14 (5.15)	4.11	<.001
Days Heavy Alcohol Use	3.96 (7.49)	1.19 (3.75)	2.87	0.005
Days Drug Use	4.03 (6.34)	0.70 (1.82)	4.29	<.001
Cravings^b	1.69 (1.17)	0.96 (1.00)	4.62	<.001
Days Self Help Attendance	8.69 (11.00)	11.64 (11.78)	-2.04	0.045
Days Risky Situations	7.60 (9.69)	4.31 (8.42)	2.6	0.011

b-- 0 = not at all; 4= extremely

Does it matter who does the follow-up? (counselors vs. research techs) Test-Retest Reliability



<u>Items (past 30 day time frame)</u>	<u>Counselor</u>	<u>Researcher</u>	t	p	correlation	p
	Mean (SD)	Mean (SD)				
Days Drink Alcohol	2.33 (5.46)	2.79 (5.83)	-1.77	0.081	0.94	<.001
Days Drug Use	0.60 (1.79)	1.35 (3.40)	-1.73	0.089	0.29	0.03
Abstinence Confidence ^b	3.11 (1.16)	2.85 (1.26)	1.81	0.074	0.55	<.001
Days Self Help Attendance	12.44 (11.67)	11.32 (10.9)	1.80	0.076	0.90	<.001
Religion Support ^b	2.92 (1.30)	2.69 (1.37)	1.96	0.054	0.75	<.001
Recovery Goals Satisfaction ^b	3.25 (0.93)	3.13 (1.09)	1.73	0.088	0.85	<.001

b-- 0 = not at all; 4= extremely

The remaining assessment items had correlations ranging from 0.34 to 0.82.



Time of Administration

- Range:
 - Clinician administered: 2-20 minutes
 - Self administered: 2-20 minutes
- Mode:
 - Clinician: >50% 4-5 minutes
 - Self: much greater variability



Summary of Findings

- Assessment can monitor progress in multiple areas of clinical relevance
- Most items appear sensitive to change from admission to 3 mo follow-up
- Under-reporting may be more likely with clinicians than with research techs; but, this is likely a function of the therapeutic context and relationship.
- Administration times vary by method but modal time is 5 minutes.



So....what exactly is the BAM?

- A 17-item measure of addiction problem severity that is designed to support measurement-based treatment in SUD specialty care settings.
- May be administered as a clinical interview (in-person or telephonically) or via patient self-report; and, it typically takes about 5 minutes to complete.
- Retrospectively examines the patient's behavior in the past 30-days, but has been adapted for repeated administrations as frequently as every 7 days (BAM for IOP).
- Includes items that assess **Risk** factors for substance use, **Protective** factors that support sobriety, and drug and alcohol **Use**.
- Produces composite scores for Risk and Protection as well as a Use score. A patient's clinical status may be assessed by examining individual BAM items and/or composite scores.



Features of the BAM

- Brief (17 items)
- Multi-dimensional, with no single summary score validated so far
- Items selected from valid/reliable measures
- Initial item selection based on research on predictors of relapse and outcome
- Data readily integrated into treatment planning
- Categorical or continuous response options to items



BAM Content: Domains & Items

<i>Substance Use</i>	<i>Risk Factors</i>	<i>Protective Factors</i>
Any alcohol use	Craving	Self-efficacy
Heavy alcohol use	Sleep problems	Self-help
Drug use	Mood	Religion/spirituality
	Risky situations	Work, school
	Family/social problems	Income
	Physical health	Social supports for recovery



The Brief Addiction Monitor: Drug and Alcohol Use

- **(1) Self Reported Substance Abuse (in past 30 days):**
 - ANY alcohol use – Item 4
 - HEAVY alcohol use - At least 5 drinks (if you are a man) or at least 4 drinks (if you are a woman) - Item 5
 - ANY illegal/street drugs or abuse any prescription medications – Item 6



The Brief Addiction Monitor: Risk Factors

- **(2) Risk Factors (in the past 30 days)**
 - Physical health – Item 1
 - Sleep – Item 2
 - Negative mood – Item 3
 - Cravings or urges to drink alcohol or use drugs – Item 8
 - Situations or people that might present increased risk for using alcohol or drugs (i.e., risky “people, places or things”)? – Item 11
 - Arguments or problems getting along with family members or friends – Item 15



The Brief Addiction Monitor: Protective Factors

- **(3) Protective Factors (in the past 30 days)**
 - Confidence in ability to be completely abstinent (clean) from alcohol and drugs in the next 30 days – Item 9
 - Self-help meeting attendance (like AA or NA) – Item 10
 - Religion or spirituality – Item 12
 - Work, school, or doing volunteer work – Item 13
 - Income (from legal sources) to pay for necessities such as housing, transportation, food and clothing for self and dependents – Item 14
 - Contact or time spent with any family members or friends who are supportive of your recovery – Item 16



BAM Scoring

- Each BAM item can be considered a “score” on which a patient’s status can change.
- End users are strongly encouraged to attend to the item-level data because they have direct implications for treatment planning. That is, they identify specific areas of need or resources the patient brings to bear in his/her recovery.
- Each domain has an associated composite score which serves as cross-sectional marker of clinical status. Treatment seeks to maximize the Protective to Risk ratio in an effort to initiate and maintain abstinence. Additional psychometric evaluation of these scores is needed before they can be more extensively applied to clinical decision-making.



BAM Scoring: Data Format

- The BAM data can be gathered in two formats:
 - **Categorical Data**
 4. In the past 30 days, how many days did you drink ANY alcohol?
 - 0
 - 1-3
 - 4-8
 - 9-15
 - 16-30
 - **Continuous Data**
 4. In the past 30 days, how many days did you drink ANY alcohol?

- Gathering continuous data permits greater precision in measurement. Furthermore, one can transform continuous data into categories.



BAM Scoring: Categorical Data

- Each response to each item in the categorical BAM has an associated score
- Item scores range from 0 to 4.
- For RISK items (1, 2, 3, 8, 11, & 15), higher scores are associated with greater risk.
- For PROTECTION items (9, 10, 12, 13, 14, & 16), higher scores are associated with greater protection.
- Likewise, for USE items (4, 5, & 6), higher scores are associated with more frequent substance use.

Composite Score Computation

- **USE = Sum of items 4, 5, & 6**
 - Range is 0 to 12
- **RISK = Sum of items 1, 2, 3, 8, 11, & 15**
 - Range is 0 to 24
- **PROTECTIVE = Sum of items 9, 10, 12, 13, 14, & 16**
 - Range is 0 to 24



BAM Scoring: Continuous Data

- Rather than categorizing the number of days in the past 30 that the respondent engaged in a particular behavior, the continuous data BAM asks the respondent for an actual number of days. Thus, the scores for the continuous items range from 0 to 30.
- Scoring: in order, each categorical response is scored as follows: 0, 8, 15, 22, and 30. For item 14 (Income), No=0, Yes=30.
- **USE = Sum of items 4, 5, 6**
 - Range is 0 to 90
- **RISK = Sum of items 1, 2, 3, 8, 11, 15**
 - Range is 0 to 180
- **PROTECTIVE = Sum of items 9, 10, 12, 13, 14, & 16**
 - Range is 0 to 180



BAM Modification

- Current version of the BAM has a 30 day reporting window.
- Alternative IOP version (categorical data) has a one week reporting period and room to record 8 weeks of data.



The BAM: Who gets it and When do they get it?



BAM Timing: The Measurement-based Care Approach

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- All clients in treatment for SUD receive a baseline BAM upon admission to the program.
 - The baseline data and feedback (MET) session inform treatment planning.
 - Follow-up BAMs are administered repeatedly throughout the client's course of treatment, typically every 30 days, just prior to treatment plan reviews, and at transition between levels of care.
 - The follow-up data and feedback sessions inform adaptive treatment efforts.
 - Follow-up BAMs also may be administered as a mechanism of outreach, via MET, to out-of-treatment clients.



Integrating the BAM into Your Program

- Build administrations into the program structure
 - All admissions complete a BAM
 - Self-report: can be distributed to a cohort of patients going through intake
 - Efficient: many BAMs collected per unit time
 - Feedback sessions needed
 - Interview: administered by provider at first face-to-face meeting
 - Permits real-time feedback
 - All patients receive follow-up BAM(s) at prescribed points
 - No need for individual tracking



Suggested Measurement Strategy

- Start with a treatment plan that has clear, quantified goals
- Conduct repeated measurement of symptoms and progress toward goals using the BAM
- Revise treatment plan (and treatment!) as necessary, based on data from ongoing assessment



Integrating the BAM into Your Practice

- Integrate “BAM Sessions” into group or individual sessions
 - Use the BAM as the content-focus of a therapy session.
 - BAM(s) completed prior to the session.
 - Provider enters data into the Scoring Template.
 - Graphs of BAM data shared at subsequent session.
 - Patient(s) discuss results vis-à-vis their needs and resources.
 - Narrative of feedback informs treatment planning.

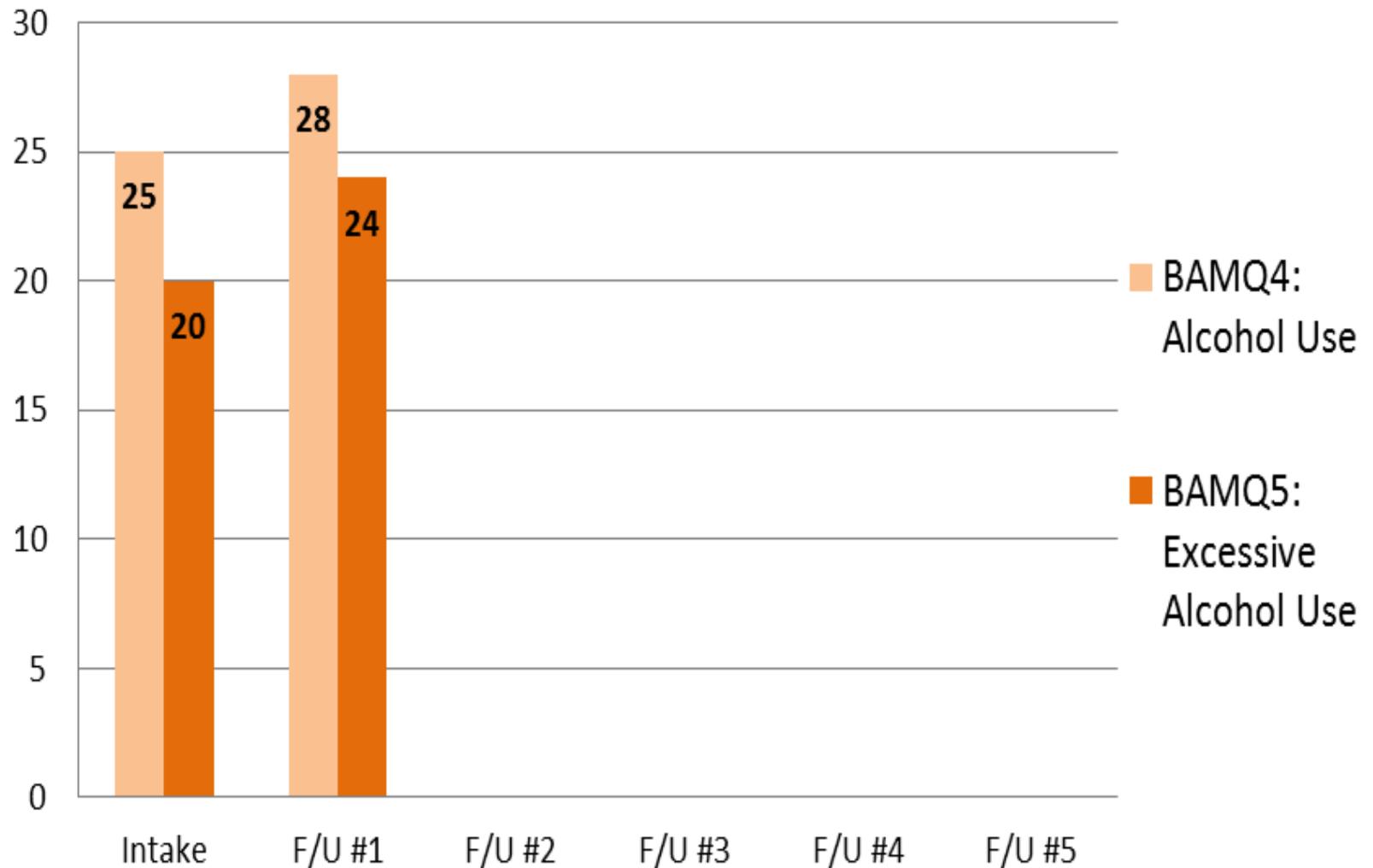


SUD THERAPY USING THE BAM

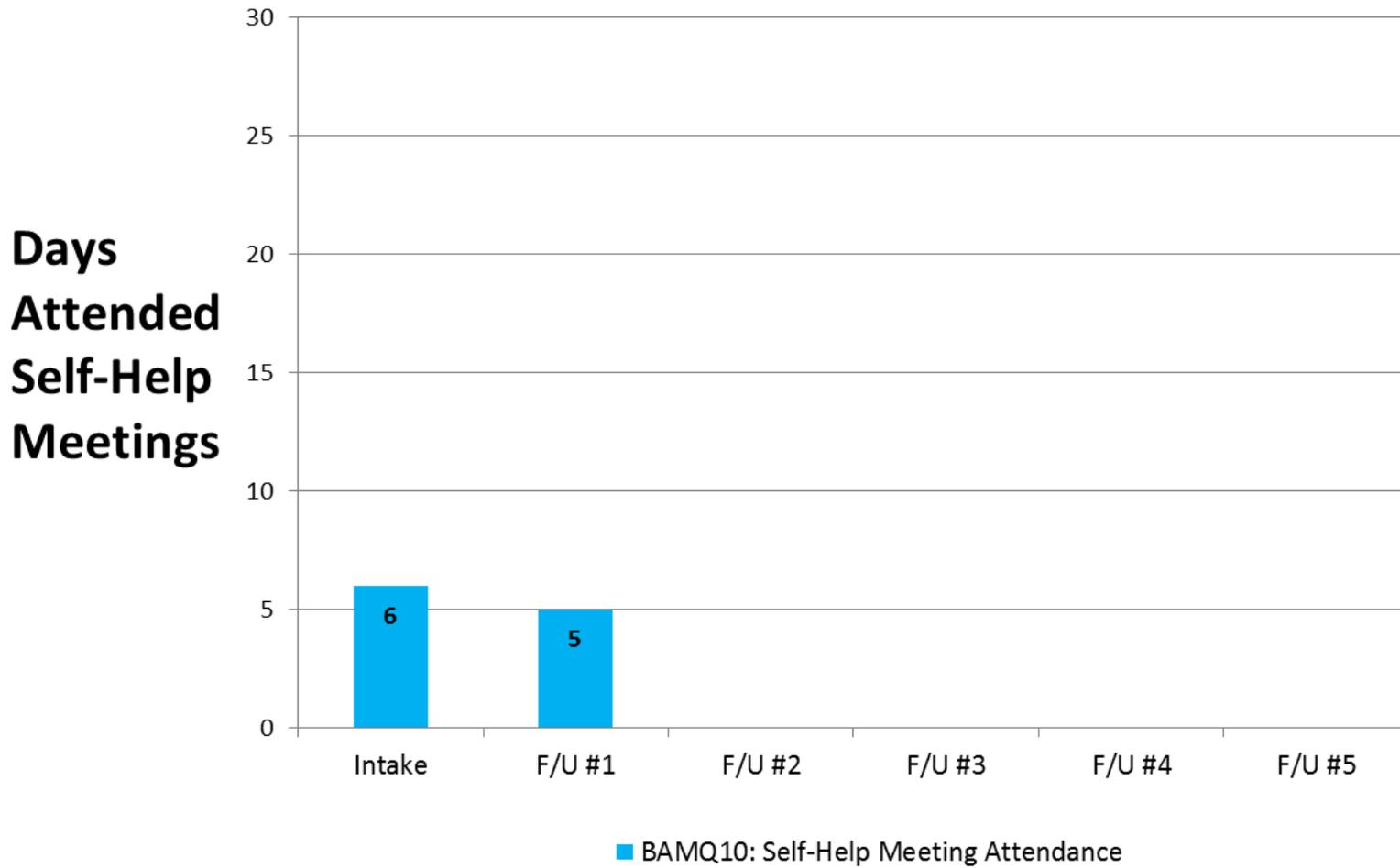
- By providing BAM data feedback to the veteran, the clinician can elicit the veteran's perspective on the clinical implications of the data, e.g. what changes, if any, is the veteran considering.
- Moreover, the clinician and veteran could consider hypothesized relationships between these variables that can be tested via treatment plan adaptations, e.g. does increasing his/her participation in self-help correlate with decreased drinking.
- The following three graphs (Graphs 1, 2, and 3) depict how such a hypothesized relationship between a veteran's alcohol use and self-help involvement might be confirmed by subsequent BAM administrations.

Graph #1: Change in Alcohol Use

**Days
Used
in
Past
30
Days**

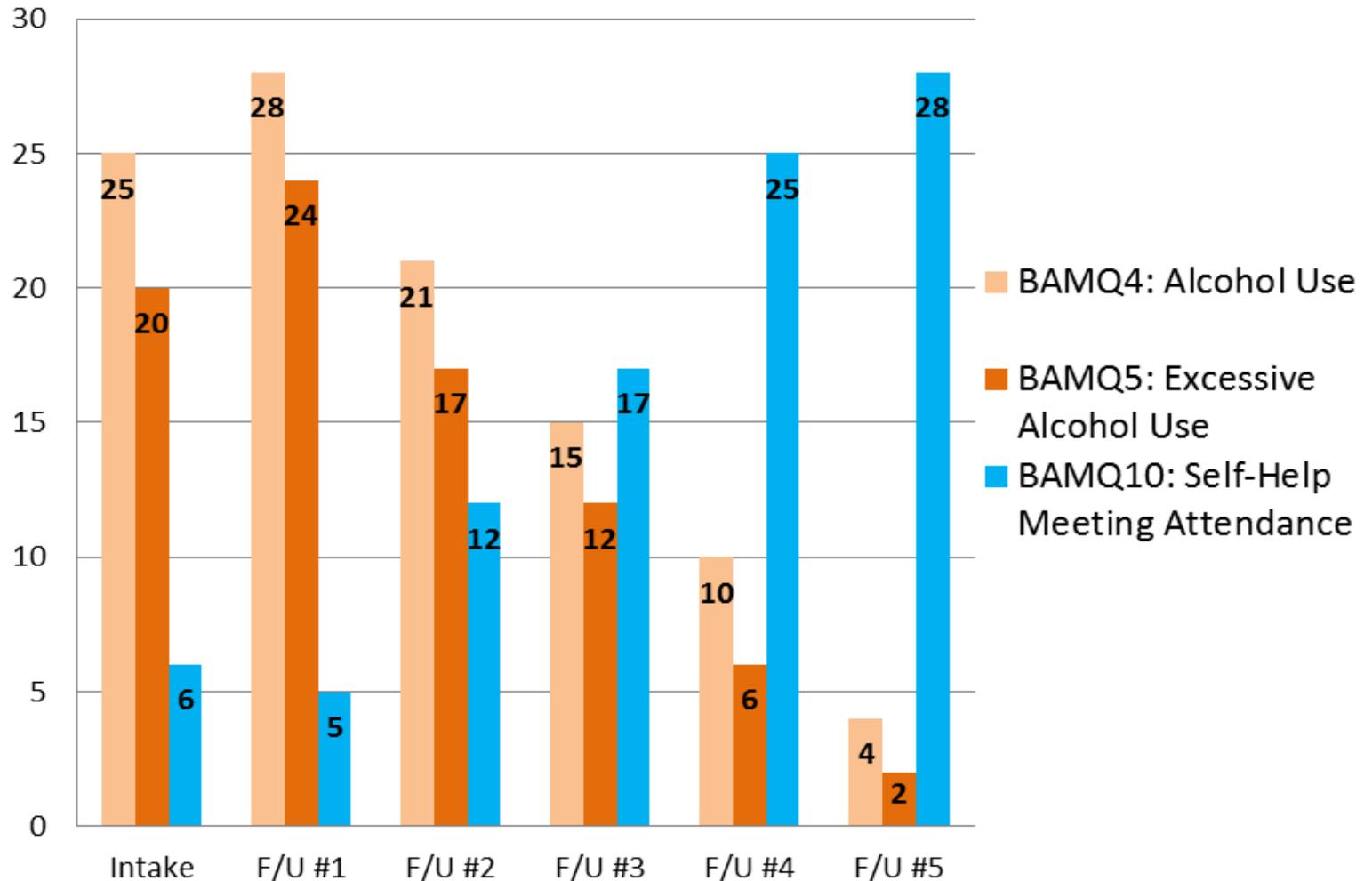


Graph #2: Change In Self-Help Meeting Attendance



Graph #3: Change in Alcohol Use and Self-Help Involvement

**Days
in
the
Past
30**





Providing BAM Feedback: Elicit, Provide, Elicit (Miller & Rollnick, 2013)

- **ELICIT** client's ideas
 - Knowledge, goals, strategies, skills
- **PROVIDE** feedback or information
 - Just the facts
- **ELICIT** client's reactions
 - “What do you make of this?”
 - “How does this fit with...?”
 - “Does this make sense?”
 - “How confident are you that you can do this?”

REFLECT client's reactions!



EXPLORING THE RELATIONSHIP OF BAM ITEMS TO THE VETERAN'S RECOVERY

Item #1 (Physical Health), #2 (Sleep Problems), and #3 (Mood Problems):

- What are the veteran's specific concerns in each area?
- In what ways are the veteran's concerns related to his/her substance misuse?
- Consider a graph that tracks change in each.
- What steps has the veteran already taken to address physical health, sleep, and/or mood concerns?
- What other options are available for the veteran to consider in having his/her physical health, sleep, and/or mood concerns addressed?

Items #4 (Alcohol Use), #5 (Heavy Alcohol Use), #6 (Other Drug Use), and #7 (Specific Substances):

- What are the good and not-so-good things about the veteran's substance misuse?
- What will happen if the misuse doesn't change?
- What will happen if misuse is decreased or eliminated?
- To what does the veteran attribute any increases and decreases in use?
- How has the veteran decreased misuse successfully in the past?



Items 8, 9, & 10

Item #8 (Craving):

- What is the veteran's understanding about how craving works?
- With the veteran's permission, the clinician can provide some education on how craving is a conditioned response.
- In what ways has the veteran responded successfully (with abstinence) to craving in the past?
- The clinician could provide a menu of options for craving management, e.g. CBT-based skills training, pharmacotherapies (naltrexone, disulfiram, acamprosate, Suboxone, methadone), other EBT-based tools such as 12-step sponsorship.

Item #9 (Confidence to be Abstinent)

- What makes the veteran confident?
- What could help increase the veteran's confidence?

Item #10 (Self-help Involvement)

- What is the veteran's perspective on the 12-step approach to recovery?
- What self-help groups has the veteran experienced?
- In what ways has self-help participation assisted the veteran with his recovery?
- How might the veteran benefit further from self-help involvement?



Items 11 & 12

Item #11 (Risky Situations)

- What is the veteran's understanding of triggers/cues?
- With the veteran's permission, the clinician can provide some education on how triggers emerge and can be managed.
- What are the veteran's triggers?
- In what ways has the veteran responded successfully (with abstinence) to triggers in the past?

Item #12 (Spirituality)

- What is the veteran's spiritual belief system?
- In what ways is substance misuse discrepant with the veteran's spiritual beliefs?
- In what ways does spirituality contribute to the veteran's recovery?
- How has the veteran's spiritual beliefs assisted with his/her recovery in the past?



Items 13, 14 & 15

Item #13 (Gainful Activities)

- How does the veteran spend his days?
- What is the veteran's perspective on the role of structured daily activities in sobriety?
- What are the veteran's vocational, educational, and volunteering interests?
- What has the veteran done in pursuit of these interests?
- If disabled, how might the veteran structure his day if not via employment?

Item #14 (Legal Income)

- What are the veteran's sources of legal financial support?
- How does the veteran's involvement in illegal sources affect his recovery?
- How important is it to the veteran to be legally self-sufficient?
- How confident is the veteran in achieving legal self-sufficiency?

Item #15 (Interpersonal Conflict)

- What is the relationship between the veteran's interpersonal conflicts and his/her substance misuse?
- How has the veteran successfully managed interpersonal conflicts in the past?



Items 16 & 17

Item #16 (Interpersonal Support)

- Who does the veteran identify as members of his sober support network and what is the nature of the support they provide, i.e. assistance with practical needs, sources of encouragement, assistance with environmental control, etcetera?
- In which functional domains (physical health, mental health, vocational/financial, housing, legal, recreational, spiritual) does social support appear to be lacking?
- How might the veteran increase the number and/or frequency of contact with of network members?

Item #17 (Recovery Satisfaction)

- With which elements of the veteran's recovery is the veteran satisfied and dissatisfied?
- What is the discrepancy between the present status of those elements and how the veteran would prefer them to be?



MBC in group-based interventions

- A BAM-oriented, group therapy session might begin with the clinician distributing to each veteran the graphs of his/her most recent BAM data.
- Veterans can be invited to share their thoughts on the implications of their data and solicit support from the group with respect to Risk-reduction and augmentation of Protective factors.
- Interventions targeting specific needs could be included within a menu of options from which veterans might select for inclusion in their treatment plans.
- How can treatment be individualized in group format?
 - BAM assessments can be completed prior to group, and information brought to group
 - Certain treatment modifications could be delivered in group format
 - Need for additional peer/social support
 - Problem solving
 - Rehearsal of coping response
 - Others will require individual sessions
 - Behavioral couples therapy, medication, etc.



Treatment Planning with the BAM

The BAM can help by...

- determining the veteran's strengths
- indicating the presence of a problem
- providing evidence of goal achievement by measuring progress on objectives.
- targeting and measuring the effectiveness of interventions for specific deficiencies in the veteran's lifestyle.



Using the BAM to determine the Veteran's strengths

- The presence (or higher frequency occurrence) of any of the **BAM Protective items** indicates relative strengths/resources the veteran brings to the treatment setting. These are indicated by the corresponding health factors for the BAM questions in the Protection domain.

FOR EXAMPLE...

- “John Doe reports that he is extremely confident that he can remain abstinent from alcohol and drug use in the next 30 days.”
- “John Doe attended self-help groups on 15 of the past 30 days.”
- “On 20 of the past 30 days, John Doe has spent time with family and friends who support his recovery.”



Using the BAM to develop a problem list

- The **BAM's alcohol and drug consumption items** (4 through 7G) and several BAM Risk and Protective items (Craving, Confidence, and Risky Situations) may be included as indicators of problematic drug and/or alcohol use. Note that the *presence of the Risk items (Craving or Risky Situations) and/or absence of the Protective item (Confidence)* can be related to problematic substance use.

FOR EXAMPLE...

- Problem #2 (Active): John Doe complains that his cocaine use 'has gotten way out of hand' as evidenced by:
 - John stated he used cocaine on 16 of the past 30 days.
 - John reported that he has been considerably bothered by drug craving in the past 30 days.
 - John reports slight confidence to be abstinent from drugs in the next 30 days.
- The **presence of the remaining Risk items** and/or **the absence of the remaining Protective items** may serve as indicators of addiction-related problems or be included in the treatment plan as problems themselves (presumably supported by additional indicators).



Using the BAM to set goals and measure progress on objectives

- By aligning objectives with the BAM, follow-up BAM assessments provide the time-bound evidence for determining therapeutic progress.

- Goal #1: John Doe will enjoy healthy sleep.

- Objective #1: By (a certain date), John will report no nights with sleep disturbances.

- Objective #2: By (a certain date), John will report no use of alcohol in the past 30 days.

OR

- Goal #2: John will be physically healthy.

- Objective #1: By (a certain date), John will describe his physical health for the past 30 days as very good or excellent.

- Objective #2: By (a certain date), John will report no nights with sleep disturbances.

- Objective #3: By (a certain date), John will report no use of alcohol or illicit drugs.

OR

- Goal #3: John will lead a sober lifestyle.

- Objective #1: By (a certain date), John will demonstrate a 50% reduction in his Risk Score.

- Objective #2: By (a certain date), John will demonstrate a 50% increase in his Protective Score.

- Objective #3: By (a certain date), John will demonstrate no drug or alcohol use.

- Objective #4: By (a certain date), John will have attended self-help meetings on at least 15 of the previous 30 days.



Using the BAM to target interventions

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- Providers may apply interventions that target specific deficiencies identified by the BAM. The deficiencies may be a combination of high frequency pathological (substance use or Risk) behaviors and low frequency healthy (Protective) behaviors.



Using the BAM to target interventions: An example



- **Problem #1 (Active):** John Doe complains that his cocaine use 'has gotten way out of hand' as evidenced by:
 - John stated he used cocaine on 16 of the past 30 days.
 - John reported that he has been considerably bothered by drug craving in the past 30 days.
 - John reports slight confidence to be abstinent from drugs in the next 30 days.
 - John reports that in 20 of the past 30 days he has been in situations or with associates that put him at risk for drug use.
-
- **Goal #1:** John will lead a sober lifestyle.
- **Objective #1:** By (a certain date), John will demonstrate a 50% reduction in his Risk Score from the baseline BAM assessment on (specify date of baseline).
- **Intervention #1:** From (specify start date and end date), (specify provider name) will provide John Doe with training on craving management skills during his weekly individual therapy sessions (see BAMQ9 – Risk Reduction).
- **Intervention #2:** On (specify date), (specify provider name) will provide John with a list of 12-step meetings within walking distance (.25 miles) of John's home.



Treatment Planning and the BAM: Interventions Based on Items

- **Specific items to attend to, and suggested referrals, include:**
- #1 (health), refer to primary care
- #3 (mood), proceed to further assessment, i.e. suicide risk, and confer with MH Treatment Coordinator
- #5,6,7 (heavy alcohol use, any drug use, specific drug use), any reported use warrants discussion with client to consider adjusting treatment (e.g., higher level of care or changing modality)
- #8 (craving), consider medicinal adjuncts, i.e. naltrexone, acamprosate.
- #14 (adequate income), consider CWT, HUD-VASH, vocational counseling.
- #16 (social support), consider adding network support
- #17 (satisfaction with progress), warrants discussion of modifications or supplements to treatment

Note: Examining scores from individual items as described above is the most clinically relevant use of this measure. Composite scoring is supplementary and very preliminary. It is based on clinical judgment rather than empirical data.



Resources on MBC

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- McKay, J.R. (2009). *Treating substance use disorders with adaptive continuing care*. Washington, DC: American Psychological Association
 - Harding, K.J.K., Rush, A.J., Arbuckle, M., Trivedi, M.H., Pincus, H.A. (2011). Measurement-based care in psychiatric practice: A policy framework for implementation. *Journal of Clinical Psychiatry*, published online ahead of print version.
 - Dennis ML, Scott CK (2007, December). Managing addiction as a chronic condition. *Addiction Science and Clinical Practice*, 45-55.



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