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# Preparing to Implement Medication Algorithms: Staff Perspectives and System Infrastructure

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## Abstract

To assess the readiness of mental health facilities in Oregon to implement medication algorithms using the Medication Management Approaches in Psychiatry toolkit (MedMAP) developed by the Substance Abuse and Mental Health Services Administration (SAMHSA), researchers conducted interviews with 68 clinical and administrative employees of four inpatient and four outpatient mental health facilities in Oregon. Opinions about the algorithms among respondents were generally positive, but were accompanied by many concerns about logistics and implementation, chiefly related to medication selection and expected restrictions on choices for prescribing providers and patients. The implementation of medication algorithms may benefit from assessing staff perspectives and capabilities of program infrastructure. The extent to which staff concerns, values, and needs are anticipated and promptly and responsively addressed is likely have a major influence on successful implementation.

### Keywords

Psychiatric disorders are a great burden on patients' quality of life and an enormous contributor to the cost of state-funded health care, despite the availability of effective psychiatric interventions. State mental health authorities struggle with the high costs of antipsychotic medications[1] and are eager to find ways to reduce expenditures while maintaining or increasing

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patient satisfaction and quality of care. The Substance Abuse and Mental Health Services Administration (SAMHSA) identified medication algorithms as an evidence-based intervention that can improve health outcomes and patient satisfaction among individuals with severe mental illness, while reducing expenditures.[2]

Medication algorithms are disease management programs for severe mental illness that can include consensus-based algorithms, patient education, and uniform clinical reports. The SAMHSA Medication Management Approaches in Psychiatry (MedMAP) Toolkit includes four components:

1. A systematic approach to medication selection

2. Outcome measurement

3. Uniform documentation for tracking

4. Consumer education and involvement to enhance adherence.

MedMAP was based on the Texas Medication Algorithm Project (TMAP),[3] and was included as one of SAMHSA's six evidence-based practice implementation resource toolkits.

The implementation of evidence-based practices in community mental health settings can be both complex and difficult.[4] Fixsen et al.[5] identified the following steps in the implementation process: exploration and adoption, program installation, initial implementation, full operation, innovation (a well thought-out improvement to a new program that has been operating with fidelity), and sustainability (responsiveness to changing circumstances and needs). They emphasized the need for careful preparation in the early stages of an implementation, including ensuring an appropriate match between program and venue and conducting stakeholder meetings to exchange information and plan for implementation.

There are multiple barriers to the implementation of guideline efforts. Six barriers have been identified specific to providers: lack of awareness, lack of familiarity, lack of agreement, lack of self-efficacy, lack of outcome expectancy, and inertia of previous practice.[6] Staff receptivity is a critical factor in deciding to implement practice guidelines. The degree to which staff support or approve of those activities, (i.e., staff "buy-in" or endorsement), including their awareness, familiarity, and agreement, has been demonstrated to be an important component in implementing changes.[5,7] Research on the attitudes of behavioral healthcare providers toward implementing evidence-based practice is generally limited.[8] One study of the implementation of medication algorithms outside of Texas found that physicians did not perceive many barriers to implementation, indicating they agreed with treatment recommendations in the algorithms and agreed that the algorithms represent good clinical practice.[9] However, despite their support for the algorithms, physicians in that study also did not alter their practice in response to the state's effort to implement the algorithm.[9]

Staff endorsement is especially important for innovations that are very different from previous processes and that challenge the status quo. Medication algorithms in the MedMAP Toolkit introduce several new components: the algorithm itself is new, and the processes of systematically tracking data, evaluating outcomes, and increasing consumer involvement and education opportunities may also be novel to some agencies. Significant culture shifts are also involved in challenging the often complete autonomy of prescribing providers and increasing reliance on technology.

In addition, the process of developing TMAP and MedMAP has not been without controversy. Since TMAP's inception, concerns have been raised about alleged undue influence of pharmaceutical companies in the choice of medications.[10,11] Indeed, the MedMAP Toolkit was withdrawn as a SAMHSA toolkit in 2005 (after this project was started), due to questions

about the efficacy of atypical antipsychotic medications.[12] However, it has since been reinstated under the new name of Systematic Medication Management, and different versions of SAMHSA's MedMAP Toolkit are currently being tested as part of a national demonstration project.

The purpose of this study was to evaluate and describe the readiness of inpatient and outpatient mental health facilities to implement medication algorithms.

## Methods

In 2004, Oregon's mental health authority was considering adopting SAMHSA's Medication Management Approaches in Psychiatry (MedMAP) Toolkit in order to decrease variability in prescribing practices and reduce expenditures. To prepare for state implementation, the state partnered with researchers to conduct a needs assessment at eight psychiatric facilities (community partnerships of inpatient and outpatient facilities in Portland, Salem, Corvallis, and Eugene, Oregon) to determine their readiness to implement medication algorithms. The study used a partially mixed concurrent qualitative-quantitative research methodology, in which the qualitative portion was primary, and the quantitative focus was secondary.[13]

We approached 13 agencies for potential inclusion in the study. We received 1 refusal, no reply from 4 agencies, and conducted interviews at 8 agencies. After obtaining the agency director's permission, researchers and agency administrators collaborated to identify up to 12 individuals at each agency who were invited to be interviewed. At each agency, invitations included a variety of each of the following individuals:

- Prescribing providers (e.g., psychiatrists or psychiatric nurse practitioners)

- Other clinical staff (e.g., nurses, mental health therapists),

- Administrative staff,

- Agency directors and clinical supervisors

- Information technology (IT) specialists.

Researchers interviewed 68 people (35 females and 33 males) during site visits. The respondents were not asked to identify their age or race/ethnicity.

Most of the respondents were employed exclusively within the psychiatric program, except for IT staff, who often worked with the mental health programs as a part of a wider scope of duties. Interviewees received a $5 gift card for their participation. The staff from outpatient programs ($n = 34$) included 14 clinicians, 10 administrative staff, 2 IT professionals, and 8 staff members with dual roles (6 clinical/administrative, 1 IT/clinical, and 1 IT/administrative). Staff from hospital-based (inpatient) programs ($n = 34$), included 18 clinicians, 10 administrative staff, 5 IT professionals, and 1 staff member with a dual clinical/administrative position. Inpatient programs were psychiatric wards in general hospitals. Outpatient programs were county mental health agencies or county-affiliated agencies. Interviews were conducted between May and October, 2006.

When possible, respondents were given a complete description of the study in writing at least 24 hours before their interviews, and verbal informed consent was obtained. The Oregon Health & Science University Institutional Review Board for the Protection of Human Subjects approved this study.

Interviews used a guide that addressed readiness to implement medication algorithms based on the tenets of MedMAP (the full interview guide is available from the first author).

Interviewees were told that Oregon's mental health authority was considering adopting SAMHSA's MedMAP Toolkit in order to decrease variability in prescribing practices and reduce expenditures, and were told that these interviews were to help the state determine how to best implement medication algorithms.

Interviews lasted 30--60 minutes and most interviews were conducted in person, although some were done by telephone. The following topics were covered in the interview:

- Program communication, including information transfer

- Implementing changes, including training and supervision

- Information technology infrastructure;

- Familiarity with medication algorithms, including medication selection, outcome measurement, tracking, and consumer involvement in treatment.

To determine whether participants overall had a positive, mixed, or negative opinion of medication algorithms, we quantified a portion of the qualitative data to enable us to conduct a quantitative analysis.[14] During the interview, participants ($n = 55$) were read a definition and asked "Based on this information and what you know, do you have an opinion about whether or how medication algorithms should be used with psychiatric patients?" Researchers evaluated answers to this question, as well as other opinion-based comments made throughout the interview, to code whether each participant had a positive, mixed, or negative opinion of medication algorithms. These opinions were sorted by prescribing status (prescribing provider, other) and program type (outpatient, hospital). A chi-square analysis determined whether there were differences by staff or setting in opinions about the algorithm.

We took several steps to increase the methodological rigor of the qualitative analyses and the quantified data coding:

- Multiple researchers participated in the data collection and analysis to ensure multiple viewpoints and discussion of perceptions of data,

- We sought consensus among researchers on definitions of codes to ensure consistent coding,

- We blind-coded a subset of the quantified data to ensure *adequate coder agreement*,

- We brought researcher findings back to knowledgeable staff members to verify that our findings were accurate representations of the opinions of those interviewed.[15]

Data were analyzed using qualitative analysis software (Atlas.ti version 5.0, Scientific Software, Berlin).

## Results

We present results of the interviews with respect to medication algorithms generally, as well as concerning the four components of MedMAP (systematic approach to medication selection, outcome measurement, uniform documentation for tracking, and consumer education and involvement to enhance adherence).

### General Perceptions of Medication Algorithms

Table 1 shows support of medication algorithms by prescribing status and program type (inpatient or outpatient). The majority of respondents (28/55, 51%) reported generally positive opinions of algorithms, and 29% (16/55) of the respondents expressed mixed opinions of algorithms. Differences between respondents without prescribing status (e.g., administrative or nursing staff) and prescribing providers approached significance, $x2(2, n = 55) = 4.62$, p <

0.10. There were nonsignificant differences between respondents at hospital and outpatient programs.

### MedMAP Medication Selection

The medication selection portion of MedMAP is based on a preference for monotherapy, with sufficient time intervals for treatment adjustments to determine effectiveness before moving to higher doses or more complex treatment regimens.

Respondents' strongest concerns were related to medication selection. A major concern was that prescribing providers would face restrictions on their treatment practices. They feared encroachment on the creative avenues and personal satisfaction of diagnosing and treating patients, as well as interference with technical aspects of prescribing. A medical records manager said there is a "need to acknowledge the art of medicine, not just the science. It is the difference between a person providing face-to-face care versus an abstract formula or list." A county clinical supervisor spoke of the current range of prescribing approaches, and the possible resistance to accepting a medication algorithm: "Doctors everywhere have their idiosyncratic practices and there are medications they like to prescribe and medications they don't like to prescribe, so it would be difficult to get the doctors to buy off on [the medication algorithm]."

Respondents were concerned that a medication algorithm would reduce individualized treatment of patients. A social worker preferred a holistic approach to treatment: "Not everyone is the same, so people need to be treated as individuals and not just based on a diagnosis. You can't take a cookie cutter approach to treating serious mental illness." Several respondents also expressed concern that an algorithm would not be well suited to treat people with mental illness at the level of severity found in most programs.

Respondents questioned whether the time frames specified in the algorithm would be compatible with inpatient settings. A psychiatrist noted: "It might be difficult to wait longer for side effects to abate, such as waiting a full 2 to 3 weeks for an antidepressant to take effect. Most patients start showing some effects more quickly, so I like to move a bit more briskly, especially in an inpatient setting."

Supporters of the medication selection framework saw potential advantages to a standardized approach to prescribing. These respondents most commonly anticipated benefits to consumers, reporting that an algorithm would help identify an appropriate medication quickly and reduce use of polypharmacy. Respondents hoped that reducing polypharmacy and improving accuracy of prescribing would help reduce medication expenditures, making funds available for other program services or for more patients. Respondents also anticipated benefits from the algorithm in that it would encourage critical thinking about prescribing, standardize prescribing practices, provide risk management protections for following best practices, and provide consistency in medication use for patients receiving care from multiple systems.

### MedMAP Documentation

MedMAP's documentation requirement was intended to help guide future medication choices based on carefully kept records. MedMAP recommends a standardized method for recording assessment and progress notes.

Respondents reported a range of documentation capabilities and practices. Some programs had one or more electronic systems in place for documentation; others worked with paper systems, or a combination of paper and limited electronic resources. A hospital manager described a sophisticated electronic system: "In outpatient behavioral health, we have worked to get outpatient physicians documenting evaluations and progress notes, medication management

notes, and so on, online." A medical director at another hospital indicated that in the absence of an electronic medical record system, "most clinical information is handwritten, or there are duplicate copies of materials in computer and paper files."

Most of the staff members we interviewed reported that their information systems were adequate for the record-keeping required to do their jobs. Some acknowledged, however, that their systems were still far from ideal and indicated that they anticipated challenges in integrating standardized measures to track information over time. Respondents cited challenges with current data systems, such as an inability to track patients easily over time and the complexity of managing patient data across multiple data systems.

A common concern was that behavioral health appeared to be a low priority, particularly within larger hospital systems. Outpatient mental health programs reported IT staff were often busy making improvements to current systems and did not have time to address their needs. Conflicting demands on IT staff resulted in mental health programs receiving less attention than they would like, and slowed the progress of system-wide improvements in informatics.

A trend was seen among the agencies where interviews were done toward improved electronic information capability. Several respondents were anticipating the implementation of an electronic medical record system.

## MedMAP Outcome Measurement

A major part of the medication algorithm program addresses accurate and consistent measurement of outcomes. MedMAP proposes that well-validated, user-friendly outcome scales be administered at regular intervals during the course of treatment.

All programs used some form of documentation for patient treatment and progress but few used any standardized or validated measures. Some programs were using these documents to track individual patient progress only; others used these and other methods to track larger trends. Current outcome measurements in place included surveys and informal performance assessments. Measurement content included patient satisfaction, number and reasons for seclusions, achievement of client treatment goals, and improvement of specific programs.

Respondents identified program barriers to conducting outcomes measurement, including logistic and attitudinal barriers. An inpatient director noted that patients' short lengths of stay limited measurement: "Sometimes patients leave rapidly because [a legal] hold is up or the court lets them go. That is not a true outcomes model. Not everyone gets the full treatment program." A county clinical supervisor anticipated institutional resistance to measurement: "There is the belief that we do mental health, not measurable outcomes---we don't even know how to think about measurable outcomes." Other programs faced barriers involving limited resources for data analysis and resistance to additional paperwork. Some respondents expressed concern that a new scale would not be compatible with existing software and forms.

## Consumer and Family Involvement

The algorithm's guidelines for consumer and family involvement include providing opportunities for input into treatment, educational curricula and materials, and consumer-mediated support groups.

Respondents indicated that there was a range of types of involvement and resources available at the participating programs. Resources and practices included one-on-one interactions; meetings and classes; materials; referrals; use of the trauma-informed Sanctuary model (i.e., treatment approaches that address patients' underlying trauma, create and maintain welcoming and more natural environments, and decrease or eliminate coercion, especially the use of

restraints and seclusion), and recovery-oriented service models (i.e., patient-centered approaches to care that emphasize hope, dignity, empowerment, and self-directed care); surveys and suggestion boxes; and consumer participation on councils, workgroups, committees, and advisory boards. Respondents also cited the community resources they use to supplement their own offerings. The National Alliance on Mental Illness (NAMI) was the resource mentioned most often. Other resources included state and local consumer-run organizations. All programs reported that they were already providing patient education materials in some form.

Levels of consumer involvement varied by program type; outpatient programs tended to have more robust consumer involvement in both treatment and advocacy than inpatient programs. Consumer involvement at the inpatient level tended to be limited to routine therapy, meetings, classes, and input into treatment plans.

Respondents had some reservations about consumer-to-consumer discussion groups, although they saw value in the idea of such groups. One hospital medical director expressed concern regarding confidentiality and patient boundaries: "If a patient became a peer supporter, the nature of our relationship with that person would be challenging…I have been on committees with patients who were stable, then they destabilize and are [admitted here]. It's not helpful to patients to have those kinds of conflicted relationships." Others had logistic concerns related to issues such as availability of transportation to attend groups.

Regarding involvement of family in a patient's treatment, program respondents said that they welcomed such involvement, but indicated it may be limited by patient choice or circumstances. A registered nurse said patients may be reluctant to invite family participation: "We try to involve them, but a lot of times folks won't sign releases of information for family members, so we can't include them." A psychiatrist observed a lack of family motivation: "Family members are not that involved. There are opportunities for them to be involved, but many clients don't have a lot of family members, and if they do, they are not interested in coming to meetings."

Some programs---both inpatient and outpatient---reported having plans to increase or improve consumer and family involvement. These plans included strengthening ties with local NAMI branches, training and employing peer support staff, and developing a consumer panel.

## Discussion

These findings indicate there are conflicting views and varying levels of staff endorsement regarding medication algorithms generally and SAMHSA's MedMAP program in particular. Staff expressed concerns about the algorithms themselves and also discussed some challenges in infrastructure capabilities with regard to the documentation and outcomes measurement recommended by MedMAP. Given the emphasis on the adoption of evidence-based practices, these findings confirm the need to consult implementation science,[5] which advocates a careful exploration of feasibility issues, before beginning to implement new interventions.

Our findings differ from a previous survey on provider perspectives on evidence-based practice that found a higher percentage of positive opinions concerning algorithms,[9] although, despite their support, that sample did not demonstrate changed prescribing behavior. Providers may also express concerns about medication algorithms within the context of media reports questioning pharmaceutical companies' influence of the algorithms,[10,11] a perceived lack of efficacy of psychiatric medication treatment guidelines,[16] and reports that consumers do not have extensive knowledge of evidence-based practice and may question new practices.[17]

Mental health practitioners often resist change.[4] Implementation efforts in which the providers are not aware of, familiar with, and in agreement with the intervention are less likely to succeed. [6] Roger`s' classic *Diffusion of Innovations* describes a critical stage in the adoption of innovations in which people actively decide whether to accept an innovation.[18] Attempts to implement algorithms before adequate buy-in has been secured can result in wasted time and resources. Our data indicate that efforts are needed to secure more consistent buy-in and support *prior to* implementation of algorithms.

Enhancing motivation and encouraging change by removing barriers can be a helpful strategy. Similarly, choosing programs that match the values, needs, and concerns of practitioners increases the likelihood of success.[19] In the interviews we conducted, practitioners reported many concerns about medication algorithms. Although some of these concerns (e.g., the application of medication algorithms to "real-world" patients) could be ameliorated through education, training is not the only answer. It is also important for policy makers to provide ample opportunity for practitioners to have input into the development and implementation of the state's application of medication algorithms. Genuine and meaningful inclusion of consumers can also strengthen endorsement and improve implementation.[5,20,21] Similarly, ensuring communication and cooperation between inpatient and outpatient programs that share many of the same patients would be beneficial.

This work also raises questions about the resources required to implement interventions and the infrastructure needed to track and sustain those interventions. Weaknesses in infrastructure in behavioral health have been well documented.[22,23] Providing adequate resources and removing environmental barriers to carrying out new practices are key to implementing change. [24] Oregon has legislated evidence-based practice policies, enacting a bill in 2003 that mandated state offices to increase the proportional share of funding for mental health and addiction services that are evidence-based to reach a level of 75% over 6 years. However, the bill provided no funding for state agencies to implement these policies. Other states may follow suit in mandating change. A reconciliation between what behavioral health providers are asked to do and the resources available would be an important step toward ensuring sustainable change.

This study was limited by its focus on a single geographic area. However, its strengths include an assessment of many different types of staff members (supervisors, prescribing providers, administrators, and others), all of whom are essential in implementing systems change. Future work should assess staff endorsement and infrastructure capability related to the eventual success of the program implementation.

## Conclusions

Implementation of medication algorithms and evidence-based practices may benefit from assessment of staff perspectives and program infrastructure capabilities. The extent to which staff concerns, values, and needs are anticipated and addressed at the outset of the process may have a major positive influence on implementation.

## Acknowledgements

## References

1. Koyanagi C, Forquer S, Alfano E. Medicaid policies to contain psychiatric drug costs. Health Affair 2005;24:536–44.

2. Herndon S. Evidence based practices: Six at a glance. SAMHSA News 2003;11:6–7.

3. Rush AJ, Rago WV, Crismon ML, et al. Medication treatment of the severely and persistently mentally ill: The Texas Medication Algorithm Project. J Clin Psychiatry 1999;60:284–91. [PubMed: 10362434]

4. Torrey WC, Drake RE, Dixon L, et al. Implementing evidence-based practices for persons with severe mental illnesses. Psychiatr Serv 2001;52:45–50. [PubMed: 11141527]

5. Fixsen, DL.; Naaom, SF.; Blase, KA., et al. Implementation research: A synthesis of the literature (FMHI Publication No. 231). University of South Florida/Louis de la Parte Mental Health Institute, the National Implementation Research Network; Tampa, FL: 2005. (available at http://nirn.fmhi.usf.edu/resources/publications/Monograph/, accessed February 22, 2008)

6. Cabana MD, Rushton JL, Rush AJ. Implementing practice guidelines for depression: Applying a new framework to an old problem. Gen Hosp Psychiatry 2002;24:35–42. [PubMed: 11814532]

7. Diamond, MA. Organizational change as human process, not technique. In: Backer, TE.; David, SL.; Saucy, G., editors. Reviewing the behavioral science knowledge base on technology transfer (NIDA Monograph No.155). National Institute on Drug Abuse; Rockville, MD: 1995. p. 119-31.(available at http://www.nida.nih.gov/pdf/monographs/download155.html, accessed February 22, 2008)

8. Aarons GA. Mental health provider attitudes toward adoption of evidence-based practice: The Evidence-Based Practice Attitude Scale (EBPAS). Ment Health Serv Res 2004;6:61–74. [PubMed: 15224451]

9. Dewan NA, Conley D, Svendsen D, et al. A quality improvement process for implementing the Texas Algorithm for Schizophrenia in Ohio. Psychiatr Serv 2003;54:1646–9. [PubMed: 14645807]

10. Moynihan R. Drug company targets US state health officials. BMJ 2004;328:306. [PubMed: 14764476]

11. Petersen M. Making drugs, shaping the rules. New York Times. February 1;2004 (available at http://www.nytimes.com, accessed March 28, 2007)

12. Alliance for Human Research Protection. SAMHSA backs away from TeenScreen & TMAP. October 24;2005 (available at www.ahrp.org/infomail/05/10/24.php, accessed February 1, 2008)

13. Leech NL, Onwuegbuzie AL. A typology of mixed method research designs. Qual Quant. 2007 (available at http://www.springerlink.com/content/2j64561705676735/fulltext.pdf, accessed March 3, 2008)

14. Chi MTH. Quantifying qualitative analyses of verbal data: A practical guide. J of Learning Sci 1997;6:271–315.

15. Boyzatis, RE. Transforming qualitative information: Thematic analysis and code development. Sage; London: 1998.

16. Leucht S. Psychiatric treatment guidelines: Doctors' non-compliance or insufficient evidence? Acta Psychiatrica Scandinavica 2007;115:417–19. [PubMed: 17498152]

17. Bielavitz S, Wisdom JP, Pollack DA. Effective mental health consumer education: A preliminary exploration. Unpublished manuscript

18. Rogers, EM. Diffusion of innovations. Vol. 5th edition. Free Press; New York: 2003.

19. Grimshaw JM, Russell IT. Effect of clinical guidelines on medical practice: A systematic review of rigorous evaluations. Lancet 1993;342:1317–22. [PubMed: 7901634]

20. Cook JA, Toprac M, Shore SE. Combining evidence-based practice with stakeholder consensus to enhance psychosocial rehabilitation services in the Texas Benefit Design Initiative. Psychiatr Rehabil J 2004;27:307–18. [PubMed: 15222144]

21. Melnyk BM, Fineout-Overholt E. Consumer preferences and values as an integral key to evidence-based practice. Nurs Adm Q 2006;30:123–7. [PubMed: 16648724]

22. Institute of Medicine Committee on Crossing the Quality Chasm: Adaptation to mental health and addictive disorders. Improving the quality of health care for mental and substance-use conditions. National Academies; Washington, DC: 2006. (available at http://www.nap.edu/catalog.php?record_id=11470#toc, accessed February 22, 2008)

23. Wisdom JP, Ford JH, Hayes RA, et al. Addiction treatment agencies' use of data: A qualitative assessment. J Behav Health Serv Res 2006;33:394–407. [PubMed: 17082981]

24. Drake RE, Torrey WC, McHugo GJ. Strategies for implementing evidence-based practices in routine mental health settings. Evid Based Ment Health 2003;6:6–7. [PubMed: 12588814]

**Table 1**

Opinions Regarding Medication Algorithms, by Staff Type and Setting ($N = 55$)

|  | Positive | Mixed | Negative |
|---|---|---|---|
| **Staff**[*] |  |  |  |
| Prescribing provider ($n = 12$) | 4 (33%) | 3 (25%) | 5 (42%) |
| Other ($n = 43$) | 24 (56%) | 13 (30%) | 6 (14%) |
| **Setting**[**] |  |  |  |
| Outpatient ($n = 26$) | 12 (46%) | 8 (31%) | 6 (23%) |
| Hospital ($n = 29$) | 16 (55%) | 8 (28%) | 5 (17%) |

[*] $\chi^2$ $p \leq 0.10$

[**] $\chi^2$ nonsignificant