

Kentucky Medication Algorithm Project (KyMAP)

Modifying and Adapting Evidence-Based Practices for Implementation

A Review in Change Management



August 28-30, 2006

SAMHSA's Medication Management Approaches in Psychiatry (MedMAP) Toolkit

Using medication in a systematic and effective way is a part of the overall treatment for severe mental illness

MedMAP is broken down into three core strategies:

- Guidelines and steps for medication decision making based on evidence and outcome
- Systematic monitoring and record keeping of medications
- Consumer and family member involvement

How Does KyMAP Compare?

MedMAP

- Guidelines and steps for medication decision making based on evidence and outcome
- Systematic monitoring and record keeping of medications
- Consumer and family member involvement

KyMAP

- Antipsychotic Algorithm for patients diagnosed with Schizophrenia
- Web-Based Application used to input medication staging and symptom scoring
- Peer to Peer Consumer Education

KyMAP

Where We are Today

Three community partners were identified to initiate a program first introduced by Texas in the Texas Medication Algorithm Project (TMAP)

Seven Counties Services
Kentucky River Community Care
Appalachian Regional Healthcare

Currently Seven Sites are actively involved in KyMAP using the Antipsychotic Algorithm

The Consumer/Family Education is currently functioning with Peer Facilitators in (3) Seven Counties CSL Sites with KyMAP offering stipends and travel reimbursement.

Fidelity Audits with UKCON and Focus Groups with UL Kent School are currently monitoring progress of the Grant.

Web-Based application continually being redesigned to meet the needs of the clinicians to better track patient care and medication

Involving Consumer and Family Education

Partnerships among consumers and their families combined with support from practitioners and the community support a move toward recovery with hope and security.

Core strategies that build upon collaboration and education include:

- Learn about mental illness
- Master new ways of managing their mental illness
- Reduce tension and stress within the family
- Provide social support and encouragement to each other
- Focus on the future

Consumer Involvement . . .

- Stimulates discussion between consumers about their illness and treatment
- Brings consumer perspective to education about mental illness
- Helps consumers learn self-management of their illness and about treatment from the experiences of other consumers

Consumer Involvement

■ Group structure

- Not therapy groups, but peer support
- Optimum group size from 5-12 consumers
- Material designed for six sessions of 1- 1 ½ hours each

■ Group content

- Basic materials about symptoms, medications, side effects and communicating
- Requested additional more in depth materials about recovery
- Adopted the PACE materials from the National Empowerment Center

■ Consumer Selection and Training

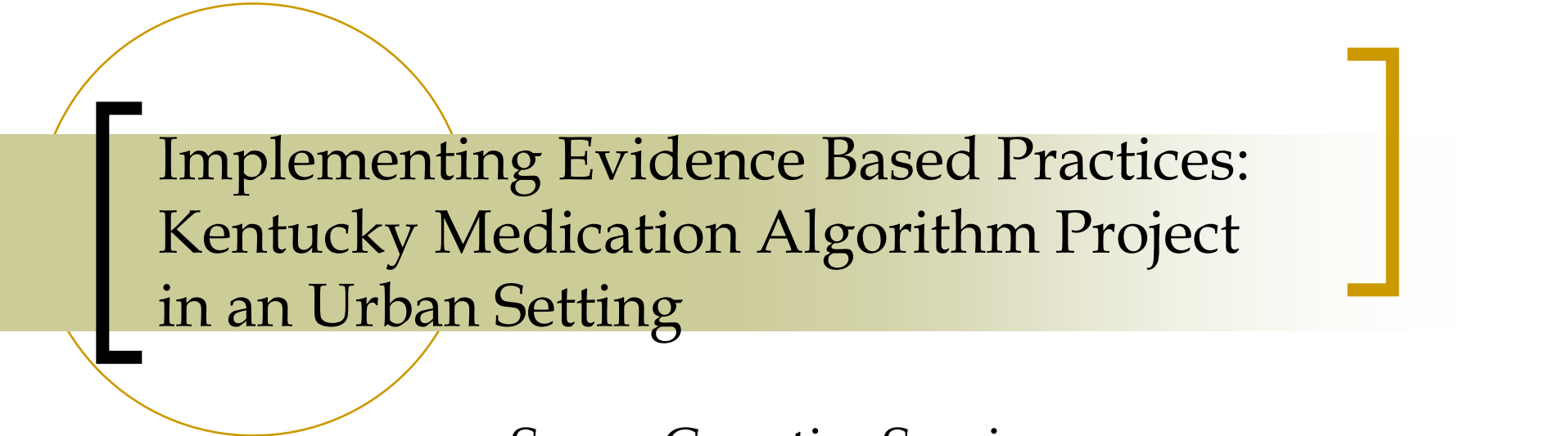
- Consumer education sub-committee identified potential consumer facilitator candidates and agreed upon content for facilitator training
- 15 consumers completed the training
- 12 continued as peer facilitators
- 9 remain currently active facilitating groups

■ Outcomes

- Committee designed a five item survey with a 4 point Likert scale
- Survey was administered to group participants at two different times.
- Results were tabulated in August and again in February
- Preparation for Peer Support Specialist role

[RESULTS]





Implementing Evidence Based Practices: Kentucky Medication Algorithm Project in an Urban Setting

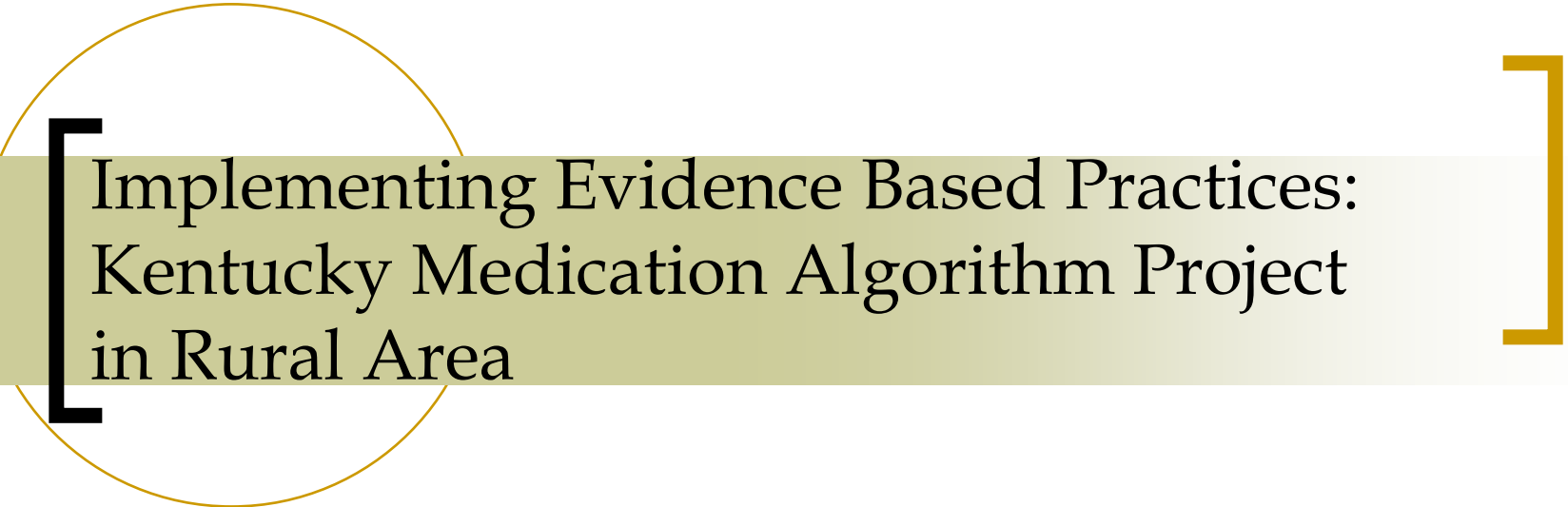
Seven Counties Services
Community Mental Health Centers

KyMAP - Positive Experiences

- Using objective measures to describe symptomology improves communication among clinicians.
- Using objective measures improves communications between clinicians and consumers
- Utilization of evidence-based practice moves clinical practice to greater compliance with medical necessity.
- Sharpened diagnosis.
- Sharpened treatment planning goals
- Supported recovery focus
- Created baseline (q of Ls, MHSIP, staging)
- Adherence to the medication algorithm provided an opportunity to revisit complex medication regimens.

KyMAP - Challenges

- Project was overly ambitious.
- Duplication of effort
 - Electronic record vs. Paper record
- Outpatient vs. Inpatient
- Insufficient support system in place to support application.
 - CMHC's have insufficient personnel to implement practice changes.
- Pressure imposed by grant timetable prevented completion of beta testing of product for functionality
- Difficulty in creating a "billable note" that included KYMAP elements
- Web-based application required more time to complete than comparable paper product.
- Early trainings did not seem appropriate to target audience.
- Concern about fitting business practices to design and not design to business practices.



Implementing Evidence Based Practices:
Kentucky Medication Algorithm Project
in Rural Area

David Mathews, Ph.D.

Kentucky River Community Care, Inc.

About

Kentucky River Community Care

- Southeast Kentucky Poverty Belt Buckle
- Laboratory for Best Practices
- Staff Survey Revealed No Ivy Leaguers
- Highest Rates of Most Health Issues in Ky

Beneficial to Clients

The Psychiatrists and ARNP at KRCC agree that KYMap is beneficial to clients.

- *Opinions: The algorithm is beneficial and should be used statewide including psychiatric hospitals. Psychiatric Hospitals must be on board and participating and tracking all medication changes to have continuity of care and for KYMap to work.*

Benefits of KyMAP

- Improvement in both positive and negative symptoms;
- It is a good monitor for both the doctor and the client.
- We are seeing fewer hospitalizations with KYMap clients.

Pitfalls/Disadvantages:

- Medicaid prior authorizations/dosage limitations will limit the effectiveness of the algorithm;
- No participation in KYMap by the hospital results in change to conventional medications and no continuity of care for the client if they are hospitalized;
 - paper vs. web based – paper with a transcriber works best the web based takes too long for a prescriber;
 - Hard to sustain consumer/family participation in education groups.
- Web based – time consuming, difficult to navigate/error messages, require computer literate staff, continued concerns about security parameters.
- Paper/transcriber – faster, the progress report is placed in the chart.
- Duplication
- Inpatient vs. Outpatient accountability
- Uncertain how to change practices to meet fidelity goals when program began – what they were looking for during record audits.

Paul: Prior to KYMap

- Paul was maintained on Haldol for years but is now maintained on Zyprexa
- He lived in a Winnebago with no utilities (electric, water)
- He did not have custody of his children, they were in foster care
- He was consistently abusing drugs and alcohol
- His appearance was disheveled, he was malodorous. On a scale of 1-6 he was a 10.
- His negative symptoms were top of the scale (severe) and his positive symptoms were moderately severe.

Since KYMap

- He lives in a 2 bedroom mobile home with utilities
- He is no longer abusing drugs and alcohol
- He has completed parenting classes
- His health has improved - his mental status has improved
- His family has been reunited and are showing improvement
- He has not been hospitalized and is more communicative
- He has fewer symptoms and side effects
- He is grooming and hygiene has improved immensely, he is now appropriately groomed, he is clean, his clothes are clean.
- His positive and negative symptoms are now normal, mild or not present.

Evaluation of the Kentucky Medication Algorithm Program

SAMHSA Grant #1HD9SM56151-01

Evidenced-Based Practice, Training and Evaluation

University of Louisville

Kent School of Social Work

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Discussion of Training Evaluation

- There was a significant knowledge gain across training sites.
- Sites with more buy-in at the beginning of the implementation scored higher.
- Training is effective
- We learned many valuable lessons that will guide the development of training curricula, logistical planning for training and evaluation of training if implemented state wide.
- Supervisor support important to ensure learning readiness.
- Learning readiness will increase satisfaction with training.

Overall Perceptions of KyMAP . . .

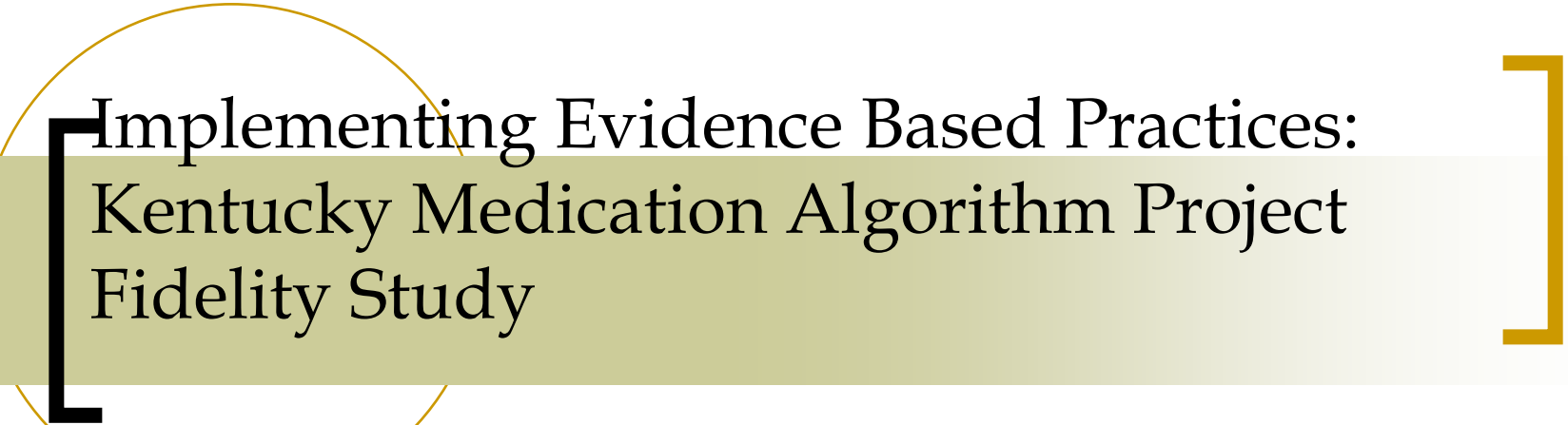
- Expenses related to training and technology can be barriers to implementation
- Staff turnover causes problems related to the need for ongoing training
- Must spend less time on technology
- Continuity of care is an issue
- Medical, nursing and social work schools must incorporate EBP into their curricula for long-term integration
- Communication is key

Stage 3: Consumers reporting on Change Focus Groups

- Clients reported feeling better on their current medications than they have in the recent past
- Medications are no longer “hit and miss”
- No longer feeling suicidal
- Still experiencing some side effects (most frequently mentioned including feeling sleepy, panic attacks, weight gain)
- Explanation of the program and involvement in decision making is important in EPB.

Urban and Rural Differences

- No significant differences between personality traits of urban and rural trainees.
- The rural trainees were significantly more ready to learn than the urban trainees.
- No significant difference between supervisor training support for urban and rural trainees.
- An ANCOVA analysis shows that when controlled for pretest, the rural trainees had significantly higher posttest knowledge than urban trainees.
- The major themes of the consumer groups were about the same for urban and rural participants.



Implementing Evidence Based Practices: Kentucky Medication Algorithm Project Fidelity Study

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Kentucky Report on Fidelity: Study Design

- **Kentucky Medication Algorithm Project (KY-MAP) – 3-year longitudinal study**
 - Fidelity Assessment Sites (n=6)
 - Fidelity Assessment Visits (n= 30)
 - Pre-education visits at each site = Baseline/Control
 - Post-education visits at each site = 4

- **Sample**
 - Program directors (n = 6)
 - Prescribers (n = 14)
 - Physicians (n = 9) and Advanced Practice Registered Nurses (n = 5)
 - Medical Records (n = 900)
 - Random Sampling

- **Instruments**
 - 17-item MedMAP Program Director Interview for Organizational Scale
 - 16-item MedMAP Prescriber Interview for Organizational Scale
 - 15-item MedMAP Fidelity Scale Outpatient Chart Review Form

Kentucky Report on Fidelity: Findings @ 5 Sites

Table 1. Baseline and Final Visit MedMAP Summary Scores

Site	Baseline (control)	Final
002	50%	62%
004	55%	58%
005	53%	64%
007	56%	58%
008	49%	52%

Kentucky Report on Fidelity: Findings @ 5 Sites

Table 2. Select Item Scores > 70% @ Final Visit

Scale Item	002	004	005	007	008
Patient education	83%	80%	70%	93%	23%
Patient involvement	100%	90%	97%	90%	77%
Simple medication plan	83%	90%	93%	73%	87%
Med. dose range	97%	100%	100%	73%	100%
Current dose/date	97%	90%	100%	83%	70%

Kentucky Report on Fidelity: Findings @ 5 Sites

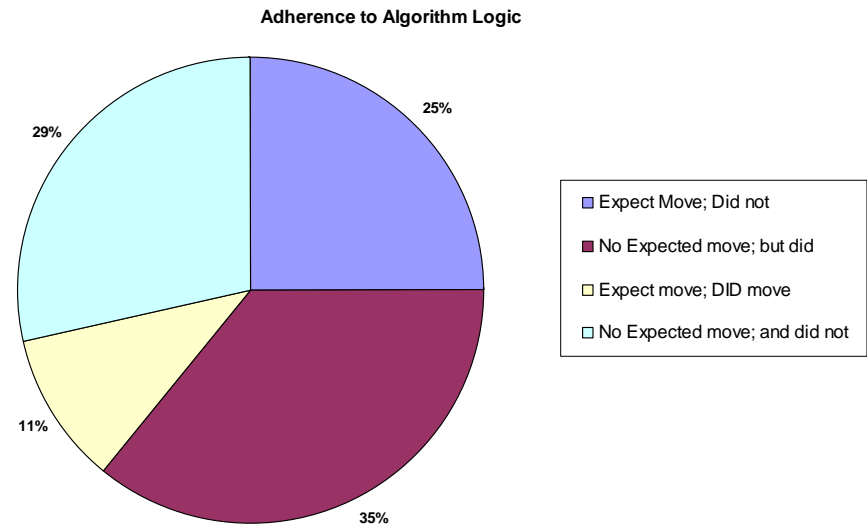
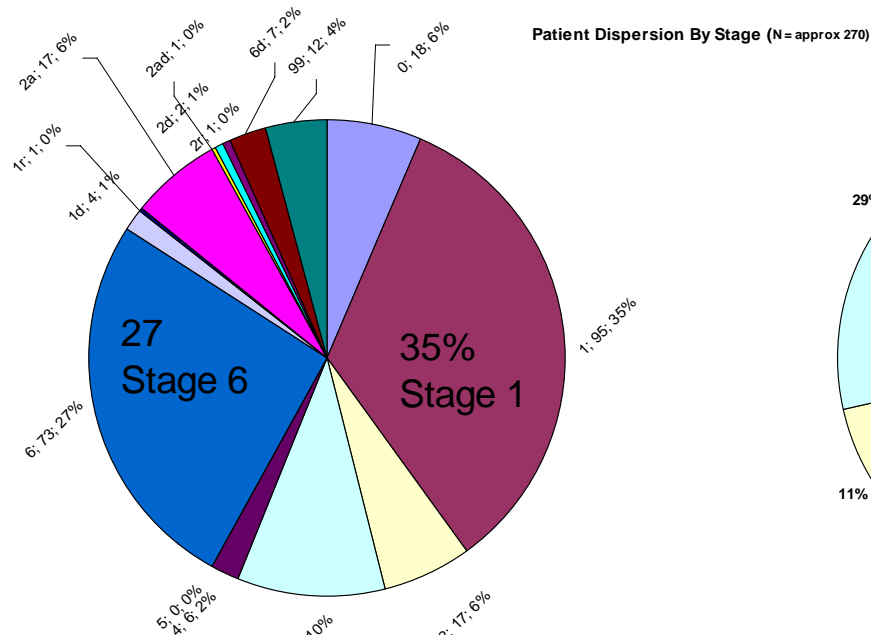
Table 3. Select Item Scores < 70% Final Visit

Scale Item	002	004	005	007	008
Illness history	17%	13%	27%	3%	13%
Medication history	36%	17%	28%	38%	12%
Systematic outcome rating plan	0%	0%	3%	0%	7%
Use of outcome scale	10%	0%	0%	7%	33%
Monitor SE	17%	3%	0%	0%	3%

Data from the Kentucky Medication Algorithm Program Database

- Reports to be gleaned from databases associated with the implementation of KYMAP
 - **Statistical**
 - **Clinical Outcomes**
 - to include decrease in positive symptom scores, and Quality of Life Assessments
 - **Adherence**
 - as measured by Fidelity Assessment and information from database on staging and movement thereof.
 - **Financial**
 - information on Cost Averted for the Commonwealth through utilization of Samples and Pharmaceutical Indigent Programs and Overall Dollars spent utilizing Medicaid, Community Medication Support Program, and self-pay/other

Data from the Kentucky Medication Algorithm Program Database



- Expect Move; Did not
- No Expected move; but did
- Expect move; DID move
- No Expected move; and did not

Data from the Kentucky Medication Algorithm Program Database

- Approx. 280 clients had their positive symptom scores input into the KYMAP Algorithm Database.
- Approx. 55% of the clients had ≥ 2 sets of scores by which we could determine response.
- 70% of these clients had positive scores recorded as being stable or improving (having a positive response)
 - Of these, Clients experiencing a Full Response* was reported to be 80%.
- Costs averted from documentation of use of samples and Pharmaceutical Indigent Programs estimated to be \$7,000 documented for Region KRCC.

○ * Full response was measured by a reduction of a minimal of 20% in positive symptoms

KyMAP

Future Direction of the Program

Four Goals have been identified:

- **Continued Success of the Algorithm**
- **Consumer Education**
- **Successful Fidelity Audits**
- **Web-Based Application/Integration**