Modeling to Learn

Test. Don’t guess.

Session 3: Comparing Measurement Based Care and Stepped Care for Suicide Prevention

@LZPhD
Lindsey Zimmerman, PhD
Office of Mental Health and Suicide Prevention
National Center for PTSD, Dissemination & Training Division

Tom Rust, PhD
Office of Healthcare Transformation
mtl.info@va.gov

Created by VA
Team

Co-Investigators
David Lounsbury, PhD, Craig Rosen, PhD, Jodie Trafton, PhD, Steven Lindley, MD, PhD

Project Support
Stacey Park, McKenzie Javorka, Dan Wang, PhD, Savet Hong, PhD, Kathryn Azevedo, PhD, Savet Hong, PhD

Team PSD Mentees
Cora Bernard, PhD, Swap Mushiana, MS, Joyce Yang, PhD

VAPOR (Veteran VA Consumer) Board
DC Barlow, Ren Kramer & Erik Ontiveros
Leroy Edwards, Tammy Thompson

Georgia Health Policy Center
Jane Branscomb, MPH Debra Kibble, MS
Ursula Davis, MA, Amanda Martinez, MPH

Takouba LLC
James Rollins, MEd
& Howard Park, MSE, MBA

Partners

VA Palo Alto Mental Health Staff
Ann LeFevre, LCSW, PhD, Maya Kopsell, MD, Trisha Vinatieri, PsyD, Bruce Linenber, PhD, Pompa Malakar, RN, Rosemarie Geiser, RN, Sarah Walls, LCSW, Gigi Fernandez, LCSW, Emily Hugo, PhD, Martha Losch, MD Jessica Cuellar, PhD, Alka Mathur, MD, Erin Sakai, PhD, Kesha Diodato, LCSW, Nathaniel Mendelssohn, MD, Nina Yi, MD, Lisa Giovanetti, LMFT, Joan Smith, LCSW, Darryl Silva, LCSW, Karen Wall, RN, EdD, and Smita Das, MD.

Office of Mental Health and Suicide Prevention (10NC5)
Matthew Neuman, PhD, Matthew Boden, PhD, Hugo Solares, PhD, Shalini Gupta, PhD, David Wright, PhD, Susanna Martins, PhD, Eric Schmidt, PhD, Amy Robinson, PharmD, Ilse Wiechers, PhD,

Office of Healthcare Transformation (10A5)
Tom Rust, PhD, Andrew Holbrook, Liz May

VA Employee Education Services (EES)
Elizabeth Bowling, MA, RD/LD, Correy Mathews, Ann Hier, MS, Fawn Powell, MHA, Justin Spears, MBA, Ed Caldwell MEd, Amy Jones, MSED, Julie Sydow MA, Cate Wright, and Lara Dolin
Team

mtl.how/team

Facilitators

Key Partners

Workgroup Leads

Co-Investigators
This is session 3 of a four part series.

May 2, 2019
12noon Pacific/3PM Eastern
Introducing *Modeling to Learn*
Helping Teams Find Local Improvements to Meet Veterans’ Needs

May 9, 2019
12noon Pacific/3PM Eastern
Introducing Measurement Based Stepped Care for Suicide Prevention

May 16, 2019
12noon Pacific/3PM Eastern
Comparing Measurement Based Care and Stepped Care for Suicide Prevention

May 22, 2019
12noon Pacific/3PM Eastern
Putting it Together: Combining Measurement Based Stepped Care for Suicide Prevention
Modeling to Learn

Test. Don’t guess.

mtl.how/quick_overview
Modeling to Learn
Test. Don’t guess.

Virtual Facilitation
Transparent Local Data
Real-time Simulation

1. Equitable access to resources.
3. Shared decision-making.
This is session 3 of a four part series.

Session 3 **Dynamic Hypotheses and Comparing Alternatives Learning Objectives**

1. Describe the systems story this team believes will cause the outcomes they expect to observe in their experiment.
2. Compare dynamic hypotheses about measurement-based care and stepped care in relation to this team's suicide prevention priority.
3. Apply systems thinking to describe this team's findings, insights and conclusions from this experiment.

Registration
https://www.hsrdrresearch.va.gov/cyberseminars/catalog-upcoming.cfm
MTL resources help teams look back two years and look ahead two years.
Suicide Prevention - How to manage high risk patients.

Stepped Care - How to decide when to step patients up to specialty care.

Join Current Session
Suicide Prevention -- Week 104
583ge_wl_bhip2_2019_04_14.xlsx

Start a New Session
- Care Coordination
- Medication Management
- Psychotherapy
- Aggregate
- Suicide Prevention
You can self-register and use the demonstration simulation to explore the suicide prevention module.

- Self-register  
  *Course Code: cybersem*  
- Once registered go to:  
  mtl.how/demo_login
Click the icon to run your own simulation.

Please provide some information so we can send you a login.

Please note that your name, email and password will only be used to create your login credentials. You will have access to the simulation for 5 days, unless you were given a Course Code. Unless you choose to continue to receive updates about the Modeling to Learn program, the system will erase your information after 5 days.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name</td>
<td></td>
</tr>
<tr>
<td>Last Name</td>
<td></td>
</tr>
<tr>
<td>Email</td>
<td></td>
</tr>
<tr>
<td>Password</td>
<td></td>
</tr>
<tr>
<td>Confirm password</td>
<td></td>
</tr>
<tr>
<td>Institution</td>
<td>Please select</td>
</tr>
<tr>
<td>If other please specify</td>
<td></td>
</tr>
<tr>
<td>Role</td>
<td>Please select</td>
</tr>
<tr>
<td>If other please specify</td>
<td></td>
</tr>
<tr>
<td>Discipline</td>
<td>Please select</td>
</tr>
<tr>
<td>If other please specify</td>
<td></td>
</tr>
<tr>
<td>How did you find us?</td>
<td>Please select</td>
</tr>
<tr>
<td>If other please specify</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td></td>
</tr>
</tbody>
</table>

You do not need a course code. However, some users may have course codes for specific trainings.

Would you like email updates about Modeling to Learn quick tips and new releases?

Yes  No
Poll 1: What would you like to explore in the demo simulation?

Choose one.

A. Patients waiting to start care
B. Detecting changes in patients’ symptoms
C. Wait times to transfer patients’ care across settings
D. Managing our patient load
E. Care for patients at high risk for suicide
Pull up prior work to save time.
Decisions from last session:
We will experiment to see if implementing measurement based care produces a virtuous cycle of moving more of our Veterans into recovery.

Measurement Based Stepped Care for Suicide Prevention
This model shows the effects of measurement based stepped care on patients’ symptoms and risk. It allows you to explore the impacts of implementing measurement based care to reduce delays in detecting patients at high risk for suicide, and to improve the quality of care by making better team decisions about when to step patients up to a higher level of care, or step them down to a lower level of care. It is also possible to experiment with team decisions related to how patient wait-times and access, the use of community care, and the impacts of provider overwork and burnout on the quality of care.

Our Question
Briefly describe what your team wants to learn from this experiment.

How can we get our high symptom patients into the right care at the right time? Specifically, stepping more of our high symptom patients up to PTSD clinical team and Addiction Treatment Services team?

Our Hypothesis
Outline the systems story your team believes will cause the outcomes your team expects to observe.

If we make no new decisions in our team, then we won’t be able to get our patients in the specialty programs they need, our patient load will increase, and we won’t move as many patients into recovery as we would like.

Our Findings
Describe your team’s findings, insights and conclusions from this experiment.

Care quality does not improve (wait time to step up changes by ~1%). However, if our manageable patient load stays the same over the next two years as the past two years, we shouldn’t expect things to get worse, either.

Our Decisions
Based on what was learned in this experiment, what changes is the team ready to make in their practice?

We will next experiment to see if implementing Measurement Based Care will produce a virtuous cycle of moving more of our Veterans into recovery.
Team challenges related to care quality.

1. What if we implemented measurement-based care in our team?

2. What if we implemented stepped care between our clinic and SMH and/or PC/PCMHI?
Team challenges related to care quality.

1. What if we implemented measurement-based care in our team?
MBC Systems Story: Higher care quality improves recovery (zoomed in)
Poll 2:
If we implement Measurement Based Care, then…

Choose one.

A. Care quality will stay the same
B. Care quality will get worse
C. Care quality will get better
D. Some care will get better and some worse
E. I don’t know
What if we implement Measurement Based Care?

vs Basecase

- GMH Patient Load
- GMH Ratio of High to Low Symptom Patients
- GMH High Risk Flag Patients
- GMH Patients Waiting to Start
- GMH to SMH Wait Time for Step up
- GMH to PC/PCMH Wait Time to Step down
Decisions from implementing Measurement Based Care: Let’s see if implementing stepped care improves care quality without the unintended increases in wait times.

Measurement Based Stepped Care for Suicide Prevention
This model shows the effects of measurement based stepped care on patients’ symptoms and risk. It allows you to explore the impacts of implementing measurement based care to reduce delays in detecting patients at high risk for suicide, and to improve the quality of care by making better team decisions about when to step patients up to a higher level of care, or step them down to a lower level of care. It is also possible to experiment with team decisions related to new patient wait times and access, the use of community care, and the impacts of provider overwork and burnout on the quality of care.

Our Question
Briefly describe what your team wants to learn from this experiment.

How much does implementing Measurement Based Care improve our ability to get our high symptom patients into the right care at the right time? Will it kick off a virtuous cycle of GMH care quality improving recovery?

Our Hypothesis
Outline the systems story your team believes will cause the outcomes your team expects to observe.

If we more readily detect patients’ symptoms and risk, then our improvement rate will increase, moving more patients in to recovery. As more patients graduate from general mental health care, our patient load will drop and open more slots to start new care episodes.

Our Findings
Describe your team's findings, insights and conclusions from this experiment.

As the improvement rate increases, the ratio of high to low symptom patients decreases, fewer patients receive a high risk flag, and wait times to step up decrease. But, patient load stays the same, wait times to step down increase, and GMH patients waiting to start increases.

Our Decisions
Based on what was learned in this experiment, what changes is the team ready to make in their practice?

Even with improved quality, patient load doesn't change. PC is taking more patients than they can handle, so their quality declines. More patients wait to step down and start to GMH care. Implementing stepped care may improve care quality without increases in wait times.
Decisions from Measurement Based Care experiment:
Something that we think is outside of our control is actually an unintended result of our own decision.
Team challenges related to care quality.

2. What if we implemented **stepped care** to get patients to the right level of care at the right time to meet their needs?
Stepped Care Systems Story: Higher care quality improves recovery (zoomed out)
Poll 3: If we implement Stepped Care, then…

Choose one.

A. Care quality will stay the same
B. Care quality will get worse
C. Care quality will get better
D. Some care will get better and some worse
E. I don’t know
What if we implement Stepped Care?

vs Measurement Based Care and Basecase

GMH Improvement Rate

GMH Ratio of High to Low Symptom Patients

GMH High Risk Flag Patients

GMH Patients Waiting to Start

GMH to SMH Wait Time for Step up

GMH to PC/PCMH Wait Time to Step down
Decisions from implementing Stepped Care: Explore what will happen if we combine Measurement Based Care and Stepped Care between GMH and PC/PCMHI.

Measurement Based Stepped Care for Suicide Prevention
This model shows the effects of measurement based stepped care on patients’ symptoms and risk. It allows you to explore the impacts of implementing measurement based care to reduce delays in detecting patients at high risk for suicide, and to improve the quality of care by making better team decisions about when to step patients up to a higher level of care, or step them down to a lower level of care. It is also possible to experiment with team decisions related to new patient wait times and access, the use of community care, and the impacts of provider overwork and burnout on the quality of care.

Our Hypothesis
Outline the systems story your team believes will cause the outcomes your team expects to observe.

If we implement Stepped Care (SC) between GMH and PC/PCMHI, then it will reduce care transfer confusion and care delays, resulting in more patients being stepped between those settings faster. GMH should have more openings for new care episodes.

Our Question
Briefly describe what your team wants to learn from this experiment.

Does implementing Stepped Care (SC) improve care quality without increases in wait times for GMH care and for stepping down from GMH to PC/PCMHI?

Our Findings
Describe your team’s findings, insights and conclusions from this experiment.

GMH starts more new care episodes, but the ratio of high to low symptom patients increases, and patients with high risk flags stay the same. Rates of patients stepping between our two settings increases, but step down wait times from GMH to PC increase.

Our Decisions
Based on what was learned in this experiment, what changes is the team ready to make in their practice?

Measurement Based Care improved patients' symptoms and risk, but reduced new care episode starts. SC started more GMH care episodes, but didn’t improve patients' symptoms and risk. Explore what will happen if we combine MBC and SC between GMH and PC/PCMHI.
Next week for session 4:

May 22, 2019  
12noon Pacific/3PM Eastern

Putting it Together: Combining Measurement Based Stepped Care for Suicide Prevention

1. Describe the decisions the team experimented with and how they are intertwined with other decisions and clinic outcomes.
2. Test your understanding of the "higher care quality improves recovery" system story by describing what’s happening when the simulation produces a runaway increase or decrease.
3. Apply systems thinking to anticipate the long-term trend in this team's ability to reduce patients' symptoms and suicide risk under different decision scenarios.

Registration

https://www.hsrd.research.va.gov/cyberseminars/catalog-upcoming.cfm
Try on your own:

If we combine Measurement Based Care and Stepped Care, then how does it impact…

A. Patients waiting to start care
B. Detecting changes in patients’ symptoms
C. Wait times to transfer patients’ care across settings
D. Managing our patient load
E. Care for patients at high risk for suicide
You can review *Modeling to Learn* session guides at mtl.how

Session guides, links, and cheatsheets.
Download 1-page Modeling to Learn Cheatsheets at mtl.how

Learning Objectives

Modeling to Learn

MTL objectives include activities and competencies that...
1. Are meaning for you and align your learning goals with your team.
2. Develop systems thinking skills to help you see how internal things fit together, and understand cause and effect without data and modeling expertise.
3. Make the data, models, and insights transparent to you.
4. Empower you to make meaningful improvements in team or societal quality of care & work life.

Time Savers

1. Explore trends on SplashPage
2. Use most recent data, UI files
3. Save a team_data_<team_name>_ui file for preferred filters

Learning Objectives

Sim UI Cheatsheet (Updated 2019_05_09)

Login

Open an HTML page in Chrome. Use mnemonic for username / email & password.

1. Choose team workflow for experimentation as a team or individual workflow for learning on your own

Aggregates

AEC: Aggregate Decomposition
CC: Aggregate Data for UI
C: Aggregate Data for UI
D: Aggregate Data for UI
E: Aggregate Data for UI
F: Aggregate Data for UI
G: Aggregate Data for UI
H: Aggregate Data for UI
I: Aggregate Data for UI
J: Aggregate Data for UI
K: Aggregate Data for UI
L: Aggregate Data for UI
M: Aggregate Data for UI
N: Aggregate Data for UI
O: Aggregate Data for UI
P: Aggregate Data for UI
Q: Aggregate Data for UI
R: Aggregate Data for UI
S: Aggregate Data for UI
T: Aggregate Data for UI
U: Aggregate Data for UI
V: Aggregate Data for UI
W: Aggregate Data for UI
X: Aggregate Data for UI
Y: Aggregate Data for UI
Z: Aggregate Data for UI

Troubleshooting

Saving data: Check file name of columns and legends.

Data UI cheatsheet (Updated 2019_05_09)

Printer refresh error: Click on Data tab & Refresh

Modeling to Learn (MTL) is an ongoing quality improvement project by VA Team Participatory System Dynamics. Info: mtlinfo.va.gov
Updated 2019_05_09
Modeling to Learn

You can review data at within VA at mtl.how/data.
*Once registered go to: mtl.how/demo_login
Help is available in top navigation bar.

<table>
<thead>
<tr>
<th>Model Diagram</th>
<th>Experiment Timeline</th>
<th>Outputs</th>
<th>Experiment</th>
</tr>
</thead>
<tbody>
<tr>
<td>The blue header at the top shows the module and data file chosen. The rates (circles) and stocks (rectangles) update dynamically with changes in the experiment variables. Throughout the model diagram, there are &quot;i&quot; icons to explain how the variable is calculated.</td>
<td>Use reveal complexities to look at balancing and reinforcing feedback systems stories. In the systems stories, there are two kinds of arrows. Plus signs mean trends move in the same direction. Minus signs mean trends move in the opposite direction.</td>
<td>View trends over time for ≤6 variables Text or Q/H/F/D Enter Question, Hypothesis, Findings, and Decisions text for each experiment. Expanded Outputs View Q/H/F/D Text and Results Dashboard at once Results Dashboard View trends over time for ≤6 variables. Compare ≤2 experiments against current run.</td>
<td>Select Experiment Select previous experiments to cue up experiment values and q/h/f/d text from previous experiments. Team Data Table Shows initial starting values of experimental variables based on team data. Experiment Adjust experiment sliders to test different values in the sim by dragging the slider.</td>
</tr>
</tbody>
</table>
Five ways to help improve *MTL* usefulness.

**Email:**  
mtl.info@va.gov

**Subject line:** **Learning**

1. *MTL* Live Team/Clinic
2. Pilot Review EES materials (e.g., Video, Guides)

**Design**

3. Data User Interface ([mtl.how/data](mailto:mtl.how/data))
4. Simulation User Interface ([mtl.how/demo](mailto:mtl.how/demo))

**Research**

5. Advisory Board and other opportunities
MTL Resources and Help

Session guides, links, and cheatsheets.

Self-registration for simulation demo. Course code: cybersem

@LZPhD
Lindsey Zimmerman, PhD
Office of Mental Health and Suicide Prevention
National Center for PTSD, Dissemination & Training Division

Tom Rust, PhD
Office of Healthcare Transformation

mtl.info@va.gov

https://www.hsrd.research.va.gov/cyberseminars/catalog-upcoming.cfm
Session 3 Bibliography


mtl.how.refs
Additional Suicide Prevention Resources

https://www.mentalhealth.va.gov/suicide_prevention/resources.asp

Twenty helpful resources are available at the link for:

• Veterans and their Loved Ones
• Community Providers and Community Members
• VA Providers and Teams