Suicide Prevention Outreach Trial

Scaling up outreach interventions

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SPOT Trial summary

• Pragmatic trial of two outreach interventions to reduce long-term risk of suicide attempt
• Automatically enroll health system patients who report frequent thoughts of death or self-harm
• Randomly assign to continued usual care or to one of two outreach-based interventions
• Examine risk of suicide attempt over 12-18 months after randomization
In pictures:

Participants automatically identified from health system records

Random Assignment

Usual Care

DBT Skills Training

Risk Assess/Care Mgmt

Outreach and coaching over up to 12 mos

Outreach and care mgmt over up to 12 mos

Suicide attempts identified from health system records
Intervention programs

• Dialectical Behavior Therapy Skills Training
  • Specific emotion regulation skills found to reduce risk of repeat suicide attempt
  • Delivered via interactive online program
  • Supported by an online health coach

• Risk Assessment and Care Management
  • Systematic outreach to assess acute risk
  • Care management to facilitate/maintain appropriate contact with outpatient mental health care
Key points regarding intervention programs

• These are “cold calls” - unexpected outreach from an new and unknown representative of the health system

• Cost matters – NNT of 100 means that we are looking for an intervention like statins, not like revascularization. Our target cost is <$100 per patient
Care Management program goals:

• Outreach and non-specific support
• Systematic assessment of current risk level
• Care management to promote appropriate follow-up care
Original plan: “Path-based” logic

Discrete “cycles” of contact, with time between cycles depending on risk level

Separate logic (and technical structure) for:
- Contact management (When to send a message)
- Decision support (What to say)
Separate applications for each function

Contact Management Database

Care Manager

EHR

Participant

Decision Support Rules

Encounter w/ Providers

Group Health
Real life:
Stuff happens while we’re trying to work

• Visits happen – and new risk assessments are recorded
• Appointments are made, cancelled, and/or missed
• People ignore our messages or don’t always accept our advice
Finding the right mix of structure and flexibility

• Our long-term goal is constant – maintaining engagement in effective mental health care

• Our short-term tactics are highly variable – across people and over time

• Our question is: Given where we are and where we want to go, what is the most helpful thing I could do right now?
New plan: State-based logic

Is There a Current Risk Assessment?

Outreach to Request Risk Assessment

Is Appropriate Follow-up Scheduled

Outreach to Facilitate Follow-up

Are We Due to Say Hello?

Done for Now

Outreach to say “Hello. We’ll be in touch again soon.”

Contact management and decision support are inseparable
“Is there current risk assessment?” depends on:

- Time since most recent risk assessment
- Risk level at most recent assessment (lower risk allows longer time til next assessment)
- Time until next scheduled mental health visit (no need for assessment if visit already scheduled)
- Allowing for care manager’s judgment
“Is appropriate follow-up scheduled?”
depends on:

- Risk level at most recent assessment
  (lower risk allows longer time til next visit)
- Time until next scheduled mental health visit
- Allowing for care manager’s judgment
“Are we due to say hello?” depends on:

- Time since most recent risk assessment
- Risk level at most recent assessment (lower risk allows longer time til next assessment)
- Time until next scheduled mental health visit (no need for assessment if visit already scheduled)
- Allowing for care manager’s judgment
One added wrinkle – because communication is asynchronous

• When we send a message, our participant:
  • Might or might not read it
  • Might or might not reply
  • Might or might not act on our advice

• So we need to wait a bit to see what happens – accomplished by a “snooze” feature with variable timing
Integrating functions in EHR
For every participant every day:

- Is There a Current Risk Assessment?
  - YES: Is Appropriate Follow-up Scheduled?
    - YES: Are We Due to Say Hello?
      - YES: Outreach to say “Hello. We’ll be in touch again soon.”
      - NO: Done for Now
    - NO: Outreach to Facilitate Follow-up
  - NO: Outreach to Request Risk Assessment

Fortunately, algorithms don’t get bored
Implemented via Epic Registry and Reporting Workbench functions:
Original plan for quality monitoring

Every contact cycle starts with a risk assessment

Quality/fidelity metric: % of assessments >30 days past due
But what’s the performance metric for this?

- **Is There a Current Risk Assessment?**
  - Yes: Go to **Is Appropriate Follow-up Scheduled?**
  - No: Outreach to Request Risk Assessment

- **Is Appropriate Follow-up Scheduled?**
  - Yes: Go to **Are We Due to Say Hello?**
  - No: Outreach to Facilitate Follow-up

- **Are We Due to Say Hello?**
  - Yes: Outreach to say “Hello. We’ll be in touch again soon.”
  - No: Done for Now
Skills Training program goals:

- Outreach and non-specific support
- Training in specific emotion-regulation skills shown to mediate effect of full-scale Dialectical Behavior Therapy
- Personalized encouragement from online coach
Skills Training technical requirements:

- Deliver multimedia content
- Individualized pathways through content
- Support rules-based outreach and feedback
- Address health system privacy/security concerns
- Integration with usual mental health treatment
No single solution meets all requirements:

- Deliver multimedia content
- Individualized pathways
- Rules-based outreach and feedback
- Privacy/security concerns
- Integration with usual treatment

Website

EHR Portal
Skills Training hybrid system:

DatStat content management system:
• Deliver multimedia content
• Support individualized pathways
• Rules-based prompts to coach

Epic patient portal:
• Outreach and feedback messages to participants
• Integration with usual mental health treatment
Hybrid system to support skills training
Modular structure of overall program:
Common structure for skills modules:
Implemented via Epic Registry and Reporting Workbench functions:
What about “nonspecific support”?  

On the one hand:
- Evidence for effectiveness of “caring message” interventions
- Experience with persistent telephonic and secure messaging outreach interventions

On the other hand:
- Very heterogeneous needs – both between and within people
- Fear of intrusive or even coercive interventions
I am a clinical social worker from the Group Health Research Institute. I am working with Group Health mental health and primary care providers to test a support program for people who may be having thoughts about suicide or about hurting themselves. We care about you, and we want to make sure you get the help you need. A new online program called Now Matters Now was designed to give you that help when you need it. The program uses real people to teach specific skills for coping with difficult times.

If you are willing to try this program, click here to find out more.
Reducing the chances of getting it all wrong

- Partnering with people with lived experience of suicidal ideation and self-harm
- Careful choice of language (borrowing extensively from Motivational Interviewing)
- (For DBT skills program) Extensive use of first-person content
And that’s why we decided to call it SPOT
It’s a collaborative effort (we need algorithms and puppies)

What computers do well

• Remember
• Apply specific rules
• Deliver information reliably

What people do well

• Identify exceptions
• Communicate
• Care