Treatment Interventions for Suicide Prevention

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Suicide prevention has many forms

- Treating Depression
- Gatekeeper Training
- Public health or injury prevention
This talk is about preventing suicide with mental health interventions to treat suicide attempts or other suicidal behavior.
Overview

- What does the clinical trial research tell us about treatment with suicidal patients?
  - What doesn’t work?
  - What does work?

- What can we learn clinically from the research data?
What doesn’t have evidence?
Inpatient psychiatric admission

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**Fig. 7. Comparison 07. General hospital admission vs. Discharge**

07.01 Repetition

Review: Psychosocial and pharmacological treatments for deliberate self harm
Comparison: 07 General hospital admission vs. Discharge
Outcome: 01 Repetition

<table>
<thead>
<tr>
<th>Study</th>
<th>Treatment n/N</th>
<th>Control n/N</th>
<th>Peto Odds Ratio 95% CI</th>
<th>Weight (%)</th>
<th>Peto Odds Ratio 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterhouse 1990</td>
<td>3/38</td>
<td>4/39</td>
<td></td>
<td>100.0</td>
<td>0.75 [ 0.16, 3.53 ]</td>
</tr>
<tr>
<td>Total (95% CI)</td>
<td>38</td>
<td>39</td>
<td></td>
<td>100.0</td>
<td>0.75 [ 0.16, 3.53 ]</td>
</tr>
</tbody>
</table>

Total events: 3 (Treatment), 4 (Control)
Test for heterogeneity: not applicable
Test for overall effect z=0.36  p=0.7

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Note, highest risk individuals excluded from trial.

Or type of inpatient psychiatry...

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**Fig. 5. Comparison 05. Inpatient behavior therapy vs Inpatient insight-orientated therapy**

**05.01 Repetition**

- **Review:** Psychosocial and pharmacological treatments for deliberate self harm
- **Comparison:** 05 Inpatient behavior therapy vs Inpatient insight-orientated therapy
- **Outcome:** 01 Repetition

<table>
<thead>
<tr>
<th>Study</th>
<th>Treatment n/N</th>
<th>Control n/N</th>
<th>Peto Odds Ratio</th>
<th>Weight (%)</th>
<th>Peto Odds Ratio 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liberman 1981</td>
<td>2/12</td>
<td>3/12</td>
<td></td>
<td>100.0</td>
<td>0.62 [0.09, 4.24]</td>
</tr>
<tr>
<td>Total (95% CI)</td>
<td>12</td>
<td>12</td>
<td></td>
<td>100.0</td>
<td>0.62 [0.09, 4.24]</td>
</tr>
</tbody>
</table>

Total events: 2 (Treatment), 3 (Control)
Test for heterogeneity: not applicable
Test for overall effect z=0.49 p=0.6

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Easy access to inpatient psychiatry has promise, but is not significant.

**Fig. 3. Comparison 03. Emergancy card vs. Standard aftercare**

<table>
<thead>
<tr>
<th>Study</th>
<th>Treatment n/N</th>
<th>Control n/N</th>
<th>Peto Odds Ratio</th>
<th>Weight (%)</th>
<th>Peto Odds Ratio 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotgrove 1995</td>
<td>3/47</td>
<td>7/58</td>
<td></td>
<td>36.6</td>
<td>0.52 [0.14, 1.92]</td>
</tr>
<tr>
<td>Morgan 1993</td>
<td>5/101</td>
<td>12/111</td>
<td></td>
<td>63.4</td>
<td>0.45 [0.17, 1.22]</td>
</tr>
<tr>
<td>Total (95% CI)</td>
<td>148</td>
<td>169</td>
<td></td>
<td>100.0</td>
<td>0.48 [0.22, 1.05]</td>
</tr>
</tbody>
</table>

Total events: 8 (Treatment), 19 (Control)

Test for heterogeneity: chi-square=0.03 df=1 p=0.87 I² =0.0%

Test for overall effect: z=1.84  p=0.07

Anti-depressant medications don’t have evidence either.
What does work?
Earlier studies of CBT show promise

Analysis 1.1. Comparison | Problem solving therapy vs Standard aftercare, Outcome | Repetition.

Review: Psychosocial and pharmacological treatments for deliberate self harm

Comparison: | Problem solving therapy vs Standard aftercare

Outcome: | Repetition

<table>
<thead>
<tr>
<th>Study or subgroup</th>
<th>Problem solving</th>
<th>Standard care</th>
<th>Peto Odds Ratio</th>
<th>Weight</th>
<th>Peto Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n/N</td>
<td>n/N</td>
<td>Peto,Fixed,95% CI</td>
<td></td>
<td>Peto,Fixed,95% CI</td>
</tr>
<tr>
<td>Evans 1999</td>
<td>10/18</td>
<td>10/14</td>
<td></td>
<td>10.2%</td>
<td>0.52 [ 0.13, 2.15 ]</td>
</tr>
<tr>
<td>Gibbons 1978</td>
<td>27/200</td>
<td>29/200</td>
<td></td>
<td>64.8%</td>
<td>0.92 [ 0.52, 1.62 ]</td>
</tr>
<tr>
<td>Hawton 1987</td>
<td>3/41</td>
<td>6/39</td>
<td></td>
<td>10.9%</td>
<td>0.45 [ 0.11, 1.79 ]</td>
</tr>
<tr>
<td>McLeavvy 1994</td>
<td>2/19</td>
<td>5/20</td>
<td></td>
<td>7.9%</td>
<td>0.38 [ 0.08, 1.93 ]</td>
</tr>
<tr>
<td>Salkovskis 1990</td>
<td>3/12</td>
<td>4/8</td>
<td></td>
<td>6.2%</td>
<td>0.35 [ 0.06, 2.19 ]</td>
</tr>
<tr>
<td><strong>Total (95% CI)</strong></td>
<td><strong>290</strong></td>
<td><strong>281</strong></td>
<td></td>
<td><strong>100.0%</strong></td>
<td><strong>0.71 [ 0.45, 1.11 ]</strong></td>
</tr>
</tbody>
</table>

Total events: 45 (Problem solving), 54 (Standard care)
Heterogeneity: $\chi^2 = 2.54, \text{df} = 4 (P = 0.64); I^2 = 0.0%$
Test for overall effect: $Z = 1.50 (P = 0.13)$

http://www.thecochranelibrary.com (Meta-analysis including DBT show significance for CBT)
Cognitive Therapy for suicide prevention (10-16 sessions) plus case management is quite effective in reducing suicide attempts.

Dialectical Behavior Therapy (DBT) is effective at reducing self harm (with BPD).

Since this review, DBT benefits have been replicated in 8 randomized clinical trials. Two trials non-significant: compared to APA guidelines for BPD and to Transference Focused Therapy.

And, believe it or not, an innovative idea from 1976: sending caring letters is effective.

Dear ________,

It has been some time since you were here at the hospital, and we hope things are going well for you. If you wish to drop us a note we would be glad to hear from you.

Sincerely,

Letters were sent to patients who were not in treatment 30 days after inpatient discharge.

Cumulative percentage of suicidal deaths among 2,782 patients during the five years after hospital discharge, by whether they accepted or declined ongoing treatment and whether they were periodically contacted by letter.

(Psychiatric Services 52:828–833, 2001)
Sending caring letters was replicated in Australia for deliberate self poisoning.

Random half of the patients discharged after self-poisoning got these cards.

Results:

5 year medical admissions for self-poisoning

Carter GL et al 2005 BMJ;331:805;
Carter GL Oct 2008 Presentation at HMC
Recently letters did not replicate in psychiatric emergency room setting when controlling self-harm

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th>Control</th>
<th>P</th>
<th>OR (95% CI)</th>
<th>IRR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-presentation for self-harm, %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To psychiatric emergency service</td>
<td>16.2</td>
<td>22.5</td>
<td>&gt; 0.13</td>
<td>0.64 (0.36–1.15)</td>
<td></td>
</tr>
<tr>
<td>To emergency department</td>
<td>26.6</td>
<td>26.0</td>
<td>&gt; 0.88</td>
<td>1.04 (0.62–1.73)</td>
<td></td>
</tr>
<tr>
<td>Total (psychiatric emergency service or emergency department)</td>
<td>26.6</td>
<td>27.2</td>
<td>&gt; 0.91</td>
<td>0.97 (0.58–1.62)</td>
<td></td>
</tr>
</tbody>
</table>

| Number of self-harm re-presentations | | |
|--------------------------------------|--|--|--|--|--|
| To psychiatric emergency service     | 28.7| 44.1| < 0.04| 0.65 (0.43–0.98) | 1.07 (0.80–1.43) |
| To emergency department              | 67.2| 61.0| > 0.52| 1.10 (0.82–1.49) |              |
| Total (psychiatric emergency service or emergency department) | 71.1| 66.4| > 0.64|                |              |

Beautrais et al 2010 Br J Psychiatry 197, 55–60

Caring letters receiving further study with study pending in Army personnel and revising a grant from Harborview to NIMH.

VA has implemented caring letters now.
Standard clinical interactions, including suicide interventions, are clinician as expert interviewing patient about depression.
Effective psychotherapies for suicidal individuals have (at least) 2 differences.

(1) Treating suicide directly (not just by treating the diagnosis)

(2) Using an overtly collaborative stance rather than psychiatric interview.
Treatment of psychiatric diagnosis does not necessarily result in reduction of suicide risk.

- **Treatment associated with reduced psychiatric symptoms and suicidal behavior:**
  - Lithium in bipolar affective disorder (no RCT but Baldessarini et al, 1999 shows evidence in review of studies) (RCT in progress)
  - Clozapine in schizophrenia (one RCT: Meltzer et al., 1998)

- **Treatment not associated with reduced psychiatric symptoms and suicidal behavior:**
  - Depression (Brent et al, 1997; Hawton et al, 2009; Khan et al., 2000; Khan et al, 2001; Lerner & Clum, 1990; Rutz, 1999)
  - Psychosis (Khan et al., 2001)
  - Depression in Borderline Personality Disorder (Linehan et al, 1991)
If you’re not treating diagnosis, what should you treat?
There are many stressors, including psychiatric diagnosis, experienced by suicidal individuals.

Secondary drivers of suicidality:
- Pain and Medical problems
- Homelessness
- Interpersonal conflict or loss
- Financial Stress
The most effective treatments focus on the unique problems of suicidal people that prevent them from solving secondary drivers.

**Primary drivers of suicidality**

- Inability to solve problems
- Intense emotion dysregulation
- Reasons for dying (e.g., thinking they are a burden)
- Lack of reasons for living
Psychiatric interviews often do not create collaboration.

- Instead, the patient is more likely to feel interrogated (or even shamed if regretful).
- The patient may feel that you are only trying to run through a checklist, rather than trying to understand what is really going on.
- Patients are frequently aware that they can have their freedom taken away due to their suicide risk, so they can be leery of authority.

Jobes, 2007
Collaborative Assessment and Management of Suicidality (CAMS)
Take steps to overtly demonstrate a desire to be collaborative.
Collaborative Stance in CAMS

• Want to directly demonstrate to client that you empathize with the patient’s suicidal wish
  – “You have everything to gain and nothing to lose from participating in this potentially life-saving treatment”.
  – You can always kill yourself later.

• At the same time, clarify when you would have to take action that they might not choose – know your personal and clinic limits
  – If they won’t participate in treatment...
  OR
  – If they say they can’t control their impulses...
Approached by Clinician (N=50)

Assessor Screen (N=50)

Accepted into Study (N=41)

Rejected at Screening (N=9)
- leaving the country = 1
- currently had provider = 3
- denied SI = 4
- wanted different treatment = 1

Did not attend first session (N=9)

Randomization Sample (N=32)

Withdrawn from study (N=3)
- too severe for study tx = 2 CAMS
- court-ordered to treatment=1 TAU

Dropped Study Treatment (N=2)

CAMS (N=14)

Completed Treatment (N=12)

Dropped out of Study Assessments (N=0)

TAU (N=15)

Completed Treatment (N=10)

Dropped out of Study Assessments (N=3)

Dropped Study Treatment (N=5)
Results for Suicidal Ideation

Bayesian Poisson HLM (because many zeros)

Posterior mean = -0.62
95% CI: -1.19 - -0.04
Results on Overall Symptom Distress

Standard HLM
t=-1.19  p=0.24
Average client satisfaction was high for both treatments (range 1-4). Satisfaction higher for the CAMS treatment condition.

t(24) = -2.76  p = .01
Total sessions ranged from low of 1 to high of 16 sessions:

- **CAMS** = 2 to 16 sessions (mean = 8.5), 7% subject had < 3 sessions
- **TAU** = 1 to 11 sessions (mean = 4.5), 53% subjects had < 3 sessions
In summary

1. There are relatively few clinical trials for treatments for suicidality.
2. Standard of care interventions such as inpatient and anti-depressants do not have strong support.
3. Psychotherapy – particularly CBT and DBT have support.
4. Caring letters alone have support.
5. Psychotherapy emphasizes collaboration and directly treating suicidality. Perhaps this makes them more effective?
Questions?