



Ontario Centre of Excellence
for Child and Youth
Mental Health

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Bringing People and Knowledge Together to Strengthen Care.
Rassembler les gens et les connaissances pour renforcer les soins.

Youth Suicide Prevention: What Works



Youth Suicide

1. Death by suicide

- Second cause of death among 15 to 24 year-olds
- 80-90% comorbid psychiatric disorder
- Males: 5 times female rates
- FN,I & M youth: 5 to 6 times general population rates
- LGBT youth: 2.3 times heterosexual youth rates

2. 1 or more attempts

- 5 to 8% (1/3 medically serious)
- Potent predictor of future attempts: 10x risk increase

3. Serious ideation

- 1 in 5



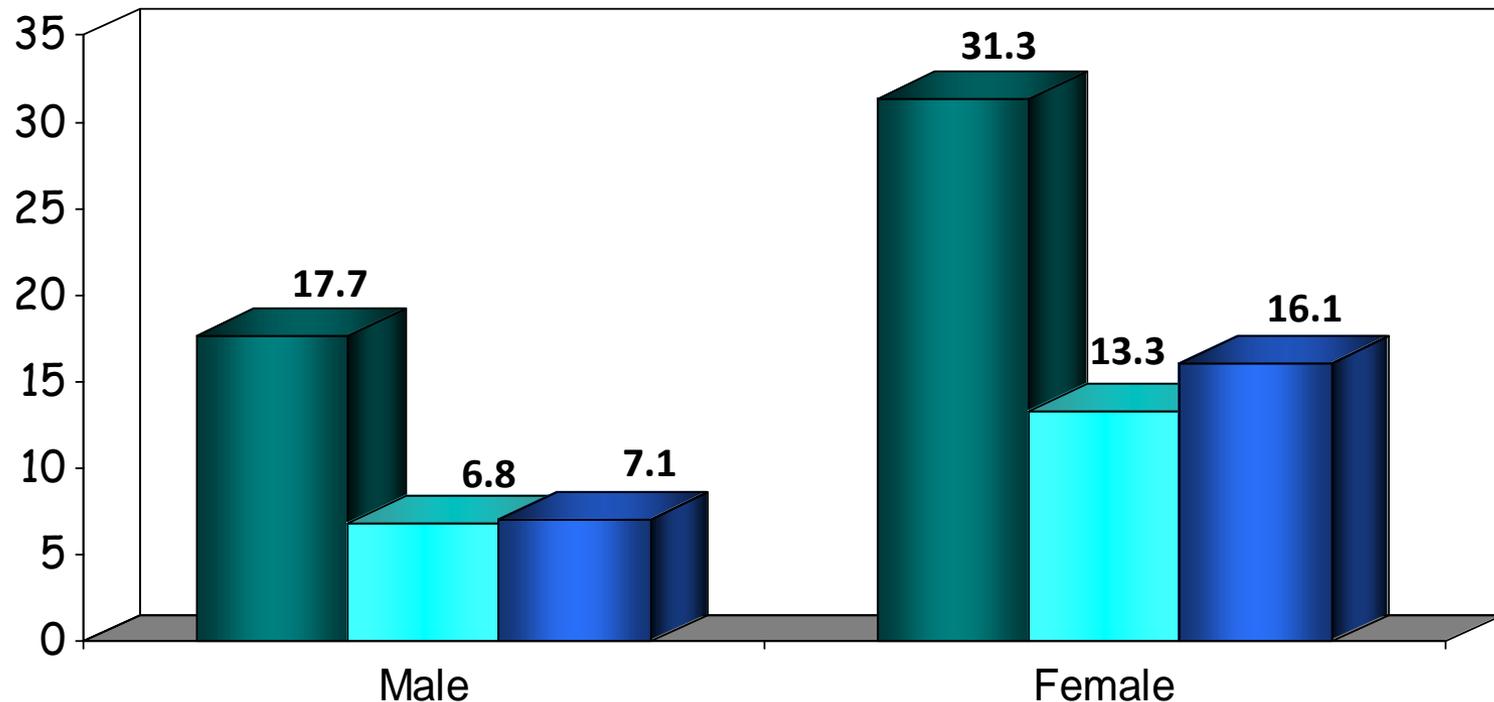
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Suicidal Ideation & Behaviour by Gender

■ Past Suicidal Thoughts

■ Current Suicidal Thoughts

■ Past Suicide Attempts



(YN/RA 2009, N=19996)



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In spite of the elevated rates of suicidal ideation and attempts, many never disclosed these thoughts or feelings:

mainstream	37.8%	non-mainstream	34.9%
younger	39.3%	older	35.1%
males	45.3%	females	32.3%



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Predicting Suicide

“Although risk factor evaluation is a necessary component of suicide assessment, no factors have been discovered that predict suicide completion at an individual level.”

Stewart, Manion, Davidson & Cloutier (2001)

“It is widely recognized from a scientific standpoint that the accurate prediction of any individual’s behaviour, and especially the prediction of suicide, is statistically impossible.”

Fawcett, Clark, & Scheftner (1991)



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Risk and Protective Factors

Risk



Causality

Youth suicide is complex and is often the result of many converging factors. The explanations and the solutions are equally complex.



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Highest Predictors

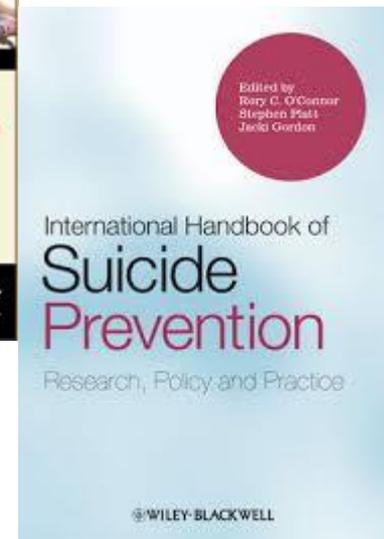
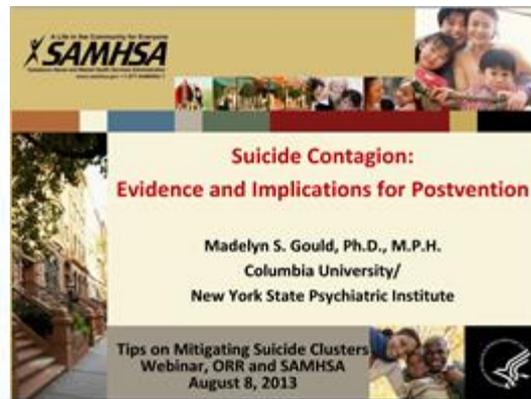
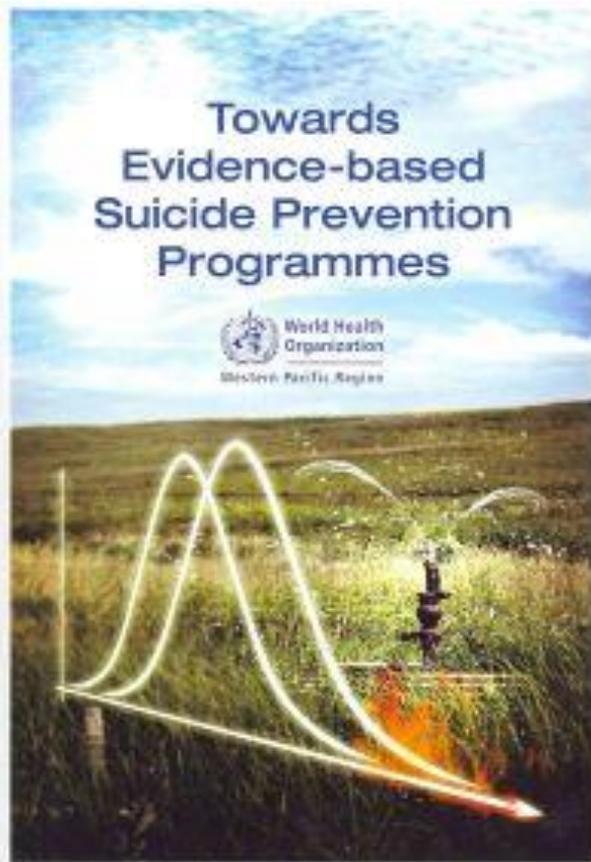
- previous suicide attempt
- psychiatric diagnosis
 - depressive disorders, other mood disorders, substance abuse
- access to lethal means*



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So What Can We Do About It?

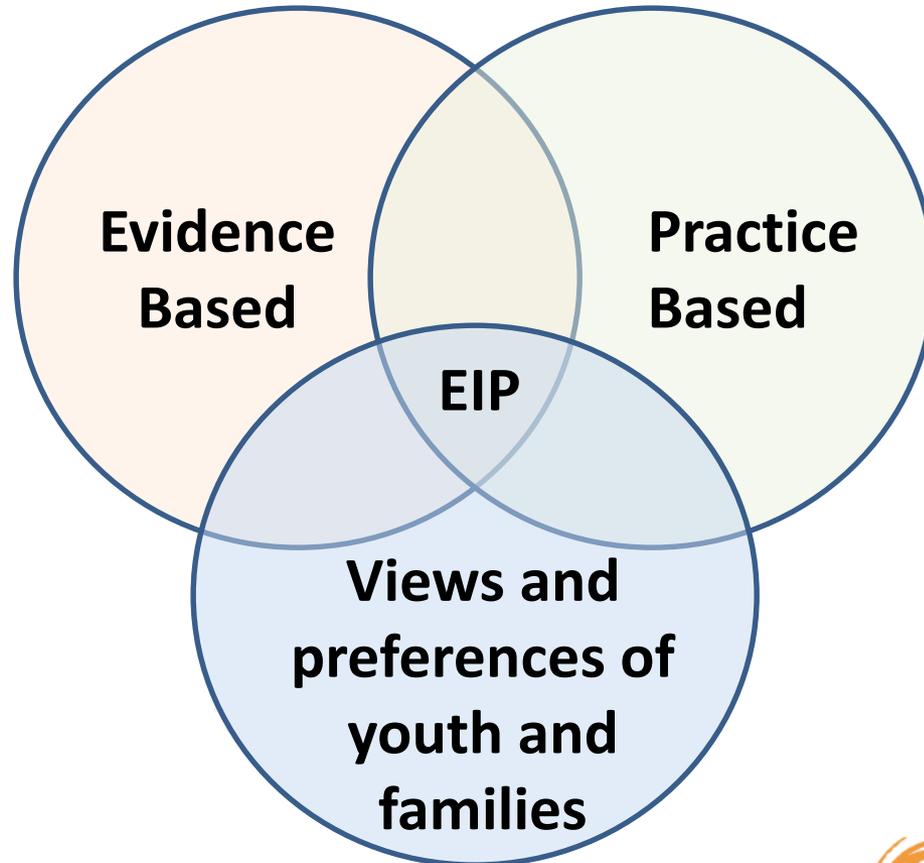
What does the evidence say?



TOGETHER
TO
LIVE



Why Evidence Informed?



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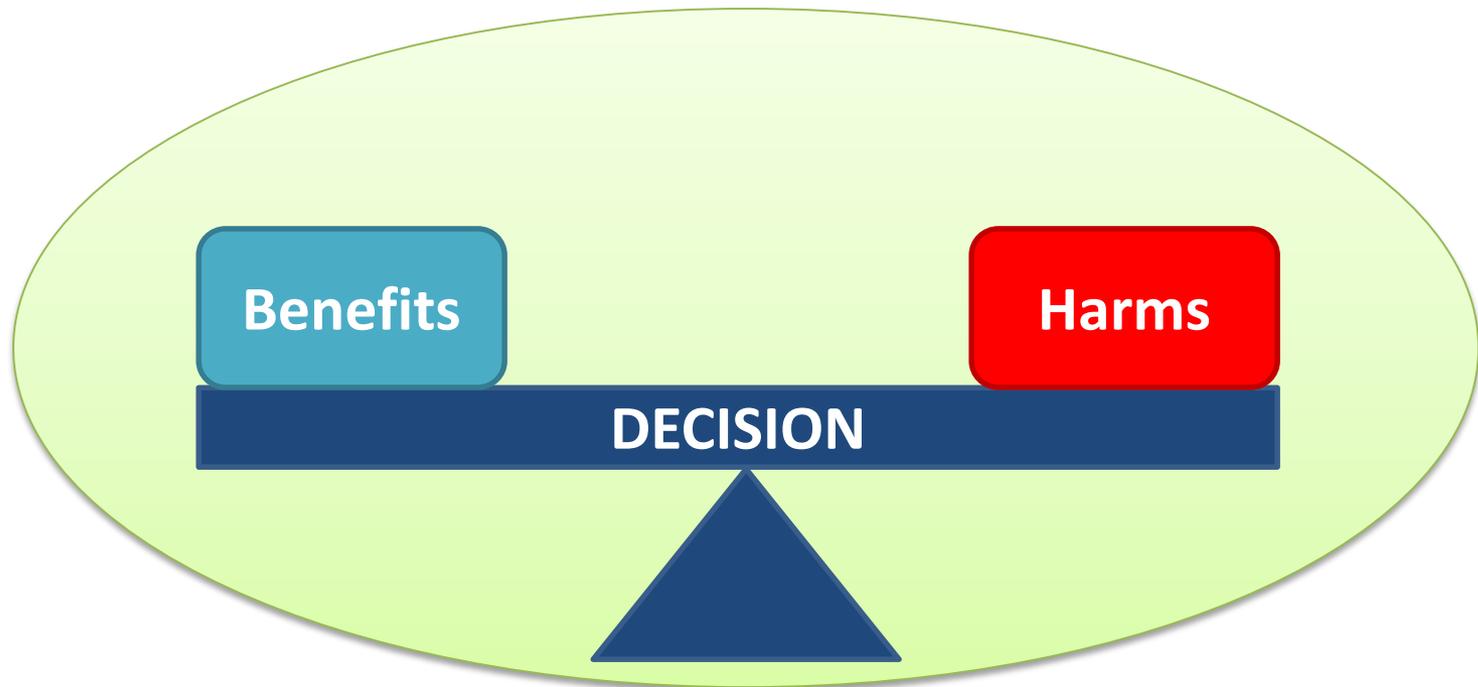
Evidence-Informed Practice

1. Guidance not prescription
2. People make decisions, not evidence
3. Primum non nocere – ‘above all, do no harm’



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Balancing Benefits & Harms



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Research Challenge

- Low frequency behaviour hard to change as an outcome
- People disagree on the best proxy
- Most don't evaluate their program in spite of best intentions
- Scale up of "effective" programs is challenging



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A Youth Suicide Prevention Plan for Canada: A Systematic Review of Reviews

National Team

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- Kathy Bennett*
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- Jeff Bridge
- Amy Cheung
- Stephanie Duda
- Stan Kutcher
- Paul Links
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- John McLennan
- Chris Mushquash
- Mandi Newton
- Anne Rhodes
- Maureen Rice
- Rob Santos
- Peter Szatmari

Can J Psychiatry. 2015 Jun;60(6):245-57.



Inspiring Innovation and Discovery



CIHR IRSC

Canadian Institutes of Health Research
Institut de recherche en santé du Canada

Knowledge Synthesis (KS) Questions

1. What is known about effective school-based interventions to prevent youth suicide?
2. What is known about effective interventions for youth at high risk due to ≥ 1 suicide attempts?



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Possible Interventions?

(Practices ↔ Programs ↔ Policies)

Types of Interventions	Examples
1. Education and awareness for the general public and professionals	<ul style="list-style-type: none"> ▪ Suicide awareness curricula ▪ Gatekeeper training ▪ Skills training ▪ Educating Primary Care & Other Providers
2. Screening tools for at-risk individuals	
3. Treatment of Psychiatric Disorder	<ul style="list-style-type: none"> ▪ Emergency Department Care ▪ Anti-depressants ▪ Psychosocial Interventions (CBT, IPT, DBT) ▪ Increased help-seeking
4. Treatment of SRB	<ul style="list-style-type: none"> ▪ Emergency Department Care ▪ Medication and Psychosocial Interventions ▪ Increased help-seeking
5. Restricting access to lethal means	
6. Responsible media reporting	
7. Postvention	

Recommendations

1. School-based Prevention (3 RCTs)

a) Universal prevention interventions:

- Suicide awareness curriculum plus screening (Signs of Suicide)
- Skills training (Good Behavior Game)
- Gatekeeper training including peer support (Sources of Strength)

b) Targeted prevention interventions:

- Suicide awareness curriculum
- Skills training

2. Attempt & Seek Care

- Emergency department transition programs (10 RCTs & CCT) (Brief intervention + contact)
- Training of primary care providers in the provision of evidence-based care for adolescent depression (1 RCT)
- Treatment of adolescent depression with antidepressants (5 non-RCTs)



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Recommendations

3. Attempt But Don't Seek Care (no studies yet)

- Gatekeeper training (promising)
- Postvention (promising)

4. Sex/Gender Differences

- Need to address & use results to inform prevention intervention design

5. Relevance to FN,I & M

- Invite FN,I & M colleagues to review findings, take into account their own unique cultural and contextual factors & draw conclusions re relevance to needs of youth in their communities
- Support need for community-led and community-based suicide prevention initiatives based on unique contextual/cultural needs



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Community-Wide Suicide Prevention

- **Advantages**

- Less stigmatizing as they are universal
- Target in context in which issues occur
- Increased access to services where help-seeking may be limited

- **Challenges**

- Difficult to evaluate
- Stigma at a systemic level still a barrier



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Effective Community-Based Youth Mental Health Promotion Programs

- Community capacity building and mobilization
- Strong youth stakeholder participation in the design
- Imbed suicide prevention into broader mental health promotion efforts
- Appreciation that not all youth are the same
- Ensure organizational supports are in place (leadership)
- Maintenance of program fidelity
- Rigorous process and outcome evaluation

(Armstrong, 2007)



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Armstrong & Manion 2013

- Personally meaningful youth engagement significantly moderated the relationships between depressive symptoms, risk behaviors, self-esteem, and social support in the prediction of suicidal ideation.
- The more meaning found in engagement, the less likely youth were to report suicidal thoughts in spite of risk factors.



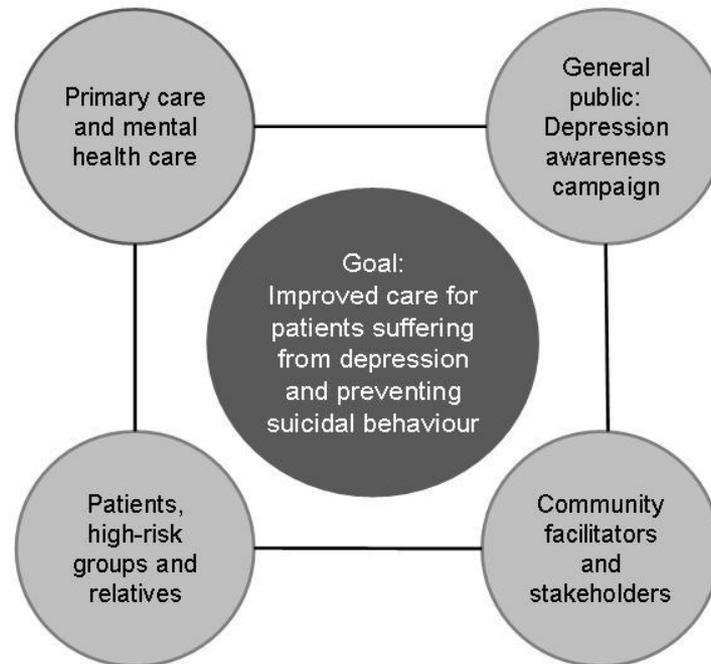
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Nuremberg Alliance Against Depression

- 2-year intervention (18 yrs +) (4-year action plan)
- 4 phases
- Comparison to baseline and control region
 - Suicidal acts ↓ 24%
 - Attempts ↓ 26.5%
 - n.s. change in death alone (power? 30% ↓ needed)
 - Effects most pronounced for 18-29 yrs
- Indications that all 4 levels interacted



Levels in Complex Multi-Level Whole Community Intervention



OSPI-Europe: adds restricting access to lethal means



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Interactions Across Levels

- Strong synergistic effects resulting from being simultaneously active across all levels
 - Public awareness resulted in more patients asking primary care about depression
 - Increased motivation of physicians for training
 - Easier for primary care to broach subject of diagnosis with patient and refer to MH care (↑ public awareness of program ↓ stigma)



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Effect of the Garrett Lee Smith Memorial Suicide Prevention Program on Suicide Attempts Among Youth (Godoy Garraza, Walrath, Goldston, Reid & McKeon)

JAMA Psychiatry. 2015;72(11):1143-1149. doi:[10.1001/jamapsychiatry.2015.1933](https://doi.org/10.1001/jamapsychiatry.2015.1933)

- Funds suicide prevention activities for youth
 - Mental health awareness
 - Screening activities
 - Gatekeeper training
 - Community partnerships
 - Linkages to service
 - Crisis hotlines
 - Survivors support programs



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Effectiveness Trial

- 466 intervention counties matched to 1161 control counties
- Implementation of intervention between 2006 and 2009
- Outcome: self-reported suicide attempts among 16- to 23-year-olds in National Survey on Drug Use and Health from 2008 to 2011
- Analysis adjusted for population size, poverty, racial/ethnic composition, unemployment, urban/rural mix, and other factors



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Results

- 57,000 youths in intervention communities
- 84,000 youths in control communities
- Intervention communities had 5 fewer suicide attempts per 1,000 youth compared to control communities
- Supporting suicide prevention programs makes a difference!



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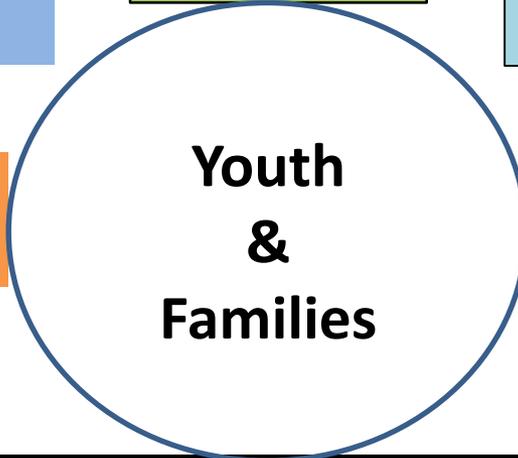
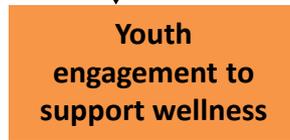
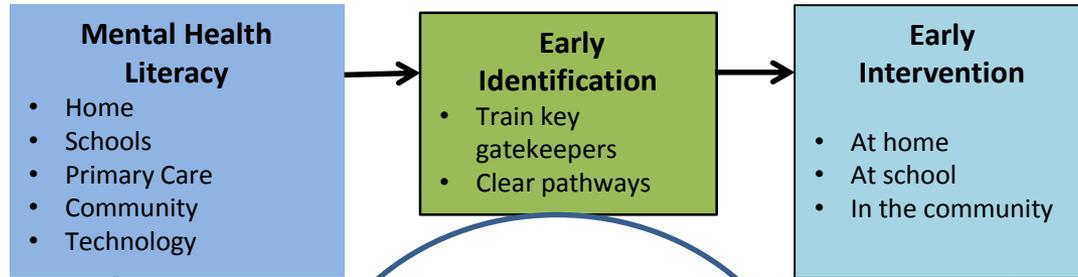
Made in Canada

- complex whole-community multilevel intervention for youth
- Universal + targeted
- Build on and mobilize existing capacity
- Important role of schools and primary care (identification and pathways to care)
- Youth and family engagement as critical additions (co-creators, peer researchers)
- Technology as a vehicle
- Linked to integrated service hubs (Headspace, Jigsaw)
- Heavy emphasis on implementation science
- Commitment to evaluation for scale-up



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Whole-Community



Wicked Questions

- What evidence do you need to change your behaviour? To invest your resources? To modify your systems?
- What is/are the right outcome(s) to track for success?
- What do you do when the evidence just isn't there?



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