Integrating Mood Management into Smoking Cessation Treatment in Primary Care Settings

camh

stop

STOP SMOKING TREATMENT for ONTARIO PATIENTS

Smoking Treatment for Ontario Patients (STOP) Program

- Province-wide initiative, delivering smoking cessation treatment and counselling support to smokers across Ontario.[1]

- **Two main goals:**[1]
  - Increase access to smoking cessation aids for people who wish to quit smoking cigarettes
  - Enhance capacity of health care settings to provide comprehensive smoking cessation treatment

- **By the numbers:**[1]

329
Health organizations and sites engaged

>1500
Practitioners offering smoking cessation services

>200,000
Individuals treated for tobacco dependence

Depressive symptoms and smoking go hand-in-hand

Individuals with depression are twice as likely to smoke cigarettes[2]

Smokers with depression experience greater addiction to nicotine and lower long-term smoking abstinence rates [3,4]

13% of STOP participants present minimal/major depressive symptoms*

18% of smokers in Canada have depression[5]

*Among participants enrolled at baseline between April 11, 2016 – February 15, 2017, depression measured using PHQ-9.

People with current or past depression are less likely to quit smoking

Literature:
Compared to smokers who are not depressed, smokers with depression who try to quit smoking are 10% less likely to succeed when given standard treatment [3,6]

In the STOP Program:
38% of smokers have current or past depression; their 6-month quit rates are significantly lower than participants without depression (33% vs. 40%, p<0.001).

What does the evidence say?

Integrating a mood management component within smoking cessation treatment in primary care can increase quit rates and abstinence among smokers with current and past depression[7,8]

Cochrane review, 24 trials
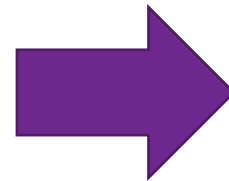
Adding mood management interventions to smoking cessation programming significantly increases likelihood of quit success by 12 to 20%. $(p<0.05)$[7]

How do we incorporate this evidence into practice?

The literature remains unclear on which knowledge translation strategy would be the *most effective* at engaging practitioners in implementing mood interventions in smoking cessation programming

It takes 17 years to transform 14% of original research into the benefit of patient care[9]

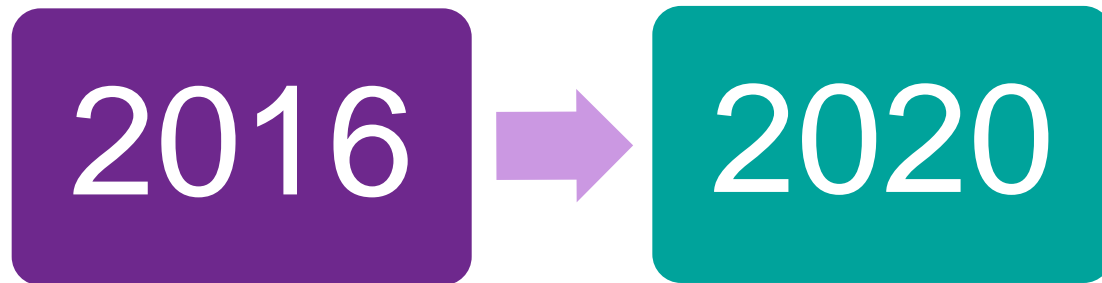Lag between high quality health care research findings and implementation in practice

~ 17 YEARS [9]

Globally we spend over **$200 billion** on healthcare research and **85%** of those research dollars **are wasted** because the research is never put into practice[10]

The Mood Management Study

Study Duration:

2016 ➡ 2020

Protocol

Tailored Versus Generic Knowledge Brokering to Integrate Mood Management Into Smoking Cessation Interventions in Primary Care Settings: Protocol for a Cluster Randomized Controlled Trial

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Abstract

Background: Both tobacco smoking and depression are major public health problems associated with high morbidity and mortality. In addition, individuals with depression are almost twice as likely to smoke and less likely to achieve smoking cessation. In the Smoking Treatment for Ontario Patients program, an established smoking cessation program in Ontario, Canada, 38% of smokers in primary care settings have current or past depression with 6-month quit rates that are significantly lower than those without depression (33% versus 40%, P<.001). Integrating self-help mood management (eg, relaxation exercises and mood monitoring) with smoking cessation treatment increases long-term quit rates by 12%-20%. However, integration in real-world settings has not been reported. It is unclear which knowledge translation strategy would be more effective for motivating clinicians to provide resources on mood management to eligible patients.

Objective: The objectives of this study are to investigate the following comparisons among depressed smokers enrolled in a smoking cessation program: 1) the effectiveness of generalized, exclusively email-based prompts versus a personalized knowledge broker in implementing mood management interventions; 2) the effectiveness of the two knowledge translation strategies on smoking quit rates; and 3) the incremental costs of the two knowledge translation strategies on the implementation of mood management interventions.

Methods: The study design is a cluster randomized controlled trial of Family Health Teams participating in the Smoking Treatment for Ontario Patients program. Family Health Teams will be randomly allocated 1:1 to receive either generalized messages (related to depression and smoking) exclusively via email (group A) or be assigned a knowledge broker who provides personalized support through phone- and email-based check-ins (group B). The primary outcome, measured at the site level, is the proportion of eligible baseline visits that result in the provision of the mood management intervention to eligible patients.

Results: Recruitment for the primary outcome of this study will be completed in 2018/2019. Results will be reported in 2019/2020.

Conclusions: This study will address the knowledge gap in the implementation strategies (ie, email-based prompts versus a knowledge broker) of mood management interventions for smokers with depression in primary care settings.

Knowledge Broker vs. Generic Email

A knowledge broker is a popular knowledge translation strategy to promote interaction between researchers and end users.
Help develop a mutual understanding of goals and cultures, collaborates with end users to identify issues and problems for which solutions are required, and facilitates the identification, access, assessment, interpretation, and translation of research evidence into local policy and practice.

Introducing the STOP Program's Mood Management Initiative

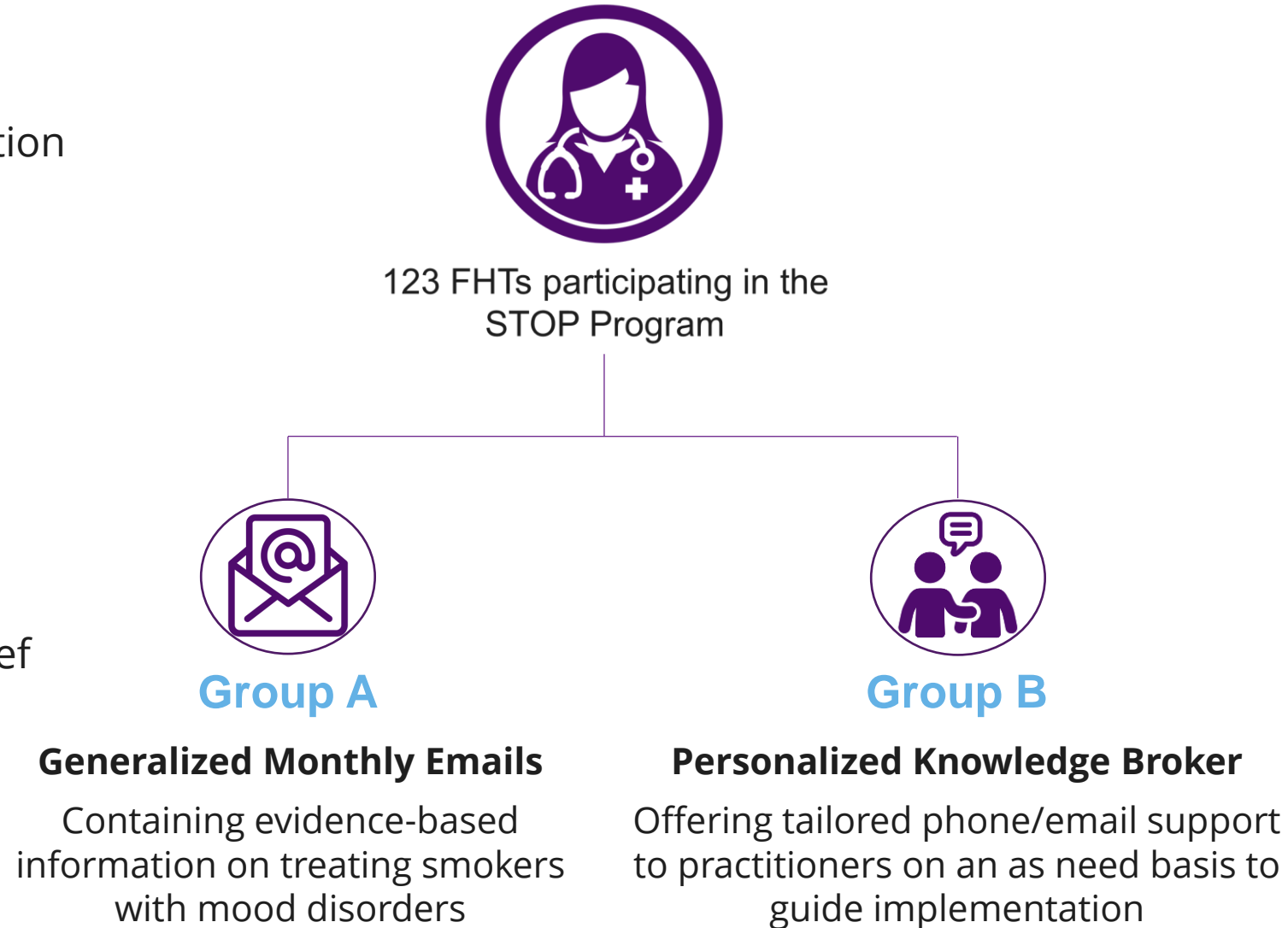- Screening tools in STOP program baseline enrollment questionnaire – PHQ-9

- Integrated Care Pathway (ICP) to facilitate delivery of mood management interventions

- Tailored brief intervention scripting and educational self-management resources available for all primary care organizations participating in the STOP Program

Pragmatic Cluster Randomized Controlled Trial

- Cluster randomized trial comparing the effectiveness of two knowledge translation strategies:[11]
  - Generalized email messages
  - Personalized knowledge broker

- 123 STOP Family Health Teams (FHTs) randomized 1:1 to either study arm[11]

- All sites had access to evidence-based screening tools and CDSS (including brief intervention scripting and educational resources)[11]

123 FHTs participating in the STOP Program

Group A

Generalized Monthly Emails

Containing evidence-based information on treating smokers with mood disorders

Group B

Personalized Knowledge Broker

Offering tailored phone/email support to practitioners on an as need basis to guide implementation

Three Outcomes of Interest

Primary: Provision of mood management intervention to patients presenting current/history of depressive symptoms during STOP program enrollment[11]

Secondary: Patient smoking abstinence at 6-month follow up[11]

Tertiary: Cost-effectiveness analysis (CEA) evaluating the implementation of each knowledge translation strategy, from the healthcare system and societal perspectives[11]

Family Health Teams (FHTs) participating in the STOP Program at the time of randomization (n=153)

FHTs excluded (n=30)
- Did not use STOP online portal during patient enrollment
- Not operational
- French speaking

FHTs Randomized: 2 stratification factors (n=123)

FHT organizational readiness:
- Unknown readiness (n=39 FHTs)
- Low readiness (n=40FHTs)
- High readiness (n=44 FHTs)

Clinic size (predicted eligible patient enrollment)
- High enrollment (n=20 FHTs)
- Low enrollment (n=103 FHTs)

Control: Monthly Email (N= 61 FHTs)

- High enrollment + high readiness (n=5)
- High enrollment + low readiness (n=3)
- High enrollment + unknown readiness (n=2)

- Low enrollment + high readiness (n=17)
- Low enrollment + low readiness (n=17)
- Low enrollment + unknown readiness (n=17)

Intervention: Knowledge Broker (N= 62 FHTs)

- High enrollment + high readiness (n=5)
- High enrollment + low readiness (n=3)
- High enrollment + unknown readiness (n=2)

- Low enrollment + high readiness (n=17)
- Low enrollment + low readiness (n=17)
- *n=1 FHT did not receive intervention*
- Low enrollment + unknown readiness (n=18)

Patients **screened** at **61** FHTs randomized to <u>control arm</u>: **(n=3,554)**

Patients **screened** at **62** FHTs randomized to <u>intervention arm</u>: **(n=3,606)**

Control FHTs that **recruited** at least 1 eligible* patient (n=53)
- **Eligible patients recruited** from <u>53 control FHTs </u>(n=1,275)

Intervention FHTs that **recruited** at least 1 eligible* patient (n=58)
- **Eligible patients recruited** from <u>58 intervention FHTs</u> (n=1,484)

Patients **offered a mood management resource** by HCP (n = 429)

Patients **offered a mood management resource** by HCP (n=554)

Primary Outcome:
- Patients accepting mood management resource (n=347)

Primary Outcome:
- Patients accepting mood management resource (n=436)

*recruitment eligibility based on patients presenting current/past depressive symptoms

Similar Baseline Characteristics between Study Arms: Patient Level

Values are numbers (percentages) unless stated otherwise.

Variables	Intervention (n=1,484)	Control (n=1,275)
Age in years (mean, sd)	51.1 (13.5)	50.4 (13.6)
Male	579 (39.0%)	476 (37.3%)
Completed some or all post-secondary	720 (48.5%)	563 (44.2%)
Household income above 40k	310 (20.9%)	276 (21.6%)
Currently employed	534 (36.0%)	481 (37.7%)
Daily smoking status	1398 (94.2%)	1189 (93.2%)
Willing to set a quit date in the next 30 days	1073 (72.3%)	853 (66.9%)
PHQ-9 (mean, sd)	4.9 (7.0)	4.3 (6.8)

Similar Baseline Characteristics between Study Arms: Cluster Level

Variables	Intervention (n=58)	Control (n=53)
Participants per cluster (mean, sd)	25.6 (36.7)	24.1 (18.0)
Year clinic enrolled first patient in the STOP program, n (%)		
2011	36 (62.1%)	29 (54.7%)
2012	11 (19.0%)	10 (18.9%)
2013	4 (6.9%)	3 (5.7%)
2014	5 (8.6%)	3 (5.7%)
2015	2 (3.4%)	5 (9.4%)
2016	0 (0%)	3 (5.7%)

Study Findings

7,174 **smokers were screened for depression**

2,757 **reported current/past depressive symptoms**

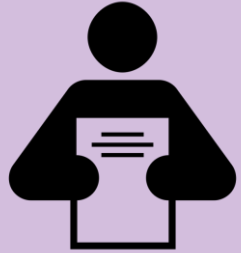**51%** **of these smokers were offered a brief intervention**

36% **were offered a self-help mood management resource**

80% **accepted the mood management resource**

Primary outcome

No significant difference between groups (email vs. knowledge broker) in the likelihood of participants accepting the mood management resource (OR=0.91, 95% CI: 0.59-1.42).

Secondary outcome

Currently in the data-collection phase for evaluating patient smoking abstinence at 6-month follow-up survey

How do we interpret these findings?

It is feasible to integrate a mood management component in primary care settings, delivered to smokers making a quit attempt

Results of this study suggest that both knowledge translation strategies are equally effective in supporting practitioners to implement a mood management component into smoking cessation programming

Future research will seek to understand which strategy is the most cost-effective, in order to inform which intervention should be implemented in primary care

Study Limitations

Potential contamination of study arms among STOP practitioners working across multiple FHTs (interaction with knowledge broker and email groups)

Outcome measure for the delivery of mood intervention (offer of mood management resource) was only measured at baseline

Aligns with Department of Psychiatry Strategic Priorities

Leverage **T**echnology
- ICP - was computerized to facilitate implementation
- Knowledge Broker – virtual

Strengthen **I**ntegration
- Collaboration between researchers, clinicians and decision makers
- Inspire for further collaborations

Improve through **M**easurement and Evidence Based Care
- Implementation Outcomes
  > Uptake
- Service Outcome
  > Effectiveness
- Health Outcomes
  > PHQ-9
  > Smoking

Lead in **E**quity and Wellness
- This study examines how we can achieve equitable access, resources, and smoking treatment for individual with depression

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Project Team and Acknowledgements

- Dr. Peter Selby – Principle Investigator
- Dr. Nadia Minian – Co-investigator and Scientist for the Mood Management Initiative
- Dr. Laurie Zawertailo – Co-investigator and STOP study Scientist
- Dr. Dolly Baliunas – Co-investigator - Epidemiologist
- Dr. Arun Ravindran - Co-investigator - internal expert on mood and anxiety disorders
- Dr. Carol Mulder - Co-investigator, Association of Family Health Teams of Ontario (AFHTO)
- Dr. Claire de Oliveira - Health economist
- Aliya Noormohamed – Project Manager
- Sheleza Ahad – Project Coordinator and Knowledge Broker
- Anna Ivanova – Research Coordinator

Thank You!
Questions?

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