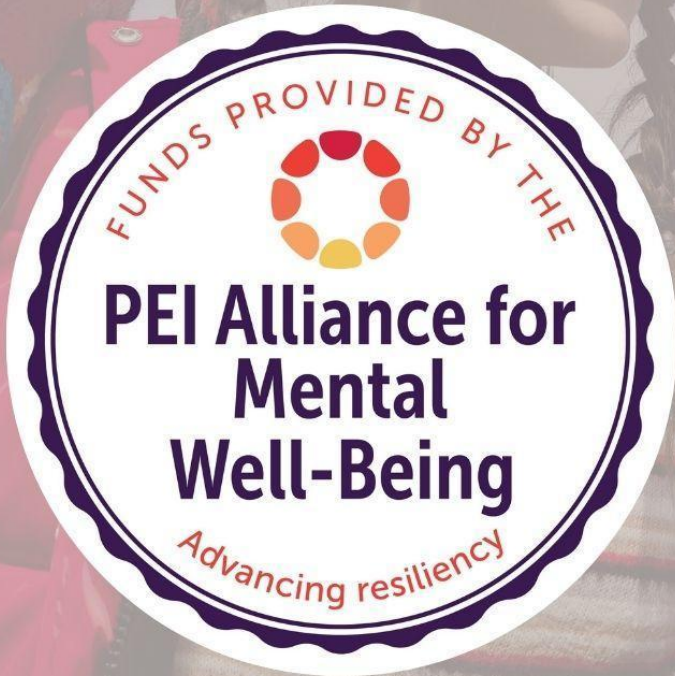


Exploring Youth Vaping/Smoking Cessation and Prevention on PEI: Project Report



LUNGNSPEI

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Exploring Youth Vaping/Smoking Cessation & Prevention on Prince Edward Island:
Project Report

BACKGROUND

Smoking remains the leading preventable cause of premature death and illness in PEI (Lim et al., 2010). Tobacco use is a significant modifiable risk factor for five of the leading causes of morbidity and mortality in PEI: heart disease, stroke, respiratory disease, diabetes, and cancer (Jha et al., 2013). E-cigarette use (“vaping”) among youth and young adults is an epidemic. Vaping has gained significant popularity among young Islanders with **39.3% of Island students (grades 7 to 12) having used these products in the last 30 days**. Smoking among Island youth is also on the rise with the rate of smoking among high school students increasing 4% over the last 2 years (from 11.8% in 2015 to 15.8% in 2017) to now double the national average of 7.9% (Health Canada, 2019).



In addition to physical health, research shows several connections between nicotine and mental health (Office of the U.S. Surgeon General, 2016). Nicotine harms developing brains, including making young people more susceptible to addiction (Taylor et al., 2014). Using e-cigarettes can worsen symptoms of depression (Obisesan, Mirbolouk, Osei, et al. 2019). With the brain still developing up until the age of 25, exposure to nicotine can impact brain development and affect a person’s ability to concentrate, learn and make decisions (Office of the U.S. Surgeon General, 2016).

The PEI 2020-21 Youth and Young Adult Vaping Project conducted by the Lung Association of Nova Scotia showed that over half (56.8%) of young Island vapers (aged 16-24) had tried to quit vaping, with the average number of serious quit attempts being 3.77. The survey also showed that 75% of Island youth and young adults (aged 16-24) were using the highest level of nicotine concentration (50-60mg/ml) (Mohammed et al., 2020). Hammond et al. (2023) showed that more than half of youth who vape are vaping within an hour of waking and 25% of youth who vape using vaping products within 5 minutes of waking.

Existing nicotine cessation programming on PEI, such as the *PEI Smoking Cessation Program* currently do not provide specific support to address youth nicotine cessation. Although smoking cessation counselling services are available through primary care, the program does not support those who are solely vaping and does not offer programming to address the unique needs of Island youth (under 19 years of age).

FUNDING

The 2022 Exploring Youth Nicotine Cessation/Prevention Project was conducted by LungNSPEI, made possible through funding by the PEI Alliance for Mental Well-Being.

PROJECT PURPOSE

The purpose of this project was to create evidence-informed recommendations for youth focused cessation opportunities (both within and outside the health system) and build support among community and government stakeholders for system level change on Prince Edward Island (PEI) for youth nicotine cessation/prevention programming.

From our research findings, our aim was to provide insights and a better understanding into the experience of PEI youth (aged 11-21) who use vaping products and their experience with trying to quit as well as opportunities to enhance local programs and services that support youth in their journey to being smoke-free.

METHODS

Interviews (Appendix A)

- Conducted and analyzed 25 interviews with Island youth (aged 17-24) who had either quit or were in the process of quitting vaping / smoking about their experience quitting, services used, products tried, barriers, etc.

Survey (Appendix B)

- Surveyed 85 Island youth, aged 16-21 who were either currently using nicotine products or who had made at least one attempt to quit vaping and/or smoking.

Community Asset Map (Appendix C)

- Conducted a **Community Asset Map using a resiliency lens** to identify gaps and opportunities in existing Island programs and services that could potentially help

youth improve their physical and mental health and reduce risk for addiction to nicotine products.

Literature review (Appendix D)

- Conducted a **literature review** to explore the current state of knowledge of youth vaping cessation interventions and highlight best or promising practices that could be implemented in PEI at the individual or school level.

RESULTS & RECOMMENDATIONS:

Our results showed that Island Youth are interested in quitting vaping/smoking with many of the survey/interview youth participants stating they were actively trying to quit. Participating youth indicated that the main challenges to quitting vaping/smoking were ‘peer/social pressure’, ‘stress and anxiety’ and ‘managing cravings’ and that they were interested in receiving both in-person and virtual counselling, text-message support as well as access to nicotine replacement therapy.

Using project evidence, the following 4 evidence-based recommendations were created to help enhance Island cessation opportunities (both within and outside the health system) and build support among community and government stakeholders for system level change on PEI for youth nicotine cessation/prevention programming.

RECOMMENDATION #1) Expansion of the PEI Smoking Cessation Program criteria to include vaping and counselling support targeted specifically for youth

<p>Asset map</p>	<ul style="list-style-type: none"> - The PEI Smoking Cessation Program provides in-person behaviour counselling with a registered nurse for smoking/dual use cessation for all ages. Nicotine Replacement Therapy is available for those aged 18 and older (with some exceptions made for those under 18). - Gaps identified were: Islanders who solely vape are not able to access services, Screening is only conducted on clients 18+ using the Ottawa Model and services are not targeted at the unique cessation needs of youth.
<p>Interview</p>	<ul style="list-style-type: none"> - 94% of participants said they were ‘not aware of any programs or services on PEI for smoking/vaping cessation’.

	<ul style="list-style-type: none"> - Participants indicated they would ‘like to see’ the following support services for youth trying to quit vaping: <ul style="list-style-type: none"> o Support Groups for youth trying to quit vaping/smoking o One-on-one support from a health professional to create a quit vaping action plan and develop coping strategies to manage cravings o Free apps that provide resources and support for youth trying to quit vaping o Further educational resources on the health risks of vaping
Survey	<ul style="list-style-type: none"> - Participants indicated they would ‘like to see’ the following support services made available for people trying to quit vaping: <ul style="list-style-type: none"> o Online counselling (35.5%) o Online support group with other youth (35.3%) o In-person counselling (41.2%) o In-person counselling with other youth (41.2%) o Text message support from quit counsellors (30.6%)
Lit Review	<ul style="list-style-type: none"> - The PEI Smoking Cessation Program Evaluation (2022) outlined the need to “expand the program to include cessation support for vaping product users” as a recommendation to increase reach in response to increasing rates of vaping use in PEI and evaluation data. - Behaviour counselling has been found to almost double the rates of long-term abstinence as opposed to usual or no treatment (Fiore et al., 2008). - Social cognitive approaches such as CBT, motivation-enhancement interventions, and social influence and support have high efficacy as tobacco use cessation tools in youth smoking (Gabble et al., 2015; Sussman et al., 1999; Sussman, 2003; Mcdonald et al., 2003) - The Ottawa Model for Smoking Cessation recommends regular follow up over a 6-month period as it helps prevent relapse, boosts motivation to quit and increases chances of a successful quit attempt (University of Ottawa Heart Institute, 2013).

RECOMMENDATION #2) Utilizing existing mental health programs and services targeted to support youth to manage stress and anxiety using healthy lifestyle behaviours

Project Evidence

<p>Asset map</p>	<ul style="list-style-type: none"> - PEI currently has a range of programs that support youth to manage their anxiety that could be utilized to support youth looking to quit vaping/smoking. - Existing mental health programs and services, such as PEI Student Well-being Teams are available in all schools across the province to provide 1-1 and group support mental health counselling and drop-in clinics at High Schools and during the summer months. - Mental Health Walk-In Clinics are available across the province and offer immediate support to help with anxiety and depression, though the majority of these services are only available to those 16 years and older and limited in rural areas.
<p>Interview</p>	<ul style="list-style-type: none"> - Stress and anxiety were identified as a major challenge to quitting vaping. Vaping/smoking were identified as a coping strategy for stress and anxiety. Improved mental health, decreased stress, anxiety and depression were identified as a main motivation for quitting vaping. - Motivations for quitting included: wanting to improve their physical health, wanting to save money, found they spent most of their time vaping or thinking about vaping, wanting to improve their mental health and be less stressed and the unknown long-term effects of vaping concerned them.
<p>Survey</p>	<ul style="list-style-type: none"> - Only 1/3 of participants indicated that their mental health was excellent/very good.
<p>Lit Review</p>	<ul style="list-style-type: none"> - Youth who smoke or use vaping products are at higher risk of developing mood disorders, and permanent lowering of impulse control (U.S Department of Health and Human Services, 2022) - Programs that support youth to manage their mental well-being could assist youth in developing healthy coping mechanisms, instead of using vaping to manage stress and anxiety.

	<ul style="list-style-type: none"> - E-cigarette use has been found to be associated with greater rates of anxiety (Grant et al. 2019). - Nicotine has been found to worsen anxiety symptoms (Kutlu & Gould, 2015)
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RECOMMENDATION #3) Screening youth for smoking/vaping starting at age 12 using evidence-based screening tools.

Project Evidence

Asset map	<ul style="list-style-type: none"> - Adults aged 18+ are screened for smoking through primary care using the Ottawa Model for Smoking Cessation. - Screening is not currently taking place for smoking and vaping use among PEI youth aged 12-17.
Interviews	<ul style="list-style-type: none"> - Participants indicated they would ‘like to see’ one-on-one support from a health professional to create a quit vaping action plan and develop coping strategies to manage cravings
Survey	<ul style="list-style-type: none"> - Of the respondent who are currently using vaping products, 50% indicated that they were currently trying to quit vaping products - Out of all participants surveyed <ul style="list-style-type: none"> o 32.9% tried smoking o 21.2% currently smoke o 17.6% used to smoke
Lit Review	<ul style="list-style-type: none"> - A brief 3–5-minute interaction with a physician is proven to have a significant impact on increasing smoking cessation rates (Cochrane Database Sys Rev, 2013). - The Canadian Paediatric Society recommends confidentially screening all youth for use of vaping products starting at the age of 12 (or earlier when appropriate), using evidence-based screening tools such as S2B1 or CRAFFT. - There is evidence that children as young as 12 are using e-cigarettes, with the average age of initiation on PEI being age 15.7 (Youth & Young Adult Vaping Survey, 2020).

	<ul style="list-style-type: none"> - Evidence of nicotine dependence is evident with 39.3% of High School students having used vaping products in the last 30 days, (CSTADS, 2018-19).
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RECOMMENDATION #4) Continue to advance nicotine reduction policy measures focused on youth protection

Project Evidence

<i>Interviews</i>	<ul style="list-style-type: none"> - Motivations for vaping initiation included: <ul style="list-style-type: none"> - Social norm among friends - Easily accessible - Easier to conceal (than cigarettes) - Being able to vape in indoor public spaces.
<i>Survey</i>	<ul style="list-style-type: none"> - In response to recent legislation/policy measures: <ul style="list-style-type: none"> o 43.5% reported that “increasing the minimum age to 21” made them vape less o 36.5% reported that “banning flavoured products” made them vape less o 25.7% reported that “restricting the sale of vaping products to vape stores only” made them vape less. - 7.9% of survey participants currently vaping indicated they use the highest level of nicotine concentration (50-60 mg/ml). These rates are down considerably from the PEI Youth & Young Adult Vaping Survey, 2020 which showed that 75% of young vapers in PEI use products with the highest available nicotine content (50 mg/ml).
<i>Lit Review</i>	<ul style="list-style-type: none"> - Evidence-based policy measures have been effectively implemented in the US and Canada to prevent and reduce tobacco use among youth and young adults. These same strategies can be applied to e-cigarettes (U.S. Department of Health and Human Services, 2016; Government of Canada, 2022). - Young people are more sensitive to price increases on tobacco products (and thus less likely to purchase these

	<p>products) than adults (Liang, Chaloupka, Nichter et al., 2003, van Hasselt, Kruger, Han, et al. 2019).</p> <ul style="list-style-type: none"> - Non-tobacco flavoured products are more appealing to youth than tobacco flavoured products
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CONCLUSION

Our project provided insights and a better understanding into the experience of PEI youth and young adults who are addicted to vaping products and their experience trying to quit. Based on this evidence, our project identified four key recommendations for policy and regulatory action to target the vaping epidemic in youth (aged 21 and under) in Prince Edward Island. In addition to interventions aimed at youth, strong tobacco/vaping youth protection legislation and policy is needed.

Our project evidence and supporting evidence from the literature also identifies the need for our province to take a comprehensive approach to address the myriad of factors that influence youth tobacco/nicotine use and cessation. and create effective programming there must be interprofessional, cross-organizational collaboration. Smoking cessation programs are successful when they involve primary health care providers, parents, teachers, and counselors and include screening, education, motivation enhancement, and social support.

This project provided an opportunity to begin to build a network of stakeholders who have a vested interest in youth mental health and addiction. Through the next step of our project we plan to continue to engage a diverse range of sectors on the topic of youth mental health and addiction and strengthen existing advocacy efforts for improved policy change that would build coordinated partnerships to mitigate sources of toxic stress caused by nicotine addiction.

By creating a better understanding of the lived experience of Island young adults who vape will help to strengthen cessation support services that are provided to PEI youth to help support their quit attempt and prevent nicotine addiction.

The next phase of this work will begin in January *‘Engaging Youth Stakeholders in Youth Vaping Harm Reduction’*. This initiative will share the research findings from this project through the creation of professional, interactive resources that will be shared at in-person, highly interactive discussions during twelve community gathering representative of a cross-section of both health and non-health youth serving organizations to help build opportunities for responsive relationships between youth who vape/smoke and adult influencers who can support them.

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Appendix A: Exploring Youth Vaping: An Interview Project

PROJECT PURPOSE

The proposed project would provide insights and a better understanding into the experience of PEI youth and young adults who are addicted to vaping products and their experience with trying to quit.

From our research findings, we hope to learn more about the experiences of young people who were successful in breaking their addiction and how we can better support positive behaviour change in our community.

RECRUITMENT

To recruit participants, social media ads were constructed and boosted on LungNSPEI's Instagram account to target social media users 16-24 living in PEI. The social media ads (Appendix A) linked to a questionnaire that was developed on Google Forms. The questionnaire contained questions about their history trying to quit vaping, age, location and availability to an interview. From these responses, participants who met our research criteria were contacted to set up interviews.

PARTICIPANTS

Interview participants were all between the ages of 18 to 24 and lived on PEI. In addition, we surveyed two 17-year-old youth, using the interview questions as we were not able to gain parental consent.

SESSION

Our organization will conduct a series of phone and virtual interviews with PEI youth and young adults (aged 16-24) who are either in the process of quitting vaping / smoking or who have completely quit in the last year. The interviews would ask participants about their experience quitting, services used, products tried, services they would like to have on PEI, barriers to quitting, etc.

QUESTION LIST

The development of the question list (see Appendix B) for our interviews was developed in partnership with the Chief Public Health Office’s Tobacco Control Coordinator. Our question list was adapted from the set of questions used in the PEI Smoking Cessation Program’s evaluation.

CONSENT

All participants provided consent to have their interview recorded when signing up for the interviews via google forum. Following the interview, participants were also asked to allow our organization to use the audio and/or video recording in publications and completed an additional consent form (see Appendix C).

THEMES

<p>Motivations for vaping initiation</p> <ul style="list-style-type: none"> • “I thought it was really cool, almost everyone at my school does it.” • “I started because it’s what everyone was doing.” 	<ul style="list-style-type: none"> - Social norm among friends - Easily accessible - Easier to conceal and able to vape in indoor public spaces. - Trying to reduce high levels of stress. - Alternative to smoking cigarettes. - Instant satisfaction, for example the feeling of a head rush or short-lived stress relief.
<p>Type of vaping product used</p>	<ul style="list-style-type: none"> - Pods
<p>How vaping products were purchased</p> <ul style="list-style-type: none"> • “I typically get them through someone who is older and can legally buy vapes.” 	<ul style="list-style-type: none"> - Tobacco/vape store (majority being underage) - Social sourcing through siblings and peers.
<p>Effect of vaping on health and day-to-day life</p>	<ul style="list-style-type: none"> - Lung health issues such as coughing, heavy breathing, and

<ul style="list-style-type: none"> ● “I live a very lazy life since I began vaping” ● “It developed to be something where I was sneaking my vape around at work because it was in my hand all day, everyday.” 	<p>low lung capacity.</p> <ul style="list-style-type: none"> - Mood changes when they can’t vape such as anxiety and irritability. - Constant low energy.
<p>Motivations for making a quit attempt</p> <ul style="list-style-type: none"> ● “Sometimes I’ll lose my vape and it just drives me crazy. I’m like ripping everything apart trying to find it” 	<ul style="list-style-type: none"> - Realizing the consequences that vaping has on their physical health. - Wanting to save money. - Felt controlled by their addiction as they were constantly stressed about when they could vape next.
<p>Motivations for quitting</p> <ul style="list-style-type: none"> ● “I’ve had really bronchitis and vaping is not helping that.” ● “I decided to quit because my health wasn’t good. Sometimes after I vaped, I would faint.” 	<ul style="list-style-type: none"> - Wanting to improve their physical health. - Wanting to save money. - Found they spent most of their time vaping or thinking about vaping. - Wanting to improve their mental health and be less stressed. - The unknown long-term effects of vaping scared them.
<p>Challenges to quit attempt</p> <ul style="list-style-type: none"> ● “The social aspect of being around other people who are vaping is a trigger that makes you want to participate.” 	<ul style="list-style-type: none"> - Constantly being surrounded by vaping as it was a social norm in their friend groups. - Mental health challenges as vaping was their main coping strategy. - Prominent nicotine cravings.

<p>Support during quit attempt</p> <ul style="list-style-type: none"> ● My sister has been great. She’s always reminding me to take care of myself.” 	<ul style="list-style-type: none"> - Social support (friends, peers, and family) - Self-motivation
<p>Effects of COVID-19</p> <ul style="list-style-type: none"> ● “I feel like it (COVID-19) definitely made it worse because whenever we went into the first lockdown, I was home all day with nothing to do but vape.” ● “More time alone is more time for me to vape” 	<ul style="list-style-type: none"> - 67% said they vaped more during the pandemic. - 33% said they vaped less during the pandemic.
<p>Number of quit attempts</p>	<ul style="list-style-type: none"> - Multiple times - Once
<p>Quit smoking products used</p>	<ul style="list-style-type: none"> - Many said they had not tried any nicotine replacement therapy. - Some used the gum or patch.
<p>Factors that helped you stay vape free</p> <ul style="list-style-type: none"> ● “I do deep breathing exercises and I find it mimics the passage of air through your mouth, so it can be satisfying.” 	<ul style="list-style-type: none"> - Limiting exposure to vaping by changing their environment, such as not going to bars or parties. - Throwing out their vape. - Physical activity such as exercise, meditation, or breathing exercises.
<p>Aware of programs and services on PEI</p>	<ul style="list-style-type: none"> - 94% of responses said they were not aware of any programs or services on PEI.

<p>Cessation programs and services you would like to see in PEI</p> <ul style="list-style-type: none"> ● “More informational resources would be good because vaping is so new.” ● “A program for people my age, like high school, would be very beneficial. I think youth would be more likely to get help or join a support group if they were around people in their age range.” 	<ul style="list-style-type: none"> - Further educational resources on the health risks associated with vaping that can help them make informed decisions. - Support groups for youth where they can come together and discuss the challenges of nicotine addiction with people their age, while also learning coping strategies. - A free app that provides resources and support for youth trying to quit vaping. Like Smoker’s Helpline but an online version catered to youth. - One-on-one support where they could create a quit vaping plan and figure out coping skills that specifically work for them with a health professional.
<p>Life changes after quitting vaping</p> <ul style="list-style-type: none"> ● “In the periods of my life where I haven’t been vaping, I’ve felt better physically, mentally, and had a lot more money.” 	<ul style="list-style-type: none"> - Improved physical health such as having more energy during the day. - Less financial strain. Youth were able to save money and put it towards things like school, gas, and groceries. - Decreased levels of stress, anxiety, and depression.

Appendix A



BREATHE
the lung association

**THE PEI LUNG ASSOCIATION
IS LOOKING FOR YOUTH PARTICIPANTS!**

**Giving Up Vaping
Interviews**
Tell us about your experience trying
to quit vaping, and we'll give you a
\$25 gift card!

LINK IN BIO

Appendix B

Exploring Youth Vaping: Interview Project - Questions List

Good morning/Afternoon _____, My name is _____ and I am a UPEI Nursing student working with the PEI Lung Association on a project about vaping awareness. The PEI Lung Association is a leading organization in Canada that works to promote lung health by funding vital research, pushing to improve treatments, smarter policies, and supporting patients.

The aim of this project is to learn more about vaping on Prince Edward Island to develop programs and services in the future to help individuals quit vaping. The answers that you provide will be used to platform research and to create ideas for programs and services that may help other people your age on Prince Edward Island in the future who may be struggling to quit.

1. Tell me about your vape use
 - a. What age were you when you started vaping?
 - b. Why did you start vaping?
 - c. When you started vaping were you aware of what was in it?
 - d. How long did you vape? or How long have been vaping?
 - e. Did advertising/social media have any persuasion with you starting vaping?
 - i. Yes / No
 - f. What type of vaping product did you use?
 - i. Pod systems
 - ii. Tank systems
 - iii. Vape pens
 - g. How many times per day or week do you vape?
 - h. (If they are using pods) How many pods do you go through a week?

2.
 - a. On average, how much did/do you spend on vaping?
 - b. Where did you purchase your vaping products?
 - c. Where did you most commonly vape at? (School/home/in car etc.)
3. How did/does vaping affect your health and your day-to-day life?
4. Were others aware of you vape/have vaped?
 - a. Yes / No
5. Do you feel many of your friends/classmates vape?
 - a. Yes / No

Quitting

6. What made you decide to make a quit attempt?
7. How many times have you tried to quit before?
8. What were the challenges you faced while trying to quit?
9. Who or what was helpful in supporting you to quit vaping?

Note: Please note we are referring to support strategies such as: someone talking to you about the triggers and how you deal with them or recommend a nicotine patch.
10. Who or what was not helpful in supporting you to quit vaping?
11. How did the COVID-19 pandemic affect your vaping behavior?
12. Have you used any of the following quit smoking products:
 - a. The gum
 - b. The patch
 - c. The Inhaler
 - d. Lozenges
 - e. Pharmaceutical cessation aids (Zyban, Champix)
 - f. Other

13. What was the most important factor that helped you quit successfully?
14. How did you manage to stay vape-free after quitting?
15. What do you do to stop yourself from vaping if you are tempted to do so?
16. Are you aware of available programs and services on PEI?

Conclusion - Future

17. What types of programs and services would you like to see in PEI to help youth and young adults quit vaping and/or smoking ?
18. How has quitting vaping changed your life? Or how do you think successfully quitting would change your life?
19. What advice would you give someone who is thinking about quitting vaping?
(Probing: advice for tips and strategies to stay smoke free/supports provided)

Appendix C

Vaping Interview Consent

Consent/Release form for the use of audio/video footage from your interview

*Required

I hereby authorize The Lung Association of Prince Edward Island to use the agreed upon audio and/or video that is recorded during my interview. I understand this information may be used in publications, including electronic publications, audiovisual presentations, promotional literature, advertising, community presentations, letters to area legislators and media and/or other similar ways. My consent is freely given as a public service to the Lung Association of Prince Edward Island, in return for a one time payment of a \$25 gift card. I release the Lung Association of Prince Edward Island and their respective employees, board members, officers and agents from any and all liability which may arise from the use of such news media stories, promotional materials, written articles, videotape and/or photographs. I understand that I can revoke this release any time in writing and that the use of any of my photos or other information authorized by this release will immediately cease.

1. Full Name *

2. Initial *

Please enter your Initials in the space below to indicate that you have read, understood and agree to the above terms.

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Appendix B: Surveys Findings

Aim & Objectives

The 2022 Exploring Youth Nicotine Cessation/Prevention Project was conducted by the Lung Association of Nova Scotia and Prince Edward Island, made possible through funding by the PEI Alliance for Mental Well-Being to create a better understanding of the challenges and barriers that youth and young adults encounter when trying to make a quit attempt and to learn more about the experience of young people who were successful in breaking their addiction to vaping products.

Methods

In PEI, a single, cross-sectional survey, offered in English, was advertised online using paid Facebook and Instagram ads and promotion through local youth community organizations and health fairs. To participate, participants had to be between the ages of 16 and 21, to have vaped at least once a week over the past three months, and to have resided in PEI at the time of the survey.

The entire data for PEI was collected between August and October 2022 and consisted of a sample of 85 participants between the ages of 16-21.

The survey included demographic questions, questions about the participants' vaping behaviour, product preferences, mental health and experience related to trying to quit vaping products.

On average, the survey took approximately 20 minutes to complete. Participants who completed the survey in its entirety were offered a \$10 electronic gift card as remuneration.

Section 1 – Demographics

Summary of demographics and vaping characteristics

- 40% of the sample identified as male and 57.6% identified as female. 2.4% of participants identified as another gender.

- 69.4% of participants were youth (16-18 years old) and 30.6% were young adults (19-21 years old).
- 34.1% of participants reported living in urban regions and 65.9% reported living in rural regions

Section 2 – Vaping & Smoking Behaviour

Participant Vaping Behaviour – Overall

- 48.2% of participants reported that they ‘currently use an e-cigarette/vape regularly (at least once a week over a 3-month period)’
- 18.8% of participants reported that they ‘used to use an e-cigarette/vape regularly (at least once a week over a 3-month period), but do not anymore
- 32.9% of participants reported that they ‘have tried an e-cigarette/vaping a few times before

Participant Smoking Behaviour – Overall

- 21.2% of participants reported that they ‘currently smoke regularly (at least once a week over a 3-month period)’
- 17.6% of participants reported that they ‘used to smoke regularly (at least once a week over a 3-month period), but do not anymore
- 32.9% of participants reported that they ‘have tried cigarettes a few times before’
- 28.3% of participants reported that they ‘have never smoked before’

Participants Currently Using Vaping Products

Of the respondents who were currently using vaping products, the following characteristics were found:

- Of the 38 people who responded 50% indicated that they were currently trying to quit vaping products.
- Concentration of nicotine among participants currently vaping
 - o 3% used 0-9 mg/ml
 - o 20% used 10-20 mg/ml
 - o 8% used 35 mg/ml
 - o 4% used 50-60 mg/ml

- 32% preferred using flavoured vape juice if currently vaping

Response to recent legislation / policy measures

- **Increasing the minimum age to 21**
 - o 43.2% reported that 'increasing the minimum age to 21' made them vape less
 - o 29.7% reported that 'increasing the minimum age to 21' had not affected their vaping
 - o 9.5% reported that 'increasing the minimum age to 21' made them vape more
 - o 17.6% answered 'I don't know/unsure'

- **Banning Flavoured products**
 - o 36.5% reported that 'banning flavoured products' made them vape less
 - o 43.2% reported that 'banning flavoured products' had not affected their vaping
 - o 5.4% reported that 'banning flavoured products' made them vape more
 - o 14.9% answered 'I don't know/unsure'

- **Restricting sale of vaping products to vape stores only**
 - o 25.7% reported that 'restricting sale of vaping products to vape stores only' made them vape less
 - o 44.6% reported that 'restricting sale of vaping products to vape stores only' had not affected their vaping
 - o 9.5% reported that 'restricting sale of vaping products to vape stores only' made them vape more
 - o 17.6% answered 'I don't know/unsure'

- **Reducing amount of nicotine permitted**
 - o 20.3% reported that 'reducing amount of nicotine permitted' made them vape less
 - o 37.8% reported that 'reducing amount of nicotine permitted' had not affected their vaping
 - o 27% reported that 'reducing amount of nicotine permitted' made them vape more
 - o 14.9% answered 'I don't know/unsure'

- **Rules and punishment at school**
 - o 36.5% reported that 'rules and punishment at school' made them vape less
 - o 37.8% reported that 'rules and punishment at school' had not affected their vaping
 - o 8.1% reported that 'rules and punishment at school' made them vape more
 - o 17.6% answered 'I don't know/unsure'

What support services would you like to see made available for people trying to quit vaping?

- 35.3% Online counselling
- 35.3% Online support group with other youth
- 41.2% In-person counseling
- 41.2% In-person counseling with other youth
- 30.6% Text-message support from quit counsellors
- 3% Other: comments – Being able to access support anonymously; youth-led talk about nicotine and drug use.

Appendix C: Asset Map

BACKGROUND

Currently, PEI does not have a tobacco reduction strategy to address youth prevention and cessation that outlines the unique needs of youth (under 18 years of age). While PEI has created the PEI Smoking Cessation Program to help PEI residents interested in quitting smoking access free nicotine replacement therapy, this program does not provide support to those who solely use vaping products.

Given that PEI does not have cessation programming specific to youth vaping/smoking cessation, our asset map used a resiliency lens to identify programs and services that could potentially help youth improve their physical and mental health and reduce risk for addiction to nicotine products.



PURPOSE

The aim of this asset map was to identify gaps and opportunities in programs and services that support youth in gaining skills and knowledge to either stay nicotine-free or to break their addiction to nicotine across PEI. The information and insight gained through this project will help us develop a better understanding of the methods that youth and young adults use when either attempting to quit vaping/smoking or how to quit vaping/smoking.

METHODS

Both surveys and interviews were conducted with providers from both the health sector and community sector to capture all programs and services on PEI that could potentially help youth to quit vaping/smoking as well as manage stress and anxiety.

PARTICIPATING ORGANIZATIONS

Health Organizations	Community/Non-Health Organizations
Canadian Mental Health Association	Big Brothers, Big Sisters
Drug Free Kids Canada	BGC Charlottetown
Health PEI	PEERS Alliance
Heart & Stroke	PEI Alliance for Mental Well-Being
Mental health Walk In Clinics	PEI Wild Child
PEI Smoking Cessation Program	Public Schools Branch
Smokers Help Line (SHL) - Canadian Cancer Society	Recreation PEI
Student Well-Being Teams	Sports PEI
Quit Your Way - Chief Public Health Office PEI	STOMP Program
Vaping Awareness Days - LungNSPEI	Young Millionaires Program
	211 United Way

RESULTS

Cessation Services	
Drug Free Kids Canada	
Services offered	<ul style="list-style-type: none"> o Provides parents with education on substance use by youth using evidence based information to engage with the youth early to prevent future use.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Parents or Guardians are empowered with information, tools, and resources they need to understand mental health and substance use risk factors. o Non-judgmental dialogue about drugs is used to help build resilience with children.
Location	<ul style="list-style-type: none"> o Via virtual 24/7
Website	<ul style="list-style-type: none"> o https://www.drugfreekidscanada.org/
Health PEI	
Services offered	<ul style="list-style-type: none"> o Primary care offered to everyone. o Aids with cessation by using aid organizations.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Brief interventions and navigating long term follow-up. o NRT through pharmacare.
Location	<ul style="list-style-type: none"> o In person and virtual services: <ul style="list-style-type: none"> o Monday-Friday 9am-4pm
Website	<ul style="list-style-type: none"> o https://www.princeedwardisland.ca/en/topic/health-pei o Office Phone: 902-368-6130
PEI Smoking Cessation Program	

<p>Services offered</p>	<ul style="list-style-type: none"> o Intake appointment with an RN to assess the patient’s smoking history and readiness to quit and development of plan for quitting (eg. Setting the quit date, choosing a quit smoking medication, choosing a method of follow-up support, preparing a quit date, addressing cravings and withdrawal) and follow-up appointment. o Nicotine Replacement Therapy available for minimum of 6 to maximum of 18 weeks at no charge. Choice of 1 form (patch, gum, lozenge, inhaler). o Cessation medication (bupropion & varenicline). o Enrollment: Island residents can enroll as many times as they would like but only once per year from the date of first enrollment. o Age: there is no predetermined age to receive services, Island residents, of any age, can book an appointment with a Primary Care RN to discuss available treatment options best suited for the individual. <ul style="list-style-type: none"> o Behavioural counselling is strongly encouraged for ages 18 and under (NRT option if necessary). o Individual counselling services available in-person and via phone to develop individual ‘cessation action plans.’
<p>Enhancing Resiliency Skills</p>	<ul style="list-style-type: none"> o Behaviour counselling.
<p>Location</p>	<ul style="list-style-type: none"> o Island-wide via 5 Primary Care Networks and Cancer Treatment Centre. o Intake available via phone. o Sample of intake form: https://src.healthpei.ca/sites/src.healthpei.ca/files/Smoking%20Cessation/Smoking_Cessation_Consult_Form_Primary_Care.pdf
<p>Website</p>	<ul style="list-style-type: none"> o https://www.princeedwardisland.ca/en/information/health-and-wellness/quit-smoking
<p>Quit Your Way (Department of Health and Wellness)</p>	

Services offered	<ul style="list-style-type: none"> o 8 week booklet designed to support youth and young adults (15-24 years old) who use tobacco or vaping products and have a desire to learn about quitting. o School-based cessation initiatives presented by school staff (Developed in 2022).
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o This program helps youth examine why they smoke or vape, learn more about nicotine addiction, preparing for and knowing what to expect when quitting and creating an action plan to quit successfully. <ul style="list-style-type: none"> o Weekly topic introductions, individual self-reflection activity, and a series of questions to prompt discussions.
Location	<ul style="list-style-type: none"> o Resources available online.
Website	<ul style="list-style-type: none"> o Coming in 2023.
Smokers' Helpline - SHL (Canadian Cancer Society)	
Services offered	<ul style="list-style-type: none"> o Information and resources about quitting smoking and/or using other tobacco products by connecting with a quit coach. o Text support with a free service that sends up to 13 weeks of evidenced-based text messages to provide support and motivation when preparing or beginning to quit.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Step by step quit plan. o Online support forum and Quit Coaches. <ul style="list-style-type: none"> o Forums can be anonymous and accessed with phone and text support. o Personalized quit calculator. <ul style="list-style-type: none"> o Shows benefits of quitting.
Location	<ul style="list-style-type: none"> o Virtual / via phone. <ul style="list-style-type: none"> o Phone during business hours: <ul style="list-style-type: none"> ▪ Monday-Thursday 9am-10pm ▪ Friday 9am-7pm

	<ul style="list-style-type: none"> ▪ Saturday-Sunday 10am-6pm o Text available 24/7
Website	<ul style="list-style-type: none"> o https://www.smokershelpline.ca/ o Organization Phone: 1-877-513-5333
STOMP Program	
Services Offered	<ul style="list-style-type: none"> o STOMP: Students Together Moving to Prevent Tobacco Use o Health intervention and prevention program that encourages students to co-design an approach that fosters awareness, prevention, and/or reduction in tobacco use and vaping. o Students in grades 7-12.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Encourages youth-led programming. o Building skills in youth including: <ul style="list-style-type: none"> o Knowledge and critical thinking skills for informed decision making. o Empowering protective behaviours. o Effectively implement decisions to manage high-risk situations. o Providing an understanding of interrelated factors for tobacco use and vaping.
Location	<ul style="list-style-type: none"> o In-person pilots at Queen Charlotte Intermediate School (Charlottetown) and Westisle High School (West Prince) o Virtual resources available.
Website	<ul style="list-style-type: none"> o https://phecanada.ca/programs/stomp
Quit 4 Life	
Services offered	<ul style="list-style-type: none"> o Quit 4 Life/Vie 100 Fumer (Q4L) has demonstrated promising results in promoting smoking cessation among youth. o Q4L was developed by Health Canada, in association with the Canadian Lung Association and Ciba-Geigy Ltd. in 1993

	<ul style="list-style-type: none"> o As a minimal contact, self-help program, it is directed at teenagers aged 13-18 years old who smoke cigarettes on a daily basis. o Quit 4 Life is based on behavioural principles, helping to build self-efficacy and motivation; and consists of an interactive web site, a handbook and facilitators' guide for nurses, teachers and professionals who work with youth.⁵¹ The program content focuses on four youth's stories and their experiences quitting smoking; and is organized around 4 central steps: Get Psyched, Get Smart, Get Support, Get On With It.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Quit 4 Life helped youth smokers learn about why they smoke, how to quit and how to maintain cessation once one gets there.
Location	<ul style="list-style-type: none"> o Pilots proposed for September 2023 in PEI
Website	<ul style="list-style-type: none"> o NA

Mental Health Services	
CMHA - PEI Division	
Services offered	<ul style="list-style-type: none"> o Co-facilitated in school programming offered to students currently in Grades 3 and 9 with supportive staff and volunteers in a team environment to foster supportive relationships.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Educating youth on skills and knowledge towards mental health, resiliency, coping, specific skill sets, and being themselves.
Location	<ul style="list-style-type: none"> o Available at all PEI schools during the school year.

	<ul style="list-style-type: none"> o Staff and volunteers attend classrooms to provide programming.
Website	<ul style="list-style-type: none"> o https://pei.cmha.ca/
Mental Health Walk-in Clinics	
Services Offered	<ul style="list-style-type: none"> o Mental health walk-in clinics. o Consultation with a registered mental health therapist for 45-60 minutes. o No appointment or referral required.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Immediate mental health support for: o Mental health therapists may provide referrals for community mental health, or mental health programs. <ul style="list-style-type: none"> o Anxiety, stress, & significant life events. o Other mental health issues.
Location	<ul style="list-style-type: none"> o Montague <ul style="list-style-type: none"> o Community Mental Health Services: Thursday 4 - 8 pm (Individuals 16+). o Charlottetown <ul style="list-style-type: none"> o Richmond Centre: Tuesday 10 am - 6 pm. Thursday 10 am - 6pm (Individuals 16+). Friday 12 - 4 pm (Individuals 16+). o McGill Centre: Saturday & Sunday 10 am - 5 pm (individuals 16+). o Summerside <ul style="list-style-type: none"> o Prince County Hospital: Monday & Wednesday 9am - 5pm. o O'Leary <ul style="list-style-type: none"> o O'Leary Health Centre: Wednesday 9 am - 3 pm. o Elmsdale <ul style="list-style-type: none"> o Westisle High School: Thursday 9 am - 3 pm (For students age 16+ at this school only).

Website	<ul style="list-style-type: none"> o https://www.princeedwardisland.ca/en/information/health-pe/mental-health-walk-in-clinics
PEERS Alliance	
Services offered	<ul style="list-style-type: none"> o Queer youth collective and writing club. o Harm-reduction services. o Sexual health education. o Educational programming in schools and administration. o Camp, Roots and Shoots and Saplings. <ul style="list-style-type: none"> o Support group for trans/gender diverse youth. o Services vary by age category: <ul style="list-style-type: none"> o Ages include 5-7,8-12,12-18, and 18+
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Facilitators and volunteers build resiliency with the youth by providing encouraging and hopeful respect and dignity towards the youth. An encouraging environment and reminders for the youth to be true to themselves and keep remaining resilient.
Location	<ul style="list-style-type: none"> o Charlottetown and Summerside: <ul style="list-style-type: none"> o In-school presentations can be paid for. o Certain programs run throughout the year and others are available only during the school year.
Website	<ul style="list-style-type: none"> o https://www.peersalliance.ca/
PEI Alliance for Mental Well-Being	
Services offered	<ul style="list-style-type: none"> o Supports the capacity of organizations who provide direct services to youth all over PEI.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Evidence-based research is used to create connections and facilitate conversations leading to sharing of best practices and successful programming and initiatives.
Location	<ul style="list-style-type: none"> o In Charlottetown: <ul style="list-style-type: none"> o Monday-Friday 8am-4pm
Website	<ul style="list-style-type: none"> o https://allianceformentalwellbeing.com/

Student Well-Being Teams	
Services Offered	<ul style="list-style-type: none"> o Mental health and well-being support for all Island students. o Drop-in clinic services (over aged 12). o Individual support (up to 3 visits) to discuss challenges such as anxiety, depression, and stress. o Support groups. o Team includes a social worker, outreach worker and registered nurse. o Well-being/health promotion focused presentations. o Act as a point of contact between home, school, and other health providers.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Building skills in youth including: <ul style="list-style-type: none"> o Strategies to manage stress and anxiety. o Positive decision making. o Positive relationships. o Education re: addiction prevention. o Collaboration with family to build skills and tools with the family unit.
Location	<ul style="list-style-type: none"> o Teams located in each Family of School across PEI. o Provincial team located in Charlottetown. o In-person and virtual.
Website	<ul style="list-style-type: none"> o https://www.princeedwardisland.ca/en/information/education-and-lifelong-learning/student-well-being-teams

Promoting Health & Well-Being Services	
BGC Charlottetown & Montague	
Services Offered	<ul style="list-style-type: none"> o Drop-in evening programming. o Afterschool programming for youth 12 & under (fee). o Free teen drop-in programming when available.

Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Positive role modeling.
Location	<ul style="list-style-type: none"> o In person services located in: <ul style="list-style-type: none"> o Charlottetown. o Montague.
Website	<ul style="list-style-type: none"> o http://charlottetownchamber.chambermaster.com/list/member/bgc-charlottetown-montague-19933
Big Brothers, Big Sisters of Prince Edward Island	
Services Offered	<ul style="list-style-type: none"> o Individual & group mentoring relationships amongst adults and youth.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Experience of healthy relationships and interactions. o Guidance and support from a mentor to build confidence and hope in youth. o Learning and development partnerships with youth needs at the center of care. o Mentors help reduce toxic stress that could be negatively impacting development
Location	<ul style="list-style-type: none"> o Charlottetown and Summerside.
Website	<ul style="list-style-type: none"> o https://pei.bigbrothersbigsisters.ca/ o Charlottetown Office Phone: 902-569-5437 o Summerside Office Phone: 902-436-8122
Heart & Stroke	
Services offered	<ul style="list-style-type: none"> o Help support children, youth and their families to build the best start for a healthier life. o Services are accessible to everyone all year long: <ul style="list-style-type: none"> o HeartSmart Kids™ o HeartSmart™ SOLVE

Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Support educators in teaching children and their families what they can do to practice brain and heart healthy habits by providing free print and digital resources. <ul style="list-style-type: none"> o Resources online or can be obtained in hardcover.
Location	<ul style="list-style-type: none"> o Based in Charlottetown but available throughout PEI. o Services accessible all year long.
Website	<ul style="list-style-type: none"> o https://www.heartandstroke.ca/ o Organization Phone: 1-888-473-4636
Public Schools Branch	
Services Offered	<ul style="list-style-type: none"> o Education. o Student support services. o Accessible to students eligible under the Education Act through the public education system. o Available during the school year.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Students obtain skills through the teaching and learning of the curriculum.
Location	<ul style="list-style-type: none"> o In-person services for all of PEI. o Organization located in Stratford PEI.
Website	<ul style="list-style-type: none"> o https://psb.edu.pe.ca/schools/our-schools
Recreation PEI	
Services Offered	<ul style="list-style-type: none"> o go!PEI <ul style="list-style-type: none"> o Delivers physical activity to all islanders (not youth specific). o Available to all islanders. o Youth can access the program through community delivery partners.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Goal of encouraging Islanders to be more active. o Improving health outcomes, confidence and mental health through physical activity.

Location	<ul style="list-style-type: none"> o Services all of PEI. o In person/virtual services.
Website	<ul style="list-style-type: none"> o https://gopei.ca/
Sport PEI	
Services Offered	<ul style="list-style-type: none"> o Services include: <ul style="list-style-type: none"> o Future Elites (ages 13-17). o She's Good (ages 10-16). o KidSport. o Accessible to youth members of Sport PEI.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Enhances resiliency skills for girls through the She's Good program. o Coaching and athlete burnout programs.
Location	<ul style="list-style-type: none"> o In person & virtual services for all of PEI.
Website	<ul style="list-style-type: none"> o https://sportpei.pe.ca/
Wild Child PEI	
Services Offered	<ul style="list-style-type: none"> o Outdoor leadership and queer youth programming. o Low staff to participant ratios which allows one on one support. o Services available to all, with priority given to marginalized communities: <ul style="list-style-type: none"> o Low income families. o Visible minorities. o LGBTQ+ families & youth. o Persons with disabilities. o Services available during: <ul style="list-style-type: none"> o March Break. o Once per week Summer programs. o Occasional sessions during the school year. o Youth can be registered by a parent or caregiver.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Building skills in youth including: <ul style="list-style-type: none"> o Team building exercises.

	<ul style="list-style-type: none"> o Confidence. o Self-esteem. o Mindfulness. o Hard skills: <ul style="list-style-type: none"> ▪ Bushcraft, cooking, naturalist skills, etc. o Reducing stress through engaging in nature. o Providing a safe environment to process emotions, current issues and for navigating one’s identity.
Location	<ul style="list-style-type: none"> o In-person services located in: <ul style="list-style-type: none"> o Cornwall. o Charlottetown. o Stratford. o Summerside.
Website	<ul style="list-style-type: none"> o https://peiwildchild.wordpress.com/
Young Millionaires Program	
Services Offered	<ul style="list-style-type: none"> o Entrepreneurship exploration & skill development. o All youth ages 9-16 & families. o Registration via website. o Services offered year round with a focus in June-September.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Supportive & safe environments for learning. o Opportunities for skill development.
Location	<ul style="list-style-type: none"> o In-person & virtual services for all of PEI.
Website	<ul style="list-style-type: none"> o https://youngmillionairesprogram.ca/
Youth Vaping Awareness Days (LungNSPEI)	
Services Offered	<ul style="list-style-type: none"> o ‘Youth Vaping Awareness Days’ video presentation o In-class sessions with UPEI nursing students. o Information shared via email/social media/newsletter with the school community to encourage conversation continuation at home.

	<ul style="list-style-type: none"> o 'Vaping 101 for Educators' factsheet distributed to teachers. o Vaping prevention bingo and trivia games hosted during breaks and lunch hour.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Increase knowledge of evidenced-informed health and social harms associated with vaping among Island youth (aged 11-15) and educators. o Increase youths' abilities in making informed decisions regarding vape products.
Location	<ul style="list-style-type: none"> o Available to all interested intermediate schools across PEI.
Website	<ul style="list-style-type: none"> o https://www.lungnspei.ca/youth-vaping-awareness-days o PEI Office Phone: 902-892-5957
211 United Way	
Services Offered	<ul style="list-style-type: none"> o Provides navigation services to a network of community, social, non-clinical health and government services across the island.
Enhancing Resiliency Skills	<ul style="list-style-type: none"> o Providing navigation and referral services needed per individual.
Location	<ul style="list-style-type: none"> o Services all of PEI virtually via website, call, text or email 24/7.
Website	<ul style="list-style-type: none"> o https://peiunitedway.com/211pei

PROGRAM & SERVICE - GAPS & OPPORTUNITIES

Program & Service Gaps	<ul style="list-style-type: none"> o PEI Smoking Cessation Program not available vaping cessation (only available for dual users and tobacco users). o Screening for PEI Smoking Cessation Program is targeted at adults 18 and older looking to quit tobacco products o Cessation services are not specifically targeted at youth.
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	<ul style="list-style-type: none"> o School-based cessation programming STOMP only available as a pilot in 2 PEI schools. o Evidence based programming such as: text-support, online counselling and group support not available for youth. o The majority of mental health services (such as Walk-In Clinics) are only available for aged 16 and older. o Limited in-person programs and services in rural areas outside of Charlottetown. o Virtual information and services may not be accessible for all Islanders such as those without internet access.
<p>Program and Service Opportunities</p>	<ul style="list-style-type: none"> o Expand PEI Smoking Cessation Program to: <ul style="list-style-type: none"> o Target the unique needs of Island youth. o Include cessation support for vaping product users. o Offer school-based programming. o Screen youth for smoking/vaping prior to age 18. o Include evidence based programming such as text-support, online counselling and group support not available for youth. o Create community programming targeted at behavioural counselling. o Target the unique needs of Island youth. o Train community facilitators in youth vaping cessation. o Provide school based programming to all Island schools. o Increased access to programs and services regardless of location/school/age/etc.

Appendix A

Hello,

I'm reaching out to you today on behalf of the Lung Association of Nova Scotia and Prince Edward Island. We are currently working on our *Exploring Youth Vaping/Smoking Cessation and Prevention on PEI* project and are looking to collect information **via survey** from various youth organizations on PEI. The information provided would be used in our Community Asset Map to identify both opportunities and gaps that currently exist in PEI programs and services to support youth (aged 11-18) to either stay nicotine free or to quit their addiction to nicotine.

Through our project, we aim to better understand the factors that contributed to the success of Island youth both quitting vaping/smoking and staying vape/smoke free. Our end goal of this project is to recommend evidence-based programs and services that can help reduce the buildup of stress among youth caused by nicotine and lead to reductions in youth smoking and vaping rates on PEI.

We would greatly appreciate if your organization could fill out this survey for us.

You can fill this survey out:

- Online through Google Forms. Link: <https://forms.gle/zPqQCYQ1SJc5jDFr6>
- With us over the phone.
- With us via Zoom.

If you'd like to fill out the survey with us over the phone or Zoom, please email us back and we will set up a time that works for you. If you have any questions, please don't hesitate to reach out to us!

Thank you!

Appendix B

Exploring Youth Vaping/Smoking Cessation and Prevention on PEI

We are currently working on our Exploring Youth Vaping/Smoking Cessation and Prevention on PEI project and are looking to collect information from various youth organizations on PEI that would be used in our Community Asset Map. By filling out the survey, we'll be able to identify both opportunities and gaps that currently exist in PEI programs and services to support youth (aged 11-18) to either stay nicotine free or to quit their addiction to nicotine.

This project aims to better understand the factors that contributed to the success of Island youth both quitting vaping/smoking and staying vape/smoke free. Our end goal is to recommend evidence-based programs and services that can help reduce the build up of stress among youth caused by nicotine and lead to reductions in youth smoking and vaping rates on PEI.

What is the name of your organization?

What is your name and your role within the organization?

Where is your organization located?

What services does your organization provide to youth?

What communities do you serve?

- Charlottetown
- Summerside
- Alberton
- Cornwall
- Kensington
- North Rustico
- O'Leary
- Souris
- Stratford
- Three Rivers
- Tignish
- All of PEI
- Other:

Who can access your services? (What eligibility is required?)

Is there a fee for the services you provide?

When are your services available?

How does your organization enhance resiliency skills in youth?

How does your organization build supportive and responsive relationships among youth?

Do you host in person or virtual services?

- In person
- Virtual
- Other:

Appendix D: Literature Review

Evidence-informed youth vaping cessation Interventions

Executive Summary

Background

The physical risks of tobacco use are well known and severe, it is a risk factor for 5 of the leading causes of morbidity and mortality in PEI and is the leading preventable cause of premature death and illness. Smoking is also one of the most common predictors of mental health problems. Nicotine use is of particular concern on the developing teenage brain and unfortunately the use of e-cigarettes among youth is increasing in PEI. Due to the increase in youth vaping and the positive effects of quitting, investigation into the most effective cessation programming is warranted.

Rationale and Purpose

The purpose of this review is to explore the current state of knowledge of youth vaping cessation interventions and highlight best or promising practices that could be implemented in PEI.

Methods

The literature search was conducted using the google scholar for relevant peer-reviewed manuscripts published in English between 2016 and 2022. Google search results of relevant grey literature such as reports from both governmental and non-governmental organisations was also included.

Limitations

Due to the recentness of vaping popularity limited research exists on its effects, promising interventions, and youth-specific cessation programs. Current vaping programs and studies are often founded on tobacco cessation and adult-specific interventions.

Summary of the Literature

The findings of the literature indicate:

- Social-Cognitive approaches like CBT, motivation-enhancement interventions, and social influence and support have high efficacy as tobacco use cessation tools in youth smoking.
- The use of pharmacological interventions for youth smoking/vaping cessation is understudied and should be used only under the advice of a medical addictions specialist.

- Web-based and text-messaging based tobacco cessation interventions have promise due to high technology use among youth but are proven to be most effective when combined with other social-cognitive cessation techniques.
- The use of mobile apps for vaping cessation is viewed preferably among youth however, limited clinical evidence is available to prove efficacy or best-practices. Further evaluation and science-based app development is needed.
- Primary healthcare providers should actively participate in screening, prevention, and delivery of smoking/vaping cessation interventions. The time cost of physician and nurse intervention is low and the impact of advice on quitting attempts is high.
- School-based interventions are cost-effective and far-reaching with signs of increased abstinence and quit attempts post program delivery.

Background

Smoking remains the leading preventable cause of premature death and illness in Prince Edward Island (PEI) (Lim et al., 2010). Tobacco use is a significant modifiable risk factor for five of the leading causes of morbidity and mortality in PEI: heart disease, stroke, respiratory disease, diabetes and cancer (Jha et al., 2013). In addition to physical health, research shows several connections between nicotine and mental health (Office of the U.S. Surgeon General, 2016). Nicotine harms developing brains, including making young people

more susceptible to addiction (Taylor et al., 2014). Using e-cigarettes can worsen symptoms of depression and affect a person's ability to concentrate, learn and make decisions (Obisesan, Mirbolouk, Osei, et al. 2019, Office of the U.S. Surgeon General, 2016).

Smoking has also been found to have negative impacts on mental health. Research indicates that the relationship between smoking and psychiatric symptoms exists even when socioeconomic factors, stressors, personality, and social support are controlled (Jorm et al., 1999). Colman et al. (2011) and Goodman & Capitman (2000) showed that smoking is one of the most common predictors for depressive & anxiety symptoms and recurrent depressive episodes. This research challenges the common assumption of the direction of the relationship between smoking and mental health challenges, showing that smoking may actually contribute to psychiatric symptoms not just the inverse.

Vaping has gained significant popularity among young Islanders with 39.3% of Island students (grades 7 to 12) having used these products in the last 30 days. Smoking among Island youth is also on the rise with the rate of smoking among high school students increasing 4% over the last 2 years (from 11.8% in 2015 to 15.8% in 2017) to now double the national average of 7.9% (Health Canada, 2019). High levels of nicotine addiction among youth were demonstrated in recent findings by Hammond et al. (2023) who showed that more than 50% of youth who vape are vaping within an hour of waking and 25% of youth who vape using vaping products within 5 minutes of waking.

Cessation interventions targeting youth aged 15-19 years were of a particular interest as this is a critical period for experimentation and development of regular smoking behaviour with 80% of regular adult smokers beginning tobacco use before the age of 18 (Amin, Dunn & Larango, 2020). The average age of vaping onset on Prince Edward Island is 15.7 years old (Al-Hamdani, 2021).

The PEI 2020-21 Youth and Young Adult Vaping Project, conducted by the Lung Association of Nova Scotia showed that over half (56.8%) of young Island vapers (aged 16-24) had tried to quit vaping, with the average number of serious quit attempts being 3.77. (Al-Hamdani, 2021). Programs and services that support youth (aged 11-18) to quit their addiction to nicotine can help build resiliency and improve mental health. According to recent research from the Truth Initiative, 47% of young people who quit vaping feel more in control than when they were vaping, and 90% feel less stressed, anxious or depressed (Truth Initiative, 2021).

Rationale and Purpose

The purpose of this review is to explore the current state of knowledge of youth vaping cessation interventions and highlight best or promising practices that could be implemented in PEI. This report will identify promising youth vaping cessation interventions at the individual-level and the school-level.

By providing a review of existing evidence on youth vaping cessation interventions, our aim is to help facilitate the development of evidence-informed tobacco/vaping reduction programming on PEI in partnership with both governmental and non-governmental organisations who work with youth.

Methods

The literature search was conducted in November 2022. The literature search was conducted using the google scholar for relevant peer-reviewed manuscripts published in English between 2016 and 2022. The key search terms were: "youth" "vaping" "cessation" "intervention" "teen" and "tobacco cessation". The search returned a total of 162 results. The references cited in relevant studies and previous reviews of the literature were also examined. In total, 38 papers were included in the review. In addition, we also searched Google for relevant grey literature such as reports from both governmental and non-governmental organisations.

Limitations

Despite the urgent need for youth vaping cessation interventions, there is limited knowledge about the process of vaping cessation, and few evidence-based interventions are available to young people seeking support. Many interventions were originally

developed for the adult smoking population and are now being adapted to meet the needs of youth who vape/smoke.

Results

Cessation Interventions for Youth - Individual Level

Social-cognitive approaches

Existing literature reviews suggests that cognitive-behavioural, motivation enhancement interventions, and social influence strategies aid in smoking cessation among young smokers (Gabble et al., 2015; Sussman et al., 1999; Sussman, 2003; Mcdonald et al., 2003). Some effective social influence strategies are refusal assertion skills, media and peer social influence and education about tobacco industry promotion (Sussman et al., 2006; Sussman & Sun, 2008). Behavioural counselling has also been found to almost double the rates of long-term abstinence as opposed to usual or no treatment (Fiore et al., 2008). The most recent Canadian Pediatric Society recommendations endorse individual or peer counselling such as CBT, motivational interviewing, mindfulness-interventions and web-based approaches for youth smoking and vaping cessation (Harvey et al., 2016).

Although there seems to be a consensus among researchers and medical professionals that social-cognitive approaches are useful in youth smoking/vaping cessation programs more

investigation is warranted into determining which strategies are most effective and if certain combinations of strategies elicit better results (Gabble et al., 2015).

The Ottawa Model for Smoking Cessation recommends follow-up counselling to take place one to four weeks after a patient's quit attempt, with subsequent monthly follow-up for the first three to six months. This recommendation is in line with evidence showing that follow-up counselling that supports relapse prevention, boosts motivation to quit and assesses any concerns, increases the chances of a successful quit attempt (University of Ottawa Heart Institute, 2013).

Pharmacological interventions

Although several systematic reviews have been carried out on the efficacy of the use of pharmacological interventions on youth cessation, limited conclusions can be made on the evidence. In regard to smoking cessation, NRT has been shown to be safe for youth and any minor adverse side effects were comparable to those experienced by adults (Moolchan et al., 2005). Overall it seems that there is a lack of evidence backing the efficacy of NRT being used as an independent smoking cessation tool for youth and warrants further investigation (Gabble et al., 2015). However, NRT may be prescribed to those severely addicted to nicotine attempting to quit vaping, but treatment should also include non-pharmacological interventions such as behavioural strategies (Gabble et al., 2015;

Harvey et al., 2016). What has been found by studies is that Nicotine patch therapy, when used in conjunction with nicotine gum and CBT can be a successful youth smoking cessation strategy (Moolchan et al., 2005; Hanson et al., 2003). While nicotine replacement therapy products are available over the counter, it is best to receive a prescription from your primary care provider, as both public and private insurance will cover the cost of NRT for youth up to the age of 18 (Chadi et al., 2021).

The effectiveness of using prescription pharmaceuticals such as bupropion and varenicline for youth nicotine cessation has produced inconclusive evidence thus far (Selph et al., 2020) but a few studies have had promising results (Stanton & Grimshaw, 2013). Bupropion may be an acceptable treatment as long as no contraindications are present such as anti-seizure medication or an eating disorder, which may be particularly relevant for adolescents, and should be used in conjunction with NRTs and behavioural strategies (Harvey et al., 2016; Hadland & Chadi, 2020). The use of varenicline is only approved for people 17 years and older therefore it is not suitable for all youth smoking cessation programs (Hadland & Chadi, 2020). Overall, it is strongly recommended that the care provider consult an adolescent addictions medical specialist before prescribing any sort of prescription pharmaceutical for smoking cessation in patients under 18 years (Hadland & Chadi, 2020).

The PEI Smoking Cessation program helps Island residents quit smoking by offering free nicotine replacement therapy (NRT) or pharmacological interventions to eligible candidates. The program is intended for those 19 years and older, although exceptions can be made for those under the age of 19 with referral from a health care provider (PEI Chief Public Health Office, n.d.). The PEI Smoking Cessation Program Evaluation Report (2022) showed that 28% of the individuals that responded to the evaluations quit smoking or other forms of tobacco. For those who did not quit but aimed to reduce their consumption, smoke 7.3 fewer cigarettes per day compared to the amount they smoked before taking part in the program (Live Well PEI, 2022).

Technology-Based Interventions

Web-based interventions

The use of Internet-based interventions is a promising avenue for youth smoking/vaping cessation however, the evidence on its efficacy and best practices is still limited and mixed. One systematic review of web-based smoking cessation interventions by Hutton et al. (2011) had difficulty drawing any concrete conclusions on the efficacy of web-based interventions as they were “heterogeneous” and Crutzen et al. (2011) noted that tracking and reporting measures were inconsistent at best and non-existent at worst making it impossible to draw conclusions. Although it is impossible to evaluate the efficacy

of web-based interventions on a whole, there have been several promising studies coming out that feature web-based elements within a larger youth smoking cessation/prevention intervention (Gabble et al., 2015). Combining an interactive website with social cognitive approaches was successful in at least two interventions employed between 2005 and 2008 (Norman et al., 2008; Chen & Yeh, 2005).

Mobile-Based Interventions - Text Messaging

Mobile-based interventions are also presenting as a promising opportunity to meaningfully engage youth with cessation tools (Berg et al., 2021). One of the biggest advantages of delivering services to youth through cell phones is the accessibility of them, the most recent Canadian Internet Usage Survey in 2020 revealed that 96.3% of Canadians between the ages of 15-24 years old had a smartphone (Stats Canada, 2021). In young adults Haug et al. (2012) found that a text-messaging support intervention had high uptake and resulted in lowered cigarette consumption in participants while a study conducted by Ybarra et al. (2013) noted text-message support increased quit rates at 4-weeks but neither study tracked nor observed long-term cessation benefits, this finding was echoed by a study of SmokeFree Buddy the app which saw short-term but no long-term benefits (Schwaninger et al., 2021). In contrast, This is Quitting, an automated but tailored text-messaging young adult focused support program that took into account participants readiness to quit, demographic data, and participant responses to automated questions

and provided evidence-based social support, behaviour modification prompts, and pharmacist/physician advice, showed promising results (Graham et al., 2021). After 7 months there was a positive statistical difference in sustained smoking cessation between the intervention and control groups (Graham et al., 2021), indicating that the features of This is Quitting may be more effective than those previously employed. Another important note is that the most recent Cochrane review (Whittaker et al., 2019) determined that “human-delivered” counselling including text messaging was more effective than automated text-messaging support, indicating cause for an at least 2-pronged approach (Berg et al., 2021).

Mobile-Based Interventions - Apps

A review of the existence and quality of cessation apps found there to be between 22 and 302 available smoking cessation apps available on 4 different app stores however only 3 apps were supported by low-high quality evidence (Haskins et al., 2017). Krishan et al. found that there are 3 adolescent vaping cessation specific apps and 5 adolescent smoking cessation apps that claim to also apply to vaping cessation, available on apps store (2022). These adolescent focused apps shared with general population cessation apps adherence to clinical guidelines in respective to creating a quit plan and increasing self-motivation by describing the benefits of cessation (Robinson et al., 2020). Where adolescent targeted apps differed was increased features targeted towards youth like peer

support and in general had higher content adherence to clinical guidelines (Robinson et al., 2020). In a randomised control trial evaluating the app Crush the Crave (CTC) found that while a feasible cessation tool it was not more effective than the Health Canada guide On the Road to Quitting in smoking abstinence rates (Baskerville et al., 2018). However, an emerging study finds that 22% of participants who used the CTC app had quit vaping 30-days post intervention vs. 16% who had not used CTC (Sanchez et al., 2022). Positive affordances of the CTC app include visualisation of quit benefits, ability to document smoking behaviour, and recognition of quit efforts however, it is recommended that CTC adapt to support gradual quitting and improve overall perceived helpfulness and user uptake (Struik et al., 2018; Baskerville et al., 2018).

Overall, Vaping cessation apps are potentially valuable tools that could be an effective modality for delivering cessation interventions for youth, however, further evaluation and implementation of evidence-based practice must be addressed before recommending the use of these platforms (Sanchez et al., 2022).

Interventions Delivered by Health Care Professionals

Physicians

Physicians are in an advantageous position to screen for, disseminate knowledge about, and kick-start interventions for youth e-cigarette use (Lyzwinski et al., 2022; Kulig,

2005). One reason for this is because physicians are often the first contact a person will reach out to for help in smoking cessation (McIntosh et al., 2005) and physicians can be seen as role models in the community (WHO, 2005). The Canadian Pediatric Society (2021) recommends confidentially screening all youth for youth of vaping products starting at the age of 12 (or earlier when appropriate), using evidence-based screening tools and using the 5 A's, ask, advise, assess, assist, and arrange.

It has been found that it takes a physician less than 3 minutes to do a brief assessment and screening of a patient's nicotine dependence and give advice (WHO, 2005) and simple advice can result in a 30% increase in quitting than those without physician advice (WHO, 2005). An important element of the intervention is that the physician identifies to the patient that nicotine dependence is an addiction and needs proper treatment, like medication and counselling, to be overcome (Berg, 2020). It is also necessary for the physician to inform the patient of the adverse health effects of vaping/smoking and use knowledge of the patient's lifestyle to inform what specific effects may motivate them to change their behaviour, ie smoking/vaping could impact the patient's performance in sport if they are an athlete (Berg et al., 2020; WHO, 2005)

Despite the benefits of physicians engaging in the vaping and smoking prevention, screening, and cessation process there exist barriers to care and e-cigarette use is infrequently discussed during visits (Pepper et al., 2015). Three barriers identified by Lando

and Hatsukami (1999) include lack of time, lack of incentives, and beliefs that smokers are unable or unwilling to quit. Physicians may also not feel comfortable discussing vaping cessation as they feel they aren't equipped with the knowledge or training to address the subject (Jankoski et al. 2019; Metcalf et al., 2022). A promising avenue for intervention is increasing physician training in vape use screening and cessation care delivery as it has been shown to increase quit rates among tobacco smokers (Carson et al., 2012).

Nurses

Blume & Lines recommends that a nurse has the following 6 roles to create a vape-free school; “advocate for non-punitive measures procedures for students’ violations of the school’s tobacco policies, deliver and/or coordinate tobacco and e-cigarette education to parents and staff on a regular basis, participate in reviewing curriculum content about alcohol, tobacco, and other drugs, ensure that students, staff, and parents who are interested in quitting are referred to treatment, support or sponsor clubs and student programs that raise awareness of the dangers of tobacco and substance use, and advocate for state initiatives and local policies that have been shown to prevent and reduce youth tobacco use (2020). These interventions should be considered as nurse-delivered interventions increased the chances of successfully quitting by 50% (Rice & Stead, 2004). Currently, there isn’t significant peer-reviewed literature specifically on the effect nurses can have on youth smoking or vaping cessation. However, it is believed that school nurses

could be great assets in delivering vaping cessation interventions as they are viewed by students as non-judgmental and credible and have the ear of school administrators (Hamilton et al., 2004; Blume & Lines, 2020).

Mental Well-Being & Resiliency

Programs that support youth to manage their anxiety may be helpful to use with youth looking to quit vaping/smoking although limited evidence is currently available to support this claim. Vaping can create a false sense of stress reduction and may even help increase focus. The body craves nicotine, making it difficult to relax and can amplify feelings of depression and anxiety (Holiday & Gould, 2016). In addition to increasing feelings of depression and anxiety, youth that smoke or use vaping products are at higher risk of developing mood disorders, and permanent lowering of impulse control. Nicotine is also very harmful to the part of the brain that controls learning and can lead to increased difficulty with attention and concentration (U.S Department of Health and Human Services, 2022). Holistic mental health programming that supports youth may be helpful in supporting youth in their cessation goals as adult influencers can play a key role in supporting behaviour change among youth.

Cessation Interventions for Youth - School Level

In addition to smoking cessation programs through medical clinics, family or other settings, school-based programs also prove to be effective. A systematic review of youth smoking cessation intervention by Gervais et al. (2007), found that behavioural interventions in school settings had positive effects and an increase in abstinence was noted for 4 weeks to 24 months following the intervention, for three out of four students. School-based interventions are beneficial as they are cost-effective, relevant to youth and have an enhanced reach and impact on youth, They also can include parental education and enhanced parent engagement by sending relevant information, giving guidance to support smoking cessation and receiving program feedback (Gabble et al., 2015). Although, limited evaluation is available for school-based cessation interventions, our review highlights the below promising school-based interventions that are currently available in Prince Edward Island.

Promising School-Based Interventions

The STOMP program, which stands for Students Together Moving to Prevent Tobacco Use, is a multi-year pilot project that began in 2021 and will be ongoing until 2024. It targets grade 7-12 students and works alongside school staff and community leaders to create an approach to reducing tobacco and vaping product use in schools. The outcomes

of the project are to develop an understanding of the factors influencing tobacco and vaping product use, build knowledge and understanding of the critical thinking skills used to make informed decisions, encourage protective behaviours about tobacco among students, and lastly to foster effective decision making and high risk situation management (Public Health Education Canada, nd).

Quit 4 Life is a youth smoking cessation multi-pronged intervention developed by Health Canada and the Lung Association of Canada in 1993 (Health Canada, 2011). The intervention consists of an interactive website, a handbook, and a facilitators guide for teachers and health care providers with the aim of helping smokers aged 13-18 years understand why they smoke, how to quit, and how to maintain cessation once they do. The goals of the program are organised into 4 steps, Get psyched, Get smart, Get support, and Get on with it. Follow up evaluations showed that completion of the program resulted in an average decrease in daily cigarette consumption from 12.4 at program start, 5.9 at program end, 7.7 at the 12-18 month follow up. Quit attempts also improved with 1.9 in the previous year before program entry and 2.5 quit attempts at the follow-up. In general, participants indicated increased motivation to quit smoking following the program and identified that the information and strategies learned in the Quit 4 Life program were the biggest motivators and help for future quit attempts. An updated version of the Quit 4 Life program, *I Quit 4 Me*, including a self-help guide for youth aged 14-18 for individual or

group use is expected to be soft launched as a pilot in spring 2023. This pilot project will assess an evaluation plan in place to test the effectiveness of the new group component, evaluation framework, and revalidate the content.

Conclusion:

All evidence indicates that the most successful tobacco/nicotine reduction and cessation interventions take a comprehensive approach. To address the myriad of factors that influence youth tobacco/nicotine use and cessation and create effective programming there must be interprofessional, cross-organizational collaboration. Smoking cessation programs should involve primary health care providers, parents, teachers, and counselors and include screening, education, motivation enhancement, and social support. In addition to interventions aimed at youth, efforts should be supplemented by legislation and policy that deter tobacco use among youth and ideally prevent it altogether. The severe physical and mental health risks associated with smoking justify continued research into impactful policy and interventions that prevent the initial uptake of smoking and vaping among young people as well as support established youth smoker's cessation efforts and motivation.

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