

# The State of Tobacco Control in North Dakota: 2021 - 2023



*Ingenuity. Enterprising. Community. Opportunity.*

# The State of Tobacco Control in North Dakota: 2021 – 2023

**Successes, challenges and opportunities of the North Dakota Tobacco Prevention and Control Program (TPCP) during the 2021 – 2023 biennium.**

This is a report to the North Dakota Legislature, tobacco control partners and the public on the state's tobacco prevention and control efforts during the 2021 – 2023 biennium (July 1, 2021 through June 30, 2023). The intended users of this report include legislators and other decision-makers; therefore, the report will be published in January 2023, and used during the legislative session.

Questions about the Tobacco Prevention and Control Program should be directed to Neil Charvat, Director, Tobacco Prevention and Control Program, [njcharvat@nd.gov](mailto:njcharvat@nd.gov).

Questions about the comprehensive evaluation should be directed to Melissa Chapman Haynes, PhD, Director of Evaluation, Professional Data Analysts (PDA), [mchapman@pdastats.com](mailto:mchapman@pdastats.com).



# Orientation to TPCP's Effort, 2021 – 2023

The introductory section grounds this report on the importance of addressing the use and treatment of tobacco use, including successes and concerning changes in tobacco control. The following four sections organize the work and data from the 2021 – 2023 biennium by themes, which are defined at the beginning of each section.

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- *Tobacco prevention and control has work to do*
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- *TPCP's approach*

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- *Creation of Tobacco Data Dashboard*
- *Building Tribal Coalitions*
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# Introduction

A black and white photograph of a bison standing on a grassy hill. The bison is in the center of the frame, facing left. The background consists of a cloudy sky and some trees on the left and right sides of the hill. The overall tone is somber and naturalistic.

- *The brain on nicotine*
- *Tobacco prevention and control has work to do*
- *Defining tobacco control*
- *Tobacco is the leading cause of preventable death*
- *TPCP's approach*

# TOBACCO IMPACT: NICOTINE IS A HIGHLY ADDICTIVE DRUG

New products, same addiction.

“

*I used nicotine as a stress reliever because I lost sight of working out and my health. Think long term, think about your body and your mind.*

- Maya, a young adult who was vaping (from Truth Initiative)

”



# THE BRAIN ON NICOTINE

*Nicotine is a highly addictive drug that is hard to quit, even when faced with negative health consequences.*

The National Institute of Health's Institute on Drug Abuse (NIDA) recently published a research article on tobacco, nicotine, and e-cigarettes. One purpose of this article is to highlight the disproportionate impact that tobacco has on some populations, including:

- People with mental health disorders, including substance use disorders,
- People living below the poverty line and those with low educational attainment, and
- Adolescents and young adults.

Nicotine is a highly addictive drug. "Addiction is characterized by compulsive drug seeking and use, even in the face of negative health consequences."<sup>1</sup>

No matter how it's delivered, nicotine is addictive and harmful for youth and young adults.<sup>2</sup>

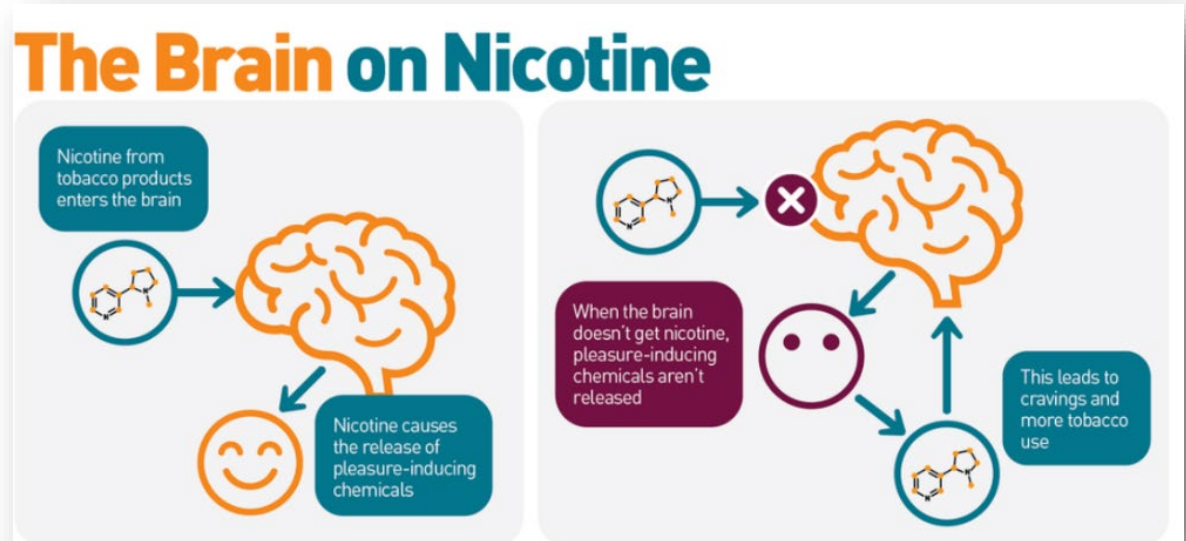


Figure from Truth Initiative<sup>3</sup>

# TOBACCO PREVENTION AND CONTROL HAS WORK TO DO

*Smoking damages nearly every organ in the body;<sup>4</sup> and there is emerging evidence on the harmful effects of vaping, including the emissions from vaping products or electronic nicotine delivery systems (ENDS).*

There is a profound and demonstrated negative health impact that commercial tobacco use has on the physical and mental health of those using tobacco products, as well as a large evidence base of the harms of secondhand smoke on non-smokers.

## **Tobacco or other nicotine use in youth wires the brain for a lifetime of continuous addiction.**

**7x**

Youth and young adults who had ever used e-cigarettes have seven times higher odds of becoming smokers, as compared to youth who had never vaped.<sup>5</sup>

**2.4x**

Nicotine use impacts mental health. A cross-sectional study of 30,000 current e-cigarette users found that frequent vaping increases the odds 2.4 times of having diagnosed depression. Nicotine use is also related to increased stress levels and anxiety.<sup>5</sup>

**3x**

Smoking prevalence is three times higher for individuals without a high school degree, as compared to those with a college degree. Prevalence is twice as high for individuals below the poverty level (41%) as compared to those at or above the poverty level (21%).<sup>6</sup>

Using tobacco increase the risk of the following diseases:



Nearly 80% of COPD cases are caused by smoking.<sup>7</sup>



1 in 3 cancer deaths is linked to smoking; smoking contributes to at least 15 different cancers.<sup>8</sup>



1 in 4 deaths from cardiovascular disease are caused by smoking.<sup>7</sup> Heart disease is the leading cause of death in North Dakota.<sup>9</sup>



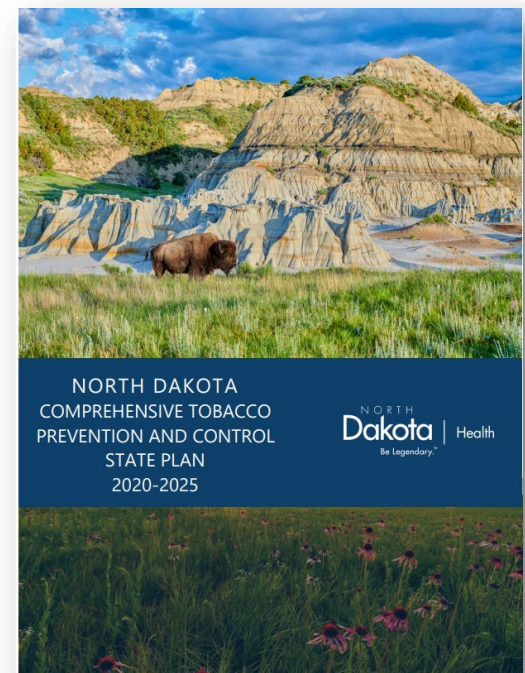
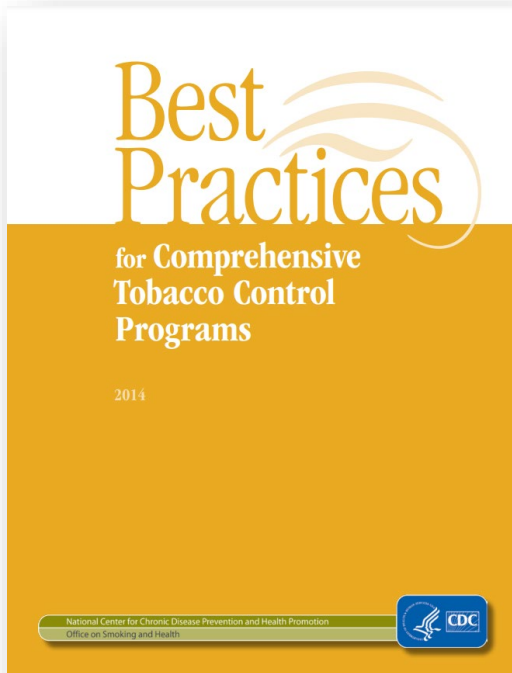
People who smoke are 30-40% more likely to develop type 2 diabetes than those who do not smoke;<sup>7</sup> there are 58.3 thousand North Dakotans with this disease.<sup>10</sup>



Smoking has impacts before, during, and after pregnancy, and increases the likelihood of premature birth and low birth weight.<sup>7</sup>

# DEFINING TOBACCO CONTROL: RESEARCH-BASED PLANS AND GUIDANCE

*The TPCP follows Centers for Disease Control and Prevention (CDC) Best Practices and Tobacco Control Network Policy Recommendations to develop the State Plan and associated grant activities.*





# DEFINING TOBACCO CONTROL: COMMERCIAL TOBACCO PRODUCTS

*The National Native Network states that "Traditional and commercial tobacco are different in the way that they are planted and grown, harvested, prepared, and used."*

## Commercial Tobacco

**This is the primary type of tobacco that is discussed in this report.** There are over 7,000 chemicals in combustible tobacco products<sup>11</sup> and emerging evidence about the chemicals and harm in vaping emissions.<sup>12</sup>

- ↑ Accelerates heart rate
- ↓ Reduces oxygen supply to body tissues
- ↔ Constricts blood vessels
- ↑ Raises blood pressure

Commercial tobacco is regulated by the Food and Drug Administration (FDA), though regulation of cigars, little cigars, hookah, and pipe tobacco. Regulation of electronic nicotine devices is in process.

## Sacred Tobacco

In this report, we distinguish the use of tobacco by Indigenous people, including American Indians living in one of the four tribal nations in this geography or in any part of the state. Practices vary by tribe, though often, the inner bark of red willow is used and referred to as sacred tobacco.

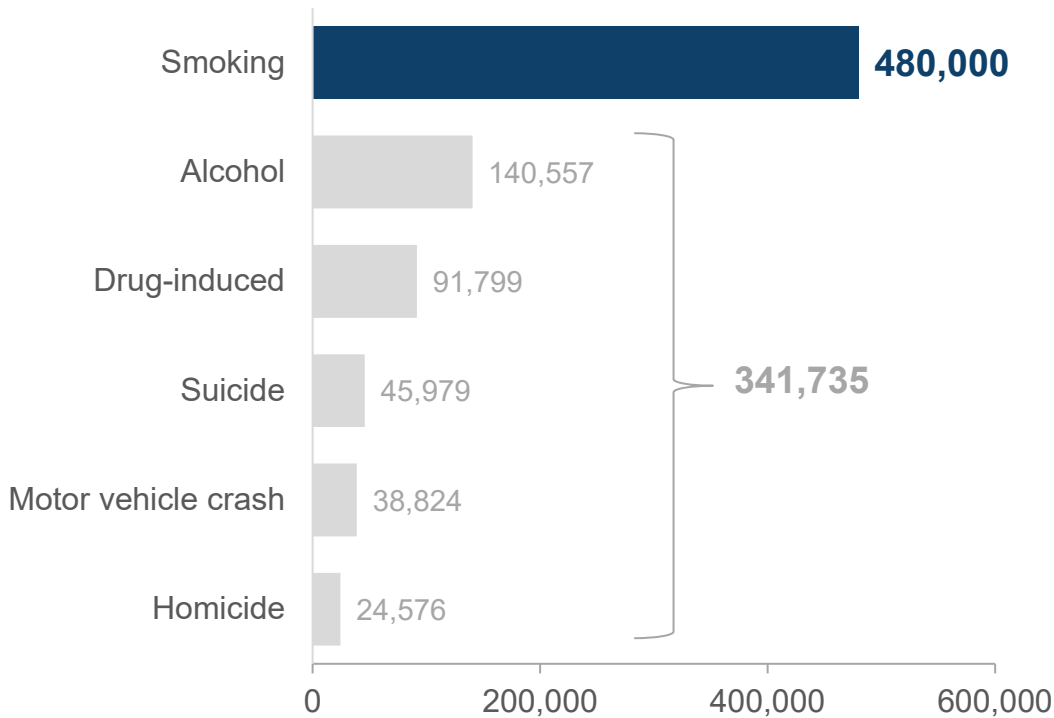
Sacred tobacco is either burned or sometimes burned in a pipe and held in the mouth during prayer. It may also be used for medicinal purposes, to smudge, or as a gift.<sup>13</sup>



# TOBACCO IS THE LEADING CAUSE OF PREVENTABLE DEATH

*Smoking cigarettes contributes to the most substance use and injury/violence-related causes of death in the United States.<sup>14</sup>*

## Leading substance use and injury/violence-related causes of death in the United States (2020)<sup>14,15,16,17,18,19</sup>



Tobacco use remains the leading cause of preventable death in the United States.<sup>14</sup> No type of tobacco is considered safe, and only nicotine replacement therapy approved by the FDA is considered safe, which does not include ENDS or synthetic nicotine.

While the number of deaths from COVID-19 are not included in this figure, the number of deaths from COVID in the US in 2020 was 350,854. This total is similar to the non-smoking related deaths in the gray bars – smoking caused more US deaths in 2020.<sup>20</sup>

The 2020 number of COVID deaths in North Dakota was 1,159.<sup>21</sup>

# NORTH DAKOTA TPCP'S COLLABORATIVE APPROACH

*The vision of the TPCP is: All North Dakotans deserve the opportunity to reach their full health potential no matter where they are born or live.*

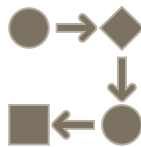
## Mission

Improve and protect the health of North Dakotans by reducing the negative health and economic consequences of the state's number-one cause of preventable disease and death – tobacco use.

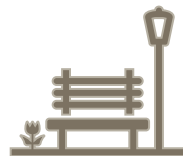
## Sustained Change



*Policy and ordinance changes to protect North Dakotans from secondhand smoke and vapor.*



*Systems change through integration of nicotine dependence treatment in health systems and with payers.*



*Environmental changes are integrated into specific contexts (e.g., schools, worksites) to reduce tobacco use.*

## Funded partners

**28** *Local Public Health Units (LPHU)*  
*Funded to provide tobacco prevention, cessation support, and support for local policy change, education and enforcement.*

**23** *Health care sites/clinics*  
*Funded to provide education on nicotine dependence and cessation support.*

**2** *Indigenous partners*  
*Funded local lead agencies: University of North Dakota to collect tribal-specific and tribal lead data collection on tobacco use and a contractor from Turtle Mountain leads the Smoke-Free Casino project and community efforts.*

**4** *Additional contractors*  
*Funded to provide media, NDQuits services, external evaluation and research.*

# Ingenuity of TPCP

During the 2021-2023 biennium, the TPCP has demonstrated considerable ingenuity, despite challenges presented by the COVID-19 pandemic. The examples provided in this section exhibit creative efforts to use data to inform tobacco control that is tailored to the North Dakota context and specific priorities.

- *Expanding the work of a pharmacist provider*
- *Creation of tobacco data dashboard*
- *Building tribal coalition*
- *TFND education webinar series*
- *North Dakota-specific Maternal Tobacco Program*
- *PDA assessment of smoke-free support*

1

# TOBACCO IMPACT: NEW PROGRAMS SUPPORT CESSATION

Addressing cessation and nicotine dependence has a positive impact on families

“

*I continue to not smoke for [my triplets] and keep them safe and keep them healthy, so they don't get secondhand smoke or anything like that and overall for my health.*

”

- Amy Fossum, mom of triplets who quit tobacco after participating in the Maternal Tobacco Program at Sanford Health



# EXPANDING THE WORK OF THE PHARMACIST PROVIDER

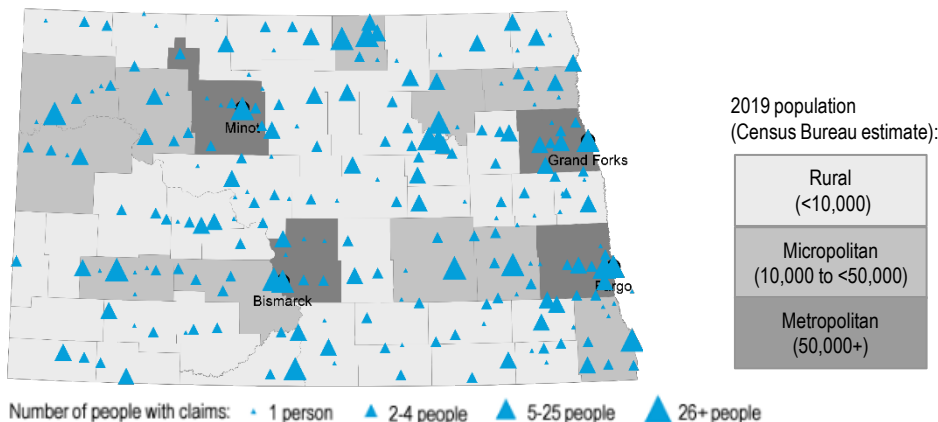
Senate Bill 2221 during the 67th legislative session (2021) allowed pharmacists independent authority to provide immunizations and tobacco cessation therapy.

North Dakota Health and Human Services (HHS), North Dakota State University (NDSU) College of Pharmacy, and the NDQuits contractor created an approved training to expand the pharmacist's role of prescriptive authority. This one-hour online, on-demand module is available for free.

HHS partnered with the Collaboration and Advancement in Pharmacy (CAP) Center at NDSU College of Pharmacy to support the Pharmacists Service Enhancement Project (PSEP). The PSEP is a collaboration with North Dakota pharmacies to expand tobacco/nicotine addiction treatment services to include counseling in rural and urban communities.

The importance of expanding pharmacist's ability to treat nicotine addiction is underscored by the following map. Medicaid claims come from North Dakotans across the state, as shown on the following map.

**Number of people with ND Medicaid pharmacy claims for tobacco cessation 2020-2021<sup>22</sup>**



*"Tobacco use continues to be a problem across North Dakota. With pharmacists being the most accessible health care providers, it is our hope that we can learn from and train pharmacists to become primary providers of tobacco cessation services. Leveraging the CAP Center Core Principles of Implementation, we will learn about barriers to implementing the services in pharmacies, and design solutions to overcome those barriers. Over time, we are hopeful that this program will grow and expand so that provision of comprehensive tobacco cessation services is the norm in North Dakota pharmacy practice."*

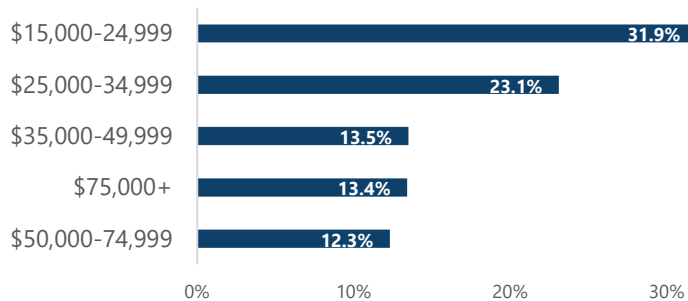
- Brody Maack, NDSU faculty and pharmacist

# CREATION OF TOBACCO DATA DASHBOARD

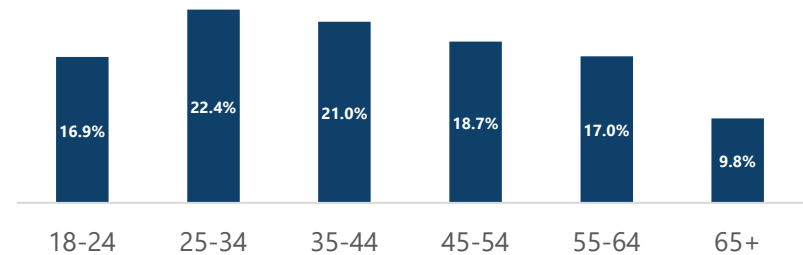
The TPCP worked with the Health Statistics and Performance Section to create an interactive dashboard for North Dakota tobacco-related data.

**The dashboard** provides a readily accessible source for most used tobacco-related data in North Dakota. This is particularly important to understand the varied tobacco use by factors such as income and age, as displayed below.<sup>23</sup>

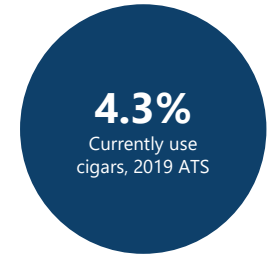
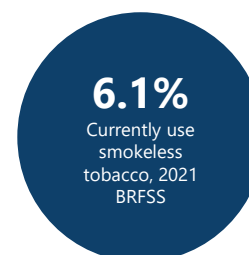
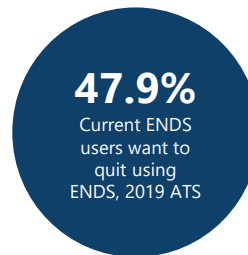
Adult Cigarette Smoking by Income & Year (BRFSS, 2020)



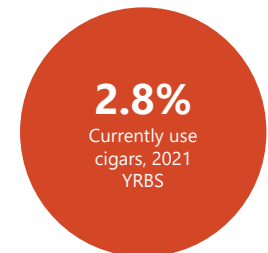
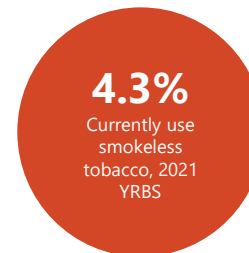
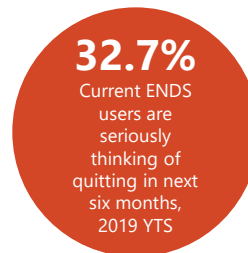
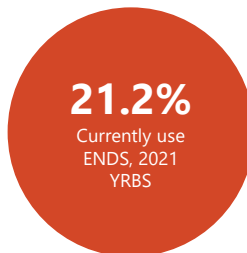
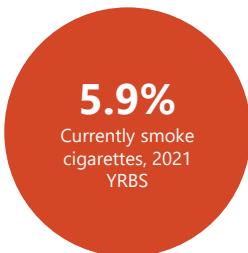
Adult Cigarette Smoking by Age Group & Year (BRFSS, 2020)



**Adults**  
(age 18+)



**High school**  
(grades 9-12)



# TRIBAL COALITIONS

*Coalition trainings are opportunities to build active support in communities.*



Kara Hickel, Health Communications and Equity Specialist at HHS  
Ray O'Leary, Cheyenne River, South Dakota  
Stephanie Jay, Tribal Coalition Coordinator



Čanšá Coalition's Tribal Tobacco Toolkit,  
<https://www.findyourpowersd.com/toolkit>

Missouri Breaks Industries Research Inc., TFND, Turtle Mountain Band of Chippewa Indians, and HHS are collaborating to conduct tribal coalition-building activities – with **specific materials customized for tribal needs**.

The first in-person training was in August 2021 with Rae O'Leary from Missouri Breaks. Efforts were expanded with a second training, held in Bismarck in September 2022. This partnership incorporated support from TFND and the North Dakota Smoke-free Casino and Tribal Coalition Coordinator. All four North Dakota Tribal Health Departments were represented at the 2022 training.

Efforts moving forward will continue to build upon these trainings, building active support in tribal communities across the state to prevent and reduce commercial tobacco use.



First TFND Coalition training in Bismarck, Fall 2022  
All four reservations were represented, and future meetings will happen quarterly.



# TOBACCO FREE NORTH DAKOTA (TFND) EDUCATION WEBINAR SERIES

*Interactive virtual webinars held to educate tobacco prevention and control partners.*

The TPCP has embraced the virtual environment to connect with grantees in a manner that is accessible across the state. The requested trainings on a variety of topics related to the TPCP state plan and guidance documents are listed on page 8. This medium has allowed an agile approach to gathering coordinators across the state for dialogue and sharing. Working with TFND, the TPCP has established a robust collection of educational options with plans to continue to provide these to grantees. The presentations are recorded and the information is helpful for new TPCP partners' staff as they are onboarded.

Within one year, eight trainings have been developed, and are available on TFND's YouTube page (hyperlinks below):

- [How to Present for Youth](#) (November 2021)
- [Media Training](#) (December 2021)
- [Creating Sound Tobacco Policies](#) (January 2022)
- [Cessation](#) (March 2022)
- [Coalition Building Part 1](#) (April 2022)
- [Coalition Building Part 2](#) (May 2022)
- [Connecting with Policymakers ft. ACS-CAN](#) (July 2022)
- [Quit Week Lessons Learned](#) (August 2022)

*"The webinar series is a true collaboration with TFND and DHHS to help partners. It brings the information full circle."*

*– Heather Austin, TFND Executive Director*



# NORTH DAKOTA-SPECIFIC MATERNAL TOBACCO PROGRAM

*The TPCP created the Maternal Tobacco Program (MTP) in 2021 to provide unique support to pregnant and postpartum women.*

The MTP offers face-to-face quit coaching and support to pregnant women. MTP facilitators assist women to develop a quit plan, which is managing cravings and withdrawal symptoms as well as planning for and avoiding trigger situations. MTP participants meet with the facilitator five times when pregnant and monthly for six months after delivery. Facilitators test for abstinence at each session and provide financial incentives when quit during the last prenatal session and the six monthly postpartum sessions.

During COVID-19, in-person sessions became challenging and MTP sites began to offer telehealth sessions. Sharon Laxdal, a registered nurse at Walsh County Health District (WCHD), provides in-person and continues telehealth MTP sessions to serve MTP participants beyond Walsh County. For example, Ms. Laxdal conducts telehealth sessions with a mom from Cando. The mom tests at the Woman's Care Center in Devils Lake.



Sharon Laxdal, WCHD



*“ I look back at all of the previous times I tried to quit, and I can see I would use every excuse I could to buy again or bum one. This time I asked myself why am I bringing these kids into this world then turning around and doing something that may take me away from so many of their special moments?*

*I didn't look at it like I was missing something. I looked at each routine habit as just one I had to break then I could do it every time. Thanks to everyone at Sanford for being there for me!*

- Paige Tuhy, Fargo, Maternal Tobacco Program participant in 2022



# ASSESSMENT OF COMMUNITY SMOKE-FREE SUPPORT

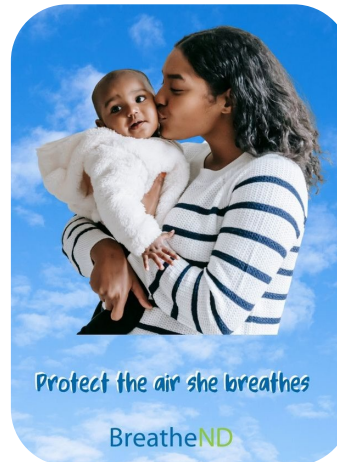
*Every North Dakota county voted in favor of the smoke-free air law in 2012, and every state level survey conducted has found more than 75% of residents continue to favor the law. <sup>24</sup>*

In 2022 the contracted external evaluator, Professional Data Analysts (PDA), developed a policy readiness tool based on the peer-reviewed literature and previous North Dakota-specific evaluation findings. The broad takeaway from the results of this assessment is that there remains strong support in favor of the law, as well as some gaps in understanding the current smoke-free air law. The law has been in place for over a decade statewide and even longer in some localities.

## North Dakota's smoke-free law:

- Prohibits use of cigarettes and electronic cigarettes in all enclosed areas of public places and places of employment.
- Defines enclosed area as all space between a floor and ceiling that has 33% or more of the surface area of its perimeter bounded by opened or closed walls, windows, or doorways.
- Prohibits use of cigarettes, including electronic cigarettes, if within 20 feet of entrances, exits, operable windows, air intakes and ventilation systems of an establishment in which smoking is prohibited by the law.

The entire law is located [here](#), Century Code 23-12-09 through 23-12-11.



“

*I think most people would be concerned about keeping it smoke free, once they hear about the potential to change. I hear people all the time saying they are happy they can go out places and not smell like smoke or breathe in smoke from others.*

”

Community survey  
respondent, Spring 2022

# ASSESSMENT OF COMMUNITY SMOKE-FREE SUPPORT: THE FUTURE

*Only 22% of community respondents reported that most members in their community understood the health impact of potential exemptions.*<sup>25</sup>

North Dakota's smoke-free law has been highly successful in changing social norms – there is a whole generation that does not know what it's like to have smoke-filled air in restaurants and public places. The social norms that other generations experienced prior to the passage of the smoke-free air law is not the experience of a growing number of North Dakotans. This is certainly a point of celebration as well as a challenge for the education of how important this law is to the wellbeing and health of residents.

TPCP partners have **strong commitment and determination** to protect the ND smoke-free air law from exemptions. Results from the organization section of the assessment found:<sup>25</sup>

**100%** **want** to protect the law

**97%** **are determined** to protect the law

**97%** **are committed** to protecting the law

“

*There is smoking and **vaping happening in doorways of business and apartment buildings** on a regular basis. Also, as one who works in smoke-free housing and am a renter in ND, I see smoking happening in hallways all the time as well. **The average elected official has no idea what the tobacco laws are, so why should the general population?***

”

“

*Most people understand they cannot smoke indoors; however, I am not sure they understand this **extends to vaping.***

”

“

*... When I reviewed the law before completing this survey **there was information that I was not aware of**, for example, the responsibilities of proprietors to post signage, the penalties involved for various violations, and I hadn't given much thought to outdoor eating places - like sandwich stands. However, I am not a smoker and that may be why I have not familiarized myself with many of the finer details.*

”

# TPCP is Enterprising

Challenges have been reframed as opportunities for the TPCP. In this section, work of the TPCP that has proven to be effective, contextually relevant, and resourceful are highlighted.

- *NDQuits is effective and cost efficient*
- *Number of Tobacco Treatment Specialists (TTS) increased during the pandemic*
- *Quit Week optimized social media messaging*
- *Youth Action Summits engaged youth across the state*
- *In-person and virtual education*
- *Long-standing partnerships*

# 2

# TOBACCO IMPACT: IT'S NEVER TOO LATE TO QUIT

Quitting nicotine dependence is possible, especially with evidence-based support

“

*[After smoking for over three decades...] I was a good smoker, I mean I looked good, I could play cigarette tricks, I blew the best smoke rings. I've lived, and smoked, long enough to have smoked on airplanes. I smoked in a grocery store. I smoked in a hospital waiting room!*

*As society progressed and moved on and smoking became a little more taboo, my smoking habit became more of a solitary thing, and I'm not a solitary type guy.*

*My older sister developed lung cancer, and I watched the courage and dignity with which she fought that disease. [Jay quit the day before Mother's Day in 2015]*

*With the right inspiration, the right motivation, maybe a nicotine lozenge or patches, it's not that hard to do. Life is so much better on the other side.*

”


- Jay Davis, Minot radio and former smoker




# NDQUITS HELPS NORTH DAKOTANS QUIT

Since 2004, the quitline has provided evidence-based tobacco counseling and nicotine replacement therapy to North Dakotans ready to make a quit attempt.

Nearly 2,000 unique North Dakotans utilized the state's quitline, NDQuits, annually during this biennium. Among the survey respondents who used tobacco when they enrolled in NDQuits and who received evidence-based service from the program (NRT or a counseling call):<sup>26</sup>

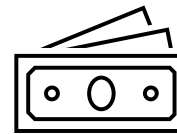
 **87%** Quit tobacco for at least a day during the 7 months since using NDQuits.

 **37%** Quit tobacco for at least 30 days during the 7 months since using NDQuits.

 **33%** Quit tobacco for at least 30 days during the 7 months since using NDQuits when ENDS use was included as tobacco use.

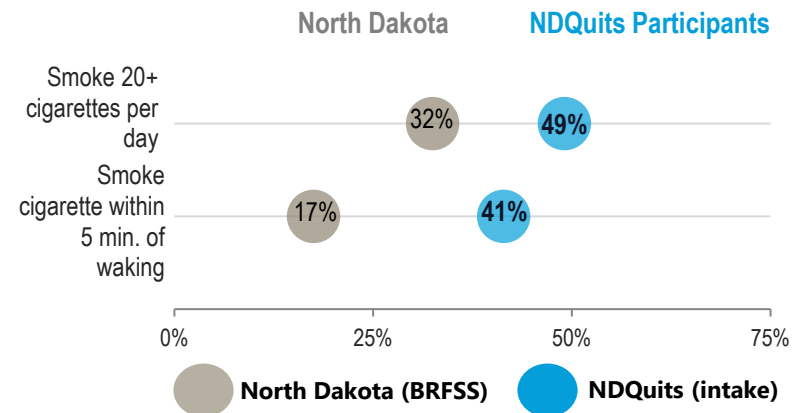
These quit rates meet the NDQuits goals (7-month and 30-day quit rate, North American Quitline Consortium (NAQC) benchmark) of 85% and 30%, respectively. A strength of NDQuits is **enrollees who get treatment go on to quit at standard rates**. Further, it appears **use of ENDS may make quitting tobacco more challenging**, given the lower quit rate.

## NDQuits is consistently cost effective.



For every \$1 spent on NDQuits, North Dakota saves \$2.57 - \$2.89 under the current tax rate (\$0.44 per pack).<sup>26</sup>

## NDQuits reaches highly addicted tobacco users.



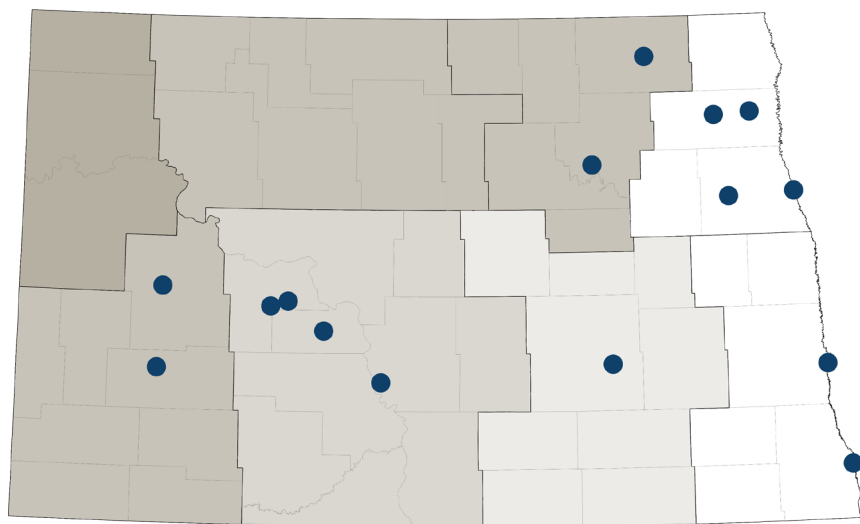
# NDQUITS BUILDS ON CAPACITY WITHIN THE STATE

*North Dakota-specific grantees and counselors provide evidence-based cessation support across the state.*

NDQuits Cessation Program (NDQC) grantees and other TPCP-funded grantees effectively refer tobacco users to NDQuits. The prevalence of tobacco use varies across the state, with higher prevalence on the western side of the state.

**97%** of referrals to NDQuits come from TPCP grantees.<sup>26</sup>

**Prevalence of tobacco use (BRFSS, 2021) overlaid with NDQC grantee locations**



**Tobacco use by region:**

○ <19%   ○ 19% - 22%   ○ 23% - 26%   ○ 27% - 30%   ○ 30% +

NDQuits is one of the only quitlines in the nation to use counselors for the general protocol that are located within the state; NDQuits counselors are at the University of North Dakota (UND). This is beneficial in reaching the varied needs of North Dakotans using NDQuits to support their cessation efforts.<sup>26</sup>

**50%** reported at least one **behavioral health condition** (e.g., anxiety disorder, depression disorder, bipolar disorder, alcohol/drug abuse, schizophrenia).

**57%** of 18–24-year-old enrollees **reported vaping** at intake.

The NAQC conducts an annual survey of quitlines across the nation. North Dakota is consistently on par with the national standard on many data points and exceeds the average number of calls. The national average is 2.8 calls per enrollee.

**3.9 calls** is the average for NDQuits enrollees, about one more call per enrollee than the national average.



# TREATMENT FOR TOBACCO AND NICOTINE MAINTAINED AND RECOVERED SINCE COVID

*NDQuits well-serves highly addicted cigarette users but could better reach other groups*

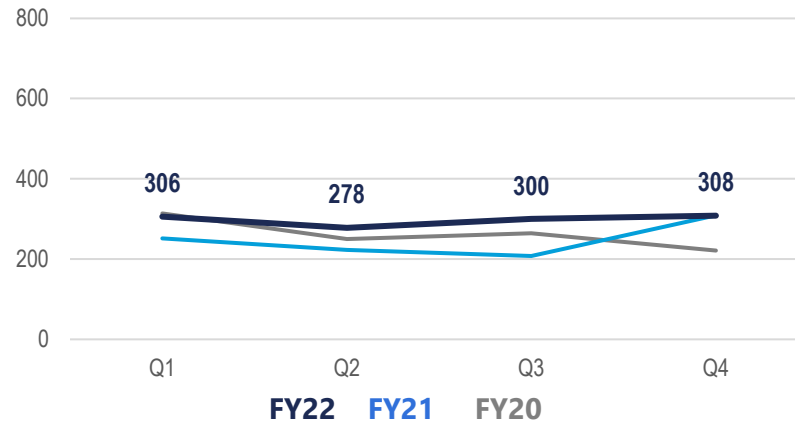
The figure on the right shows the total number of patients referred to NDQuits by NDQC Grant Program grantees per quarter. The NDQC Program has twenty current grantees across the state.

The total number of patients referred to NDQuits in the fiscal year 2022 (n=1,192) is higher than in the previous two fiscal years (992 patients in 2021 and 1,049 in 2020).<sup>27</sup>

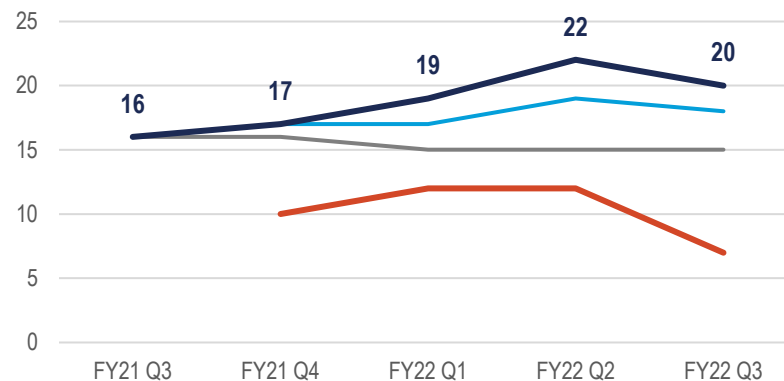
The NDQC grantees also address ENDS use and vaping. This includes:

- Asking patients if they vape.
- Providing tobacco treatment (counseling, NRT) to those who only vape.
- Treating patients who vape and use combustible tobacco products (dual use).

Number of patients referred to NDQuits across grantees



Number grantees addressing ENDS/vaping



**Ask patients if they vape | Provide TTS to those who only vape | Provide NRT to those who only vape | Treatment for dual use**

# THE NUMBER OF TTS INCREASED DURING THE PANDEMIC

*Despite a global pandemic, the number of TTS in North Dakota increased during the biennium.*



May 2022 TTS Group Photo



October 2022 TTS Group Photo

During this biennium, the Mayo Nicotine Dependence Center conducted three TTS trainings – one virtual in November 2021 and two in-person trainings in May and October 2022. This **added nearly 100 TTS** at various health systems and organizations.

Attendees include respiratory therapists, nurses, addiction counselors, pharmacists, social workers, and providers. Common feedback includes that attendees have increased their competence and confidence in addressing tobacco use with clients and patients.

Increasing the TTS in the state provides increased opportunities for North Dakotans who use tobacco and nicotine products to receive counseling from a health care provider.

*"This course was so beneficial, and the instructors were amazing!"*

*"[This training] greatly increased my knowledge and excitement about offering and talking about tobacco [treatment] with patients."*

# QUIT WEEK OPTIMIZED SOCIAL MEDIA MESSAGING

Since 2020, local public health units and other TPCP partners worked together to raise awareness about the harms of tobacco use and to promote quitting.

Quit Week is a coordinated media campaign that educates on cessation resources available to North Dakotans and encourages North Dakotans that use tobacco to make a quit attempt. Messages are coordinated and shared via social media (Instagram, Facebook, Snapchat, YouTube), broadcast TV, radio, digital media, billboards, newspapers, and earned media. From 2020 to 2022, the “It’s Quitting Time” brand was established, and engagement per post has improved.<sup>28</sup>

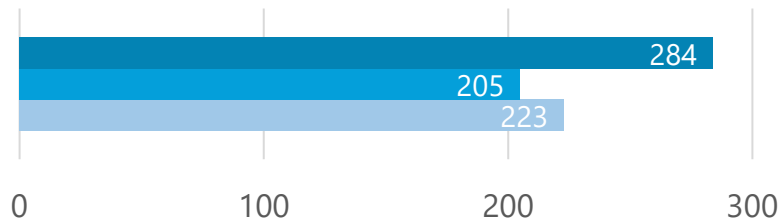


Family HealthCare staff wearing Quit Week shirts, May 2022

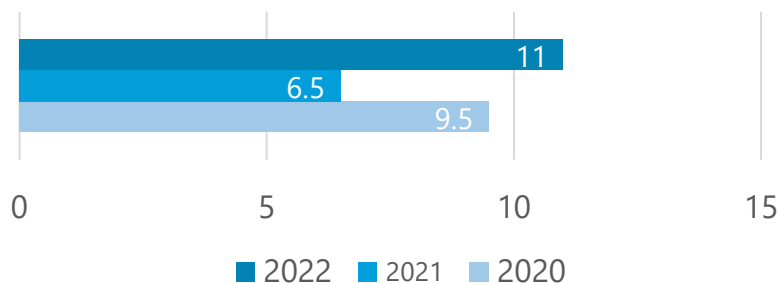


Layn Sabot from Heartview Foundation with a client, June 2022

People reached per post, by year



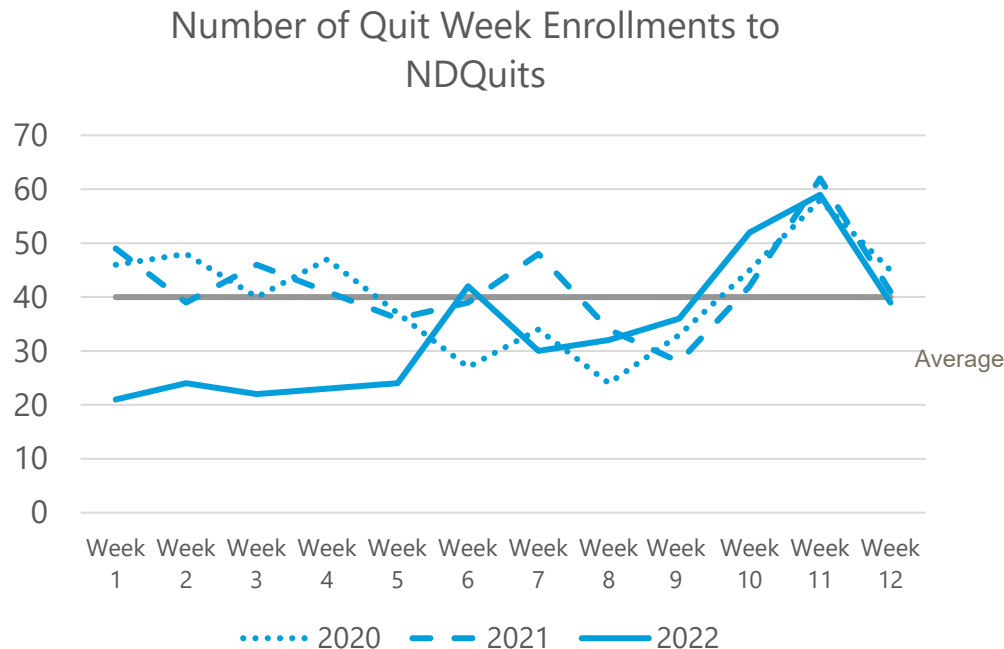
Average engagements per post, by year



# QUIT WEEK EFFECTIVELY PROMOTES CESSATION

*In 2022, there was a 64% increase in NDQuits enrollments during the last week of the campaign.*

**The number of enrollments to North Dakota's quitline, NDQuits, increased during the statewide Quit Week media campaigns.** There were 18 more enrollments than the average over 12 weeks leading up to and during *Quit Week* in 2020 and 21 more enrollments over a similar period in 2021. For 2022, there was a 64% increase in NDQuits enrollments during the week.<sup>29</sup>



Maximizing limited resources, the North Dakota TPCP partnered with 50+ state and local organizations to **coordinate** and **amplify** the *Quit Week* messaging to all parts of the state.

- The statewide tobacco coalition, **TFND**, provided partners with promotional and social media materials targeted to priority groups, such as American Indians, pregnant women, or youth.
- Use of a contracted **media vendor** allowed for consistent messaging statewide.
- All 28 **local public health units** (LPHUs) across the state promoted *Quit Week* in their communities and to the public through multiple promotional strategies, including social media, print media, broadcast, radio, TV, and billboards.
- **Local coalitions and community members** helped spread the message within their professional networks and through their personal relationships.

# YOUTH ACTION SUMMITS

Two Break Free Youth Action Summits (YAS) took place during the biennium, with both happening during 2022 due to a COVID-19 delay. A total of 326 high school students from across the state participated in one of these Summits.



Fall 2022 Break Free YAS in Bismarck. Representatives Glenn Bosch and Lawrence Klemin and candidate (now elected Senator) Sean Clearly participated.



Fall 2022 Break Free YAS in Fargo, organized by Bismarck Burleigh Public Health, Fargo Cass Public Health, TFND, and the TPCP.

The Break Free YAS has been a statewide annual event for the past five years. In the fall of 2022, a speaker was brought in from a national organization, Truth Initiative, whose focus was on supporting peers with quitting.

“

*The Youth Action Summit provides me with tangible information and opportunities to advocate a tobacco-free lifestyle within my community.*

”

Erynn, High School Senior from Bismarck and 4x Summit Attendee

“

*We are excited to host the third Fargo Youth Action Summit. Youth involvement in tobacco prevention is critical and the summit will give students tools they need to take action and make a positive change, both in their communities and throughout the state.*

”

Annabel DeFault, Fargo Cass Public Health Tobacco Prevention Coordinator

# IN-PERSON AND VIRTUAL EDUCATION

*There are some key aspects of partnerships that are important in TPCP work, such as partnering across sectors and engaging health care professionals to maintain and increase tobacco and nicotine dependence treatment education. NDQC grantees plan education events.*

## Virtual options sustained trainings

### 7<sup>th</sup> Annual Nicotine Dependence Conference/Webinar Series

*by CHI St. Alexius Health & Sanford Health – Bismarck*

January 10 and 17, 2022

Flyer for the 7<sup>th</sup> Annual Nicotine Dependence Conference/webinar series, a collaborative effort of CHI St. Alexius Health & Sanford Health – Bismarck.

**Webinar series – CEUs provided for RN, RT, Dentist, Dental Hygienist, and MD**

### Tobacco Treatment and Prevention Conference

*Evolving Nicotine and Tobacco Products: The Emerging Challenges and How to Move Forward*

May 10, 2022

REGISTER AT  
[CTIMaine.org/Conference](https://CTIMaine.org/Conference)

This year the Fargo Nicotine Dependence Conference collaborated with MaineHealth. North Dakota healthcare staff may attend for free on **May 10** only.

Flyer for the Fargo Nicotine Dependence Conference, which happened virtually in May 2022.

**Virtual conference with national partners**

## In-person trainings resume



Brody Maack, PharmD, BCACP, CTTS, presenting at the August 2022 Badlands Symposium in Dickinson.

**The pharmacist as a provider for tobacco treatment**



Ed Larson, MA, CTTS, from the Southeast HSC presenting at the August 2022 Badlands Symposium in Dickinson.

**The role of Human Service Centers (HSC) in nicotine dependence treatment**

# LONG-STANDING PARTNERSHIPS DEVELOP INTO MULTI-YEAR, MULTI-LEVEL PROJECTS

## CHI St. Alexis Health has generated ripple effects that expand beyond the scope of singular projects

CHI St. Alexis Health started the NDQC Grant in 2012 and built their Tobacco Treatment Program (TTP) from the ground up with the support of the HHS. Their history with the NDQC Grant is full of successes and challenges. Each time a barrier was encountered, the TTP team persisted in maintaining exceptional patient care, building rapport with clinicians, expanding the program when they could, and providing education opportunities. A full case study is [available online](#).

When assessing factors contributing to CHI St. Alexis Health's TTP success, **four key components emerge:**<sup>30</sup>



Tobacco use is considered and treated as a chronic disease.



A passionate team of dedicated TTS with a strong champion push the program forward.



Strong collaborations with HHS, other NDQC grantees, and their communities.



Persistence in achieving a successful program and adapting to changing contexts for their work.

## QUIT SUCCESS STORIES

A patient that was counseled mostly via e-mail recently contacted her TTS for an update on her quit journey. This patient has been quit for seven years in May 2022.

A 79-year-old male was hospitalized for a stroke. He was a daily pipe smoker and quit smoking during that admission with assistance from one of the TTS. Almost a year later, this same gentleman was in the hospital again and remains tobacco free.

A 69-year-old female was admitted to the hospital for surgery. She was a current 3/4 pack per day smoker and has been counseled multiple times (dating back to 2018). The patient has tried many different combinations of pharmacotherapy for smoking cessation. She was enrolled in NDQuits when discharged. At the 2-week follow-up phone call, the patient continues to remain tobacco free. She has COPD as well, and her primary care provider states that her breath sounds have improved significantly since she quit.

# TPCP Community Building

The effects of the pandemic and the changing world of tobacco and nicotine products have necessitated a recommitment to the partnership component of the TPCP. Coalition trainings, education around tobacco prevention and control, and data collection efforts to inform future work has been a primary focus during this biennium.

- *State and community collaboration*
- *TFND and vaping cessation support*
- *Vaping is a concern across the state*
- *Youth outreach and advocacy*
- *Community outreach and capacity building*

3



# TOBACCO IMPACT: TPCP PARTNER

Tobacco effects all North Dakotans, including those that do not use tobacco or nicotine.

“ I have been impacted by commercial tobacco use since I was a young child. Although I have never used tobacco in any form, I grew up with parents who smoked, although never in our home. My mom quit smoking shortly after the ashes she flicked from her cigarette landed on my hand and burned my skin. I was eight years old at that time, and she didn't do it purposely. The wind was blowing hard that day, at the outdoor event we were attending.

My father continued to smoke until 6 years ago when he was rushed to the ER with a TIA. He quit "cold turkey" and remains tobacco free to this day; however, he was diagnosed with lung cancer in August 2021 and since his diagnosis, has been receiving chemotherapy and radiation.

In my professional life many of the consumers I work with use some form of tobacco or vaping device. We refer many of our consumers to the Southwestern District Health Unit for assistance with tobacco cessation and witness a growing number of consumers who develop chronic health issues such as: cancers, COPD, emphysema, increased blood pressure, diabetes, etc.

”

- Chantel Zeller, Region 8 Branch Office Coordinator, Dakota Center for Independent Living



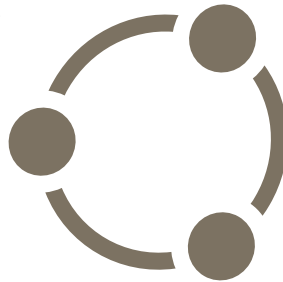
# TPCP'S APPROACH RELIES ON STRONG STATE AND LOCAL COLLABORATION

*TPCP is implemented by a cross-sector collaboration of individuals and organizations at the state and local levels. Each group plays a critical role in supporting and implementing TPCP activities, building on the strengths of one another's level of influence.*

## **State program staff**



Provide infrastructure to support collective TPCP activities (e.g., technical assistance, monthly calls, specific trainings, in-person meetings, site visits, and program administration).



## **Local TPCP grantees**



Lead and engage a cross-sector coalition of local-level partners to implement TPCP strategies (e.g., manage mutually beneficial partnerships, and implement sustainable policies, systems, and environmental change).

TFND and other contractors provide support and content area expertise (e.g., evaluation, media, quitline, and policy).



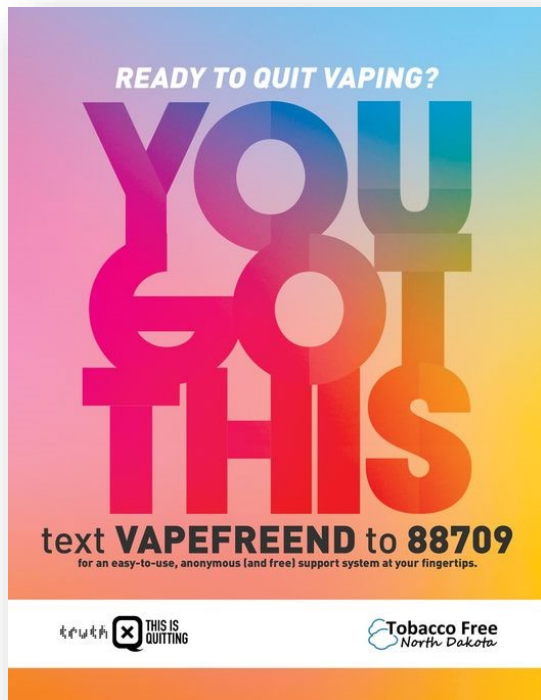
## **Local community partners**

Collaborate with TPCP grantees to implement TPCP strategies (e.g., implement projects, participate in coalitions, and spread the word).

# TFND OFFERS STATE-SPECIFIC QUITTING NICOTINE PROGRAM FOR YOUTH AND YOUNG ADULTS

*On April 1, 2022, North Dakota began using and promoting an anonymous, free resource – This Is Quitting – for North Dakota youth and young adults aged 13-24.*

**This is Quitting** sends users daily, age-appropriate messages tailored to their enrollment date or quit date, which can be set and reset via text message. The first messages they receive will ask for their age and product usage; messages are tailored based on that information.



Enroll by texting VAPEFREEND to 88709.

Those who are not ready to quit receive at least four weeks of messages focused on building skills and confidence. Users with a quit date receive one week of messages prior to that date and at least eight weeks of messages after their quit date. Users can text COPE, STRESS, SLIP or MORE throughout the program to receive instant support. Upon completion of the program, users receive periodic text messages from truth® and may continue to use supportive keywords.

Here's what some young people have to say:

*"They make it seem like there is a way out of addiction."* – Chase, teen

*They encourage me not to JUUL, they offer alternatives when I get a craving. I started going to the gym and working out instead of JUULing.* – Scarlett, young adult

*They remind me there's no room to turn back to something harmful.* – Meredith, young adult

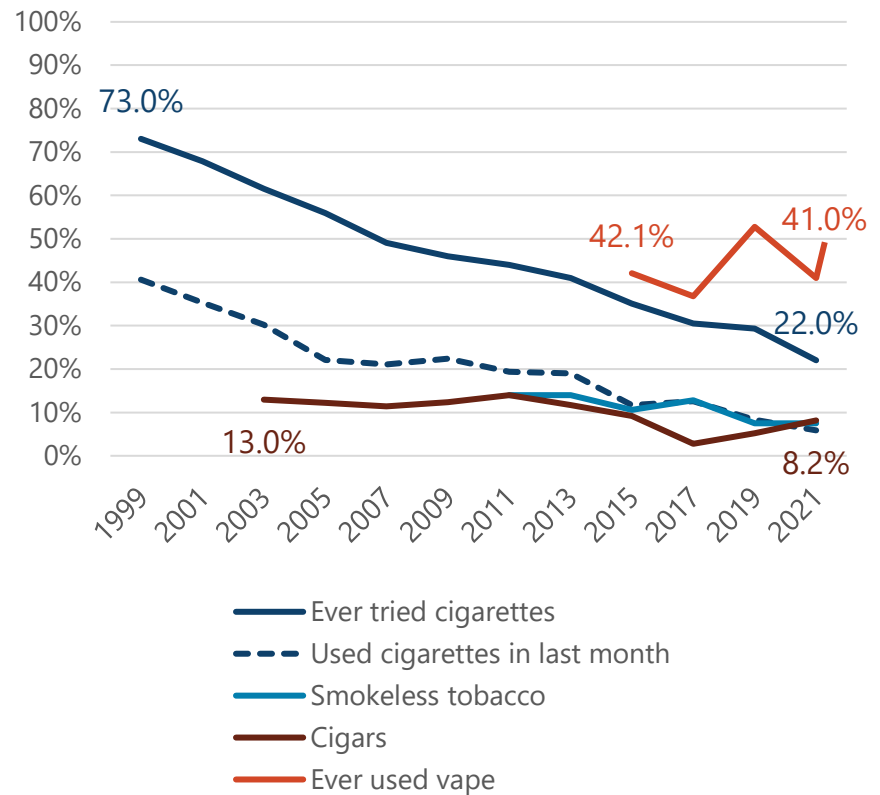
# VAPING IS OF CONCERN TO MANY IN THE STATE

According to the 2021 Youth Risk Behavior Survey, 38.6% of North Dakota high school students have tried electronic vapor products. Education and quitting resources are vital to reverse this trend.

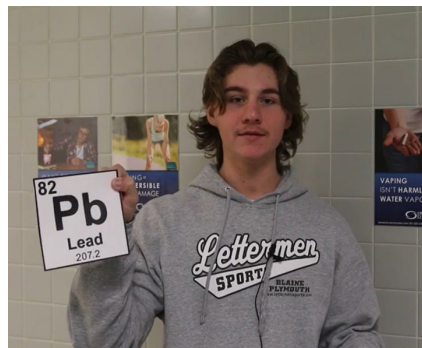
Cigarette use is down among high school students in North Dakota, though vaping rates are high.

Tobacco prevention and control has a strong evidence base and **demonstrated history of addressing nicotine addiction** through the prevention and cessation of combustible tobacco. This needs urgent attention and resources to address vaping while keeping the combustible product initiation on a downward trend.

North Dakota high school tobacco and vaping use (YRBS, 1999-2021)



NDQC grantee University of Mary promotes quitting and quit resources on campus on its Facebook for Respiratory Care Week in October 2022.



Ben Foster, TFND Video Essay Scholarship Contest Honorable Mention, "Do you think it's cool inhaling metals such as chromium, manganese, nickel, lead, and cadmium?"

# YOUTH OUTREACH AND ADVOCACY

*Big Tobacco Exposed is a College Graphic Design Contest by Bismarck-Burleigh Public Health (BBPH) and sponsored by TFND.*



Emily Salvey, Bismarck State College



Jakki Honeyman, United Tribes Technical College



Teigen O'Rourke, United Tribes Technical College

Emily Salvey from Bismarck State College won this year's contest with this submission. TPCP partners provided the 2<sup>nd</sup> and 3<sup>rd</sup> place winners with their award, both were from United Tribes Technical College. (below)



Heather Austin, TFND, Emily Salvey, Jordyn Schaeftbauer, BBPH



Big Tobacco Exposed finalists and TFND and BBPH staff.

# YOUTH OUTREACH AND ADVOCACY: NATIONAL YOUTH ADVOCATE OF THE YEAR

*Madeline Erickson from Bismarck was selected as a national Youth Advocate of the Year by Campaign for Tobacco Free Kids.*

A member of the Bismarck Break Free Youth Board, and a recent graduate of Saint Mary's Central High School, she was recognized by the Campaign for Tobacco Free Kids as a National Youth Advocate of the Year in 2021. Madeline held events at her high school, such as "Donut Day," which was a creative way to "Donut Smoke" and "Donut Vape." She also elevated the dangers of vaping and allowing cigars to be smoked in public settings currently protected by North Dakota's comprehensive smoke-free law.

“

*I became an advocate because I believe everyone deserves the right to be educated about the dangers of tobacco and vaping.*

*In my testimony I advocated for the youth and how they would not be able to make this decision. And how they would be stuck with cigar bars, a place which would harm their health.*

”

Madeline Erickson, Bismarck and CFTFK Youth Advocate of the Year, 2021



On September 29, 2021, Madeline Erickson from Bismarck was one of four youth to receive a Youth Advocate of the Year Award.



Madeline Erickson providing testimony to a legislative committee during the 2019 – 2021 biennial legislative session.

# COMMUNITY OUTREACH

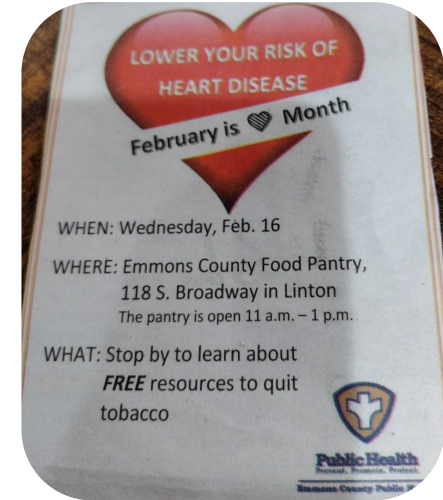
Grantees lead the way in educating their communities and providing local resources for prevention and cessation.



Sanford Medical Center Fargo campuses celebrate World COPD day and the Great American Smoke Out in November 2021. They provided gift bags, quit kits, and information for visitors and staff.



CHI St. Alexius Health COVID vaccination health fair in January 2022.



Emmons County Public Health offered free resources to Food Pantry consumers to quit tobacco for Heart Disease Awareness in February 2022.



Anabel DuFault, Fargo Cass Public Health and Officer Nielsen, School Resource Officer (SRO) presenting information on vaping to health care professionals in May 2022.



Chelsea Ridge, Upper Missouri Health District Health Unit discussing the Great American Smoke Out for local newscast in November 2022.

# COMMUNITY OUTREACH: BUILDING CAPACITY

TPCP maintained the convening of partners, virtually and in person, throughout the biennium.

The TPCP is unique in that partners were convened, usually virtually, throughout the pandemic to ensure work on addressing tobacco use and nicotine addiction continued.

Throughout the biennium, despite many resources being diverted to address the global pandemic, the TPCP continued to convene and facilitate events, including strategically developed Quarterly Partners meetings. These convenings allowed work to continue in urgent areas, such as ENDS/vaping and the changing tobacco control landscape.

“

*It takes a lot to maintain the relationships...lots of communication and talking with groups. Know what your ask is and what's in it for them. Meeting with a purpose. Allowing people to be as involved as they can.*

Tom Volk, Drug Prevention Specialist at HHS

”

“

*It is really about the relationships you have with people in your community.*

Sue Kahler, Bismarck Burleigh Public Health

”

**Addressing Electronic Nicotine Delivery Systems and Vaping in North Dakota**

February 9 and 10, 2022, from 1:00-3:00pm CT  
To register for one or both days of this free virtual summit, please visit <https://bit.ly/endsummit2022>

2.0 Contact Hours available in each session for TTS and ND RTs. This activity has been submitted to the Ohio Nurses Association for approval to award contact hours. The Ohio Nurses Association is accredited as an approver of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation. ©2021-001-971

DATE	TIME	TOPIC	SPEAKER
FEBRUARY 9, 2022	1:00-1:30	Heated Tobacco Products (IQOS)	Jon Ebbert, MD Mayo Clinic
	1:30-2:00	ENDS and "harm reduction" pros and cons	J. Taylor Hays, MD Mayo Clinic
	2:00-3:00	Enhancing Mental Health Outcomes and Recovery from Substance Use Disorders by Addressing Smoking	Brian Hurley, MD, MBA, DFASAM President-Elect, American Society of Addiction Medicine
FEBRUARY 10, 2022	1:00-1:45	Say what?! THAT'S in my e-cig?	Kolby Schaeffer Fraese, DNP, RN-BC North Dakota State University Kelly Buettner-Schmidt, PhD, RN FAAN North Dakota State University
	1:45-2:30	FDA's Premarket Review Process: What's the Latest?	Natalie Hemmerich, JD, MPH Public Health Law Center
	2:30-3:00	A brief overview of recent and upcoming Legislative efforts	Heather Austin, Executive Director Tobacco Free North Dakota



**Education about vaping continued throughout the biennium.** The ENDS Summit continued during the pandemic; this Summit was started in 2019, and the past two have been held virtually. This event is free to attendees and the virtual format made it accessible to partners across the state.



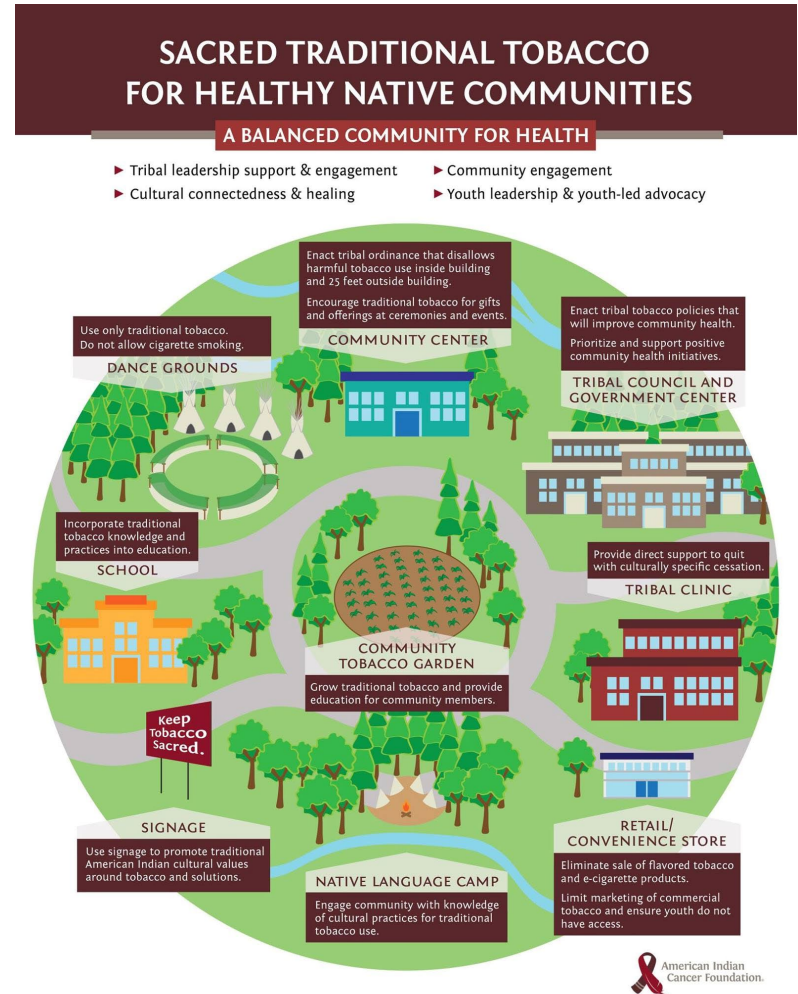
# SACRED TOBACCO EDUCATION AND DATA COLLECTION

## Supporting Tribal Sovereignty within the context of Tribal Health

The American Indian Adult Tobacco Survey, in partnership with University of North Dakota, will provide accurate data on tobacco use in North Dakota's tribal nations. This data will inform future work, led by each sovereign nation and supported by the TPCP.



- 2019.** Initial project development strategy, expectations between the TPCP and UND.
- 2020.** Project coordinator training with the American Indian Cancer Foundation.
- 2021.** Tribal Council approval and IRB for MHA Nation, hiring and training Indigenous staff.
- 2022.** Completed data collection in MHA Nation. Standing Rock IRB obtained and data collecting in process.
- 2023.** Partner with the other two tribal nationals to complete survey, plus one urban area.



From <https://keepitsacred.itcmi.org/tobacco-and-tradition/traditional-tobacco-use/>



# Opportunity sparked by TPCP

There are several opportunities that are in progress and that will continue to facilitate work conducted during the next biennium. These are highlighted in the following pages.

- *Agency integration to collaborate on retailer training, ND Medicaid, and expanded tobacco use treatment*
- *HHS and Mayo Clinic virtual interactive educator training*
- *Lung cancer prescreening in tobacco use treatment*
- *Vaping research*

4

## TOBACCO IMPACT: FORMER TOBACCO USER

Quitting tobacco can take many attempts. It is never too late to quit tobacco to see positive impacts on quality of life, and overall mental and physical health.

“

We recently had a patient who was seen in our outpatient tobacco program after a recent hospital stay. He had been smoking 3 packs of cigarettes per day for more than 35 years. He was recently able to cut back to 4 cigarettes per day and a month after than on September 15<sup>th</sup> he became tobacco free after countless attempts at trying to quit on his own.

As healthcare professionals we know that quitting tobacco is one of the most important things a patient can do to improve their health regardless of their age, or how long they have been smoking. Helping our communities quit using tobacco products makes a direct impact of state and our local economy.

- Michelle Earl, Altru Health System

”



# NORTH DAKOTA HHS AGENCY INTEGRATION SUPPORTS EXPANSION OF COLLABORATION AND PARTNERSHIPS

*The North Dakota Department of Health and the North Dakota Department of Human Services were integrated on September 1, 2022, allowing for expanded collaborations.*

## Retailer training and support

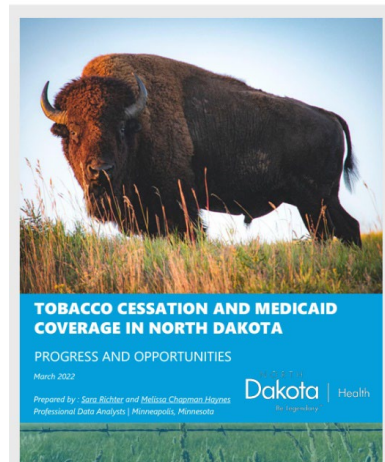
Retailers across the state remain critical partners in tobacco prevention and control efforts. Since 2017, the TPCP has partnered with Substance Abuse staff at the state to implement retailer education, compliance, and support and technical assistance with signage.

The federal (2019) and North Dakota (2021) passage of Tobacco 21 laws, combined with COVID 19–related staffing challenges in retail environments, may have contributed to increased failure rates of retail sales of tobacco products to underage purchasers during law-enforcement compliance checks. These failures may be an opportunity for HHS to expand collaborative efforts to work with communities and retailers to address these threats to North Dakota youth effectively.

## North Dakota Medicaid and TPCP

In 2022, these two offices collaborated to share data and conduct and analysis into the use of tobacco cessation benefits by North Dakotans using Medicaid.

Some results are shared in this report; the full report is available [here](#).



## Expanded tobacco use treatment

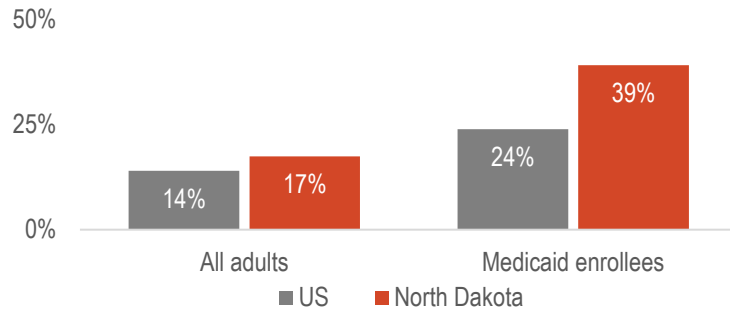
The infrastructure built over the past decade through the NDQC has laid the groundwork for expanded tobacco use treatment, including through partnerships with pharmacists (discussed in the “Ingenuity” section of this report).

Expanded work has also included tobacco use treatment as part of lung cancer screening efforts. Work conducted at one of the NDQC grantee sites, Altru, is continuing through TPCP support.

# COLLABORATION AND DATA SHARING BETWEEN TPCP AND NORTH DAKOTA MEDICAID

*Data monitoring informs discussions and future programmatic decisions by both programs.*

Cigarette smoking rates are higher in **North Dakota** than in the **U.S. overall**, even more so among **Medicaid enrollees in North Dakota** than in the **U.S. overall**.<sup>22</sup>



North Dakotans are utilizing cessation coverage across the state, though the western part of the state has fewer claims. According to the 2020 Annual Technical Report of the North Dakota Medicaid Expansion Program, patients using tobacco are being advised to quit and discussing cessation medications at lower rates than the national benchmarks.<sup>31</sup>

CAPHS Metric (rolling 2-year averages)*	2019 Rate	2020 Rate	Compared to Benchmark
Advising smokers to quit	76.9%	75.2%	◆
Discussing cessation medications	52.1%	51.8%	◆
Discussing cessation strategies	48.1%	50.0%	◆◆

\* Table taken from 2020 annual technical evaluation report

◆ MCO rate is equal to or exceeds the national average, but does not meet the 75<sup>th</sup> percentile

◆◆ MCO rate is below the national average

## Major milestones in Medicaid coverage

- 2010 ● The Affordable Care Act required Medicaid programs to cover tobacco cessation counseling and medications for pregnant women.
- 2014 ● North Dakota Medicaid adopted the Medicaid eligibility expansion criteria. The Affordable Care Act prohibits state Medicaid programs from excluding any of the seven FDA-approved tobacco cessation medications (Chantix, bupropion, nicotine patches, nicotine gum, nicotine lozenges, nicotine nasal spray, and nicotine inhaler) from traditional Medicaid coverage.
- 2020 ● North Dakota Medicaid removed the requirement for prior authorization from a physician, making cessation medications more widely available.
- 2022 ● North Dakota Medicaid expanded tobacco cessation counseling coverage to include all enrollees.

# BEHAVIORAL HEALTH AND HUMAN SERVICE CENTERS (HSC)

## *Behavioral Health Treatment facilities at HSCs*

Behavioral health services in North Dakota are provided through eight HSCs, the North Dakota State Hospital, and through contracts. There are a total of 106 North Dakota behavioral health facilities included in the 2020 National Survey of Substance Abuse Treatment Services (N-SSATS); 98 were eligible and 87 were included in the 2020 report. In late 2020, all eight Regional HSC finished a rigorous accreditation from the Council on Accreditation for outpatient behavioral health services. This infrastructure is important in providing high-quality outpatient services for North Dakotans across the state.

A Tribal Community Public Health Survey 2020 identified a specific need to develop additional capacity for behavioral health and for substance abuse programs for tribal populations in the state.<sup>32</sup>

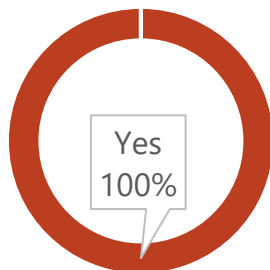
**75%** of the state's Federally Qualified Health Centers are funded by the NDQuits Cessation Grant Program.

**17** TTS are at the Southeast HSC and eight are Certified TTS. There is one TTS on each behavioral health team.

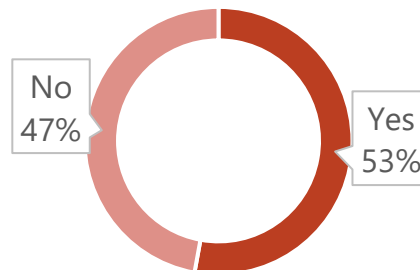
**30%** of Southeast HSC consumers are being reached by TTS, or about 810 of their 2,700 consumers.<sup>34</sup>

## Of the 87 behavioral health facilities included in the N-SSATS:<sup>33</sup>

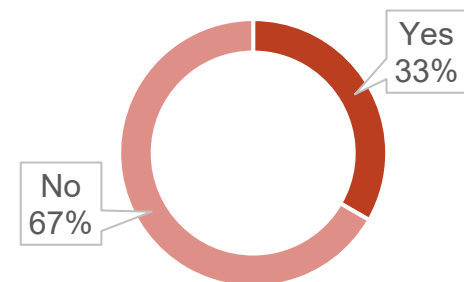
### Smoke-free policy is in place at all HSC



### Health system changes that support cessation



### Offers medication for tobacco treatment




# HEALTH AND HUMAN SERVICES AND MAYO CLINIC VIRTUAL INTERACTIVE EDUCATOR TRAINING

*Educators working with youth and young adults desire more information on vaping and nicotine addiction.*

The TPCP and Mayo Clinic  
Educator Training will address:

- Different ENDS/vape devices
- How nicotine affects the adolescent brain
- Neurobiology of addiction and its effects on mental health and other drugs
- Withdrawal symptoms

Further, educators will learn about motivational interviewing, referring to outside evidence-based resources, and preparing for real life student scenarios.



**Addressing Youth and Young Adult  
Nicotine Dependence in North Dakota**

NDQuits and Mayo Clinic present a free, virtual, and interactive training for school and university staff.

**You will learn how to:**

- Recognize electronic nicotine (vape) devices
- Understand brain development and the impact of nicotine on mental health, cognition, other drug use, and addiction
- Identify strategies for intervention and engaging adolescents and young adults with a restorative approach

# LUNG CANCER IS THE #1 CAUSE OF CANCER DEATHS FOR NORTH DAKOTA MEN AND WOMEN <sup>35</sup>

*Tobacco use is the leading risk factor for lung cancer. Risk increases by smoking and being exposed to secondhand smoke.*



*The U.S. Preventive Services Task Force recommends annual screening for lung cancer in adults aged 50-80 years old who have a 20 pack per year smoking history and currently smoke or have quit in the past 15 years.*

## State of Lung Cancer in North Dakota, 2022 Infographic – North Dakota’s ranking as compared to other states in the U.S. <sup>36</sup>



Altru Health System in Grand Forks, which has been working on tobacco cessation systems change and education with the TPCP since 2014, has established processes to provide counseling, bridge NRT, and referrals to the quitline (including to quitlines in neighboring states, as appropriate). The champions for this work were well positioned to receive funding from the North Dakota Comprehensive Cancer Control Program (NDCCCCP) in 2019 to start integrating tobacco treatment into lung cancer screening efforts.

During this biennium, when the NDCCCCP funding was no longer available, the **TPCP started to provide Altru funding to continue integrated tobacco treatment and lung cancer screening.** This cross-cutting work will serve as a model for other grantees moving forward.



# INTEGRATION OF TOBACCO CESSATION INTO LUNG CANCER SCREENING PARTNERSHIPS

*Two of the NDQC grantees were able to continue or deepen work in integrating tobacco and nicotine dependence treatment into lung cancer screening due to TPCP support.*

Altru Health System in Grand Forks integrates its tobacco treatment and lung cancer screening efforts. Following the USPSTF Guidelines, Altru assesses lung cancer risk using low dose lung CT, provides smoking cessation by a TTS for all current smokers, and offers continuity of care and ongoing monitoring. Altru reported a **207% increase of the low-dose CT scan** after starting this initiative.<sup>37</sup>

CHI St. Alexius Health opened a Hematology and Oncology Clinic in 2021. One of the goals of CHI St. Alexius Health TTS is to make it a standard protocol to counsel all new patients that are seen at the Hematology and Oncology Clinic who indicate they are tobacco users.

There is a lot of unmet opportunity – fewer than 6% of people who are eligible for early screening take advantage of it, though results from a recent study indicated patients diagnosed with lung cancer at an early-stage CT screening have a 20-year survival rate of 80%.<sup>38</sup>

“

*As Tobacco Cessation Specialists we see our Altru Cancer Center as a tremendous missed opportunity to address tobacco cessation. Documented risks associated with continued smoking following cancer diagnosis include decreased survival time; increased complications from surgery, radiation, and chemotherapy; and increased risk of second primary tumors. In recognition of this treatment gap, we hope to integrate an opt out approach into our cancer center in 2023-2024 for all our patients that utilize tobacco products at our Altru Cancer Center. Working toward this goal is something we are very excited to provide for our patients here at Altru.*

”

Michelle Earl, Altru Health System

# THE CHANGING LANDSCAPE OF TOBACCO CONTROL

Flavors that entice youth to try nicotine products, synthetic nicotine, and ENDS/vape products contribute to a changing product and substance landscape.

## Addictive regardless of product type

Due to evidence that pointed to marketing to young individuals through free samples, use of social influencers, and misleading the public on nicotine content, JUUL is required to pay millions of dollars to 34 states and territories, including over \$6 million to North Dakota over the next decade.<sup>39</sup>



Photos from Kelly Buettner-Schmidt, PhD, North Dakota State University

## Delayed Policy Actions related to youth use

Gaps in federal policy have allowed for an explosion of products, including flavored products. Despite the federal rulings against closed pod e-cigarettes (e.g., JUUL), exemptions for open-system, disposable, and refillable devices remain.

The National Youth Tobacco Survey, 2022, indicated that more than 2.5 million high school and middle school students currently use e-cigarettes.<sup>40</sup> Among these youth:

**85%** use flavored e-cigarettes

**55%** use disposable e-cigarettes

**28%** use an e-cigarette product every day

## Synthetic nicotine obscures regulation

Synthetic nicotine is created in a laboratory and brought to the market in an attempt to get around regulatory guidance from the FDA. Numerous e-cigarette makers switched to synthetic nicotine while the FDA determined how to regulate synthetic nicotine.

In March 2022, Congress closed the synthetic nicotine loophole. However, the federal deadlines have not been followed, and **these products are still on the market.**

Often, these products are marketed as “tobacco-free” and “healthy,” which is misleading because the nicotine in these products is still addictive.

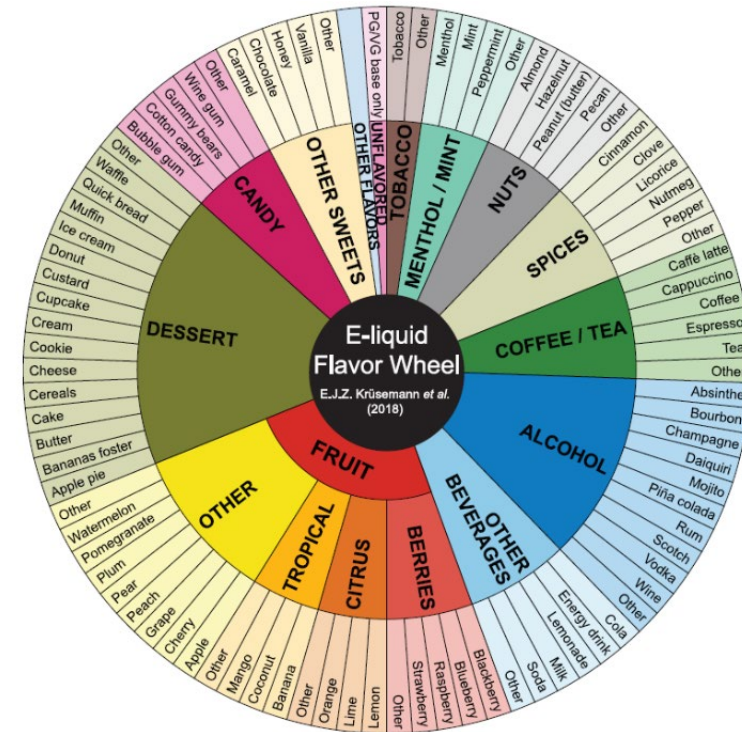
# NORTH DAKOTA-SPECIFIC E-LIQUID STUDIES

Research conducted at North Dakota State University examines labeling discrepancies, chemical components, and the abundance of flavors in e-cigarette products sold in the state.

## Study Highlights

- Quality Control Concerns
- Inaccurate nicotine content
- E-Liquids Compounded in Shop Lack Quality Control
- Concerns Related to Using E-Liquids and ENDS for Quitting Tobacco Use
- Clinician Perspective and Clinical Guidelines

Flavor wheel of e-liquid labels (from Krüsemann et al, 2019)<sup>42</sup>



The flavor wheel is based upon information gathered from the e-liquid labels; NDSU's Kelly Buettner-Schmidt, PhD, and colleagues are analyzing e-liquid labels for flavor and other information of e-liquids purchased in North Dakota. A future publication will report on a chemical analysis of ingredients found in e-liquids in North Dakota.

*"...research has shown that ENDS (electronic nicotine delivery systems) use does not lead to quitting tobacco or other nicotine products; more than half of those who started using ENDS for tobacco cessation simply transferred their nicotine dependence to ENDS..."* <sup>41</sup>

- Kelly Buettner-Schmidt, PhD, NDSU

# SMOKE-FREE AND TOBACCO-FREE COMMUNITIES

*Smoke-free laws protect North Dakotans from the 7,000 chemicals in combustible tobacco products.*

North Dakota's comprehensive smoke-free laws, and local tobacco-free policies, serve to protect all North Dakotans from the well-documented harms of secondhand smoke exposure. Further, third hand smoke found in carpet and other materials where there has been smoking also pose health risks to non-smokers, particularly children. North Dakota TPCP, partners, and communities continue to educate on the health and cost benefits of smoke-free and tobacco-free environments.



“

*We currently have only one tobacco free park in the county. There is massive room for improvement with several additional parks not currently smoke or tobacco free in our county. Additional information and examples on a national and a state level would be very helpful to achieving additional tobacco free parks locally.*

”

- Local tobacco coordinator, spring 2022

# SUMMARY

Tobacco affects all North Dakotans, including those that do not use tobacco or nicotine. TPCP has a **history of successfully addressing nicotine addiction**. This needs urgent attention and resources to address vaping while keeping the combustible product initiation on a downward trend.

TPCP exhibits **ingenuity** through promising work with pharmacists, tribal coalition, and helping pregnant North Dakotans quit tobacco.

TPCP implements data-informed strategies through a relationship-first approach to fit **community** needs and priorities.

Tobacco impacts all North Dakota communities and contributes to the leading cause of death in the state, heart disease.

TPCP has a demonstrated, **enterprising** history of effective, contextually relevant programs – NDQuits, TTS, Quit Week, YAS.

HHS agency integration sparks **opportunity** to build and expand existing work with retailer partnership, ND Medicaid, and expanded tobacco use treatment.

# REFERENCES

- <sup>1</sup> NIDA. 2021, April 12. Is nicotine addictive? Retrieved from <https://nida.nih.gov/publications/research-reports/tobacco-nicotine-e-cigarettes/nicotine-addictive>
- <sup>2</sup> From: [www.e-cigarettes.surgeongeneral.gov](http://www.e-cigarettes.surgeongeneral.gov)
- <sup>3</sup> From Truth Initiative, <https://truthinitiative.org/research-resources/emerging-tobacco-products/nicotine-use-and-stress>
- <sup>4</sup> NIDA. 2021, April 12. What are the physical health consequences of tobacco use?. Retrieved from <https://nida.nih.gov/publications/research-reports/tobacco-nicotine-e-cigarettes/what-are-physical-health-consequences-tobacco-use>.
- <sup>5</sup> FDA, Health Effects of Tobacco Use. Retrieved from <https://www.fda.gov/tobacco-products/public-health-education/health-effects-tobacco-use#:~:text=Tobacco%20use%20has%20serious%20effects,than%20480%2C000%20deaths%20each%20year>.
- <sup>6</sup> Garrett BE, Martell BN, Caraballo RS, King BA. Socioeconomic Differences in Cigarette Smoking Among Sociodemographic Groups. *Prev Chronic Dis* 2019;16:180553. DOI: <http://dx.doi.org/10.5888/pcd16.180553>
- <sup>7</sup> U.S. Department of Health and Human Services. The Health Consequences of Smoking—50 Years of Progress. A Report of the Surgeon General. Atlanta, GA: US Dept of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2014.
- <sup>8</sup> Jacobs, E.J.; Newton, C.C.; Carter, B.D.; Feskanich, D.; Freedman, N.D.; Prentice, R.L.; Flanders, W.D. (2015). What proportion of cancer deaths in the contemporary United States is attributable to cigarette smoking? *Annals of Epidemiology*, 25(3), 179-182. <https://www.sciencedirect.com/science/article/pii/S1047279714005092>.
- <sup>9</sup> National Center for Health Statistics: North Dakota. <https://www.cdc.gov/nchs/pressroom/states/northdakota/nd.htm>.
- <sup>10</sup> North Dakota 2022 Diabetes Report, [https://ndlegis.gov/files/committees/67-2021/23\\_5151\\_03000appendixd.pdf](https://ndlegis.gov/files/committees/67-2021/23_5151_03000appendixd.pdf).
- <sup>11</sup> National Cancer Institute. (2017). Harms of Cigarette Smoking and Health Benefits of Quitting. Available at <https://www.cancer.gov/about-cancer/causes-prevention/risk/tobacco/cessation-fact-sheet#:~:text=Of%20the%20more%20than%207%2C000,least%2069%20can%20cause%20cancer>.
- <sup>12</sup> Know The Risks: E-cigarettes and Young People. [www.e-cigarettes.surgeongeneral.gov](http://www.e-cigarettes.surgeongeneral.gov).
- <sup>13</sup> Sacred Willow: Keeping Tobacco Traditional, <http://keepitsacred.itcml.org/wp-content/uploads/sites/5/2017/11/sacred-willow-final-draft-3rd-edition-2017-2.pdf>
- <sup>14</sup> US smoking deaths source, [https://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/fast\\_facts/diseases-and-death.html](https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/diseases-and-death.html)
- <sup>15</sup> US Homicide deaths source, [https://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/fast\\_facts/diseases-and-death.html](https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/diseases-and-death.html)
- <sup>16</sup> Motor Vehicle Fatalities source, Stewart, T. (2022, March). Overview of motor vehicle crashes in 2020 (Report No. DOT HS 813 266). National Highway Traffic Safety Administration.
- <sup>17</sup> Suicide data source, <https://wonder.cdc.gov>
- <sup>18</sup> Drug-Induced deaths source, CDC/NCHS, National Vital Statistics System, Mortality. CDC WONDER, Atlanta, GA: US Department of Health and Human Services, CDC; 2021. <https://wonder.cdc.gov/>.
- <sup>19</sup> Alcohol-related deaths source: Centers for Disease Control and Prevention. Alcohol Related Disease Impact (ARDI) application, 2022. Available at [www.cdc.gov/ARDI](http://www.cdc.gov/ARDI).
- <sup>20</sup> US COVID deaths source, Murphy SL, Kochanek KD, Xu JQ, Arias E. Mortality in the United States, 2020. NCHS Data Brief, no 427. Hyattsville, MD: National Center for Health Statistics. 2021.
- <sup>21</sup> North Dakota COVID deaths source, <https://www.hhs.nd.gov/sites/www/files/documents/DOH%20Legacy/Vital/2020VES.pdf>.
- <sup>22</sup> Professional Data Analysts (PDA). Tobacco Cessation and Medicaid Coverage in North Dakota: Progress and Opportunities. Available online at [https://www.health.nd.gov/sites/www/files/documents/Files/HSC/CHS/Tobacco/Reports/2021-NDDoH\\_Medicaid\\_Data\\_Report\\_March\\_22.pdf](https://www.health.nd.gov/sites/www/files/documents/Files/HSC/CHS/Tobacco/Reports/2021-NDDoH_Medicaid_Data_Report_March_22.pdf).

## REFERENCES (CONTINUED)

- <sup>23</sup> North Dakota Health and Human Services, Tobacco Prevention and Control Program performance dashboard. Available at <https://www.health.nd.gov/prevention/tobacco-prevention-control/tobacco-surveillance-data>.
- <sup>24</sup> Odney Advertising polls (2013, 2015, 2017).
- <sup>25</sup> Professional Data Analysts (PDA). North Dakota Policy Readiness Toolkit. Minneapolis, MN.
- <sup>26</sup> Professional Data Analysts (PDA). NDQuits annual summary and key metrics report, FY21. Minneapolis, MN.
- <sup>27</sup> Professional Data Analysts (PDA). NDQC quarterly summary tracking and graphs. Minneapolis, MN.
- <sup>28</sup> Tobacco Free North Dakota (TFND). Quit Week social media metrics, presented at the Quarterly Partners Meetings. Bismarck, ND.
- <sup>29</sup> Professional Data Analysts (PDA). Quit Week and NDQuits enrollments tracking, FY20-FY22. Minneapolis, MN.
- <sup>30</sup> Professional Data Analysts (PDA). NDQuits Cessation Program (NDQC): CHI St. Alexius Health Case Study, 2020. Minneapolis, MN. Available at [https://www.health.nd.gov/sites/www/files/documents/Files/HSC/CHS/Tobacco/Reports/NDQC\\_FY20\\_CHI-St\\_Alexius\\_Health\\_Case\\_Study.pdf](https://www.health.nd.gov/sites/www/files/documents/Files/HSC/CHS/Tobacco/Reports/NDQC_FY20_CHI-St_Alexius_Health_Case_Study.pdf).
- <sup>31</sup> North Dakota Department of Human Services. North Dakota Medicaid Expansion Program. Annual Technical Review Report, Measurement Year 2020. Qlarant. September 2021.
- <sup>32</sup> 'Ulu'ave, K., & Redvers, N. (2020). Summary of the Tribal Community Public Health Survey. Submitted to the North Dakota Department of Health on October 12, 2020.
- <sup>33</sup> National Survey of Substance Abuse Treatment Services (N-SSATS), Data on Substance Abuse Treatment Facilities, 2020. Available at <https://www.samhsa.gov/data/report/national-survey-substance-abuse-treatment-services-n-ssats-2020-data-substance-abuse>.
- <sup>34</sup> Reported by Southwest Human Service Center at the August 2021 TPCP Quarterly Partners Meeting.
- <sup>35</sup> American Cancer Society. Cancer Statistics Center – North Dakota At a Glance. <https://cancerstatisticscenter.cancer.org/#!/state/North%20Dakota>.
- <sup>36</sup> American Lung Association (2021). State of Lung Cancer in North Dakota. Available at <https://www.lung.org/research/state-of-lung-cancer/states/north-dakota#:~:text=The%20rate%20of%20new%20lung,it%20in%20the%20average%20tier>.
- <sup>37</sup> Reported by Michelle Earl from Altru Health at the November 2022 TPCP Quarterly Partners Meeting.
- <sup>38</sup> Lung Cancer Screening Dramatically Increases Long-term Survival Rate. Presented at the annual meeting of the Radiological Society of North America, November 2022. Summary available here, <https://www.newswise.com/articles/lung-cancer-screening-dramatically-increases-long-term-survival-rate?sc=mw&xy=5013137>.
- <sup>39</sup> <https://attorneygeneral.nd.gov/news/attorney-general-drew-wrigley-reaches-settlement-agreement-juul-labs>
- <sup>40</sup> Food and Drug Administration. Results from the Annual National Youth Tobacco Survey, 2022, <https://www.fda.gov/tobacco-products/youth-united-states-and-tobacco/results-annual-national-youth-tobacco-survey>.
- <sup>41</sup> Buettner-Schmidt, K., Swanson, K., Maack, B., Barnacle, M., Miller, D., Orr, M., & Gag, M. (2021, January). E-cigarettes for quitting tobacco: Not the solution! School of Nursing, North Dakota State University.
- <sup>42</sup> Erna J Z Krüsemann, MSc, Sanne Boesveldt, PhD, Kees de Graaf, PhD, Reinskje Talhout, PhD, An E-Liquid Flavor Wheel: A Shared Vocabulary Based on Systematically Reviewing E-Liquid Flavor Classifications in Literature, *Nicotine & Tobacco Research*, Volume 21, Issue 10, October 2019, Pages 1310–1319, <https://doi.org/10.1093/ntr/nty101>.

# Appendix

Ten-year surveillance data for cigarette prevalence provides evidence that tobacco prevention and control is effective. Trends for use of electronic vaping devices among both adults and youth are concerning, and trends show need for urgent attention.

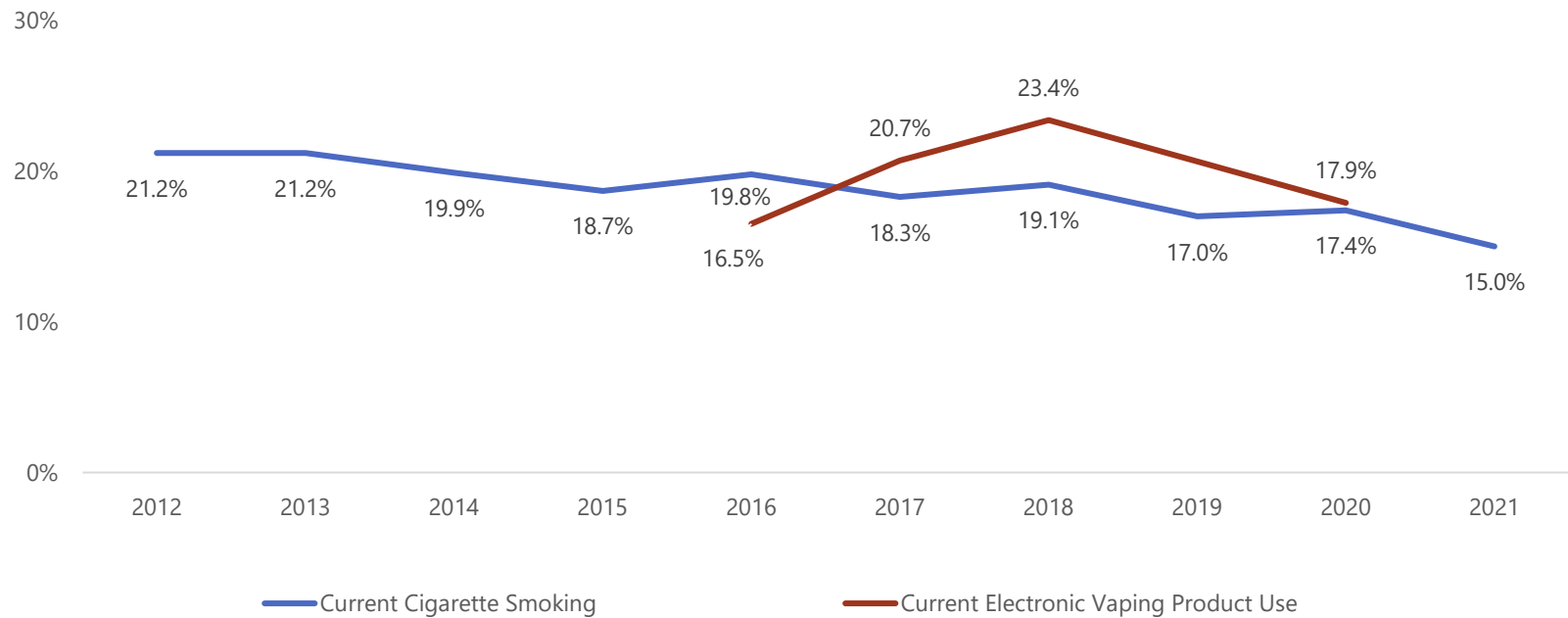
- *Adult current cigarette smoking and adult current electronic vaping*
- *Youth current cigarette smoking and youth current electronic vaping*
- *Current cigarette smoking among pregnant women*
- *Current cigarette smoking among American Indian adults*
- *Tobacco surveillance data*



# ADULT CURRENT CIGARETTE SMOKING AND ADULT CURRENT ELECTRONIC VAPING PRODUCT USE

*Over the past decade there has been a statistically significant reduction in adult cigarette smoking; current adult use of electronic vaping products is of concern.*

Adult Current Cigarette Smoking and Adult Current Electronic Vaping Product Use

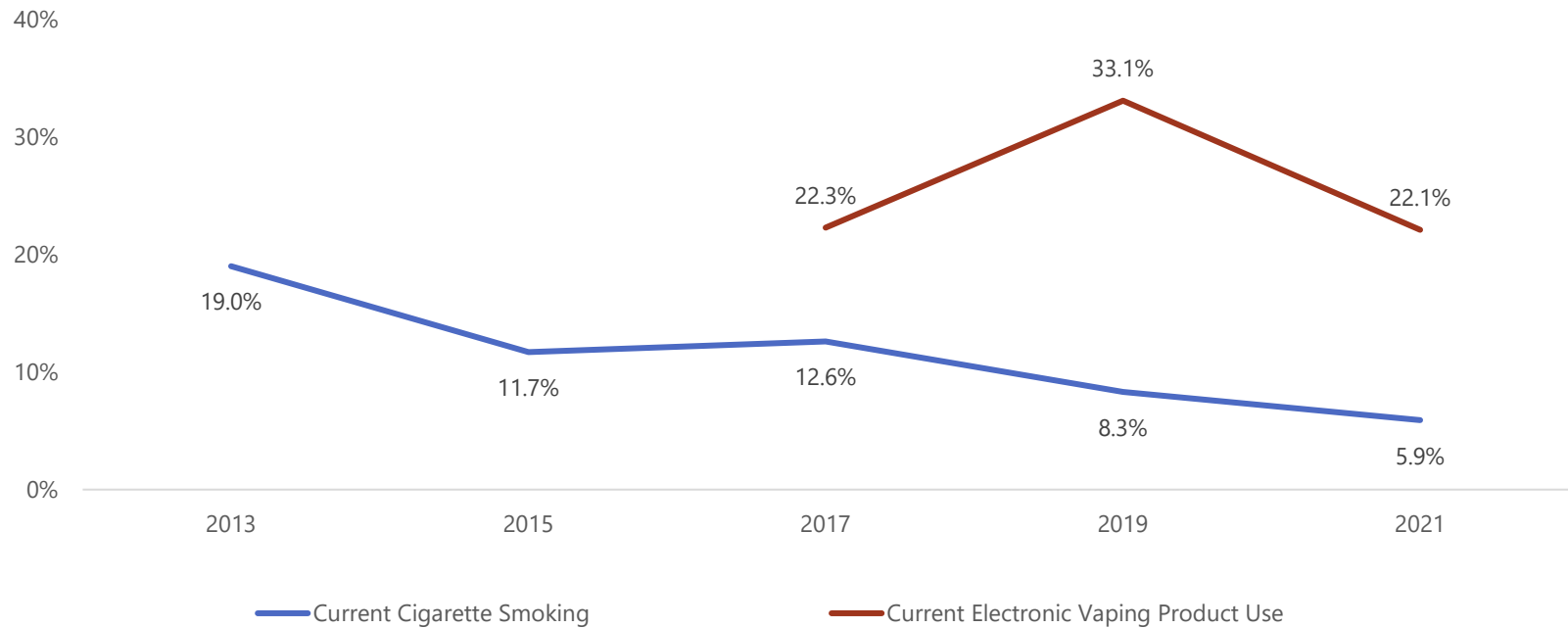


Source: North Dakota Behavior Risk Factor Surveillance System (BRFSS)

# YOUTH CURRENT CIGARETTE SMOKING AND CURRENT ELECTRONIC VAPING PRODUCT USE

*The high school cigarette smoking rate is currently 5.9%; however, the 2017-2021 rates of electronic use are higher than cigarette use was in 2013.*

Youth Current Cigarette Smoking and Current Electronic Vaping Product Use

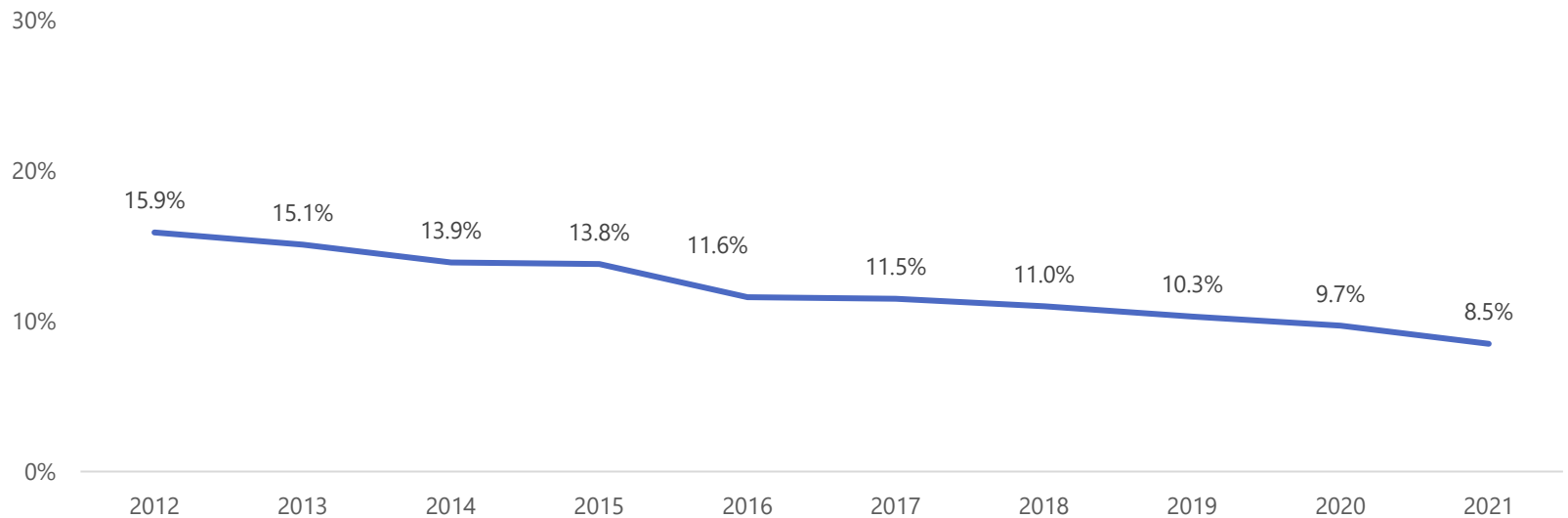


Source: North Dakota Youth Risk Behavior Survey (YRBS, Grades 9-12)

# CURRENT CIGARETTE SMOKING AMONG PREGNANT WOMEN IN NORTH DAKOTA

*There has been a continued reduction in cigarette smoking among pregnant women in North Dakota.*

Current Cigarette Smoking Among Pregnant Women

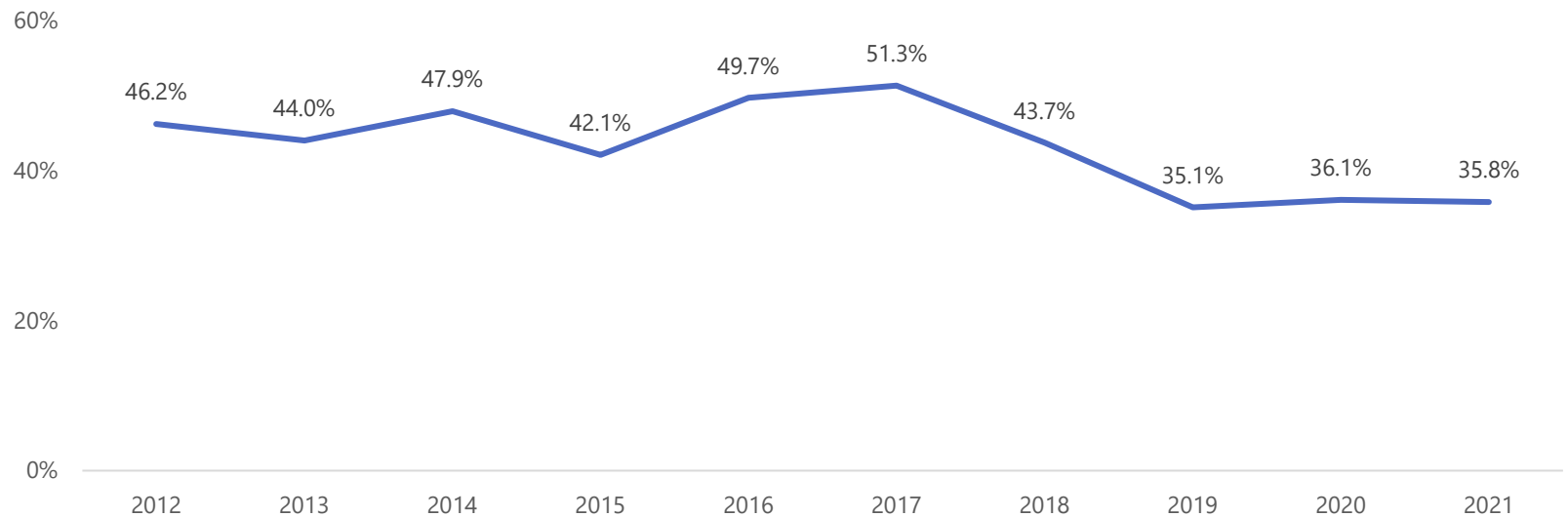


Source: North Dakota Vital Statistics

# CURRENT CIGARETTE SMOKING AMONG AMERICAN INDIAN ADULTS

*Current cigarette smoking among American Indian adults in North Dakota is more than double the general population, though there has been a trending decrease over the past decade.*

Current Cigarette Smoking Among American Indian Adults



Source: North Dakota Behavior Risk Factor Surveillance System (BRFSS)

# TOBACCO SURVEILLANCE DATA

Indicator	2017	2018	2019	2020	2021
<b>Tobacco Use</b> (Used at least once in past 30 days)					
<b>Cigarette Smoking</b>					
Adult (BRFSS) <sup>1</sup>	18.3	19.1	17.0	17.4	15.0
High School (YRBS) <sup>1</sup>	12.6		8.3		5.9
American Indian <sup>2</sup>	51.3	43.7	35.1	36.1	35.8
Pregnant Women <sup>3</sup>	11.5	11.0	10.3	9.7	8.5
Low Income <sup>4</sup>	33.4	34.7	30.6	31.2	29.7
Low Education <sup>5</sup>	31.0	33.5	27.7	39.2	36.0
<b>Smokeless Tobacco<sup>6</sup></b>					
Adult Males (BRFSS <sup>*</sup> )	11.6	12.0	11.8	11.1	10.9
High School Males (YRBS)	12.8		7.5		7.5
<b>Cigars<sup>7</sup></b>					
Adult (ATS)	5.3		4.3		
High School (YRBS)	8.2		5.2		2.8
<b>E-Cigarettes<sup>8</sup></b>					
Adult (ATS)	19.6		22.1		
Adult (BRFSS <sup>*</sup> )	20.7	23.3		17.9	
High School (YTS)	19.1		29.4		
High School (YRBS)	20.6		33.1		21.2
<b>Any Tobacco Product<sup>9</sup></b>					
Adult (BRFSS <sup>*</sup> )	23.4	25.5		22.9	
High School (YRBS)	27.0		34.7		23.0
<b>Tobacco Use Initiation</b>					
Adult - Ever tried electronic cigarettes <sup>10</sup>	20.6	27.2		25.1	
High School - Ever tried electronic cigarettes <sup>10</sup>	41.0		52.8		38.6
High School cigarette use before age 13 <sup>11</sup>	35.5		40.7		
High School smokeless tobacco use before age 13 <sup>12</sup>	26.1		27.1		
<b>Tobacco Consumption</b>					
Cigarettes Sold - in millions (ND Tax Commission)	966	936	890	885	
Annual Cigarette Tax Revenue - in millions	21.2	20.6	19.6	19.5	
Annual Other Tobacco Tax Revenue - in millions	7.0	7.1	7.1	6.9	
<b>Cessation</b>					
<b>Cigarette Smoking Quit Attempts</b>					
Adult (BRFSS <sup>*</sup> )	54.6	54.0	55.1	50.0	
High School (YRBS)	50.3		54.0		30.9
NDQuits - Total Enrolled <sup>13</sup>	3,266	3,401	3,029	2,533	1,976
NDQuits - Quit Rate <sup>14</sup>				28.7†	32.8†
<b>Tobacco-related Policy</b>					
Support increasing cigarette tax to \$2.00 <sup>15</sup>	57.8		56.7		
<b>Health and Economic Consequences</b>					
Deaths Attributed to Tobacco Use <sup>16</sup>					1,000
Deaths Attributed to Secondhand Smoke <sup>17</sup>					80 - 140
Smoking Attributable Medical Expenditures - in millions <sup>18</sup>					\$326
Smoking Attributable Productivity Loss - in millions <sup>19</sup>					\$232.6

\*Note: In 2011, the Behavior Risk Factor Surveillance System (BRFSS) began including cell phone-only users in sampling and the method of weighting the results was changed. This makes BRFSS results from 2010 and prior no longer comparable to 2011 and beyond.

<sup>1</sup> Adult current cigarette smoking defined as, of those who have smoked 100+ cigarettes in their life, those who used every day or some days of the past 30 days. Youth current cigarette smoking defined as the proportion of 9-12 grade students who have smoked cigarettes on at least one of the past 30 days.

<sup>2</sup> American Indian current smoking prevalence obtained from the North Dakota Behavior Risk Factor Surveillance System (BRFSS) Calculated Variables Report. Data currently unavailable for smokeless tobacco use.

<sup>3</sup> The percent of women reporting smoking during the 1st trimester (North Dakota Vital Statistics). Beginning in 2020, percent of pregnant women reporting smoking anytime during pregnancy.

<sup>4</sup> Current smoking rate among low income adults (Earning less than \$15,000 per year). From the North Dakota BRFSS.

<sup>5</sup> Current smoking rate among adults having low education (defined as having less than a high school diploma or GED) from the North Dakota BRFSS.

<sup>6</sup> Adult chewing tobacco use defined as using chewing tobacco, snuff, or snus every day or some days of the 30 days before the survey. High School (grades 9-12) current smokeless tobacco use defined as using chewing tobacco, snuff, dip, snus, or dissolvable tobacco products on one or more of the 30 days before the survey.

<sup>7</sup> Adult and High School current cigar use defined as smoking cigars, cigarillos, or little cigars on one or more of the 30 days before the survey. Adult current cigar use from the North Dakota Adult Tobacco Survey (ATS) and High School (grades 9-12) current cigar use from the North Dakota Youth Risk Behavior Survey (YRBS).

<sup>8</sup> Adult current use of electronic cigarettes (among those who have ever tried, also used every day or some days of past 30 days) from the North Dakota BRFSS. Youth (youth in grades 9-12 who used at least one day of past 30 days) from North Dakota Youth Tobacco Survey (YTS) and North Dakota Youth Risk Behavior Survey (YRBS).

<sup>9</sup> For adults, any current tobacco use (used at least one day of the past 30 days) includes cigarettes, smokeless tobacco, or electronic cigarettes while for youth (grades 9-12), any current tobacco use includes cigarettes, cigars, smokeless tobacco, or electronic cigarettes.

<sup>10</sup> Ever tried electronic cigarettes for total adult population from the North Dakota ATS and for the total High School (grades 9-12) population from the North Dakota YRBS.

<sup>11</sup> Of current cigarette smokers in grades 9-12, the proportion who report first cigarette use before age 13 (YTS).

<sup>12</sup> Of current smokeless tobacco users in grades 9-12, proportion who reporting smokeless tobacco use before age 13 (YTS).

<sup>13</sup> Total number people enrolled in NDQuits is for state fiscal year (July-June) comes from NDQuits State Summary Reports.

<sup>14</sup> NDQuits quit rate is obtained from annual NDQuits Evaluation Reports and calculated using North American Quitline Consortium (NAQC) guidelines. They are for state fiscal year (July-June) and participants are considered to have quit if, 7 months after program registration, they report not using cigarettes or other forms of tobacco, including electronic nicotine delivery systems (ENDS), in the past 30 days (i.e. Thirty-day Point Prevalence Abstinence).

<sup>15</sup> The source for this tobacco tax-related policy question is the North Dakota Adult Tobacco Survey (ATS).

<sup>16</sup> North Dakota estimate of smoking-attributable deaths: CDC, Best Practices for Comprehensive Tobacco Control Programs—2014. This estimate is the annual average from 2005-2009, is among adults aged 35 years and older, and does not include burn or secondhand smoke deaths.

<sup>17</sup> Estimated range of deaths due to secondhand smoke exposure reported by the Campaign for Tobacco Free Kids (CTFK).

<sup>18</sup> Smoking attributable medical expenditures reported by the Campaign for Tobacco-Free Kids and are among adults aged 18 years and over.

<sup>19</sup> Smoking attributable productivity costs reported by the Campaign for Tobacco-Free Kids (CTFK). They are the annual average productivity costs from 2000-2004 reported by they CDC's SAMMEC (Smoking-Attributable Morbidity, Mortality, and Economic Costs) website updated to 2009 dollars.

† Respondents to the NDQuits 7-Month Follow-Up Survey were more likely to exhibit characteristics that are associated with higher levels of quitting (i.e. be older at intake, have a higher education level, be insured, and to use their first cigarette later after waking). This means the quit rate could be biased upward since a greater proportion of these groups of tobacco users were among survey responders compared to all program participants.