



Establishing & Operating Tobacco/Nicotine Cessation Services

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Mayo Clinic Nicotine Dependence Center
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Presenters



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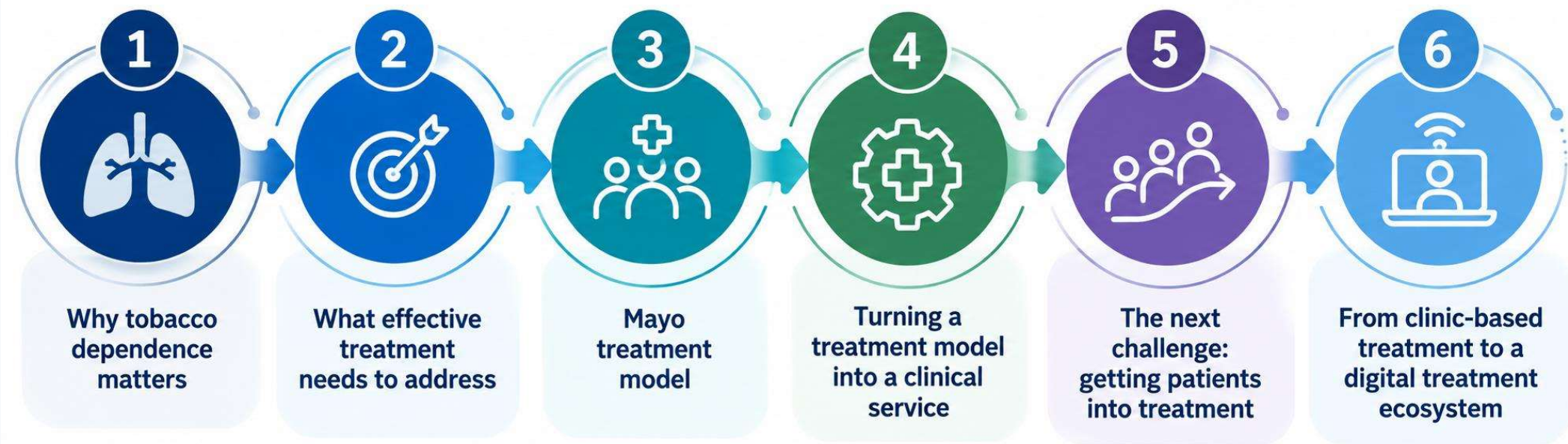


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Program Manager

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Our Journey: From Nicotine Dependence to System-Level Treatment



Why Tobacco Dependence Matters

Tobacco in Hong Kong: Low Prevalence, High Health Burden

Prevalence of Daily Cigarette Smoking

Among people age 15+ in Hong Kong (2023)

9.1%

of people age 15+ are
daily conventional
cigarette smokers.


16.4%
Male

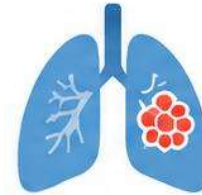

2.7%
Female

Tobacco Causes Premature Death



Tobacco use is a **leading preventable cause** of premature death in Hong Kong.

Lung Cancer Burden



Lung cancer has among the **highest cancer incidence and mortality rates** in Hong Kong.

Tobacco Increases the Risk of Many Serious Diseases

Smoking causes or worsens many life-threatening conditions, including:



Cardiovascular disease

e.g., coronary heart disease, heart attack, heart failure



Stroke

Increases risk of ischemic and hemorrhagic stroke



Chronic lung disease

e.g., COPD, chronic bronchitis, emphysema



Multiple cancers

e.g., lung, head and neck, bladder, pancreas, stomach, colorectal, and others

Secondhand Smoke Also Harms Health

Exposure to secondhand smoke increases the risk of:



20–30%

higher risk of lung cancer
in nonsmoking spouses
from secondhand smoke.



Lung cancer



Heart disease



Stroke



Respiratory
diseases in children



Tobacco use causes **serious disease and premature death** worldwide.

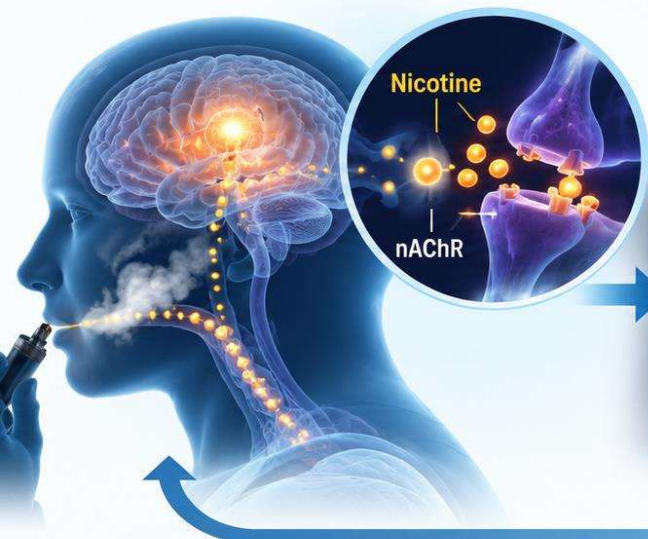
Sources: Hong Kong Department of Health (Thematic Household Survey 2023); Hong Kong Cancer Registry; WHO.

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Inhalation Combines Features That Make Drugs Highly Reinforcing

High concentration

Nicotine reaches the brain within seconds.



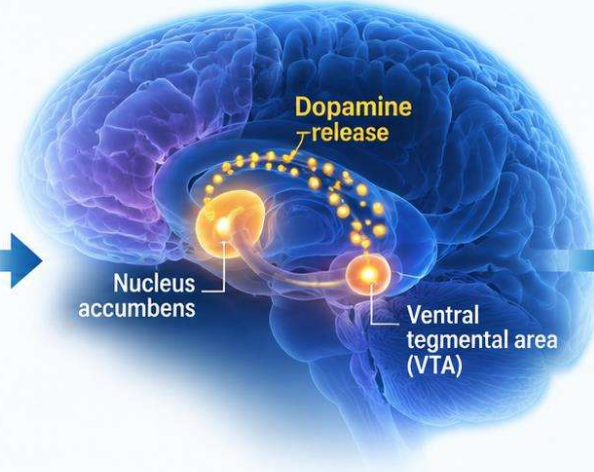
Rapid redosing

Additional doses can be taken quickly.



Reward without intoxication

"Euphoria" occurs without obvious impairment.



Repeated reinforcement

The behavior is reinforced many times each day.



Fast peaks + frequent repetition create a powerful loop

What Effective Treatment Needs to Address

Addiction Education



Explain the biology
Affirm the difficulty
Ask permission to share



Pharmacotherapy



≈2×

success rate

Medication “takes the edge off” while behavioral change is built.

GOAL

Stop tobacco use and not reproduce tobacco’s dose delivery.

DELIVERY

Medication does not match the speed or concentration of smoked nicotine.

BENEFIT

Reduce withdrawal so patients can practice new behaviors.

CHOICE

Encourage medication while supporting patients who decline it.

A Menu of Medication Options

- Offer options
- Use shared decision-making
- Combination therapy when needed

LONG-ACTING OPTIONS



Nicotine patch
Available doses:

- 21 mg
- 14 mg
- 7 mg



Bupropion (Zyban, Wellbutrin)
Available doses:

- 150 mg
- 300 mg



Varenicline (Chantix)
Available doses:

- 0.5 mg
- 1 mg

SHORT-ACTING OPTIONS



Nicotine nasal spray



Nicotine gum
Available doses:

- 2 mg
- 4 mg

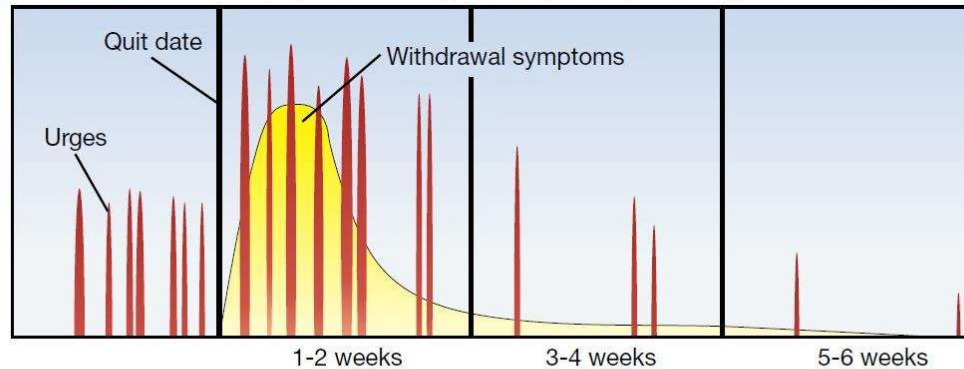


Nicotine lozenge
Available doses:

- 2 mg
- 4 mg

Medication Reduces Withdrawal While Behavior Changes

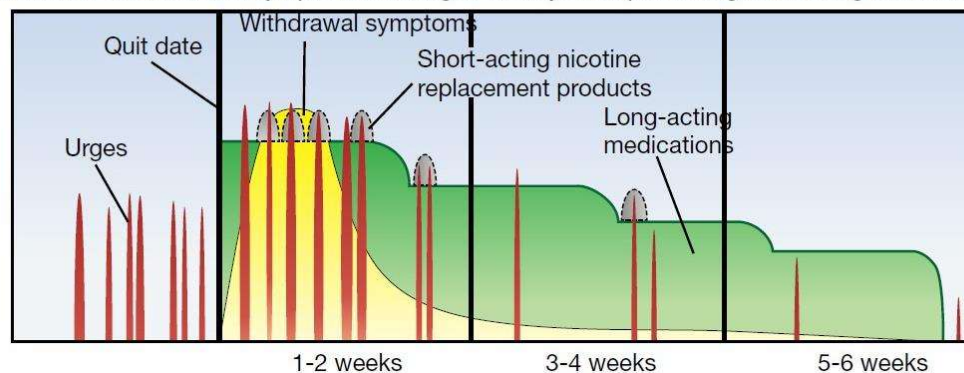
5a. Timeline of withdrawal symptoms and urges when you stop smoking without using medications



1 Without medication

Urges and withdrawal are strongest in the first weeks and usually improve over time.

5b. Timeline of withdrawal symptoms and urges when you stop smoking while using medications.



2 With combination therapy

Long-acting and short-acting medications reduce peaks and make behavioral change more manageable.

Figure 5a and b. How NRT can you cope with withdrawal symptoms and urges

Cognitive-Behavioral Therapy



A structured, time-limited, and goal-oriented form of psychotherapy that targets maladaptive patterns of thinking and behavior.

Key idea

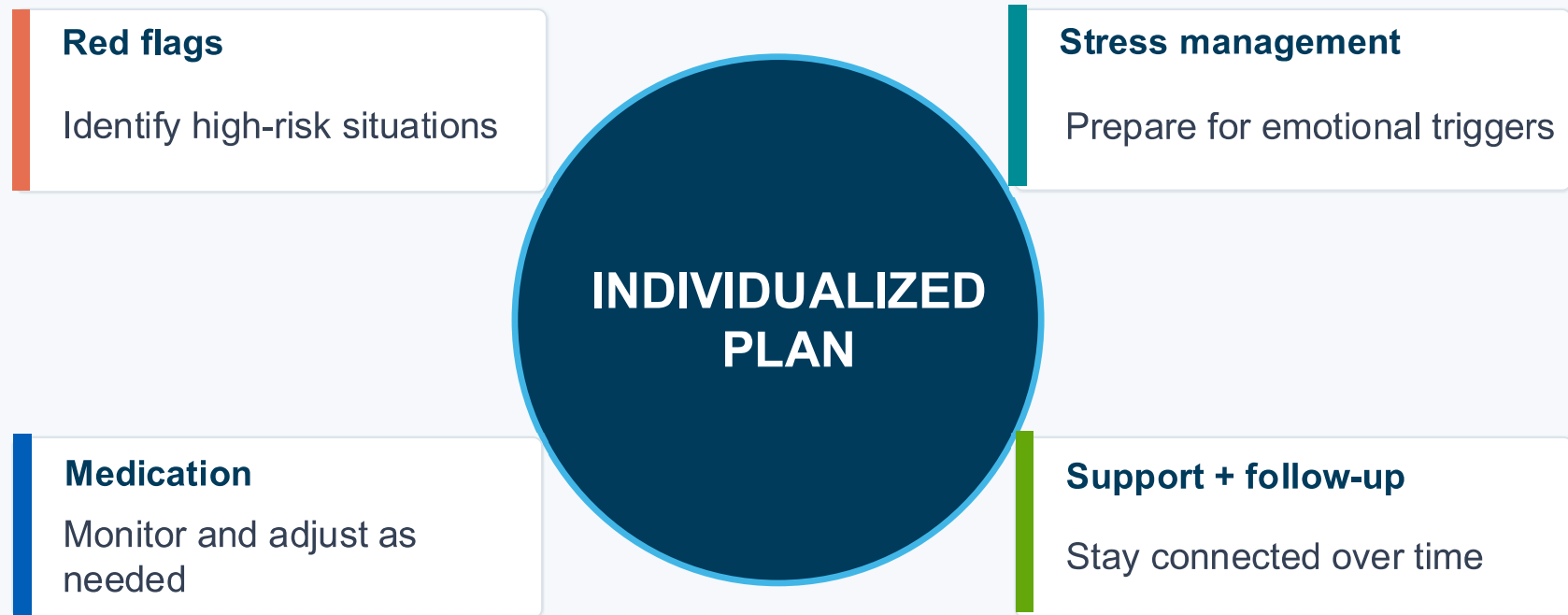
● Thinking

● Behaving

● Change

Thinking → Behaving → Change

Relapse Prevention: Begins Before the Quit Attempt



Motivational Interviewing: How We Deliver the Model

“ ”

A communication approach that focuses on ambivalence around behavior change.

MI identifies and strengthens the patient's own reasons to change.

1

Explore ambivalence

Understand what matters to the patient.

2

Elicit patient's reasons

Draw out personal motivations for change.

3

Strengthen change talk

Build importance, confidence and commitment to make the change.

PATIENT-CENTERED

NON-JUDGMENTAL

COLLABORATIVE

AUTONOMY-SUPPORTIVE

Mayo Treatment Model

Mayo Model Integrates Biology, Behavior, and Long-Term Support

01

Addiction education

Explain nicotine dependence and normalize the difficulty of stopping.

02

Pharmacotherapy

Reduce withdrawal and support behavioral change.

03

Cognitive / behavioral

Change thoughts, routines, and responses to cues.

04

Relapse prevention

Plan for red flags, stress, support, and follow-up.



We Teach Patients to Interrupt the Smoking Loop

- 1 Awareness** Notice thoughts, cues, and routines.
- 2 Reframing** Challenge unhelpful or distorted thinking.
- 3 Positive self-affirmations** Strengthen a non-smoker identity and confidence.
- 4 Behavioral change** Build substitutes, routines, and problem-solving skills.



Look at thoughts as well as behaviors.

From Thoughts to Behaviors

THOUGHTS

"Smoking isn't an option."

"I happily see myself as a nonsmoker."

"I can do this."

BEHAVIORS

Alter routines

Use behavioral substitutes

Practice problem-solving skills

COPING TOOLKIT

Chewing gum

Mints / lollipops

Sunflower seeds

Cinnamon sticks

Stress balls

Rubber bands

Turning a Treatment Model into Clinical Services

One Treatment Model, Multiple Levels of Intensity



Outpatient

In person or virtual

Patients can be seen on the Mayo campus or through a virtual visit



Inpatient

Nurse protocol

Nurses can order nicotine patch therapy while hospitalized and alert patients to post-discharge resources

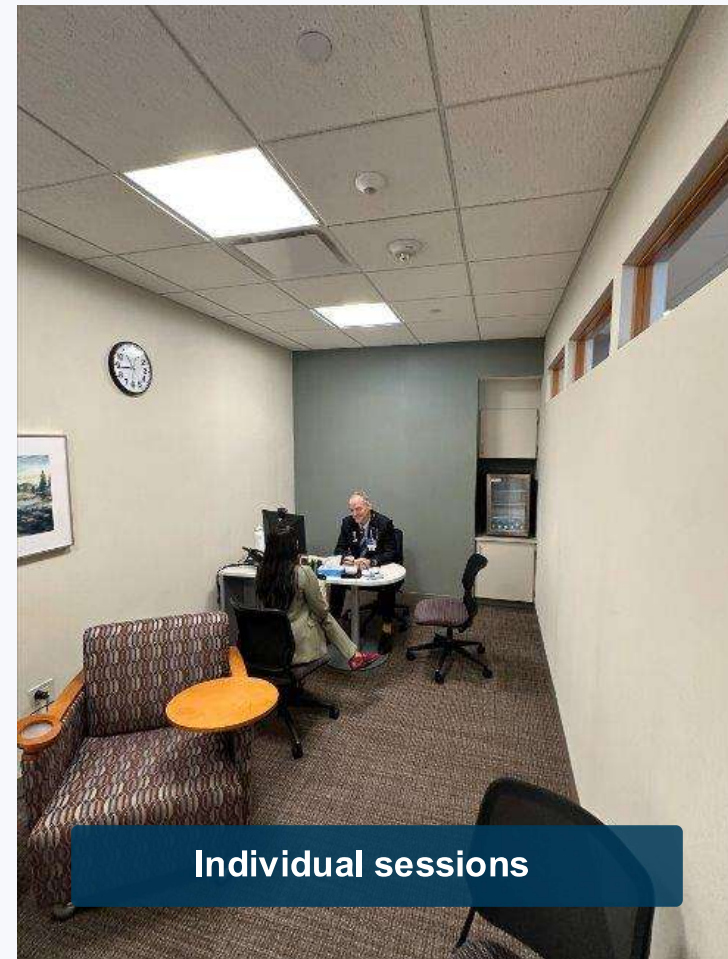


ITTP

Intensive tobacco treatment program

4½-day Intensive Tobacco Treatment Program

Clinical Space Supports Both Group and Individual Care



Program Redesign Increased Six-month Success Rates

PREVIOUS

8-day residential program

54%

success at six months

- 8 days on Rochester campus
- Four individual follow-up visits



CURRENT

5-day intensive outpatient program

>60%

success at six months

- Virtual physician/CNP previsit
- Virtual counselor previsit
- 5-day onsite program
- Four individual follow-up visits

Specialist Treatment Requires a Multidisciplinary Team

NICOTINE DEPENDENCE CENTER

Clinical + operational team

6

Counselors who are Tobacco Treatment Specialists (TTS)

1

Program manager who is TTS

1

Medical director

2

Additional providers / prescribers

7

Support staff: 3 schedulers, 3 education support, 1 office manager

Building and Sustaining Tobacco Treatment Programs



Institutional buy-in

Align cessation services with quality metrics and readmission goals.



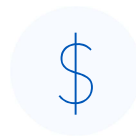
Trained workforce

Define clinical roles, supervision, and tobacco treatment specialist expertise.



Default pathways

Embed identification and referral in the EHR so treatment happens by default.



Durable funding

Use billing, grants, and outcomes data to demonstrate reach, quit rates, and cost offsets.

The Next Challenge: Getting Patients Into Treatment

There Is a Gap Between Opportunity and Action

We have effective treatment and frequent healthcare touchpoints, but too few smokers receive it.

Problem

A large gap exists between opportunity and delivery of care.

Treatment is effective



2–3x

Higher quit rates with evidence-based treatment compared with minimal support.

Most smokers interact with health care



70–80%

of smokers have at least one health care visit each year.

Too few receive treatment



1 in 5

smokers attempting to quit use any evidence-based treatment.

Design Principle

Build systems that make tobacco treatment the default.



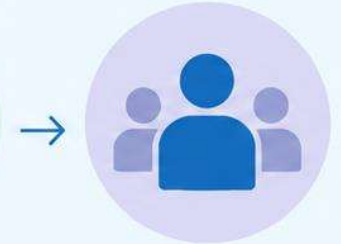
Make identification routine

Systematically identify all tobacco users in health care settings using the EHR.



Make referral the default

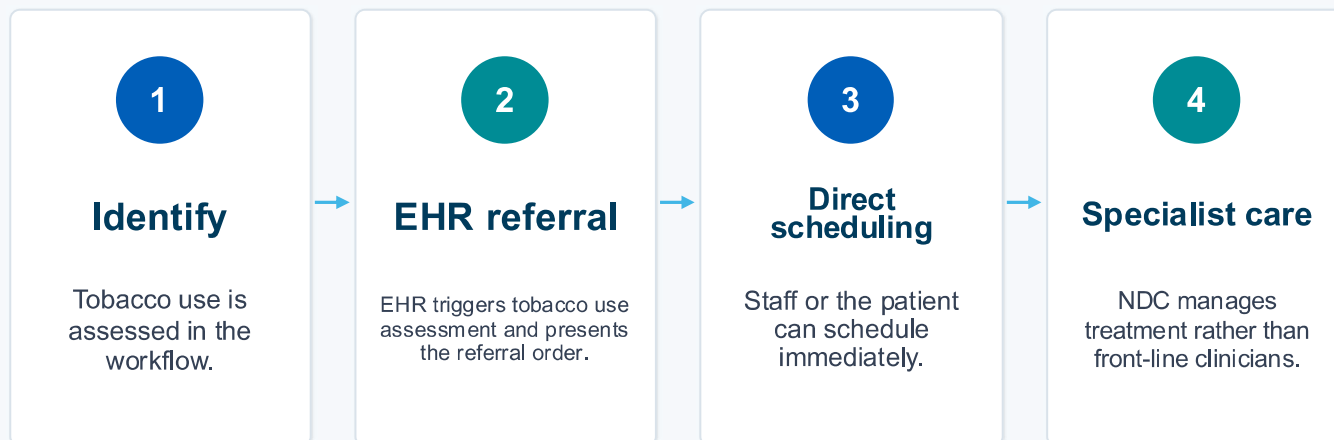
Use automated, opt-out referral pathways to connect patients to evidence-based treatment.



Remove dependence on individual clinicians

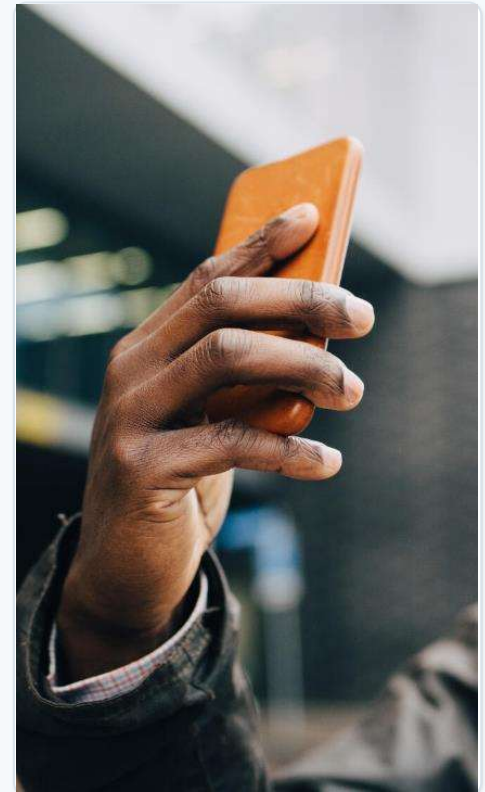
Build standardized workflows and system supports so treatment does not rely on individual clinician initiative.

Use the EHR to Close the Treatment Gap



Design intent

Move tobacco treatment from clinician-dependent to system-enabled



Implementation Requires Training Tools for Staff, Clinicians, and Patients

BestPractice Advisory - Rspatient, Rstest "Rachel"

Important (1)

⚠ TOBACCO USE ASSESSMENT: Order a Nicotine Dependence Consult for any patient who uses tobacco or e-cigarettes.

ASK: Have you used any tobacco, including e-cigarettes, in the last 30 days?

IF YES: Please say the following script, and click **ACCEPT**

"We would like all patients who use tobacco visit with a specialist to learn more about how tobacco affects your health. This is an important part of your care at Mayo Clinic. If you need more information, your provider can help you."

IF NO: Select an "Acknowledge Reason" and click **ACCEPT**

[NICOTINE DEPENDENCE COUNSELING](#)

[Nicotine Dependence](#)

Acknowledge Reason

☐ Never used tobacco ☐ Used tobacco more than 30 days ago ☐ In tobacco treatment

Built for staff, providers, and patients

- MyLearning module — Tobacco Use Assessment & Referral
- Quick reference guide — Best Practice Advisory
- Patient education brochure
- Patient video
- Optional provider MyLearning module and brochure

Automation Must Reach the Right Person



Right patient + Right staff member + Right moment

Referral Works Better When Patients Know What to Expect

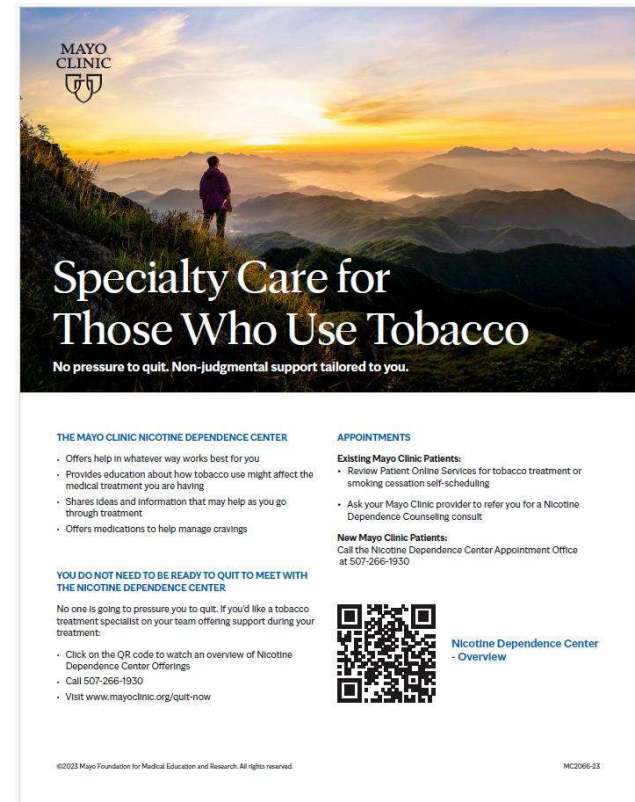
What patients should know

- You do not need to be ready to quit.
- You will not be pressured to quit.
- A visit can still help you understand options and plan next steps.
- The flyer explains what we do, how to contact us, and where to learn more.

AT DESKS

IN PATIENT ROOMS

QR CODE ACCESS



The flyer features the Mayo Clinic logo at the top left. The main image shows a person standing on a mountain ridge at sunset, looking out over a vast landscape. The title "Specialty Care for Those Who Use Tobacco" is prominently displayed in white text over the image. Below the title, a subtitle reads "No pressure to quit. Non-judgmental support tailored to you." The flyer is divided into sections: "THE MAYO CLINIC NICOTINE DEPENDENCE CENTER" with bullet points about services; "APPOINTMENTS" with instructions for existing and new patients; "YOU DO NOT NEED TO BE READY TO QUIT TO MEET WITH THE NICOTINE DEPENDENCE CENTER" with a paragraph and bullet points; and a QR code labeled "Nicotine Dependence Center - Overview". The footer contains copyright information and a reference code.

MAYO CLINIC

Specialty Care for Those Who Use Tobacco
No pressure to quit. Non-judgmental support tailored to you.

THE MAYO CLINIC NICOTINE DEPENDENCE CENTER

- Offers help in whatever way works best for you
- Provides education about how tobacco use might affect the medical treatment you are having
- Shares ideas and information that may help as you go through treatment
- Offers medications to help manage cravings

APPOINTMENTS

Existing Mayo Clinic Patients:

- Review Patient Online Services for tobacco treatment or smoking cessation self-scheduling
- Ask your Mayo Clinic provider to refer you for a Nicotine Dependence Counseling consult

New Mayo Clinic Patients:
Call the Nicotine Dependence Center Appointment Office at 507-266-1930

YOU DO NOT NEED TO BE READY TO QUIT TO MEET WITH THE NICOTINE DEPENDENCE CENTER

No one is going to pressure you to quit. If you'd like a tobacco treatment specialist on your team offering support during your treatment:

- Click on the QR code to watch an overview of Nicotine Dependence Center Offerings
- Call 507-266-1930
- Visit www.mayoclinic.org/quit-now

Nicotine Dependence Center - Overview

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Motivate & Reward Staff

Reward Decks

Share meaningful data with supervisors and staff and reward what teams can control.

Most signed orders by department

Best order rate within department

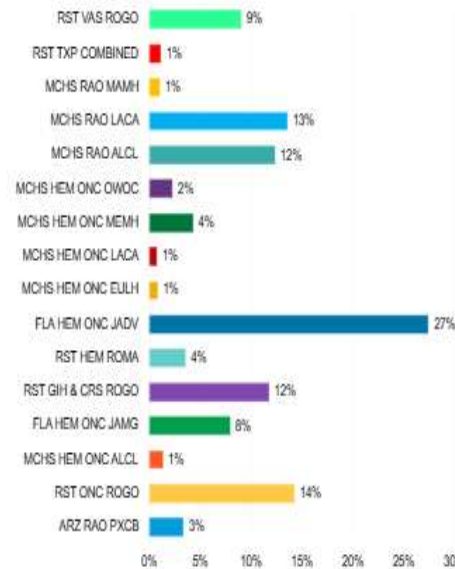
Top individual user

Most scheduled visits

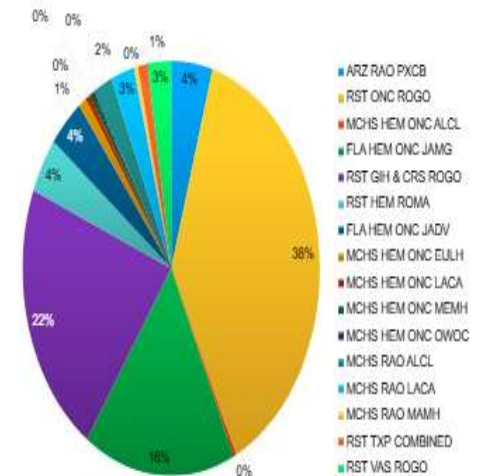
Most completed visits

COMPLETED SIGNED ORDER SUCCESSES

Department Achievement of Signed Order Successes out of their H2 2025 Fires

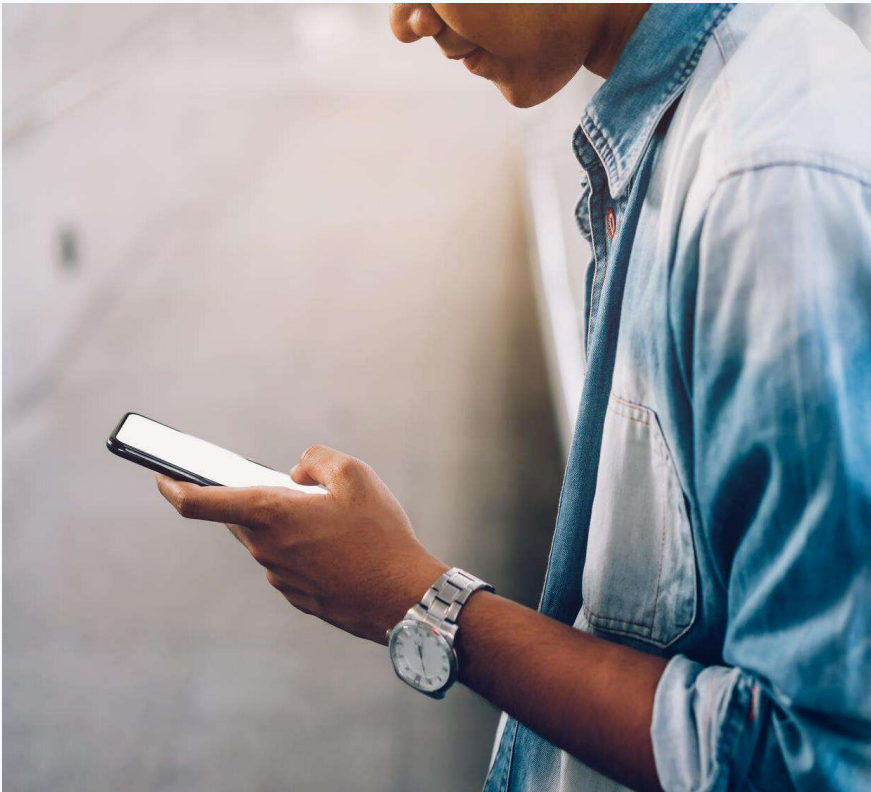


Department Contribution to Overall H2 2025 Signed Order Successes



Measure → Share → Recognize → Improve

OPA patient Re-Engagement: “Digital Backstop”



1

Order / ticket exists

OPA created a self-scheduling opportunity.

2

No visit scheduled

The patient has not scheduled or completed an NDC consult.

3

Campaign outreach

Send a portal message or postcard with NDC information.

4

Re-entry to care

Remind the patient how to schedule when ready.

Meet patients when they are ready, not only when the OPA first fires.

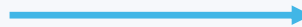
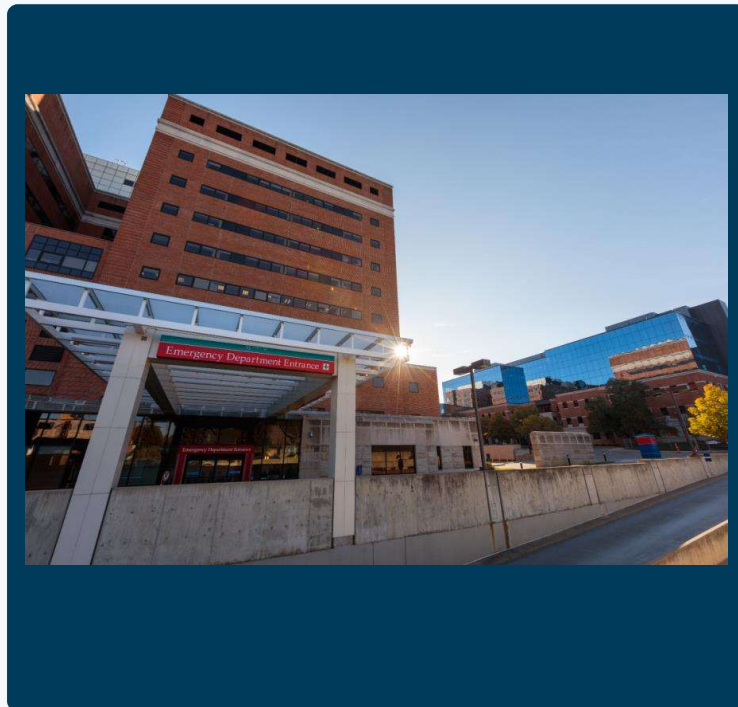


TELEHEALTH

Video visits extend specialist care beyond our walls; regardless of distance or mobility.



Hospital Discharge Creates Opportunity to Re-Engage Patients



Cipher

Automated patient outreach
platform

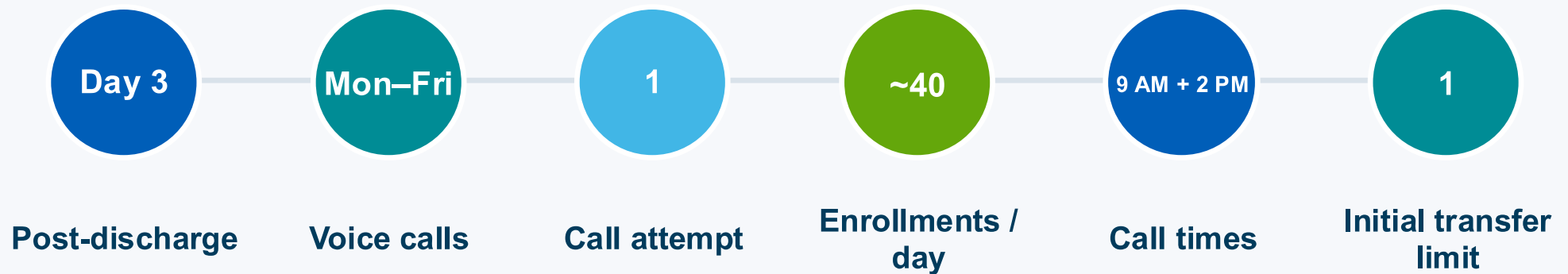
VOICE OUTREACH

LIVE TRANSFER

SELF-SCHEDULING
GUIDANCE

Shared goal: move eligible patients from hospital discharge to treatment access.

Outreach Details



Outreach is designed to be timely, limited, and operationally predictable.

Patient Call Pathway

NDC MESSAGE

“Our goal is to help you live tobacco-free with non-judgmental, personalized support, effective medicines, and services to help you quit.”

Choose the next step

PRESS 1

Live transfer

Route to the next available care team member.

PRESS 2

Self-schedule

Use Patient Online Services → “Tobacco Treatment.”

PRESS 3

Schedule later

Send a text with the scheduling phone number.

PRESS 4

Decline now

Acknowledge the patient's preference.

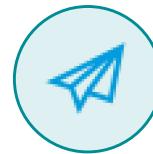
From Clinic-Based Treatment to a Digital Ecosystem

The Future Is Continuous, Connected, and Human-Centered



Continuous, connected care

Remote monitoring, patient-facing apps, and EHR-driven automation.



Broader digital reach

Wider access, faster follow-up, and less reliance on in-person visits.



Emerging AI use cases

Documentation support, risk prediction, and tailored messaging show early promise.



Complement not replacement

AI should support specialist-delivered care rather than displace it.

The technology changes; the therapeutic relationship remains central.

Three Take-Home Messages

1. Tobacco dependence is a chronic, highly reinforcing condition that responds to evidence-based treatment.
2. Effective programs combine specialist clinical care with systems that identify and refer patients by default.
3. Digital tools expand reach, but technology should strengthen, *not replace*, the therapeutic relationship.

