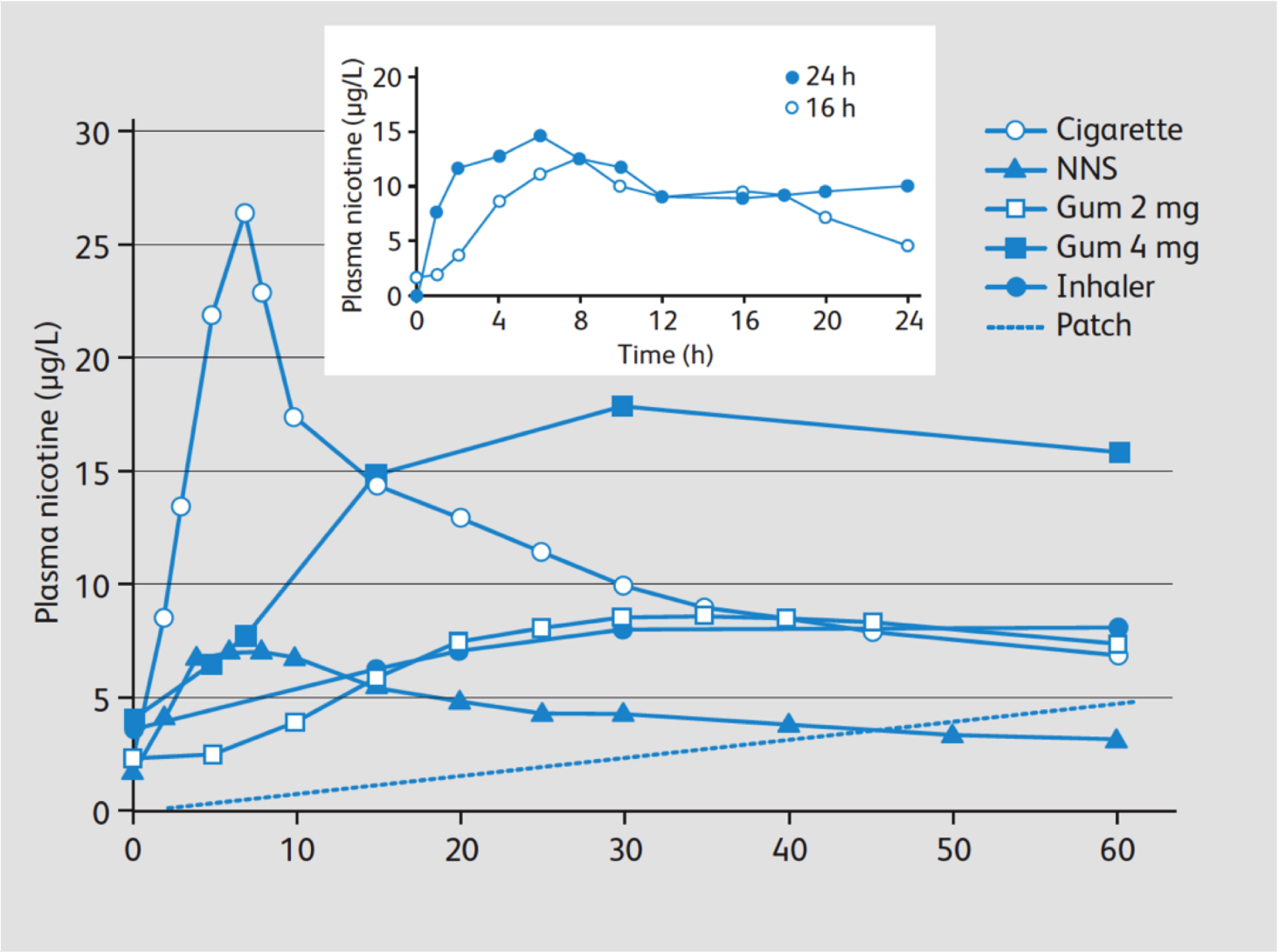
NTS
National Training Service

Stop Smoking Practitioner Program
REFRESHER TRAINING

February / March 2019

Nicotine Delivery



Toxicity of Nicotine

- Nicotine is a naturally forming compound in tobacco and other plants related to the tobacco plant. (Tomatoes, eggplant etc.)
- Botanists see nicotine as a natural pesticide.
- People have been poisoned by large doses of nicotine.

Toxicity of Nicotine

LD_{50}

Lethal Dose measure of amount of a compound ingested where 50% of subjects die from the dose.

Toxicity of Nicotine

- Standard textbooks, databases, and safety sheets consistently state that the lethal dose for adults is 60 mg or less (30–60 mg)

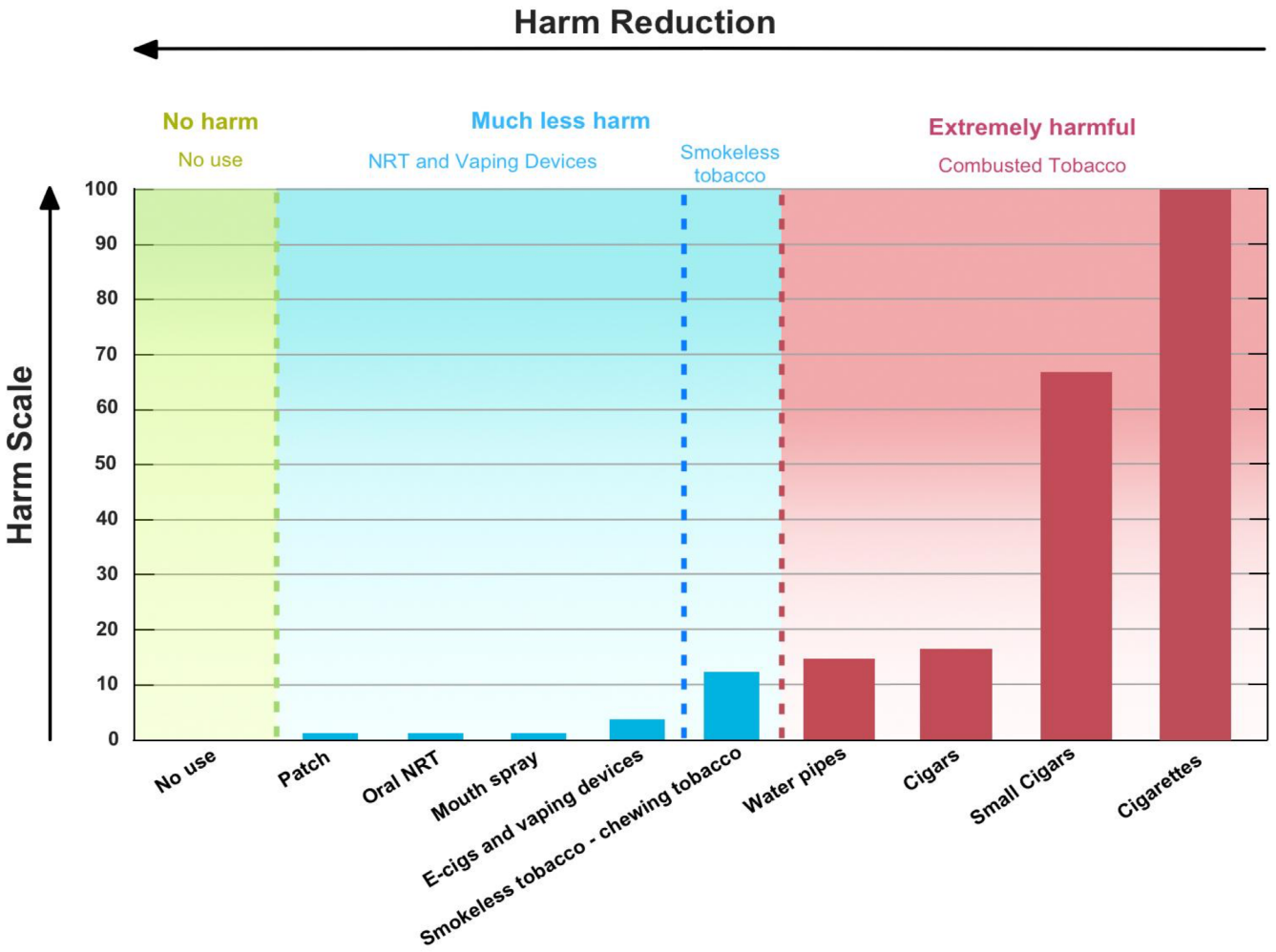
- The 60-mg dose would correspond to an oral LD_{50} of around 0.8 mg/kg, a dose that is considerably smaller than the values determined for laboratory animals, which are ranging from 3.3 mg/kg (mice) to more than 50 mg/kg (rats)

- A careful estimate suggests that the lower limit causing fatal outcomes is 0.5–1 g of ingested nicotine corresponding to an oral LD_{50} of **6.5–13 mg/kg**.

Toxicity of Nicotine

- All of this means that in order for an 80 kg person to die from a nicotine overdose due to NRT use they would need to ingest the equivalent of 260 pieces of 4 mg gum to reach the lower limit of lethal dose!

Relative Harm Scale



Assessing your client

Assessment Form

PLEASE COMPLETE THIS FORM AND BRING IT TO YOUR FIRST APPOINTMENT.

If you have any problems with the questions, please don't worry or be put off coming. We will help you if necessary.

The information collected is strictly confidential and will not be released for any other purpose than under th provisions of the Health Information ACT 1994 (Sec22). **No names or information that might identify you** will be used in any reports, only statistical figures may be utilised from the overall clients who are receiving help to stop smoking. The information will be stored in accordance with the Health Information ACT 1994 anc you have a right to review your information at any time.

We have included in your pack additional information of the Consumers' Code of Rights. If you have any questions or need clarification regarding these rights we will be available to discuss these further at your appointment.

Signing below indicates that you have read this notice and agree to your information being used in this way.

Signature:		**Date:** //
First Name:		**Title:** *(circle one)* **Mr Mrs Miss Ms**
Last Name:		
Street Address:		
Suburb:	**Town/City:**	**Post code:**
Home Ph:	**Other Ph/Mobile:**	
Email:		

D.O.B:	**Age:**	**Gender:** *(circle one)* **Male Female**
Next of Kin:		**Phone:**
Address:		

Doctor/Midwife (name):	**NHI Number:**
Address/Contact:	
Phone:	**Ethnicity:**

Saves time if clients can fill in before session.

Handy to get GP or LMC contact if needed in future.

QUESTIONS ABOUT YOUR SMOKING

(1) **How many cigarettes do you usually smoke each day?**

(2) **How many of these are hand-rolled cigarettes?**

(3) **Have you recently cut down?** *(Circle one)* No Yes

If **YES** how many cigarettes per day did you use to smoke?

(4) **How much money are you spending on tobacco per week?**

(5) **How soon after waking up do you usually smoke?** *(Circle one)*

Within 5 mins 6-30 mins 31-60 mins After 1 hour

(6) **Does your spouse or parnter smoke?** *(Circle one)*

Yes No No spouse/partner

(7) **Smokefree environments**

Home: *(Circle one)* Allowed inside the home Not allowed inside the home

Car: *(Circle one)* Allowed inside the car Not allowed inside the car Do not have a car

(8) **What is the longest time you've succeeded in giving up smoking in the last 3 years?** *(Circle one)*

Few hours 1 day 2-3 days 4-7 days 1-3 weeks 1-3 months More than 3 months Not tired

(9) **How long ago was your last serious attempt to stop?** *(Circle one)*

1-3 weeks 1-6 months More than 6 months More than a year Never tried before

(10) **What was the ONE MAIN THING that led you back to smoking last time?** *(Circle JUST ONE reason)*

Never stopped before	Got too miserable	Craved too much	Put on too much weight
Got too bad tempered	Got too stressed	Thought I could smoke and stop easily	Cannabis smoking
Getting drunk	Something else:		

(11) **What is your ONE MAIN REASON for wanting to stop now?** *(Circle JUST the most important ONE)*

To save money	To stop being addicted	To protect my health	To please others	It's anti-social
Another reason:				

(12) **If you are female, are you?** *(Circle one)*

Pregnant Trying to conceive Breast Feeding None of these

(13) **Do you regularly use cannabis?** *(Circle one)*

No Yes, with tobacco Yes, but not with tobacco

Gauging daily smoking rates – usually under reported.

Base treatment on historical smoking rates.

Test for dependency

Work on plans to reduce risk.

Praise all quit attempts – normalise stopping can be hard for everyone who smokes.

Triggers to relapse – Plan for behavioural changes to reduce risk.

Refer back to this in future sessions – ask client if change is occurring – benefits of quitting are confirmed, rapport is build.

Advice that smoking cannabis makes stopping smoking harder – suggest solutions.

(14) Which of these methods below have you tried before to help you stop?
(Circle ALL THE ONES you have ever tried)

None of these	Quitline phone	Quitline Txt2Quit	Quitline blog	Quitline coach
Herbal cigarettes	Hypnosis	Acupuncture	Self help book or brochure	E-cigarettes
Group counselling	Individual support from a stop smoking service	Other internet support	Relaxation or meditation	Own willpower
Exercise	Meditation	Herbal or natural remedies	Other: *(please state)*	

(15) Which of these stop smoking medicines have you tried before?
(Circle ALL THE ONES you have ever tired)

None of these	Nicotine gum	Nicotine Lozenge	Nicotine patch	Nicotine mouth spray
Champix (Varenicline)	Zyban (Bupropion)	Nortriptyline	Other: *(please state)*	

(16) Have you ever suffered any unpleasant reactions to any of the above medications?
(Circle one) YES NO

If yes, **a) Which medication?**

b) What reaction?

(17) About how many cigarettes did you smoke per day in the last week?
(Write one number in the box)

(18) Please show for each of the symptons below how you have been feeling over the past week
(tick the ONE box that best applies to you on each line)

	Not at all	Slightly	Somewhat	Very	Extremely
Low mood					
Irritable, Angry, Grumpy					
Restless, Can't sit still More hungry than n normal					
Can't concentrate					
Slept worse than usual					

(19) How much of the time have you felt the urge to smoke in the last week?
(tick one box)
- Not at all
- A little of the time
- Some of the time
- A lot of the time
- Almost all of the time
- All of the time

(20) How strong have these urges been?
(tick one box)
- No urges
- Slight
- Moderate
- Strong
- Very strong
- Extremely strong

Ask about what happened – What went well? What went badly? Why do you think this happened? What can we do this time that will help?

Good results? Bad results? Side effects? Techniques for use? Not used for long enough, often enough or allergic? Correct all as needed.

If allergic or can't use for good reasons, don't waste time discussing these meds.

This is the basis of Withdrawal Oriented Treatment!

(21) Do you have a preference for any o the following stop smoking medicines? (✔ tick all that apply)

☐**Patch** ☐**Inhalator** ☐**Lozenge** ☐**Mouth spray**
☐**Gum** ☐**Bupropion (Zyphan)** ☐**Nortriptyline** ☐**Varenicline (Champix)**
☐**I'm not sure** *(Don't worry if you're not sure, we will discuss the range of options when we first meet)*

(22) If you join the stop smoking programme, you may be prescribed a medicine to help. Some medicines are not suitable for some people, so we ask everyone to complete the medical checklist below. If you don't understand some of the questions, a practitioner at the clinic will help you.

Have you ever suffered from these Illnesses?	*Circle one*		Do you currently take any medicines for these Illnesses?	*Circle one*	Name of any medicine you are taking
Chronic Obstructive Pulmonary Disease (COPD)	**YES**	**NO**	**YES**	**NO**	
Alcohol problems?	**YES**	**NO**	**YES**	**NO**	
Drug problems?	**YES**	**NO**	**YES**	**NO**	
Any mental illness?	**YES**	**NO**	**YES**	**NO**	
Skin allergies or eczema?	**YES**	**NO**	**YES**	**NO**	
Fits or seizures or epilepsy?	**YES**	**NO**	**YES**	**NO**	
Other current illness not listed above:			**Name of other medicines/tablets/injections not listed above:**		

If you are currently under the care of a mental health team?

Name of your psychiatrist or mental health care worker:

Address/Contact:

Phone:

Please check that you have included ALL medicines you are currently taking somewhere above.

Thank you very much. Please remember to bring this form with you to your first appointment.

STAFF USE ONLY: clinical notes

CO reading: _____ ppm

Many people will have used NRT or other SS medicines and have a good idea of what will work this quit attempt. Work with them on this!

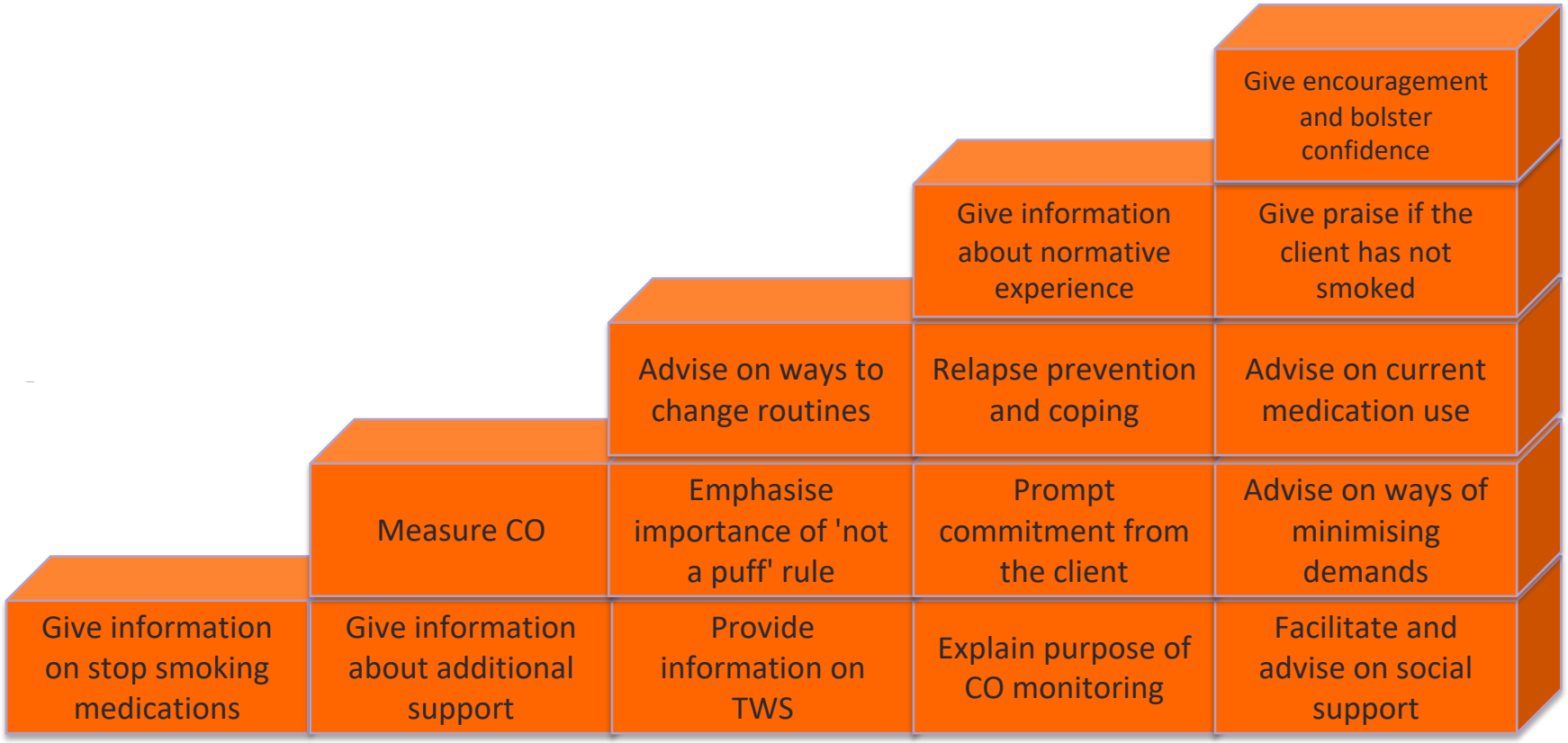
This is helpful as will show you that some SS medicines can't be used as contraindicated and that some medicines will need to be dose adjusted on stopping smoking.

Also shows up the 4 medicines that have clinically relevant blood level increases on stopping smoking.

Great to have. Contact other carers to advise on client stopping smoking and elicit support and added care in stop smoking motivation.

Record CO reading and add clinical notes for each client – what you did, why you did it etc. so you records keep you safe!

Behaviour Change Techniques



Behavioural Support

The TOP FIVE

1. Building rapport
2. Use of CO monitoring as a motivational tool
3. Explaining how to use medications
4. Explaining the rationale for not having a single puff
5. Eliciting commitment from the client to the not-a-puff rule

NTS
National Training Service

Withdrawal oriented treatment (WOT)

First Meeting with Client

Below are **10 key points** that should be covered in this first meeting:

1. Getting to know your client.
2. Assess client's current readiness and ability to quit. Is client ready to quit completely? Cut down then quit approach?
3. Explain the treatment programme and set accurate expectations.
4. Likelihood of success.
5. Discuss why people smoke and why can be difficult to quit.
6. Setting a quit date.
7. Explain Social Support and Quit Buddy.
8. Explain stop smoking medicines.
9. Explain CO monitor.
10. Discussion and next steps.

There is quite a lot of information to cover in the first pre-quit session. If you run out of time, and your client is not quitting within the next week, you can spread some of the tasks out across several pre-quit sessions.

Subsequent pre-quit sessions

At all pre-quit sessions you will want to cover the following:

1. Check if you client has made any changes to their smoking - reducing the number of cigarettes they smoke in the lead-up to their quit date.
2. Check CO reading - CO reading may increase, even though your client has cut down, which could be an indication of compensatory smoking.
3. Check on medication use.
4. Check on preparations for quitting.
5. Set a target quit date.
6. Arrange follow-up.

Three steps to setting a quit date

Setting a quit date can be approached as a three-step process:

1. You provide a simple **explanation** for setting a quit date.
2. You help your client to **choose** a date to stop smoking.
3. You ensure your client understands the **commitment** of Not a Single Puff after the quit date.

Quit Day Session

Below are **seven key points** that are covered in the *Quit Day session.*

1. Check if your client has made any changes to their smoking.
2. Check CO reading.
3. Check on medication use.
4. Checking that they have social support in place.
5. Discussion on how to cope with craving and other withdrawal symptoms.
6. Gaining commitment to not having a single puff.
7. Arrange follow-up.

Post-quit sessions

The primary focus of these sessions is on overcoming tobacco withdrawal.

It is important to avoid lecturing and to encourage your client to discuss post quit concerns and progress. Don't be afraid of moments of silence and don't be tempted to provide all the answers.

Below are **eight key points** that should be covered

1. Reports: check on your client's progress (monitoring).
2. CO reading.
3. Advise on weight gain.
4. Other advice (CO monitor, medications, buddies).
5. Methods of coping with difficult situations.
6. Dealing with lapses.
7. Reaffirm ongoing commitment to not having a single puff.
8. Arrange follow-up.

Social Support

Utilising whānau, friends and other social support in smoking cessation programmes

Influence of whānau

- Smokers are more likely to
  - marry smokers
  - to smoke the same number of cigarettes &
  - to quit at the same time as their spouse
- Smokers who are married to nonsmokers or ex-smokers are more likely to quit and remain abstinent
- Married smokers have higher quit rates than those who are divorced, widowed or have never married
- Support from the spouse is highly predictive of successful smoking cessation

Park et al Enhancing partner support to improve smoking cessation. Cochrane Database of Systematic Reviews 2012, Issue 7. Art. No.: CD002928.

Association with quitting

- If you live with others who smoke, then you are less likely to quit than if you live with others who are smokefree
- If you live alone, then your chances of quitting are less than if you live with other people

Social support is important

A quit buddy

- **Who?**
  - Can be a never-smoker, another smoker trying to quit, an ex-smoker, or a current smoker
- **Where do you get a buddy?**
  - From within an existing social network
  - Someone new (previously unknown)
- **What does the buddy do?**
  - Is given social responsibility to support the smoker in their quit attempt

May & West Tobacco Control 2000;9:415–422

Quit Buddies in Individual Treatment

	Buddy Condition	Solo Condition	p-value
Abstinent for 1 week	40%	22%	p<0.01
Abstinent for 4 weeks	27%	12%	p<0.01

West R, Edwards M, Hajek P. A randomized controlled trial of a "buddy" systems to improve success at giving up smoking in general practice. *Addiction* 1998;93(7):1007-11.

Gaining commitment to a quit buddy

- The point of a promise is to strengthen the commitment to not having a single puff.
- Promising to keep in touch with their quit buddy is a real commitment with a real purpose – a verbal contract of commitment to a rule!

"Having someone who you can talk to and checks up on you daily can be of great help in making you take this quit attempt seriously and stick to your decision not to smoke, even at times when this is difficult.

I will do this every time I see you. I will model how to do a promise for you. You can do this standing up or sitting, whatever feels more comfortable for you.

"I promise that I will do everything I can not to have a single puff this week and I promise to keep in touch with my buddy every day this week"

Tobacco withdrawal

Signs & symptoms	Duration	Prevalence
Irritability	< 4 weeks	50%
Depression	< 4 weeks	60%
Restlessness	< 4 weeks	60%
Poor concentration	< 2 weeks	60%
Increased appetite	> 10 weeks	70%
Sleep disturbance	< 1 week	25%
Urges to smoke	> 2 weeks	70%
Mouth Ulcers	> 4 weeks	40%
Constipation	>4 weeks	17%

Assessing tobacco withdrawal

(18) **Please show for each of the symptons below how you have been feeling over the past week**
(✔ tick the ONE box that best applies to you on each line)

	Not at all	Slightly	Somewhat	Very	Extremely
Low mood					
Irritable, Angry, Grumpy					
Restless, Can't sit still					
More hungry than normal					
Can't concentrate					
Slept worse than usual					

(19) **How much of the time have you felt the urge to smoke in the last week?** (✔ tick one box)

Not at all
A little of the time
Some of the time
A lot of the time
Almost all of the time
All of the time

(20) **How strong have these urges been? (✔ tick one box)**

No urges
Slight
Moderate
Strong
Very strong
Extremely strong

Use of medicines

- Check clients have enough
- Complete the course
- Can extend use if needed
- Reassure clients that they can contact you with any questions or concerns

Using prescription stop smoking medicines

Varenicline brand name change

Both are currently available, but only Varenicline Pfizer will be available from the 1st June 2019

CHAMPIX

VARENICLINE PFIZER

	Initiation pack 11 x 0.5mg + 14 x 1mg tabs	Continuation pack 28 x 1mg tabs	Continuation pack 56 x 1mg tabs		Initiation pack 11 x 0.5mg + 42 x 1mg tabs	Continuation pack 56 x 1mg tabs
List price	$60.48 (x1)	$67.74 (x1)	$135.48 (x2)		$25.64 (x1)	$27.10 (x2)
Total cost	**$399.18**				**$79.84**	

NTS
National Training Service

Vaping Update

National Training Service

TEC study

(Trial of Electronic Cigarettes Study)

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

A Randomized Trial of E-Cigarettes versus Nicotine-Replacement Therapy

Peter Hajek, Ph.D., Anna Phillips-Waller, B.Sc., Dunja Przulj, Ph.D., Francesca Pesola, Ph.D., Katie Myers Smith, D.Psych., Natalie Bisal, M.Sc., Jinshuo Li, M.Phil., Steve Parrott, M.Sc., Peter Sasieni, Ph.D., Lynne Dawkins, Ph.D., Louise Ross, Maciej Goniewicz, Ph.D., Pharm.D., Qi Wu, M.Sc., and Hayden J. McRobbie, Ph.D.

Background

- Cochrane review
  - Two old trials of early cig-a-like EC
  - EC more effective than ‘placebo’
  - EC with low nicotine delivery and no face-to-face contact had similar low efficacy as patches.
- Aim of TEC study
  - To evaluate modern e-cigarettes compared with NRT in smokers seeking help with UK specialist service support

Sites and participants

- TEC took place May 2015 – February 2018
- UK Stop Smoking Services
  - 4 sites: City of London, Tower Hamlets, Leicester, East Sussex
- Participants
  - N=886.
  - No strong preference to use or not to use EC or NRT; and not currently using either.

Procedures cont.

- Product use started at the TQD session
  - Participants committed to using allocated product for at least 4 weeks
- Weekly support sessions as per usual practice
- Followed up at 6 and 12 months
- If abstinence reported at 12M, participants invited for CO reading and paid £20 for travel and time

NRT products

Gum

Patch

Nasal Spray

Inhalator

Lozenge

Microtab/Minis

Mouth Spray

Mouth Strip

NRT

- 88% used combinations (typically patch + faster acting product)
- Free to switch NRT products - 59% switched
- Supplies for three months
- Cost to the health system: £120 for 3M of one product
- Cost to the client: £8.80 if they pay for prescriptions

E-cigarettes

- Starter pack ‘One Kit’ (with adapter, spare battery, 5 atomisers), 30ml bottle of tobacco flavour e-liquid (18mg/ml nicotine)
- Second bottle if requested (only 7% did)
- 75% switched to other flavours
- Cost to the SSS: £30.25

Main measures

- **Primary outcome**:
- Sustained abstinence (1 year) validated by CO<9ppm; drop outs included as non-abstainers.
- CO-validated reduction of 50% or more
- Presence of nausea, sleep disturbance, throat/mouth irritation.
- Presence of shortness of breath, wheezing, cough, phlegm.
- Withdrawal symptoms; Product ratings

Withdrawal symptoms over four weeks post-TQD

- EC arm abstainers had less severe urges to smoke.
- Lower increase in irritability, restlessness and inability to concentrate.
- By week four, abstainers in both arm reported little withdrawal discomfort.

Product ratings

(helpfulness 1=not at all to 5=extremely; comparisons to cigarettes 1=much less than cigs, 3=the same, 5=much more than cigs)

	EC (N=324)	NRT (N=228)	Difference (95% CI)
Helpfulness (mean)			
1 week post-TQD	4.3	3.6	0.7 (0.5 to 0.9)
4 weeks post-TQD	4.3	3.7	0.6 (0.4 to 0.7)
Taste compared to cigs			
1 week post-TQD	3.0	2.7	0.3 (0.1 to 0.6)
4 weeks post-TQD	3.5	3.1	0.4 (0.2 to 0.6)
Satisfaction compared to cigarettes			
1 week post-TQD	2.4	2.0	0.4 (0.2 to 0.6)
4 weeks post-TQD	2.7	2.3	0.5 (0.3 to 06)

Summary

- Adherence was good and similar in both study arms, but EC were used for longer
- EC arm abstainers had less withdrawal discomfort and craving
- EC received more favourable ratings

So how does this translate to abstinence?

Effects on abstinence and reduction

	EC (N=438)	NRT (N=446)	RR (95% CI)
% abstinent* for 52 weeks	18.1%	9.9%	1.83 (1.30 to 2.58)
CO validated reduction in non-abstainers	12.8%	7.4%	1.75 (1.12 to 2.72)

*biochemically validated

Some 52-weeks abstainers used non-allocated products

- 2.5% in the EC arm were using NRT
- 20.5% in the NRT arm were using EC
- When these were removed from the sample, 52-weeks abstinence rates were

17.7% vs. 8%

(RR=2.21, 95%CI 1.52 to 3.22)

Reduced nicotine use over time

- The mean nicotine content used across the study period was:
  - 4 weeks: 18 mg/ml
  - 26 weeks: 12 mg/ml
  - 52 weeks: 11 mg/ml
- Fruit flavors were the most popular (33%)

Nicotine use at 52 weeks

Of those who were smokefree at 52 weeks

EC arm

- 20% stopped vaping
- 24% using nicotine free liquid
- 56% using nicotine liquid

NRT arm

- 9% were still using NRT

Elicited adverse reactions

	EC (N=438)	NRT (N=446)	RR (95% CI)
Nausea	31%	38%	0.83 (0.69 to 0.99)
Severe nausea	7%	7%	NS
Throat/mouth irritation	65%	51%	1.27 (1.13 to 1.43)
Severe irritation	6%	4%	NS
Sleep disturbance	64%	68%	NS

Elicited respiratory symptoms

	EC (N=315)		NRT (N=279)		RR (95% CI)
	Baseline	52 weeks	Baseline	52 weeks	
Shortness of breath	38%	21%	33%	23%	NS
Wheezing	32%	24%	31%	21%	NS
Cough	55%	31%	52%	40%	0.8 (0.6 to 0.9)
Phlegm	44%	25%	43%	37%	0.7 (0.6 to 0.9)

Was it due to different quit rates?

- Controlling for smoking status did not change the results.
- Comparing vapers and non-vapers regardless of product allocation did not change the results either
- Studies of effects of vaping on lung health are needed

Study limitations

- Could not be blinded
  - But NRT quit rates were at least as in routine care using the same approach
- 1-year f-u was 79%, as usual (75% to 79% in similar studies); drop-outs included as non-abstainers
- May not generalise to smokers not seeking help; EC use without support; cig-a-like EC

Possible reasons for EC superiority

- NRT was used under optimal conditions (access to full range, combinations, expert guidance); adherence was good.
- EC better at withdrawal relief, better subjective effects, most likely better nicotine tailoring.
- Smokers determine nicotine intake; when on NRT (known to under-dose by some 50%), labelling dictates how much they can get. EC allows self-titration.

High on-going EC use

- Could be bad if it poses health risks.
- Could be good if it prevents relapse (as with long-term NRT use); ameliorates withdrawal discomfort and weight gain; maintains a degree of enjoyment/ benefits that smoking provided.

Conclusions for practice

- EC generate better quit rates than NRT
- Starter packs cost less than NRT (let alone combination NRT).
- Ideally SSS should use treatment that is more effective and much more cost-effective **BUT:**
- Barriers may involve concerns about medicinal licensing, product choice and media misinformation about EC safety.