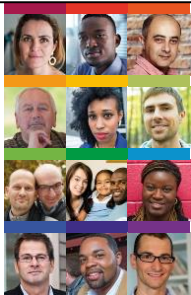
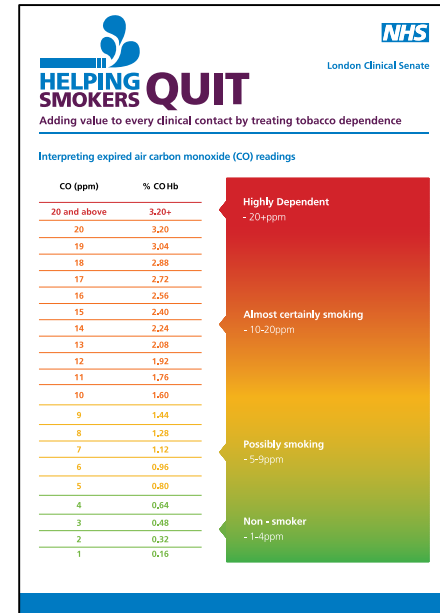
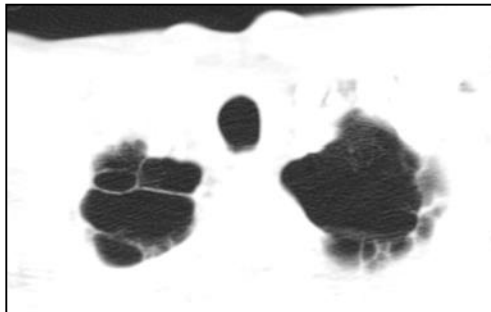


Tobacco Dependence & HIV: Case for change



British HIV Association
Standards of Care
for People Living with HIV
2013



Helping Smokers Quit Adding value to HIV Care?

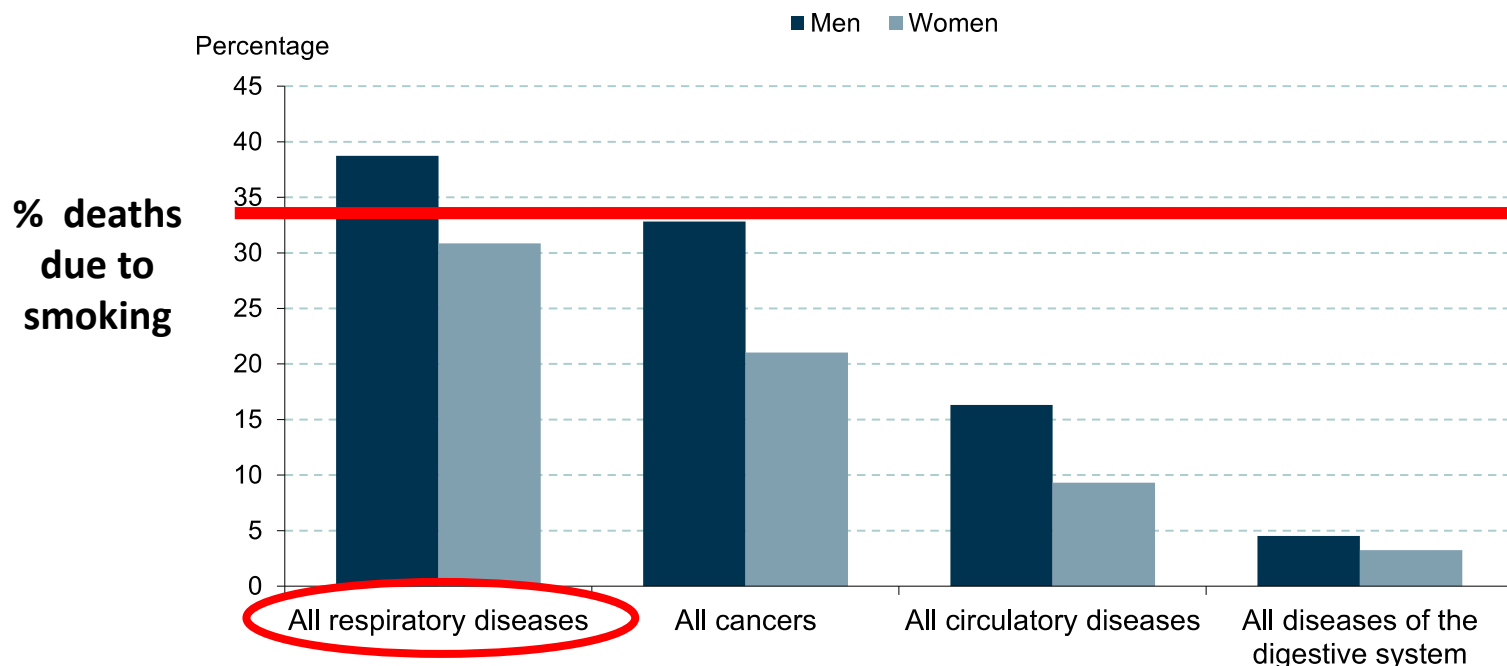
BHIVA Conference: Best Practice Session 13 Nov 2015

Louise Restrick, integrated consultant respiratory physician,
Whittington Health & Islington CCG
London Senate Helping Smokers Quit Team
London Respiratory Network Lead

'Smoking' and respiratory deaths

Statistics on Smoking, England 2015

Figure 4.5 - Estimated deaths attributable to smoking, as a percentage of all deaths from that disease¹, by gender, 2013

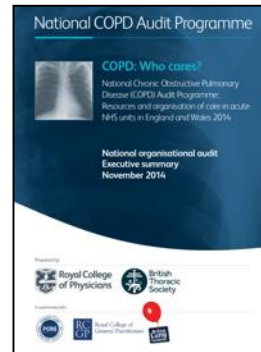


1. Among adults aged 35 and over.

Source: Office for National Statistics, Annual Mortality Statistics, 2013 date of death registration : Crown Copyright
Copyright © 2015 re-used with permission of the Office for National Statistics.

More than 1 in 3 respiratory deaths the result of tobacco dependence
~ 35%
COPD and Lung Cancer

Tobacco dependence and COPD

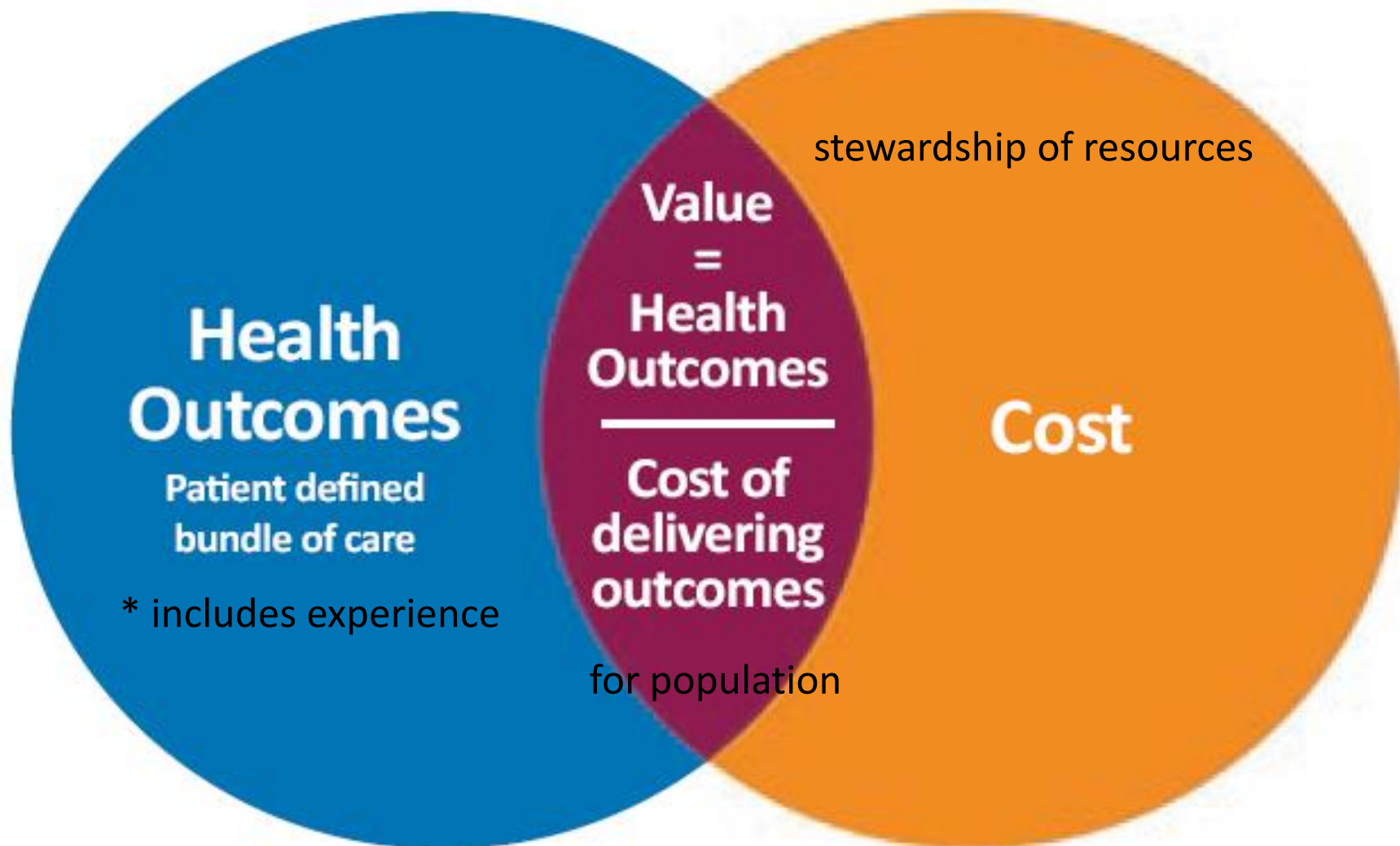


Smoking status		
RCP BTS COPD Audit 2014	National audit (13414)	
Known	92%	12390
If known (12390):		
Current smoker	37%	4528
Ex-smoker (stopped prior to hospital admission)	61%	7552
Never smoked	3%	310

More than 1 in 3 people admitted with COPD remain tobacco or nicotine dependent ~37%

Unchanged in 10 years

Value Framework: work with patients, improve outcomes and reduce costs

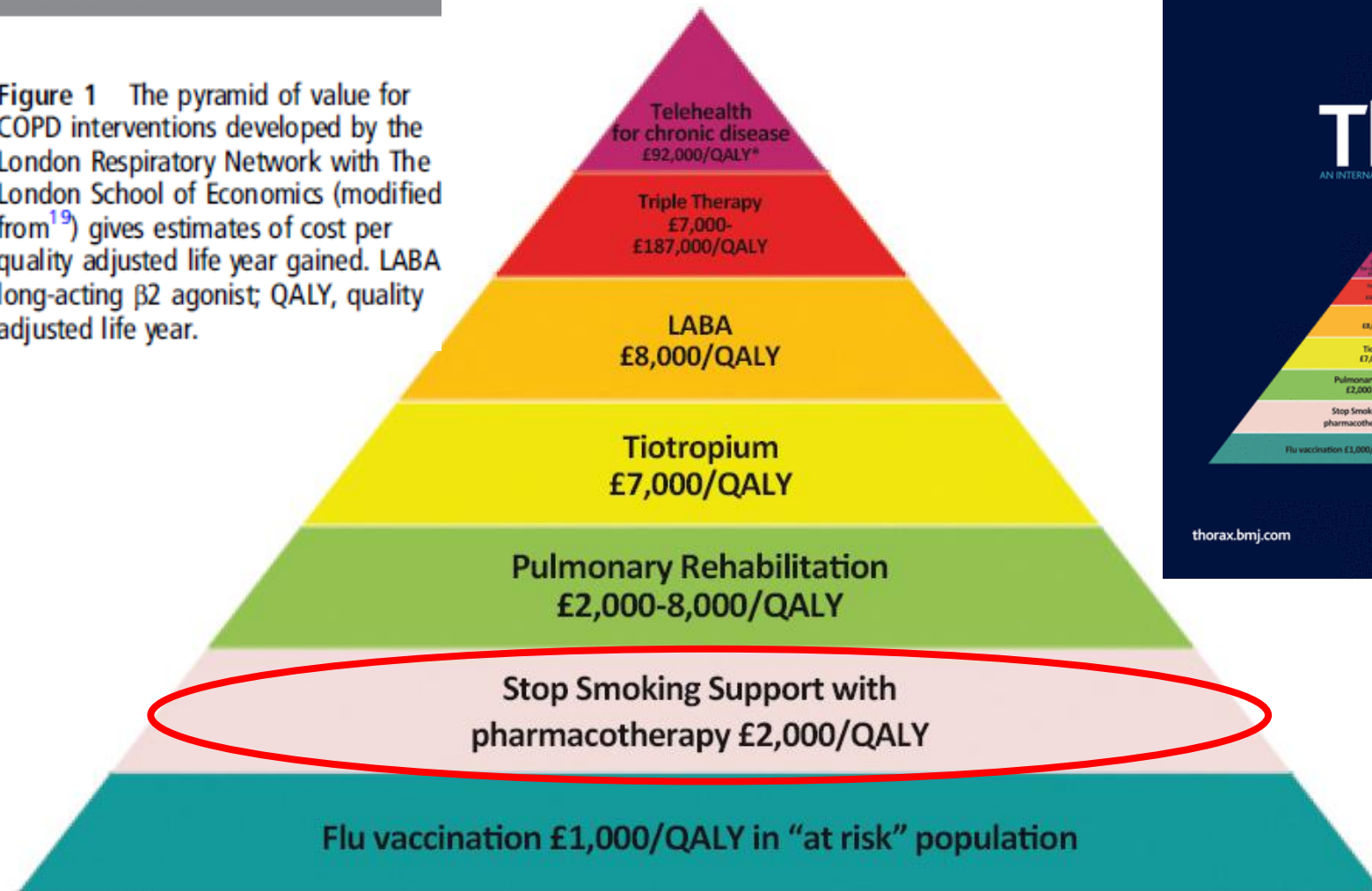


What is High Value Respiratory Care?

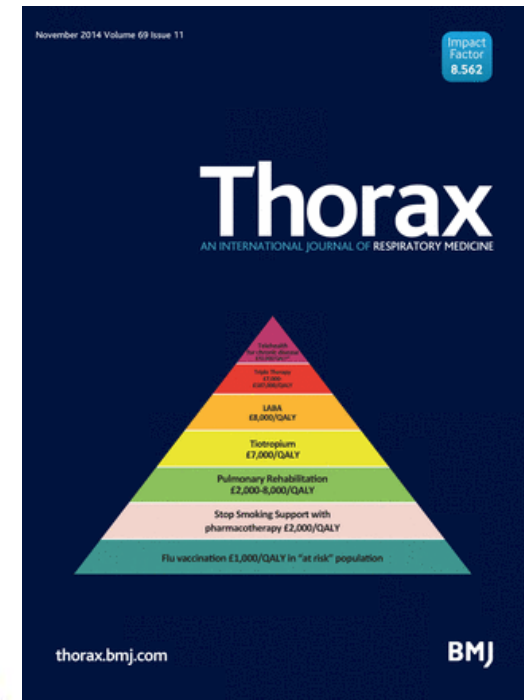
COPD 'Value' Pyramid

Editorial

Figure 1 The pyramid of value for COPD interventions developed by the London Respiratory Network with The London School of Economics (modified from¹⁹) gives estimates of cost per quality adjusted life year gained. LABA long-acting β_2 agonist; QALY, quality adjusted life year.

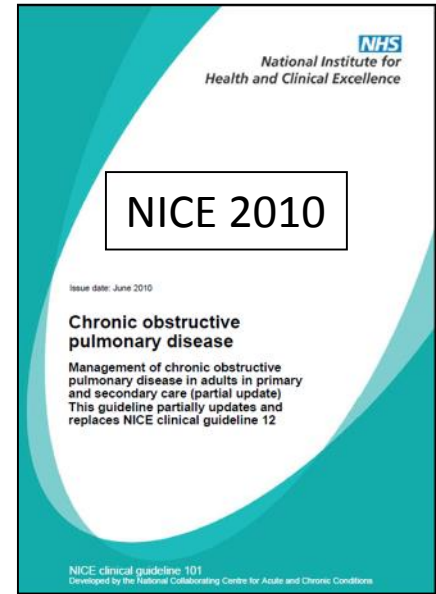


*(not specific to COPD)



Evidence-based treatment for tobacco dependence in COPD

‘Offer nicotine replacement therapy, **varenicline** or bupropion (unless contraindicated) combined with a support programme to optimise quit rates... ***to all people with COPD who still smoke at every opportunity.***’



Issue Date: March 2006

Brief interventions and referral for smoking cessation in primary care and other settings

Issue date: July 2007

Review date: May 2010

Varenicline for smoking cessation



40% COPD admissions tobacco dependent: Do we treat tobacco dependence?



Current smokers given smoking cessation **advice** during admission

RCP BTS COPD Audit 2014	National audit (4528 current smokers)	
Yes	58%	2610
No	11%	490
Not applicable	5%	217
Not recorded / not clear from notes	25%	1138
No answer=blank	2%	73

More than 40% people admitted with COPD who are tobacco dependent do not have a record of having been 'given smoking cessation advice during admission'

Adding value to hospital admission: Treating nicotine dependence



‘Smoking’ is tobacco/**nicotine dependence**

Sick smokers are admitted to ... hospitals

Evidence based quit smoking is the most important **treatment** for nicotine dependence in sick smokers:

Behaviour change support and prescribed quit smoking medication

As supporting people who are nicotine dependent and have respiratory disease to quit is their key **treatment** ...
... effective quit smoking is our **clinical responsibility**

Adding value to **respiratory** ward admission: Evidence-based treatment of nicotine dependence



Integral part of clinical care

Consultant led - all team members responsibility

Skilled behaviour change support

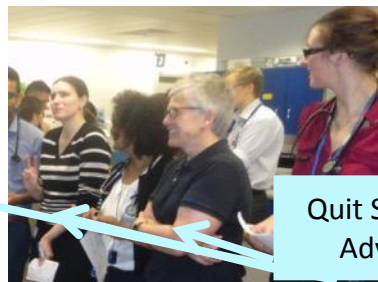
Quit smoking advisor key member in MDT

Multiple interventions on the ward

Co-ordinated follow up in clinic and at home



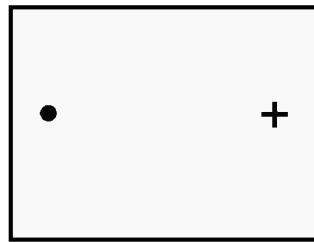
Team have and use Carbon Monoxide (CO) monitors
Range of NRT and varenicline available and prescribed



Quit Smoking
Advisors



Impact of tobacco dependence in people living with HIV?



~3000 HIV-infected individuals*

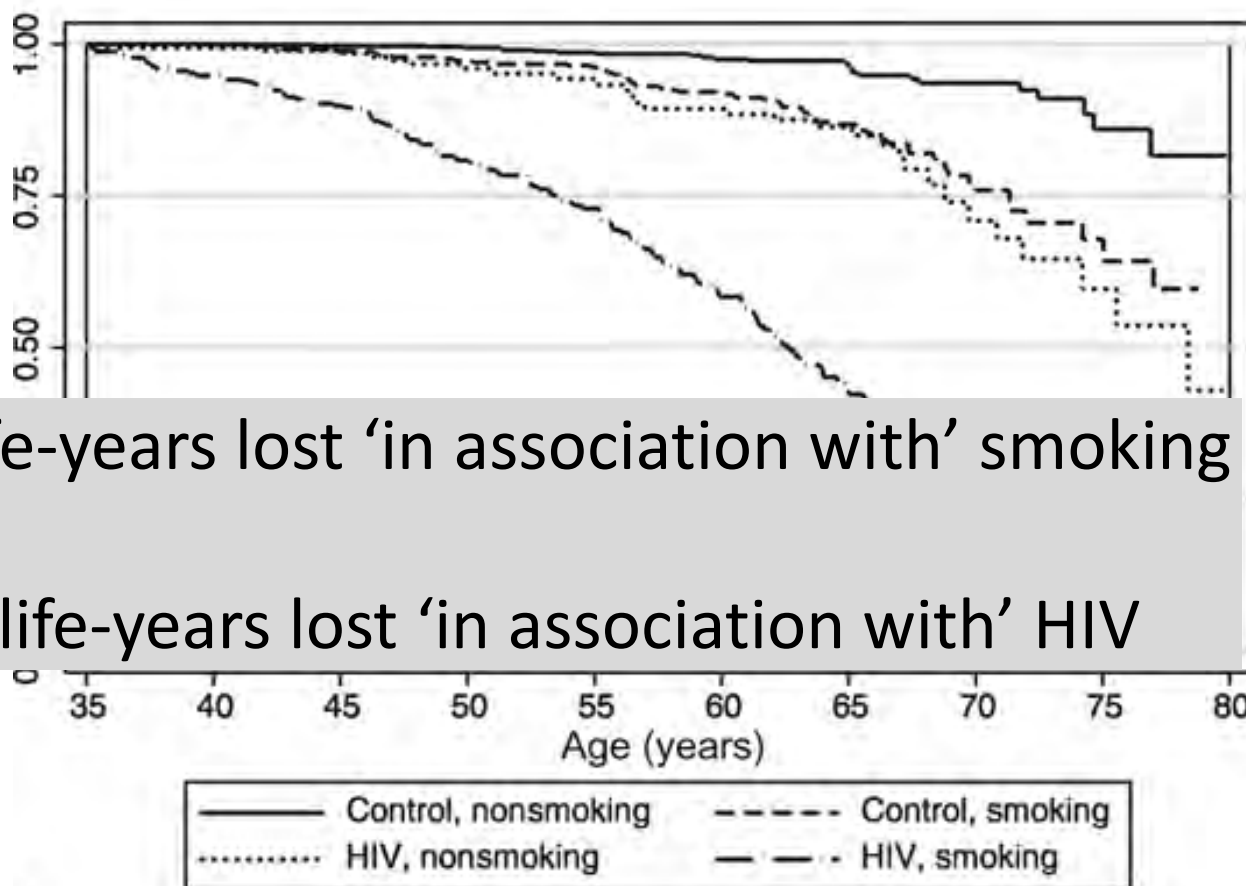
Denmark 1995-2010 - 10 000 controls - followed up ~4 years

Self-reported Smoking status	'Smoker' %	'Ex-smoker' %	'Never Smoker' %
HIV-infected individuals	47	18	35
Population Controls	20.6	32.8	46.6

***1500 excluded because missing data on smoking status ie 1 in 3!**

Impact of tobacco dependence in people living with HIV

Kaplan-Meier curve showing survival by age stratified by HIV & smoking status



Mean age 42-45 years

223 deaths in 4 years ...

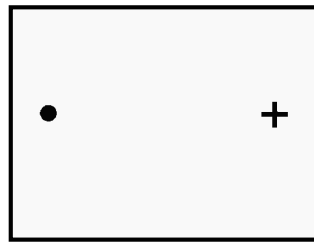
Age at death?

Young

12 life-years lost 'in association with' smoking

5 life-years lost 'in association with' HIV

Impact of tobacco dependence in people living with HIV



~18 000 HIV-infected individuals **US & Europe**

46 000 eligible HIV-infected individuals

60% smokers

Higher mortality from cardiovascular disease & non-AIDS malignancies than non-smokers

7.9 life-years lost associated with smoking

5.9 life years lost associated with HIV

24 000 excluded due to lack of data on smoking status
ie information missing in more than half ...

What about respiratory illnesses?

Cannabis smoking and respiratory illness: inner city experience & observations

1 in 3 tobacco smokers in an inner city hospital population
also smoke cannabis*

- ✓ all groups in society
- ✓ have to ask not volunteered...



History of tobacco **and cannabis smoking**

- ✓ Young people with pneumothorax
- ✓ Younger people with severe COPD with emphysema on CT
- ✓ Younger people with lung cancer

Cannabis smoking & lung cancer

Tunisia, Morocco & Algeria*

*Berthiller et al J Thoracic Oncology 2008

Odds Ratio for lung cancer if cannabis user **>2**

New Zealand** 79 cases lung cancer in under-55s

Risk of lung cancer increased:

8% for each joint-year cannabis smoking

7% for each pack-year cigarette smoking

>5 x Relative Risk with >10 joint-years cannabis

'5% of lung cancer in those aged ≤ 55 years may be attributable to cannabis smoking.'

**Aldington et al ERJ 2008:31;280-286

Sweden*** 49 000 male conscripts age 18-20 followed for 40 years

1.7% 'heavy' cannabis users (>50 joints total ie ~1 joint-year)

Odd ratio of lung cancer **>2** (adjusted for tobacco use)

***Callaghan et al Cancer Causes Control 2013:24:1811-1820

Cannabis smoking and respiratory illness: changing what we do ASK

Whittington Health **NHS**

NAME.....

HOSP.NO.....

DOB..... Age.....

ACUTE EXACERBATION OF C.O.P.D. CLERKING PROFORMA

SMOKING (including cannabis and other drugs)

Still smoking tobacco Yes ☐ No ☐ If yes,/ day. If ex-smoker, date given up

Pack years = $\frac{\text{no. of cigarettes}}{20} \times \text{years} = \underline{\hspace{2cm}}$

Still smoking cannabis Yes ☐ No ☐ Joint years = no. of joints per day X years = $\underline{\hspace{2cm}}$

History of smoking other drugs e.g crack/ heroin Yes ☐ No ☐

If yes, state Frequency of use

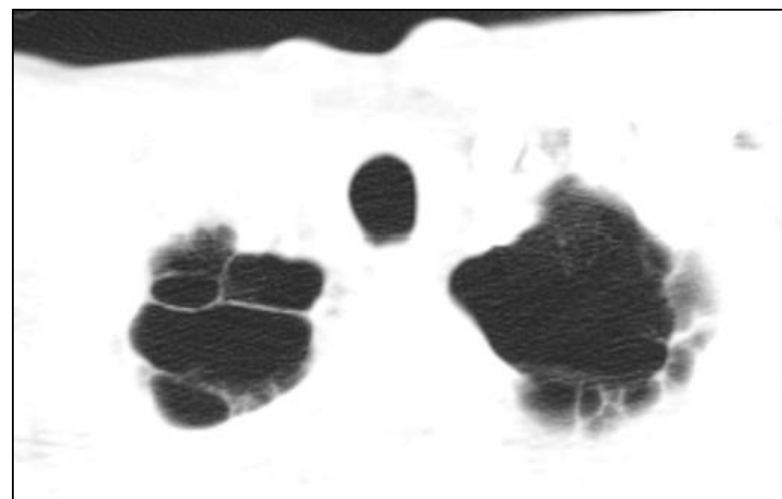
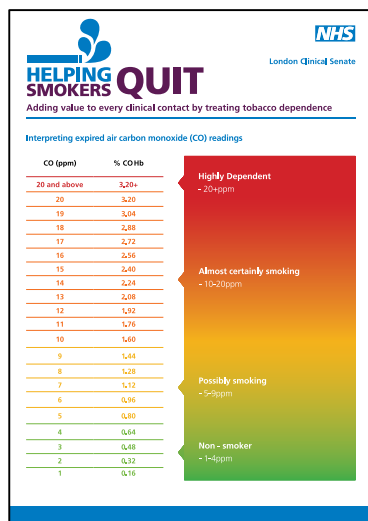
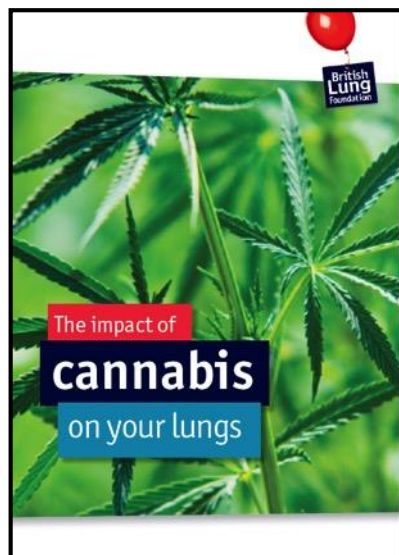
Still smoking other drugs e.g crack/ heroin Yes ☐ No ☐

Radiologist CT chest reporting:

‘Does this patient smoke cannabis?’

‘Appearance consistent with ‘cannabis lung’

Cannabis smoking and respiratory illness: changing what we do ... ADVISE



Impact of tobacco dependence in people living with HIV: Lung cancer

520 deaths in ~18 000 HIV-infected individuals
29% (152) AIDS- related
71% (368) deaths considered non-AIDS related

25% (94/368) due to non-AIDS malignant deaths
50% (47/94) due to cancers strongly related to **tobacco smoking**
lung, head-and-neck, oesophagus, pancreas & bladder cancer
96% (45/47) in tobacco smokers

Lung cancer accounted for 35% - all **tobacco smokers**
34/94 non-AIDS malignant deaths
6.5% all deaths in PLWH

Impact of
cannabis
smoking?

Does smoking matter in other respiratory illnesses? **Pneumonia**

Current smoking:

- ✓ Increases risk of getting community acquired pneumonia
- ✓ Increases risk of severe sepsis and hospitalisation
- ✓ Increases 30-day mortality ... independent of tobacco-related co-morbidity, age and co-morbid conditions



Does smoking matter in other respiratory illnesses? **Tuberculosis (TB)**

Smoking **doubles** the risk of pulmonary TB and related mortality

Increased risk of infection from exposure to second hand smoke and increased risk of relapse

15% of pulmonary TB diagnosed each year may be attributable to smoking alone*

Smoking cessation:

Reduces the risk of premature death from TB by 50%

Reduces the risk of infection in contacts

Reduces the risk of relapse*

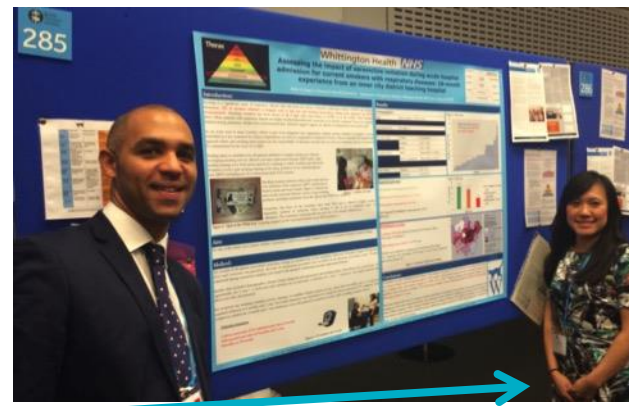
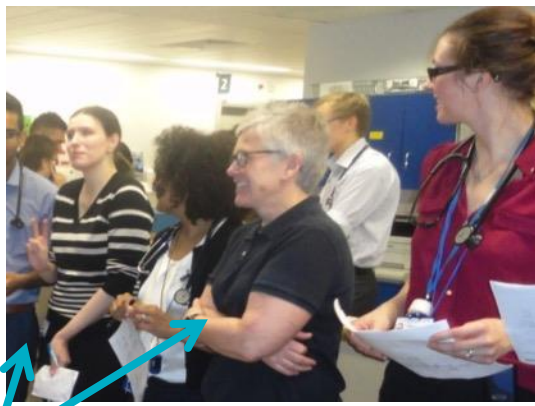
Changing respiratory care to deliver evidence-based treatment of nicotine dependence



Skilled behaviour change support & **medication**

Quit smoking advisors working with respiratory teams

Respiratory team training in smoking cessation and prescribing ... and behaviour change skills



Smoking Cessation Advisors work on wards with patients ...and teams

50% 6 month quit rates

For **highly tobacco dependent** patients with varenicline and intensive support*

*Ainley A, Pang E, Coleman B, Stern M, Restrick LJ *Thorax* 2014;69 (Suppl 2):A199 10.1136/thoraxjnl-2014 206260.404

Helping Smokers Quit London Senate Programme 2014-16

Treating tobacco dependency

Long-term condition that starts in childhood

Increasing the impact of therapy for people with HIV: tobacco consumption is the modifiable risk factor contributing most to the development of non-AIDS-defining events among persons living with HIV/AIDS.¹²

Helping Smokers Quit London Senate Programme 2014-16



Adding value to every clinical contact by treating tobacco dependence

The expired carbon
monoxide (CO) test
Guidance for health
professionals

This document has been written by clinicians
to support other health professionals using
exhaled CO test. The London Clinical Senate
recommends it as a motivational tool and in
the context of the CO4 campaign.



Know your level and track your
improvement – For patients

First and foremost, the value of CO monitoring is as a motivational tool



Adding value to every clinical contact by treating tobacco dependence



London Clinical Senate

The Clinical Senate asks London's health organisations to commit to CO4:

1. The 'right' **CO** nversation for every patient and staff member who smokes that gives him or her a chance to quit, referring if necessary.
2. Make routine desktop exhaled carbon monoxide **(CO)** monitoring by clinicians possible: *"Would you like to know your level?"*
3. **CO** de the intervention so we can evaluate effectiveness - including death certification.
4. **CO** mmission the system to do this right: so right behaviours incentivised systematically.

nt

smoking

Enabling COversations:

Clinicians trained in smoking cessation



Very Brief Advice on Smoking

30 seconds to save a life

ASK

AND RECORD SMOKING STATUS

Is the patient a smoker, ex-smoker or a non-smoker?

ADVISE

ON THE BEST WAY OF QUITTING

The best way of stopping smoking is with a combination of medication and specialist support.

ACT

ON PATIENT'S RESPONSE

Build confidence, give information, refer, prescribe. They are up to four times more likely to quit successfully with support.

REFER THEM TO THEIR LOCAL NHS STOP SMOKING SERVICE

Online training module
WWW.NCSCT.CO.UK/VBA




30 Seconds to save a life



NCSCT

HOMEABOUTTRAININGRESEARCHDELIVERYRESOURCESCONTACT



The NHS Centre for Smoking Cessation and Training (NCSCT)

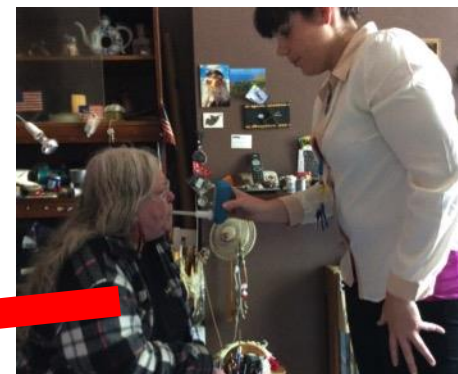
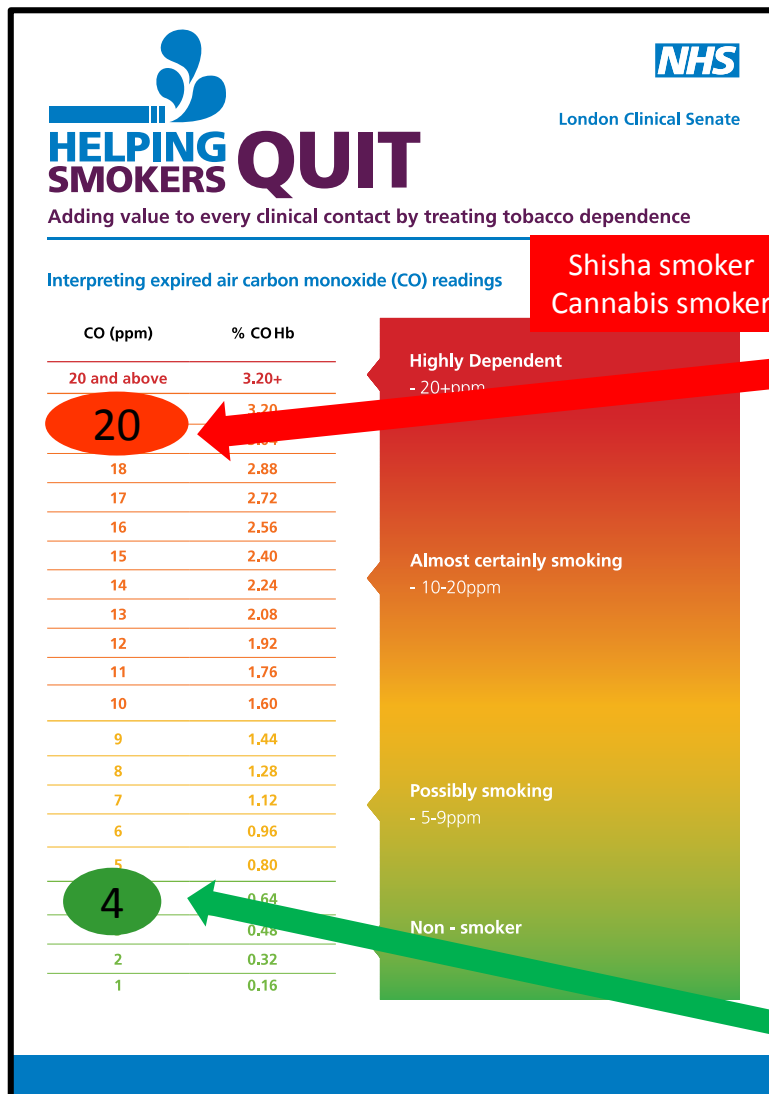
A short training module on how to deliver very brief advice on smoking.

[Visit Training Module](#)

NHS Centre for Smoking Cessation and Training

Why we have and use a CO monitor on the ward, in clinic and on home visits

Cheap ~ £150
Quick - easy to use
Diagnostic:
Smoking contributing
Tobacco dependence
Motivational tool
Outcome measure



Why we recommend, offer & can prescribe varenicline for our nicotine dependent patients with COPD/respiratory illnesses



~500 smokers with severe COPD

Mean age 58 years

60 pack-years of smoking

High nicotine dependence

Access to skilled support

Prescribed NRT and varenicline

48.5% abstinence at 6 months

61% with varenicline and 44% with NRT

Safe



COding smoking status & interventions: national respiratory data



Record	Smoking Status	Interventions
COPD	✓	(✓)
Asthma (2011)	✓	✗
Pneumonia	✗	✗
Tuberculosis	✗	✗
ILD	✗	✗
Lung Cancer	✗	✗

Records of smoking as cause of death?

South Africa

Sitas F et al *Lancet* 2013;382:685-693

'Smoker five years ago?' included on death notifications since 1998

England

Smoking as cause of death without referral to coroner since 1992 ...

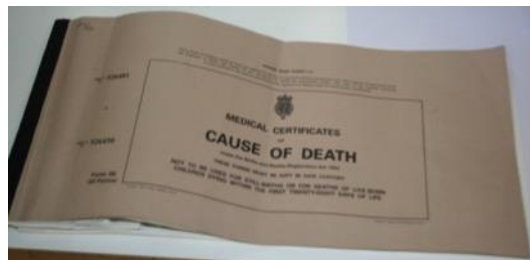
Diagnosis	No. of deaths (% of total)	Smoking cited as underlying COD (part I)	Smoking cited as a contributory factor (part II)
Carcinoma of lung or bronchus	145 (7.3%)	1	3
COPD & Emphysema	134 (6.7%)	1	3

• +

Smoking included as cause of death in fewer than 1% of deaths due to lung cancer or COPD although smoking known cause of >85% of both

Code: smoking on death certificates

Consultant input into death certificates for all in hospital deaths



Tobacco smoking recording in Part 1 for deaths due to:
Lung cancer, COPD, other cancers and diseases caused by smoking

Post-mortem/*
Coroner 1 2 (3)

Whether seen
after death* a (b) c

Cause of death:—
I (a) COPD

2007

Employment? ☐ Please tick where

MEDICAL CERTIFICATE OF CAUSE OF DEATH

Name of deceased _____ Date of death _____ Place of death _____ Last seen alive _____

of NOVEMBER 2012 Age as stated to _____

of NOVEMBER 2012

2012

CAUSE OF DEATH

The condition or conditions leading to the death should be stated in the space provided below. If the cause of death is not stated, the Registrar will assume it is the condition or conditions stated in the space provided below.

(a) CHRONIC OBSTRUCTIVE PULMONARY DISEASE
60 (WITT) PACK/YR SMOKING HISTORY.

(b) BRONCHIECTASIS, CORONARY CARDIAC
DISEASE

by me _____

Post-mortem/*
Coroner 1 2 (3) 4

Whether seen
after death* (a) b c

Cause of death:—
I (a) SCC OVULA
(b) TOBACCO SMOKING
(c)

II

Employment? ☐ Please tick where

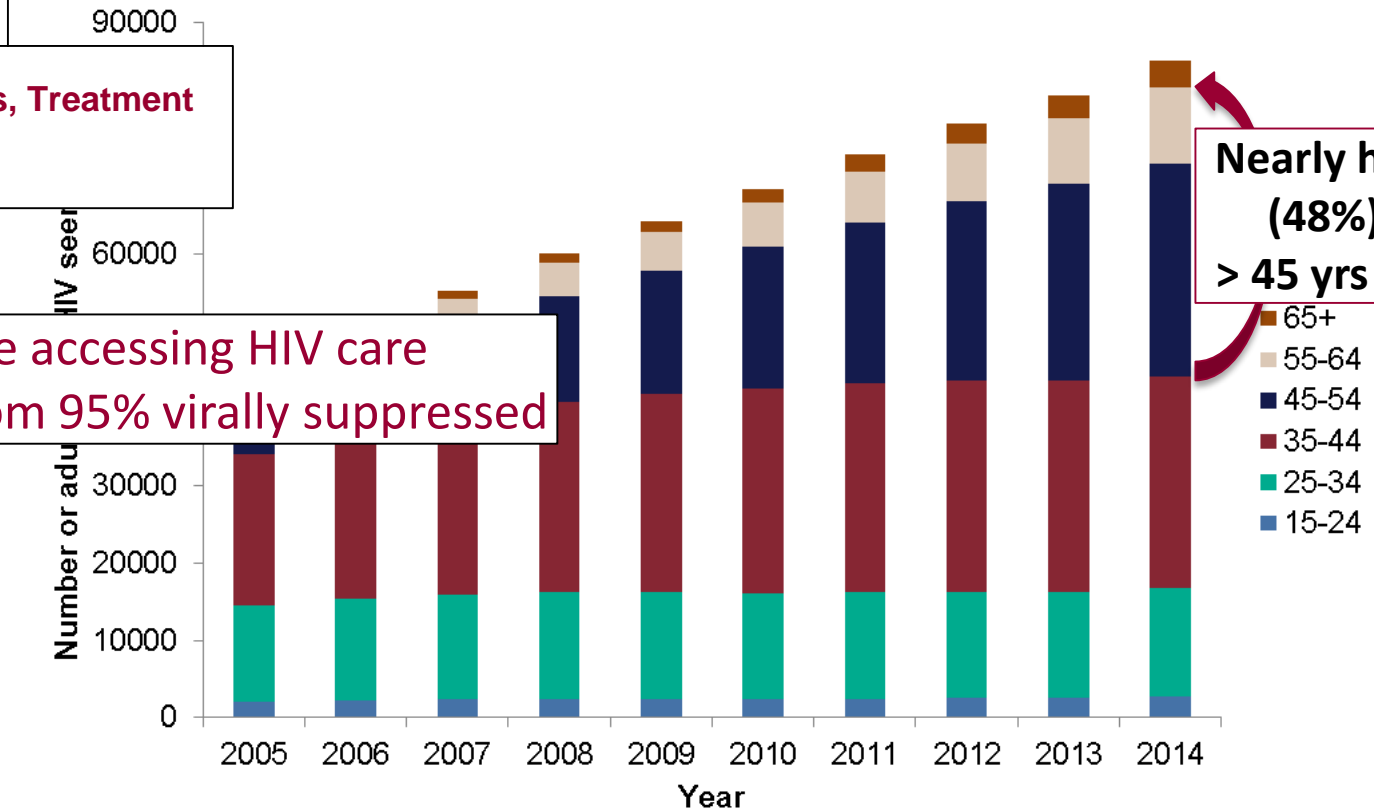
2013

Importance and confidence – TRAINING

Commission the system to do this right

Clinical leadership and incentives

Figure 2: People seen for HIV care by age group over time; 2005-2014



Nearly half
(48%)
> 45 yrs old

65+
55-64
45-54
35-44
25-34
15-24

HIV New Diagnoses, Treatment and Care in the UK
2015 report

85,489 people accessing HIV care
91% on ART, of whom 95% virally suppressed

41% live in London

613 people
with HIV died

'HIV specialist treatment and care in the UK remains excellent'

Smoking prevalence & interventions?

• +

Commission the system to do this right

Clinical leadership and incentives



British HIV Association

Standards of Care
for People Living with HIV

Monitoring according to national guidelines

- Patients having a documented 10-year cardiovascular disease (CVD) risk calculated within 1 year of first presentation and within the last 3 years (target: 70% each).
- Patients with a smoking history documented in the last 2 years (target: 95%) and blood pressure (BP) recorded in the last year (target: 95%).

12 Standards of Care for People Living with HIV

- Standard 1:** HIV testing and diagnosis
- Standard 2:** Access to, and retention in, HIV treatment and care
- Standard 3:** Provision of outpatient treatment and care for HIV, and access to care for complex comorbidity
- Standard 4:** Safe ARV prescribing: Effective medicines management
- Standard 5:** Inpatient care for people living with HIV
- Standard 6:** Psychological care
- Standard 7:** Sexual health and identification of contacts at risk of infection
- Standard 8:** Reproductive health
- Standard 9:** Self-management
- Standard 10:** Participation of people with HIV in their care
- Standard 11:** Competencies
- Standard 12:** Information for public health surveillance, commissioning, audit and research



Commission the system to do this right

Clinical leadership and incentives



Monitoring according to national guidelines

- Patients having a documented 10-year cardiovascular disease (CVD) risk calculated within 1 year of first presentation and within the last 3 years (target: 70% each).
- Patients with a smoking history documented in the last 2 years (target: 95%) and blood pressure (BP) recorded in the last year (target: 95%).

Standards & Outcome Measures?

Smoking prevalence in PLWH?

Risk assessment - Pack years? Cannabis? Joint-years?

Tobacco dependence identified & treated in every setting

- Smoking cessation offered & by trained professional?

- % all staff trained in smoking cessation eg VBA, Level 1

- Evidence-based smoking cessation – trained staff, CO readings, NRT & varenicline prescriptions?

6/12 or 1 year quit rates?

Smoking attributable mortality and age at death



London Senate Helping Smokers Quit Resources:



HELPING SMOKERS QUIT
Adding value to every clinical contact by treating tobacco dependence

The expired carbon monoxide (CO) test
Guidance for health professionals

This document has been written by clinicians to support other health professionals using the expired CO test. The London Clinical Senate recommends it as a motivational tool and within the context of the CO4 campaign.

Know your level and track your improvement – For patients

First and foremost, the value of CO monitoring is as a motivational tool for smokers. Pharmacists and smoking cessation specialist colleagues who have considerable experience of using this report its acceptability to patients and efficacy for behaviour change when used within the context of a supportive and structured intervention.

Enhanced tobacco smoking metrics – For clinicians, providers and commissioners

The test provides a digital result (parts per million – ppm) that can be coded and then used in conjunction with self-reported current tobacco smoking status to help you understand your population. However smoking products (e.g. cannabis) can result in higher levels. Knowing the value can positively impact on the conversation and the subsequent choice of intervention. The CO test result is an alternative measure of success in a harm reduction approach where the patient wishes to cut down rather than quit.

The following 'You-See' link demonstrates how to use one of the currently available devices.

The science, kit, intervention and interpretation

Carbon monoxide is one of the toxic gases exhaled by smokers from cigarettes. It has a short half-life, with elimination becoming slower as the concentration decreases. It is usually undetectable around 24 hours after the last cigarette. It is therefore a useful marker of regular smoking. If a smoker reports not smoking in the preceding 24 hours an expired air test can confirm this.

CO is easy to measure using readily available commercial products like those supplied by **Indivision Scientific Ltd** and **Carelution Corporation**. These devices are highlighted in this document because their devices have well-established use in the NHS and the authors have experience of using them. The devices are easy to use, handheld and no more expensive than high quality electronic blood pressure monitors of the type you would expect to see on every GP desk.

When using a multi-use device a single use mouthpiece is required. Each kit comes with simple advice about calibration.

There is a new **Indivision CO** monitor for personal use with a smartphone or tablet and it is currently the cheapest on the market.

All devices give a CO reading in parts per million (ppm). ppm is generally considered to be the highest acceptable level of CO in the expired breath of an individual who reports 'not smoking though'. CO arising from always inflammation in Chronic Obstructive Pulmonary disease (COPD) can result in levels up to 11 ppm. In practice, colleagues who have considerable experience in their use would suggest that any value above 5ppm usually suggests exposure to tobacco smoking.

As more health professionals in London become trained to support people to make a quit attempt through very brief advice and by having the right conversations there is an opportunity to utilise this motivational change tool currently proven in specialist quit training settings in everyday clinical settings too. The finding of a raised reading emphasises the measurable team of smoking, showing reduction following treatment and behaviour change provides motivation, rewards and immediate feedback on health gains. As part of the treatment protocol, praise can then be provided and a reinforcement of the 'not-a-quit' rule.

HELPING SMOKERS QUIT
Adding value to every clinical contact by treating tobacco dependence

Interpreting expired air carbon monoxide (CO) readings

CO (ppm)	% COHb
20 and above	3.20+
20	3.20
19	3.04
18	2.88
17	2.72
16	2.56
15	2.40
14	2.24
13	2.08
12	1.92
11	1.76
10	1.60
9	1.44
8	1.28
7	1.12
6	0.96
5	0.80
4	0.64
3	0.48
2	0.32
1	0.16

Highly Dependent
- 20+ppm

Almost certainly smokes
- 10-20ppm

Possibly smoking
- 5-9ppm

Non-smoker
- 1-4ppm

HELPING SMOKERS QUIT
Adding value to every clinical contact by treating tobacco dependence

London's Clinical Senate is asking health professionals working with London's 1.2 million smokers to support the HELPING SMOKERS QUIT programme.

In 2015 the Senate has prioritised the role of London's NHS to help smokers quit. Smoke free initiatives predominantly delivered by Public Health colleagues are already having a measurable and clinically meaningful impact on outcomes.

- London compares well to other cities with 18% prevalence.
- Hospital admissions aged 35+ in England attributable to smoking dropped to 460,900 in 2012/13 – an 18% decrease since 2004/05.
- Prenatal and paediatric hospital admissions for asthma have reduced by 10% and being born very small for gestational age has reduced following smoke free legislation.

However the recently published NHS Five Year Forward View states that we now need a 'radical upgrade in prevention and public health' following a failure to heed the learning from the Wanless report 12 years ago: smoking is still the 'number one killer'. "Every year 8000 people in London die from tobacco dependence – a preventable and treatable condition."

Whilst the NHS works to align with this agenda every health worker coming into contact with a patient who smokes can ensure they know how to provide a brief intervention.

The 20 minutes that will have more impact than anything else you do

Enhancing cancer therapy: smoking cessation before the initiation of radiation therapy in lung cancer is associated with an increased rate of complete response to treatment compared to those who continue to smoke through treatment.

Increasing the impact of therapy for people with HIV: tobacco consumption is the modifiable risk factor contributing most to the development of non-AIDS-defining events among persons living with HIV/AIDS.

Improving the health of future generations in London: on average 6% of pregnant Londoners smoke but 36% of pregnant teenagers smoke. Significant risks include reduced birth weight, infection and sudden infant death.

Smoking is associated with increased ambulance call outs: the impact of alcohol misuse on health services, and in particular the ambulance service, is well documented but tobacco smoking has odds ratio for ambulance call out in male current smokers - 1.63 (1.03-2.57) than regular strong alcohol drinkers - 1.35 (0.79-2.31).

The very brief advice (VBA) training takes only 20 minutes and the intervention can take as little as 30 seconds to complete in a real consultation. NICE guidance for in- and out-of hospital services recommends this intervention.

Learn how to provide this high value intervention at http://elearning.ncsct.co.uk/vba-stage_1. By August 2014 111,763 healthcare professionals had completed this training module.

<http://www.londonsenate.nhs.uk/helping-smokers-quit/>