

## Chronic Obstructive Pulmonary Disease (COPD) & contemplating quit smoking – protocol WMAHSN-05c

### Purpose

- To help the patient understand how to manage their COPD, noting changes in SATS, temperature and sputum colour, and initiating rescue medication as appropriate.
- To support the shared management plan patient agrees with the GP practice team, empowering the patient to self-titrate medication, self care, and be less dependent on face to face clinical contacts.
- To prevent deterioration of COPD and thus reduce unnecessary admission to hospital or attendance at A&E.
- To improve compliance with use of inhalers.
- To help the patient decide to stop smoking; and commit to a designated stop smoking service.
- To help the patient adopt a healthier lifestyle – encouraging exercise, eating sensibly, maintaining a happy mood, taking care in adverse weather, etc.
- To discover whether the patient feels depressed, and offer simple approaches to self-management.

### Setting

General practice setting; but could be community services setting if a clinician takes responsibility

### Selection of patients

Patient who smokes who would like help for up to 6 months to contemplate becoming a non-smoker; and in addition is:

on the practice COPD disease register, diagnosed according to best practice guidelines with spirometry, and on regular medication; and clinician feels that their clinical management might be improved and the patient given more autonomy. They will have one or more of the following symptoms or behaviours:

- excessive use of inhalers
- breathlessness on exertion
- productive sputum
- one or more exacerbations of COPD in last 12 months
- attended practice frequently in previous year for respiratory reasons, having been prescribed two or more courses of antibiotics
- been admitted to hospital with exacerbation of COPD in previous year
- attended A&E, walk in centre, out of hours service (OOHs) with exacerbation of COPD/chest infection – in previous 12 months

### Expected outcomes

1 Changes in healthcare usage:

- Fewer unnecessary admissions to hospital or attendances at A&E, or walk-in centres
- Frequency and timing of rescue medication – initiated earlier when early signs of deterioration

2 Patient empowerment:

- Ability to self-titrate rescue medication

3 Improved clinical outcomes:

- Less breathless on exertion
- Become a non-smoker, and adopt other lifestyle changes to improve their COPD

#### 4 Popularity of Flo:

- Patients find Flo messages helpful and reassuring
- Clinicians find Flo reinforces clinical management without excessive clinical time

#### 5 Cost effectiveness:

- Reduction in costs of secondary care usage (avoidable admissions / outpatient referral)

#### Success criteria

- 50% of patients start rescue medication appropriately, in line with self management plan
- 50% of patients who committed at baseline do at least 20 days of texting in SATS readings over a 3 month period
- 30% of patients decide to quit smoking; 20% quit themselves or commit to a designated stop smoking service.

#### Protocol

In summary:

- Patient is issued with a pulse oximeter, thermometer, and rescue medication
- The patient agrees a shared management plan with practice nurse and is given a leaflet incorporating this information.
- Daily, the patient receives text messages asking about their sputum colour and SATS and temperature (as appropriate).
- Monthly, the patient is asked if they are taking exercise.
- Daily, the patient receives an automated message giving general health and lifestyle advice, including encouragement to become a non-smoker.
- Monthly text enquiry of patient experience

Patient:

- signs contract, agreeing to respond to messages from Flo, to care for the equipment, and return it when asked to do so.
- signs a consent form accepting that they remain responsible for their health, and understanding that readings are sent to an inanimate machine. They specifically agree that if they are very short of breath or have chest pain or feel very ill they will phone for help from a doctor (eg general practice, out of hours service or 999 service) immediately and not use the telehealth system.
- measures their SATS and sputum colour daily, and sends the readings in to Flo when asked. If their sputum is code 4 or 5 (see Flo text codes), they are asked if they feel unwell, and if so, are asked to take their temperature. If their temperature is  $>37.5^{\circ}\text{C}$ , and they are more breathless than usual, they are told to take their rescue medication in line with their agreed joint management plan.
- responds to monthly questions about mood and exercise.
- receives automated information messages, and tries to adopt the advice contained in them.

Clinician:

- agrees a shared management plan with the patient, which includes the use of Flo.
- Advises patient about appropriate information leaflets, eg  
[http://www.improvement.nhs.uk/documents/BLF/Assessment\\_BK24\\_2012\\_v1.pdf](http://www.improvement.nhs.uk/documents/BLF/Assessment_BK24_2012_v1.pdf)  
[http://www.improvement.nhs.uk/documents/BLF/Flare-ups\\_BK23\\_2012\\_v1.pdf](http://www.improvement.nhs.uk/documents/BLF/Flare-ups_BK23_2012_v1.pdf)
- issues pulse oximeter, thermometer. Trains the patient to use the equipment.

- explains to the patient that readings are sent to an inanimate machine which is not monitored continuously, and obtains their signed consent form which states that the patient remains responsible for their own health.
- obtains patient's signed agreement to respond to Flo, and to look after the equipment, and return it when asked.
- enrolls patient on Flo by using the patient's current mobile phone number and NHS number, then selecting the appropriate service for them.
- issues standby rescue medication (e.g. doxycycline 100mg (8) + prednisolone 30mg od for 5 days (5mg x 30))
- monitors the patient's readings twice a week, and if unable to do so, ensures another clinician in the practice team does so.
- understands what to do if the readings are not within anticipated limits/outside agreed parameters (eg ask patient to come to surgery same day).
- after six months, asks patient to return equipment, unless doctor wants them to continue using it.

## Message Content

- Daily at 11.00am and a reminder at 1.00 pm for 6 months – sputum question
- Daily at 12:00 and 14:00pm SATS question
- Monthly exercise question
- Daily information messages for 28 days, then repeated
- Monthly patient experience questions

### Sputum Reading

#### Daily reminder at 11am (service message)

11am: ***“What colour is your sputum today? Reply: SPUTUM and the number of the colour. Thanks, Flo.”***

2 hours later if the patient has not replied to the first message: ***“Hi, You haven't told us what colour your sputum is today. Please reply SPUTUM and the number of the colour. Thanks, Flo.”***

#### Within range 1 - 2:

- ***“That's good, remember to keep warm and drink plenty.”***

#### Colour 3 :

- ***“Increase your inhaler to the maximum dose for 2 days.”***

#### Colour 4 - 5:

- ***“Carry on using your inhalers as prescribed and if you are feeling unwell please reply with your temperature. TP and temperature eg: TP 37.2.”***

#### If they respond with a temperature reading:

Temperature <36.0 ***“Your body temperature is very low. Wrap up warm with layers of clothes, and call the surgery to discuss this temperature reading with the nurse”***

Temperature 36.1- 37.4 ***“That's good, increase your blue inhaler to the maximum dose for 2 days.”***

Temperature ≥37.5 ***“Are you more short of breath than usual? Please reply BR1 if you are more short of breath, or BR2 if you are not.”***

**Response BR1: "If this is typical of how your COPD gets worse, take your rescue medication today & increase inhaler to max dose for 2 days. Ask nurse within 2 days for advice."**

**Response BR2: "If you're tired or more short of breath later today take your rescue medication & increase inhaler to max dose for 2 days. Ask nurse within 2 days for advice."**

### Blood oxygen reading

**Daily at 12:00: "What is your oxygen level today? Please reply: OX and then the number on the reading. eg "OX 95" Thanks, Flo."**

**Reminder at 14:00: "You haven't yet told us what your oxygen level is today. Please reply: OX and then the number on the reading. eg "OX 95" Thanks, Flo."**

**Reading  $\geq$  93 "Your oxygen level is normal, have a good day. Flo"**

**Reading  $<$ 93 "That's a lower level today, make sure you take plenty of rest. Take care, Flo"**

### Exercise question every 4 weeks

**Reading 15:00 : "Are you managing to do something active most days? Please reply EXE 1 for 'yes', EXE 2 for 'no' Thanks, Flo."**

**Reminder 19:00: "Please let us know if you are managing to do something active most days. Reply EXE 1 for 'yes', or EXE 2 for 'no'. Thanks, Flo."**

**Response YES: "That's great, well done. Take care, Flo."**

**Response NO: "People with COPD who keep active have a much better quality of life. Take care, Flo."**

### Information messages (daily for 28 days, then repeated)

- 1. A quarter of smokers intend to stop next month- if that's you, decide you really will quit.**
- 2. Find healthy alternatives to smoking - eat fruit as a snack.**
- 3. Talk to your GP or nurse about stopping smoking - that five minute chat could save your life.**
- 4. Giving up smoking would be taking control back over your life.**
- 5. Doing easy swinging exercises with your shoulders improves your flexibility and helps your breathing too.**
- 6. Smoking kills more people each year than traffic accidents do.**
- 7. Giving up smoking will make you look younger, as your skin will be more healthy.**
- 8. Stop and rest when you need to, don't get over-tired.**
- 9. Half of people who smoke all their lives, die on average ten years early.**
- 10. Practise deep breathing- rest your elbows on the arms of your chair to prevent your shoulders lifting.**
- 11. Walking is great exercise. Start inside your home, increase how many times you can walk from the front to the back, then maybe to the local shops?**

12. **However ill you are from your lung disease, you'll improve if you stop smoking.**
13. **If you can't stop smoking for yourself- do it for someone you love.**
14. **Picture yourself without a fag - it's not a mirage - you really can do it.**
15. **Drink plenty of fluid - at least 8 glasses a day.**
16. **Make a New Year's resolution to quit smoking. Or how about a Monday resolution, or an Everyday resolution?**
17. **Eating healthy foods will help you to fight off infections.**
18. **A year after you've stopped smoking, your risk of a having a heart attack falls to about half.**
19. **Try this exercise- stand up from sitting without using your hands; do it ten times.**
20. **Have regular quiet periods every day as relaxation helps your breathing.**
21. **Quitting smoking isn't easy - but nothing worthwhile is.**
22. **If you feel a bit stuck at home it'd be good to find a new interest.**
23. **Daily short walks are really good for your lungs.**
24. **Quitting is about taking control of your life, rather than being controlled by your addiction.**
25. **Keep the air in your house at a constant temperature to help your lungs.**
26. **Cover your nose and mouth with a scarf to help your breathing on a cold or windy day**
27. **Stay away from people who have colds, so you don't catch it too.**
28. **Clear the bottom of your lungs every morning by lying on each side, and taking deep breaths to help you cough.**

### Patient experience questions

BASELINE:

**How often have you needed to see your doctor in the last month because of your chest? Please text CC, followed by the number of times, eg CC3 Thanks, Flo. (XevalQ-01)**

**Do you think that you have good breathing control? Reply CC1 for yes; CC2 for no; CC3 for unsure. Thanks, Flo. (XevalQ-02)**

MONTHS 1,2,3,4,5,6:

**How often have you needed to see your doctor in the last month because of your chest? Please text CC, followed by the number of times, eg CC3 Thanks, Flo. (xEvalQ 3,5,7,9, DIARY 7,9)**

**Has Flo helped your breathing control? If yes, please reply CC1; if no, reply CC2; if unsure, text CC3 (xEvalQ 4,6,8,10, DIARY 8,10)**

MONTHS 3 and 6:

**Please text SM1 if you agree with the statement " I am now a non-smoker ", or text SM 2 if you don't. Thanks, Flo (SMOKING, DIARY6)**

**Thank you. This information helps us to know how useful the Flo system is.**