



Stoke-on-Trent
Clinical Commissioning Group

Simple Telehealth SMS texting service

Flo

resource pack

for clinicians

AIM for HEALTH version



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www.stoke.nhs.uk/simple/aim

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Acknowledgements. Some sections of this resource pack have been derived from an original produced by NHS Midlands and East, and we are grateful for their kind permission to use and alter their work.

Introduction to ‘Flo’ simple telehealth

Simple telehealth is the multi-award winning, NHS inspired and owned telehealth solution. Simple telehealth (STH) is designed to enable patients to take responsibility for the monitoring and dual management of their own condition, treatment, or lifestyle. STH’s innovative methods allow multiple healthcare teams to share patient information and assist patients in the joint management of their own care.

Simple telehealth encompasses Florence™ the friendly interface & ‘persona’, technical assets, methodologies, global patents, business cases, clinical protocols, and an open and honest approach to sharing best practice across health and social care.

STH is used to:

- Collate patient responses about their experiences with targeted messaging
- Improve concordance and compliance with treatment regimes through encouragement, reminders and interactive contact
- Enhance clinical team productivity and improve health outcomes
- Engage patients in their own health and social care in relation to their lifestyle habits, clinical conditions and services

Due to the low cost of STH, its ease of use and universal acceptability of the methods, STH seems to be affordable and deployable on an unequalled scale across a wide range of conditions and pathways.

Many parts of the UK are using Flo already. Their contribution to widening its use has been helped by the development of a community of practice, which through collaboration offers ideas for future potential in your own area. You may want to consider this, once you have used Flo via the AIM project.

www.stoke.nhs.uk/simple

This ‘Community of Practice’, (CoP) (see website) allows collaboration and sharing between NHS and Social Care organisations across the UK. Any NHS or social care professional or manager along with individual members of the public can access the site.

In this CoP you can access:

<ul style="list-style-type: none">• General information plus training guides / videos	<ul style="list-style-type: none">• Help and support
<ul style="list-style-type: none">• Case studies	<ul style="list-style-type: none">• Discussion forums
<ul style="list-style-type: none">• Business cases	<ul style="list-style-type: none">• Project team sites
<ul style="list-style-type: none">• Document templates	<ul style="list-style-type: none">• Latest developments
<ul style="list-style-type: none">• Shared learning	<ul style="list-style-type: none">• Evidence base

Clinical protocols for rollout via Flo SMS texting service through the AIM for Health project

NHS Stoke on Trent Clinical Commissioning Group will support frontline practitioners with the effective use of the Florence (Flo) telehealth service that empowers patients to use Flo telehealth as an enabling tool to take more responsibility for their health and wellbeing. To do this at speed, we propose to focus on clinical applications that frontline practitioners recognise as being important clinical areas that enhance patients' quality of care and that can be adopted within a busy everyday general practice. In parallel, commissioners will recognise that if these clinical areas are adopted there should be obvious effects on minimising deterioration or acute exacerbations of long term conditions – and thus less avoidable healthcare usage in the short, medium and long term.

The clinical areas offered are:

- 1. Initial high BP reading (hypertension, not yet confirmed)**
- 2. Hypertension (poor control or newly diagnosed)**
- 3. Hypertension (stable)**
- 4. Inhaler reminder for adults and teenagers (asthma and COPD)**
- 5. Inhaler reminder for parent of child with asthma**
- 6. Smoking cessation (within first 4 weeks of supported stop smoking service provision)**
- 7. Smoking cessation (smokers who have quit, at end of three months smoking cessation service or equivalent)**
- 8. Smoking cessation (contemplating quitting, but have not yet decided to do so)**
- 9. Medication reminder (could be pain management)**
- 10. Further option for Hypertension (poor control or newly diagnosed for patients with CKD or diabetes and/or ACR ≥ 70 mg/mmol)**

Associated protocols follow; the interactive messages and information messages are all loaded and ready to be rolled out, having been trialled and revised in local practices in Stoke-on-Trent and beyond.

There are other protocols ready to be adopted if the GPs & practice nurses who trial Flo telehealth wish to expand into other clinical areas in 'phase 2' eg 2013/4 (such as COPD-triggering rescue medication, remedying adverse lifestyle habits such as obesity/alcohol misuse).

Protocols/ consent forms/ patient contracts/ patient instruction sheets/clinician guidelines follow – all collated by Phil O’Connell (Flo technical lead) and Professor Ruth Chambers (GP & Clinical director for practice development & performance NHS Stoke-on-Trent CCG).

We include example copies of patient consent forms, contracts, patient literature and information leaflets, ‘how to do it’ for clinicians, and other useful resources; you can adopt or adapt these for your practice or CCG.

Also, www.stoke.nhs.uk/simple/aim gives further information.

Remote Care Monitoring (Preparation) Scheme DES

The aims of this enhanced service in 2013/14 for GP practices include:

- identify and agree priority area for remote care monitoring to be implemented in 2014/15;
- record appropriate patient preferences for receiving and monitoring required test results;
- plan system for registering patients for remote care monitoring of agreed clinical priority

So you can use your experience of applying simple telehealth to plan your system for fulfilling the requirements of this DES for 2013-4 and subsequent application in 2014-5.

Disclaimer

All the clinical protocols provided are those adopted by NHS Stoke-on-Trent CCG for use in association with Flo telehealth service. Healthcare professionals and practice teams in Stoke-on-Trent CCG and any other participating CCG should compare the proposed clinical protocols with their own practice protocols and make amendments (to the clinical protocol and any associated messages or clinical parameters set in the text messaging) where these differ from the example protocols shared here. Practices must insert specific systolic and diastolic BP readings in their own dual management plan-(see Appendix 1b) the examples shared from the AIM for Health project (see Appendix 1a) are locally agreed protocols that can be adapted by clinicians elsewhere. In receiving and interpreting text messages and the use of example dual management plans, health professionals should use their clinical judgement in individual cases and arrive upon a shared care management plan with their patients. This resource is based on current best evidence at the time of compilation and other national guidelines. The authors recognise that new evidence can come into existence rapidly, and clinicians should follow current best evidence at the particular time of applying their knowledge and skills in patient care for individual patients.

References

1. Protocols 1, 2, 3 and 10 are based on NICE guidelines:

Hypertension CG127 <http://www.nice.org.uk/nicemedia/live/13561/56015/56015.pdf>

CKD CG73 <http://www.nice.org.uk/nicemedia/live/12069/42119/42119.pdf>

2. All protocols relate to medicines adherence NICE guidelines:

Medicines adherence CG 76 www.nice.org.uk/CG76

General Medical Council (GMC). *Good practice in prescribing and managing medicines and devices*. London: GMC, 2013. www.gmc-uk.org/guidance/ethical_guidance/14316.asp

Nursing & Midwifery Council (NMC). *Standards for medicines management*. London: NMC, 2010 www.nmc-uk.org/publications

Initial high blood pressure reading (hypertension not yet confirmed) – protocol 1

Purpose

- To establish whether a patient's initial high blood pressure reading is confirmed hypertension, or merely an isolated incident.

Setting

General practice

Selection of patients

- Patient who has had a blood pressure reading $\geq 140/90$ mmHg (in clinic), but it is not yet clear whether they have hypertension
- Patients for whom ambulatory BP monitoring is not available or acceptable
- Patient should not have diabetes or CKD (would be different version with lower BP goal)
- Exclude patients with pulse irregularity (for example, due to atrial fibrillation as automated devices may not accurately measure the blood pressure and manual blood pressure monitoring should be undertaken)
- Exclude patients ≥ 80 years old (different BP goal)

Expected outcomes

1 Healthcare usage:

- Blood pressure readings taken at home mean less surgery consultation time used; reflect real time BP measures (without 'white coat' hypertension effect)
- Should avoid inappropriate classification as hypertension (and thus avoid unnecessary follow up and medication)

2 Patient empowerment:

- Greater understanding about their possible condition

3 Improved clinical outcomes:

- Better monitoring of blood pressure readings to clarify if the patient has confirmed hypertension; then patient is not put on unnecessary medication/ nor classified as having a long term condition that they have not got

4 Popularity of Flo:

- Patients find Flo responses reassuring
- Clinicians find Flo provides speedy and accurate confirmation (or not) of hypertension, and does not require excessive clinical time

5 Cost effectiveness:

- Costs of antihypertensive medication – ie normotensive patient is not classed as having hypertension, and does not take unjustified medication

Success criteria

100% patients confirmed as either having hypertension or not.

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General information about Home Blood Pressure Monitoring (HBPM)

- Home is generally lower than clinic BP: approximately -5/5mmHg at 140/90mmHg in clinic and -10/5mmHg at 160/100mmHg in clinic
- Don't supply or recommend wrist machines as very difficult to get level of arm right
- The British Hypertension Society has a list of validated monitors which are as cheap as £15
- Don't forget to calibrate home BP monitors that you lend out annually
- NICE and US and Europeans recommend one week of readings, twice daily (0600-1200 AND 1800-0000), discard the first day's readings and calculate the mean of the rest. Florence lets you export an excel file which makes calculating this easy
- If home BP is very up and down it can be difficult to work out what is going on and in this case it is probably worth organising an ABPM instead.

Protocol

In summary:

- Patient issued with a sphygmomanometer of a type recommended by the British Hypertension Society (www.bhsoc.org//index.php?cID=246)
- Patient signs contract
- Twice daily BP readings, submitted via Flo for one week, remotely monitored by a clinician
- After one week, arrange review to decide whether diagnosis of hypertension can be made. Outcomes will be start medication and transfer the patient to telehealth hypertension programme protocol 2, or if BP readings normal, text or phone patient to explain, stop texted in BP readings and return the sphygmomanometer.
- Read code added on practice disease register as appropriate
- After one week 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 a computer.
- takes their blood pressure twice daily, and sends the reading in to Flo when asked.
- Responds to texts from Flo at the end of the week about their experience.

Clinician:

- issues sphygmomanometer and appropriate cuff size, and trains patient in its use.
- agrees with the patient how often to take their blood pressure and send the readings in via Flo.
- obtains patient's signed agreement to respond to Flo, to look after the equipment, and return it when asked.

- explains to the patient that readings are sent to a computer which is not monitored continuously, and obtains their signed consent form which states that the patient remains responsible for their own health.
- enrolls patient on Flo by using the patient's mobile phone number, demonstrating patient consent, and NHS number, then selecting the appropriate service for them.
- arranges contact with patient around one week later to review blood pressure readings, face to face if appropriate or phones or texts patient – and either confirm not hypertensive or start medication and move to Flo protocol 2 (newly diagnosed / unstable hypertension) (arrange to phone / text patient instead if BP readings show normotensive).
- monitors the patient's readings end of week, and if unable to do so, ensures another member of the practice team does so.
- understands what to do if the readings are outside set parameters (eg ask patient to come to surgery).
- after one week, asks patient to return equipment, unless hypertension confirmed, then medication started, and blood tests/ ECG done where necessary, and moved to protocol 2 telehealth hypertension programme.
- writes patient's baseline details on evaluation form, and files this for access by project administrator (if practice undertaking substantive evaluation).
- completes a questionnaire after one week as to whether hypertension confirmed.
- adds Read code to patient's medical records and entry on disease register if hypertension confirmed.

Practice administrator:

- notes patients enrolled on telehealth project.

Interactive automated messages

Daily at 8.00am and reminder at 8.00pm:

Information messages

None

Evaluation (optional – for practice team)

Date when started using Flo.....

Most recent BP prior to using Flo..... Date.....

Attach Flo readings sheet(s)

After one week's readings, was the patient confirmed as hypertensive? YES / NO

If YES, what treatment will they be started on?.....

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Patient texted experience response via Flo (after one week):

ANS1 Please text #1 if you agree with the statement "I would recommend this service to my family and friends", or #2 if you disagree.

ANS2 Thank you. Now please tell us if you feel confident about taking your blood pressure. Please text #1 if you do, or #2 if you don't. Thanks, Flo.

ANS3 Please text #1 if you agree with the statement "I prefer to send my readings to my practice via Flo, rather than go in person", or # 2 if you disagree.

Hypertension (poor control or newly diagnosed) – protocol 2

Purpose

- To improve patient compliance with medication use.
- To encourage the patient to adhere to the dual management plan agreed with their GP practice team to gain better control of their blood pressure.
- To help the patient adopt a healthier lifestyle – exercise, eat sensibly, within ideal weight range, maintaining happy mood.

Setting

General practice, but can be any healthcare setting if a clinician takes continuing responsibility.

Selection of patients

- Patients who are on the practice hypertension register and on medication but their blood pressure is poorly controlled, ie $\geq 140/90$ mmHg (in surgery) who need help to comply with their medication. (Please note, they should not have diabetes or CKD with ACR ≥ 70 mg/mmol, as this requires a different protocol with lower target blood pressure.)
- Patients who in addition to poorly controlled blood pressure have poor lifestyle habits eg drink alcohol excessively, take little exercise, have poor diet, smoke.
- Patients with newly diagnosed hypertension, whose blood pressure control needs careful management to optimise the use of anti-hypertensive medication.
- Exclude patients with pulse irregularity (for example, due to atrial fibrillation as automated devices may not accurately measure the blood pressure and manual blood pressure monitoring should be undertaken).
- Exclude patients ≥ 80 years old (different BP goal).

Expected outcomes

- 1 Changes in healthcare usage:
 - Fewer unnecessary admissions to hospital or attendances at A&E; less contact at GP surgery
 - Regular pattern of repeat prescriptions for anti-hypertensive drugs
- 2 Patient empowerment:
 - Greater confidence about their condition
 - Lifestyle changes to improve or maintain their health & wellbeing
- 3 Improved clinical outcomes:
 - Blood pressure $< 140/90$ mmHg in clinic (or $< 135/85$ mmHg home BP readings) or patient's set goal (see success criteria for definition).
- 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 avoidable secondary care use (stroke, referrals, falls)

Success criteria

- 50% of patients who commit at start do at least 20 days of texting in BP readings over a 2 month period
- 75% of patients with unstable hypertension become controlled within two months (<140/90mmHg sustained; or < 135/85mmHg as home blood pressure readings – practice can decide the goals for their patients) (Please note, we will take number who text 80% readings BP <135/85mmHg in last 2 weeks of texted readings to be classed as ‘controlled’)

General information about Home Blood Pressure Monitoring (HBPM)

- Home is generally lower than clinic BP: approximately -5/5mmHg at 140/90mmHg in clinic and -10/5mmHg at 160/100mmHg in clinic
- Don't supply or recommend wrist machines as very difficult to get level of arm right
- The British Hypertension Society has a list of validated monitors which are as cheap as £15
- Don't forget to calibrate home BP monitors that you lend out annually
- NICE and US and Europeans recommend one week of readings, twice daily (0600-1200 AND 1800-0000), discard the first day's readings and calculate the mean of the rest. Florence lets you export an excel file which makes calculating this easy
- If home BP is very up and down it can be difficult to work out what is going on and in this case it is probably worth organising an ABPM instead.

Protocol

In summary:

- Patient issued with sphygmomanometer of a type recommended by the British Hypertension Society (www.bhsoc.org//index.php?cID=246)
- Patient signs contract
- Clinician / patient agree dual management BP control plan (see Appendix 1a for example BP dual management plan; Appendix 1b for version of dual management plan that practices should complete for their clinical use to match their own clinical protocol.)
- Twice daily BP readings, submitted via 'Flo', remotely monitored weekly by clinician – for two months in first instance
- Monthly responses to depression questions
- Twice weekly information messages
- Monthly text enquiry of patient experience
- Evaluation (optional) – capture of healthcare usage, 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 a computer.

- takes their blood pressure twice daily and sends the readings in to Flo when asked – for two months.
- responds to monthly questions about mood.
- receives twice weekly information messages, and tries to adopt the advice contained in them.
- responds to monthly texts from Flo about their experience.

Clinician:

- agrees a dual management plan with the patient, (Appendix 1b) which includes the use of Flo.
- issues sphygmomanometer and appropriate cuff, and trains the patient in its use.
- obtains patient’s signed agreement to respond to Flo, to look after the equipment, and return it when asked.
- explains to the patient that readings are sent to a computer which is not monitored continuously, and obtains their signed consent - that the patient remains responsible for their own health.
- enrolls patient on Flo by using the patient’s current mobile phone number and NHS number, then selecting the appropriate service for them.
- monitors the patient’s BP readings weekly, and if unable to do so, ensures another clinician in the practice team does so.
- arranges an appointment to review titration of medication against blood pressure readings after one month, or by phone or text as appropriate.
- understands what to do if the readings are outside set parameters / agreed goals (eg ask patient to come to surgery or adjust medication by phone).
- after two months, asks patient to return equipment, unless doctor / nurse wants them to continue using it to achieve better control of their hypertension.
- writes patient’s details on evaluation form, and files this for access by project administrator.
- completes an online questionnaire three monthly about the use of Flo.

Practice administrator:

- keeps a note of patients enrolled on telehealth project.
- completes evaluation form if practice undertaking substantive evaluation.

Interactive messages

Daily at 8.00am and reminder at 8.00pm: re BP readings

Monthly: depression questions

Automated information messages

Twice weekly information messages for 8 weeks

Evaluation (optional –for practice team)

Date when started using Flo.....

Attach Flo readings sheet(s)

Date when BP goal reached and sustained (judge from Flo graph).....

Medication taken for hypertension in 12 months before starting Flo

Medication taken for hypertension since commencing with Flo

Healthcare usage - previous history & during project

Depression confirmed?/ medication started or continued? / mental health referral made?

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

Patient texted experience response via Flo (after each month):

ANS1 Please text #1 if you agree with the statement "I would recommend this service to my family and friends", or #2 if you disagree.

ANS2 Thank you. Now, do you feel confident you understand your blood pressure better? Please text #1 if you do, or #2 if you do not. Thanks, Flo

ANS3 Please text #1 if you agree with the statement "I prefer to send my readings to my practice via Flo, rather than go in person" or #2 if you disagree.

Hypertension (stable) – protocol 3

Purpose

- To improve compliance with anti-hypertensive medication.
- To encourage patient to adhere to the dual management plan agreed with their GP practice team, to sustain well-controlled blood pressure (<140/90mmHg clinic; <135/85mmHg home BP readings).
- To provide a convenient alternative to visiting the GP surgery for regular hypertension review while still providing the clinician with regular information about BP control.
- To help the patient adopt a healthier lifestyle – exercise, eating sensibly, within ideal weight range, maintaining happy mood.

Setting

General practice, but can be any healthcare setting if a clinician takes continuing responsibility

Selection of patients

- Patients who are on the practice hypertension register and on medication whose blood pressure is stable, ie <135/85mmHg Home BP readings, who do not have diabetes or CKD with ACR \geq 70 mg/mmol (as this would require a different protocol with lower BP goal).
- Patients who in addition to hypertension have poor lifestyle habits, who drink alcohol excessively, take little exercise, or have poor diet.
- Patients who will benefit from regular text messages that encourage compliance with medication.
- Exclude patients with pulse irregularity (for example, due to atrial fibrillation as automated devices may not accurately measure the blood pressure and manual blood pressure monitoring should be undertaken)
- Exclude patients \geq 80 years old (different BP goal)

Expected outcomes

1 Changes in healthcare usage:

- Fewer unnecessary admissions to hospital or attendances at A&E; less contact at GP surgery
- Regular pattern of repeat prescriptions for anti-hypertensive drugs

2 Patient empowerment:

- Greater confidence about their condition
- Lifestyle changes to improve or maintain their health & wellbeing

3 Improved clinical outcomes:

- Maintenance of stable blood pressure readings (ie consistently <140/90mmHg in clinic or <135/85mmHg Home BP readings)

4 Popularity of Flo:

- Patients find Flo messages helpful and reassuring
- Clinicians find Flo helps to maintain stable blood pressure without excessive clinical time

5 Cost effectiveness:

- Reduction in costs of avoidable secondary care use

Success criteria

- 50% of patients who commit at start do at least 15 texted responses over a 3 months period
- 80% of patients maintain stable blood pressure control over the 3 months period (ie consistently <140/90mmHg clinic; <135/85mmHg home BP readings) [Please note, 'controlled' blood pressure is defined as 80% of text BP readings in the last 2 weeks are <135/85mmHg].

General information about Home Blood Pressure Monitoring (HBPM)

- Home is generally lower than clinic BP: approximately -5/5mmHg at 140/90mmHg in clinic and -10/5mmHg at 160/100mmHg in clinic
- Don't supply or recommend wrist machines as very difficult to get level of arm right
- The British Hypertension Society has a list of validated monitors which are as cheap as £15
- Don't forget to calibrate home BP monitors that you lend out annually
- NICE and US and Europeans recommend one week of readings, twice daily (0600-1200 AND 1800-0000), discard the first day's readings and calculate the mean of the rest. Florence lets you export an excel file which makes calculating this easy
- If home BP is very up and down it can be difficult to work out what is going on and in this case it is probably worth organising an ABPM instead.

Protocol

In summary:

- Patient issued with sphygmomanometer of a type recommended by the British Hypertension Society (www.bhsoc.org//index.php?clD=246)
- Patient signs contract
- Clinician / patient agree dual management BP control plan (see Appendix 1a for example BP dual management plan; Appendix 1b for version of dual management plan that practices should complete for their clinical use to match their own clinical protocol.)
- Weekly blood pressure readings – for 3 months (or jointly agree other time period)
- Monthly responses to depression questions
- Twice weekly information messages
- Monthly text enquiry of patient experience
- Evaluation (optional) – capture of healthcare usage, 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 a computer.
- takes their blood pressure weekly and sends the reading in to Flo when asked.
- responds to monthly questions about mood.
- receives twice weekly information messages, and tries to adopt the advice contained in them.
- responds to monthly texts from Flo about their experience.

Clinician:

- agrees a dual management plan with the patient, which includes the use of Flo (see Appendices 1a and 1b).
- issues sphygmomanometer and appropriate cuff, and trains the patient in its use.
- obtains patient's signed agreement to respond to Flo, to look after the equipment, and return it when asked.
- explains to the patient that readings are sent to a computer which is not monitored continuously, and obtains their signed consent form which states that the patient remains responsible for their own health.
- enrolls patient on Flo by using the patient's current mobile phone number and NHS number, then selecting the appropriate service for them.
- monitors the patient's readings weekly, and if unable to do so, ensures another clinician in the practice team does so.
- arranges appointment to review BP readings in line with practice protocol.
- understands what to do if the readings are not within anticipated limits/agreed goals (eg ask patient to come to surgery & review medication, adjust medication by phone).
- after three months, asks patient to return equipment, unless doctor / nurse wants them to continue using it.
- writes patient's details on evaluation form, and files this for access by project administrator.
- completes an online questionnaire three monthly about the use of Flo.

Practice administrator:

- keeps a note of patients enrolled on telehealth project.

Interactive automated messages

Weekly: BP readings

Monthly: depression questions

Automated information messages

Twice weekly information messages for 13 weeks

Evaluation (optional – for practice team)

Date when started using Flo.....

Attach Flo readings sheet(s)

Date when BP goal reached and sustained (judge from Flo graph).....

Medication taken for hypertension in 12 months before starting Flo

Medication taken for hypertension since commencing with Flo

Healthcare usage - previous history & during project

Depression confirmed?/ medication started or continued? / mental health referral made?

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Patient texted experience response via Flo (every month)

ANS1 Please text #1 if you agree with the statement "I would recommend this service to my family and friends", or #2 if you disagree.

ANS2 Thank you. Now do you feel confident you understand your blood pressure better? Please text #1 if you do, or #2 if you do not. Thanks, Flo.

ANS3 Finally, please text #1 if you agree with the statement "I take my tablets regularly", or #2 if you disagree.

Inhaler reminder for adults and teenagers – protocol 4

Purpose

- To establish better habits and patient compliance with inhaler use.
- To support the dual management plan agreed with the GP practice, empowering the patient to take responsibility for their adherence to agreed inhaler treatment.

Setting

General practice or any other health care setting where a clinician takes responsibility for enrolling patient and provides oversight.

Selection of patients

- Patients with asthma or COPD who tend to forget to take their preventer inhalers, thus experiencing exacerbations of their condition which would be unlikely to have occurred if they had taken their preventer inhaler regularly.
- Adult or teenager aged 13 years or older.

Expected outcomes

1 Changes in healthcare usage:

- Fewer unnecessary admissions to hospital or attendances at A&E; less contacts at GP surgery for emergency consultations
- Increased use of preventer inhalers and reduction in reliever inhaler usage

2 Patient empowerment:

- Greater confidence about their condition
- Willingness to change their lifestyle to remember to take their inhalers regularly (right inhaler, right time)

3 Improved clinical outcomes:

- Adherence to best practice guidelines concerning use of inhalers

4 Popularity of Flo:

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

5 Cost effectiveness:

- Reduction in costs of secondary care use (ie avoidable admissions, out-patient referrals)
- Reduction in costs of wasted medication eg. requested but unused inhalers

Success criteria (see patient texted responses below for specific wording)

- 50% of participants feel more confident in managing their breathing control
- 50% feel that Flo helps them to use their inhaler regularly

Protocol

In summary:

- Clinician / patient agree dual management plan (for asthma or COPD - see Appendix 2 for asthma example)
- Twice daily reminders for patient to take their preventer inhaler for 3 months.
- Monthly text enquiry of patient experience
- Evaluation (optional) – capture of healthcare usage, patient experience

Patient:

- receives twice daily reminder messages, and complies by using inhalers regularly.
- responds to monthly texts from Flo about their experience.

Clinician:

- agrees dual management plan with patient
- enrolls patient on Flo by using the patient’s current mobile phone number and NHS number, then selecting the appropriate service for them.
- writes patient’s details on evaluation form, and files this for access by project administrator.
- checks with patient if the Flo programme can be terminated at eg 3 months if reminders no longer required.
- completes an online questionnaire three monthly about the use of Flo.

Practice administrator:

- keeps a note of patients enrolled on telehealth project.

Automated interactive messages

Focused questions to patient by text at Day 0 and Day 85

Patient reported use of reliever inhalers

Automated reminder messages

Twice daily: inhaler reminders

Evaluation – (optional for practice team)

Date when started using Flo.....

Medication taken in 12 months before starting Flo (steroids, inhalers)

Medication taken since commencing with Flo (steroids, inhalers)

Healthcare usage - previous history

Healthcare usage -during project

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Monthly texts from Flo to gauge patient experience

ANS1 Please text #1 if you agree with the statement "I would recommend this service to my family and friends", or #2 if you disagree.

ANS2 Thank you. Now are you confident you understand how your inhaler controls your breathing? Please text #1 if you are, or #2 if you are not. Thanks, Flo.

ANS3 Thank you. Now please text #1 if you agree that Flo has helped you to remember to use your inhaler regularly, or text #2, if you disagree. Thanks.

Additional question at day 0 and 85 days later:

How many times have you needed your blue inhaler in the last 3 days? Please reply REL followed by the number of times, eg.REL 6. Thanks, Flo

0-2 That's good, Your breathing seems well controlled.

3-10 Using your preventer inhaler is key to keeping your breathing as well controlled as possible.

11-50 Using the preventer inhaler helps to control your breathing so you shouldn't get so breathless.

Inhaler reminder for parents of children with asthma – protocol 5

Purpose

- To establish better habits and patient compliance with inhaler use.
- To support the dual management plan agreed with the GP practice, empowering the patient to take responsibility for their adherence to agreed inhaler treatment.

Setting

General practice or any other health care setting where a clinician takes responsibility for enrolling patient and provides oversight.

Selection of patients

- Parents of children with asthma who tend to forget to take their preventer inhalers, thus experiencing exacerbations of their condition which would be unlikely to have occurred if they had taken their preventer inhaler regularly.

Expected outcomes

1 Changes in healthcare usage:

- Fewer unnecessary admissions to hospital or attendances at A&E; less contacts at GP surgery for emergency consultations
- Increased use of preventer inhalers and reduction in reliever inhaler usage

2 Patient empowerment:

- Greater confidence about their condition
- Willingness to change their lifestyle to remember to take their inhalers regularly (right inhaler, right time)

3 Improved clinical outcomes:

- Adherence to best practice guidelines concerning use of inhalers

4 Popularity of Flo:

- Parents find Flo messages helpful
- Clinicians find Flo reinforces clinical management without excessive clinical time

5 Cost effectiveness:

- Reduction in costs of secondary care use (ie avoidable admissions or out-patient referrals)

- Reduction in costs of wasted medication eg. requested but unused inhalers

6 Other:

- Add yours:

Success criteria (see patient texted responses below for specific wording)

- 50% of participants feel more confident in managing their child's breathing control
- 50% feel that Flo helps them to use their child's inhaler regularly

Protocol

In summary:

- Clinician / parent agrees dual management plan (see Appendix 2)
- Twice daily reminders for parent to give their child their preventer inhaler for three months.
- Monthly text enquiry of parent experience
- Evaluation (optional) – capture of healthcare usage, parent experience

Patient:

- receives twice daily reminder messages, and complies by giving inhalers regularly.
- responds to monthly texts from Flo about their experience.

Clinician:

- agrees dual management plan with parent
- enrolls patient on Flo by using the parent's current mobile phone number and NHS number, then selecting the appropriate service for them.
- writes parent's details on evaluation form, and files this for access by project administrator.
- checks with parent if the Flo programme can be terminated at eg three months if reminders no longer required.
- completes an online questionnaire three monthly about the use of Flo.

Practice administrator:

- keeps a note of patients enrolled on telehealth project, who receive three months of messaging.

Automated interactive messages

Focused questions to patient by text at Day 0 and Day 85

Parent reported use of reliever inhalers

Automated reminder messages

Twice daily:

Daily 8am : Hi, this is just a reminder to give your child their preventer inhaler today.

Daily 8pm Hi. Just wanted to make sure you gave your child their preventer inhaler today.
Thanks, Flo.

Monthly texts from Flo to gauge patient experience

ANS1 Please text #1 if you agree with the statement "I would recommend this service to my family and friends", or #2 if you disagree.

ANS2 Thank you. Now please tell us if you are confident you understand how your child's inhaler controls breathing. Please text #1 if you are, or #2 if you are not. Thanks, Flo.

ANS3 Thank you. Now please text #1 if you agree that Flo has helped you to remember to give your child their inhaler regularly, or text #2, if you disagree. Thanks.

Additional question at day 0 and 85 days later:

How many times has your child needed their blue inhaler in the last 3 days? Please reply REL followed by the number of times, eg.REL 6. Thanks, Flo

0-2 That's good, Your child's breathing seems well controlled.

3-10 Using your preventer inhaler is key to keeping your child's breathing as well controlled as possible.

11-50 Using the preventer inhaler helps to control your child's breathing so they shouldn't get so breathless.

Smoking cessation (motivated patients in first 4 weeks of recruitment to designated smoking cessation service or equivalent) – protocol 6

Purpose

To support the patient's adherence to the dual management plan agreed with the smoking cessation service provider, helping the patient to remain committed to their decision to quit smoking.

Setting

General practice or other community setting for designated 'Any Qualified Provider' smoking cessation service or equivalent in-practice service.

Selection of patients

Patients who have decided to quit smoking and have recently enrolled on the quit smoking service (in the first four weeks).

Expected outcomes

- 1 Changes in healthcare usage:
 - More effective use of smoking cessation service and nicotine replacement therapy
- 2 Patient empowerment:
 - Greater confidence to quit smoking
 - Willingness to make lifestyle changes to maintain their quit status
- 3 Improved clinical outcomes:
 - Increased number of successful quitters at 4 weeks; at 12 weeks
- 4 Popularity of Flo:
 - Patients find Flo messages helpful and encouraging
 - Clinicians find Flo reinforces clinical management without excessive clinical time.
- 5 Cost effectiveness:
 - Reduction in costs of associated medical problems exacerbated by smoking; investment in stop smoking service more worthwhile with enhanced quit rates
- 6 Other:
 - Add yours:

Success criteria

- 30% of patients who committed at start to text smoking status over three days each fortnight do so on at least two occasions in two months (50% of protocol)
- 50% of participants report maintaining quit status 2-3 months (depending if recruited at weeks 1-4 of smoking cessation programme) after recruitment to stop smoking service (compared with practice report of patients' quit status)

Protocol

In summary:

- Clinician and patient agree to continue smoking cessation management plan
- Fortnightly interactive messages: patient texting in reply for 3 days sequence:
 - (i) number of cigarettes smoked previous day
 - (ii) feelings / confidence
 - (iii) symptoms
- Monthly interactive questions to determine if patient suffers from depression
- Daily text of automated interesting / supportive messages (one daily for 3 months)
- Monthly text enquiry of patient experience
- Evaluation (optional) – capture of healthcare usage, patient experience

Patient:

- signs contract, agreeing to respond to interactive messages from Flo.
- signs a consent form accepting that they remain responsible for their health, and understanding that readings are sent to an inanimate machine.
- receives daily information messages and tries to adopt the advice contained in them.
- attends practice or other smoking cessation provider for agreed reviews, any additional help, NRT prescriptions, etc as necessary.
- responds to texts from Flo at the end of three months about their experience.

Clinician:

- agrees a management plan with the patient, which includes the use of Flo.
- obtains signed consent to respond to Flo.
- enrolls patient on Flo by using the patient's current mobile phone number and NHS number, then selecting the appropriate service for them.
- monitors the patient's readings once a month, and if unable to do so, ensures another member of the practice team does so.
- After twelve weeks, offers patients who have quit smoking the opportunity to enrol on protocol 7, to maintain their quit status.
- twelve weeks after patient registered for quit smoking service, asks patient to complete a short questionnaire (if practice evaluating service).
- writes patient's details on evaluation form, and files this for access by project administrator if the practice is undertaking substantive evaluation.

- completes an online questionnaire three monthly about the use of Flo.

Practice administrator:

- keeps a note of patients enrolled on telehealth project.
- completes evaluation form if practice undertaking substantive evaluation.

Interactive automated messages

Fortnightly:

Patient text of (i) verified number cigarettes smoked day before (ii) feelings and (iii) symptoms, **one per day for each of three days**

Text from Flo:

Q: How many cigarettes (or other tobacco) have you smoked in the last day? (Choices: none; ≥ 1)

Q: How confident are you feeling about carrying on with stopping smoking?
(Choices: very confident; not confident)

Q: Are you experiencing any withdrawal symptoms from stopping smoking?
(Choices: none; a few; a lot)

Monthly

Text from Flo:

Q: During the past month, for how many days have you felt down, depressed or hopeless?

Q: During the past month, for how many days have you had little interest or pleasure in doing things?

Automated information messages

(one daily for a month; weeks 5-12 one daily for 40 days, then repeated)

Patient texted enquiry of experience (once, after 3 months)

ANS1 Please text #1 if you agree with the statement "I would recommend this service to my family and friends", or #2 if you disagree.

ANS2 Thank you. Now please tell us if "the text messages supported me to stop smoking". Please text #1 if you agree, or # 2 if you disagree. Thanks, Flo.

Smoking cessation (smokers recently quit smoking) - protocol 7

Purpose

To help the patient to maintain their resolve to continue as a non-smoker.

Setting

General practice or other community setting for designated 'Any Qualified Provider' smoking cessation service or equivalent in-practice stop smoking service

Selection of patients

Patients who have completed 3 months of a quit smoking service, and would like extra help for up to a further 9 months to remain as a non-smoker.

Expected outcomes

- 1 Changes in healthcare usage:
 - More effective use of smoking cessation service in helping to sustain quit status of patients after three months.
- 2 Patient empowerment:
 - Greater confidence in continuing to quit smoking
 - Willingness to make lifestyle changes to maintain their resolve
- 3 Improved clinical outcomes:
 - Health improves – including any long-term condition / life expectancy.
- 4 Popularity of Flo:
 - Patients find Flo messages helpful and reassuring.
 - Clinicians find Flo reinforces clinical management, and does not require excessive clinical time.
- 5 Cost effectiveness:
 - Reduction in costs of associated medical problems exacerbated by smoking.
 - Increased percentage of successful quitters

Success criteria

- 50% of patients who sign up to Flo remain on the programme, receiving and sending texts for at least 3 months.
- 50% of patients report that they remain non-smokers nine months later.

Protocol

In summary:

- Patient agrees to accept and respond to messages from Flo for at least 3 months.
- Three weekly sequence of questions about number of cigarettes smoked, confidence that they can continue to have quit smoking, and provide support to aid combating cravings for cigarettes.
- Monthly questions about mood.

- Twice weekly automated information messages.
- Monthly text enquiry of patient experience
- Evaluation (optional) – capture of healthcare usage, patient experience

Patient:

- signs contract, agreeing to respond to interactive messages from Flo, for up to 9 months.
- receives twice weekly information messages, and tries to adopt the advice contained in them.
- responds to monthly texts from Flo about their experience.

Clinician:

- agrees a management plan with the patient, which includes the use of Flo.
- enrolls patient on Flo by using the patient's current mobile phone number and NHS number, then selecting the appropriate service for them.
- monitors the patient's responses once a month, and if unable to do so, ensures another member of the practice team does so.
- completes an online questionnaire three monthly about the use of Flo.

Practice administrator:

- keeps a note of patients enrolled on telehealthcare project.
- completes evaluation form if practice undertaking substantive evaluation.

Interactive automated messages

Three weekly: Patient texts in: (i) verifying number cigarettes smoked, (ii) feelings and (iii) symptoms, one each per day, for 3 days

Monthly: questions on depression

Automated interesting / supportive messages (twice weekly for 34 weeks & then repeated)

Evaluation (optional for practice team)

Recruitment date for Flo _____

Dates attended smoking cessation service from _____ to _____

Date patient quit smoking? _____

If attended stop smoking services - Summary nicotine related therapy prescribed

Number of smoking cessation attendances in previous 3 months

XX

Patient texted enquiry of experience (3 monthly)

ANS1 Please say if you agree with the statement "I would recommend this service to my family and friends" Please reply #1 if you agree, or # 2 if you don't. Thanks.

ANS2 Thank you. Now please tell us if "the text messages support me to remain a non-smoker". Please text # 1 if you agree, or # 2 if you disagree. Thanks, Flo.

Smoking cessation (smokers who are contemplating quitting smoking) -protocol 8

To help the patient decide to quit smoking.

Setting

General practice or other community setting where a clinician takes continuing responsibility

Selection of patients

Patients who are smokers at 'contemplation stage' of stop smoking whether or not person has long term condition(s) (asthma, COPD, CHD, stroke, diabetes etc), who is not participating in specific smoking cessation service

Expected outcomes

1 Changes in healthcare usage:

- Increased uptake of smoking cessation service.
- Improved control of existing long-term condition which is adversely affected by smoking

2 Patient empowerment:

- Willingness to make lifestyle changes to improve their general health by quitting smoking

3 Improved clinical outcomes:

- Health improves – including any long-term condition / life expectancy.

4 Popularity of Flo:

- Patients find Flo messages helpful and reassuring.
- Clinicians find Flo reinforces clinical advice, and does not require excessive clinical time.

5 Cost effectiveness:

- Reduction in costs of associated medical problems exacerbated by smoking.
- Increased percentage of smokers who decide to quit

6 Other:

- Add yours:

Success criteria

25% of patients who sign up to Flo decide to quit

Protocol

In summary:

- Patient agrees to accept and respond to messages from Flo for at least 3 months.
- Daily automated information messages.
- Monthly text enquiry of patient experience, and invitation to join a smoking cessation programme

Patient:

- signs contract, agreeing to respond to interactive messages from Flo, for up to 3 months.
- receives daily information messages, and tries to adopt the advice contained in them.
- responds to monthly texts from Flo about their experience.

Clinician:

- notes how many cigarettes the patient smokes
- enrolls patient on Flo by using the patient's current mobile phone number and NHS number, then selecting the appropriate service for them.
- monitors the patient's responses monthly, and if unable to do so, ensures another member of the practice team does so.
- contacts the patient by text or phone after 3 months to offer help via the practice's smoking cessation programme, if the patient has not already decided to do so.
- completes an online questionnaire three monthly about the use of Flo.

Practice administrator:

- keeps a note of patients enrolled on telehealthcare project.
- completes evaluation form if practice undertaking substantive evaluation.

Interactive automated messages

Daily one way text of interesting / supportive messages (different one each day for 73 days then repeated up to 3 months)

Monthly text to gauge patient experience via Flo

ANS 1 Please say if you agree or disagree with the statement "I would recommend this service to my family and friends" Please reply #1 if you agree, or #2 if not.

ANS2 Thank you. Now please tell us if "the text messages make me realise the effects of smoking on my health" Please text #1 if you agree, or #2 if you don't. Flo

ANS3 Please text #1 if you agree with the statement "I have decided to quit smoking", or #2 if you disagree.

Medication reminder for adults and teenagers – protocol 9

Purpose

- To establish better habits and improve compliance with prescribed medication use (for example, could be pain management, anti-hypertensive medication or contraception pill [with technical modification]).
- To support the dual management plan agreed with the GP practice, empowering the patient to take responsibility for their adherence to agreed treatment, improving their self-care.
- Reduce avoidable healthcare usage, (eg attendance at GP surgery, Out of Hours, Walk-in Centres or A&E) for a poorly-controlled condition.

Setting

- General practice or any other health care setting where a clinician takes responsibility for enrolling patient and provides oversight.

Selection of patients

- Patients or carers who are forgetful about taking their prescribed daily tablets regularly (e.g. analgesics, anti-hypertensives, statins, medication taken infrequently such as weekly biphosphonates)

Expected outcomes

1 Changes in healthcare usage:

- Fewer unnecessary admissions to hospital or attendances at A&E; less contacts at GP surgery
- Medication use more in line with prescribed regimes

2 Patient empowerment:

- Greater confidence about their condition
- Lifestyle changes to remember to take their medication

3 Improved clinical outcomes:

- Adherence to best practice guidelines concerning use of medication

4 Popularity of Flo:

- Patients find Flo messages helpful.
- Carers feel supported by Flo
- Clinicians find Flo reinforces clinical management, and does not require excessive clinical time.

5 Cost effectiveness:

- Reduction in costs of secondary care use (eg admissions, out-patient referrals)
- Reduction in costs specific to purpose of medication – eg in relation to unplanned pregnancy

6 Other:

- Add yours:-

Success criteria

50% of participants report taking their tablets or medicine (eg analgesia) as prescribed in the previous week.

Protocol

In summary:

- daily reminder for patient to take their medication – for 3 months (can be adapted to twice-daily or weekly etc)

Patient :

- receives reminder messages, and changes their lifestyle to take their medication regularly.
- responds to texts from Flo at the beginning and end of the programme about their medication usage and experience of using Flo.

Clinician:

- re-affirms dual management plan with patient in relation to type and frequency of medication
- enrolls patient on Flo by using the patient's current mobile phone number and NHS number, then selecting the appropriate service for them.
- writes patient's details on evaluation form, and files this for access by project administrator
- checks with patient if the Flo programme can be terminated at eg three months if reminders no longer required.
- completes an online questionnaire three monthly about the use of Flo.

Practice administrator:

- keeps a note of patients enrolled on telehealthcare project.

Automated reminder messages

(Can be adapted to twice daily)

Daily 9am : Hi. Just wanted to make sure you take your tablets today. Take care, Flo.

At day 0 (start of programme):

Please say if, in the last week you have taken your tablets regularly as prescribed. Please reply #1 if you have, or #2 if you have not. Thanks, Flo

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End of 3 months text to gauge patient experience via Flo

ANS1 Please text #1 if you agree with the statement "I would recommend this service to my family and friends", or #2 if you disagree.

ANS2 Thank you. Now, are you confident that in future you will remember to take your tablets? Please text #1 if you are or #2 if you aren't confident. Thanks, Flo

ANS3 Thank you. Now please say if, in the last week you have taken your tablets regularly as prescribed. Please reply #1 if you have, or #2 if you have not. Thanks, Flo

Hypertension: poor control/newly diagnosed with chronic kidney disease [CKD] Stages 3-5 or diabetes and/or ACR \geq 70mg/ mmol with need for BP goal <130/80mmHg (clinic reading) – protocol 10

Purpose

- To improve patient compliance with medication use
- To encourage the patient to adhere to the joint management plan agreed with the GP practice, to achieve good BP control in speedy way to maintain their blood pressure <130/80mmHg (clinic or <125/75mmHg by home BP monitoring [HBPM])
- To help the patient adopt a healthier lifestyle – exercise, eating sensibly (eg avoiding salt), within ideal weight range, happy mood.

Setting

General practice, but can be any healthcare setting if a clinician takes continuing responsibility.

Selection of patients

Patients with CKD (Stages 3-5 ie sustained eGFR<60) or who have diabetes and/or ACR \geq 70mg/ mmol and who:

- Are on the practice hypertension register and on regular medication but their blood pressure is poorly controlled ie \geq 130/80mmHg in surgery; and/or
- Have newly diagnosed hypertension, so their blood pressure control needs careful management to optimise the use of anti-hypertensive medication; and/ or
- Do not comply with their anti-hypertensive medication
- In addition to poorly controlled blood pressure have poor lifestyle habits eg drink alcohol excessively, take little exercise, have poor diet.
- Exclude patients with pulse irregularity (for example, due to atrial fibrillation as automated devices may not accurately measure the blood pressure and manual blood pressure monitoring should be undertaken).
- Exclude patients \geq 80 years old (different BP goal).

Expected outcomes

1. Changes in healthcare usage:

- Fewer unnecessary admissions to hospital or attendances at A&E; less face to face contact at GP surgery
- Regular pattern of repeat prescriptions for anti-hypertensive drugs

2. Patient empowerment:

- Greater confidence about their condition
- Willingness to make lifestyle changes to improve or maintain their CKD or diabetes and hypertension

3. Improved clinical outcomes:

- At least 25% of patients participating who previously had a BP \geq 130/80mmHg, now have BP <130/80mmHg (in clinic or <125/75mmHg HBPM readings)) which is sustained for at least the last 2 weeks of the 3 months project period.

4. Popularity of Flo:

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

5. Cost effectiveness:

- Reduction in costs of secondary care use (eg dialysis, stroke, outpatient referrals).

6. Other:

- Add yours:

Success criteria

- 50% of patients who commit at start do at least 20 days of texting BP readings in over a 3 month period
- 80% of patients maintain stable blood pressure control over the 2 month period (ie consistently <130/80mmHg clinic; <125/75mmHg home BP readings) (Please note, we will take number who text 80% readings BP <125/75mmHg in last 2 weeks of texted readings to be classed as 'controlled'.)

General information about home blood pressure monitoring

- Home is generally lower than clinic BP: approximately -5/5mmg at 140/90mmHg in clinic and -10/5mmHg at 160/100mmHg in clinic
- Don't supply or recommend wrist machines as very difficult to get level of arm right
- The British Hypertension Society has a list of validated monitors which are as cheap as £15
- Don't forget to calibrate home BP monitors that you lend out annually
- NICE and US and Europeans recommend one week of readings, twice daily (0600-1200 AND 1800-0000), discard the first day's readings and calculate the mean of the rest. Florence lets you export an excel file which makes calculating this easy
- If home BP is very up and down it can be difficult to work out what is going on and in this case it is probably worth organising an ABPM instead.

Protocol

In summary:

- 3 months to gain BP control
- Patient issued with sphygmomanometer of a type recommended by the British Hypertension Society (<http://www.bhsoc.org//index.hp?clD=246>)
- Patient signs contract
- Clinician / patient agree dual management BP control plan (see Appendix 1c for example BP dual management plan; Appendix 1b for version of dual management plan that practices should complete for their clinical use to match their own clinical protocol.)
- Twice daily BP readings for three months, submitted via 'Flo', remotely monitored weekly by clinician
- Monthly responses to depression questions

- Twice weekly information messages
- Monthly text enquiry of patient experience
- Evaluation (optional) – capture of healthcare usage, 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 a computer.
- takes their blood pressure twice daily and sends the readings in to Flo when asked.
- responds to monthly questions about mood.
- receives twice weekly information messages, and tries to adopt the advice contained in them.
- responds to monthly texts from Flo about their experience.

Clinician:

- agrees a dual management plan with the patient, which includes the use of Flo (see Appendix 1c).
- issues sphygmomanometer and appropriate cuff, and trains the patient in its use.
- obtains patient's signed agreement to respond to Flo, to look after the equipment, and return it when asked.
- explains to the patient that readings are sent to a computer which is not monitored continuously, and obtains their signed consent - that the patient remains responsible for their own health.
- enrolls patient on Flo by using the patient's current mobile phone number and NHS number, then selecting the appropriate service for them.
- monitors the patient's BP readings weekly, and if unable to do so, ensures another clinician in the practice team does so.
- arranges a face to face appointment to review blood pressure readings after one month if necessary.
- understands what to do if the readings are outside set parameters / agreed goals (eg ask patient to come to surgery or adjust medication by phone).
- after three months, asks patient to return equipment, unless doctor wants them to continue using it.
- responds to three monthly online survey about their experience with Flo.
- writes patient's details on evaluation form, and files this for access by project administrator.

Practice administrator:

- keeps a note of patients enrolled on telehealth project, and which patients complete two months of messaging.
- completes evaluation form if practice undertaking substantive evaluation.

Interactive messages

Please note this version is designed for those with BP goal <130/80mmHg

1. For Months 1-3 (blood pressure)

Daily at 8.00am and 8.00pm

2. Monthly –depression questions

Automated information messages

Twice weekly information messages for 13 weeks

Evaluation (optional – for practice team)

Practice team completes:

Patient's name

NHS number.....

Date of birth.....

Date when started using Flo.....

Most recent eGFR prior to using Flo.....

Most recent BP prior to using Flo..... Date.....

Attach Flo readings sheet(s)

Date when BP goal reached and sustained (judge from Flo graph).....

eGFR at end of 6 months period of using Flo	
Depression questions indicated need for consultation with GP	yes / no
If YES, was anti-depressant medication started?	yes / no If yes, what medication?
Was a mental health referral made?	yes / no

XX
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Patient texted experience response via Flo (after each month):

ANS1 Please text #1 if you agree with the statement "I would recommend this service to my family and friends", or #2 if you disagree.

ANS2 Thank you. Now do you feel confident you understand your blood pressure better? Please text #1 if you do or #2 if you do not. Thanks, Flo.

ANS3 Please text #1 if you agree with the statement "I prefer to send my readings to my practice via Flo, rather than go in person", or #2 if you disagree.

BLOOD PRESSURE READINGS taken by patient at home RECOMMENDED ACTIONS (Check BP again if unusually high)

<p>Please note that if you send in a reading that is lower than an acceptable range (eg. you text 70/50 mmHg or lower), Flo will ask you to take your BP again.</p>	<p>If it is still as low as this an hour later you should call a doctor urgently today and they can talk through any other symptoms you have and agree if you should be seen urgently.</p>
<p>Your blood pressure is under control when the top (systolic) measurement is less than 135mmHg and the bottom (diastolic) measurement is less than 85mmHg.</p> <p>We hope your blood pressure readings will be below 135/85mmHg when you take them at home.</p>	<p>Follow a healthy lifestyle. Take plenty of exercise – half an hour walking each day, if you can. Eat sensibly – 5 portions of fruit and vegetables every day, and cut down on fat, sugar and salt. For alcohol, women should not drink more than 14 units per week or 3 units in one day, and men no more than 21 units per week or 4 units in one day, Keep your weight down, and aim for a body mass index of less than 25. If you smoke, stop now.</p>
<p>Sometimes your blood pressure may be raised, and your reading may be as high as 170/105mmHg. Although this is a high reading, it might settle without any further change to your medication if this is an unusual reading.</p>	<p>Keep taking the tablets every day as your doctor has prescribed. Think if there is anything which has made your blood pressure worse, and if you can identify it, take action to alter what has taken place. Were you angry or stressed? If your blood pressure remains between 150/95 – 170/105mmHg make an appointment with your GP or practice nurse in the next few days. If it is between 135/85-149/94mmHg wait and see if it settles and go for your next usual blood pressure review.</p>
<p>If your BP reading rises further: above 170/105mmHg (that is if either of your readings is above 170mmHg and / or 105mmHg)</p> <p>Example</p> <p>Very high blood pressure could trigger a stroke, so it's important for a doctor to adjust your tablets as soon as possible to lower your blood pressure.</p>	<p>Stay calm, and continue with your present tablets; try some relaxation techniques. Just sitting still and thinking about your breathing can help to calm you down. Or think about a relaxing time you've had in the past (eg holiday, long soak in the bath).</p> <p>If you repeat your blood pressure reading an hour later, and it's still as high, make an appointment to see your doctor or practice nurse within the next couple of days if it is just above 170/105mmHg.</p> <p>If your blood pressure reaches 200/105mmHg, or even higher, this is very high, and you should contact a doctor urgently today.</p> <p>Phone the surgery or, if it's at night or the weekend, phone the Out of Hours / 111 service who can agree with you when you should be reviewed.</p>

Personal high blood pressure action plan				
Name				Date of birth ___ / ___ / ___
GP name		Phone number		
Practice nurse name				
My blood pressure treatment				
Medication	Dose	When I take it	Target BP	Date

Blood pressure readings option if you want to write any down

Date	Time	Reading 1 mmHg	Reading 2 mmHg
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Some tips to make sure your blood pressure reading is accurate

Wear loose clothing.

Don't rush straight in from exercising or a stressful journey to take your blood pressure.

Do not have a drink containing caffeine, eat a heavy meal or smoke within the half hour before taking your blood pressure.

Sit quietly for at least 5 minutes with your back against a chair, and your arm supported, uncovered, at the level of your heart. You will need to wrap the cuff of the machine around the bare skin of your arm.

Don't talk while taking your blood pressure.

Take two measurements of your blood pressure, and if these are very different, take a third, and send in the lowest of these to Flo.

DUAL MANAGEMENT PLAN FOR BLOOD PRESSURE CONTROL(patient <80 years without: CKD or diabetes and/or ACR ≥70mg/mmol)**BLOOD PRESSURE READINGS taken by patient at home RECOMMENDED ACTIONS (Check BP again if unusually high)**

<p>Please note that if you send in a reading that is lower than an acceptable range, (eg. you text mmHg or lower), Flo will ask you to take your BP again.</p>	<p>If it is still as low as this an hour later you should call a doctor urgently today and they can talk through any other symptoms you have and agree if you should be seen urgently.</p>
<p>Your blood pressure is under control when the top (systolic) measurement is less than mmHg and the bottom (diastolic) measurement is less than mmHg.</p> <p>We hope your blood pressure readings will be below mmHg when you take them at home.</p>	<p>Follow a healthy lifestyle. Take plenty of exercise – half an hour walking each day, if you can. Eat sensibly – 5 portions of fruit and vegetables every day, and cut down on fat, sugar and salt. For alcohol, women should not drink more than 14 units per week or 3 units in one day, and men no more than 21 units per week or 4 units in one day, Keep your weight down, and aim for a body mass index of less than 25. If you smoke, stop now.</p>
<p>Sometimes your blood pressure may be raised, and your reading may be as high as mmHg. Although this is a high reading, it might settle without any further change to your medication if this is an unusual reading.</p>	<p>Keep taking the tablets every day as your doctor has prescribed. Think if there is anything which has made your blood pressure worse, and if you can identify it, take action to alter what has taken place. Were you angry or stressed? If your blood pressure remains between mmHg make an appointment with your GP or practice nurse in the next few days. If it is between mmHg wait and see if it settles and go for your next usual blood pressure review.</p>
<p>If your BP reading rises further: above mmHg (that is if either of your readings is above mmHg and / or mmHg)</p> <p>Very high blood pressure could trigger a stroke, so it's important for a doctor to adjust your tablets as soon as possible to lower your blood pressure.</p>	<p>Stay calm, and continue with your present tablets; try some relaxation techniques. Just sitting still and thinking about your breathing can help to calm you down. Or think about a relaxing time you've had in the past (eg holiday, long soak in the bath).</p> <p>If you repeat your blood pressure reading an hour later, and it's still as high, make an appointment to see your doctor or practice nurse within the next couple of days if it is just above mmHg.</p> <p>If your blood pressure reaches mmHg, or even higher, this is very high, and you should contact a doctor urgently today.</p> <p>Phone the surgery or, if it's at night or the weekend, phone the Out of Hours / 111 service who can agree with you when you should be reviewed.</p>

Personal high blood pressure action plan				
Name				Date of birth ____/____/____
GP name		Phone number		
Practice nurse name				
My blood pressure treatment				
Medication	Dose	When I take it	Target BP	Date

Blood pressure readings option if you want to write any down

Date	Time	Reading 1 mmHg	Reading 2 mmHg
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Some tips to make sure your blood pressure reading is accurate

Wear loose clothing.

Don't rush straight in from exercising or a stressful journey to take your blood pressure.

Do not have a drink containing caffeine, eat a heavy meal or smoke within the half hour before taking your blood pressure.

Sit quietly for at least 5 minutes with your back against a chair, and your arm supported, uncovered, at the level of your heart. You will need to wrap the cuff of the machine around the bare skin of your arm.

Don't talk while taking your blood pressure.

Take two measurements of your blood pressure, and if these are very different, take a third, and send in the lowest of these to Flo.

DUAL MANAGEMENT PLAN FOR BLOOD PRESSURE CONTROL (patients with CKD or diabetes and/or ACR \geq 70mg/mmol)
BLOOD PRESSURE READINGS taken by patient at home RECOMMENDED ACTIONS (Check BP again if unusually high)

<p>Please note that if you send in a reading that is lower than an acceptable range, (eg. you text 70/50 mmHg or lower), Flo will ask you to take your BP again.</p>	<p>If it is still as low as this an hour later you should call a doctor urgently today and they can talk through any other symptoms you have and agree if you should be seen urgently.</p>
<p>Your blood pressure is under control when the top (systolic) measurement is less than 125mmHg and the bottom (diastolic) measurement is less than 75mmHg.</p> <p>We hope your blood pressure readings will be below 125/75mmHg when you take them at home.</p>	<p>Follow a healthy lifestyle. Take plenty of exercise – half an hour walking each day, if you can. Eat sensibly – 5 portions of fruit and vegetables every day, and cut down on fat, sugar and salt. For alcohol, women should not drink more than 14 units per week or 3 units in one day, and men no more than 21 units per week or 4 units in one day, Keep your weight down, and aim for a body mass index of less than 25. If you smoke, stop now.</p>
<p>Sometimes your blood pressure may be raised, and your reading may be as high as 170/105mmHg. Although this is a high reading, it might settle without any further change to your medication if this is an unusual reading.</p>	<p>Keep taking the tablets every day as your doctor has prescribed. Think if there is anything which has made your blood pressure worse, and if you can identify it, take action to alter what has taken place. Were you angry or stressed? If your blood pressure remains between 150/95 – 170/105mmHg make an appointment with your GP or practice nurse in the next few days. If it is between 125/75 -149/94mmHg wait and see if it settles and go for your next usual blood pressure review.</p>
<p>If your BP reading rises further: above 170/105mmHg (that is if either of your readings is above 170mmHg and / or 105mmHg)</p> <p>Example</p> <p>Very high blood pressure could trigger a stroke, so it's important for a doctor to adjust your tablets as soon as possible to lower your blood pressure.</p>	<p>Stay calm, and continue with your present tablets; try some relaxation techniques. Just sitting still and thinking about your breathing can help to calm you down. Or think about a relaxing time you've had in the past (eg holiday, long soak in the bath).</p> <p>If you repeat your blood pressure reading an hour later, and it's still as high, make an appointment to see your doctor or practice nurse within the next couple of days if it is just above 170/105mmHg.</p> <p>If your blood pressure reaches 200/105mmHg, or even higher, this is very high, and you should contact a doctor urgently today.</p> <p>Phone the surgery or, if it's at night or the weekend, phone the Out of Hours / 111 service who can agree with you when you should be reviewed.</p>

Personal high blood pressure action plan				
Name				Date of birth ___/___/___
GP name			Phone number	
Practice nurse name				
My blood pressure treatment				
Medication	Dose	When I take it	Target BP	Date

My blood pressure readings option if you want to write any down

Date	Time	Reading 1 mmHg	Reading 2 mmHg
		/	/
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Some tips to make sure your blood pressure reading is accurate

Wear loose clothing.

Don't rush straight in from exercising or a stressful journey to take your blood pressure.

Do not have a drink containing caffeine, eat a heavy meal or smoke within the half hour before taking your blood pressure.

Sit quietly for at least 5 minutes with your back against a chair, and your arm supported, uncovered, at the level of your heart. You will need to wrap the cuff of the machine around the bare skin of your arm.

Don't talk while taking your blood pressure.

Take two measurements of your blood pressure, and if these are very different, take a third, and send in the lowest of these to Flo.

Stages of Asthma Control

1. Asthma is under good control when:

- You have no cough, chest tightness, wheeze or shortness of breath
- You are able to do your usual activities
- Your peak flow is 75% or 100% of best.

75% = 100% =

2. Your asthma is getting worse when you experience any of the following:

- Cough, wheeze, chest tightness, shortness of breath
- Waking at night due to asthma symptoms (including cough)
- When you can do some, but not all, your usual activities
- Your peak flow is 60% - 75% of best.

60% = 75% =

3. You have poor control when:

- Your symptoms are worsening
- Your reliever is less effective and is needed more often than usual
- You are breathless on normal activity
- Your peak flow is 60% of best.

60% =

4. EMERGENCY / SEVERE ATTACK:

- Your symptoms continue to get worse
- Your symptoms are not responding to your reliever
- You are too breathless or exhausted to speak
- Your peak flow is 40% of best.

40% =

IMPORTANT: if you need your reliever more than 4 hourly seek an urgent medical review



IMPORTANT: if you need your reliever more than 4 hourly seek an urgent medical review



IMPORTANT: if you need your reliever more than 4 hourly seek an urgent medical review



IMPORTANT: CALL 999 IMMEDIATELY!



Recommended Action

1. ACTION:

- Continue to take your regular preventer medication as directed
- IMPORTANT:** if you need to use your reliever regularly 3 times per week or more then seek a routine medical review with the asthma nurse or GP
- if your asthma is always well controlled your asthma nurse or GP may want to reduce or step down your regular treatment

2. ACTION: contact GP/Asthma Nurse for review within 24hrs

- Increase your reliever medication
- Take puffs every 4 hours with MDI / spacer device OR:
- Take 1 extra puff of . If symptoms are not improving after 5 minutes take 1 more puff. No more than 6 puffs on any single occasion. Max puffs daily
- You may need to start a course of prednisolone 5mg tablets once daily for days

3. ACTION: contact GP/Asthma Nurse for urgent review

- Take puffs of your reliever every 4 hours with MDI / spacer OR:
- Take 1 extra puff of . If symptoms are not improving after 5 minutes take 1 more puff. No more than 6 puffs on any single occasion. Max puffs daily
- If not already taken—start prednisolone 5mg tablets once daily for days

Continue to take your usual preventer medication

4. ACTION:

- CALL 999 IMMEDIATELY FOR AMBULANCE TO HOSPITAL!**
- Take salbutamol 10 puffs—if poor response then give 1 puff every minute with MDI / Spacer until help arrives

To use Flo most effectively, some planning is necessary, and this chart helps the practice to identify what to do. They should choose a protocol which is important for them and their patients in terms of potential benefits. Then follow the selection criteria of the protocol they have chosen to make sure that the patients who use Flo are those most likely to engage fully with the messaging service.

Flo Project Plan for practice team (example for specific clinical protocol)

CCG	
Practice	
Lead clinicians and will this be the clinician(s) who responds to the 3-monthly online survey?	
Who is your CCG clinical Telehealth facilitator?	
Which taster protocol are you selecting? – see protocol for selection criteria	
How will you identify potential patients? (see selection criteria)	
WHO WILL:	
Enrol patients onto Flo / get signed consent?	
Coordinate purchase / obtaining of equipment to lend to patients; and organise how it is lent out and returned?	
Provide oversight of readings texted in by patient and how regularly?	
Be the contact for patients if any problems with Flo?	
'Own' the group phone number (should be a landline)	
Collect data to evaluate the project (protocols 1 and 6) to feed back to the AIM team	

Collect data to evaluate the application of protocol for practice?	
Who will be responsible for keeping an oversight of the Aim for Health project?	
Benefits / outcomes / efficiency measures expected (see protocol for suggested outcomes)	
Baseline measurements Would an agreed dual patient management plan be useful – to agree and print off a copy for each patient? (Please append your practice version)	
Entry qualification	<ol style="list-style-type: none"> 1. Patient must fit the selection criteria. 2. Patients with appropriate cognitive ability 3. Patient has own mobile phone and is/will be capable of operating STH 4. Patient does not require daily triage in relation to their health condition 5. Equipment (if any) available; patient will take responsibility
Forecast size of cohort	
Constraints/challenges of implementation envisaged	

Simple telehealth practice team login details

(To gather information enabling a local administrator to add clinicians to the Flo system)

Practice team name:

Practice team landline phone number:

CCG clinical telehealth facilitator:

Phone number:

Email address:

Name	Role	Mobile phone number *	Email address

* for password purposes only - can be a personal phone

Patient consent form to participate in the AIM for Health project using Florence (Flo)



Name of organisation/ surgery/clinic overseeing the Flo service for this patient:.....

Address/contact number of healthcare team:.....

I, (name)..... understand that as part of the Flo mobile phone text service I am responsible for:

- replying to the texts sent by the Flo system which ask for an answer or a reading
- acting in accordance with the advice as written in my personal dual management plan
- Looking after the following equipment which has been loaned to me, and returning it when asked to do so:

Equipment: 1).....
2).....

If I feel I no longer want to participate in the Flo service, I can text STOP, and will be removed from the system. If I want a temporary break from the service, I can text HOLIDAY (or AWAY), and when I want to resume, text HOME. (If my holiday is abroad in a different time zone I should text HOLIDAY, or ask my clinician if the message timing can be amended.)

I understand that I will be sending mobile phone text messages to a computer, and that human clinical staff will only look at the readings once a week. I am therefore still responsible for my health, and if I feel unwell, will take whatever action is necessary for my well-being, including seeking help from health professionals in the usual way. If I do not receive a reminder message for some reason I understand that I am still responsible for taking my medication as agreed with my clinician.

Patient writes in own handwriting: 'I understand that the Flo system is not a replacement for my usual care from my GP or nurse.'

.....
.....

The best phone number to make contact with me is: _____
and the best time to call is: _____

I will not change my mobile phone number without letting my practice know.

Signed:.....

Name and contact details of responsible clinician/staff member signing the patient up to use Flo:

Name:..... Phone:.....

Date:.....

AIM for Health summary chart of patient participants



Name	Date of birth	NHS no.	Responsible clinician	Clinical area	Date of enrolment on Flo	Equipment lent	End date

Name	Date of birth	NHS no.	Responsible clinician	Clinical area	Date of enrolment on Flo	Equipment lent	End date

Example leaflet (1) general leaflet for patients who have been told about Flo

It looks a bit complicated – do I need to put the messages in capital letters?

Flo recognises both upper and lower case, so just write in whatever is easiest for you.

What do patients say?

“The service has altered my life. I feel supported...It’s great”.

“I was astonished at how Flo changed my medication habits”.

“I now feel that I am not on my own”.

Who runs the service?

Flo is provided for you by your local NHS healthcare team.

IMPORTANT: Florence is NOT an emergency service.
If you feel unwell, contact your medical team in the usual way.



Simple
TELEHEALTH

Florence

Welcome to

Flo

- helping you
manage your health



NHS

What is it?

Quite simply, 'Florence' or 'Flo' as we like to call her, is a very easy to use service *designed by professionals inside the NHS* to provide support and advice for you to manage your own condition.

Flo combines the expertise of your healthcare team and the convenience of your own mobile phone to give you prompts and advice to act on. If you need a little more assistance Flo helps you to monitor your vital signs such as blood pressure, pulse, oxygen levels and many others.

Flo makes use of the familiar and convenient mobile phone text service 'SMS' to communicate with you directly.

It's your choice!

One of your healthcare team has asked if you'd like to use Flo. You'll need to give your mobile phone number to register, and then Flo will send a short note to your mobile phone introducing herself and asking you to confirm that you want to join. If you're happy to receive texts from Flo and to share your information with the doctors and nurses who look after you, just reply to Flo's note with YES. Flo won't do anything else until you reply. You are in control.

Reminders and information

Flo send the kind of messages you've agreed to. Some may be to remind you to take your medication, and others may give you information to help you manage better. You won't be expected to reply to these.

Monitoring

Sometimes you will be asked to reply to Flo, but there will be clear instructions in the text message about how to do this. You may be asked about how you liked the Flo system, or how you are managing your health, and some patients will be asked to text in readings of their bodily measurements, such as blood pressure, oxygen, weight, and so on. Flo is very flexible about how and when you send your readings in and Flo can be set up to expect your readings at a time to suit you. But you can send them in before or after the scheduled time, it is up to you. However, just to be helpful Flo may send you a prompt or two to remind you that your readings are due.

It's quick and easy to send a reading in. You just send a text with the reading, and usually a short word or a few letters (you'll be told by Flo what to write), so that Flo knows where to put the information in the computer. Flo will check the reading against a guide set up by your healthcare team and will reply, either telling you that everything is normal or giving you advice to follow on what to do next.

The advice might remind you to do something you have already agreed with your doctor or nurse, or could ask you to call your healthcare team for further help.

Sharing

Information you send in to Flo can be shared across your healthcare team. They will be able to see the texts you and Flo have sent to each other and Flo also shows them charts and graphs just the same way as they would see it on any professional medical system. **But they will only look at the readings occasionally, so if you feel unwell, you will still need to contact them in the usual way.**

Does it cost me anything?

No. When you are in the UK - at home, on holiday or just visiting friends Flo is completely free to use even if you have a PAY AS YOU GO SIM with no credit, as the NHS is paying for it. Flo can also be used from anywhere else in the world, but you will be charged your normal network rate for the messages. Also, if you choose to use Flo to record your vital signs, the equipment may be provided free of charge, depending on your local arrangement.

How do I stop the messages if I find they are getting too much for me?

If you want to completely stop using Flo, simply text STOP (to the number which is sending the messages), and you will be permanently removed from the system.

However, if you just want a holiday from receiving the messages, just send HOLIDAY, or AWAY, and your messages will stop until you return and text HOME to the same number.



You will be asked this question most often. Please give your answer by writing BP followed by the reading on your blood pressure monitor.

Please take your blood pressure, and send me the readings. Please write BP, followed by each reading, eg: BP 140 80
Thanks, Flo

So this is what you would write for a BP of 142/85mmHg

BP 142 85

You may receive other messages, but only some need an answer. Just follow the instructions. Usually you'll need to use some letters and then a number.

If you want to stop all messages, text STOP to Flo, but if you want a short break from receiving messages, text 'HOLIDAY', or 'AWAY' and then 'HOME' when you want to start again.

Using Flo to help manage your blood pressure



You have agreed to take your blood pressure (BP) at home, and send the readings in by text message to the surgery when asked by 'Flo' the messaging service.

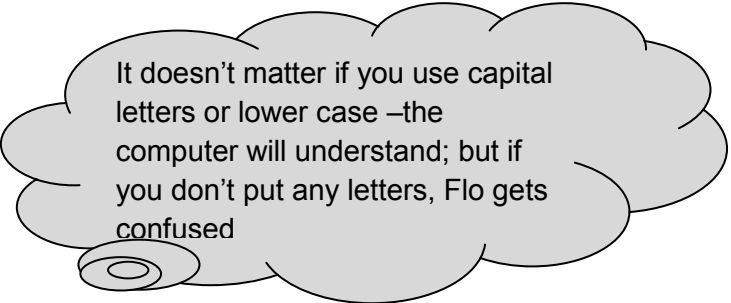
Please remember that this is an automated service, and no-one at the surgery will be looking at your readings every day, so if you feel unwell, you should take normal steps to look after yourself, and this may include asking for help from health professionals as usual.

You will have a dual management plan agreed with your nurse or doctor, which makes it clear what to do if your BP increases. Flo supports the advice given in this plan. You will be asked to return the BP monitor once you no longer need it for this programme, so that other patients can also benefit from the service.

Your BP reading is two numbers, the pressure when the heart beats, and that in between beats. It is usually written (for example) 130/85mmHg. To send this by phone, you only need to put the figures, but you must also put BP, or the computer won't know what the numbers are. So to send in this reading you would put: BP 130 85

High BP is usually any reading above 140/90mmHg, but sometimes people have other medical problems which mean they should aim to keep their BP below 130/80mmHg.

Usually BP readings at home are a little lower than at your doctor's surgery, but they are as accurate, if you take the reading as you have been shown.



It doesn't matter if you use capital letters or lower case –the computer will understand; but if you don't put any letters, Flo gets confused

A few tips:

Wear loose clothing so your arm isn't squeezed, and wrap the cuff around the bare skin of your arm.

Use the same arm each time.

Take two or three readings, and send in the average.

Go to the toilet beforehand, if you need to.

Don't have a big meal or caffeinated drink, or smoke within 30 minutes before taking the readings.

Sit calmly for 5 minutes before taking the BP reading; rest your arm on something firm so the cuff is level with your heart.

Don't talk while you are taking your BP.

If you find taking your BP very stressful, leave it for a day or two, and discuss it with your practice nurse if these feelings don't settle.

You may find that certain things you do affect your BP, and that once you understand what these are you can alter your life to avoid some of these pressures.

Flo may send you information about what may help to reduce your BP. Try some of these out, as the more you can do for yourself, the less tablets you are likely to need - but don't alter your tablets without discussing it with your doctor or practice nurse.

Sometimes the tablets you take to help with BP control have side effects, and if you are concerned about these, have a chat with your doctor or pharmacist.

Example patient leaflet (3) for patients who have decided to quit smoking, or are maintaining their non-smoking status

You will be asked this question quite often. Please give your answer by writing SM followed by 1 if you feel very confident, or 2 if you don't.

So if you don't feel confident today you would reply like this.



Using Flo to help you quit smoking

You may receive other messages, but only some need an answer. Just follow the instructions. Usually you'll need to use some letters and then a number.



You have agreed to answer questions and receive text messages from 'Flo' the messaging service, and the answers will be sent to your surgery. Please remember that this is an automated service, and no-one at the surgery will be looking at your readings every day, so if you are struggling, or feel unwell, you should take normal steps to look after yourself, and this may include asking for help from health professionals as usual.

You will have set some goals and agreed a dual management plan with your nurse, and Flo supports this, but for any further help, you may need to ask your practice team.

Some messages will just be giving you information, but others need a reply. You may be asked, for example, about how many cigarettes you smoked the previous day. The question will ask you to write the letters SMOKE and the number of cigarettes. To send this by phone, you must put the word or letters you've been asked to text and then the number, or the computer won't know what the numbers are. So to send in an answer that you've smoked 4 cigarettes in the last day, you'd need to send:

SMOKE 4

You'll find that Flo will send sufficient instructions with each question, so you will have no difficulty in texting the answer. If there are no instructions about replying, then you are not expected to reply. To help you, here are some of the kinds of questions you might be asked:

How many cigarettes (or other tobacco) have you smoked in the last day? (Please answer SMOKE followed by the number) Thanks, Flo.

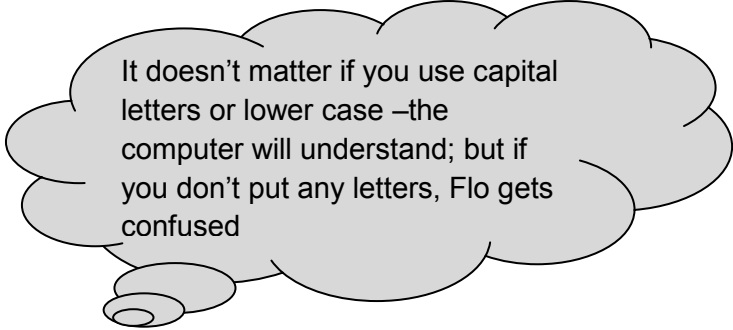
Are you experiencing any withdrawal symptoms from stopping smoking? Reply CRAV 1 if you don't have any, CRAV 2 if you have a few, or CRAV 3 if you have a lot.

Flo is just a way of helping you to follow the dual management plan drawn up with your general practice team to manage your health. If you have any problems, just ask your nurse or doctor in the usual way.

Replies you send in to Flo will be shared with your doctor or nurse in your practice, but please note that your messages may only be looked at once a week.

If you want to stop all messages, text STOP to Flo, but if you want a short break from receiving messages, text 'HOLIDAY', or 'AWAY' and then 'HOME' when you want to start again.

Text messages in the UK to and from Flo are free (ie. They are paid for by the NHS); however, in other countries you would be charged the usual messaging rate for the service.



It doesn't matter if you use capital letters or lower case –the computer will understand; but if you don't put any letters, Flo gets confused

Example patient leaflet (4) for patients who are receiving reminders to take their inhaler regularly



e.g. REL 4 like this:
(Please note it doesn't matter if you use upper or lower case letters)



Using Flo to help control your breathing

You may receive other messages, but only some need an answer. Just follow the instructions. Usually you'll need to use some letters and then a number.



You have agreed to receive text messages from 'Flo' the text messaging service.

You will be receiving reminders to help you remember to use your 'preventer' inhaler each day, and by doing this, you should find that you are less likely to become breathless.

You will also be asked, when you start to use Flo and after three months or so, about how often you use your blue inhaler and the question will ask you to write some letters (REL) and the number of times. To send this by phone, you must put the word or letters you've been asked to text and then the number, or the computer won't know what the numbers are. So to send in an answer that you've used your blue inhaler four times, you'd need to send:

REL 4

Flo is just a way of helping you to follow the dual management plan drawn up with your practice to manage your health. If you have any problems, just ask your nurse or doctor in the usual way.

If you want to stop all messages, text STOP to Flo, but if you want a short break from receiving messages, text 'HOLIDAY', or 'AWAY' and then 'HOME when you want to start again.

Text messages in the UK to and from Flo are free (ie. they are paid for by the NHS); however, in other countries you would be charged the usual messaging rate for the service.



You will be asked this question when you start, and after about 3 months. Please give your answer by writing REL followed by the number of times you have used your blue inhaler as shown on the next page.

It doesn't matter if you use capital letters or lower case –the computer will understand; but if you don't put any letters, Flo gets confused

Example leaflet (5) for patients who receive reminders to take their medication regularly



e.g. If you haven't taken your tablets regularly text this:

You may receive other messages, but only some need an answer. Just follow the instructions. Usually you'll need to use some letters and then a number.



Using Flo to remember to take your tablets



You have agreed to receive text messages from 'Flo' the text messaging service.

You will be receiving reminders to help you remember to take your tablets each day, and by doing this, you should find that you are more likely to feel better and your health improves.

You will also be asked, when you start to use Flo and after three months or so, about whether you've taken your prescribed tablets regularly. You'll need to reply #1 if you have or #2 if you haven't been taking them. It's important to put # before the number, or the computer won't know what to do with your reply.

Flo is just a way of helping you to follow the dual management plan drawn up with your practice to manage your health. If you have any problems, just ask your nurse or doctor in the usual way.

If you want to stop all messages, text STOP to Flo, but if you want a short break from receiving messages, text 'HOLIDAY', or 'AWAY' and then 'HOME' when you want to start again.

Text messages in the UK to and from Flo are free (ie. They are paid for by the NHS); however, in other countries you would be charged the usual messaging rate for the service.



You will be asked this question when you start, and after about 3 months. Please give your answer by writing # followed by 1 if you have taken your tablets regularly, or 2 if not.

It doesn't matter if you use capital letters or lower case –the computer will understand; but if you don't put any letters, Flo gets confused


Clinician - how to use 'Florence' ('Flo')

QUICK START

Your CCG administrator will have set you up on Flo by inputting your name, email address, and mobile phone number into the Florence website, and allocating you to your workplace group. You will then receive a password via your mobile phone that you will need when you first log onto Flo.

To log on to Flo:

Get your computer going as usual, then get onto the internet, probably by clicking on the

Internet explorer logo:  At the left side of the top of the screen is a rectangle



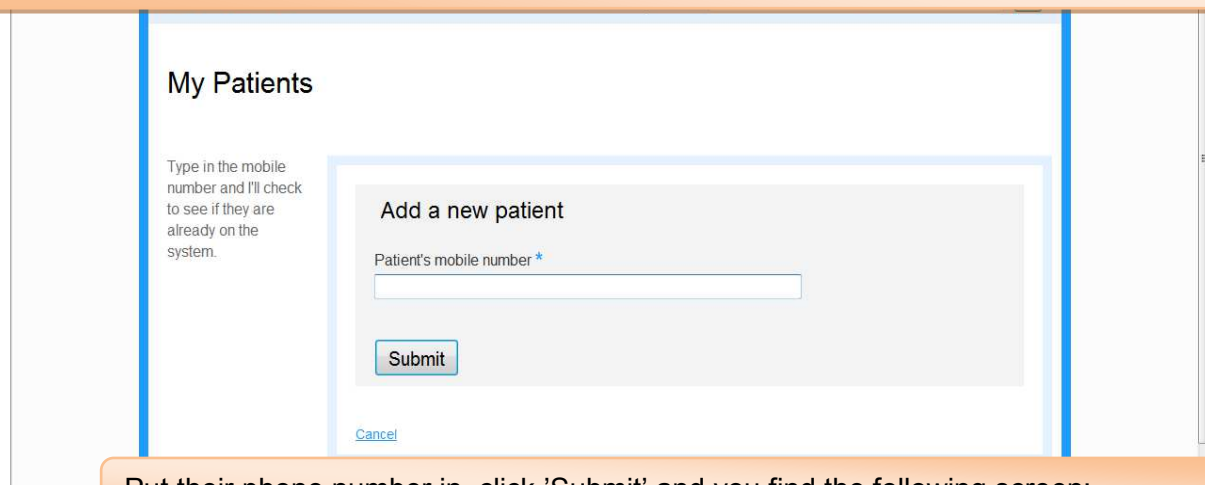
Write the web address in this box on the screen.
Click on the horizontal arrow, and you will get your login screen.
You need to write in your email address, and the password which was sent to your mobile phone.



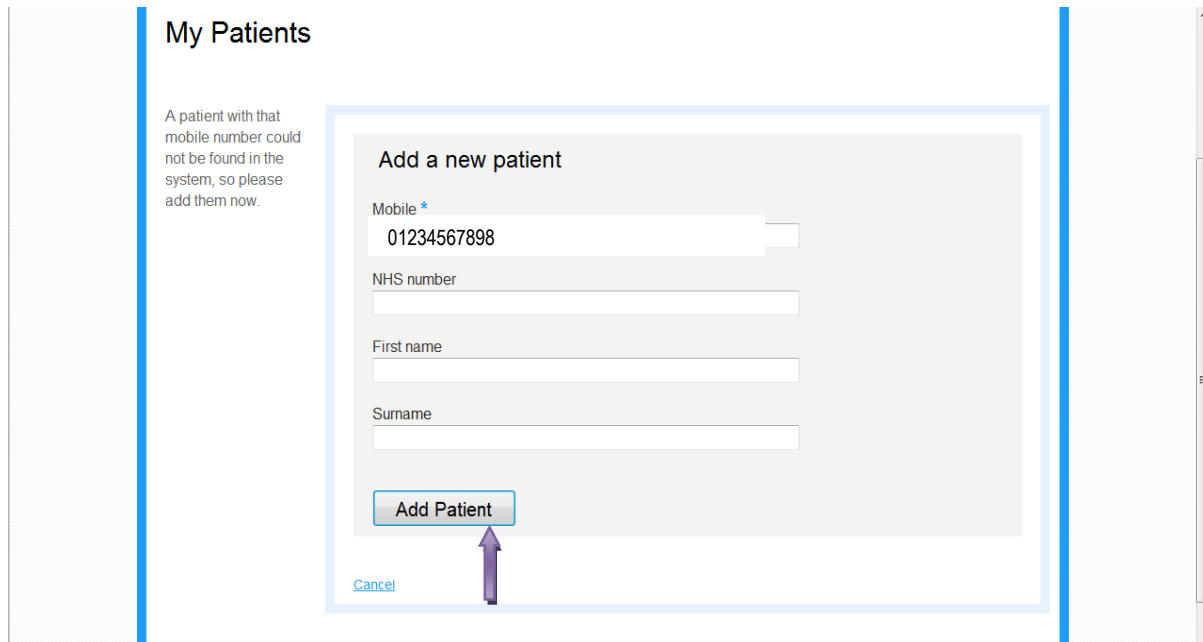
Once you have clicked on 'submit', you will be logged onto Flo. If you click on the 'Account and settings' words at the top of the page, a new window will appear which has four options at the left hand side of the page, the lowest of which is 'change password'. Click on this, and you will have an option to input a new password which is easier to remember – but you must first write your present password. Your new password must include a capital letter and a number.

Now, when you log onto Flo, using your email address and password, you will get a box saying 'add new patient' in blue.

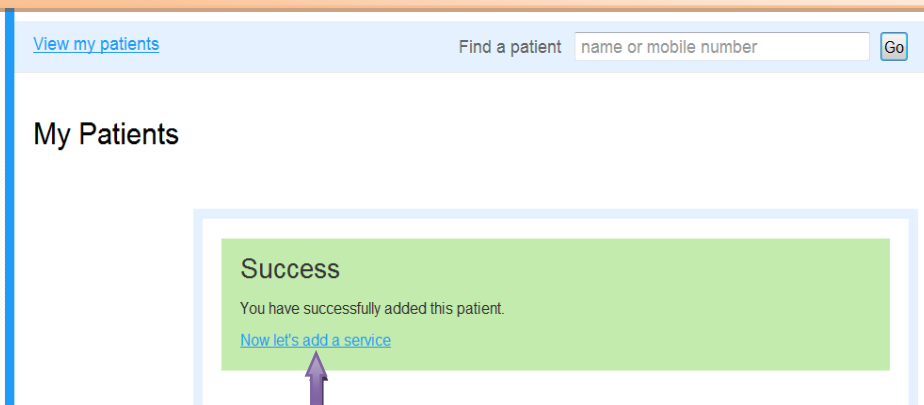
When you click on 'Add new patient', the first thing you see is the box to enter their phone number:



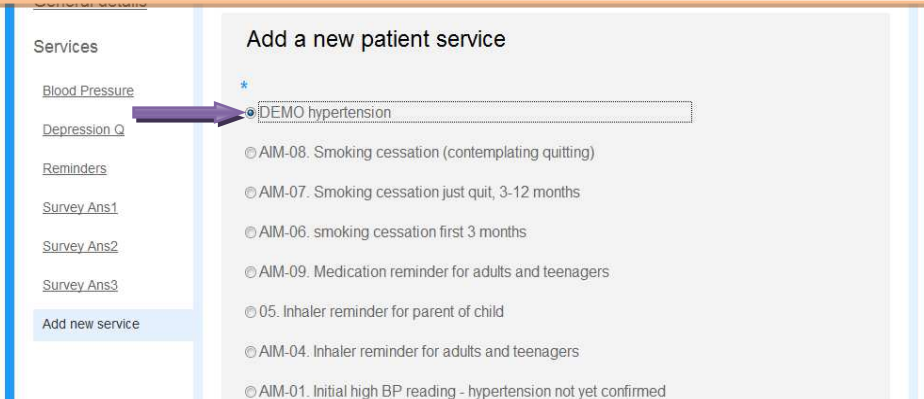
Put their phone number in, click 'Submit' and you find the following screen:



If you are just practising with colleagues, you don't need to enter their NHS number, just their name. Click 'Add patient', and within a few seconds they will receive a text inviting them to join the Flo programme. Meanwhile, your screen changes to this:



Click 'Now let's add a service', and you will be shown the protocols you have available at your surgery. If you want to try this out with a colleague before using Flo with a patient: Choose the DEMO protocol, which is a hypertension one, and will start on the first day the patient signs up.



Click on the protocol, then 'Add'. **BE CAREFUL TO PRESS 'ADD' ONCE ONLY, OR YOU MAY SEND THE PATIENT DUPLICATE MESSAGES.**

You will see a screen with sections of the hypertension protocol down the left hand side (the protocols will ask about depression, will send out 'reminders' – advice messages, and there will be some evaluation questions – ANS1,2, and 3) :

General details

Services

Blood Pressure

Depression Q

Reminders

Survey Ans1

Survey Ans2

Survey Ans3

Add new service

Success

New protocol added

[Add more](#) or [view readings](#)

Click on Blood Pressure:

Florence Stoke

[View readings](#)

[Send text message](#)

General details

Services

Blood Pressure

Depression Q

Reminders

Survey Ans1

Survey Ans2

Survey Ans3

The patient's "Blood Pressure" settings.

Type	Next	Created
Reading Every Sun,Mon,Tue,Wed,Thu,Fri,Sat @ 08:00 Message: Hi. Don't forget to take your blood pressure this	5 th Mar 2013	4 th Mar 2013 Chris Chambers

Click on the 'Reading Every Sun Mon, etc' and you will see the timing of the message:

General details

Services

Blood Pressure

Depression Q

Reminders

Survey Ans1

Survey Ans2

Survey Ans3

Add new service

Edit the patient's "Blood Pressure" settings.

Schedule

Start Date
4th Mar 2013 12:57

End Date
04 May 2013 [End now](#) [End all on this protocol](#)

Frequency
Every Sun,Mon,Tue,Wed,Thu,Fri,Sat

Time of day
08:00

Days of the week

Upon which days should the message be sent?

Sunday Monday

Tuesday Wednesday

Alter the time to be about two minutes later than the present moment, Then click 'Save'. In two minutes, your colleague will receive a message asking for their blood pressure, and when they respond, will get a suitable reply from Flo. They can send another reading in after a minute or two, without being asked. If you then click on 'view readings', you will see their entry in Flo, and this is what you will look at once or twice a week. If you want to, you can send a text message to the 'patient', by clicking on 'send text message' at the top right of the screen.

You may have noticed that in the previous screen are options to change the parameters for alerts, and for the messages. Usually the only changes that clinicians make are to alter the timing of messages, if the current ones are inconvenient for the patient. Sometimes clinicians want to change the wording of the message to personalise it for a patient. It would be more unusual to change the parameters of the alerts, as this involves clinical decisions. This should only be taken by a local team decision, and the names of those who altered the recommended alert levels need to be logged, as they have taken clinical responsibility for the changes.

From this screen, click on 'general details' (If you were trying to get here from your patient list, you just need to click on 'edit patient'). This screen will appear:

The screenshot shows a web interface for editing patient details. On the left is a sidebar with a 'General details' tab selected, and sub-options for 'Services', 'Auto-response', and 'Add new service'. The main content area is titled 'Edit the patient's details using the form below.' and contains the following fields and options:

- Mobile ***: Text input field containing '07967974286'.
- NHS number**: Text input field.
- First name**: Text input field containing 'Florence'.
- Surname**: Text input field containing 'OConnell'.
- Unexpected messages**: A section with a sub-header and a paragraph: 'Sometimes patients send me text messages when I'm not expecting them. I normally reply but if you'd rather I didn't, please tick this box.' Below this is a checkbox labeled 'Don't reply to unexpected messages' which is currently unchecked.
- No contact email**: A sub-section with a paragraph: 'If the patient hasn't sent in a text recently I can email clinical staff.' Below this is a checked checkbox labeled 'Send email if the patient hasn't texted in within' followed by a text input field containing '7' and the word 'days'.
- Save**: A blue button at the bottom left.
- Transfer or Discharge Patient**: Links at the bottom right.

In this screen you can alter the patient's phone number. This is obviously useful if the patient has a new phone, but is also handy if a patient has died – in this case add the date (just the numbers, eg.270513) after the phone number, so it becomes a different number. Then click 'save'.

In the case of a death, when you 'Discharge' the patient at the bottom right of this screen, if you have altered their phone number, they will not receive a message to say they have been discharged, and this should prevent further distress to relatives.

For normal discharges, just click on the word 'Discharge', and the patient will be sent a text message to let them know they have been discharged.

To transfer a patient to another clinician in your group, click on the word 'Transfer', and choose which clinician you want to look after the patient in the future. This might be useful if a clinician were to go on holiday. However, if the usual clinician was away unexpectedly, any clinician in your group can see all the patients from your group by clicking the 'Go' button beside the 'Find a patient' box when you have logged on.

You can choose how long before you receive an email alert to say a patient has not responded to one of Flo's requests for information – the default is 7 days.

If the patient wants to opt out, they need to text 'stop'. Or if they want a break from the messages, they can text 'holiday' or 'away', and 'home' when they want to re-start.

Using Flo day to day

When you have set up patients on your list, each time you log on, you will have the list of your current patients displayed on the screen, and to go to their details you just click on their name. This will take you to the patient's readings and messages. Clicking on the words on the left hand part of the screen will provide graphs related to each topic, eg 'depression', 'weight' etc. If you want to see what messages have been sent from Flo, and the replies from the patient, click on the words 'all messages'. Most of the time you will just want to look at the visual graph of readings, so keeping an eye on progress is very quick. It is a good idea to look at 'all messages' from time to time, as it gives you a good idea if the patient is having any problems with the messaging process, such as forgetting to put the code letters before their response. If the patient gets several replies from Flo saying that she can't understand what the patient has said, they can get frustrated, and opt out. You might decide to text them back a personal message or phone them for a chat if you see they are having difficulty or you are worried about their health.

If you need to look at the patients of other clinicians in your workplace group, click on 'GO' to the right of the box labelled 'find a patient', and a list of all patients in your group will be displayed – current and also previous patients who have now finished Flo. This is particularly useful if a member of your team is off sick unexpectedly.

Patients' details can be printed as they appear on screen, or as excel spreadsheets of readings.

Adding a new patient

When a patient is added to the system, they are automatically placed on the clinician's 'My Patients' list. The clinician who adds the patient will receive any alerts that may be generated. However, you can 'Transfer' a patient to a colleague in your group, who will then receive the alerts, for example if you go on holiday

STEP 1: Advise the patient that they will receive text messages from Flo inviting them to join the service.

If you are giving the patient any observation monitoring equipment, also tell the patient that they may get prompts to take readings before you deliver the equipment but to just ignore these temporarily.

Agree a dual management plan with the patient, and then get them to sign the consent form, explaining to them that Flo is not a substitute for the usual care they can expect from their surgery, and that they should take their normal action if they feel unwell, as Flo is only monitored occasionally, and you will not be responding to readings as soon as they are sent in via Flo.

Patients who already have a mobile phone and use SMS texting will find Flo easy to use. It is important that you advise patients to regularly delete unneeded messages from their SMS inbox to prevent the inbox becoming full and thereby preventing Flo from delivering messages.

Caution: *If your patient does not already have a mobile phone and you provide a mobile in order for the patient to use Flo, the patient may need additional support and instruction on how to use a mobile phone and send SMS text messages. You may need to provide this additional support for a number of weeks.*

STEP 2: Click on 'Add new patient' under 'my patients', enter your patient's mobile phone number and press submit. Flo will search the database to see if your patient is already on the system. (If already on the system you can add them to your list).

You can optionally enter the NHS number, first name and surname, then press 'Add Patient'.

At this point the patient will be invited to join the service and they will need to reply with YES to join. The service will not start working until the patient replies.

STEP 3: You can now add a service. You will see a list of protocol templates; simply select the protocol of your choice and press 'Add'.

For your records, it is useful to keep a list of when patients are added to Flo, so that you can easily see how long they have been using the system, and you can decide whether to review the patient.

Personalise a patient's protocol

Select the patient and click on 'Edit patient' under their name. You can now change their general information, edit services or add a new service.

To change a service,

- click on the appropriate entry in the left hand column
- click on one of the underlined entries

THEN

- click on the 'Schedule' bar to change the schedule

OR

- click on the 'Reading Limits' bar to change alert thresholds (You should not usually do this, unless parameters have been agreed with your team, and changes logged).

OR

- click on the 'Messages' bar to personalise any of the messages

THEN

- Press 'Save'

Discharge a patient

Select the patient and click on 'Edit patient' under their name.

At the bottom right of the 'General details' tab, click on 'Discharge'.

THEN

Click on 'Discharge this patient'.

The patient will be removed from your 'My Patients' list. You will still be able to access the record from 'Find a patient' and add the patient again if required at any time, but you will need to go into 'add a service' when setting the patient up again.

The patient will receive a text from Flo to say they have been removed from the service, as it is important that the patient is informed. You may also want to send a personal text to them. If they send in a reading after they have been discharged from Flo, they will receive a text explaining that the service has finished and they are not required to send any further readings. (But see section on 'death' in the box above).

Transfer a patient to a colleague

Select the patient and click on 'Edit patient' under their name. You can now transfer the patient to another clinician in your group.

At the bottom right of the 'General details' tab, click on 'Transfer Patient'.

THEN

Select the target clinician and press 'Transfer this patient'.

The patient will be removed from your 'My Patients' list and added to the list of the chosen clinician. Any transferred services will behave as if the chosen clinician had set them up in the first instance. You will still be able access the record from 'Find a patient'.

Edit your own profile

You can personalise your own settings by clicking on 'Account & Settings' at the top of the screen.

If you or your team require notification when a patient on your "My Patients" list with a service **set up by you** or **transferred to you** has a recurring/critical breach of alert parameters there are a number of options you can choose from:

1. Send alerts to a group mailbox

Click on the 'Contact details' tab and check the 'Copy email alerts to my main group' box then save.

2. Recieve personal notification of alerts

Click on the 'Contact details' tab, check the 'Email alerts?' box then save. Alerts will be sent to the email address used for your log in.

3. Notify a named colleague of your alerts

- Check the 'Email alerts?' box as above.
- Click on 'Overview' tab and choose contacts who will receive copies of your alerts.
- Click on the 'Set alerts' tab, select a colleague then save.
- *Your colleague must have their own 'Email alerts' box checked to receive copies of your alerts.*

Mobile phones & networks

Flo has been tested and works with all UK mobile networks and responds to patients' text messages immediately. Patients normally receive the response within seconds, however the messages sent to the patient by Flo can be subject to peak time delays within the mobile phone network.

- **O2:** During technical trials, the O2 mobile network has been found to have the following anomaly which may from time to time affect your patients' messages.
- If multiple messages are sent to an O2 handset at the same time, as would be the case if you were monitoring blood pressure, oxygen saturation and pulse, on occasions one or more of the messages may get delayed. Messages appear to get 'freed' from the queue when O2 recognises activity on the handset such as sending another SMS or initiating a phone call. (This is a general issue with the O2 network). If your patient uses O2 and reports this problem, advise the patient if they do not get a response from a particular reading within 20 minutes, to send in the individual reading again.
- **SMART PHONES:** During technical trials, it was noted that some smart phone/operating system combinations may suffer from memory management problems which can affect their response speed to mobile networks (similar to a slow running computer). If a patient is using a smartphone and they experience problems receiving messages in a timely manner we recommend that they power cycle (OFF/ON) the phone daily.

FREQUENTLY ASKED QUESTIONS

For clinicians:

Why do you want my mobile phone number? – I don't want a lot of messages on my personal phone.

Flo needs to send you a secure password. That is all that your mobile number will be used for. Any other messages or alerts about your patients will be sent to your email address.

What if I can't remember my password?

The password sent to your mobile phone will be difficult to memorise. When you first log onto Florence (Flo) you have to use this one that Flo has sent, but if you click on 'Account and settings' you can alter your password to something you can remember more easily – but it must include a number and a capital letter. To change it, you still need to enter your original password, though.

If you later forget your password, and can't log in, you can click on the words: 'Forgotten your password?' and Flo will send a link to your email address, and a new password to your mobile phone.

What if I forget how to use Flo?

There is a 'help' button on each page of the Flo website. You can even access this if you haven't logged in.

How much time does it take to send the messages to patients?

The time it takes is enrolling the patient in the first place, which might be five minutes on average. This is where you must agree with the patient their dual management plan and instruct them in the use of any equipment that might be lent to them, eg sphygmomanometer.

Explain to them that Flo is just a machine, and that no-one else will be looking at any readings they send in more often than once a week, so they still need to take care of themselves in the normal way. Get them to sign a consent form where they agree that they understand this, giving informed consent.

Explain how, for most situations, Flo will send some messages that need a reply, and some general information ones that don't. Allocate a 'service' to the patient, and then you can sit back, and let Flo send out all the messages and questions automatically.

What about monitoring the readings that patients send in?

We recommend that at least once a week you log onto Flo, and you'll see your list of patients. Click on them one at a time, and you will see a graph, which relates to a particular aspect of the protocol, indicated by a word at the left of the screen. For instance, with hypertension there will be blood pressure, depression, and so on, which relate to patient responses to the automated questions asked on each of these topics. Some might be daily questions, and others asked less frequently, for example, monthly. Obviously, there will be lots of readings for an aspect which

asks daily questions, so visually you can see quickly any changes, or whether the readings are within the range you expect.

While some readings are visually useful, and presented as graphs, such as blood pressure, etc, others are yes/ no answers, a number of days when the patient experienced particular feelings, or used a particular inhaler, or perhaps an answer to questions about whether they found Flo to be helpful. To understand these responses it is useful to look at the original protocol where they are all written out, or to view the actual messages sent by Flo by clicking on 'All messages' on the left hand side of the page.

To print off the readings so they can be scanned into a patient's record, you can either print what is on the screen (right click and in the drop-down menu go to 'print') or 'export data to excel', in which case you click on the word 'excel', and the readings are entered into an excel spreadsheet.

While you are looking at the patient's record, if you want to contact them, you can either phone them, or send a text message direct from the screen (click on 'send text message', and a box appears for you to write in)

What do I do if a patient stops replying to Flo?

There are a number of reasons why patients stop answering Flo's messages. Sometimes they feel they no longer need them, other patients may find the messages get in the way of their daily activities, and some start to feel that Flo is nagging, and they feel stressed by the messages, particularly where behavioural change is being addressed. It's worth contacting the patient to see if there are any modifications that might help, such as changing the time of day when they receive the messages. You need to establish whether the patient wants to passively receive advice, rather than send information back, and if so, you can stop some of the messages. However, if the patient really wants to stop using Flo, you can discharge them through the 'edit patient' section. This will prevent annoyance to the patient from unwanted messages, and save the NHS the cost of unnecessary texts.

How do I know what messages that Flo is sending out to patients?

When you decide to use Flo, you should look at the clinical protocol, which not only relays the messages and their frequency, but also the purpose of the intervention, and the kinds of patients for whom it might be appropriate.

If you want to see all the messages that Flo has sent to a patient, and the replies, click on 'all messages' on the left hand side of the screen. If you want to see what the patient is going to receive in the future, you can go to the 'edit patient' section, and then click on 'reminders' on the left hand side of the screen.

Can I change the texts that Flo sends to patients?

Yes, if you feel this is important. You need to click on the patient's name, then on 'edit patient', and then whatever aspect of the service you want to alter, eg 'Blood pressure'. You might want to alter the time of day that the message is sent, or you could add the person's name to the message. But it could be time-consuming, since you may find that a number of different messages are going to be sent out, each on different days, and if you want to alter the time for one, you would probably want to alter it for each of them.

What if I don't agree with the clinical protocol that was provided with Flo?

The clinical protocols provided are based closely on best practice, NICE guidelines, etc, but Flo is only a tool for you to use as a reinforcement of your practice management plans, and therefore you need to feel that Flo is giving patients the information you want her to, based on the evidence included in your own practice protocol. You can make minor changes to individual patients' protocols, but if you want to alter substantially the messages that Flo sends out, it would be better to discuss this with your local CCG administrator or CCG clinical Telehealth facilitator.

Can I practise Flo on a pretend patient before I try it out on patients?

Yes – either you yourself can be the patient, or a colleague can. You'll need your mobile phone number, but you don't need to enter your NHS number, just your name. When you 'Add a service' for the patient, use a 'DEMO' protocol, which you can ask your facilitator to add to your group's list. Please don't use other AIM protocols, as we need to know how many real patients are using Flo.

What am I supposed to do if I have an alert sent to me?

Alerts are intended to be a speedy way for you to know that a patient's readings are well outside the normal range. What you do would depend on how you normally treat this patient. With Flo you may have more readings than if the patient had a weekly check-up, so you will be better informed about them. You don't necessarily have to take action because of an alert, and may decide to wait and see if the problem settles without an intervention. It is up to you as a clinician to take professional responsibility and decide what is required, possibly through discussion with colleagues, or by reference to your local code of practice. Remember, Flo is just a machine, a tool to help you, and you are the clinician who makes judgements about a patient's condition. Flo may give you more patient-related information than you are used to having, and you will perhaps want to look more at the trends in those readings, rather than spikes (unless these indicate a red flag alert).

There are other alerts which tell you that the patient hasn't responded to Flo for some time, usually at least a week. Although this may not be clinically important in the case of, say, someone who is quitting smoking, it does mean that the patient is not engaged as they agreed. You should contact the patient to see if they want to continue, and if they don't, you can discharge them from Flo. This at least saves the NHS the cost of unnecessary texts, which although free to the patient do incur charges to the NHS.

Are text messages secure?

The security of text messages has been in the news with phone hacking by journalists. Interception of text messages is a theoretical possibility, and the security depends on the effectiveness of the mobile phone company's technical expertise. Once messages are received at the Florence website, access is only granted to clinicians who enter appropriate passwords. Each clinician is only able to access records of patients who are attached to their healthcare group. CCG administrators can only access non-clinical information from the website. Clinicians logging onto Flo from NHS computers will have the usual high levels of security maintained by

NHS networks. Access to patient records on Flo by clinicians working from home is an area where there is a potential security risk, and a local policy in a CCG or trust might be needed to cover the way in which patient information is accessed and used by clinicians outside NHS premises.

Are there any published professional standards relating to text messaging?

A nurse must ensure that there are practice protocols in place to ensure patient confidentiality and documentation of any text received, including: complete text message, telephone number it was sent from, any response given, signature and date received.

(NMC.Standards for medicines management. London: NMC, 2010 – so the answer relates to standards for medicines management but appears to apply to other clinical applications of text messaging; and the 'signature' would be that given in the patient consent process to sign up to Flo'.)

The Royal College of Nursing states:

Using eHealth as part of nursing practice is covered by the NMC Code of practice, in exactly the same way as any other aspect of nursing practice. This includes:

- *being competent in managing the equipment involved and delivering the care associated with its use*
- *clarity on who has ongoing responsibility for the care of patients*
- *ensuring informed consent prior to use of any eHealth application*
- *determining and informing patients of their rights and responsibilities*
- *respecting privacy – for example, knowing who is in the room at a remote site and if they have a right to see any data or images being transmitted, or verifying the identity of all people involved*
- *maintaining confidentiality, including after the consultation*
- *ensuring data integrity and network security*
- *agreeing on ownership of eHealth records.*

The code is available from the Nursing and

Midwifery Council (NMC):

www.nmc-uk.org/Nurses-and-midwives/The-code (accessed 25/2/13)

The **General Medical Council's** guidance is as follows:

Remote prescribing via telephone, fax, video-link or online

Before you prescribe for a patient via telephone, fax, video-link or online, you must satisfy yourself that you can make an adequate assessment, establish a dialogue and obtain the patient's consent following our guidance in [Consent: patients and doctors making decisions together](http://www.gmc-uk.org/guidance/ethical_guidance/consent_guidance_index.asp). (http://www.gmc-uk.org/guidance/ethical_guidance/consent_guidance_index.asp) (accessed 25/2/13)

You may prescribe only when you have adequate knowledge of the patient's health, and are satisfied that the medicines serve the patient's needs. You must consider:

- a. the ways in which your communication with the patient may be restricted by the use of telephone or other technology*
- b. the need for physical examination or other assessments*
- c. whether you have access to the patient's medical records.*

Consent: patients and doctors making decisions together. (GMC 2008)

Practice nurse and medicines management: Are there any professional standards relating to the remote prescribing of drugs?

Yes, the NMC Standards for medicines management specify that where changes to the dose of a medication that has been previously prescribed is considered necessary, then 'information technology (eg text message, email) may be used but must confirm any change to the original prescription.' Where a medication has not been prescribed before. A nurse may not prescribe remotely if they have not assessed the patient except in life threatening situations.

So long as the nurse is competent to interpret test results and assess symptoms or sign in the clinical management relating to over or under treatment, then it is acceptable for nurses to titrate doses according to patient response and symptom control within the prescribed range (in agreed practice clinical protocol).

(NMC.Standards for medicines management. London: NMC, 2010 www.nmc-uk.org/publications)

The **General Medical Council's** advice regarding remote prescribing is as follows:

Remote prescribing via telephone, email, fax, video link or a website

- 1. From time to time it may be appropriate to use a telephone or other non face-to-face medium to prescribe medicines and treatment for patients. Such situations may occur where:*
 - a. a. You have responsibility for the care of the patient*
 - b. b. You are deputising for another doctor who is responsible for the continuing care of a patient or*
 - c. c. You have prior knowledge and understanding of the patient's condition/s and medical history and you have authority to access the patient's records.*
- 2. In all circumstances, you must ensure that you have an appropriate dialogue with the patient to:*
 - a. Establish the patient's current medical conditions and history and concurrent or recent use of other medications including non-prescription medicines;*

- b. Carry out an adequate assessment of the patient's condition*
 - c. Identify the likely cause of the patient's condition*
 - d. Ensure that there is sufficient justification to prescribe the medicines/treatment proposed. Where appropriate you should discuss other treatment options with the patient*
 - e. Ensure that the treatment and/or medicine/s are not contra-indicated for the patient*
- Make a clear, accurate and legible record of all medicines prescribed.*

Consent: patients and doctors making decisions together (GMC 2008)

http://www.gmc-uk.org/guidance/ethical_guidance/consent_guidance_index.asp (accessed 25/2/13)

A patient has opted out of the service, but has since changed his mind, and would like to continue, but Flo won't let me add a new service.

Once a patient has sent Flo the 'stop' message, Flo will not allow you to add a new service for that patient until they text YES. Once they've done this, you should be able to continue.

A patient has died – what should I do?

You'll need to discharge them, but you won't want their relatives to get a message telling them that they have been discharged. Go into 'Edit patient', go to their phone number, and add the date in numbers onto the end of their phone number, and click 'save' (eg 23232454545**250213** – the last six figures being the date you discharge them). Then discharge them. The phone number will have changed, so they won't get a message.

A patient has changed their mobile phone number – what should I do?

Go into the 'edit patient' screen, and change the phone number, then click 'save'.

How do I find a particular patient in Flo?

When you log onto Flo, your own patients are displayed on the screen. You can see all the patients in your practice or health group by clicking on the 'Go' button beside the 'find a patient' box. Or, you can enter the patient's name or mobile phone number in the box, and Flo will find their record.

Can Flo connect directly to the practice computer?

No. This is because there are a number of different computer systems in use in general practices. However, as Flo is web-based, you can run the website in the background, minimised, while using the practice computer programme, and then just click on the taskbar to see Florence in full screen view. In seconds, you can see your patient's readings numerically and as a graph.

If you want a more permanent record, you can print off a copy of the screen view or an excel spreadsheet of the readings, and you can either send this to the practice computer system if it

has that capability, or scan it into the computer as you would a letter from the hospital. Which member of staff is allocated this task is up to individual practices.

Who is sitting looking at the screen when the messages come in?

Usually no-one, as clinicians are busy doing other important things. You will normally only look at the screen once or twice a week to see what has been happening to your patients. Based on this, you may wish to contact a patient by phone or text, or if the readings appear normal, you don't need to take any further action.

It is important to explain to the patient that Flo is not a form of treatment, nor is it intended that text messages should make a consultation unnecessary. If the patient feels unwell and wants advice, they should contact their appropriate health professional in the usual way. Flo is an enhancement to existing services, giving support and reinforcement to dual management plans. It is not a monitoring service, and the readings texted in are intended to provide more information for judgements to be made about the long-term management of the patient's condition, rather than to trigger instant reaction to what appears on the screen.

What happens if a patient phones their GP on advice from Flo and they have no appointments?

Before this situation arises, all members of the practice should be included in plans to introduce the Flo service, and discuss what local procedures should be followed. If a patient has a reading which Flo or their joint management plan indicates needs an urgent consultation, some way must be found to accommodate this request, as it would be unsafe to ignore the evidence of such a clear clinical sign.

Do you have to have 3G?

Florence is a web-based programme. You do not need any alteration to the practice computers, nor do you need 3G or any mobile network, unless you wanted to work in an outreach clinic with no landline internet connection. All you require is to connect to the internet, as you would to use Google. and you'll find Flo is there to be used.

Is there a pathway for hypotension?

- See the joint management plan for hypertension in this resource pack.

What needs to be done about sterilising blood pressure monitors if they are to be recycled to other patients?

Follow similar procedures that you use with sphygmomanometers in your normal practice. You would probably wipe with a damp cloth, and change the cuff when it seems worn or dirty.

Is there evidence that smoking cessation works?

There is considerable evidence in favour of the effectiveness of telehealth for smoking cessation. Two sources are:

Civiljak M, Sheikh A, Stead LF, Car J. Internet-based interventions for **smoking cessation**. **Cochrane** Database System Rev 2010, Issue 9. Art. No.: CD007078.

Whittaker R, McRobbie H, Bullen C, Borland R, Rodgers A, Gu Y. Mobile phone-based interventions for smoking cessation. *Cochrane Database of Systematic Reviews* 2012, Issue 11. Art. No.: CD006611. DOI: 10.1002/14651858.CD006611.pub3.
<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD006611.pub3/full>

How has Flo influenced presentation rates in practices?

Generally patients have found Flo reassuring, and they have consulted less. Much depends on the confidence they have in the dual management plan, and the way in which this is explained to the patient is crucial to its effective use. Some patients have found that using Flo has increased their understanding of their condition, so they can manage better.

Would you expect 50 patients from a practice?

This would depend on the size of the practice. In a practice with only one GP, we have had over 30 patients recruited in 2-3 months, and in another with four partners we have had over 80 patients recruited.

What percentage of patients drop out?

This depends on the condition which you are using Flo for, and how well you engage the patient during the initial consultation. Many patients with hypertension like to be able to be involved in taking their blood pressure as it helps them feel more in control. Patients or parents using inhaler reminders often ask to be reinstated when their reminders stop after three months. Drop out rates in these situations are probably less than 10%.

Smoking cessation is more difficult, as some people find the messages encouraging and supportive, while others, who are starting to relapse, can find Flo too nagging, and the messages highlight their feelings of guilt at their failure to quit smoking. Drop out rates here may be 40-50%.

Is Flo available in different languages?

At present, Flo is usually offered in English, but if a practice has a particular ethnic group who need texts in other languages which use the same alphabet characters, then contact the AIM team, and we will try to translate the messages for you.

Is Flo suitable for housebound patients?

Flo is a great help for housebound patients who would have difficulty getting to the surgery, and for whom visits by medical staff are time-consuming. However, there must be good lines of communication between the patient and the healthcare team, as without sight of the patient, the usual cues as to the patient's situation are limited. The initial introduction to Flo needs to be especially carefully done, with emphasis on the need for the patient to use healthcare services in the usual way, should they feel unwell. Flo is not a monitored service, and if someone who is housebound needs more intensive oversight by clinicians, a different service may be needed. Flo is not a replacement for usual medical care, but rather a different way of delivering the same quality of service.

Despite these reservations, many housebound patients feel Flo is a friend who is keeping an eye on them, and they enjoy having regular text messages.

For patients: - your clinical approach to meet the patient's preferences or needs

Does the patient have to sign a consent form?

Although patients agree to participate in the Flo service by replying 'yes' to their first text message, this does not necessarily mean that they have consented in an informed way to this new way of managing their health. It is important to explain to the patient that readings are only monitored weekly, and that if they feel unwell they should follow their normal procedure, seeking professional help as necessary. A consent form should indicate that the patient understands this, and it is therefore important to obtain a signature to this effect. Or you could choose to ask the patient to write a sentence that confirms their understanding of the 'contract'(see page 39).

Are text messages free of charge?

All text messages are free of charge in the UK, where the NHS is paying for them. However, some phone companies will not transmit these free messages if you have no credit on the phone. If patients go abroad, there are normal message charges applied to texts from Flo. Most patients therefore opt to text 'holiday', and they will then receive no messages until they return and text 'home'.

In fact, each message costs the NHS 8p, but this is of more concern to clinicians and commissioners than to the patient. It is a point to consider, though if the patient doesn't respond to Flo, yet continues to receive messages, that the cost can be substantial over a few months.

I work shifts – can I have the messages sent at different times on alternate weeks?

Although it is reasonably straightforward to edit the messages for a patient to be sent at a different time, for example if they preferred to have their request for readings to be in the evening, rather than the morning, it is more complicated to send them at different times each week, and would require re-writing the technical protocol, so the short answer is: try to find a time which would suit both shifts, if that is possible, otherwise, see if your CCG administrator can help by setting a long period (eg 12 hours) between the message and the reminder message.

Sometimes Flo sends reminders when I haven't had a chance to take my readings, as I'm at work

As a clinician you can alter the time the messages are sent, by accessing the patient's file, going to 'edit patient', then clicking on the title of the messages which are giving problems. You will then have the messages and the times listed, and you can alter them. If a patient were to find that having daily messages was excessive, and they are listed for each day of the week by name, it would be possible to reduce the days the messages are sent out. However, for some protocols, it is not possible to change the frequency (in order to ensure consistency and safety), so in these cases, the patient may need to be moved to a different protocol.

Sometimes when I reply to Flo, I get a message saying that she didn't understand my text.

This can occur when a patient replies to an information message which doesn't require an answer, and the computer doesn't know what to do with the message. There are a few rhetorical questions in the information messages, and sometimes patients try to answer them. Answers are only required where instructions are given about how to answer the questions.

All answers need a code in order to allocate the answer to a section of the computer, this may be a #, or some letters, eg EXE, or a word eg SMOKE. If patients send in messages without a code, the computer will reply that it didn't understand the message.

Some patients try to send information in words, and Flo can only cope with the code and a number, so again a 'don't understand' message will be generated.

Sometimes when I send in a reading, Flo says she wasn't expecting that, so she hasn't stored it

This can happen when people send in their readings too long before they are asked for them. If they wait until they are asked for a reading, there should be no problem, and when patients get used to the time a reading is requested, they send the reading in half an hour early, which is again accepted by Flo. But if they send a reading in more than an hour before the allocated time, the computer may not understand what it is for, and will reject it. The message will still be visible if you look at 'all messages', but will not be part of the readings graph.

When I'm asked to send in a reading, I worry about using capital letters and spaces, so this anxiety affects my readings.

It doesn't matter whether the text is upper or lower case in responses, nor whether there are spaces, so there is no need to be anxious about this.

If a patient gets anxious, suggest that they ignore the messages from Flo for a few days, or text in 'holiday', and have a few days off. If the stress of sending in readings raises their BP, the benefits of home readings are reduced, and it may be that the patient is not suitable for this dual management approach in the long run. But most patients settle after a few days of sending in readings.

I keep telling Flo that I don't want any more messages, but I still get them sent to me.

The patient must use the word STOP. Flo does not understand other words like 'your messages are doing my head in'.

Help and support from the AIM for Health team

Advice and Interactive Messages (AIM) for Health Implementation Support for general practice teams:

Once you and your practice team have attended the workshops, defined which Flo clinical protocols to use, and have connected with the clinical telehealth facilitator that your CCG has appointed to help practices locally, and are ready to sign up patients to the Florence SMS texting telehealth service, and begin using the Florence clinical website, we are on hand to help you.

Most implementation activities are listed on your Flo Project Plan (see page 36) in this AIM for Health Resource Pack, and at anytime if you should need additional training, support on those activities listed on the project plan, or to have a better understanding of the Florence clinical website; please contact Rocky Shaw at rocky.shaw@nhs.net

Once an email is received a member of the AIM for Health project team will contact you to assist with your implementation of the Flo texting telehealth service in your practice.

Websites you may find useful:

Main AIM for Health website, which contains news, patient leaflets, protocols, consent forms, and dual management plans:

www.stoke.nhs.uk/simple/aim

The Simple Telehealth website, which has information about how Flo is being used in other parts of the country, and includes collaboration from other users:

www.stoke.nhs.uk/simple