

Purpose

- To improve compliance with medication use.
- To encourage patient to adhere to the joint management plan agreed with the GP practice or heart failure clinic to gain better control of their heart failure
- To help the patient recognise symptoms of heart failure so that medication can be correctly targeted to optimise the control of their heart failure and prevent deterioration of their condition
- To enhance the confidence and understanding of patients with heart failure

Setting:

General practice, following appropriate up-skilling of clinicians to enable them to titrate medication competently, or community specialist heart failure nurse clinics.

Selection of patients

- Patients who are under care of heart failure team from outpatient or inpatient care settings who appear to be 'reasonably stable' ie at stages NYHA 1 and 2 and deemed suitable by heart failure nurses
- Patients who are on the general practice heart failure register and deemed suitable by competent responsible GP (trained/mentored by heart failure team)
- Patients who are capable of agreeing a dual management plan with the responsible clinician, undertaking text messaging with Florence in reliable way, and acting with confidence in concordance with the plan.
- Patients with deteriorating heart failure, whose control needs careful management to optimise the use of medication.

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
- Most effective level of medication reached quickly in agreement with patient to achieve most satisfactory control of heart failure (ACEI and/or beta blocker medication)

2 Improved clinical outcomes:

Heart failure is managed to give patients the highest quality of life possible

3 Patient empowerment:

- Greater confidence about their condition
- Joint agreement between clinician and patient as to tolerable level of medication
- Lifestyle changes to improve or maintain their condition

4 Popularity of Flo:

- Patients find Flo messages reassure them that they can actively participate in managing their heart failure.
- Clinicians find Flo reinforces clinical management without excessive clinical time.

5 Cost effectiveness:

- Reduction in costs of secondary care use (eg admissions, A&E attendances)

Success criteria

- 50% of patients who committed at start do at least 20 days of texting in over a 3-month period.
- 50% of patients with poor control of heart failure become controlled within 3 months

Protocol summary (13 weeks):

- Patient issued with sphygmomanometer
- Patient signs contract
- Monthly text enquiry of patient's confidence of managing their health.
- 3 x weekly text enquiry of patient's BP in sitting and standing, heart rate, weight, and side effects of medication.
- 3x weekly (on different days from above) question about whether patient is in red, amber or green on their management chart.
- (ACEI protocol only) Fortnightly reminder to have kidney function test.

Patient:

- signs contract, agreeing to respond to messages from Flo, to care for the equipment, and return it when asked to do so.
- signs a consent form accepting that they remain responsible for their health, and understanding that readings are sent to an inanimate machine.
- takes their blood pressure three times a week in sitting and standing and sends the readings in to Flo when asked.
- measures their weight three times a week, and sends this in to Flo when asked, as well as answering other questions including heart rate.

Clinician:

- agrees a clinical management plan with the patient, which includes the use of Flo. Shared management plan: describes clinical information patient will receive – measures patient will make (eg weight, side effects of medication, blackouts, pulse, BP); medication; oversight by specialist / practice nurse/ GP of Flo readings on website eg three times weekly, blood tests. Titration phase can be up to 12 weeks.
- issues sphygmomanometer and appropriate cuff, and trains the patient in its use; and if the patient does not have suitable scales of their own, provides a set of scales as well/ recommends patient buys their own.
- obtains patient's signed agreement to respond to Flo, and to look after the equipment, and return it when asked.

- explains to the patient that readings are sent to an inanimate machine which is not monitored continuously, and obtains their signed consent form which states that the patient remains responsible for their own health.
- 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 weight & BP readings weekly, and if unable to do so, ensures another clinician in the clinical team does so.
- checks renal function regularly (ACEI protocol)
- arranges a face to face appointment to review condition after one month.
- understands what to do if the readings are outside set parameters / or agreed goals (eg ask patient to come to clinic or adjust medication by phone).
- after three months, asks patient to return equipment, unless doctor wants them to continue using it.

BP readings

Default: systolic (90-140 mmHg) diastolic (60-90 mmHg)

Monday, Wednesday, Friday at 9.00am (but if patient sends in more frequent readings, they will receive the same responses)

9.00am: Please send the reading of your BP while SITTING Please write SIT, then the reading, eg: SIT 140 80

3 hours later if the patient has not replied to the first message:

Hi I've noticed you haven't sent in your blood pressure readings while SITTING . Text SIT, then the reading, eg SIT 140 80

Within normal range:

Your blood pressure reading in sitting is fine. Flo.

Above desirable range:

Your Blood pressure reading in sitting is fine. Flo..

Below desirable range:

Please phone your practice nurse during normal opening hours. Thanks, Flo

Monday, Wednesday, Friday at 9.10am (but if patient sends in more frequent readings, they will receive the same responses)

Default: 90-140 mmHg) diastolic (40-90 mmHg)

9.10am: Please take your blood pressure standing up, and text it in. Text STAND, then the reading, eg STAND 130 80

3 hours later if the patient has not replied to the first message:

You haven't sent in your blood pressure reading while standing up Please text it in. Text STAND, then the reading, eg STAND 130 80

Within normal range:

Your blood pressure in standing is fine

Above desirable range:

Your blood pressure in standing is a little high today. Follow the advice in your management plan

Below desirable range:

Your blood pressure is low today. Please phone your practice nurse during practice hours.

Weight

Monday, Wednesday, Friday at 9.15am

What's your weight in kilograms today? Please text WT followed by the reading in kg eg WT 185.4 Thanks, Flo.

8 hours later if the patient has not replied to the first message:

Hi. You haven't sent in your weight measurement today. Please reply WT followed by the reading in kilograms, eg WT 85.2 Thanks, Flo.

Response:

That's fine. Take care, Flo.

If weight is greater than 2 kg difference from 3 days earlier:

Please phone your practice nurse. Take care, Flo.

Heart rate

Monday, Wednesday, Friday at 9.20am

What is your resting pulse rate? Please text PU then the pulse reading, eg PU 76 Thanks, Flo.

1 hour later if the patient has not replied to the first message:

Hi You haven't said what your resting pulse rate is. Please text PU then the pulse reading, eg PU 76 Thanks, Flo.

60-200: Your heart rate is fine today. Take care, Flo

<60: Have you had any dizziness or blackouts? Please text BL2 if you have, or BL1 if you have not had any dizziness or blackouts.

BL1: That's fine. Your pulse rate is a little low, but there's no need for you to take any action. Take care, Flo

BL2: Please see your GP to discuss your symptoms and arrange an ECG

<50: Please see your GP to arrange an ECG. Thanks, Flo.

Effects of medication

Monday, Wednesday, Friday at 10:00am:

Have you developed any symptoms that you think may be caused by your tablets? Please text MED2 if you've had symptoms, or MED1 if you haven't. Thanks, Flo.

2 hours later if the patient has not replied to the first message:

Hi. You haven't said if you've developed any symptoms from taking your medication. Please text MED2 if you've had symptoms, or MED1 if you haven't.

MED1: *Please continue with your medication. Take care, Flo.*

MED 2: *Please contact your doctor or practice nurse during surgery hours*

Heart Failure Chart question

Tuesday, Thursday, Saturday at 10:00am:

Are you in green, amber, or red on your chart today? Please text CHART 3 for green, CHART 2 for amber, or CHART 1 for red. Thanks, Flo.

1 hour later if the patient has not replied to the first message:

Hi. You haven't said if you are in green, amber, or red on your chart today. Please text CHART 3 for green, CHART 2 for amber, or CHART 1 for red. Thanks, Flo.

For ACE inhibitor protocol

Every 14 days at 13:00:

It's really important to have your kidney function test regularly. Your doctor will discuss the results at your next appointment. Take care, Flo.

Patient Experience Questions

(xEvalQ1) every four weeks at 12:00pm

Hi, please text CON 1, if you have felt more confident about managing your health since using Flo, or CON 2 if you have not. Thank you.

Thank you for letting me know if you found the text messaging service helpful. Take care, Flo.