

Overweight & obesity + hypertension (reasonably well controlled), already motivated to reduce weight (BMI ≥ 28 adults and teenagers ≥16 years) – protocol AIM-13

Purpose

- To support person who is overweight or obese to lose at least 5% of their weight within an agreed time frame.
- 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 person adopt a healthier lifestyle – exercise, eating sensibly, maintaining happy mood.
- To improve patient compliance with anti-hypertensive medication.

Setting

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

Selection of patients

- Person who is substantially overweight (BMI 28-29.9) or obese (BMI≥30), aged ≥ 16 years old who is at contemplation phase of motivation to lose weight and has NO identified long term condition or recent surgery that affects their health in such a way that it limits their physical activity or dictates their diet.
- Patient who is on the practice hypertension register and with blood pressure goal <140/90 mmHg (clinic; <135/85 mmHg home BP reading), who does not have diabetes or CKD and/or ACR≥ 70 mg/mmol (as this would require a different protocol with lower BP goal). [If hypertension poorly controlled select protocol 2 to gain effective clinical control; then convert to this protocol when ready to focus on obesity).
- Person who will benefit from regular text messages that encourage compliance with medication.

(Please note, the patient's participation on the Flo programme could be renewed at end of initial 3 months period.)

Success criteria

- 50% of participants reduce body weight by 5% after 3 months
- 50% of participants report improved nutrition by regularly eating healthy foods
- 80% of participants maintain stable blood pressure control over the 3 month period (ie consistently <135/85 mmHg home BP readings)
- 50% of participants report increased physical activity – at least three days per week of at least 20 minutes physical activity sustained at week 12
- 50% of participants who committed at baseline do at least a month of texting in once a week over a 3 month period

Expected outcomes

1. Changes in healthcare usage:

- regular pattern of repeat prescriptions for anti-hypertensive drugs
- fewer referrals, unnecessary admissions to hospital or attendances at A&E; less face to face contact at GP surgery -- if attain ideal weight range/maintain good control of hypertension

2 Patient empowerment:

- Greater confidence about losing weight
- Lifestyle changes to improve or maintain their health & wellbeing, reduce weight in order to improve their hypertension

3 Improved clinical outcomes:

- Prevent near family member being obese
- Maintenance of stable blood pressure readings (ie consistently <135/85 mmHg home BP readings)
- Reduced weight leading to better management of hypertension/ maybe less anti-hypertensive medication.

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 health care use in long term (myocardial infarction, diabetes, back pain, stroke, referrals, falls)

Protocol

In summary:

- Agree person purchase reliable weighing scales (if not already got)
- Patient issued with sphygmomanometer
- Weekly responses to blood pressure, weight and activity questions
- Weekly responses to motivation questions
- Monthly responses to depression questions
- Daily information messages
- Monthly text enquiry of person experience

Participant:

- agrees shared management plan (see pages 100 & 108) and that they will respond to messages from Flo.
- signs a consent form accepting that they remain responsible for their health, and understanding that texted in readings are sent to a computer and that they will care for the equipment and return it when asked to do so.
- confirms has reliable weighing scales at their home.
- takes their blood pressure weekly and sends the reading in to Flo when asked.
- measures their weight weekly, and sends this in to Flo when asked.
- responds to weekly questions about physical activity.
- responds to monthly questions about mood.
- receives daily information messages, and tries to adopt the advice contained in them.
- attends for re-weigh after 3 months (optional)

Clinician:

- issues sphygmomanometer and appropriate cuff, and trains the patient in its use.
- agrees a shared management plan with the patient, (see pages 100 & 108) which includes weight loss goal and time period, use of Flo.
- finalise patient contract:
 - agreed personalised plan that includes:
 - specified planned weight loss goals in kgms – over specified time period
 - agreement to start weight loss programme straightaway
 - healthy eating plan / and describe associated drinks
 - extent & nature of regular physical activity
 - blood pressure goal/anti-hypertensive medication
 - (may include prescription of orlistat/xenical if patient choice/medically suitable)

- agree if patient will attend commercial weight management programme (eg Weight Watchers or Slimmers' World)
- obtains patient's signed agreement to respond to Flo.
- explains to the patient that texted in 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.
- undertake baseline measures in surgery: current weight, height (calculate BMI), blood pressure, GPPAQ, AUDIT C
- monitors the patient's BP readings and weight readings monthly, texts response to patient if appropriate, and if unable to do so, ensures another clinician in the practice team does so.
- acts if the BP readings are not within anticipated limits/agreed goals (eg text patient to come to surgery to review medication or adjust medication by phone).
- arranges a face to face appointment to review weight and blood pressure control at 3 months.

Practice administrator:

- keeps a note of patients enrolled on telehealth project, and which patients complete three months of messaging.

Message Content

- Weekly BP reading Friday 8.00am 3 months
- Weekly weight reading
- Weekly exercise questions
- Weekly confidence questions
- Depression/mood questions (every 4 weeks)
- Daily information messages for 13 weeks

Blood pressure reading

Default: systolic (80-134 mmHg) diastolic (60-84 mmHg)

Weekly reminder Friday at 8.00am (service message)

8.00am: *"Please take your blood pressure, and send me the readings. Please write BP, followed by each reading, eg: BP 140 80 Thanks, Flo."*

10 hours later if the patient has not replied to the first message: *"Hi. I've noticed you haven't sent in your readings today. Could you please text in BP, then the readings. Thanks Flo"*

Within normal range:

- *"Your BP reading is normal. Flo."*

Above desirable range:

- **Systolic:** *"Your blood pressure (systolic) is a little high today. Follow the advice in your management plan, and take the readings again at your usual time. Thanks, Flo."*
- **Diastolic:** *"Your blood pressure (diastolic) is a little high today. Follow the advice in your management plan, and take the readings again at your usual time. Thanks, Flo."*

Below desirable range:

- **Systolic and diastolic:** *"Your blood is pressure a little low today. Take it again, and follow the advice in your management plan. Take care, Flo."*

Breach message triggered when the readings reach either 200 mmHg (systolic) or 105 mmHg (diastolic) or if the BP is below 70 mmHg (systolic) or 50 mmHg (diastolic).

"Your BP is outside the safe range - so contact a doctor today as agreed in your management plan. Take care, Flo."

Weight reading

Weekly at 8:00am : *"Hi. Please text in your weight in kilogrammes today. Reply WT, followed by your weight, eg WT 86. Thanks, Flo"*

Reminder at 8:00pm: *"Hi. You haven't told us your weight today. Please text in your weight in kilogrammes today. Reply WT, followed by your weight, eg WT 86. Thanks, Flo."*

"Thanks for sending in your weight measurement. Take care, Flo."

Weight Q

Weekly at about 8:15am: *"Have you lost weight this week? Please reply WEIGHT 1 if you have, or WEIGHT 2 if you haven't lost weight. Thanks, Flo."*

Has lost weight (one of the following responses):

"Wonderful. You'll soon be feeling so much fitter, and will look better too. Take care, Flo"

"Fantastic. Your effort seems to be working. Take care, Flo."

"Great. Keep up the good work. Take care, Flo."

"Amazing. You must be proud of yourself. Take care, Flo."

"Terrific. You are getting results. But, don't be disheartened if you don't manage to lose weight each week. Take care, Flo."

"Brilliant. It takes a lot of willpower to keep this up. Take care, Flo."

"Well done, keep going, you can reach your goals. Take care, Flo."

Hasn't lost weight (one of the following responses):

"If you're eating less, try doing more exercise as well, and eventually you'll win. Take care, Flo."

"Keep going and you'll succeed. Take care, Flo."

"Sometimes no matter how hard you try, your weight doesn't shift as quickly as you hope. Take care, Flo."

"It's never going to be easy, but it'll be worth it in the end. Take care, Flo"

"Work up a way to beat temptations and start losing weight again. Take care, Flo."

"Write down why you think you've slipped this week. Take care, Flo"

"Tomorrow's a new day for a fresh start. Take care, Flo."

Exercise questions

Weekly at 16:00: *"During the last week, have you done physical activity most days as you agreed in your plan? Please text EXE followed by the number of days you've exercised."*

Reminder at 19:00: *"Please text the number of days you've done physical activity during the last week. Text EXE, then the number of days, eg EXE 3 if you exercised on 3 days. Thanks"*

Responses to exercising for 5-7 days:

"That's great- keep going. Take care, Flo."

"The combination of less food and more exercise will really make a difference Take care, Flo."

"Changing the pattern of your life, will help you keep the weight off, once you've lost it. Take care, Flo."

"Doing regular exercise will help you feel better in many ways. Take care, Flo."

"Soon you'll be more fit & toned. Take care, Flo."

Responses for 3-4 days:

"Try and do a bit more exercise and work on fitting it in to your busy days. Take care, Flo."

"It's not easy to fit exercise sessions into a busy day, but short bursts are effective. Take care, Flo."

"Speed up your everyday activities - walk to the shops, use stairs, do some gardening, clean the windows. Take care, Flo."

"Instead of flopping in front of TV, run up and down stairs during the adverts.. Take care, Flo."

"Whatever you're doing, try and make it an exercise: when sitting, lift both feet off the floor - that'll tighten your tummy. Take care, Flo."

Responses for 0-2 days:

"Now, don't be lazy - you've pledged to do regular exercise - so try harder..Take care, Flo"

"How about walking to the shops - if you already do, then speed up. Take care, Flo."

"If you're sitting about a lot, you'll get backache. Take care, Flo."

"Get up and walk on the spot, do some shoulder movements too. Take care, Flo."

"Use the space in the shopping centre or supermarket to do brisk walking. Take care, Flo."

Confidence questions

Weekly at 17:00: *"How confident are you that you will keep to your plan to reduce weight? Text CON, then 1 if you are very confident; 2 if quite confident; or 3 if not confident"*

Reminder at 20:00: *“Please text CON 1 if you are very confident that you will keep to your weight-reducing plan, CON 2 if quite confident, or CON 3 if not confident. Thanks, Flo.”*

Responses to very or quite confident:

“Great - a more healthy lifestyle should do it. Take care, Flo.”

“Good - congratulate yourself for your weight loss plan. Take care, Flo.”

“Great -develop a strategy (eg friend to chat with) to cope with any set-backs.. Take care, Flo.”

“Fantastic: keeping motivated is really difficult, and you've found what works for you. Take care, Flo.”

“Excellent: you'll see positive results now, and this will keep you motivated. Take care, Flo”

Responses to not confident:

“This is a challenge that you can win. Take care, Flo.”

“Think why you're going to lose weight: to join in activities, live longer, be free of pain. Take care, Flo.”

“Set yourself small targets that you can achieve, and eventually you'll reach your goal. Take care, Flo.”

“Olympic athletes worked hard to get their medals - this is your Olympics, but the only person to beat is you. Take care, Flo.”

“Look at what you've achieved so far. If you aren't getting results, eat less, exercise more, to be certain of success. Take care, Flo.”

Mood / Depression questions

Monthly:

“During the past month, for how many days have you felt down, depressed, or hopeless? Please reply FEEL followed by the number of days. Thanks, Flo.”

Responses for 0-3 days:

“You seem to be managing pretty well. Try to see things in a positive way, and manage your health so that you feel in control.”

“Great: you've definitely found ways to enjoy life. Stay positive, even if things don't always work out for you.”

“That's really good. You've obviously got a positive outlook on life.”

Responses for 4-10 days:

“It's not unusual to feel down sometimes. Think of positive experiences you've had, and do something you are pleased with each day.”

“It sounds as though you've a reasonably balanced outlook.”

Responses for >10 days:

“You seem to be having a difficult time at present. Try to look at what you can achieve, and be proud of doing that, against the odds.”

“Think if there was something else you could have done to help you have a better day: meet a friend, watch a film, go for a walk. Take care, Flo.”

“During the past month, for how many days have you had little interest or pleasure in doing things? Please reply INT then the number of days. Thanks, Flo.”

Responses for 0-3 days:

“That's good, it's important to enjoy life.”

“Laughter and fun increase your ability to cope with the pressures of work and life.”

“To stay well make time for leisure, family and a social life.”

Responses for 4-10 days:

“Don't let your problems get on top of you. It's OK to spoil yourself sometimes: find a new hobby, or phone a friend for a chat.”

“Try to think of positive experiences you've had and do more of them”

“Focus on your successes and achievements, rather than negative thoughts. Try to do something you are pleased with each day.

Responses for >10 days:

“Spend some time doing what you've liked in the past - listen to music, have a relaxing bath, read a book, or meet a friend.”

“Relaxation techniques can help.”

“Do at least one thing you enjoy each day, this will help you cope with the more challenging days.”

If 2 consecutive months of high scores, monitoring clinician should contact patient and suggest appointment with GP.

Information Messages (daily for 13 weeks)

1. *You'll be much more confident with your appearance when you've lost more weight.*
2. *Losing weight should give you a new found confidence.*
3. *When measuring your BP, don't forget to support your arm at heart level and avoid talking. Take care, Flo.*
4. *If you're overweight you're more likely to get diabetes, heart disease and cancer.*
5. *Fat can kill you – don't let that happen.*
6. *When you measure your BP, don't forget to remove any tight clothing and ensure your arm is relaxed. Thanks Flo*
7. *Check the calorie content of packets of food before buying – you'll often be surprised.*
8. *Restart your healthy diet again tomorrow if you've been naughty today.*
9. *When you take your BP sit quietly for at least 5 minutes with your arm exposed and supported at the level of your heart. Kind regards, Flo.*
10. *Don't forget there's lots of hidden calories in many drinks- so beware.*
11. *You can do it – invest in your future.*
12. *Check the salt content of your food; try for less than 3 grams per day. Kind regards, Flo.*
13. *Eat less, do more.*
14. *Overweight & obesity are forms of malnutrition.*

15. Remember - don't have a caffeine containing drink like coke or coffee or smoke tobacco 30 minutes before taking your BP if possible. Take care, Flo.
16. Look after yourself – you're best placed to do that.
17. Get moving – that's the most direct way to lose weight.
18. Around 9000 people die prematurely from obesity in England each year.
19. Your home blood pressure readings are just as reliable as those taken in your GP's surgery if you take your BP correctly as we've advised. Thanks Flo
20. A fatty liver doesn't work so well in your body. You need a healthy liver to fight infection and aid digestion.
21. Your confidence should increase as you lose weight.
22. If you become over-anxious about your BP measurements, then stop taking your blood pressure for a couple of days. Take care, Flo.
23. If you do cheat on your diet, then get back on track tomorrow.
24. Reaching your goals will give you and your supporters a sense of pride.
25. If you lose weight, then others will copy you and try to diet too.
26. Eat sensibly- don't starve yourself.
27. Cut down to small portions - even of healthy seeming foods.
28. Don't talk or move when taking your blood pressure, just sit still and stay quiet.
29. Avoid added salt and help your kidneys – a healthy diet is not just about limited content of fat and carbohydrates.
30. Exercise will help get your BP down; try to do 30 minutes, 3 to 5 times per week - the more, the better. Take care Flo.
31. Believe in yourself and do it – reach your diet goals.
32. Find other ways to relax - and avoid comfort eating.
33. If you've not succeeded in losing weight before – find a different way of doing it that's worked for a friend.
34. Don't rush when taking your blood pressure – you want to register a low reading.
35. If you're overweight, just losing 5% will make a real difference to your health.
36. A very low calorie diet is less than 800 calories a day – but it can be dangerous to stay on an extremely restricted diet for too long.
37. Try to relax and don't let stress get a hold of you as it could make your blood pressure worse.
38. Insufficient sleep is associated with obesity, so make sure that you get enough for you most nights.
39. Set realistic goals that you can achieve- not fantasy goals that you've little chance of meeting.
40. A home BP reading is typically lower than a BP taken in your GP's surgery. Take care, Flo.
41. Now you're not eating sweets and other treats – buy yourself a visual reward instead to remind you of your success.
42. Have a standby plan if you're under stress – so you do something to relax or distract you and don't slip into overeating.
43. You're never too busy to weave regular exercise into your daily life if you prioritise it.
44. Using a pedometer can help you assess your activity level and motivate you to move more.
45. Regular cycling can help you lose weight, reduce stress and improve your fitness. Many employers now operate a cycle to work scheme.
46. Gradually try to increase your exercise. 30 minutes of exercise 5 times a week is the recommended goal.
47. If you have cheated don't carry on cheating for the rest of the day. Just get back on track as soon as you can.
48. Don't skip breakfast. Eating breakfast can help you control your weight.
49. Measure yourself. Weight loss may disappear in inches as well as on the scales
50. If you're craving have a little of what you fancy but don't overdo it.
51. Sneak eating can make you feel guilty. If you are struggling chat to someone about it.

**Patient Experience Questions
(monthly at 6.15pm)**

"Hi, Shortly I'll ask three questions to see how you liked the Flo system. Your answer will be either #1 if you agree with what's said, or #2 if not. Thanks, Flo"

Months 1 and 2:

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 can lose weight? 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.

"Thank you for answering these questions. Knowing how useful you find the texting service helps us to improve it for future patients"

Month 3:

ANS1 Please text #1 if you agree with the statement "I am pleased with the amount of weight I have lost", or #2 if you disagree.

ANS2 Please text #1 if you agree with the statement "I do physical activity most days", or #2 if you disagree.

ANS3 Please text #1 if you agree with the statement ""I have improved my nutrition by regularly eating healthy foods." or #2 if you disagree.

Diary "Please say if you liked using Flo. Text #1 if you did, or #2 if you didn't. Thanks"

"Thank you for your help in giving your views. This will enable us to improve the service for future patients."

Evaluation (optional)

Practice team completes:

Patient's name

Date when started using Flo.....

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

Previous history	Number and date
Highest weight ever logged in medical records/ when?	

Medication taken for hypertension in 12 months before starting Flo

Medication	Dose	Date started / prescribed	Date stopped

After 3 months on Flo

Attach Flo readings sheet(s)

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

Weight at end of Flo programme/when?	
Did the patient's weight change while using Flo?	yes, increase / yes, decrease / no By how much?.....
Was this $\geq 5\%$ weight before started Flo programme?	
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

Attach Flo readings sheet(s)

Date when BP appears sustained at level of agreed goal (judge from Flo graph).....

Medication taken for hypertension since commencing with Flo

Medication	Dose	Date started / prescribed	Date stopped

Telephone or face to face questionnaire after 3 months (if practice is interested in doing this)

Date.....	Agree	Disagree
Do you agree with the following statements? (please tick box)		
1) Using Flo has helped me to understand the importance of my losing weight	<input type="checkbox"/>	<input type="checkbox"/>
2) I have no difficulty in texting in reports of my weight or BP readings	<input type="checkbox"/>	<input type="checkbox"/>
3) I find the messages helpful and interesting	<input type="checkbox"/>	<input type="checkbox"/>
4) I prefer to send my readings to the practice via Flo, rather than go to the surgery	<input type="checkbox"/>	<input type="checkbox"/>
5) I would recommend this service to my family and friends	<input type="checkbox"/>	<input type="checkbox"/>

Any other comments?:

References

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