**Primary Care Hypertension Monitoring - Newly Diagnosed or Unstable (AIM-02) Microcase**

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| NHS TEAM |  |
| TYPE | Hypertension monitoring with medication titration. |
| TARGET COHORT | Patients newly identified & confirmed as having raised BP, or patients considered to be unstable. |
| DESCRIPTION Opportunity & Solution | Hypertension is the single most common risk factor for both cardiovascular and overall disease burden and mortality worldwide, medical treatment of hypertension mitigates this risk¹. Hypertension affects 42 % of adults in England² and is a key factor for cardiovascular and renal disease³. Despite its significant negative health consequences, it is commonly inadequately controlled¹. Management of hypertension is also among the most common reasons for ambulatory visits to physicians’ clinics among non-pregnant adults worldwide⁴. Current practice is to monitor BP in patients diagnosed with hypertension over a period of time, allowing potential titration of any anti-hypertensive medications that have been prescribed; depending on local practice this may be done by:1. Asking the patient to home monitor and record readings on paper and bring these back to an appointment/s for review.
2. Further appointments at their GP practice for BP readings to be taken in surgery.

The time between identifying unstable or raised BP and treatment leaves the patient unmanaged and vulnerable to exacerbation before treatment has commenced. Based on previous evidence⁵ Flo⁶ has been identified as the NHS owned clinically driven interactive self-management tool that could enable a safe and effective transition to a home blood pressure monitoring pathway. Following clinical approval locally, home monitoring via Florence can be offered to patients attending the practice demonstrating a raised blood pressure. Flo is listed in NICE’s shared learning database for management of hypertension. For more information, please click [here](https://www.nice.org.uk/sharedlearning/interactive-simple-telehealth-for-the-management-of-blood-pressure).   |
| OUTCOME CLAIMS | *IMPROVED:** Clinical outcomes as treatment can be initiated promptly if required.
* Patient satisfaction with convenient reminders to take readings and clinically approved advice once blood pressure readings submitted.
* Accuracy in medication in titration.
* Patient safety during monitoring process due to advice provided by Flo, in concordance with a shared management plan (as decided by the practice).

*INCREASED:** Capacity in primary care due to patients not needing to visit the practice to have BP reading taken or reviewed.
* Confidence and ability to self-manage outside of face to face care.
* Patient engagement and understanding of condition and/or symptoms.

*REDUCED:* * Visits to the practice for blood pressure monitoring.
* Time taken to reach stable BP, due to faster access to diagnostic data upon which to make a treatment decision, such as titrating anti-hypertensive medication monitoring promptly.
* Cost of clinical time.
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| EFFICIENCY MEASURE | *PRIMARY CLAIMS:*1. Fewer appointments at GP Practice (calculated by total time saved per patient).
2. Cost based on fewer appointments.
3. Patient satisfaction survey.
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| REQUIRED TIME What is the duration of the plan? | Protocol duration is 8 weeks.Flo prompts patient to send 2 blood pressure daily (total 112 readings\*). |
| ENTRY QUALIFICATION | 1. Patient part of target cohort.
2. Patient with appropriate cognitive ability.
3. Patient (or willing family member/carer) owns a mobile phone and is capable of sending and receiving SMS and taking own blood pressure accurately.
4. Patient has access to a blood pressure monitor.
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| ROI CALCULATION | ***In Practice BP Monitoring compared to using Flo:****\*Based on AIM-02⁷ protocol. Patient receives a message at 8:00am from Flo for 8 weeks asking for BP in AM & PM reading. Flo will send a reminder 12 hours later if the patient doesn’t send in the AM reading (cost is included in the contingency messages). Patient responses with BP will generate a reply from Flo, however it is possible that a patient would only provide one BP reading daily, which would result in between 56-112 readings, total 168-280 messages . Flo will 2 additional support messages per week, totalling 16 messages, as well as a set of evaluation questions at the end of the 8 weeks. A reminder is sent, and then the first question; if at any point the patient doesn’t respond, the next question will not be sent, hence between 2 & 8 messages. The sum total is therefore 186-304 texts. Texts cost £0.08.**\*\*Based on 10 minute appointment. Cost taken from Personal Social Services Research Unit, University of Kent “Unit Costs of Health and Social Care 2017”* [*https://www.pssru.ac.uk/project-pages/unity-costs/unity-costs-2017/*](https://www.pssru.ac.uk/project-pages/unity-costs/unity-costs-2017/)*\*\*\*Based on low cost BIHS accredited machine. May vary dependent on practice preference.**\*\*\*\* Based on data from NHS Ayrshire & Arran, presented by Dr. Kes Khaliq at the national Scottish Flo event. Data showed that use of Flo avoided between 1-6 appointments for patients, with an average of 2.4 appointments saved.*  |
| PILOT |  |

**References**

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2 Wolf-Maier K, *et al. Hypertension treatment and control in five European countries, Canada, and the United States****.*** Hypertension 2004;43(1):10-7.

3 Kearney M, Arden C, Fuat P, Griffith K. *Blood pressure: a call to action for primary care.* Primary Care Cardiovascular Journal. 2015; February: Epublication online

4 Xu W., Goldberg SI, Shubina M, Turchin A. *Optimal systolic blood pressure target, time to intensification, and time to follow-up in treatment of hypertension: population based retrospective cohort study*. BMJ:2015:350

5 Cottrell E, Chambers R, O’Connell R (2012) *Using simple telehealth in primary care to reduce blood pressure: a service evaluation*. BMJ Open 2: e001391.doi:10.1136/bmjopen-2012-001391

6 Simple Shared Healthcare (2016). About us (Internet). (2016 Jan; cited 2016 Nov 27). Available from: <http://www.simple.uk.net/home/about-us>

7 Chambers, R, Advice and Interactive Messages (AIM) for Health, 2011.