**Primary Care Hypertension Annual Review Microcase**

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| NHS TEAM |  |
| TYPE | Hypertension annual review |
| TARGET COHORT | Patients previously diagnosed as having hypertension requiring annual review. |
| 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. Around 7 million people in the UK have undiagnosed hypertension and therefore do not know that they are at risk².Timely and accurate diagnosis of hypertension can improve clinical outcomes; patients waiting over a month and a half post high reading demonstrate progressively worse outcomes than those treated more promptly³. Current practice for annual review of hypertension is obtained by monitoring the patient's BP over a period of time; depending on local practice this may be done by:1. Asking the patient to home monitor and record readings on paper and bring back to a 2nd appointment for review
2. Further appointments at their GP practice for BP readings to be taken in surgery

The time between identifying a raised blood pressure and treatment leaves the patient unmanaged and vulnerable to exacerbation before treatment has commenced. Based on previous evidence⁴ Flo⁵ has been identified as the NHS owned clinically driven interactive self management tool that could enable a safe and effective transition to a 7-day home blood pressure monitoring pathway. Following clinical approval locally, home monitoring via Florence can be offered to patients attending the practice requiring an annual review of their 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.
* Patient choice in treatment planning; a safe alternative option to ambulatory monitoring.
* 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.
* Confidence and ability to self-manage outside of face to face care.
* Patient engagement in condition and/or symptoms.

*REDUCED:* * Visits to the practice for blood pressure monitoring.
* Time taken to reach diagnosis and initiate treatment, if necessary, due to ability to initiate monitoring immediately and faster access to diagnostic data upon which to make a treatment decision.
* Cost of ambulatory monitor and 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 begins day 364 and monitoring then runs for 7 days.Flo prompts patient to send 2 blood pressure readings per day (total 14 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 for annual review compared to using Flo:****\*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/unit-costs/unit-costs-2017/*](https://www.pssru.ac.uk/project-pages/unit-costs/unit-costs-2017/)*\*\*Based on adapted AIM-01⁶ protocol. Protocol to be added when patient is first diagnosed; on day 364 a reminder is sent to the patient letting them know that Flo will ask for readings for the following 7 days. Patient receives 1 message from Flo each morning asking for AM & PM reading. Patient responds once, generating a reply from Flo. If patient replies within 12 hours, Flo will not send any further messages, hence minimum of 3 messages. If patient remembers to send 2nd BP reading, Flo replies to both, resulting in a total of 5 messages. Flo will send a reminder after 12 hours if the patient does not respond with a reading, but this cost is included in the contingency messages. The patient will receive evaluation questions after the monitoring period, as well as a message stating that their clinician will be in touch if they need to discuss their readings further. Texts cost £0.08.**\*\*\*Based on low cost BIHS accredited machine. May vary dependent on practice preference.**\*\*\*\*Based on calculations from this microcase, maximum cost compared to minimum of £0.00 where further monitoring is not required.* |
| PILOT |  |

**References**

1 Lim SS, Vos T, Flaxman AD, Danaei G, Shibuya K, Adair-Rohani H, et al. *A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010*. Lancet 2012;380:2224-60.

2 British Heart Foundation. *High blood pressure risk factors* (Internet). (Nov 2016; cited 2016 Nov 22). Available from: https://www.bhf.org.uk/heart-health/risk-factors/high-blood-pressure

3 Xu W, Goldberg S, Shubina M, Turchin A (2015*). Optimal systolic blood pressure target, time to intensification, and time to follow-up in treatment of hypertension: population based retrospective cohort study* (Internet). BMJ Open. (2015 Feb; cited 2016 Nov 22). Available from: http://dx.doi.org/10.1136/bmj.h158

4 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

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

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