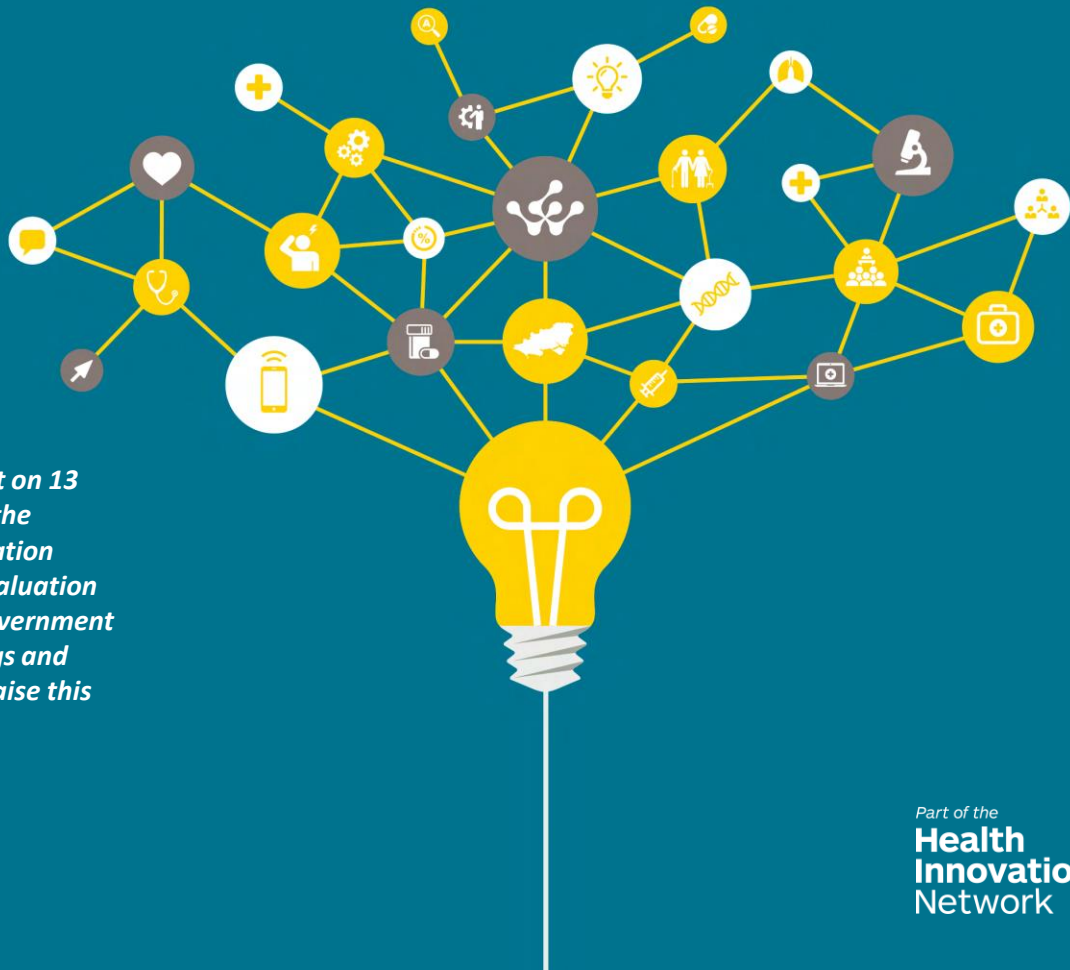# Real world evaluation of the BP@Home pathway

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Disclaimer

This evaluation was completed before the announcement on 13 March 2025 that NHS England will be brought back into the Department of Health and Social Care (DHSC). The evaluation description of the innovation, its deployment, and the evaluation findings were accurate at the time of publication. The government decision may, in the future, alter how the report's findings and recommendations are received in this new context. We raise this issue for the reader to note.

Executive summary

In 2024, NHS Dorset successfully applied to the Health Innovation Wessex Real World Evaluation programme to investigate the productivity and efficiency of BP@Home, as an example of a hybrid model of care (HMoC), and to understand facilitators and barriers to the wider implementation of this type of care model.

Evaluation questions considered:

- Key stakeholders' preferred definition of the term 'hybrid model of care' and the perceived value and challenges associated with this form of care delivery.

- Organisational features that support, or challenge, implementing and sustaining HMoCs.

- Resource implications and benefits of the BP@Home pathway (as one example of a HMoC) in terms of primary care efficiency and productivity.

We conducted a multi-methods evaluation using surveys, Nominal Group Technique, pathway mapping interviews and economic modelling.

Pathway mapping showed that the BP@Home pathway has been implemented differently by each of the PCNs, including different methods for monitoring patients using the pathway. Where data completeness allowed, efficiencies were observed compared to the standard care pathway.

In PCN 1, staff time allocated to the standard care pathway (481 hours) and the BP@Home pathway (489 hours) were similar over a three-month period, but cost savings were observed. **Associated costs for the standard care pathway were calculated as £23,857 and £14,773 for the BP@Home pathway.** A move from patients being reviewed largely by GPs to review by a mix of GPs, nurses, pharmacists and HCAs is likely responsible for most of the cost savings.

In PCN 3, a reduction in staff hours was observed for the BP@Home pathway (193 hours) versus 381 hours for the standard care pathway, due to the move from seeing patients in appointments to monitoring via the app. Despite resources for the standard care pathway being an underestimate, **associated costs reduced from £11,510 for the standard care pathway to £7,453 for the BP@Home pathway**.

Executive summary

Findings suggest that to facilitate implementation of HMoCs, organisations should pay particular attention to strong leadership, the inclusion of a digital care coordinator role and ways to encourage buy-in from staff at all levels.

Reluctance to use digital, low digital literacy and barriers to accessing digital could be seen as barriers and the support offered to onboarding is likely to be helpful in addressing some of these. An increased understanding of patient views concerning barriers they face, their motivations to use digital and any support they would find helpful would inform future implementation.

Ensuring sufficient IT and technological support and, as far as possible, overcoming challenges of interface and infrastructure is likely to be beneficial.

Preferred definition	Potential value	Challenges/barriers	Facilitators
A hybrid model of care integrates traditional face-to-face healthcare with modern virtual care to provide more patient-centred and flexible care. This model involves in-person visits for physical examinations and treatments, as well as virtual visits using telehealth technologies like video conferencing for consultations and monitoring. The aim is to offer comprehensive care that caters to patients' preferences and needs.	Efficiency savings for clinicians and services. Early diagnosis and monitoring of issues. Convenience and flexibility for patients. Provision of additional forms of communication and care. Ownership of care.	Reluctance to use digital. Low digital literacy. Barriers to accessing digital services. Delays (e.g. to submitting readings). Technological and operational issues. Limited PCN resources. Variation in PCN staff understanding of, or engagement with BP@Home.	Clinical director support. Engagement and motivation of the whole team. Digital care coordinator role. Whole PCN approach. NHS app business as usual. Support from app manufacturer. Wider collaboration and networking.

Background and introduction

- BP@Home is a digital intervention (powered by Viso/Omron). It drives a hybrid model of care (HMoC) designed to connect patients and clinical teams to capture, monitor and manage hypertension.

- It automatically codes blood pressure readings, provides evidence-based support, guides active condition management and enables remote approval of medication titrations.

- Patients complete their readings from home and submit in a monitoring week (as per NICE guidance) and the average is coded into the patient record. Trend analysis and education is provided via the digital app to the patient.

- During a pilot phase, BP@Home supported 1877 patients across nine Dorset primary care networks (PCNs). An evaluation undertaken by NHS Dorset indicated improved patient outcomes and operational productivity benefits for general practice, particularly where workforce constraints are in place. During 2024/25, BP@Home was scaled to all PCNs across Dorset (18 in total).

- Deployment of HMoCs (of which BP@Home is an example) is a strategic priority for NHS Dorset, as stated within their Clinical Commissioning Local Improvement Plan.

- HMoCs combine in-person with virtual care and can take various forms across the continuum of care from prevention to ongoing management, however there is currently a lack of a shared definition of this term.

- **In 2024, NHS Dorset successfully applied to the Health Innovation Wessex Real World Evaluation programme to investigate productivity and efficiencies implications of BP@Home, as an example of a hybrid model of care (HMoC) and to understand facilitators and barriers to the wider implementation of HMoCs.**

Viso is the name of the app that allows patients to monitor their blood pressure at home and Omron is the company that developed it. What is Viso | OMRON UK (omron-healthcare.co.uk)

Background and introduction

The **agreed evaluation questions** were as follows:

1. How do key stakeholders in primary care understand and define the term 'hybrid model of care' and what is the perceived value of this way of working?

2. How do primary care and NHS Dorset stakeholders define and describe organisational features of digital maturity that they perceive as supporting the implementation and sustainability of hybrid models of care? Which do they feel to be the most important?

3. What are the organisational development needs, or barriers to be addressed in order to better support the implementation and sustainability of hybrid models of care in primary care?

4. What are the resource implications and benefits of the BP@Home pathway (as one example of a 'hybrid model of care') in terms of primary care efficiency and productivity?

The following were **out of scope**:

• Patient experience of using the BP@Home platform

• Patient outcomes e.g. change in blood pressure readings (collected via Dorset Intelligence and Insight Service)

• Longer-term benefits e.g. reduced risk of future stroke

• Wider system efficiencies

• Individual PCN-level evaluation

• Evaluation of other hybrid models of care in Dorset.

We conducted a multi-methods evaluation using different methods of data collection and analysis for each of the evaluation questions.

The presentation is divided into separate sections by evaluation question.

1. How do key primary care stakeholders understand and define the term 'hybrid model of care' and what is the perceived value of this way of working?

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Survey methods (Q1)

- We created a short survey to address Q1, which was distributed amongst staff interacting with BP@Home within the 18 PCNs in Dorset offering the BP@Home pathway (n=51).

- The survey provided three suggested definitions of 'hybrid model of care' (provided by NHS Dorset, see right) and asked respondents to rank them in order of preference.

- Respondents were also given the opportunity to suggest changes to their preferred statement.

- We asked respondents what they felt to be the value of, and challenges associated with, hybrid models of care. We reviewed these answers and grouped responses together into categories.

- We received 13 responses (25% response rate). Job roles represented included digital care co-ordinators and digital transformation leads, clinical staff and managerial staff.

Proposed definitions

A hybrid model of care integrates traditional face-to-face healthcare with modern virtual care to provide more patient-centred and flexible care. This model involves in-person visits for physical examinations and treatments, as well as virtual visits using telehealth technologies like video conferencing for consultations and monitoring. The aim is to offer comprehensive care that caters to patients' preferences and needs.

A hybrid model of care is one that fully empowers and involves the patient or citizen (extending the workforce) enabled by a digital platform. The digital element behaves in a way where a relationship is developed with the patient with workflow maximised via automation and increasing productivity.

A hybrid model of care fully empowers the patient or citizen and enhances workflows to increase productivity.
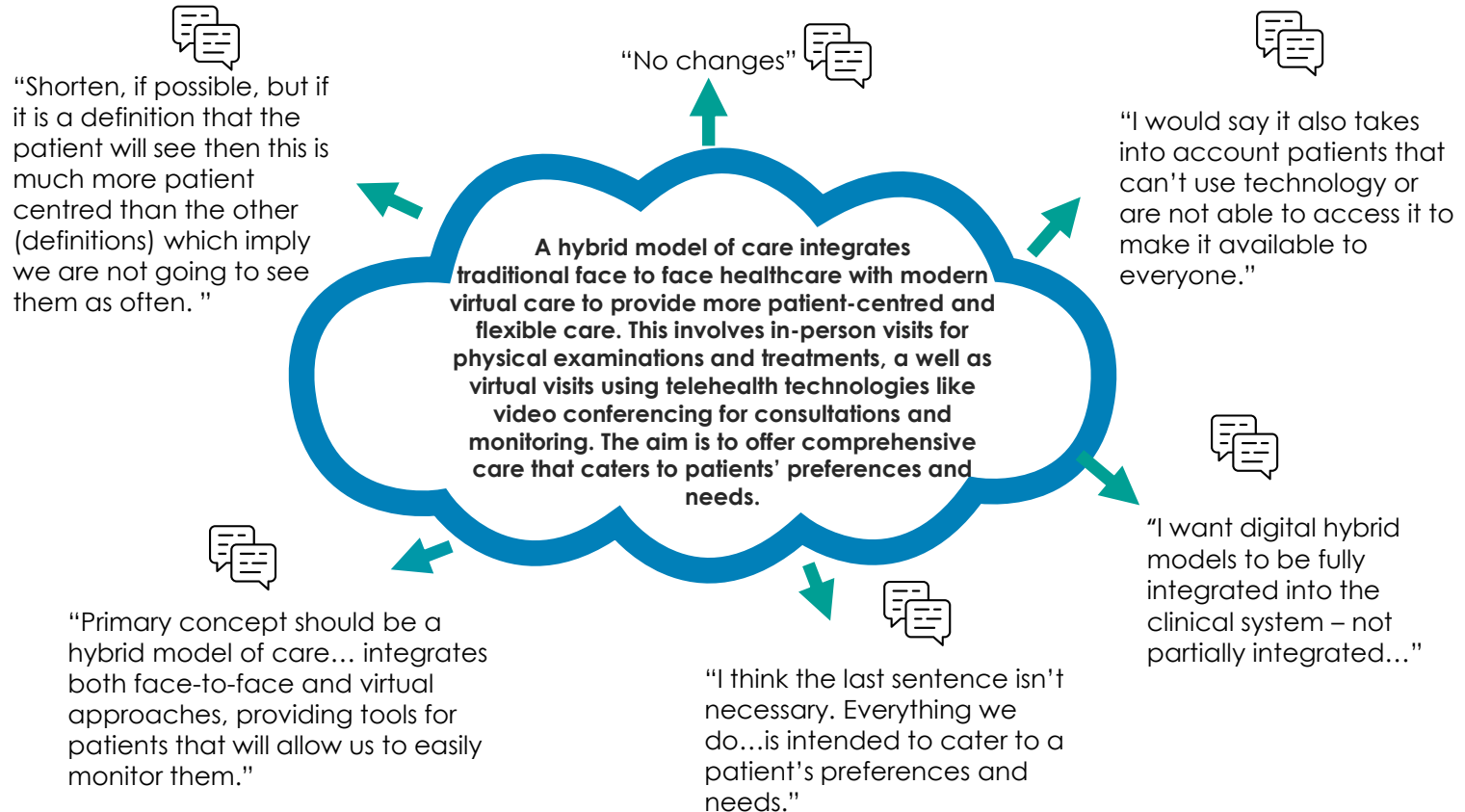
Ranking of definitions

Definition	Votes for first choice (n=11)
A hybrid model of care integrates traditional face-to-face healthcare with modern virtual care to provide more patient-centred and flexible care. This model involves in-person visits for physical examinations and treatments, as well as virtual visits using telehealth technologies like video conferencing for consultations and monitoring. The aim is to offer comprehensive care that caters to patients' preferences and needs.	7 (64%)
A hybrid model of care is one that fully empowers and involves the patient or citizen (extending the workforce) enabled by a digital platform. The digital element behaves in a way where a relationship is developed with the patient with workflow maximised via automation and increasing productivity.	3 (27%)
A hybrid model of care fully empowers the patient or citizen and enhances workflows to increase productivity	1 (9%)

Preferred definition and associated comments

"Shorten, if possible, but if it is a definition that the patient will see then this is much more patient centred than the other (definitions) which imply we are not going to see them as often. "

"No changes"

"I would say it also takes into account patients that can't use technology or are not able to access it to make it available to everyone."

A hybrid model of care integrates traditional face to face healthcare with modern virtual care to provide more patient-centred and flexible care. This involves in-person visits for physical examinations and treatments, a well as virtual visits using telehealth technologies like video conferencing for consultations and monitoring. The aim is to offer comprehensive care that caters to patients' preferences and needs.

"Primary concept should be a hybrid model of care… integrates both face-to-face and virtual approaches, providing tools for patients that will allow us to easily monitor them."

"I think the last sentence isn't necessary. Everything we do…is intended to cater to a patient's preferences and needs."

"I want digital hybrid models to be fully integrated into the clinical system – not partially integrated…"

Value of hybrid models of care for primary care

Category/theme	Example response
Efficiency savings for clinicians and services	"Digital automation will hopefully reduce the admin burden on clinicians, enabling them to spend more time providing clinical care."
Early diagnosis and monitoring of issues	"It helps to recognise uncontrolled BP and optimise it quicker than at annual meds (medications) review."
Convenience and flexibility for patient	"Meets the different needs of patients. Some are busy and miss out on reviews as they are working/ have caring duties. Offers patients a choice."
Additional form of communication/care	"It gives patients and clinicians another platform to discuss their health and resolve problems."
Ownership of care	"It can help clinicians and patients be in more control of their care and be more aware of what they can do to improve."

Challenges of hybrid models of care

Category/theme	Example response
Patient factors encompassing: • Reluctance to use digital in the place of traditional care • Barriers to access • Delays (e.g. to submitting readings)	"Still a huge number of patients with no digital access."
Technical and operational issues	"There are technological limitations on both sides, highlighting a need for change. The tools provided often don't meet our needs and expectations." "Double pathways is confusing for some, risk of duplication."

2. How do primary care and NHS Dorset stakeholders define and describe organisational features of digital maturity that they perceive as supporting the implementation and sustainability of hybrid models of care? Which do they feel to be the most important?

3. What are the organisational development needs, or barriers to be addressed in order to better support the implementation and sustainability of hybrid models of care in primary care?

Workshop methods (Qs 2 and 3)

- We conducted a workshop using the nominal group technique[1] (NGT) on 17 January 2025 at NHS Dorset to answer evaluation questions 2 and 3. There were eight attendees representing six PCNs ranging in digital maturity rating[2] from low to high. Job roles included digital care co-ordinators, pharmacists and pharmacy technicians.

- Respondents generated up to three ideas for organisational factors that **support** HMoCs and recorded each on a separate Post-it Note.

- Responses were read out and clarified one-by-one by participants. Responses were grouped together.

- This process was repeated for factors that act as **barriers** to HMoCs.

- Respondents ranked their top five responses in order of importance (most important scores 5 – least important scores 1).

- Ranking results were calculated. Ranked responses are shown on the following two slides, with exemplar comments.
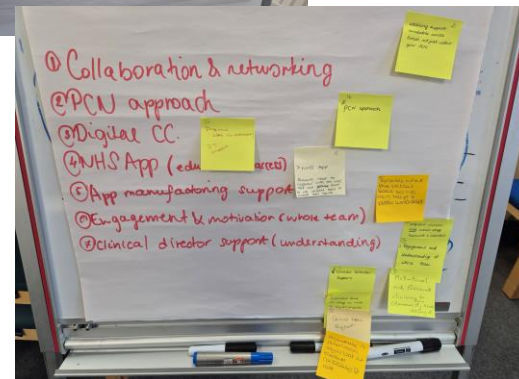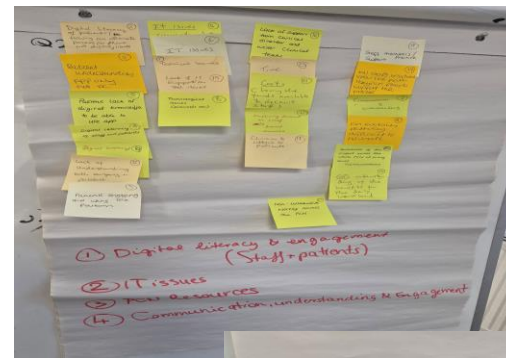
1. The Nominal Group Technique – a practical guide for facilitators, University of Liverpool, 2011 guide_for_ELESIG_v1.pdf
2. NHS Dorset provide a rating of each PCN's digital maturity, informed by a range of indicators relating to staffing and infrastructure in place to support digital ways of working.

Features that support implementation and sustainability of hybrid models of care

In order of importance
(Where 1 is the highest ranked. Where responses received the same score, this is indicated by the = symbol)

01 **CLINICAL DIRECTOR SUPPORT**
"Motivated and passionate clinician to drive the project."

02 **ENGAGEMENT AND MOTIVATION OF THE WHOLE TEAM**
"Engaged clinical and admin staff. Teamwork is essential."

03 **DIGITAL CARE CO-ORDINATOR**
"Pivotal role to drive forwards."

04 **WHOLE PCN APPROACH**
"Joint effort, same experience for all patients, so much easier if all working in the same way."

=05 **NHS APP**
"Patients need to be registered on the NHS App to use Viso. NHS App needs to be business as usual."

=05 **SUPPORT FROM APP MANUFACTURER**
"Responding to glitches, Omron supported onboarding."

07 **WIDER COLLABORATION AND NETWORKING**
"Gain feedback and understanding of the experiences of other areas."

Barriers to the implementation and sustainability of hybrid models of care

In order of importance
(Where 1 is the highest ranked. Where responses received the same score, this is indicated by the "=" symbol)

01

IT ISSUES
E.g. "Technological issues (firewall), Technical issues, Lack of IT support."
"Connection between…tool and primary care (interface)"

=02

PCN RESOURCES
"Conflicting demands on time/limited resources".

=02

(LACK OF) DIGITAL LITERACY STAFF AND PATIENTS
"Patient lack of digital knowledge to be able to use the app." "Lack of understanding both surgery and patient."

04

(LACK OF) UNDERSTANDING AND ENGAGEMENT
E.g. "Non collaborative working across the PCN", "(lack of) GP's understanding."

4. What are the resource implications and benefits of the BP@Home pathway (as one example of a hybrid model of care) in terms of primary care efficiency and productivity?

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Pathway mapping and economic modelling methods (Q4)

- We conducted four interviews on 17 January 2025 at NHS Dorset (total of six respondents) to map the BP@Home and standard care pathways. Respondents interviewed represented PCNs with low, medium and high digital maturity (rated by NHS Dorset). These PCNs are referred to as PCNs 1-4 in subsequent slides.

- We asked respondents to review two draft pathway maps (BP@Home pathway and standard care pathway) that had been developed by the HIW Insight team from maps shared by NHS Dorset, and an initial conversation within a D@SH monthly meeting (September 2024).

- Respondents commented on the accuracy of the maps, suggested changes where necessary and allocated resourcing (in terms of staff time and other costs) relevant to each of the stages.

- Interviews lasted between 50-90 minutes. Notes were taken by the interviewers and annotations made on the pathway maps by respondents (and sometimes by interviewers).

- Notes and annotations were typed up into tables highlighting the resourcing, comments and suggested changes given against different elements of the pathway maps.

- Where gaps in documentation of pathway steps or estimates of resource allocation remained, follow-up questions were shared via email with respondents. Respondents replied to these via email or in two cases, in conversation via MS Teams.

- Following data collection, revised pathway maps were drawn up (as shown in the following slides) and economic modelling of the different pathways was conducted. Comparisons were carried out separately for each of the four PCNs. This approach reflected the variation in how the two pathways were being applied across PCNs.

Economic modelling approach

1 Source total numbers of patients using BP@Home for each PCN interviewed.

2 Quantify staff time[3] and associated costs[4] for this cohort under the BP@Home pathway (as described to us) over a three-month period[5].

3 Quantify staff time and associated costs for the same cohort under the standard care pathway (as described to us) over a three-month period.

**4** Compare staff time and associated costs for each PCN across the two pathways.

[3] Estimates on hours spent by staff role on each activity provided by respondents during interviews
[4] Associated costs calculated by multiplying time estimates provided during interviews by staff bands and/or hourly rates provided by NHS Dorset. Further information can be found in the appendix of this report.
[5] Three months has been chosen as the timeframe for this analysis, as this was the median estimate provided during interviews for time taken to achieve blood pressure control.

Standard care pathway
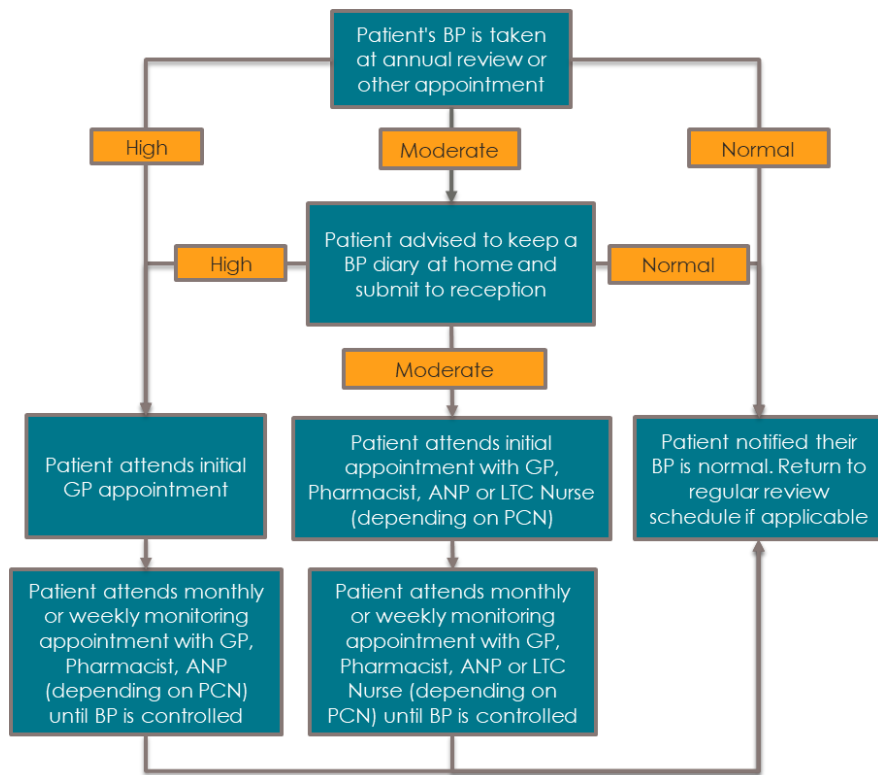
The key facets of the standard care pathway across the four PCNs are summarised here.
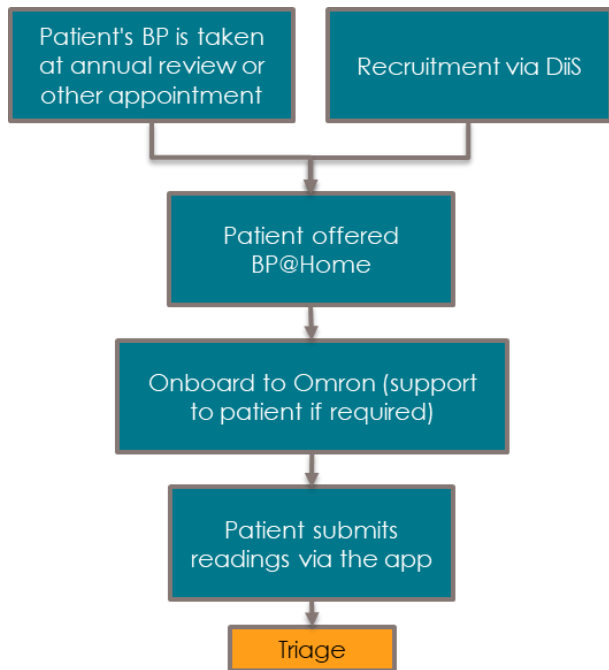
Patients are triaged following their blood pressure (BP) reading which is taken at a scheduled appointment (e.g. annual long-term conditions review). Patients are grouped into three broad categories based on their BP reading (high, moderate and normal). The exact criteria for inclusion in these groups differ by PCN.

Patients with a high BP reading are seen by a GP, usually within 24 hours. Following an initial appointment, most PCNs continue to monitor patients with a high BP monthly until their BP comes under control. This monitoring is sometimes via a GP and sometimes via a pharmacist or an advanced nurse practitioner (ANP). PCN 4 reported weekly rather than monthly monitoring of these patients by the GP.

Patients with a moderate BP are asked to keep a BP diary at home for seven days and submit it to reception at their surgery. Following an initial appointment, these patients are monitored monthly.

BP@Home pathway

```
┌─────────────────────┐   ┌─────────────────────┐
│ Patient's BP is taken│   │ Recruitment via DiiS│
│ at annual review or  │   │                     │
│ other appointment    │   │                     │
└─────────────────────┘   └─────────────────────┘
            │                       │
            └───────────┬───────────┘
                        ▼
            ┌───────────────────────┐
            │   Patient offered     │
            │      BP@Home          │
            └───────────────────────┘
                        │
                        ▼
            ┌───────────────────────┐
            │ Onboard to Omron (support│
            │  to patient if required) │
            └───────────────────────┘
                        │
                        ▼
            ┌───────────────────────┐
            │   Patient submits     │
            │ readings via the app  │
            └───────────────────────┘
                        │
                        ▼
            ┌───────────────────────┐
            │        Triage         │
            └───────────────────────┘
```

Entry onto the BP@Home pathway

Most PCNs identified patients for the BP@Home pathway via the same two routes; opportunistic recruitment via a scheduled appointments and/or, in the majority of cases, identification via Dorset Intelligence and Insight Service (DiiS). By contrast, PCN 2 reported that they do not utilise DiiS but instead recruit via events and social media invitations which happen sporadically.
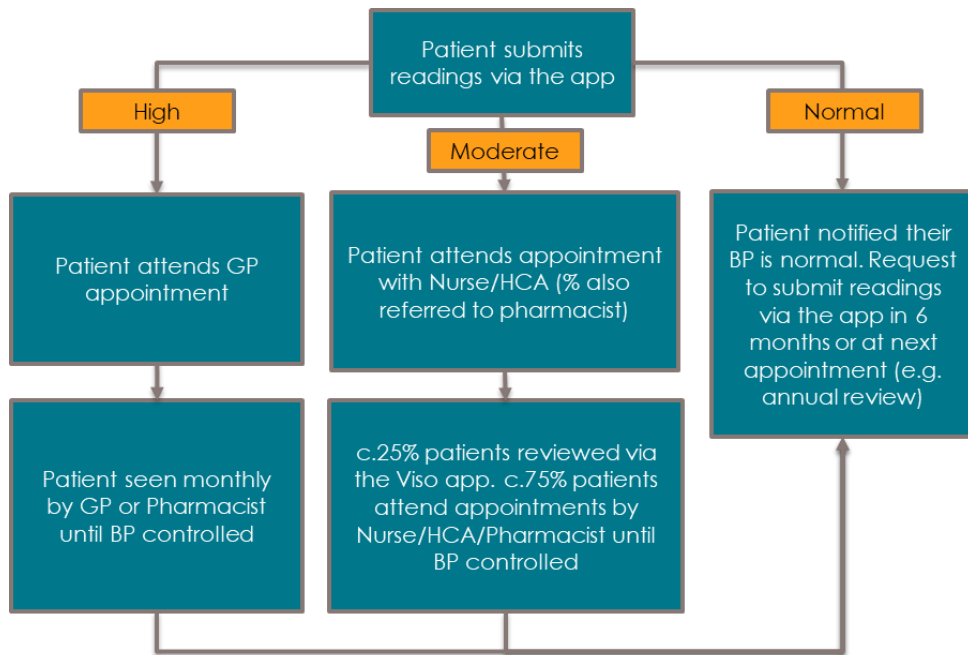
Variation was observed between PCNs in how patients were managed on the BP@Home pathway following triage and the extent to which patients were still seen in appointments.

These differences are shown separately by individual PCN in the following slides.

PCN 1: BP@Home pathway

PCN 1 has 1,364 patients using BP@Home. Its digital maturity rating is **High**.

The pathway map describes different management routes for patients with high, moderate or normal BP readings. Under the standard care pathway, patients with a high BP would be seen initially by their GP and then reviewed monthly in appointments. Under the BP@Home pathway, patients would be seen monthly by a GP or pharmacist.

For patients with a moderate BP, there is a shift from being seen by a GP to being seen by healthcare assistant (HCA), pharmacist or nurse. Additionally, not every patient using BP@Home is reviewed in appointments and c.25% are now reviewed in the app instead.

PCN 1: Economic modelling

The BP@Home and standard care pathways for PCN 1 are similar in terms of time input, but the BP@Home pathway is more efficient in terms of cost. While there have been savings in appointments and admin time from not processing the paper BP diaries, there are also additional tasks relating to the BP@Home pathway such as providing support to use the Viso app and carrying out clinical checks in the Viso dashboard. The shift in staff role from patients being reviewed largely by GPs to a mix of GPs, nurses, pharmacists and HCAs is likely responsible for most of the cost savings.
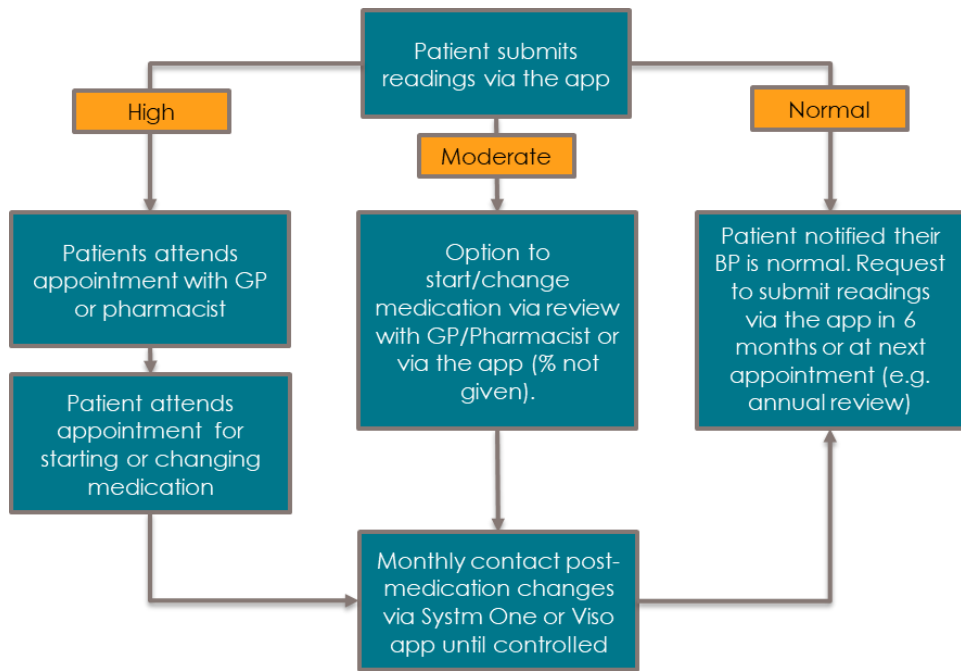
Standard care pathway	Staff Hours Spent	Staff role(s)	Associated Cost
Processing paper BP diaries	30	Nursing team	£573
Appointments for patients with high BP and associated admin time	148	GP/Admin Team	£7,954
Appointments for patients with moderate BP and associated admin time	303	GP/Admin Team	£15,330
Total	**481**		**£23,857**

BP@Home pathway	Staff Hours Spent	Staff role(s)	Associated Cost
DiiS recruitment	3	Digital Care Coordinator	£57
Onboarding support	15	Digital Care Coordinator	£283
Daily Viso dashboard review	40	HCA/Pharmacist/Nurse	£1,117
Reviewing Viso app engagement	6	Digital Care Coordinator	£113
Appointments for patients with high BP + associated admin time	148	GP/Pharmacist/Admin Team	£6,799
Appointments for patients with moderate BP + associated admin time	277	HCA/Pharmacist/Nurse/Admin Team	£6,404
Total	**489**		**£14,773**

PCN 2: BP@Home pathway

PCN 2 has 383 patients using BP@Home. Its digital maturity rating is **Low**.

Patient submits readings via the app

High

Moderate

Normal

Patients attends appointment with GP or pharmacist

Option to start/change medication via review with GP/Pharmacist or via the app (% not given).

Patient notified their BP is normal. Request to submit readings via the app in 6 months or at next appointment (e.g. annual review)

Patient attends appointment for starting or changing medication

Monthly contact post-medication changes via Systm One or Viso app until controlled

Under the standard care pathway, patients with a high BP are seen initially by a GP before typically being passed to a pharmacist for monthly appointments. Under the BP@Home pathway, these patients are still seen initially by a GP or pharmacist and for medication changes (titrations) but are then contacted monthly via the Viso app following this.

For patients with a moderate BP, there is an option to titrate via the app or via appointments. This is a change from the standard care pathway where all reviews took place in appointments.

PCN 2: Economic modelling

The following tables quantify the time spent by staff operating the standard care and BP@Home pathways, however data was not available for the proportion of patients who were managed via the app vs managed in appointments or for the number of medication changes that would be likely to occur in a three-month period (and therefore how many appointments needed). The pathway maps indicate a decrease in time spent on appointments, but we are not able to quantify how much.
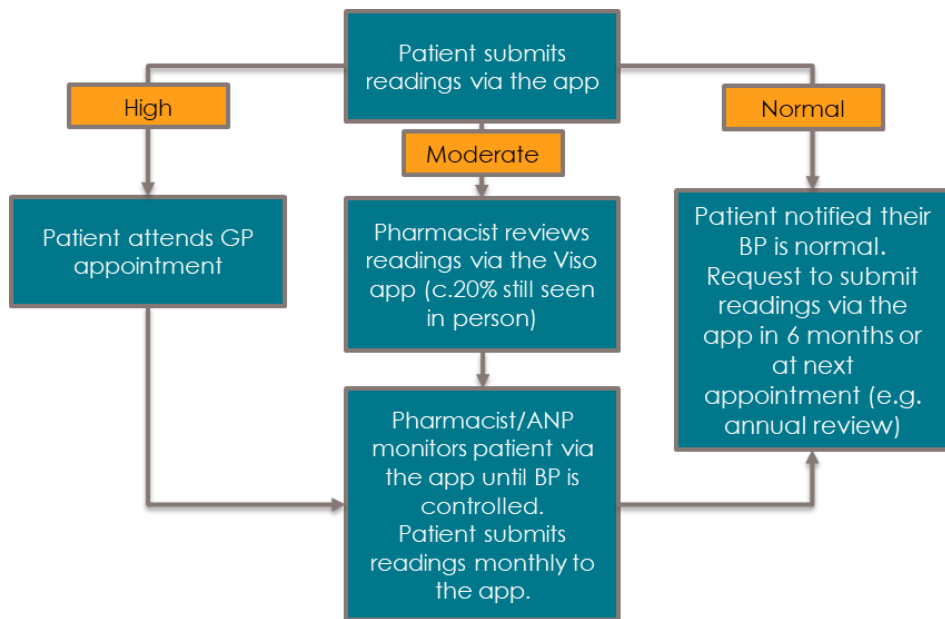
Standard care pathway	Staff Hours Spent	Staff role(s)	Associated Cost
Processing paper BP diaries	34	Digital care coordinator	£638
Appointments for patients with high BP and associated admin time	70	GP/Pharmacist/Admin Team	£2,548
Appointments for patients with moderate BP and associated admin time	128	GP/Pharmacist/Admin Team	£5,528
Total	**232**		**£8,714**

BP@Home pathway	Staff Hours Spent	Staff role(s)	Associated Cost
Events/social media recruitment	16	Admin Manager/Pharmacist/Pharmacy Technicians	£502
Onboarding support	24	Digital Transformation Lead	£792
Daily Viso dashboard review	90	Pharmacist	£3,233
Reviewing Viso app engagement	12	Pharmacy Technician	£322
Appointments for patients with high BP + associated admin time	Not possible to calculate	GP/Pharmacist/Admin Team	Not possible to calculate
Appointments for patients with moderate BP + associated admin time	Not possible to calculate	GP/Pharmacist/Admin Team	Not possible to calculate
Total	**142**		**£4,849**

PCN 3: BP@Home pathway

PCN 3 has 1,285 patients using BP@Home. Its digital maturity rating is **High**.

Patient submits readings via the app

High

Moderate

Normal

Patient attends GP appointment

Pharmacist reviews readings via the Viso app (c.20% still seen in person)

Patient notified their BP is normal. Request to submit readings via the app in 6 months or at next appointment (e.g. annual review)

Pharmacist/ANP monitors patient via the app until BP is controlled. Patient submits readings monthly to the app.

In this PCN, patients with high BP are now only being seen once by the GP following triage rather than being seen monthly for follow up as with the standard care pathway.

Patients with a moderate BP under the BP@Home pathway are also largely managed via the Viso app and only c.20% are seen in appointments. Under the standard care pathway, newly diagnosed or complex patients would be seen initially by an ANP or pharmacist while simple medication changes would be carried out via text or email to the patient.

PCN 3: Economic modelling

It was not possible for us to calculate the number of appointments for patients with moderate BP under the standard care pathway because the proportion of patients that were newly diagnosed/complex (and therefore required an appointment) was not available. Despite the staff hours for the standard care pathway being an underestimate, the BP@Home pathway is still less time and resource-intensive in this PCN due to the move from seeing patients in appointments to monitoring largely via the app.

Standard care pathway	Staff Hours Spent	Staff role(s)	Associated Cost
Processing paper BP diaries	122	Admin Team	£2,008
Appointments for patients with high BP + associated admin time	259	GP/ANP/Pharmacist/Admin Team	£9,501
Appointments for patients with moderate BP + associated admin time	Not possible to calculate	ANP/Pharmacist/Admin Team	Not possible to calculate
Total	**381**		**£11,510**

BP@Home pathway	Staff Hours Spent	Staff role(s)	Associated Cost
DiiS recruitment	12	Digital Care Coordinator	£226
Onboarding support	24	Digital Care Coordinator	£453
Daily Viso dashboard review	40	ANP/Pharmacist	£1,437
Reviewing Viso app engagement	-	-	-
Appointments for patients with high BP + associated admin time	86	GP/Admin Team	£4,425
Appointments for patients with moderate BP + associated admin time	31	Pharmacist/Admin Team	£912
Total	**193**		**£7,453**

PCN 4: BP@Home pathway

PCN 4 has 562 patients using BP@Home. Its digital maturity rating is **Mid**.
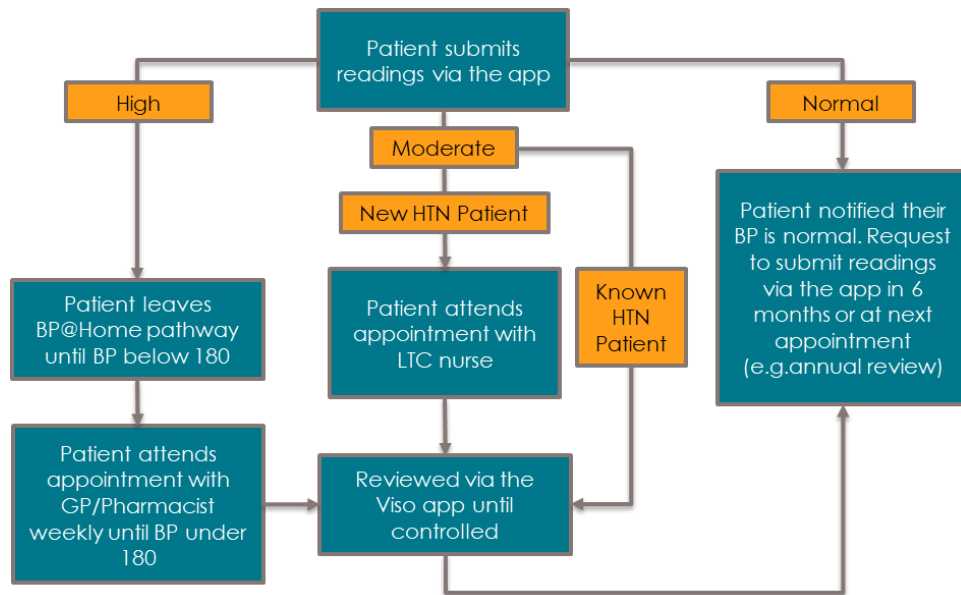
In this PCN, under the standard care pathway, patients with a high BP reading are reviewed in weekly GP appointments rather than monthly as with the other PCNs interviewed. Under the BP@Home pathway, these patients are still reviewed weekly in appointments until their systolic BP reading reduces to 180. At this point they move to monitoring within the app.

Under the standard care pathway, patients with a moderate BP reading would typically be seen by a long-term conditions (LTC) nurse. Under the BP@Home pathway, only newly diagnosed patients are seen by the LTC nurse, while others are managed in the app.

PCN 4: Economic Modelling

It has not been possible to calculate time spent on appointments for the BP@Home pathway because we were not provided with estimates of the time taken for a high-BP patient's reading to reduce to 180, or the number of newly-diagnosed hypertension patients. Gaps in data for both pathways make it difficult to draw conclusions. The pathway maps indicate that fewer appointments will take place under BP@Home but as this PCN has high resource use for the daily dashboard review compared to other PCNs, it is unclear whether savings in appointments and time processing paper BP diaries would be offset by extra time spent reviewing the dashboard.

Standard care pathway	Staff Hours Spent	Staff role(s)	Associated Cost
Processing paper BP diaries	Not supplied	Admin Team	Not supplied
Appointments for patients with high BP and associated admin time	384	GP/Pharmacist/Admin Team	£21,372
Appointments for patients with moderate BP and associated admin time	165	LTC Nurse/Admin Team	£3,036
Total	**549**		**£24,408**

BP@Home pathway	Staff Hours Spent	Staff role(s)	Associated Cost
DiiS recruitment	1	Digital Care Coordinator	£19
Onboarding support	1	Digital Care Coordinator	£12
Daily Viso dashboard review	240	ANP/Pharmacist/Prescribing Nurse	£8,622
Reviewing Viso app engagement	-	-	-
Appointments for patients with high BP and associated admin time	Not possible to calculate	GP/Admin Team	Not possible to calculate
Appointments for patients with moderate BP and associated admin time	Not possible to calculate	LTC nurse/Admin Team	Not possible to calculate
Total	**242**		**£8,652**

Economic Modelling: PCN comparison

Time and cost estimates for the standard care pathway are compared here by PCN. The exact scenarios differed by PCN, for example some specified a different appointment length for the same type of appointment and even where the same staff groups were carrying out appointments, they might have done so in different proportions. Analysis was carried out based on the individual scenarios described to us at each PCN.

Processing paper BP diaries	Staff Hours Spent	Staff role(s)	Associated Cost
PCN 1 (1,364 patients using BP@Home)	30	Nursing team	£573
PCN 2 (383 patients using BP@Home)	34	Digital care coordinator	£638
PCN 3 (1,285 patients using BP@Home)	122	Admin Team	£2,008
PCN 4 (562 patients using BP@Home)	Not supplied	Admin Team	Not supplied

Appointments for patients with high BP and associated admin time	Staff Hours Spent	Staff role(s)	Associated Cost
PCN 1 (1,364 patients using BP@Home)	148	GP/Admin Team	£7,954
PCN 2 (383 patients using BP@Home)	70	GP/Pharmacist/Admin Team	£2,548
PCN 3 (1,285 patients using BP@Home)	259	GP/ANP/Pharmacist/Admin Team	£9,501
PCN 4 (562 patients using BP@Home)	384	GP/Pharmacist/Admin Team	£21,372

Appointments for patients with moderate BP and associated admin time	Staff Hours Spent	Staff role(s)	Associated Cost
PCN 1 (1,364 patients using BP@Home)	303	GP/Admin Team	£15,330
PCN 2 (383 patients using BP@Home)	128	GP/Pharmacist/Admin Team	£5,528
PCN 3 (1,285 patients using BP@Home)	Not possible to calculate	ANP/Pharmacist/Admin Team	Not possible to calculate
PCN 4 (562 patients using BP@Home)	165	LTC Nurse/Admin Team	£3,036

Economic Modelling: PCN comparison

Time and cost estimates for the main steps in the BP@Home Pathway are compared here by PCN.

Daily Viso dashboard review	Staff Hours Spent	Staff role(s)	Associated Cost
PCN 1 (1,364 patients using BP@Home)	40	HCA/Pharmacist/Nurse	£1,117
PCN 2 (383 patients using BP@Home)	90	Pharmacist	£3,233
PCN 3 (1,285 patients using BP@Home)	40	ANP/Pharmacist	£1,437
PCN 4 (562 patients using BP@Home)	240	ANP/Pharmacist/Prescribing Nurse	£8,622

Appointments for patients with high BP and associated admin time	Staff Hours Spent	Staff role(s)	Associated Cost
PCN 1 (1,364 patients using BP@Home)	148	GP/Pharmacist/Admin Team	£6,799
PCN 2 (383 patients using BP@Home)	Not possible to calculate	GP/Pharmacist/Admin Team	Not possible to calculate
PCN 3 (1,285 patients using BP@Home)	86	GP/Admin Team	£4,425
PCN 4 (562 patients using BP@Home)	Not possible to calculate	GP/Admin Team	Not possible to calculate

Appointments for patients with moderate BP and associated admin time	Staff Hours Spent	Staff role(s)	Associated Cost
PCN 1 (1,364 patients using BP@Home)	277	HCA/Pharmacist/Nurse/Admin Team	£6,404
PCN 2 (383 patients using BP@Home)	Not possible to calculate	GP/Pharmacist/Admin Team	Not possible to calculate
PCN 3 (1,285 patients using BP@Home)	31	Pharmacist/Admin Team	£912
PCN 4 (562 patients using BP@Home)	Not possible to calculate	LTC nurse/Admin Team	Not possible to calculate

Limitations

1. Whilst the response to the staff survey was 25%, the number of returns was relatively small (n=13), meaning that responses may not be representative of a wider sample of staff across Dorset PCNs.

2. As a method, the Nominal Group Technique workshop is designed to provide consensus over the relative importance of issues identified. However, it does not provide detailed reasoning behind the choice of response.

3. Due to availability of staff, we were able to conduct four pathway mapping interviews, out of a target of six, which limited the data available to us.

4. There were also limits to the amount of data we were able to collect during interview due to interview length (ranging from 50-90 minutes), and the nature of the information requested, which was not always known to respondents. We supplemented data collected on the day with follow-up requests via email which yielded further information. However, some gaps remained as described in the previous slides. A list of assumptions informing the economic modelling can be found in the appendix of this report.

5. The economic modelling relies on the accuracy of the estimates provided by the respondents.

6. Through follow-up discussion with interview respondents, further complexities in the pathways were uncovered. Staff actions are dependent on the patient's individual factors and this analysis focuses only on the key elements of the pathway.

Conclusions and summary of findings concerning hybrid models of care in primary care

Preferred definition	Potential value	Challenges/barriers	Facilitators
A hybrid model of care integrates traditional face-to-face healthcare with modern virtual care to provide more patient-centred and flexible care. This model involves in-person visits for physical examinations and treatments, as well as virtual visits using telehealth technologies like video conferencing for consultations and monitoring. The aim is to offer comprehensive care that caters to patients' preferences and needs.	• Efficiency savings for clinicians and services, • Early diagnosis and monitoring of issues, • Convenience and flexibility for patients, • Provision of additional forms of communication and care, • Ownership of care.	• Reluctance to use digital. • Low digital literacy. • Barriers to accessing digital services. • Delays (e.g. to submitting readings). • Technological and operational issues. • Limited PCN resources • Variation in PCN staff understanding of, or engagement with BP@Home.	• Clinical director support • Engagement and motivation of the whole team • Digital care co-ordinator role • Whole PCN approach • NHS app business as usual • Support from app manufacturer • Wider collaboration and networking.

Conclusions continued

- Pathway mapping showed that the BP@Home pathway has been implemented in different ways across each of the PCNs, with different methods for monitoring patients on the BP@Home pathway in use. Where data completeness allowed, efficiencies compared to the standard care pathway were observed.

- In PCN 1, staff time allocated to the standard care pathway (481 hours) and the BP@Home pathway (489 hours) were similar over a three-month period, but cost savings resulted from a move away from monitoring by GPs, with associated costs for the standard care pathway calculated as £23,857 and £14,773 for the BP@Home pathway.

- In PCN 3, a reduction in staff hours was observed for the BP@Home pathway (193 hours) versus 381 hours for the standard care pathway, due to the move from seeing patients in appointments to monitoring via the app. Despite resources for the standard care pathway being an underestimate, associated costs reduced from £11,510 for the standard care pathway to £7,453 for the BP@Home pathway.

- For the remaining two PCNs, whilst pathway mapping indicated a decrease in time spent on appointments on the BP@Home pathway, missing data meant that we were unable to draw conclusions over the extent of any efficiency savings.

Considerations from the evaluation findings

- Findings suggest that to facilitate hybrid models of care, organisations should pay particular attention to strong leadership, the inclusion of a digital care coordinator role and ways to encourage buy-in from staff at all levels.

- Reluctance to use digital, low digital literacy and barriers to accessing digital could be seen as barriers and the support offered to onboarding is likely to be helpful in addressing some of these. An increased understanding of patient views concerning barriers they face, their motivations to use digital and any support they would find helpful would inform future implementation.

- Ensuring sufficient IT and technological support and, as far as possible, overcoming challenges of interface and infrastructure is likely to be beneficial.

- The pathway mapping included a limited number of PCNs, and it would be useful to complete a similar exercise across a wider sample.

- PCNs could be asked to keep a diary of time spent over a three-month period on the broad steps identified as part of the economic modelling e.g. time spent on DiiS recruitment, time spent on processing paper BP readings . This would address some of the data gaps encountered in this evaluation where respondents did not feel able to provide a time estimate during the interview.

- It would be helpful for PCNs to state all criteria by which they decide to offer an appointment vs monitor the patient within the app, and to provide estimates of the proportions of patients that meet those criteria. This would facilitate modelling of the more complex elements of the pathway that we were unable to carry out in this evaluation.

- It may be worth considering whether further implementation advice and guidance would be appropriate to ensure a more uniform approach to monitoring patients via BP@Home e.g. concerning the balance of monitoring via appointments or the app.

Appendix – Assumptions informing the economic modelling

- The time taken for BP to be controlled has been used as the timeframe for this analysis. We received a number of estimates from interview respondents on average time to achieve control, ranging from one month to 12 months. Some responses related specifically to the BP@Home or standard care pathways, and some related specifically to patients with a high BP reading or patients with a moderate BP reading. The median value for all estimates received was three months. It is recognised that in reality, different cohorts of patients will likely take different lengths of time to achieve controlled BP.

- 'Risk group at onboarding' taken from the DiiS BP@Home Dashboard[6] was used as a proxy measure for the number of patients at each PCN falling into the 'High', 'Moderate' and 'Normal' groups described to us in interviews.

- Staff bands and hourly rates for the roles described during interviews have been provided to HIW by the Chief Nursing Information Officer for Primary Care at NHS Dorset Integrated Care Board. Where staff band was provided, the intermediate step of the pay band (plus 33% to cover National Insurance and pension contributions) was used to calculate hourly rate[7.]

- This model assumes 20 working days in a month (5 days x 4 weeks)

- Opportunistic recruitment at existing appointments was described by interview respondents but has not been quantified because it continues in both sets of pathways.

- The unit cost of a BP monitor was described by some interview respondents but has not been quantified because patients were already using BP monitors at home to complete their paper diaries, and therefore this cost was not unique to either pathway.

[6] BP@Home - Power BI
[7] Pay scales for 2024/25 | NHS Employers

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