



Better Local Care Hampshire Multispecialty Community Provider Vanguard

Deep Dive Evaluation Report: Paramedic Home Visiting Service

June 2017

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EXECUTIVE SUMMARY

The **Paramedic Home Visiting Service (PHVS)** began in May 2016 in Waterlooville as a pilot site for Southern Health's 'Better Local Care' vanguard. The goal of the PHVS is to save GP time, deliver better and more convenient patient care, and improve caseload management in response to cost and capacity issues. The service is delivered by one specialist paramedic and one specialist nurse practitioner seconded from the South Central Ambulance Service NHS Foundation Trust (SCAS), who complete home visits on behalf of GPs from local practices in the locality.

This final report builds on an early stage evaluation report completed in November 2016, during which time the number of patients seen has grown from just over 500 patient contacts to over 1,000 for a registered patient population of approximately 55,200. The early project write-up provided an initial assessment of the activity delivered by the PHVS, with a focus on process issues such as set-up and implementation. The research tools were largely qualitative, focused on the views of management and clinical staff and a review of project documentation and monitoring information. This report provides additional evidence, including a survey of GPs using the service, and secondary data on patient outcomes.

Methodology

This report assesses progress since the outset of the service in June 2016 up until December 2016, and builds on the initial report using the following research methods:

- In-depth interviews with clinical staff and practice staff as well as commissioners on the project's strategic fit, sustainability, and the potential for scale-up and roll-out elsewhere.
- Analysis of triage data from the IT/operations team to assess the service's performance against objectives, e.g. testing whether patients are seen earlier in the day as a result of the service.
- Assessment of clinical outcome data from paramedic team records.
- Online survey of GPs conducted in January 2017 with 19 GP responses. The number of responses by Practice can be found in Appendix 1.
- Patient surveys handed out by home visiting clinicians and completed by patients or carers.

Limitations to the study include:

- Home visiting staff gathered patient feedback directly. While this is an acceptable approach given the profile of patients involved, and logistics of capturing data, caution should be exercised in interpretation of the results given the risk of response bias.
- Paramedic Home Visiting Service staff only started collecting feedback from patients in latter stages of the pilot and therefore the sample of patient feedback is relatively small (n=38 out of c.1000 patients contacts).
- Robust cost-savings analysis was hindered by the lack of a common standard on the unit cost of care by profession. The report makes tentative calculations regarding the economic impact and effectiveness of the project, though these should also be treated with caution given the relatively small sample size and comparatively short project time span.
- Lack of access to data on hospital admissions due to information governance issues has prevented more granular analysis of patient and system outcomes.

A more detailed methodology can be found in the report appendices.

Conclusions

The project demonstrates strong alignment with national health policy objectives set out in the FYFV – particularly the need to provide stronger patient experience, a joined-up service through technology utilisation and efficient use of clinical data¹ and a reduction in pressure on key entry points.

The service also supports the central objective laid out in the GPFV of reducing GP workload and making more efficient use of appointment time for complex cases. Additionally, the PHVS aligns with and contributes to delivering the South East Hampshire MCP Frailty strategy/patient pathway in Waterlooville.

Recent research into initiatives aimed at reducing emergency admissions highlights the role of intermediate care and out-of-hospital/at-home services amongst the most popular responses piloted around England.² In a report on effective approaches in urgent and emergency care, NHS Interim Management and Support (NHSIMAS) highlights that:

- Primary care can smooth demand for ambulance conveyance by responding rapidly to requests for urgent home visits and ensuring they are not “batched” at the end of surgeries. This helps reduce mid-afternoon arrival peaks in ED departments and assessment units that causes crowding and increases admission rates.
- Practices should consider the guidance of the Primary Care Foundation³ to ensure that avoidable access issues do not provoke patients to call ambulances or by-pass the practice to seek help in emergency departments.

Patient outcomes

Improved access to care

The PHVS seeks to deliver improved access to care for registered patient populations by seeing increasing proportions of patients on the morning that a home visit is requested, and visiting higher proportions of patients within 2 hours of a home visit request.

A key short-term outcome outlined in the logic model is to have the majority of home visits completed before noon. Between June 2016 and March 1st 2017, from a total of 990 recorded visits, 474 occurred before 12pm (c.48%) and 516 recorded visits have occurred after 12pm.⁴ Overall, the proportion of patients seen before noon grew as the service matured.

The majority of patients are seen within two hours of a slot being claimed, with 39% (n=389) of patients seen within an hour and 28% (n=273) seen between 1 and 2 hours. However, there was a notable lag early in the day between patients requesting a home visit when practices opened (at c.8am) and GPs allocating those cases much later in the morning, which suggests scope to further increase the proportion of patients seen before midday.

¹ Not yet being implemented

² Ham et al 2010, 'Avoiding Hospital Admissions: Lessons from evidence and experience', The King's Fund

³ Primary Care Foundation, 2009, 'Urgent Care: A Practical Guide to Transforming Same Day Care in General Practice', 2009, Department of Health

http://www.primarycarefoundation.co.uk/images/PrimaryCareFoundation/Downloading_Reports/Reports_and_Articles/Urgent_Care_Centres/Urgent_Care_May_09.pdf

⁴ Please note 24 records were removed in this count due to recording errors.

Using a similar scheme as a benchmark (the St Helens Acute Visiting Service) suggests that, at 39% of patients seen within 1 hour (95% CI [15%, 58%]) the PHVS impact on patient access falls between what could be expected under a regular GP home visiting scheme (fewer than 10% of home visits were conducted within an hour of being requested) and what could be achieved if issues regarding process lags and technology issues were addressed (76% of St Helen's home visits were completed within an hour of being requested).

Improved patient experience

Ninety-five percent of PHVS patients (n=38) reported that their visit occurred at the expected time; 79% of patients were aware of the role of the professional visiting them; 100% of patients believed they were treated in a kind / caring manner; and 100% of patients stated that everything was clearly explained to them.

One hundred percent of patients (n=38) reported that they were either 'satisfied' or 'very satisfied' that their issue had been resolved; and the same number reported that they were either 'happy' or 'very happy' with the service.

A small minority of patients remain keen to see their GP: It's *"not the same as having your own GP that knows you and your history. It was not explained why [Paramedic] was unable to give [medicine] - but immediately organised a prescription for [medicine via the GP]. GP called back the next day."*

Improved patient outcomes

Data collected from the SCAS paramedic team provides a snapshot of patient and referral outcomes for 901 home visits between June 2016 and February 1st 2017. In 37% of cases (n=331) the outcome was a discussion with a GP only; in 42% of cases (n=379), advice and a prescription was issued.

For those patients that were seen via a home visit, 247 resulted in an intervention (24% of the total patients visited). The PHVS team delivered a wide range of interventions, however just under 60% of the interventions delivered by the PHVS were in support of urologic conditions.

Lack of control group data prevents assessment of impact against a counterfactual scenario.

GP / staff outcomes

Reduced GP workload / stress

A total of 19 out of c.37 GPs (51%)⁵ at four participating practices responded to a survey administered by the evaluation team in February 2017. A majority of respondents (n=16) indicated that the PHVS had freed-up time and reduced their existing workload.

Seventeen GPs were asked to estimate additional staff time required to deliver the service, and time savings as a result of the service. Survey responses indicate that on average, 1.5 hours per week of GP time were spent on the service, and 4.5 hours of GP time were saved. This would represent a theoretical net effect of 3 hours saved per week for each GP involved in the service (CI 95% [4 hours

⁵ Respondents were asked to state the number of GPs employed at their practice. The numbers returned for each practice varied slightly. The 37 figure uses lowest estimates for each practice.

41 mins, 1 hour 18 mins]), though these figures are somewhat tentative given that they are based on subjective time estimates.⁶

Five GPs commented that there were additional job satisfaction benefits such as the reduction in stress from knowing they wouldn't have to leave mid-surgery to attend to patients at home.⁷ Several GPs wrote in comment sections that they did still carry out home visits, but that these were fewer and typically involved more complex cases. Below are representative quotes from GP practice survey responses.

- *"The pressure on time during on-call days is now more manageable. It had previously been 'retiring early soon' levels of manic!"*
- *"It has really made a significant impact on my day and relieves a burden on an already pretty frantic day."*

Increased GP time to focus on complex cases

Almost half of respondents to the GP survey indicated that longer appointments had been provided to deal with more complex patients as a result of the PHVS.

A total of 17 out of 19 GP survey respondents (89%) stated that the PHVS had been 'very beneficial' for non-complex patients. Thirteen of the 19 survey respondents (68%) suggested that the service was either 'very beneficial' or 'slightly beneficial' for patients who have complex care needs.

The respondents who suggested that the PHVS resulted in 'No change' or was 'Slightly disadvantageous' to the quality of care received by *complex* patients provided the following comments:

- *Can be useful to get baseline observations, but decision making can be more difficult with more complex patients (respondent reporting 'No change');*
- *I don't think the quality of care has gone up or down - the service is just delivered in a slightly different way (respondent reporting 'No change');*
- *Every paramedic visit had a discussion with either the patient's own GP or the duty GP to review the clinical history and management pathway (respondent reporting 'No change');*
- *It is sometimes difficult in more complex cases to get an accurate feel of the challenges involved. There is potential for delay in action if these complex cases are reviewed too often by the paramedic team. The main responsibility for this lies with the GP allocating appropriate visits and defining the specific goal of a visit if it is a complex patient needing review (respondent reporting 'Slightly disadvantageous').*

Improved sustainability in primary care

Eighteen of the 19 GP staff surveyed via RSM PACEC's online questionnaire stated that the service should be rolled out to other localities in the future, which suggests that the PHVS has had a positive effect on sustainability for the practices involved. However when asked to identify *"any significant*

⁶ Although answers were given at GP level, please note the survey questions addressed both the GP level and practice level.

⁷ Note that reductions in stress and / or improved job satisfaction were not quantified through the survey.

issues associated with scaling up / rolling out the service” four out of seven respondents to that question noted shortages of appropriate staff.

In a similar vein, interviews with SCAS representatives noted that there are currently 65 Specialist Practitioners across the trust, with internal estimates suggesting that in order to service the wider Southern Trust area more than four times that number would be required.⁸

Cost and future funding sources were also identified as challenges for future sustainability in the online GP practice survey (one respondent) and in interviews with local GP, CCG, and SCAS representatives (five interviewees in total). Current funding for training and resources is provided by the Vanguard (Better Local Care), with the cost of the paramedics borne by SCAS through the 999 contract, rather than through practices. Commissioning discussions suggest that this funding model is not expected to continue in future, since patients using the service are not those that would typically call 999.

Therefore, while 18 out of 19 respondents to the GP practice survey believe that the service should be continued, and that it should also be rolled out, uncertainty regarding availability of appropriate staff resource to scale up, and lack of clarity regarding a future commissioning model constitute two notable challenges to service sustainability.

System / team outcomes

Hospital utilisation outcomes

Information governance issues have prevented analysis of SUS data that could evidence reductions in these two metrics. Approximately 84% of practice staff (n=16) responding to the online survey believed that fewer patients from the locality have been admitted to a hospital as a result of the service than would have otherwise been the case.

Improved integration between primary and acute care teams

Fifteen of the staff surveyed stated that the PHVS has been ‘very beneficial’ in enabling more effective working with community teams.

Improved education and training for staff

Both formal and non-formal mentorship and training was provided to PHVS staff members, and in-depth interviews with PHVS staff have highlighted the considerable value they attach to the professional development that their involvement in the PHVS has provided.

⁸ Figure drawn from consultation with SCAS representatives.

Funding and sustainability

The service enjoys significant local buy-in and is used frequently by all participating practices. A majority of slots available to each practice are claimed.

There is further work to be done to ensure services can be supported in a manner that ensures equity across practices and appropriate use of local commissioning funds.

Recommendations

- **Recommendation 1:** disseminate findings widely given that the evidence could contribute to the strategic need for a clearer, more varied Paramedic career path, and may provide learning for other Home Visiting interventions.
- **Recommendation 2:** findings from the staff survey indicate that there is notable appetite among participating practices for the PHVS to be extended. Options for spread should be considered, with a particular focus on overcoming staff resourcing and financing issues.
- **Recommendation 3:** explore options for providing Paramedics' with access to patient data. The home visiting team can only access patient record data by travelling to the relevant practice. Appropriate technology would allow home visiting staff access to patient record data from any location and result in notable time and travel savings.
- **Recommendation 4:** develop and implement common case allocation protocols to ensure clinical decisions are made earlier in the day, so that paramedics are dispatched as soon as cases come in, thus providing a shorter time between initial call and home visit.
- **Recommendation 5:** maximise potential benefits of the web portal, which was an unintended benefit. The web portal was created for management of available slots and the home visiting staff schedule. Interviewees suggested that the portal could be developed to monitor more patient / user / service outcomes, such as those outcomes from patients that are from care / nursing homes.
- **Recommendation 6:** explore the potential for applying research funding to conduct a larger evaluation study addressing robust evidence of effectiveness and cost-effectiveness of the pilot.

1 INTRODUCTION AND BACKGROUND

RSM PACEC were appointed by Southern Health on behalf of the Hampshire MCP Vanguard to complete an evaluation of the NHS Vanguard Pilot to implement a Multispecialty Community Provider (MCP) new care model with GPs known locally as Better Local Care (BLC). The BLC aim is:

To improve the health, well-being and independence of people living in our natural communities of care, making Hampshire an even greater place for all our residents to live.

At the time of project implementation, Better Local Care had four key themes:

- **Improving access to care:** So it's easier for people to get a same-day or urgent appointment at their GP surgery, and so people with complex health problems get more input from their GP.
- **Joining up the professionals that support the same people:** So doctors, nurses, social and voluntary sector workers and volunteers are part of the same extended team, making care more straightforward (especially for people with complex needs).
- **Bringing specialist care nearer to you:** So patients can see the professional they need, sooner: For example physiotherapists and mental health workers in local GP surgeries.
- **Concentrating on prevention:** to support people earlier, and help them make the right choices about their health and wellbeing, to stay independent and reduce the need to go to hospital.

The BLC Vanguard is a partnership of GPs, NHS providers and commissioners, Hampshire County Council, local councils of voluntary services, a number of local community, voluntary and charity organisations.⁹

This report is one of a series of Deep Dive Evaluation Reports which aim to evaluate some of the projects supported under Better Local Care to explore the outputs, outcomes and impacts, the successes and challenges, and importantly the learning which can be used to improve the projects in the future. This Deep Dive Evaluation Report focuses on the Paramedic Home Visiting Service (PHVS).

The pilot began in May 2016 and is implemented by professionals seconded from South Central Ambulance Service (SCAS), who work with GP surgeries in the Waterlooville area and provide home visits to patients who require them. Patient home visits are transferred from GPs to a specially trained paramedic and a specialist nurse practitioner.

⁹ <http://www.southernhealth.nhs.uk/inside/better-local-care/>

2 CONTEXT, NEED AND OBJECTIVES

This section sets out the national and local context within which the PHVS is operating, providing linkages to the NHS Five Year Forward View and the General Practice Forward View, and linkages to relevant local strategy and policy. It makes reference where appropriate, to relevant documentation that supports the logic underpinning the PHVS, before summarising the main objectives for the service.

2.1 National policy context

The NHS Five Year Forward View notes the need to reshape emergency and urgent care services, ensuring new models of care can be developed in order to deliver out-of-hospital services. The Forward View notes that ‘across the NHS, urgent and emergency care services will be redesigned to integrate between A&E departments, GP out-of-hours services, urgent care centres, NHS 111, and ambulance services.’

There is a need to reduce emergency systems use and redirect non-life threatening cases to appropriate out-of-hospital services in order to drive down costs, meet NHS targets, and meet the care quality and patient experience objectives outlined in the Forward View. Urgent and emergency care services typically convey users to acute settings, adding further demand to high-cost environments and often inconveniencing users. There is therefore a strong rationale for delivering care services within homes.

2.1.1 National context within General Practice

The General Practice Forward View (GPFV) identifies workload pressure as the defining issue facing practitioners in the coming years. The GP Forward View aims to ‘reduce practice burdens and help release time’, promising to ‘make better use of the wider workforce’, co-ordinating with nurse practitioners, community pharmacists and other specialists. The added strain of home visits on top of existing in-practice sessions is a key workforce issue for GPs in Waterloo, reflected in the pilot’s project plans and subsequently in RSM PACEC’s GP staff survey.

The GPFV additionally notes that GPs find it increasingly difficult to offer timely appointments and often struggle to provide enough time for patients with complex needs. As part of its pledge to support MCPs, the Forward View promises to ‘get away from the treadmill of the ‘one size fits all’ 10 minute consultation followed by outpatient referral or prescription.’ The MCP’s goal is to provide ‘a stronger focus on population health, prevention, and supporting and mobilising patients and communities’ and supplying ‘more integrated urgent care as part of a reformed urgent and emergency care system’.

The GPFV responds to the findings of the 2015 Primary Care Foundation / NHS Alliance report into GP workload pressures, *Making Time in General Practice*¹⁰, which noted the strength of British general practice as ‘its personal response to a dedicated patient list’ and its weakness as ‘its failure

¹⁰ PCT/NHS Alliance (2015) ‘Making Time in General Practice’ Available at: <http://www.nhsalliance.org/wp-content/uploads/2015/10/Making-Time-in-General-Practice-FULL-REPORT-01-10-15.pdf>

to develop consistent systems that free up time and resources to devote to improving care for patients.’

Recent research into measures to reduce emergency admissions to hospitals and GP practices, highlights the role of intermediate care and out-of-hospital/at-home services amongst the most popular responses piloted around England.¹¹ Evidence on local care models suggests that care co-ordination works most effectively when organised at the community level, leveraging in the knowledge and expertise of local civil sector and community organisations.¹² In response to these issues, attempts have been made to change emergency care provision and staff roles to provide a more patient-focused, convenient and joined-up service outside of hospitals which takes pressure off acute care services and GPs.

In a report on effective approaches in urgent and emergency care, NHS Interim Management and Support (NHSIMAS) highlights that:

- Primary care can smooth demand for ambulance conveyance by responding rapidly to requests for urgent home visits and ensuring they are not “batched” at the end of surgeries. This helps reduce mid-afternoon arrival peaks in ED departments and assessment units that causes crowding and increases admission rates.
- Practices should consider the guidance of the Primary Care Foundation¹³ to ensure that avoidable access issues do not provoke patients to call ambulances or by-pass the practice to seek help in emergency departments.

2.2 Local policy context and rationale

SCAS’s strategic plan outlines key challenges facing the Trust, chiefly the need to ‘improve the quality and effectiveness of patient care, and to support local systems in managing rising demand, within the context of tightening finances and increased competition.’

SCAS has witnessed increasing difficulties related to workforce retention and recruitment in recent years, with paramedics having been added to the UK’s Shortage Occupation List (SOL) for the first time in 2015 (recent evidence suggests a ratio of one staff vacancy for every three existing jobs at the Ambulance Trust).¹⁴

As part of the home visiting scheme, paramedics are expected to be able to take on increasingly sophisticated work and acquire new skills, improving their future progression options and making paramedic roles more attractive to prospective employees.

A recent paper written by a members and staff of the NHS Confederation and the National Association of Primary Care (NAPC) suggested that developing alternative career pathways and

¹¹ Ham et al 2010, ‘Avoiding Hospital Admissions: Lessons from evidence and experience’, The King’s Fund

¹² Goodwin et al 2013, ‘Co-ordinated care for people with complex conditions’, The King’s Fund

¹³ Primary Care Foundation, 2009, ‘Urgent Care: A Practical Guide to Transforming Same Day Care in General Practice’, 2009, Department of Health
http://www.primarycarefoundation.co.uk/images/PrimaryCareFoundation/Downloading_Reports/Reports_and_Articles/Urgent_Care_Centres/Urgent_Care_May_09.pdf

¹⁴ ‘As of March 2015 the Trust had 603 staff working primarily as paramedics ... its vacancy count increased from 220 in 2014 to 277 in 2015.’ Paramedic Workforce Shortage – Is it Solvable? *NHE Review* (June 2015)

roles for emergency care professionals could increase primary care capacity and help to prevent hospitalisation.¹⁵

Interviews with local GPs have indicated that services are under severe pressure in Waterlooville, and a number of local practices have merged as a result of workforce retention difficulties¹⁶. The lack of GP capacity in the local area helped provide the impetus for introducing specialist home visiting.

There is some alignment with SCAS's strategic plan, which outlines a desire to develop Advanced Paramedic roles to support career development. The plan outlines service provision aspirations:

SCAS – service priorities

- Helping people to identify and access the care that they need, with **Clinical Coordination Centres** providing simplified access for all health and social care, whether someone is in a crisis situation or simply booking an appointment.
- **24/7 mobile teams** to support people in their own homes and local communities, offering advice, assessment, diagnostics and treatment on scene.
- **Pro-active welfare calls and monitoring** the health of people who are frail, at risk of deterioration in their health or who suffer from mental health issues. Clinicians working with GPs and other community-based services to keep people safe in their own communities, and helping to resettle people at home following discharge from hospital.
- Maintaining a 'helicopter view' of **local systems of care**, analysing demand patterns, patient flows, clinical outcomes and service gaps. We will work with our commissioners and partners to improve the range and availability of services offered in each local area.
- **Expanding clinical assessment, signposting and mobile healthcare services** into a wider geography.

Source: SCAS Strategic Plan

2.3 PHVS objectives

The PHVS's Business Plan and logic model sets out a number of key aims and key performance indicators (KPIs). Key objectives / outcomes include:

- Improved access to care;
- Improved outcomes and experiences for patients;
- Reduced attendances and admissions to A&E / ED;
- Release GP time to focus on complex cases;
- Improved education and training of staff; and
- Improved sustainability in primary care.

Performance indicators used to inform this report are presented again at the introduction to subsequent sections as relevant.

¹⁵ NHS Confederation, 'Not More of the Same: Ensuring We Have the Right Workforce for Future Models of Care' (2014)

¹⁶ <https://www.southeasternhampshireccg.nhs.uk/news/Neighbouring-GP-practices-set-to-merge.htm>

2.4 Evidence from similar initiatives

Case Study: South East Coast Ambulance Service. A 2015 trial in Kent (Folkestone) featured paramedic practitioners working between 7am and midnight in place of GPs in response to home visit requests. The paramedics completed assessments where appropriate and conveyed patients to their GP practice where necessary, such in the case of a prescription being needed. The service saw 740 patients, with fewer than 10% requiring onward conveyance to accident and emergency. Approximately half of patients were treated solely by paramedic practitioners in their homes and approximately half were dealt with in remote consultation with patients' GPs. Patients waited an average of 35 minutes from the point of referral to be seen by paramedic practitioners. The reductions were deemed by the authors as being sufficient to allow for the scheme to pay for itself (net neutral cost) through reduced hospital admissions.¹⁷

Case study: St Helens Acute Home Visiting Service (AVS). An Acute Home Visiting Service was first set up in St Helens and Knowsley Teaching Hospitals NHS Trust in 2006. The service was implemented for 12 practices with a registered population of 60,000 (approximately twice the size of the current PHVS). The St Helens AVS was expected to deliver similar outcomes to the PHVS including; reduced GP workload, greater sustainability in primary care, more time available for home visits, and ultimately a reduction in emergency admissions. The St Helens model differed from the PHVS in that it employed a dedicated home visiting doctor to complete the visits, rather than Paramedic and / or Specialist Nurse Practitioner staff as is the case within the PHVS. Under the St Helens Acute Visiting Service 76% of home visits were completed within an hour of being requested. Research into the service suggests that it reduced emergency admissions by 30%, saving approximately £1m as a result of assessing and completing home visits in a shorter timeframe.¹⁸

Context, need and objectives: in summary

- There is strong evidence that pressure on GPs and practices is continuing to grow and likely to become unsustainable at current rates, reflected NHS planning and policy frameworks such as the GP Forward View. The GP Forward View notes the need to support integrated care, new MCP models, and co-ordinate with other care professionals and practices to ensure a more efficient and effective primary care system.
- The objectives of the PHVS are very clearly aligned to the national context, including the FYFV and the GPFV.
- The logic underpinning PHVS outcomes regarding reduced pressure in ED is supported by recent reports on good practice in urgent care from NHSIMAS and the Primary Care Foundation. Similarly, the logic underpinning PHVS outcomes regarding paramedic career development and retention is supported by the NHS Confederation and the NAPC.
- There are also notable strains on core paramedic services, including a shortage of paramedic staff in the local area. It is therefore important to consider both the GP and ambulatory context when interpreting evaluation findings.

¹⁷ Note that this evidence is taken from the case study below and figures have not been validated as part of the BLC evaluation. Practice based paramedics, S Kent Coast. Available at: <https://www.england.nhs.uk/wp-content/uploads/2016/03/releas-capcty-case-study-4-138.pdf>

¹⁸ Ibid

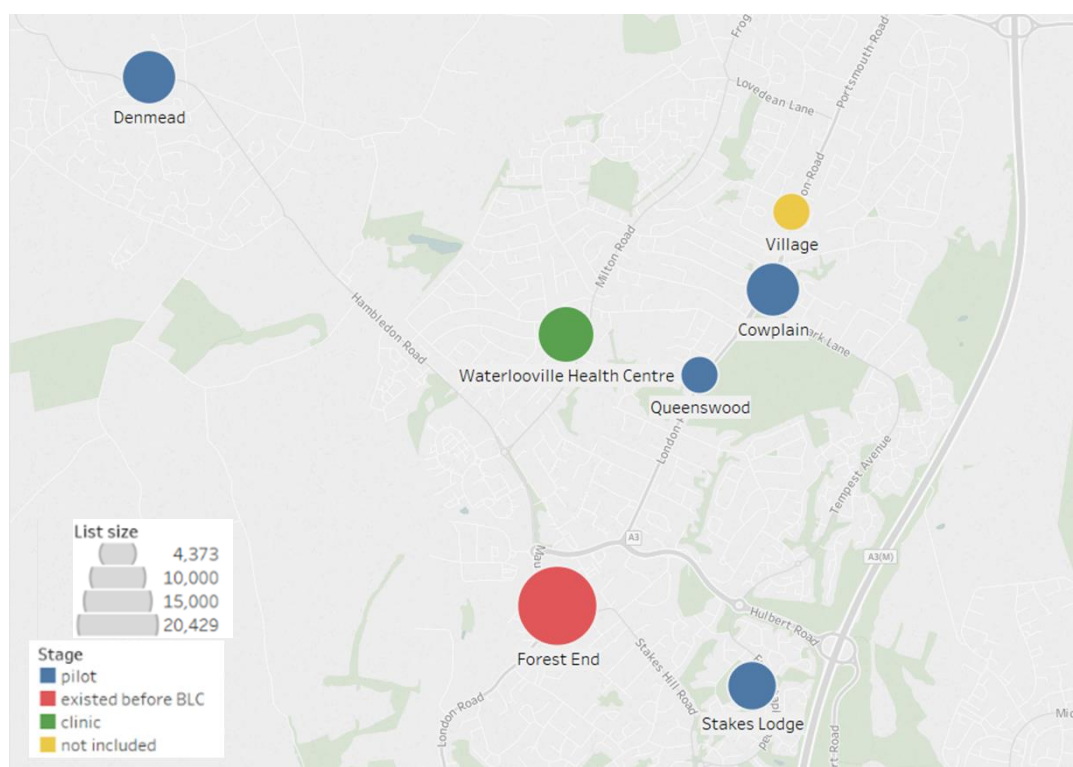
3 MODEL AND ACTIVITY TO DATE

Waterlooville became part of the MCP Vanguard in December 2015, following the original three MCP pilot sites as a “fast follower” site in December 2015.

3.1 Pilot sites and list sizes

The PHVS pilot was implemented initially in the Waterlooville natural community of care area, formally beginning in May / June 2016, and is still ongoing at the time of writing. SCAS seconded two staff members to the locality for a 6 month period to provide a GP home-visit support service to 6 surgeries. The seconded staff consist of one specialist nurse and one specialist paramedic. The service builds on the initial Forest End pilot which served a practice population of approximately 20,500. Under Better Local Care the pilot was delivered across four practices, outlined in Figure 3.1 below.

Figure 3.1: Waterlooville – participating GP practices by list size



Source: RSM PACEC. The size of each practice marker reflects the list size within each practice. Village practice is not currently involved in the scheme.

Note that Stakes Lodge Surgery is one of four sites that make up the ‘Vine Medical Group’, which also includes Forest End Surgery, the Waterloooville Health Centre and Westbrook Surgery (not shown). Table 3.1 overleaf presents profiles for participating practices.

Table 3.1: Participating Practice Profiles

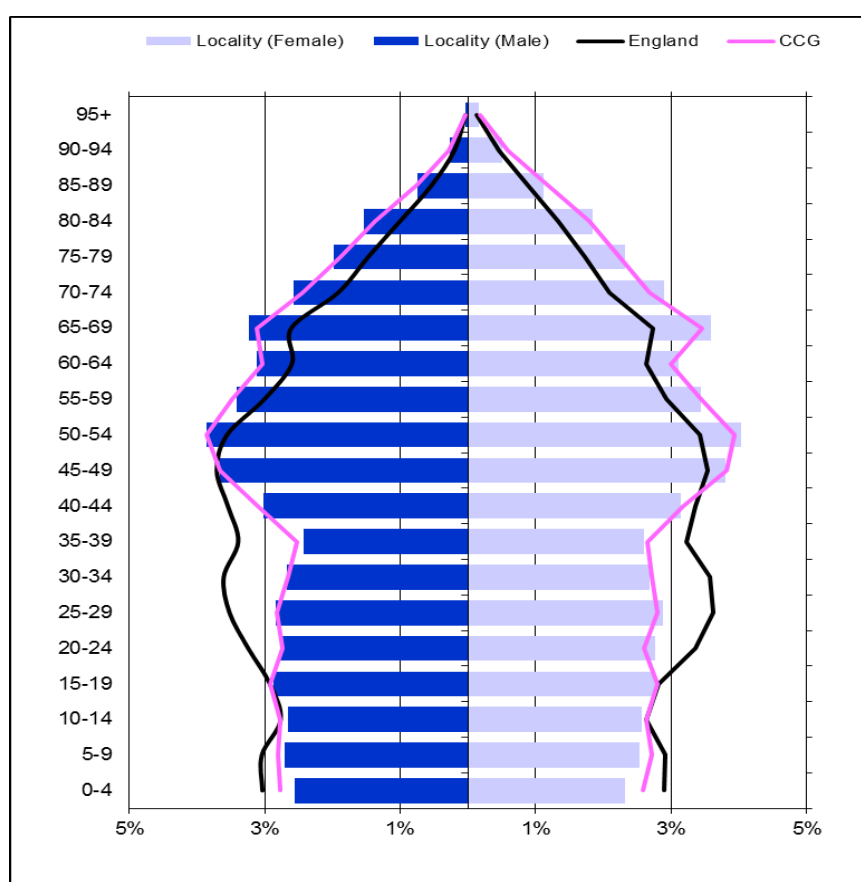
Indicator	PHVS Practice	Age	Value (# or %)	Compared to England	Compared to SE Hants CCG
Registered Population (#)	Stakes Lodge	All ages	7,453	Lower	Lower
	Queenswood		4,731	Lower	Lower
	Cowplain		9,349	Higher	Higher
	Denmead		9,138	Higher	Higher
% Aged 65+	Stakes Lodge	65+ yrs	21.7	Higher	Same
	Queenswood		20.6	Higher	Same
	Cowplain		25.3	Higher	Higher
	Denmead		23.6	Higher	Higher
% with long standing condition	Stakes Lodge	18+ yrs	58.9	Same	Same
	Queenswood		52.5	Same	Same
	Cowplain		60.0	Same	Same
	Denmead		46.4	Same	Same
% with caring responsibility	Stakes Lodge	18+ yrs	23.2	Same	Same
	Queenswood		15.5	Same	Same
	Cowplain		13.2	Same	Same
	Denmead		18.1	Same	Same
% nursing home patients	Stakes Lodge	All ages	0.3	Same	Not compared
	Queenswood		1.1	Higher	Not compared
	Cowplain		0.3	Lower	Not compared
	Denmead		0.7	Same	Not compared

Source: PHE Fingertips GP Practice Profiles

3.2 Local demographics and deprivation

The Waterlooville locality has an ageing population. The age profile of registered patients aged 65+ across the six practices that make up the locality is broadly in line with South Eastern Hampshire CCG figures, and considerably higher than the England average, as illustrated in Figure 3.2 overleaf.

Figure 3.2: Waterlooville Locality Demographic



Source: South Central & West Commissioning Support Unit Baseline Locality Packs

3.2.1 Deprivation

According to the 2015 Indices of Multiple Deprivation, the areas served by the six practices which make up the Waterlooville locality all have below average levels of deprivation in England (index score of 21.8). Four of the six practices are less deprived than the average for South Eastern Hampshire CCG area.

Among the practices participating in the pilot, Stakes Lodge and Queenswood have the highest levels of deprivation (index scores of 16.3 and 13.1 respectively). Deprivation indices for the other 2 participating practices (Cowplain and Denmead) are notably lower, at 10.8 and 8.1 respectively.

3.3 Population health

Data relating to the health of registered populations in the Waterlooville locality in 2014-15, compiled by Public Health England and the South Central and West CSU, highlight that:

- Prevalence of hypertension among registered populations (all ages) at Stakes Lodge and Cowplain Family Practice are higher than the South Eastern Hampshire CCG average (16.7% and 19% respectively, compared to 15.5%), and in turn, prevalence among the South Eastern Hampshire CCG is significantly higher than the England average (13.8%);
- Prevalence of asthma among registered populations (all ages) at Stakes Lodge and Queenswood Surgery are above the South Eastern Hampshire CCG average (9.5% and 7.7% respectively compared to 6.3%), and again, prevalence among the South Eastern Hampshire CCG population is significantly higher than the England average (6%);

- Prevalence of diabetes among registered populations at Stakes Lodge practice is higher than the CCG average (7.2% compared to 6.5%). Prevalence among the population at Denmead Health Centre is significantly lower than the CCG average at 5.8%;
- Prevalence of other QOF related health issues among participating practice populations is either in line with South Eastern Hampshire CCG averages (e.g. Heart Disease, Long Term Conditions, ACS Conditions and Stroke) or better than the CCG average (e.g. Smoking).

Similar data relating to emergency admissions, excess bed days, length of stay and outpatient attendances in 2014-15 highlights the following:

- The percentage of emergency admissions among patients aged 65+ that result in a length of stay of less than 1 day is lower than the CCG average (13%) in three out of the four participating practices (Stakes Lodge, 12%; Queenswood, 7%; Cowplain, 10%);
- Age standardised figures for outpatient attendances vary by issue. Of most note are figures for:
 - Physio OP attendances (significantly higher than CCG average among populations at Queenswood and Cowplain and significantly lower than the CCG average among populations at Stakes Lodge and Denmead);
 - Dermatology OP attendances (significantly higher than CCG average among populations at three of the four participating practices – Stakes Lodge, Queenswood, and Cowplain);
 - ENT OP attendances (also significantly higher than the CCG average among populations at Stakes Lodge, Queenswood and Cowplain);
 - Urology OP attendances at Waterlooville locality level are significantly higher than the CCG average (4,465 compared to 4,281). Cowplain Family Practice is a significant contributor to the Waterlooville data, with an age standardised figure of 5,439 Urology related OP attendances.

3.4 The PHVS model

The PHVS is delivered collaboratively by six GP practices in the Waterlooville area, and Paramedic staff seconded from the South Central Ambulance Service (SCAS). It is designed to allow visits to take place in a shorter timeframe and earlier in the day than would be possible if local GPs were required to complete the visits. The service is also intended to reduce GP workload and / or free up GP time to focus on more complex cases. The service is intended to increase integration and efficiency through a number of empirically-proven drivers outlined in the business case in Table 3.2 below.

Table 3.2: Efficiency drivers from home visiting

Integrated and community care efficiency drivers

- Paramedics build up knowledge and experience of their respective 'patches' as well as knowledge of local patients, key determinants in decision making (e.g. deciding whether or not hospitalisation is required);
- Integrated patient records: detailed patient information and clinical history accessible to paramedics along with test records, long-term conditions and allergies;
- Cost savings from reduced use of blue light transport, general practice and acute services;
- GP time more efficiently allocated to complex cases;
- Single assessments with shorter referral pathways;
- Supporting proactive management of long-term conditions with a preventive focus; and
- Better patient education, self-care and self-management, and exercise and rehabilitation to reduce the need to interact with care professionals.

The activities listed below were those deemed necessary to effectively implement and deliver the service as set out in the project bid document.

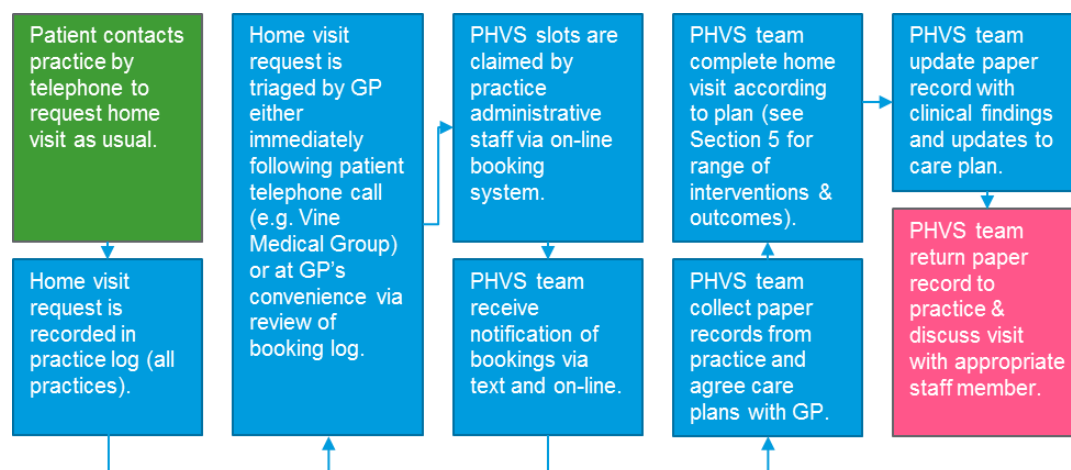
Implementation activity identified in Project Bid Document

1. To develop process for managing shared records/access to records.
2. Process to triage and identify patients and refer to Paramedics.
3. Clarity of process and services available to PHVS for Onward referral such as ERS at Home, ICTs etc.
4. Process to identify patients needing further intervention by the GP and further home visit.
5. Outline means of transport.
6. Outline equipment available and from where this will be sourced.
7. Process and provision for training induction and ongoing training.
8. Identify members of staff and associated days/hours of work they will be available to support the pilot.
9. Secure Vanguard funding approval for the pilot and agree finances to reflect support from SCAS in this pilot.
10. Confirm start date of the pilot.
11. Outline KPIs and methods and timeframes for collection.

Source: PHVS Project Initiation Document

Figure 3.3 overleaf provides an illustration of the PHVS, described in more detail in subsequent paragraphs.

Figure 3.3: Home visiting process



Source: RSM PACEC / PHVS team.

Following a routine request by a patient for a home visit, basic information is collected by practice staff before being triaged by practice GPs. Triage happens in different ways at different practices and could be completed immediately following the call (where GPs and reception staff physically located together and in direct contact) or later in the morning (where reception staff log all requests and these are reviewed by GPs at their convenience). Caseloads are triaged by GPs such that patients with less complex complaints are seen in the morning, allowing GPs to attend to complex cases more comprehensively and allowing GP sessions to finish on time.

The PHVS team (specially trained paramedics and / or a specialist nurse practitioner in the case of the pilot) can view bookings via a bespoke on-line booking system, and are notified by text message of all new bookings. The PHVS team visits the practice to collect a paper record of the patient's basic EMIS data, and to discuss cases and care plans with GPs.

The PHVS team input clinical findings and notes to the patient's care plan into the paper record before returning the record to the patient's GP after visits. Where necessary the PHVS team and GP discuss adjustments to the patient's care plan. In all cases the EMIS system is updated to log completed visits, and a discussion occurs between the visiting team member and a GP or duty doctor.

Practice and Paramedic staff have worked together to create a publically available on-line booking portal, which is considered by staff as being a key achievement of the project. The booking system (see Figure 3.4) is visible to clinicians and local patients alike.

Figure 3.4: PHVS web portal

Previous Day Reset to today Next Day

Scheduled mentor meeting [Delete day note](#)

Paramedic/Specialist Nurse Practitioner day availability [Delete day note](#)

Specialist Nurse Practitioner slots			Paramedic slots			Shared Slots		
Slot #		Pt #	Slot #		Pt #	Slot #		Pt #
1472	Wine - [8:10-08]	20184	1481	Wine - [8:10-11]	11081			
1473	Wine - [8:00-30]	36569	1478	Gowplan - [8:11-40]	11813			
1475	Denmead - [8:13-20]	12456	1482	Queenswood - [8:18-00]	12087			
1474	Gowplan - [Available]		1483	Shared - [Available]				
1477	Queenswood - [Available]		1480	Denmead - [Available]				

Source: PHVS operational staff

3.5 Activity to date

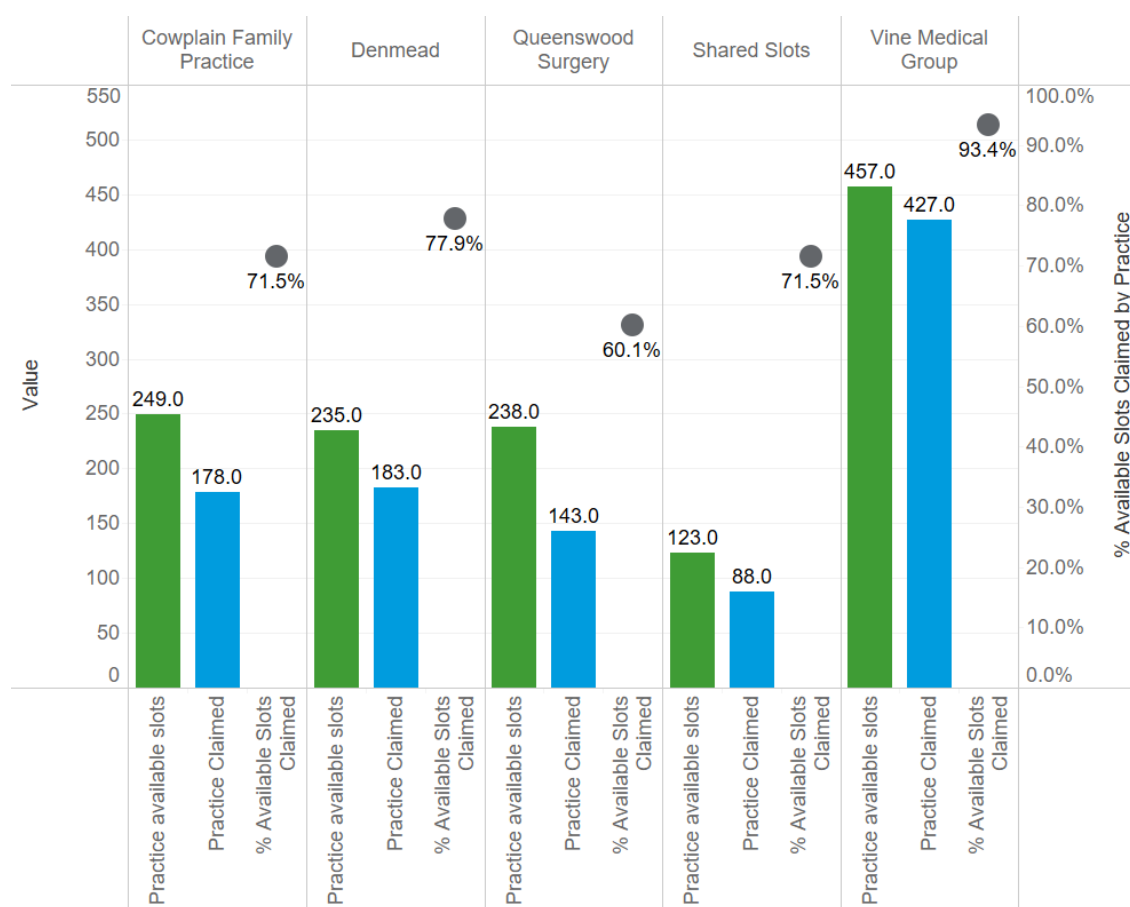
This sub-section presents findings from analysis of data collected by the PHVS against the following process / output indicators, together with qualitative data from in-depth interviews with PHVS operational staff where relevant:

- Number of home visiting slots available to participating practices via the PHVS;
- Number of home visit slots claimed by participating practices;
- Number of patients seen by the PHVS.

3.5.1 Service utilisation

Practices are allocated a share of slots based on the practice registered population size. Figure 3.5 shows the number of PHVS slots available to the four participating practices over the 10-month period. It also shows the number and percentage of slots claimed by each practice.

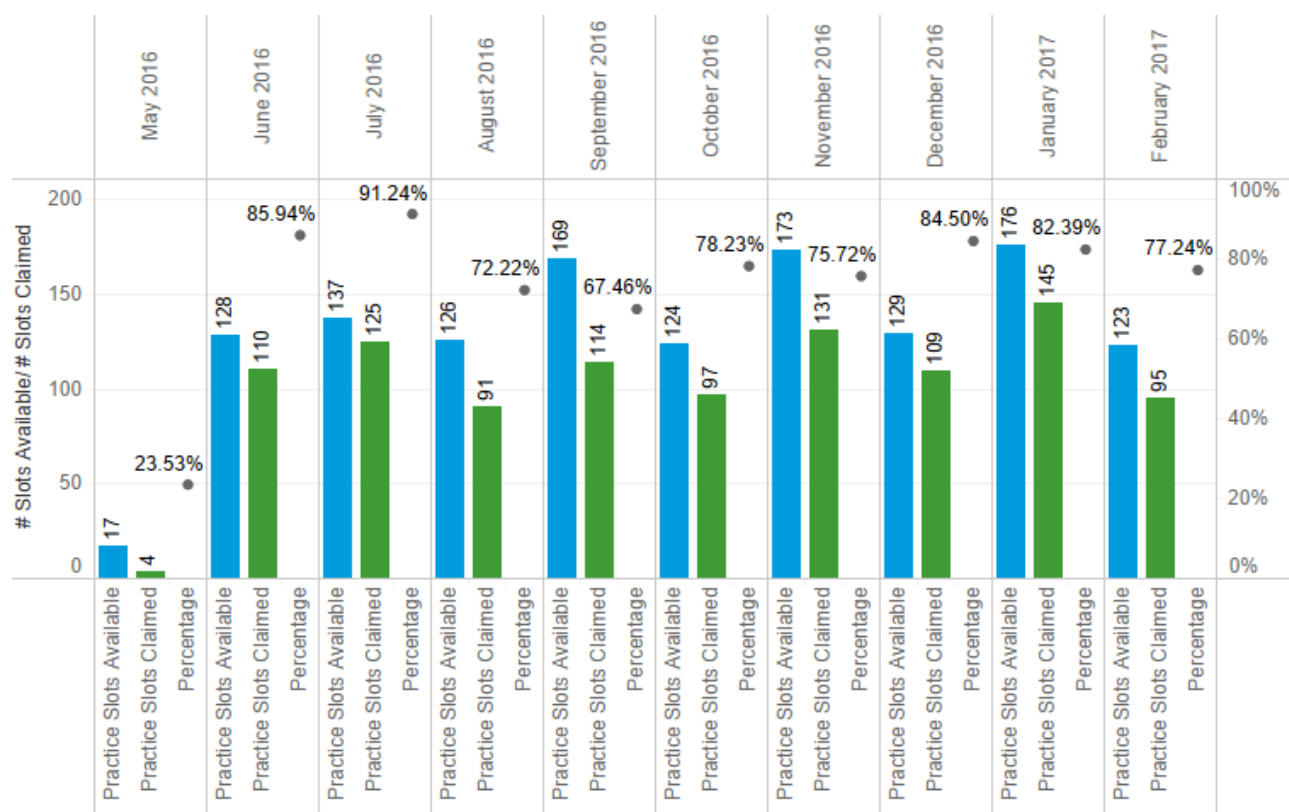
Figure 3.5 – Practice Slots Available / Claimed by Practice



Source: PHVS Management Data (29th May 2016 – 28th February 2017), RSM PACEC

The data shows some variation in the percentage of slots claimed by participating practices. Vine Medical Group used the highest percentage of available slots (93%); Queenswood Surgery used the lowest percentage of available slots (60%). Across all four practices the average percentage of slots claimed was just under 75%. Figure 3.6 below shows the number and percentage of slots claimed by practices on a monthly basis. The conversion rate varies each month, with the highest percentage of slots claimed in July (c.91%) and the lowest (excluding the first month of the service) in September at c.67%.

Figure 3.6 – Practice Slots Available / Claimed per month



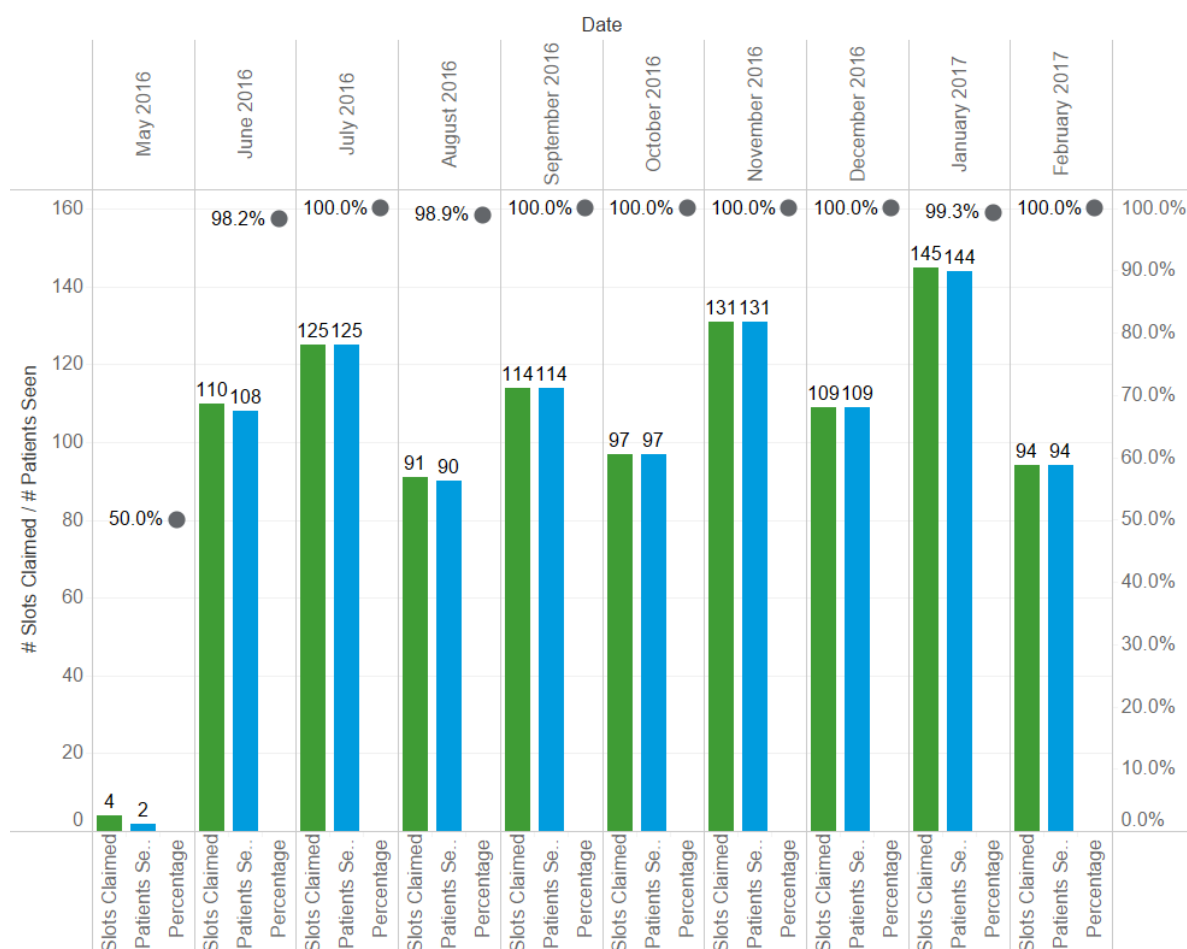
Source: PHVS Management Data (29th May 2016 – 28th February 2017), RSM PACEC

3.5.2 Conversion rate (slots claimed vs visits completed)

Figure 3.7 below shows the conversion rate (visits completed as a percentage of slots claimed by practices) each month. The conversion rate is high, averaging above 99% across the service at the time of writing.¹⁹

¹⁹ The number of visits following slots claimed

Figure 3.7 – Conversion Rate (Slots Claimed to Patient Visits)



Source: SCAS PHVS Management Data (29th May 2016 – 28th February 2017), RSM PACEC

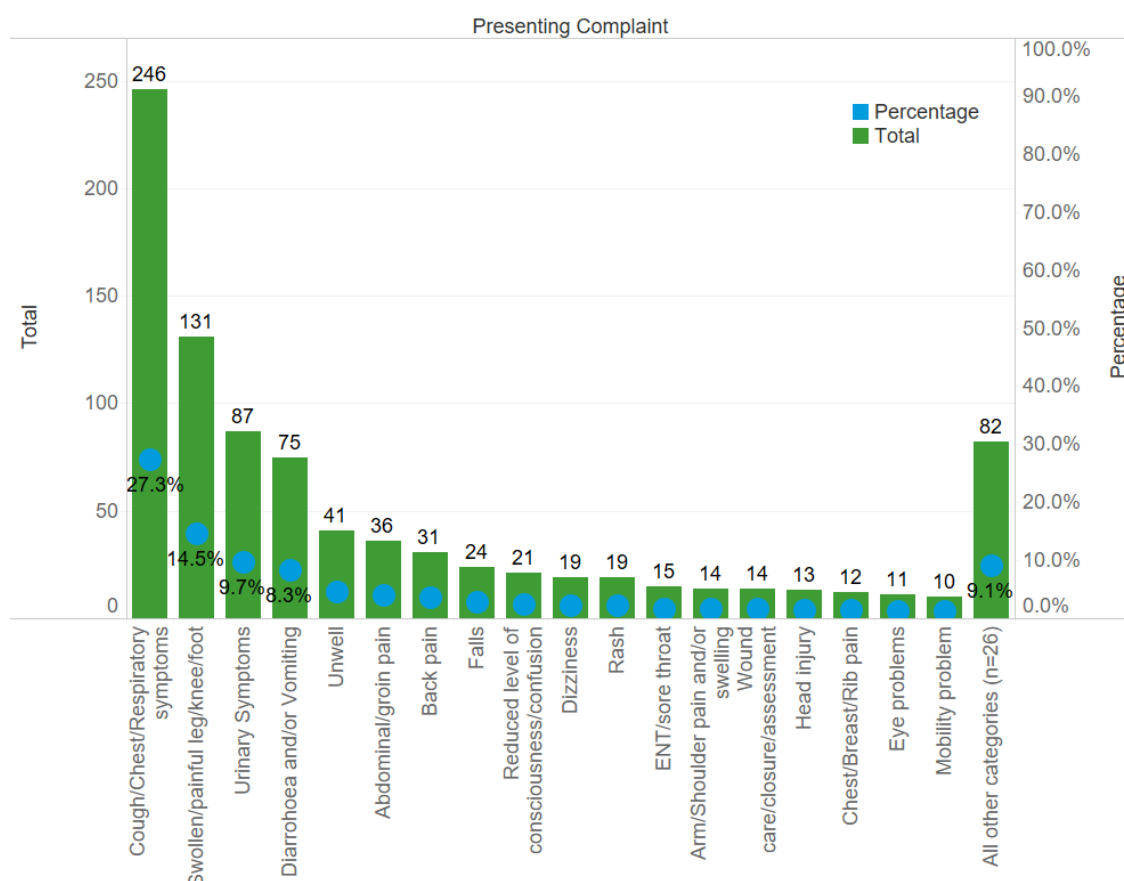
3.5.3 Patients seen and presenting complaints

At the time of writing, total of 1,014 patients²⁰ had been seen between May 2016 and March 1st 2017 (10 months), an average of just over 100 patients per month or 24 patients per week (43 weeks). Approximately 25 of the 1,014 PHVS patients have been admitted to hospital, which equates to a 2.5% transfer rate.

Figure 3.8 shows the presenting complaints of those utilising the PHVS between May 31st 2016 and February 1st 2017. Just over a quarter of all patients seen by the service were experiencing coughing / respiratory issues, and approximately a quarter had swelling, joint or urinary complaints.

²⁰ SCAS Paramedic Home Visiting Service management data

Figure 3.8: Presenting Symptoms of Paramedic Home Visits (n=901)²¹



Source: SCAS PHVS management data, PACEC. 'All others' aggregates all outcomes with fewer than 10 patients (category n=26).

3.6 Process evaluation findings

Overall, activity data shows variable utilisation of PHVS slots by individual practices, ranging from 60% (Queenswood), up to 93% (Vine Medical Group). There is scope to improve service utilisation among some participating practices.

When visits have been booked by practices, they have been completed by PHVS staff almost 100% of the time, which is indication of a reliable service.

Over 1,000 patients were seen by the PHVS over a 10 month period, approximately 113 per month on average. Just under 60% of issues addressed by the PHVS related to respiratory symptoms, swelling / joint pain, urinary symptoms, diarrhoea and vomiting.

In-depth interviews with GP leads and PHVS visiting team members identified strong communication between the paramedics and practices as a key enabler of the PHVS. In-depth interviews with the PHVS team suggested that communication (the visit booking process in particular) could be improved in some instances. PHVS staff expect that better communication, and a more standardised

²¹ Please note the figure shows presenting complaints of 901 patients seen between May 29th 2016 and February 1st 2017.

booking process in line with high use PHVS practices, would reduce the lag in case allocation and allow an even higher proportion of visits to be completed within 2 hours.

The online booking portal uses patient EMIS codes, which are individual to a practice rather than NHS numbers (individual to each patient). This is an obstacle when assessing the frequent users of the service against A&E attendances, potentially inhibiting long-term tracking and evaluation. It is possible for each practice to manually search for an NHS number based on the patient EMIS code, though this is a time consuming task.

In-depth interviews with the PHVS team also identified some important 'quick wins' for improving the service. These centred on case load documentation and management, specifically the current practice of travelling to GP practices to collect caseloads and EMIS details rather than through digital channels.

4 OUTPUTS AND OUTCOMES

The sections below assess the PHVS's performance against the outcomes and key indicators set out in Figure 4.1 below. Changes to legislation regarding information governance have meant that Secondary Use Statistics (SUS) data has not been available to the evaluation, which limits any assessment of performance against system / economic outcomes.

Figure 4.1: PHVS outcomes and indicators

Beneficiary Group	Outcome	Indicator(s)
Patients	<ul style="list-style-type: none"> Improved access to care; Improved patient experience; Improved patient outcomes. 	<ul style="list-style-type: none"> Increasing number of home visits completed before 12; Reduced waiting times; High patient satisfaction.
Staff (GPs)	<ul style="list-style-type: none"> Reduced GP workload / stress; Increased GP time to focus on complex cases; Improved sustainability in primary care. 	<ul style="list-style-type: none"> Increasing number of home visits completed (see Section 3); GPs reporting reduced workload / increased capacity for complex cases;
Teams / System	<ul style="list-style-type: none"> Reduced attendances at A&E / ED; Reduced hospital admissions; Improved integration between primary and acute care teams; Improved education and training of staff. 	<ul style="list-style-type: none"> 3% reduction in A&E / ED attendances among the PHVS cohort 6 months pre / post intervention (not available); Reduction in hospital admissions among the PHVS cohort 6 months pre / post intervention (not available); Reduction in ED attendances from Care Homes as a result of falls (not available); GPs report practice benefits as a result of the service; Staff report positive effects on integration between primary and acute care teams; Staff report positive experience of education and training opportunities.

4.1 Patient outcomes

4.1.1 Improved access to care

The PHVS seeks to deliver improved access to care for registered patient populations by seeing increasing proportions of patients on the morning that a home visit is requested, and visiting higher proportions of patients within 2 hours of a home visit request.

More home visits before midday

Achieving the short-term outcome of more home visits before midday has potential knock-on effects for both primary and acute care systems. The Primary Care Foundation report “*Urgent Care – A Practical Guide to Transforming Same-Day Care in General Practice*” reviewed how general practice manages urgent care, and identified that access; speed of response; capacity and assessment were key factors for high quality urgent care. The report maintained that better management of urgent requests, including requests for same day home visits, can lead to a reduction in attendance at A&E and emergency hospital admissions. It suggests that if practices can manage urgent care earlier, the workload and costs for the rest of the NHS will be reduced.²² Similarly, a well-publicised case study regarding an Acute Visiting Service in St Helens, found that it reduced emergency admissions by 30%, saving approximately £1m as a result of assessing and completing home visits in a shorter timeframe.²³

A key short-term outcome outlined in the logic model is to have the majority of home visits completed before noon. Between June 2016 and March 1st 2017, from a total of 990 recorded visits, 474 occurred before 12pm and 516 recorded visits have occurred after 12pm.²⁴ The proportion of patients visiting before 12pm varied each month, with July 2016 having the lowest proportion of patients visiting before 12pm (36.6%) and February 2017 having the highest (59.6%).

There was a notable lag early in the day between patients requesting a home visit when practices opened (around 8am) and GPs allocating those cases much later in the morning. Although, the median time take to visit patients is c.1.5 hours. More detail is shown in figure 4.3. This implementation challenge was expected and there have been suggestions to how it can be overcome. For instance, those patients who call later in the evening (e.g. 6pm) could be booked in for the next morning, filling the unused morning slots.

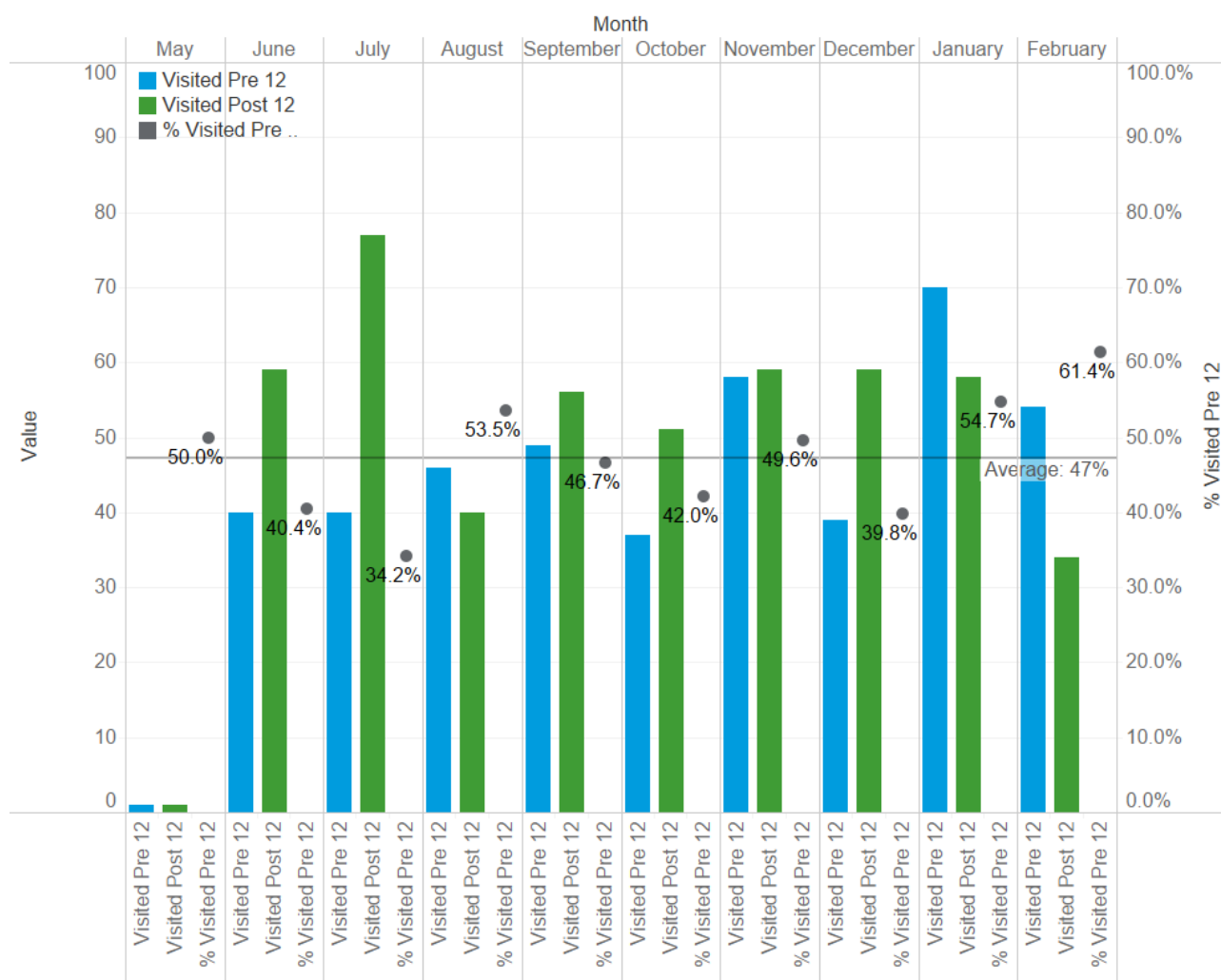
Figure 4.2 below shows the variation in the proportion of home visits arranged by month. The average proportion of patients visited before noon for the full 10 month period is 47%. Overall, there appears to be an upward trend (though not statistically significant) in the proportion of patients being seen before noon.

²² Primary Care Foundation, 2009, “Urgent Care: A Practical Guide to Transforming Same-Day Care in General Practice”, Department of Health, 2009. Supported by the Royal College of General Practitioners and the British Medical Association.

²³ Ibid

²⁴ Please note 24 records were removed in this count due to recording errors.

Figure 4.2: Proportion of home visits before noon by month



Source: PHVS appointment data (n=990)

Improved turnaround time for home visits

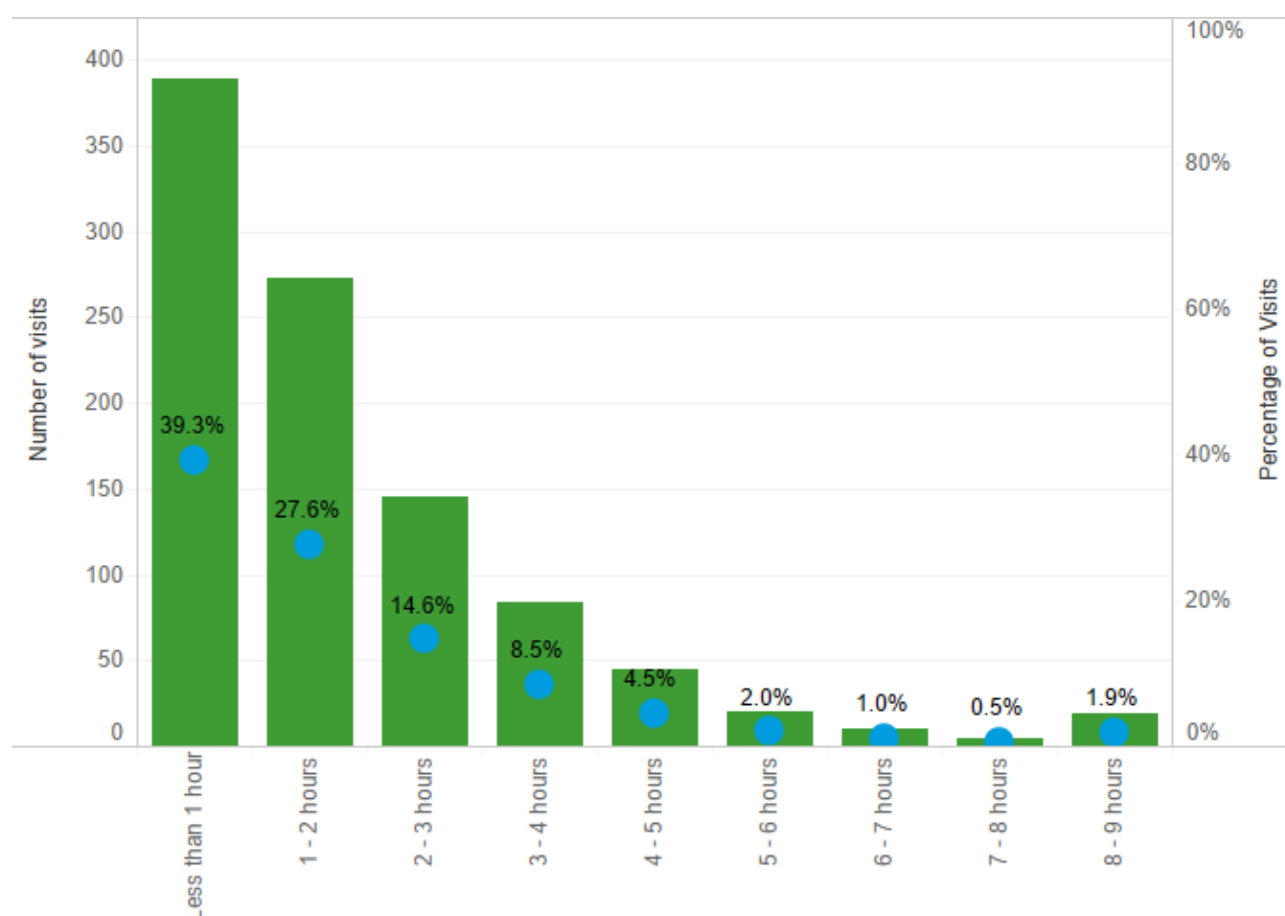
The PHVS also seeks to reduce the length of time it takes to complete a home visit, reducing wait times and improving access to care for patients. Figure 4.3 below shows the length of time between visits being claimed by the practice, and being completed. The majority of patients are seen within two hours of a slot being claimed, with 39% (n=389) of patients seen within an hour and 28% (n=273) seen between 1 and 2 hours.

The St Helens Acute Home Visiting Service (see Section 2.4 for details) provides a basis for comparing visit times.²⁵ It states that when delivered by regular practice GPs, fewer than 10% of home visits were conducted within an hour of being requested. Under the Acute Visiting Service, where a dedicated home visiting doctor completed the visits, 76% of home visits were completed within an hour of being requested. The St Helen's data suggests that the PHVS figure of 39% is a marked improvement on the percentage of visits likely to be completed by local GPs in the absence

²⁵ The Acute Visiting Service in St Helens has a narrower focus on acute cases, whereas the PHVS accepts home visits from patients in need of a wider range of urgent and non-urgent care. Nevertheless, it is helpful to use the St Helens data as a benchmark for relating PHVS results.

of the service (10%), but that there is also scope to further improve response times, for example by reducing the morning lag in allocating cases among some practices.

Figure 4.3: Time Taken to Visit (same day visits)²⁶



Source: PHVS appointment data, (n=990)²⁷

The median time taken to visit patients falls under the one to two-hour range, at c.1.5 hours.

²⁶ Note that a total of 17 visits did not happen on the same day.

²⁷ Note that in 24 records were excluded due to recording errors.

4.1.2 Improved patient experience

PHVS staff collected feedback directly from 38 patients following their visit (just under 4% of patients seen by the service). The sample size is small and the data collection method is highly susceptible to response bias. While these results cannot be deemed to be representative and should be interpreted with caution, they do provide an indication of PHVS patient experience.

As illustrated in Table 4.1 and Table 4.2, almost all patients a) reported that their visit occurred at the expected time, b) were aware of the role of the professional visiting them, and c) felt that information about their care was clearly explained. The data suggests high levels of patient satisfaction with the service.

Data was not collected from a control group (e.g. patients in receipt of home visits from GPs in neighbouring practice geographies) and it is not therefore possible to state whether levels of patient satisfaction are improved or otherwise compared to the counterfactual scenario.

Table 4.1: Patient feedback

	Was Visit at Expected Time?	Aware that Paramedic or Nurse Attending?	Were you treated in a kind/caring manner?	Was everything explained clearly to you?
Number answering "Yes"	36	30	38	38
Yes as % of total	95%	79%	100%	100%

Source: Patient feedback survey data. n=38

Table 4.2: Patient satisfaction

How satisfied were you that the issue was resolved?	
Percent responding "Satisfied" or "Very Satisfied"	100%
Were you happy with your new home visit service?	
Percent responding "Happy" or "Very Happy"	100%
Patient experience – qualitative comments when asked for more detail about their experience	
The majority of comments were positive including:	
<ul style="list-style-type: none">• [It is good that someone can] "come to visit early, not having to wait till afternoon"• "I thought it would be very difficult to get somebody to come"• "Helping out the doctors with their extra patients and workload"	
However a small minority of patients remain keen to see their GP:	
<ul style="list-style-type: none">• It's "not the same as having your own GP that knows you and your history. It was not explained why [Paramedic] was unable to give [medicine] - but immediately organised a prescription for [medicine via the GP]. GP called back the next day."	

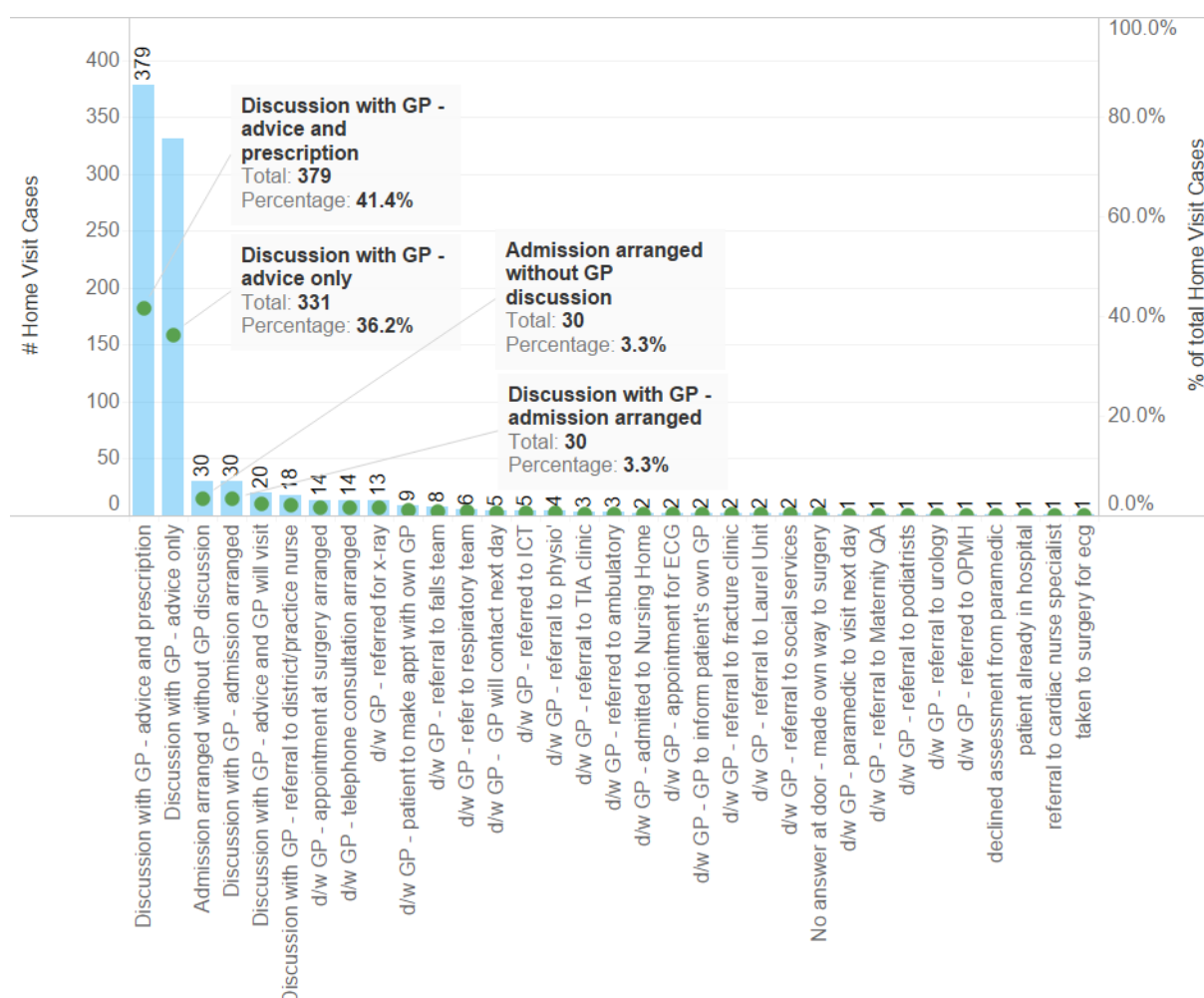
Source: Patient feedback survey data. n=38

4.1.3 Improved patient outcomes

Data collected from the SCAS paramedic team, presented in Figure 4.4 below, provides a snapshot of patient and referral outcomes for 901 home visits between May 2016 and February 1st 2017. In 36% of cases (n=331) the outcome was a discussion with a GP only; in 41% of cases (n=379), advice and a prescription was issued. In very few cases were patients referred to specialist or emergency services. As is the case for patient satisfaction data, data from a control group was not

collected and it is not therefore possible to comment on whether these outcomes are improved or otherwise against a counterfactual scenario.

Figure 4.4: Outcomes of Paramedic Home Visits (n=901)

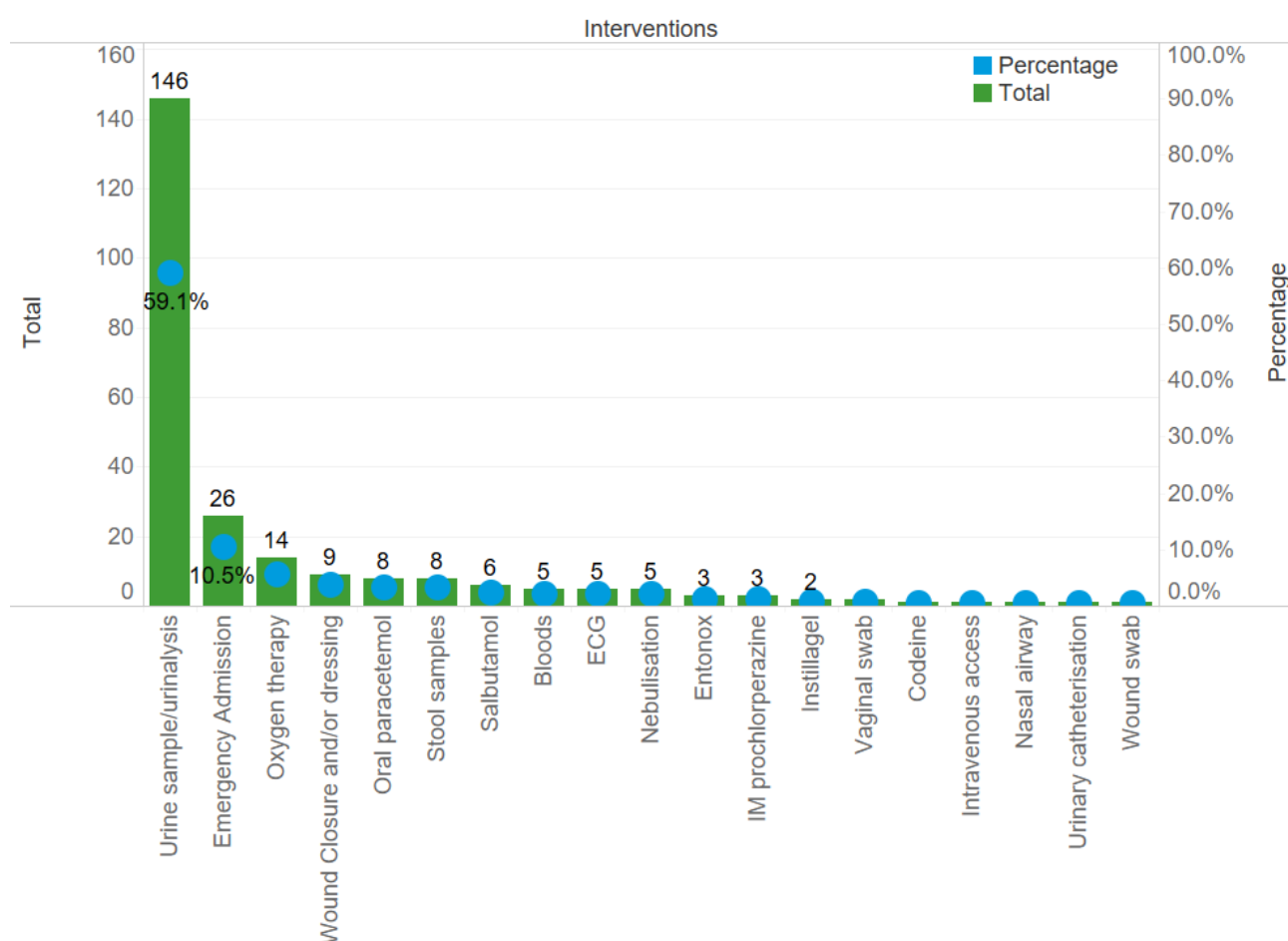


Source: SCAS PHVS management data. DW = "Discussion with".²⁸

For those patients that were seen via a home visit, 247 resulted in an intervention (24% of the total patients visited). Figure 4.5 below shows the type and number of interventions delivered via the PHVS.

²⁸ Note that at the time of writing outcomes data was only available for 901 of the total 1,014 home visits. The subsequent discrepancy between numbers of home visits (901) and outcomes (915), is due to multiple outcomes in some cases.

Figure 4.5: Type and Number of Interventions Delivered



Source: SCAS PHVS management data, 29th May 2016 – 1st February 2017, RSM PACEC.

Consultation with clinical stakeholders and delivery staff suggested that patients that fall under the 'Emergency Admission' category were very likely to have been hospitalised regardless. The other interventions shown are those that would have required a GP visit as a minimum. The PHVS team delivered a wide range of interventions, however just under 60% of the interventions delivered by the PHVS were in support of urologic conditions.

4.2 GP / staff outcomes

4.2.1 Reduced GP workload / stress

A total of 19 out of c.37 GPs (51%)²⁹ at four participating practices responded to a survey administered by the evaluation team in February 2017. A majority of respondents (n=16) indicated that the PHVS had freed-up time and reduced their existing workload.

Seventeen GPs were asked to estimate added time costs/savings as a result of the service. Survey responses indicate that on average, 1.5 hours per week of GP time were spent on the service, and

²⁹ Respondents were asked to state the number of GPs employed at their practice. The numbers returned for each practice varied slightly. The 37 figure uses lowest estimates for each practice.

4.5 hours of GP time were saved. This would represent a theoretical net effect of 3 hours (CI 95% [4 hours 41 mins, 1 hour 18 mins]) saved per week for each GP involved in the service, though these figures are somewhat tentative given that they are based on subjective time estimates.³⁰

Aside from specified time savings, approximately one fifth of GPs commented that there were additional job satisfaction benefits such as the stress reduction from knowing they wouldn't have to leave mid-surgery to attend to patients at home.³¹ Several GPs wrote in comment sections that they did still carry out home visits, but that these were fewer and typically involved more complex cases. Below are representative quotes from GP practice survey responses.

GP feedback

"The pressure on time during on-call days is now more manageable. It had previously been "retiring early soon" levels of manic!"

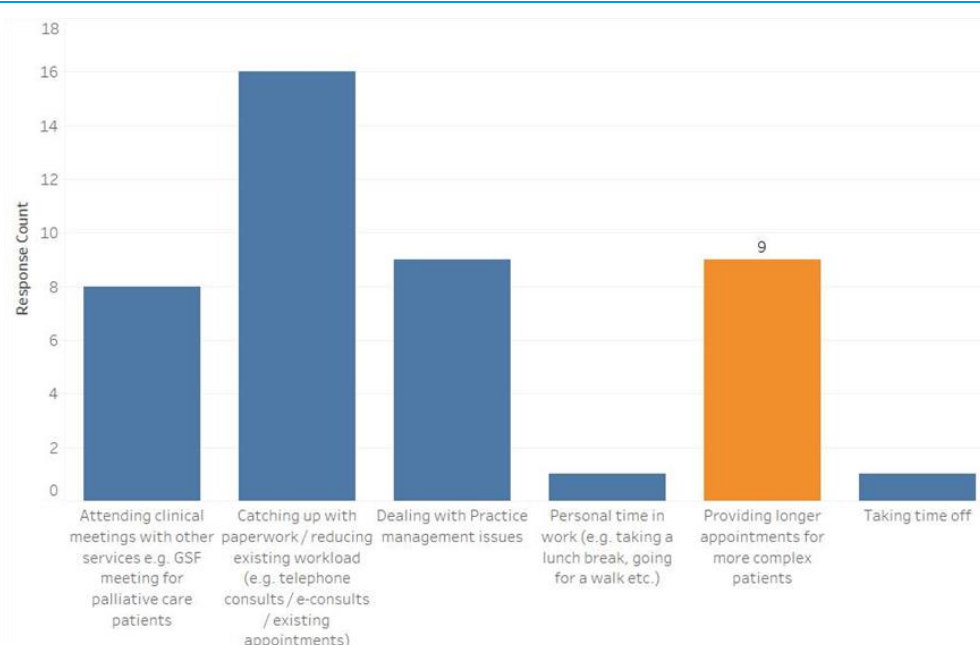
"It has really made a significant impact on my day and relieves a burden on an already pretty frantic day."

Source: Local Staff e-Survey responses, RSM PACEC.

4.2.2 Increased GP time to focus on complex cases

Releasing pressure on primary care is a targeted short term outcome of the PHVS. Figure 4.6 below shows GPs' own perceptions on how far this has been achieved. Almost half of respondents to the GP survey indicated that longer appointments had been provided to deal with more complex patients as a result of the PHVS.

Figure 4.6: Staff Survey Outcomes



Source: Local Staff Survey, PACEC

³⁰ Although answers were given at GP level, please note the survey questions addressed both the GP level and practice level.

³¹ Note that reductions in stress and / or improved job satisfaction were not quantified through the survey.

GP survey respondents believe that the overall quality of care for non-complex patients has benefitted as a result of the PHVS, as illustrated in Table 4.3 below. A total of 17 respondents stated that it has been 'very beneficial' for non-complex patients. For those patients who have complex care needs, the majority of staff surveyed suggested that the service is either 'very beneficial' or 'slightly beneficial' to their quality of care.

Table 4.3: Staff Survey Outcomes (Quality of Care)

Question	Very beneficial	Slightly beneficial	No change	Slightly disadvantageous	Very disadvantageous	Don't know	Skipped question
To what extent has the new PHVS been either beneficial or disadvantageous to the quality of care non-complex patients have received?	17	1	1	0	0	0	0
To what extent has the new PHVS been either beneficial or disadvantageous to the quality of care complex patients have received?	6	7	3	2	0	0	1

Source: Staff e-Survey, PACEC

The respondent reporting 'No change' to the quality of care received by *non-complex* patients stated:

- *"The care the patient got was of the same high level that their own GP would have provided. There were pluses and minuses. The plus was the fact the paramedics had more time and could do additional tasks such as ECG, and also take a prescription to the chemist or take medication back to the patient from our dispensary. The minus was the patient didn't see their own GP and thus didn't have the historical connection and over view with past history and problems."*

The respondents who suggested that the PHVS resulted in 'No change' or was 'Slightly disadvantageous' to the quality of care received by *complex* patients provided the following comments:

- *Can be useful to get baseline observations, but decision making can be more difficult with more complex patients (respondent reporting 'No change');*
- *I don't think the quality of care has gone up or down - the service is just delivered in a slightly different way (respondent reporting 'No change');*
- *Every paramedic visit had a discussion with either the patient's own GP or the duty GP to review the clinical history and management pathway (respondent reporting 'No change');*
- *It is sometimes difficult in more complex cases to get an accurate feel of the challenges involved. There is potential for delay in action if these complex cases are reviewed too often by the paramedic team. The main responsibility for this lies with the GP allocating appropriate visits and defining the specific goal of a visit if it is a complex patient needing review (respondent reporting 'Slightly disadvantageous').*

4.2.3 Improved sustainability in primary care

Eighteen of the 19 GP staff surveyed via RSM PACEC's online questionnaire stated that the service should be rolled out to other localities in the future, which suggests that the PHVS has had a positive effect on sustainability for the practices involved. However when asked to identify *"any significant issues associated with scaling up / rolling out the service"* four out of seven respondents to that question noted shortages of appropriate staff.

In a similar vein, interviews with SCAS representatives noted that there are currently 65 Specialist Practitioners across the trust, with internal estimates suggesting that in order to service the wider Southern Trust area more than four times that number would be required.³² While this is obviously a challenge to future sustainability of the service, in-depth interviews with representatives from SCAS and local GPs proposed solutions to this shortage, including:

- Hiring paramedics directly via GP practices. This option risks affecting recruitment and retention in SCAS due to differences in workplace conditions.
- Use of paramedics or band 6 nursing staff rather than specialist paramedics. Use of nursing staff may assist in scale up insofar as nurses would not impact 999 work.

While steps have been taken to improve recruitment and expand the workforce, SCAS representatives are uncertain as to how quickly this process will deliver new staff. At the time of writing, SCAS is also in the process of creating a mobile health care strategy, part of which will seek to determine the future model for commissioning the service.

Cost and future funding sources were also identified as challenges for future sustainability in the online GP practice survey (one respondent) and in interviews with local GPs, CCG, and SCAS representatives (five interviewees in total). Current funding for training and resources is provided by the Vanguard (Better Local Care), with the cost of the paramedics borne by SCAS through the 999 contract, rather than through practices. Commissioning discussions suggest that this funding model is not expected to continue in future, since patients using the service are not those that would typically call 999. The unit cost assumptions for the specialist practitioners as estimated by SCAS are outlined in the table below:

Table 4.4: Unit cost assumptions

Item combination	Approximated costs (£)
Specialist practitioner (salary cost)	£21 p/h
Specialist practitioner + backfill	£55 - £65 p/h
Specialist practitioner + car + equipment + backfill	£85 p/h

Source: SCAS

The above table notes the need to cover and account for backfill costs for services that use Specialist Practitioners, of which there is currently a shortage.³³

³² Figure drawn from consultation with SCAS representatives.

³³ Backfill refers to a rate which allows another specialist practitioner to cover any other work under SCAS contracts, therefore avoiding staff shortages.

Therefore, while 18 out of 19 respondents to the GP practice survey believe that the service should be continued, and that it should also be rolled out, uncertainty regarding availability of appropriate staff resource to scale up, and lack of clarity regarding a future commissioning model constitute two notable challenges to service sustainability.

4.3 System / team outcomes

4.3.1 Hospital utilisation outcomes

The PHVS sought to reduce the number of ED attendances from Care Homes as a result of falls, and also to reduce the number of A&E attendances among PHVS patients. Information governance issues have prevented analysis of SUS data that could evidence reductions in these two metrics. In the absence of that data, this section presents qualitative findings from the GP practice survey regarding staff perceptions of impact on these metrics. It should be noted that the data has been gathered from participating practices and is therefore subject to response bias.

Approximately 84% of practice staff (n=16) responding to the online survey believed that fewer patients from the locality have been admitted to a hospital as a result of the service than would have otherwise been the case.

4.3.2 Improved integration between primary and acute care teams

A key theme outlined in the GP Forward View is to 'make better use of the wider workforce'. Seventy-nine percent of the staff surveyed stated that the PHVS has been 'very beneficial' in enabling more effective working with community teams. This is an indicator of improved working relationships as outlined in the Business Plan for PHVS.

Table 4.5: Staff Survey Outcomes (Integrated teams)

Question	Very beneficial	Slightly beneficial	No Change	Slightly disadvantageous	Very disadvantageous	Don't know	skipped question
In your view, to what extent has the Paramedic Waterloooville Home Visiting Service been beneficial or disadvantageous in enabling more effective working with community teams and other healthcare related organisations?	15	4	0	0	0	0	0

Source: Staff e-Survey, PACEC

4.3.3 Improved education and training for staff

A key outcome of the PHVS model is training and CPD provision for seconded home visiting staff. Training received to date has consisted of both formal and non-formal mentorship.

The two specialists receive formal weekly mentorship from a locality GP to discuss cases from the previous week. This is reported by PHVS staff to be valuable as it allows them to expand on knowledge (e.g. improving signposting and care navigation skills) and review cases to find the most

suitable solutions for patients. In addition to formal weekly mentorship, the specialists are intended to receive on-the-job learning during case handovers with the GP and assistance in compiling patient plans.

A two-week introduction and familiarisation package for the specialist nurse practitioner and paramedic consisted of visiting various surgeries, meeting clinical leads and observing the multi-disciplinary team. Face to face training on use of the dedicated online service portal was delivered by the IT lead to the two specialists and the four practices involved at that time were given electronic 'how to' guides for claiming patient appointment slots on the online allocation system.

In-depth interviews with PHVS staff have highlighted the considerable value they attach to the professional development that their involvement in the PHVS has provided.

Through in-depth evaluation interviews, MCP leads have indicated a number of ambitions for the enhancing the training and skills element of the model. This includes a proposal that induction for home visiting clinical staff should lead onto a more formal and personalised learning plan. To facilitate this, a generic IT platform would be needed to run an education package and build a portfolio of learning (allowing ongoing professional accreditation).

The current home visiting staff have drafted a bespoke two-day training programme, reflecting their on-the-ground experience over the last six months, which they feel would be of benefit to future staff delivering the service.

The clinical lead has outlined plans for rotation to support both variety and continuity, allowing new staff to be introduced into the service. Newcomers would receive mentorship and familiarisation support from existing specialists, who could then spread the service into new areas. Options are currently being scoped to rotate staff between paramedic work with SCAS and primary care work.

Table 4.6: Two day training programme (draft version)

Agenda	Topic	Delivery
Welcome	Aim	To prepare paramedics for safe and effective practice in primary care
	Introduction	Background, Vanguard, Overview, Lessons learned from the pilot
	Leg Problems	DVT, Knee pain, Oedema, Cellulitis, Gout
Clinical	Chest Problems	Chesty cough, Chest Infection, Pneumonia, Infection versus Failure, Revision of respiratory sounds and assessment, EOCOPD
	Diarrhoea and vomiting	Stool type, The value of a timeline, Clues to dehydration, Constipation/Obstipation, Impact on medications – what to stop, Treatments
	Urinary symptoms	Common symptoms, Revise interpretation of the urine strip, Risk groups, Assessment of when to treat
	Abdominal and groin pain	Revision of the assessment of the abdomen, Red flags
	Back pain	Assessment of; red flags, Medications, Recovery
	Rashes	Shingles/Chicken pox, Thrush, Intertrigo, Meningococcal septicaemia
	ENT	Tonsillitis, Oral thrush, Ear infection
	Samples	Sending samples, Pots and swabs, Bloods
	Information Technology	EMIS, Locality website, Auditing, Remote documentation
Non-clinical	Referrals	Community Services, Integrated care teams, CRIS, Outcomes
	Etiquette	Workflow, Feedback to GPs, Named GPs, Duty GPs
	Hardware	Vehicles, Equipment
	Administrative	Passwords, Prescriptions, Contact Numbers
	Others	Indemnity, Photography, Vine Paramedics, Uniform, Mentorship
	Inspirational 'send-off'	Prognostication, The 3 rules of medicine, Best practice

Source: PHVS Training Update December 2016

5 FINANCIAL AND ECONOMIC ASSESSMENT

5.1.1 Project Costs

Costings for PHVS – Phase 1		
Cost Planned	Unit / WTE	2016/17
Paramedic training	3.00 FTE paramedics at £3000 each based on 15 days at £200 per day	£9,000
EMIS Anywhere	Patient Record EMIS for four practices (TPP & Vision used on site)	£5,640
Induction training for paramedics	Two weeks at £30 per hour for trainer	£6,750
Recruitment costs	Advertising, shortlisting, interviewing plus employment documentation – lead organization to be determined	£6,000
Equipment for paramedics	Based on equipping mobile bag at £500 per unit	£1,500
Uniform	Based on two uniforms per paramedic	£600
Total Non-Recurring Costs		£29,490.00
Ongoing Training Requirements	Paramedics ongoing training based on £1,000 per post-holder	£3,000
EMIS Anywhere	Patient Record EMIS for four practices (TPP & Vision used on site) – recurring license costs	£1680
Telephony	Three mobile phone contracts on recurring basis	£1,260
Paramedics	3.00wte Paramedic posts with extended skills training (basic salary £35,000 plus enhancements and on costs at 30%) = 2 staff across locality as 1.40wte to cover shifts	£182,130
Professional indemnity	£2500 per paramedic	£7,500
Travel expenses	Based on 0.45p per mile at 30 miles per day (per paramedic)	£10,000
Clinical governance	Appraisals, training/monitoring (based on 3 hours of GP time per month), ongoing evaluation of project	£15,000
Telephony	Ongoing telephony costs	£1,500
Administrative Support	WTE Band 4 with on costs	£25,000
GP Premises Costs	To enable Paramedics to access several bases across the locality with access to telephony/IT etc. Based on £1,000 per practice	£6,000
Total Recurring Costs		£253,070.00
Total Costs 2015/16 (based on the service starting from 01/03/16 with associated start-up costs released in 2015/16)		£53,036.67
Total Costs 2016/17		£253,070.00
Total Costs 2017/18 onwards		£253,070.00

Source: PHVS Bid Document

5.1.2 Unit cost savings

A key attraction in terms of savings outlined in the original business case is the difference in the unit cost of care delivered by non-GP specialists compared to GPs. Average GP gross income is more than double that of specialist paramedics, implying substantial differences in per-appointment or per-hour costs, all other things being equal. There are major differences in overhead cost and service delivery, discussed below. Lack of data regarding hospital usage among the PHVS cohort places significant limitations on the extent and credibility of any economic analysis regarding system impacts. In the absence of that data, the only savings to the wider system would result from activity that GP practices fund directly, which is not how the PHVS has been funded.

Cost savings estimates (set out in Table 5.1 below) on a 'per appointment saved' basis (i.e. accounting for the whole recurring cost of the project) suggest a net value of in-practice appointments of £188,160 against non-overhead projects costs of £252,070. However, these figures include the assumption that significantly more patients would have been seen overall as a result of the project (see cost element b.).

Table 5.1: Cost savings estimate (appointment basis)

Cost element	Value
a. Number of paramedic visits (whole programme life)	1,176 paramedic visits in 10 months
b. Equivalent number of in-practice visits facilitated (1:4)	4,704 GP in-practice appointments ³⁴
c. Cost per 11.7 min GP appointment (NHS 2015 unit costs)	£40 ³⁵
d. Value of appointments facilitated	£188,160
e. Non-recurring cost of PHVS	£253,070
f. Net difference	(64,910)

Source: PSSRU – Unit Costs of Health & Social Care 2015

Table 5.2 overleaf suggests unit cost net savings of between £25,755 and £71,411 resulting from the project. However, these costs do not account for utilisation affects considered in 5.1.3 (Actual savings) below.

³⁴ Assumes 1:4 ratio (4.25 visits / shift for paramedics = 17 in-practice appointments per shift for GPs in NHS Wales pilot)

³⁵ Excluding direct care staff costs, with qualification costs

Table 5.2: Cost Savings Estimate (unit cost basis)

Cost element	Value
a. GP cost per hour of patient contact ³⁶	£207
b. GP cost per hour of GMS activity	£129
c. GP hours saved per PHVS patient visited	0.497
d. GP home visiting hours saved (estimate for 1,176 patients)	585
e. Gross saving (cost) of 585 GP hours	£121,165 (a.) to £75,509 (b.)
f. Specialist practitioner cost per home visiting hour (estimate) ³⁷	£85
g. Specialist practitioner cost for 585 home visiting hours ³⁸	£49,754
h. Net saving (estimate)	£71,411 (a.) to £25,755 (b.)

Source: Health & Social Care – unit costs, including qualification, 2016. [Figures do not account for any travel time saved. The GP hours saved / patient ratio is taken from the September 2016 outcomes report, which found 110 GP hours saved from 221 patient visits.]

5.1.3 Actual savings

The above estimates rely on broad assumptions, but provide an early indication of the potential for savings over the longer term.

Net savings figures must account for the full range of differences between the intervention and counterfactual however.

The above data does not include:

- Changes in ED and A&E admissions as a result of patients being seen by a paramedic rather than a GP
- Changes in ED and A&E admissions as a result of patients being seen earlier in the day
- Non-equivalent service provision. GP home visits are likely to be quicker as a result of:
 - Greater familiarity with patients and their clinical issues
 - Greater powers to prescribe, deliver on-the-spot solutions
 - Differences in patient expectations, with paramedic staff typically called upon to provide a wider range of time-consuming support functions.
- GP input and follow-up on paramedic appointments (see above). Service data indicates that the majority of home visits involved some amount of GP follow up.
- Unit costs only account for appointment time, and do not reflect utilisation. If paramedic staff are being under-utilised in practices relative to secondary care work then the real cost difference between GPs and paramedics could equalise or become net negative.
- Differences in utilisation as a result of the service. The number of in-practice appointments that can be delivered as a result of paramedic home visiting is likely to be considerably larger than the number of home visits a GP would have undertaken in the equivalent time. (A major study

³⁶ PSSRU Unit Cost data (2015). Excludes time taken to travel, excludes direct care staff costs, includes qualification costs

³⁷ Approximated cost including the cost of a car, equipment and backfill

³⁸ Excludes the increased time for discussion with patients' GP

undertaken recently in Wales found that a paramedic practitioner carried out approximately 4.25 patient contacts in a 5-hour shift, freeing up time for 17 GP in-practice contacts).³⁹

A number of the factors above are difficult to monetise and may deliver overall savings in other areas of the health and care system. For instance, paramedics performing a wider range of support within homes (e.g. support in dressing patients or providing information) may be carrying out work that would otherwise need to be done by local community or social care services.

Table 5.1 below provides a cost-benefit matrix – the list is not exhaustive, but is confined to fundamentals (excludes unintended benefits such as savings to social care system).

Table 5.1: Cost-Benefit Matrix (fundamentals)

Costs	Benefits
Start-up (non-recurring) costs: £29,490 Paramedic training, recruitment uniform and equipment. Ongoing (recurring) costs: £253,070 Ongoing training, EMIS anywhere, wages, insurance, travel, premises and administration.	<ul style="list-style-type: none"> • Patients seen earlier in the day • GP appointments substituted at lower unit cost • Paramedic workforce satisfaction • GP workforce satisfaction • Paramedic skills development

An exhaustive assessment would need to account for costs and benefits across the entire health and care system over time, including:

- annualise start-up (non-recurring costs) across the life-cycle of the programme, applying discounts to account for depreciation effects.
- account for duplication effects across the care system (e.g. if paramedics are being costed for indemnity insurance in both GP practices and SCAS).

³⁹ NHS Wales pilot “One Paramedic + One GP = Four GPs” (2015)

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Strategic fit

The project demonstrates strong alignment with national health policy objectives set out in the FYFV – particularly the need to provide stronger patient experience, a joined-up service through technology utilisation and efficient use of clinical data⁴⁰ and a reduction in pressure on key entry points.

The service also supports the central objective laid out in the GPFV of reducing GP workload and making more efficient use of appointment time for complex cases. Additionally, PHVS aligns with and contributes to delivering the South East Hampshire MCP Frailty strategy/patient pathway in Waterlooville.

Recent research into measures to reduce emergency admissions to hospitals and GP practices, highlights the role of intermediate care and out-of-hospital/at-home services amongst the most popular responses piloted around England.⁴¹ In a report on effective approaches in urgent and emergency care, NHS Interim Management and Support (NHSIMAS) highlights that:

- Primary care can smooth demand for ambulance conveyance by responding rapidly to requests for urgent home visits and ensuring they are not “batched” at the end of surgeries. This helps reduce mid-afternoon arrival peaks in ED departments and assessment units that causes crowding and increases admission rates.
- Practices should consider the guidance of the Primary Care Foundation⁴² to ensure that avoidable access issues do not provoke patients to call ambulances or by-pass the practice to seek help in emergency departments.

6.2 Patient outcomes

6.2.1 Improved access to care

The PHVS seeks to deliver improved access to care for registered patient populations by seeing increasing proportions of patients on the morning that a home visit is requested, and visiting higher proportions of patients within 2 hours of a home visit request.

A key short-term outcome outlined in the logic model is to have the majority of home visits completed before noon. Between June 2016 and February 2017, from a total of 990 recorded visits, 474 occurred before 12pm (48%) and 516 recorded visits have occurred after 12pm.⁴³ Overall, the proportion of patients seen before noon grew as the service matured.

The majority of patients are seen within two hours of a slot being claimed, with 39% (n=357) of patients seen within an hour and 27% (n=251) seen between 1 and 2 hours. However, there was a notable

⁴⁰ Not yet being implemented

⁴¹ Ham et al 2010, ‘Avoiding Hospital Admissions: Lessons from evidence and experience’, The King’s Fund

⁴² Primary Care Foundation, 2009, ‘Urgent Care: A Practical Guide to Transforming Same Day Care in General Practice’, 2009, Department of Health

http://www.primarycarefoundation.co.uk/images/PrimaryCareFoundation/Downloading_Reports/Reports_and_Articles/Urgent_Care_Centres/Urgent_Care_May_09.pdf

⁴³ Please note 22 records were removed in this count due to recording errors.

lag early in the day between patients requesting a home visit when practices opened (around 8am) and GPs allocating those cases much later in the morning, which suggests scope to further increase the proportion of patients seen before midday.

Using a similar scheme as a benchmark (the St Helens Acute Visiting Service) suggests that at 39% of patients seen within 1 hour, the PHVS impact on patient access falls between what could be expected under a regular GP home visiting scheme (fewer than 10% of home visits were conducted within an hour of being requested) and what could be achieved if issues regarding process lags and technology issues were addressed (76% of St Helen's home visits were completed within an hour of being requested).

6.2.2 Improved patient experience

Ninety-five percent of PHVS patients (n=38) reported that their visit occurred at the expected time; 79% of patients were aware of the role of the professional visiting them; 100% of patients believed they were treated in a kind / caring manner; and 100% of patients stated that everything was clearly explained to them.

One hundred percent of patients (n=38) reported that they were either 'satisfied' or 'very satisfied' that their issue had been resolved; and the same number reported that they were either 'happy' or 'very happy' with the service.

A small minority of patients remain keen to see their GP: It's *"not the same as having your own GP that knows you and your history. It was not explained why [Paramedic] was unable to give [medicine] - but immediately organised a prescription for [medicine via the GP]. GP called back the next day."*

6.2.3 Improved patient outcomes

Data collected from the SCAS paramedic team provides a snapshot of patient and referral outcomes for 901 home visits. In 36% of cases (n=331) the outcome was a discussion with a GP only; in 41% of cases (n=379), advice and a prescription was issued.

For those patients that were seen via a home visit, 247 resulted in an intervention (24% of the total patients visited). The PHVS team delivered a wide range of interventions, however just under 60% of the interventions delivered by the PHVS were in support of urologic conditions.

Lack of control group data prevents assessment of impact against a counterfactual scenario.

6.3 GP / staff outcomes

6.3.1 Reduced GP workload / stress

A total of 19 out of c.37 GPs (51%)⁴⁴ at four participating practices responded to a survey administered by the evaluation team in February 2017. A majority of respondents (n=16) indicated that the PHVS had freed-up time and reduced their existing workload.

Seventeen GPs were asked to estimate added time costs/savings as a result of the service. Survey responses indicate that on average, 1.5 hours per week of GP time were spent on the service, and 4.5 hours of GP time were saved. This would represent a theoretical net effect of 3 hours (CI 95% [4 hours 41 mins, 1 hour 18 mins]) saved per week for each GP involved in the service, though these figures are somewhat tentative given that they are based on subjective time estimates.⁴⁵

Approximately one fifth of GPs commented that there were additional job satisfaction benefits such as the reduction in stress from knowing they wouldn't have to leave mid-surgery to attend to patients at home.⁴⁶ Several GPs wrote in comment sections that they did still carry out home visits, but that these were fewer and typically involved more complex cases. Below are representative quotes from GP practice survey responses.

- *"The pressure on time during on-call days is now more manageable. It had previously been "retiring early soon" levels of manic!"*
- *"It has really made a significant impact on my day and relieves a burden on an already pretty frantic day."*

6.3.2 Increased GP time to focus on complex cases

Almost half of respondents to the GP survey indicated that longer appointments had been provided to deal with more complex patients as a result of the PHVS.

A total of 17 out of 19 GP survey respondents (89%) stated that the PHVS had been 'very beneficial' for non-complex patients. Thirteen of the 19 survey respondents (68%) suggested that the service was either 'very beneficial' or 'slightly beneficial' for patients who have complex care needs.

The respondents who suggested that the PHVS resulted in 'No change' or was 'Slightly disadvantageous' to the quality of care received by *complex* patients provided the following comments:

- *Can be useful to get baseline observations, but decision making can be more difficult with more complex patients (respondent reporting 'No change');*
- *I don't think the quality of care has gone up or down - the service is just delivered in a slightly different way (respondent reporting 'No change');*

⁴⁴ Respondents were asked to state the number of GPs employed at their practice. The numbers returned for each practice varied slightly. The 37 figure uses lowest estimates for each practice.

⁴⁵ Although answers were given at GP level, please note the survey questions addressed both the GP level and practice level.

⁴⁶ Note that reductions in stress and / or improved job satisfaction were not quantified through the survey.

- *Every paramedic visit had a discussion with either the patient's own GP or the duty GP to review the clinical history and management pathway (respondent reporting 'No change');*
- *It is sometimes difficult in more complex cases to get an accurate feel of the challenges involved. There is potential for delay in action if these complex cases are reviewed too often by the paramedic team. The main responsibility for this lies with the GP allocating appropriate visits and defining the specific goal of a visit if it is a complex patient needing review (respondent reporting 'Slightly disadvantageous').*

6.3.3 Improved sustainability in primary care

All but one of the GP survey respondents stated that the service should be rolled out to other localities going forward, indicating that PHVS has had a positive, sustainable effect on the practices involved. However, out of the seven respondents who elected to identify "any significant issues associated with scaling up / rolling out the service" four noted shortages of appropriate staff.

Similarly, interviews with SCAS representatives noted that there are currently 65 Specialist Practitioners across the trust, with internal estimates suggesting that more than four times that number would be required to roll out the service to the wider Southern Trust area.

Online GP survey respondents indicated that future costs and funding sources were challenges for sustainability of the initiative, a theme also resonated in interviews carried out with GPs, CCG and SCAS representatives by the RSM PACEC team. Funds for training and resource provision is currently provided by the Better Local Care Vanguard, with the cost of paramedics borne by SCAS through the 999 contract rather than via practices. Commissioning discussions suggest that this funding model is not expected to continue in future, since patients using the service are not those that would typically call 999.

Although 18 out of the 19 GP respondents' to the online survey believe the pilot should be continued and rolled out more widely, uncertainty about available staff or resources to support this scale up mean there is a lack of clarity regarding a future, sustainable service.

6.4 System / team outcomes

6.4.1 Hospital utilisation outcomes

Information governance issues have prevented analysis of SUS data that could evidence reductions in these two metrics. Approximately 84% of practice staff (n=16) responding to the online survey believed that fewer patients from the locality have been admitted to a hospital as a result of the service than would have otherwise been the case.

6.4.2 Improved integration between primary and acute care teams

Seventy-nine percent of the staff surveyed stated that the PHVS has been 'very beneficial' in enabling more effective working with community teams, improved education and training for staff.

Both formal and non-formal mentorship and training was provided to PHVS staff members, and in-depth interviews with PHVS staff have highlighted the considerable value they attach to the professional development that their involvement in the PHVS has provided.

6.5 Funding and sustainability

The service enjoys significant local buy-in and is used frequently by all participating practices. A majority of slots available to each practice are claimed.

There is further work to be done to ensure services can be supported in a manner that ensures equity across practices and appropriate use of local commissioning funds.

6.6 Recommendations

- **Recommendation 1:** disseminate findings widely given that the evidence could contribute to the strategic need for a clearer, more varied Paramedic career path, and may provide learning for other Home Visiting interventions.
- **Recommendation 2:** findings from the staff survey indicate that there is notable appetite among participating practices for the PHVS to be extended. Options for spread should be considered, with a particular focus on overcoming staff resourcing and financing issues.
- **Recommendation 3:** explore options for providing Paramedics' with access to patient data. The home visiting team can only access patient record data by travelling to the relevant practice. Appropriate technology would allow home visiting staff access to patient record data from any location and result in notable time and travel savings.
- **Recommendation 4:** develop and implement common case allocation protocols to ensure clinical decisions are made earlier in the day, so that paramedics are dispatched as soon as cases come in, thus providing a shorter time between initial call and home visit.
- **Recommendation 5:** maximise potential benefits of the web portal, which was an unintended benefit. The web portal was created for management of available slots and the home visiting staff schedule. Interviewees suggested that the portal could be developed to monitor more patient / user / service outcomes, such as those outcomes from patients that are from care / nursing homes.
- **Recommendation 6:** explore the potential for applying research funding to conduct a larger evaluation study addressing robust evidence of effectiveness and cost-effectiveness of the pilot.



APPENDIX 1- METHODOLOGY OUTLINE

Overview

RSM PACEC's methodology for this deep dive report used a mixed-method approach, using a variety of research methods evaluating both qualitative and quantitative data. The key methods used within this reports approach are outlined in the sections below.

Time scale

This evaluation covers the period of May 2016 to February 2017/

Key metrics

The key outcomes and indicators this report use for analysis and the key indicators demonstrating goal progress or achievement are summarised below

Beneficiary Group	Outcome	Indicator(s)
Patients	<ul style="list-style-type: none">• Improved access to care;• Improved patient experience;• Improved patient outcomes.	<ul style="list-style-type: none">• Increasing number of home visits completed before 12;• Reduced waiting times;• High patient satisfaction.
Staff (GPs)	<ul style="list-style-type: none">• Reduced GP workload / stress;• Increased GP time to focus on complex cases;• Improved sustainability in primary care.	<ul style="list-style-type: none">• Increasing number of home visits completed (see Section 3);• GPs reporting reduced workload / increased capacity for complex cases;
Teams / System	<ul style="list-style-type: none">• Reduced attendances at A&E / ED;• Reduced hospital admissions;• Improved integration between primary and acute care teams;• Improved education and training of staff.	<ul style="list-style-type: none">• 3% reduction in A&E / ED attendances among the PHVS cohort 6 months pre / post intervention (not available);• Reduction in hospital admissions among the PHVS cohort 6 months pre / post intervention (not available);• Reduction in ED attendances from Care Homes as a result of falls (not available);• GPs report practice benefits as a result of the service;• Staff report positive effects on integration between primary and acute care teams;• Staff report positive experience of education and training opportunities.

Staff Interviews

Seven staff from CCGs, SCAS and local practices were interviewed in total (some in joint interviews). The breakdown of interviewed staff is detailed below.

Role	Organisation
General Practitioner	Cowplain Family Practice
General Practitioner	Vine Medical Group
Senior Commissioning Officer	South Eastern Hampshire & Fareham and Gosport CCG
Commissioning Manager Emergency Planning Officer	Southern East Hampshire CCG
Specialist Nurse Practitioner	SCAS
Specialist Paramedic	SCAS
IT Co-Ordinator/ Manager	Vine Medical Group

The interviews were semi-structured, with some questions asked to all and others tailored to the specific role of each interviewee. The interviews were designed to evaluate the projects strategic fit, sustainability and it's potential for scale-up or roll-out elsewhere. The baseline topic guide used as the starting point for these interviews can be found in Appendix 2.

Assessment of Triage data and Clinical Outcome data

The PHVS team provided the RSM PACEC evaluation team with management data they had collected during their operation which was used to inform much of our analysis. PHVS appointment data was also used to determine frequency of appointments that occurred before noon and average waiting times. The following table shows the available data under specific timeframes.

Table: Data used

Data type	Timeframe
<ul style="list-style-type: none">• Number of home visits• Number of appointments claimed• Number of appointments available	29 th May 2016 – 28 th February 2017
<ul style="list-style-type: none">• Outcomes of paramedic home visits• Symptoms of paramedic visits• Type and number of interventions	29 th May 2016 – 1 st February 2017

GP survey

In January 2017 37 GPs from four participating practices were invited to completed anonymised online survey designed by the PACEC RSM Evaluation team. The survey was hosted on Survey Monkey and advertised to GPs through practice emails. 19 responded in total. A breakdown of responders are detailed below and the Survey questions are listed in Appendix 3.

Practice	Number of respondents
Denmead	3
Queenwood	1
Cowplain Family Practice	6
Vine Medical Group	9

Patient Survey

Feedback was collected by PHVS staff from 38 patients following their visit (representing just under 4% of patients seen by the service). These results cannot be deemed to be representative and should be interpreted with caution due to the small sample size and potential for bias. However, they do provide an indication of PHVS patient experience. This survey was designed by the Paramedics team and it should be noted that the response rate is unavailable.

As no control group was used to collect similar data it is not possible to state if levels of satisfaction are improved or otherwise compared to the counterfactual scenario. The survey given to patients can be found under Appendix 4.

Methodology Limitations

Limitations in the study include:

- Home visiting staff gathered patient feedback directly. While this is a perfectly acceptable approach given the profile of patients involved, and logistics of capturing data, caution should be exercised in interpretation of the results given the risk of response bias.
- Robust cost-savings analysis was hindered by the lack of a common standard on the unit cost of care by profession. The report makes tentative calculations regarding the economic impact and effectiveness of the project, though these should also be treated with caution given the relatively small sample size and comparatively short project time span.
- Lack of access to data Secondary Use Statistics meant that evaluation of some key outcomes (namely Hospital Utilisation outcomes) was limited



APPENDIX 2 – STAFF INTERVIEW GUIDE

STAFF INTERVIEW – TOPIC GUIDE

Project specific Questions

- Q1. Who claims appointment slots within the practice?
- Q2. How do the handovers work (from paramedics to GP)?
- Q3. Do you offer mentoring/go over case studies?

Process Evaluation Questions

- Q4. What have been the main implementation successes?
- Q5. How have these been achieved / what have been the drivers behind success and can they be replicated?
- Q6. What have been the main implementation challenges?
- Q7. How could / should these challenges be overcome [practical steps required to improve]

Impact Evaluation Questions

- Q8. In your view what difference has PHVS made in each of the following areas, and most importantly, how / what are the reasons behind the differences:
 - a) Information sharing
 - b) More general team collaboration
 - c) Any other intended or unintended effects

Sustainability & Commissioning Questions

- Q9. What if any awareness do commissioners have of the intervention?
- Q10. Are you aware of commissioning intentions, and any associated expectations for the intervention?

Q11. [If relevant based on previous answer] what practical steps need to be taken to meet commissioning expectations (including any evidence requirements)?

Q12. To what extent is the intervention perceived by staff as providing VfM currently?

Q13. How, if at all could VfM be improved e.g. cost savings, increasing take up etc.?

Q14. How can VfM improvements be practically achieved (what are the steps required to deliver improvement)?

Q15. In your view is the intervention currently being implemented in a sustainable way in terms of

- a) type and availability of physical and staff resources; and
- b) future budgets / commissioning plans?

Q16. **Can** the intervention be delivered sustainably ***in future at scale***, again in terms of

- c) type and availability of physical and staff resources; and
- d) future budgets / commissioning plans?

Q17. If so, what practical changes need to be made to deliver the intervention sustainably in future?



APPENDIX 3: RSM PACEC ONLINE GP SURVEY

1. Please enter the name of your practice.

2. Please provide your practice number (if you have it to hand)

3. How many GPs are employed full time by the practice?

4. Have you used the new PHVS to date?

Yes
No
Don't Know

5. Please use the space below to briefly describe how you have used the PHVS.

6. Please use the space below to briefly describe how you have not used the PHVS.

7. Approximately when did your practice start using the PHVS?

8. To what extent has the new PHVS been either beneficial or disadvantageous to the quality of care non-complex patients have received?

Very beneficial
Slightly beneficial
No change
Slightly disadvantageous
Very disadvantageous
Don't Know

9. Please use the space below to briefly state the reasons for your answer

10. To what extent has the new PHVS been either beneficial or disadvantageous to the quality of care complex patients have received?

11. Please use the space below to briefly state the reasons for your answer

12. In your view, has the Paramedic Waterloooville Home Visiting Service had any impact on the level of hospital admissions from the locality?

Yes, I believe that fewer patients from this locality have been admitted to hospital as a result of the PHVS than would have otherwise been the case.	No, I don't believe that the PHVS has had any impact on the number of patients being admitted to hospital from the locality.
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13. Please use the space below to explain how the PHVS has helped reduce hospital admissions.

14. On average, do you believe that the new PHVS means that your patients get seen earlier than they would otherwise be seen in the absence of the service?

15. Please provide an estimate of how much earlier your patients are seen as a result of the new PHVS, on a typical day.

An hour earlier or less
1 - 2 hours earlier
2 - 3 hours earlier
3 - 4 hours earlier
4 - 5 hours earlier
5 - 6 hours earlier
More than 6 hours earlier
If you selected more than 6 hours earlier please use the space below to provide the number of hours. Please enter a whole number.

16. In your view, to what extent has the Paramedic Waterloooville Home Visiting Service been beneficial or disadvantageous in enabling more effective working with community teams and other healthcare related organisations?

Very beneficial
Slightly beneficial
No change
Slightly disadvantageous
Very disadvantageous
Don't Know

17. Please use the space below to briefly state the reasons for your answer.

--

18. Please use the space below to identify any other benefits that the PHVS has had for primary care services / the primary care system in the locality.

19. Please use the space below to identify any negative effects that the PHVS has had for primary care services / the primary care system in the locality.

20. Please estimate the amount of additional administrator time you / your Practice has spent supporting the implementation of the new PHVS on average in a typical week. Please note that we are asking here about time that would not otherwise have been spent on similar activity. Please enter a number to the nearest whole hour.

21. Please estimate the amount of additional GP time you / your Practice has spent supporting the implementation of the new PHVS per GP on average in a typical week. Please note that we are asking here about time that would not otherwise have been spent on similar activity. Please enter a number to the nearest whole hour.

22. Please estimate the amount of administrator time you / your Practice has saved on average in a typical week as a result of the new PHVS. Please enter a number to the nearest whole hour.

23. Please estimate the amount of GP time you / your Practice has saved per GP on average in a typical week as a result of the new PHVS. Please enter a number to the nearest whole hour.

24. Please use the space below to describe any other cost or time savings that your practice has derived as a result of the new PHVS.

25. Please indicate how the majority of any time you / your Practice has saved has been allocated (in a typical week)?

Providing longer appointments for more complex patients
Catching up with paperwork / reducing existing workload (e.g. telephone consults / e-consults / existing appointments)
Dealing with Practice management issues

Personal time in work (e.g. taking a lunch break, going for a walk etc.)
Taking time off
Attending clinical meetings with other services e.g. GSF meeting for palliative care patients

26. Do you personally feel any difference to the Practice has been achieved as a result of any time saved due to the new PHVS?

Yes
No

27. Please use the space below to provide any further information you believe is important for the evaluation of the PHVS to consider?

--

28. If necessary, a member of the evaluation team may wish to contact you to understand more about these cost savings. If you are willing to discuss further please use the space below to provide an appropriate telephone number.

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29. Overall, in your view does the PHVS provide benefits to the primary care system and / or individual GP practices that wouldn't have been derived otherwise?

Yes
No
Don't Know

30. Could you please outline any of these benefits?

--

31. In your view should the PHVS continue to operate in future?

Yes
No
Don't Know

32. Please use the space below to provide a reason for your answer.

--

33. In your view can the PHVS be sustainable in future in terms of a) funding b) appropriately skilled and experience staff and c) physical resources?

Funding
Skilled and Experienced Staffing
Physical Resources

34. Please use the space below to provide a reason for your answer.

--

35. In your view could the PHVS be delivered more cost effectively in future?

Yes
No
Don't Know

36. Based on your experience, should the PHVS be extended / rolled out to other localities in future?

Yes
No
Don't Know

37. Please use the space below to provide a reason for your answer.

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APPENDIX 3: PATIENT SURVEY

New Home Visiting Service (Waterlooville) Patient Questionnaire

Q1. GP Surgery

Denmead Health Centre
Vine Medical Group
Queenswood
Cowplain Family Practice
Unsure

Q2. Are you the Patient?

Patient
Carer for Under 18
Carer for Over 18

Q3. Was Visit at Expected Time?

Yes
No
Don't know

Q4. Aware that Paramedic or Nurse Attending?

Yes
No
Don't know

Q5. Were you treated in a kind/caring manner?

Yes
No
Don't know

Q6. Was everything explained clearly to you?

Yes
No
Don't know

Q7. How satisfied were you that issue was resolved?

Very satisfied
Satisfied
Neither satisfied or unsatisfied

Unsatisfied
Very unsatisfied

home visit service?

Q8. Were you happy with your new

Very Happy
Happy
Neither happy or unhappy
Unhappy
Very Unhappy

Q9. Would you recommend this service?

Yes
No
Don't know

Q10. Comments on things doing well

Q11. Any improvements?

Yes:

No



APPENDIX 5 – SUMMARY OF INDICATORS

The table below sets out the performance indicators identified in the original PHVS business plan, and notes which of these were available for use in the evaluation report at the time of writing.

Indicator	Available to evaluation?
• Number of requests to participating practices for home visit (including direct patient requests, domiciliary requests and / or nursing / care home requests);	Yes
• Number of visits provided by the PHVS;	Yes
• Time of day all Paramedic Home Visits completed; OR	Yes
• % Completed pre 12.00 and % completed after 1200;	Yes
• Number of visits by the PHVS that do not require a subsequent GP Visit within a week;	No
• Number of onward referrals to community support services that result in care at home;	No
• Number of patients seen by the PHVS that require a subsequent admission within a week; and	No
• Number of patients with a fully complete care plan.	No
• GP clinic sessions would run to time (as GP capacity released)	No
• Releasing pressure on primary care for complex patients to be seen, GPs feel they have more time	Yes
• High level of Patient satisfaction	Yes
• (Reduction in) The number of ED attendances from Nursing and Care Homes	No
• Case Study of specific patients where admission avoided	No
• Quality of life question and MDT question on survey	No
• Reduction in A&E attendances (> 3% in first 3 months- this cohort; 5% in 2016/17 and 10% in 2017/18	No
• Staff reporting increased control and improved patient care	Yes
• >85% of patients would recommend their practice (pilot sites only)	No (due to GP Patient Survey Time Lag)