Interim report

London Innovation Collaborative evaluation of remote monitoring in care homes

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South London

Contents

Executive summary

- Care home staff are **excited about the use of remote monitoring solutions** to improve the residents' experiences, and believe the products will benefit the home and the wider healthcare system

- Care home staff feel that **communication with primary care is generally professional, friendly and responsive.** There can sometimes be strained and rushed experiences but the care home staff are confident that digital technology can improve this

- There are some **concerns around additional tasks and time pressures for care home staff** using faulty technology or technology that requires the repetition of tasks

- Usage across London differs by locality (CCG/ICS) and provider but in excess of **160,000 vitals** have been collected, and **61,000 NEWS2 or risk assessments** have been calculated since Jan 2020

Implementation and embedding of the remote monitoring technology is ongoing and increased usage to support the care of residents can be expected

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Introduction

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Background to the Innovation Collaborative

- NHSX partnered with the national Academic Health Science Network (AHSN) to establish a national Innovation Collaborative, creating a connected network to rapidly share learning and best practice in digital transformation across the NHS and care sector.

- As part of this initiative, NHSX has provided implementation funding to the seven regions in England to scale projects that use technology, devices or apps to support the monitoring and management of people's health at home or their place of residence.

LONDON

Many areas of London have deployed remote monitoring technologies within certain areas of their localities, and the five ICSs have committed to work collaboratively to support the increased use of remote monitoring across various pathways under the London Innovation Collaborative.

As part of a commissioned programme of work through the London Digital First Programme, an evaluation of the London regional scale of remote monitoring in care homes is being delivered by the Health Innovation Network.

Additional resources:

- An overview of the London Innovation Collaborative from the regional innovation series

- National work from the Innovation Collaborative - Future NHS page

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London Innovation Collaborative interim report and evaluation

- This interim report summarises the **baseline survey of care home staff** to understand their experience, confidence and perspectives on remote monitoring solutions, and the **usage of the solutions to date** using supplier data

- A prospective mixed methods evaluation will be delivered in April 2022

- The full evaluation report aims to share the general effect of remote monitoring solutions in care homes across London and identify what system improvements were made, sharing the learning around enablers and barriers

- The final evaluation will encompass:
  - The period from go-live (different for each care home) to 31 December 2021
  - The perspectives of those who engage with the platforms (care home staff, GPs) and intermediary organisations that support/coordinate care home operations, though surveys and interviews
  - The analysis of supplier usage data from care homes that are part of the roll-out from across the 5 London ICSs
  - Benefit analysis using London Ambulance Service and hospital activity data

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Key points to note

- North West London ICS will be included in the evaluation but are not represented in the interim report due to a later go-live date for care homes

- The baseline care home survey was not mandatory so results do not reflect all care homes using a remote monitoring solution and therefore might not represent the demographic and perspectives of all care home staff

- There were a number of care homes who were already using a remote monitoring solution when surveyed, these staff were asked to reflect to a time before the product was live

- The dissemination methods of the survey to each care home were different in each ICS

- Data from Inhealthcare was not available for the interim report but will be included in the evaluation

- The data range for each supplier dataset is detailed on the relevant summary slide

- It is difficult to draw London-wide comparisons about the usage of the solutions due to the different suppliers, time periods of reporting, care home type and the support offered

- 'Vitals' collected by the remote monitoring solutions referred to in this report are defined as:
  - Clinical measurements to monitor the body's basic functions, such as blood pressure, pulse rate, oxygen saturation and temperature

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Project details

South West London

- **Aim of the project**: Implement VCare in five of the six SWL localities and expand the use of the Whzan Blue box in existing care homes as well as implement in additional care homes in Wandsworth. This will align with clinical training of a nationally recognised clinical pathway and meet information governance requirements, whilst creating a new digital support team to help care homes use their technology effectively and embed in daily routines.

- **Adoption and implementation model**:
  - Staffing model: Digital Integration Support and Liaison Officers (DISLOs) work closely with care home staff to encourage uptake, support onboarding and help manage challenges, as well as ensuring staff are confident using the systems in their day to day work.
  - Additional offering:
    - Online 'showcase' launch events for groups and individual care homes, as well as GPs and community teams, featuring a live demo and an overview of the project's purpose and benefits have taken place to introduce the technology
    - Support care homes with other digital upskilling projects, such as NHSmail and Data Security and Protection Toolkit

- 120 care homes are set to adopt a remote monitoring solution

- **Solutions in use**: VCare and Whzan

- **For more information contact**:
  - Jenny Freeman and Lucy McCulloch: SWLcarehomes.admin@swlondon.nhs.uk

South East London

- **Aim of the project**: Expand the existing Docobo remote monitoring scheme and introduce ARC to help care home residents continue to receive high quality care from their GP.

- **Adoption and implementation model**:
  - Staffing model: Borough leads, clinical leads and suppliers working together with care homes and GPs to deliver training and ensure successful uptake.
  - Additional offering:
    - Tailored training programmes for each care home, with group training, one-to-one support sessions and webinars
    - GP practices get their own dedicated training

- 66 care homes are set to adopt a remote monitoring solution

- **Solutions in use**: Docobo and ARC

- **For more information contact**:
  - Ross Wickens: ross.wickens1@nhs.net
  - Richard Ince: richard.ince1@nhs.net

North East London

- **Aim of the project**: Expand the existing Feebris remote monitoring scheme and introduce Inhealthcare into all care homes. The project involves the creation of new 'digital peer champion' roles to help improve the digital capability of care homes and to help play a central role in embedding the remote monitoring technologies.

- **Adoption and implementation model**:
  - Staffing model: A team of Digital Project Support Officers support the implementation process, while Digital Peer Champions from existing care home staff help embed the new technologies.
  - Additional offering:
    - Project team, working with suppliers, to deliver bespoke training packages, including 1:1 training, e-learning and training videos and resources on the website
    - This is supported by engagement activities that reach out to care home managers
    - The team has worked with Inhealthcare to develop a bespoke clinical pathway

- 259 care homes are set to adopt a remote monitoring solution

- **Solutions in use**: Feebris and Inhealthcare (the latter not included in the interim report)

- **For more information contact**:
  - Pranoti Shah: pranotishah@nhs.net
  - Selda Bicer: s.bicer@nhs.net

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North Central London

- **Aim of the project**: To expand the use of the Whzan Blue Box to create an opportunity to develop a vital signs education programme for care home staff, led by nurse educators, to complement the use of the remote monitoring technology.

- **Adoption and implementation model**:
  - Staffing model: Nurse educators and a clinical lead working together with care homes and GPs to deliver training and ensure successful uptake.
  - Additional offering:
    - Nurse educators train staff on how to use the equipment while 'super users' in each care home receive additional support to enable them to support and up-skill colleagues
    - A clinical lead works with clinicians across the healthcare system to develop new pathways for remote monitoring and to see where it can be used to enhance existing clinical reviews for care home residents

- 150 care homes are set to adopt a remote monitoring solution

- **Solutions in use**: Whzan

- **For more information contact**:
  - Alister Johnson: alister.johnson@nhs.net
  - Shani Gray: shani.gray@nhs.net

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Baseline care home survey

Baseline survey details

- Care home staff from care homes already live, or due to go live in 2-3 weeks, with a remote monitoring solution were asked to complete a short online survey

- 170 responses were received from 94 care homes across four London ICSs between 18 May and 31 October '21

South West London	55 responses	29 care homes
South East London	25 responses	9 care homes
North East London	36 responses	31 care homes
North Central London	54 responses	25 care homes

- It is not possible to calculate a response rate due to the survey administration approach

- The survey focused on the following areas

  - Care sector experience and roles of the care home staff

  - Experience and confidence in using remote monitoring solutions

  - The current relationship with the assigned GP

  - Confidence in the benefit these solutions could have

  - Key themes from optional additional feedback was given by 60 responders

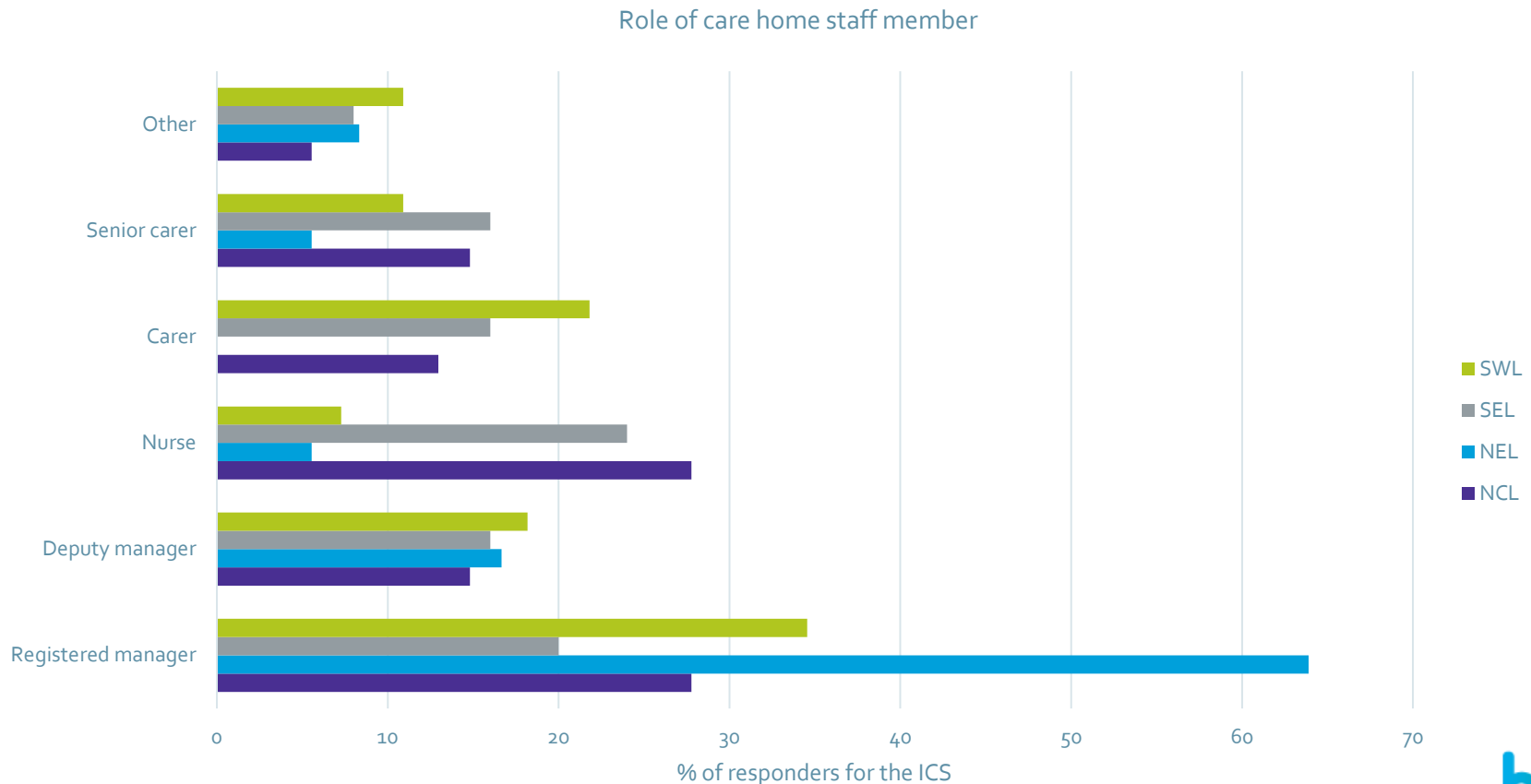- A full analysis of the results is provided in Appendix 1

Characteristics of respondents

- The figures below shows that the majority of respondents, across all ICSs, have been working in the care sector for more than 10 years
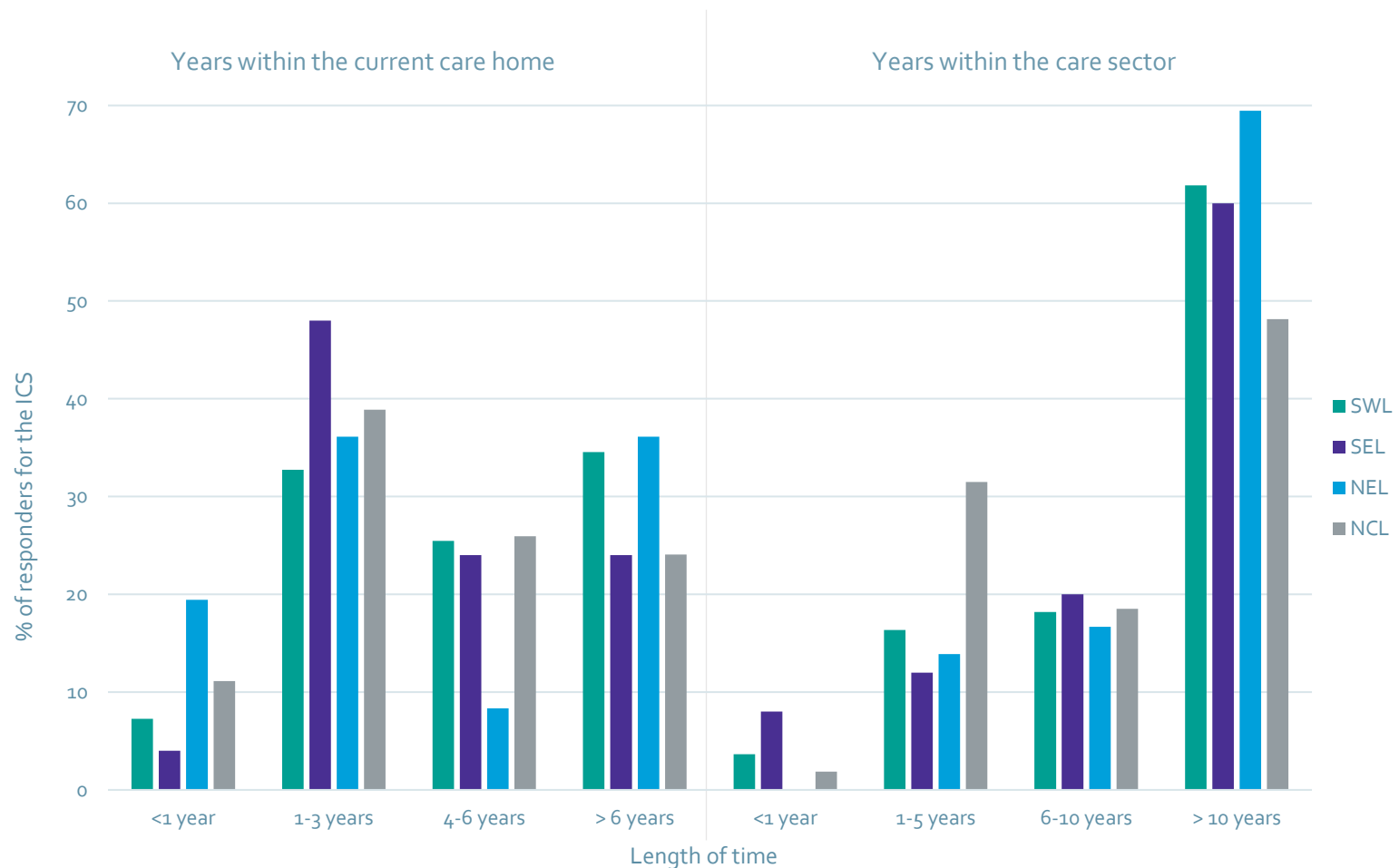
Characteristics of respondents

- The figure below shows the role breakdown of the respondents by ICS, with differences likely being driven by survey dissemination methodology and highlighting the diversity in messaging and perspectives that have been collected
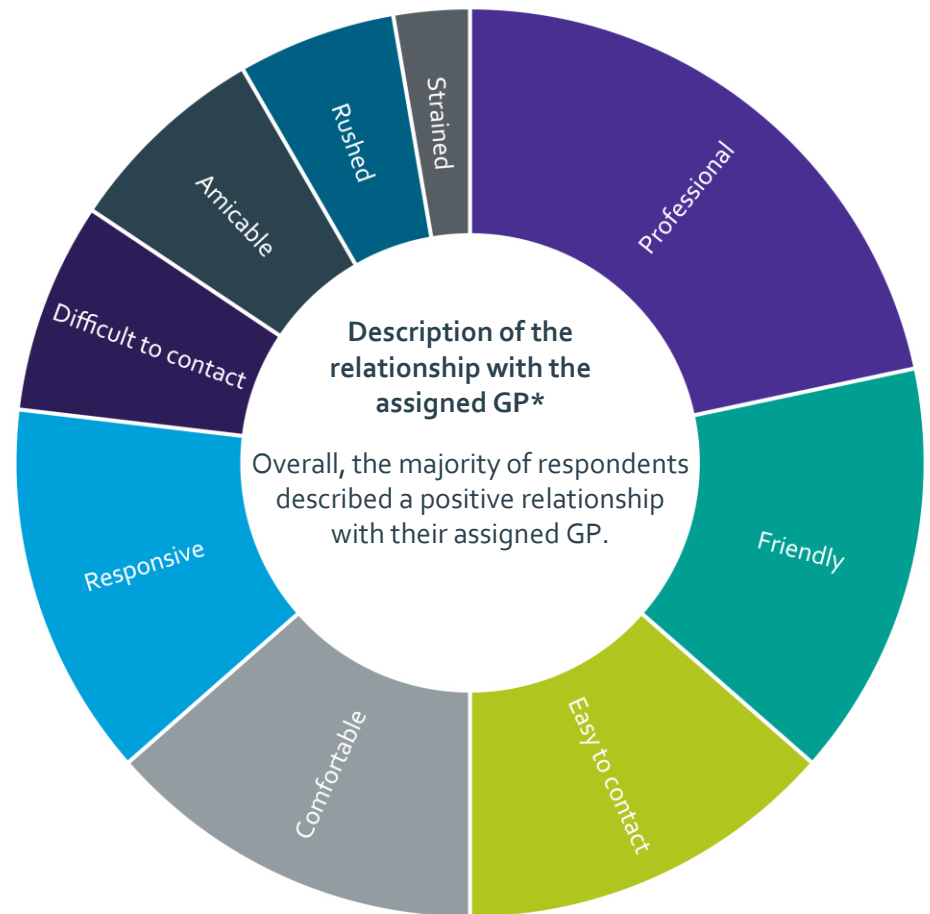
Role of care home staff member

% of responders for the ICS

Legend: SWL, SEL, NEL, NCL

*Responders could select more than one role if applicable

170

**survey responses
from care home staff
across London**

58% have experience using a
remote monitoring solution

49% were confident in using a
remote monitoring solution

Description of the relationship with the assigned GP*

Overall, the majority of respondents described a positive relationship with their assigned GP.

Segments: Strained, Rushed, Amicable, Difficult to contact, Responsive, Comfortable, Easy to contact, Friendly, Professional

*Size of the segment reflects the proportion of respondents responses across the four ICSs represented in the survey. Responders could select all that apply.

>85%

agreed or strongly agreed that there are **benefits to staff, residents and the wider healthcare system**; and communication between primary care, and urgent and emergency services can be improved with the use of remote monitoring solutions

69%

felt **relationships could be improved between staff, residents and relatives** with the use of a remote monitoring solution

Positive feedback on the use of remote monitoring when caring for residents

"Very grateful to have the opportunity to use [..]. Thank you!"

"The system has helped us identify that a person is unwell and provided proof of this to enable them to receive the care they need from GPs, hospital staff and rapid relief"

"We have felt that it has empowered us to provide better care for our residents"

"On hand response to queries, convenience in response, able to keep families updated on medical advice and follow ups"

"Definitely improved the relationship with the GP. [It allows me] to manage the shift well and [makes me feel] confident that I have not left the resident unsafe at the end of the shift. The use of NEWS score prompted us as a team to seek medical help and GP input where we felt the resident did not look well. With the back up of the observations history our residents get help timely"

"Staff love it, easy to use. Saves time and enhances communication between health professionals. Data are recorded in one place, user friendly"

"Gives the care team the confidence to make decisions"

"[It] can be very helpful in monitoring daily health and can help pick up any health issues faster than usual"

"I find that it's very useful especially with the pandemic"

"I think it could help 111 to cut back on the repeated questions to saved time"

"It is simply fantastic!"

Concerns about the use of remote monitoring when caring for residents

"I hope will not require additional time for staff to undertake"

"The system is good, but sometimes we have issue with the battery not working properly but now have improved. we have our own system which will be fine if we can emerge the two to avoid repeat"

"The staff and the residents will benefit from the system. But the equipment has to be in a very good working condition otherwise the staff will waste a lot of time and they cannot afford to do so"

"Small home so [the product] is not overly used"

"I think we could do with some more support in our care setting with the overall implementation of the digital monitoring system"

"Sometimes the readings don't always connect with the pad. I think we need more than one BP arm band, in different sizes as it is really difficult to get readings on some residents"

"I have been trained to use the remote monitoring system, but the GP is not so it has been discouraging for us due to the wait"

"Sometimes manual entries are required as signal are not picked up as required"

"We have been trained to use the [...] technology but are having trouble getting connected to our GP using the system"

"It is adding to the staff workload as there are a lot of tasks to already complete. [It] can be difficult when there are staff shortages"

"[We] need additional options like 'John refused observation'"

Usage analysis

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Usage analysis

- This section details the usage analysis by London ICS

- The supplier data summarised includes:

  - South West London: Vcare and Whzan

  - South East London: Docobo and Arc

  - North East London: Feebris

  - North Central London: Whzan

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South West London

- Data from 1 May – 1 Oct 2021 showed a steady increase in care homes using the Vcare system, as well as the number of vitals being collected (Figure 1)

- The care homes supported were largely nursing homes for older people with dementia and those with learning disabilities (Table 1)

75K

vitals measured in 47 care homes between 1 May and 15 Oct '21
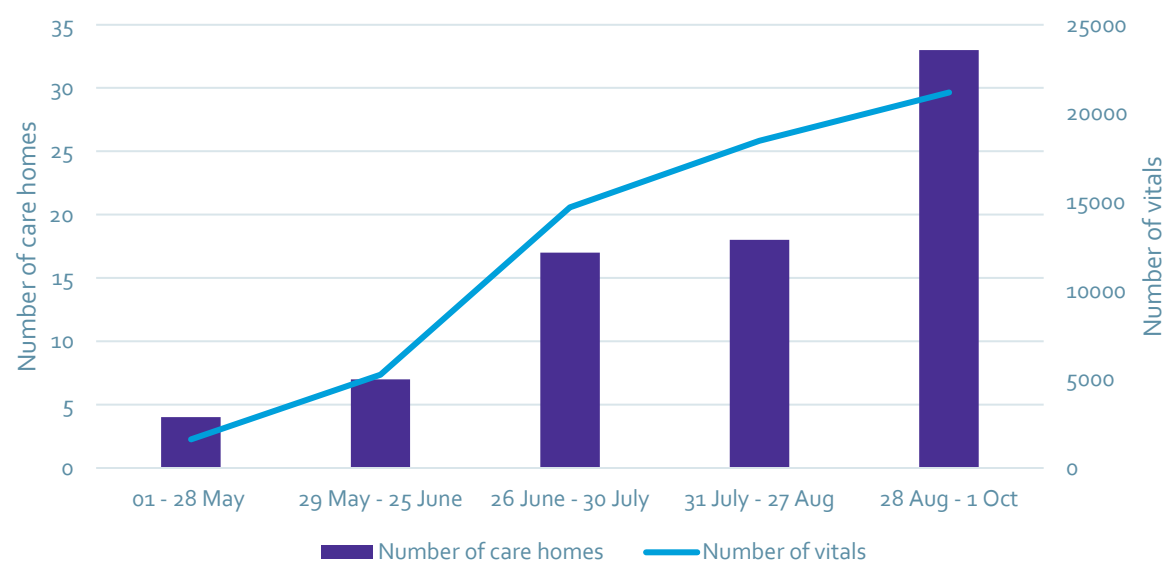
22

Figure 1: Vitals collected across care homes in SWL

Table 1: Type of care homes using VCare

Care home type	Number (%)
Older people with dementia	23 (51%)
Learning disability	11 (25%)
Mental health	5 (11%)
Learning disability & mental health	1 (2%)
Older people	5 (11%)

*The number of care homes live between 28 Aug – 1 Oct includes 9 care home where vitals where collected on one resident. This is likely linked to staff training

South West London

- The average number of vitals collected per resident per month differs by individual care home (Figure 2)

  - There were 11 care homes who used the product more frequently on the residents (average ≥20).

- 95% of risk assessments calculated resulted in a risk level of 0, and 748 vitals required review or escalation (Table 2)

23

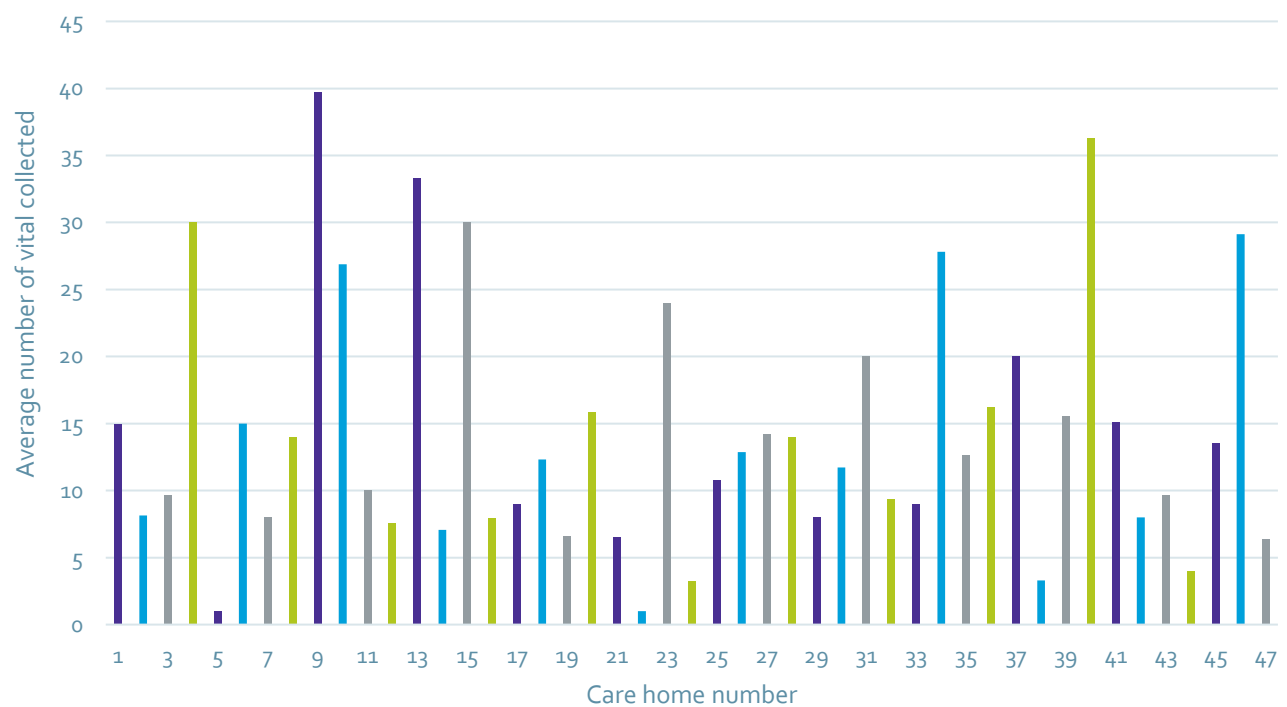Figure 2: Average number of of vitals collected per resident on the VCare system

Y-axis: Average number of vital collected
X-axis: Care home number

Table 2: Escalations by level

| Escalation level (NEWS2 score)	Number (%)
Level 0 (0-2)	13539 (95%)
Level 1 (3-4)	577 (4%)
Level 2 (5-6)	133 (1%)
Level 3 (7 & above)	38 (0%)

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South West London

Data from 3 care homes using the Whzan system between Mar '20 and April '21 showed consistent collection of four vital signs

There was an increase in usage from May '21 (and an additional 4 care homes) when a structured support programme was introduced (Figure 3)

33K
vitals measured between 1 March '20 and 30 Sept '21

24

Figure 3: Summary of vitals collected for the number of residents

Legend:
- BP
- Pulse
- O₂
- Temp
- # of residents

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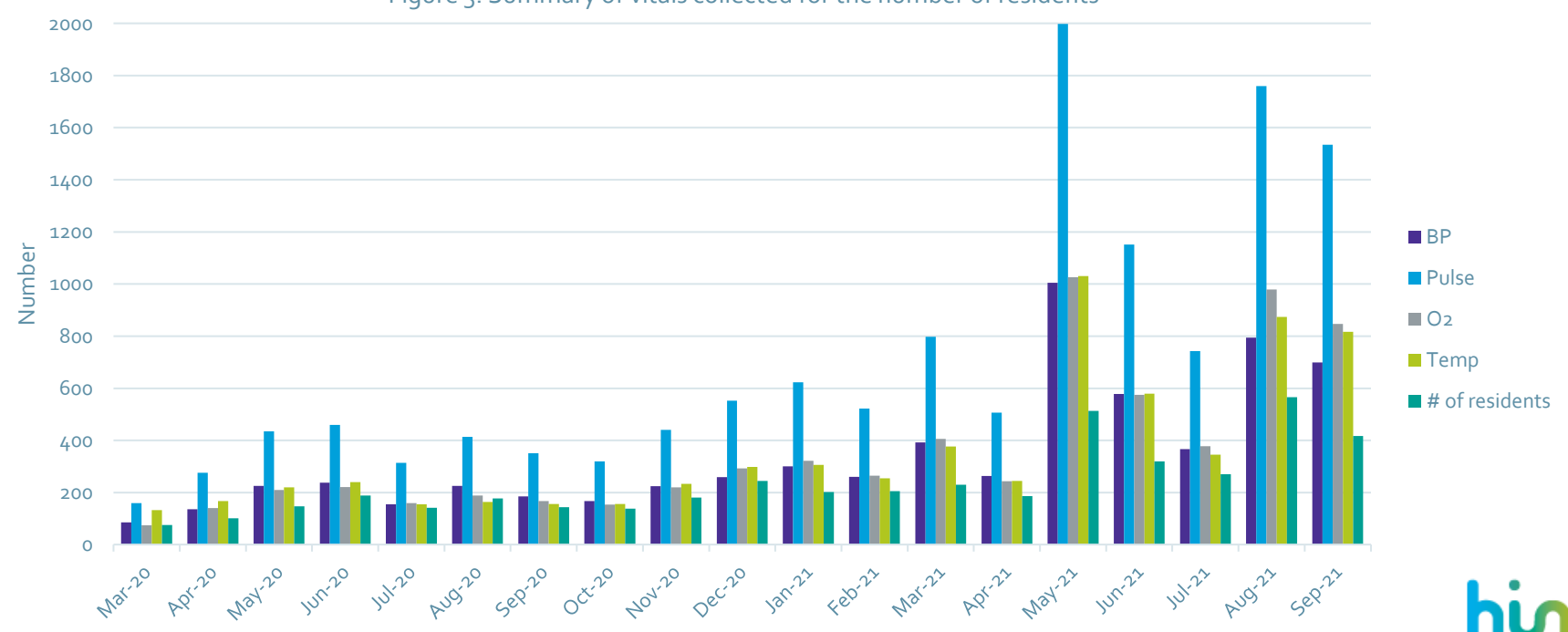
South West London

- The types of care homes using Whzan were nursing homes for older people with dementia

- NEWS2 was calculated for residents from January '21, increasing in use in South West London by Sept '21 (Figure 4)

- Of these scores calculated, 88% classified the resident as low risk and 190 NEWS2 scores required review or escalation outside of the care home setting (Table 3)

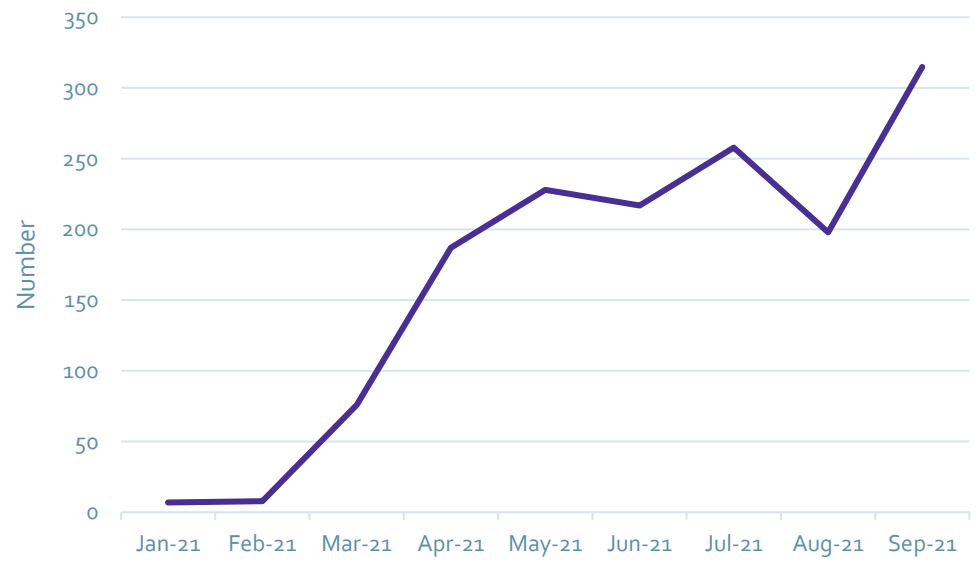Figure 4: Number of NEWS2 scores calculated over time

Table 3: NEWS2 score summary

| NEWS2	Number (%)
1 (0-4)	1415 (88%)
2 (5-6)	153 (10%)
3 (7+)	37 (3%)

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South East London

- Data from 13 older person care homes using the the Docobo system in Bexley showed increased use from June '20 (Figure 5)

- Alerts were introduced in Jan '20, Figure 5 showing the breakdown of the type of alerts given by the system, with question-based alerts being more frequently advised

5600

assessments done and alerts raised in 13 care homes between Oct '18 and May '21

26

Figure 5: Resident assessments and alerts in SEL using Docobo

# of measurement alerts   # of question alerts   Total # of assessments
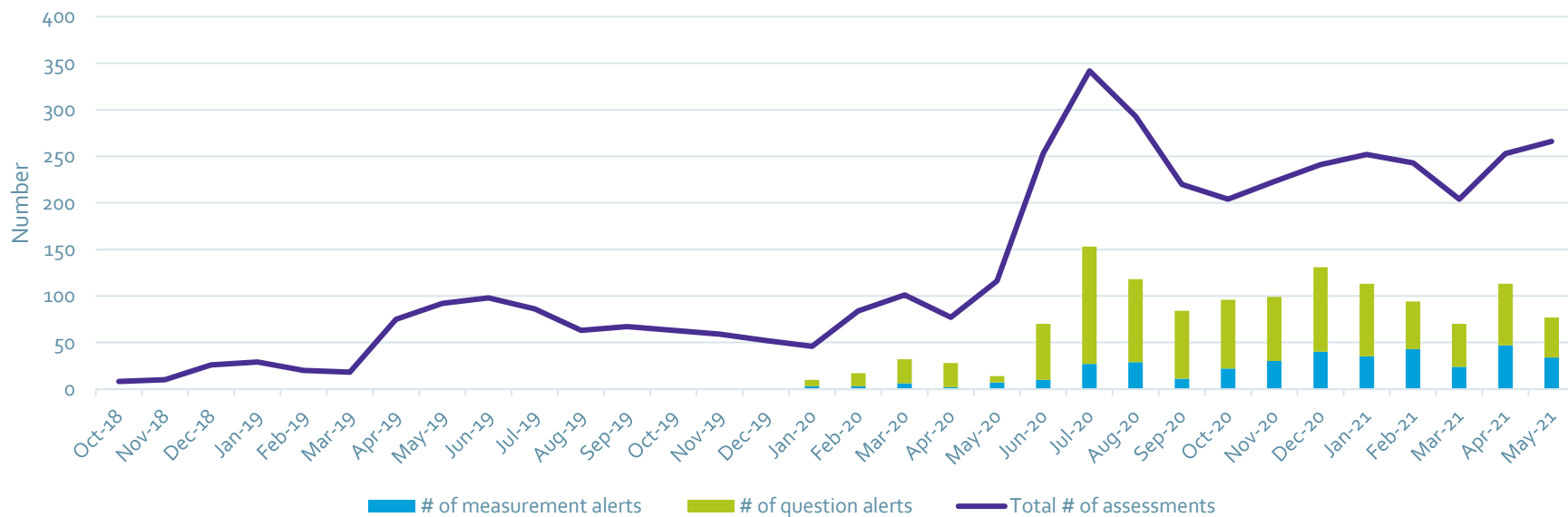
South East London

- Data from 18 care homes with the ARC system in South East London showed 108 consultations between June – Oct '21 (Figure 6)

- Consultations might include more than one resident, and did not correlate with the care home size

- Four care homes accounted for 60% of the consultations undertaken

21hrs

of video consultations between care homes and GPs between June and Oct '21

Figure 6: Summary of number of consultations and care home size

Care home size (bed number)
Consultations
Total time (minutes)

Number

Care home number

27
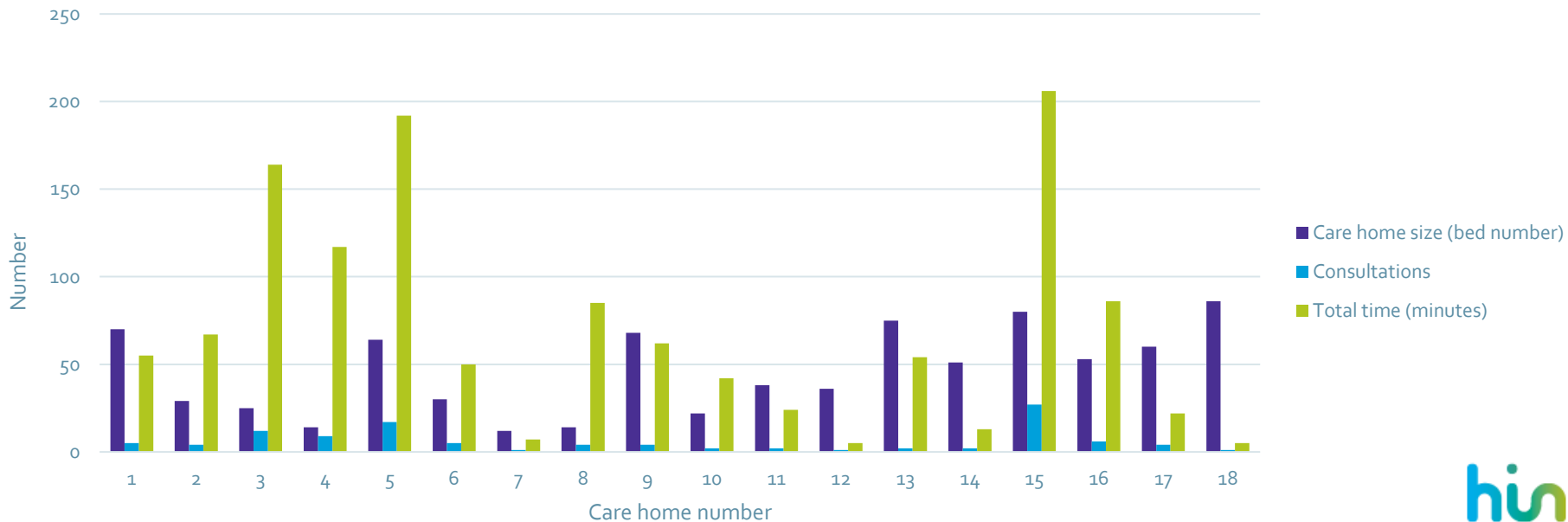
North East London

- Data from the Feebris system shows unique check-ups from across 32 care homes have been collected from 1,066 individual residents

- NEWS2 calculations were being undertaken at most unique check-ups (Figure 7), 12% of which required review or escalation (Table 4)

- The recommended action from the Feebris system followed the expected trajectory of a regular monitoring model, with 'all clear' and 'increased monitoring' accounting for 76% of the recommendations (Table 5)

28

2839

unique checks-ups between May '20 and Oct '21

Table 4: NEWS2 score summary

NEWS2	Number (%)
1 (0-4)	2670 (88%)
2 (5-6)	234 (8%)
3 (7+)	113 (4%)

Figure 7: Summary of number of check-ups and NEWS2 score calculations
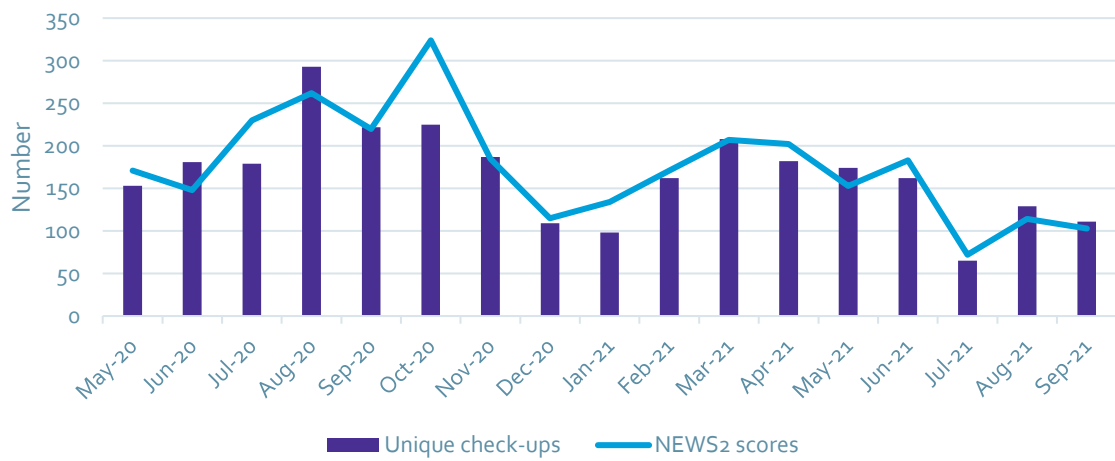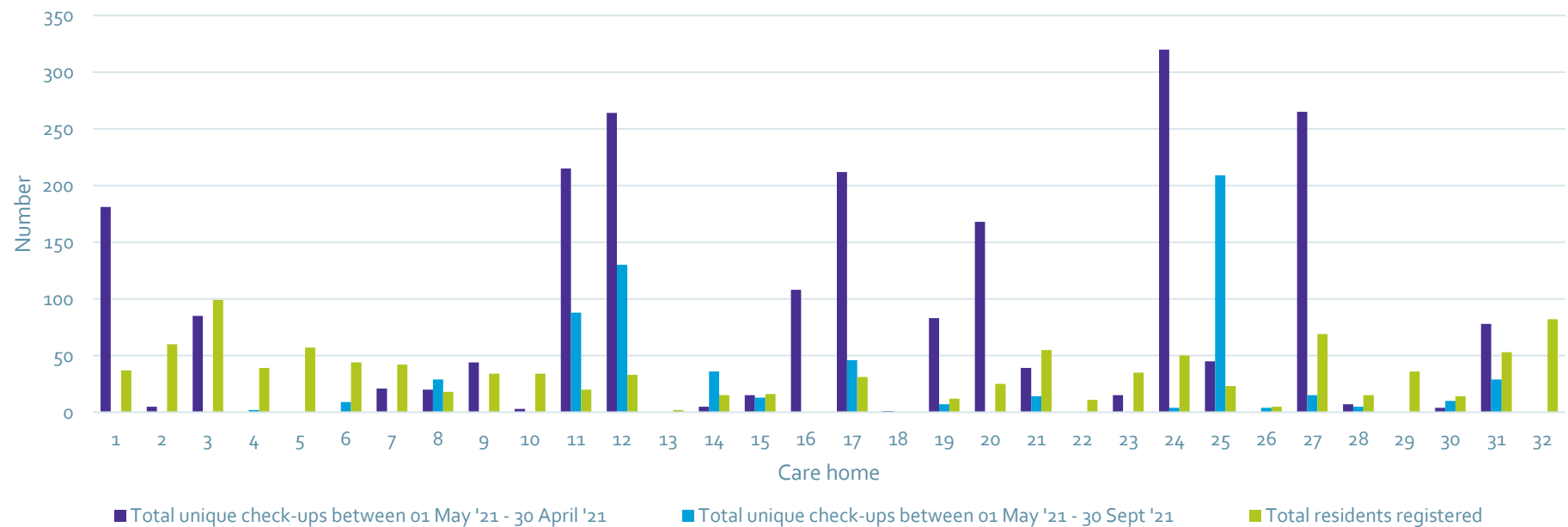

Table 5: Summary of actions

Recommended Action	Selected Action				
	1	2	3	4	5
1	699	14	16	1	0
2	1329	211	52	1	2
3	247	67	48	3	0
4	135	57	34	7	1
5	41	41	28	4	11

Legend: 1 = All clear; 2 = Increase monitoring; 3 = Call GP; 4 = Call 111; 5 = Call 999

North East London

- Data from 32 care homes showed usage changing over time, with 3 care homes using the solution significantly more over between May – Sept '21 (Figure 8)

- The average number of check-ups done per resident on the system differed by care home, where care homes undertaking more check-ups did not have significantly more residents registered on the system, but rather undertook more check-ups on those residents

29

Figure 8: Care home virtual check-ups and residents registered

Legend:
- Total unique check-ups between 01 May '21 - 30 April '21
- Total unique check-ups between 01 May '21 - 30 Sept '21
- Total residents registered

North Central London

- Data from care homes using the Whzan system showed the number of unique residents being assessed each month was constant from March '21 (Figure 9)

- This highlights that while the collection of all four vitals and NEWS 2 score calculations have reduced following wave 2 of the pandemic, the number of residents being supported has not changed

- Of the NEWS scores calculated, 93% classified the resident as low risk (Table 6)

30

41K
NEWS2 scores calculated on 1730 residents since Oct '20
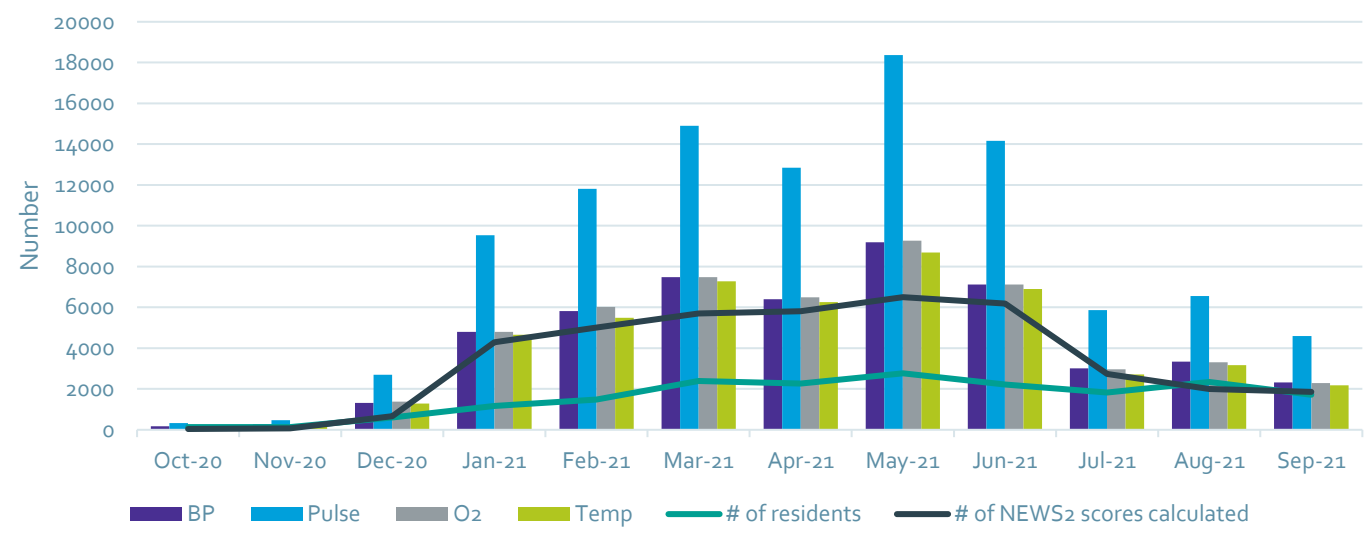
Figure 9: Summary of vitals collected

Table 6: NEWS2 score summary

NEWS2	Number (%)
1 (0-4)	38449 (93%)
2 (5-6)	2092 (5%)
3 (7+)	686 (2%)

Legend: ■ BP ■ Pulse ■ O2 ■ Temp — # of residents — # of NEWS2 scores calculated

*excluded Jan - Sept 2020 due to low usage1

Next steps

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Next steps for the evaluation

- A follow-up care home staff survey will be undertaken and a comparative analysis will identify any changes in responses

- A survey will be undertaken to understand GP experience of supporting the use of remote monitoring in care homes

- Individual locality interviews will be done to collect additional individual project context, lessons learnt and recommendations

- Continued collection of supplier data to assess usage

- Benefit analysis will be undertaken using LAS, hospital admission and supplier data

- For more information, contact Katya Masconi-Yule, katya.masconi-yule@nhs.net
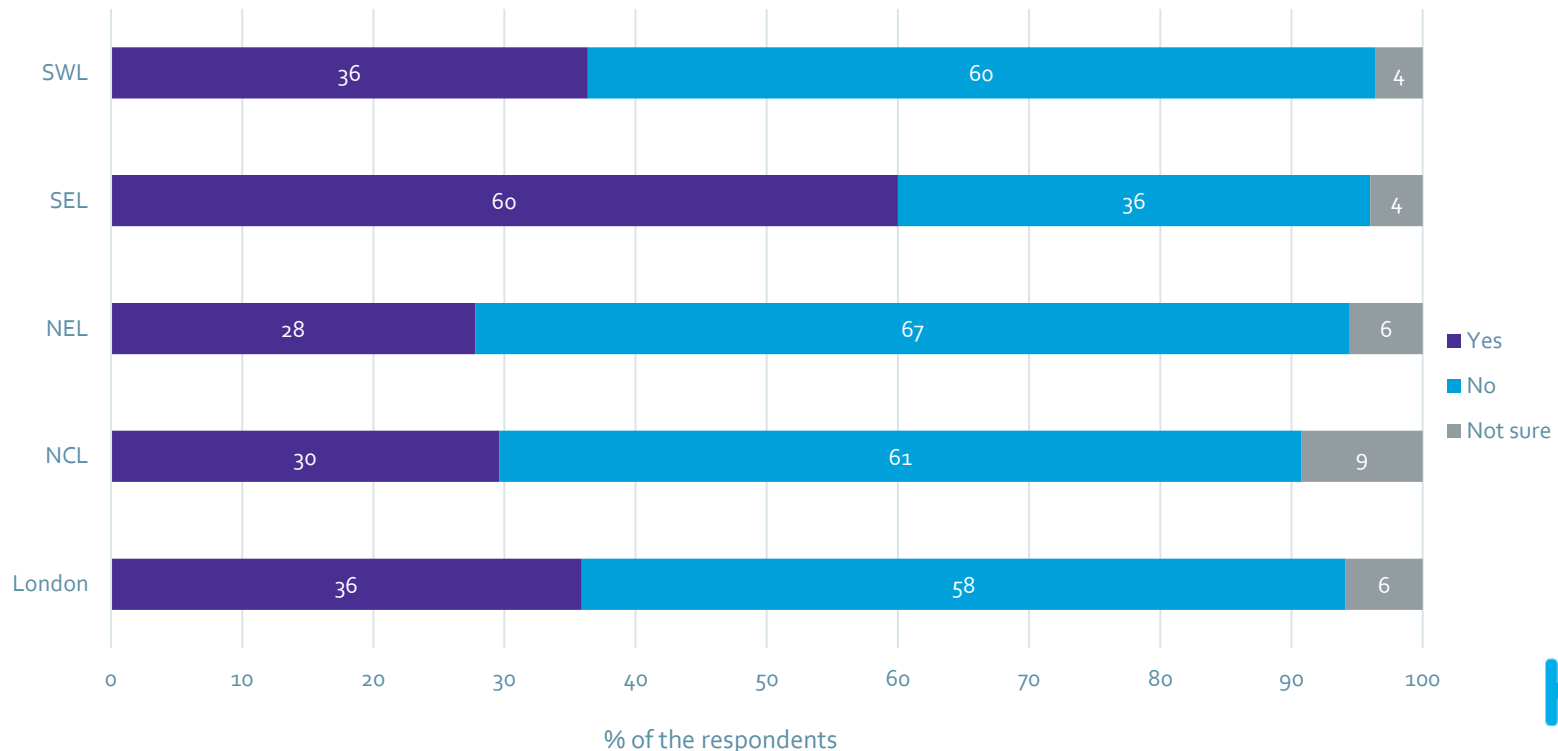
Appendix 1

- Detailed results from the baseline care home staff survey

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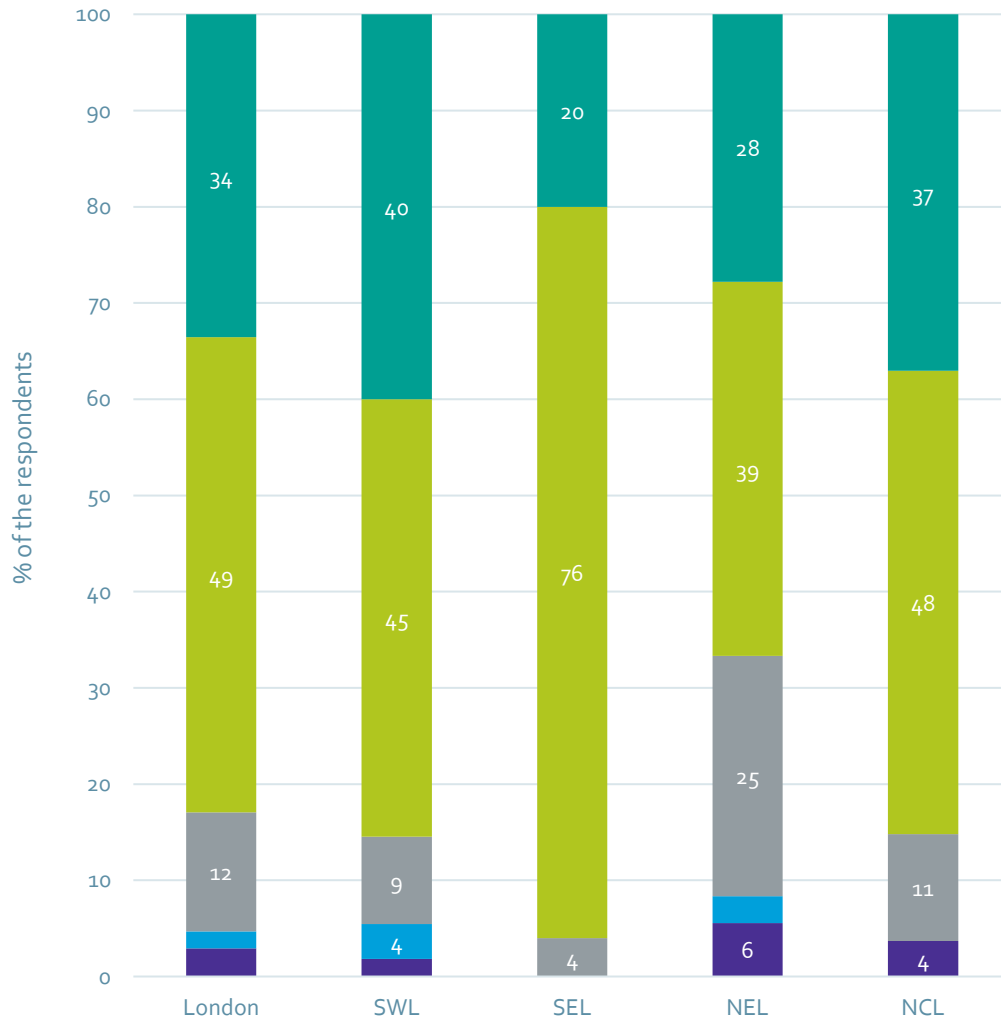# Experience of using remote monitoring solutions

- Staff were asked if they had any experience using a remote monitoring solution in their care sector career. The figure below shows the % breakdown by ICS, with a pan-London summary, showing a greater % of respondents in South East London had used a remote monitoring solution before. This is likely due to the use of the Docobo in care homes in SEL since October 2018.

Experience using remote monitoring solutions in the care of residents

Legend:
- Yes
- No
- Not sure

| Region	Yes	No	Not sure
SWL	36	60	4
SEL	60	36	4
NEL	28	67	6
NCL	30	61	9
London	36	58	6

% of the respondents

Confidence in using remote monitoring solutions

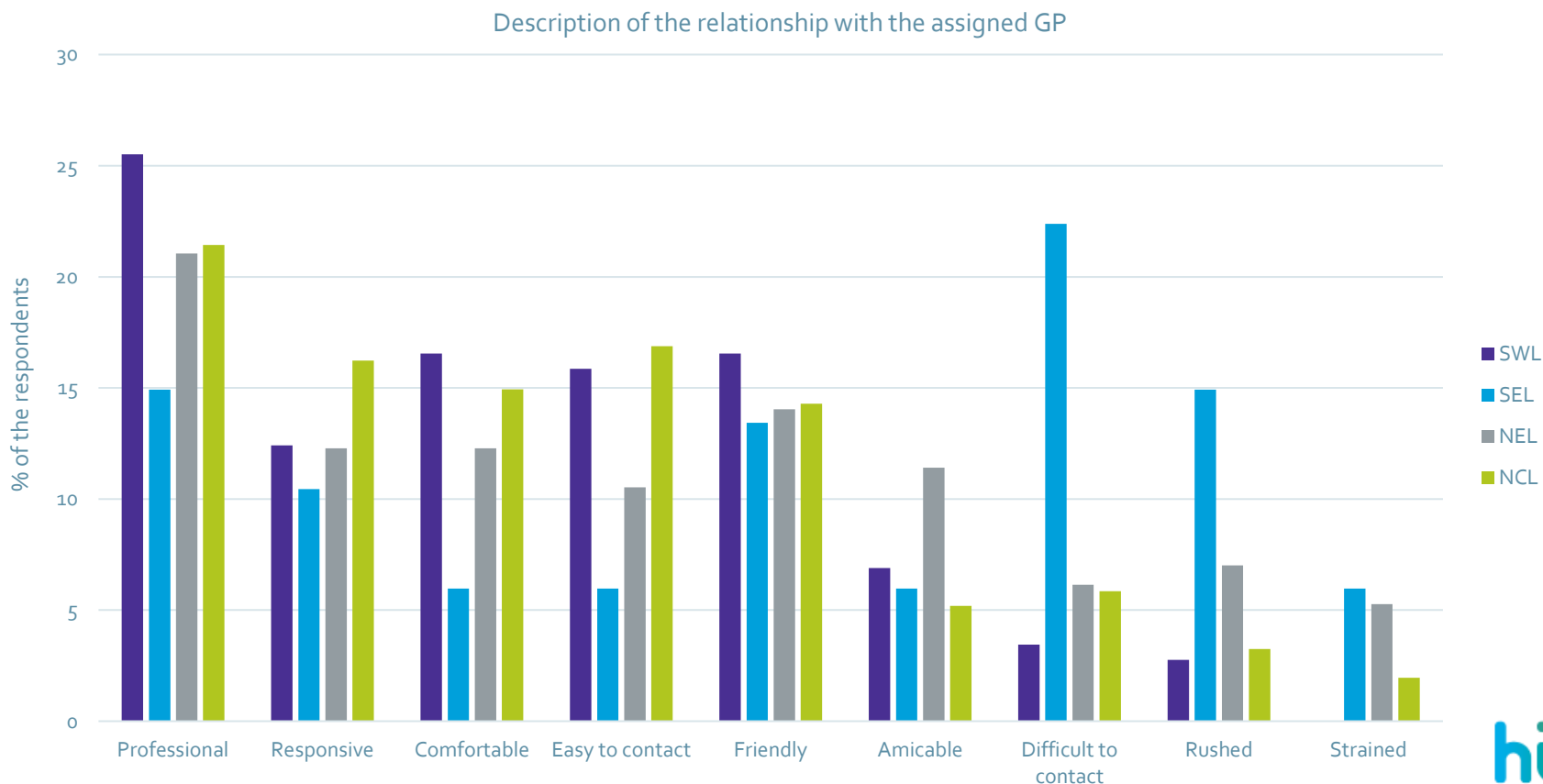Confidence in using remote monitoring solutions in a care setting with residents

- Staff were asked to respond to the statement ' I have confidence using remote monitoring solutions in a care setting with residents'

- The figures here shows the % breakdown by ICS, with a pan-London summary. Corresponding to the previous figure, a greater % of respondents felt confident using a remote monitoring solution in South East London

35
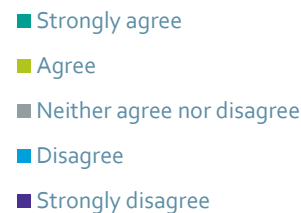
The relationship with the GP

- The figure below details the description of the relationship with the GP by ICS. Overall, the majority of respondents described a positive relationship with their assigned GP, with care home respondents from SEL having a more strained and rushed experience

Description of the relationship with the assigned GP

Legend: SWL, SEL, NEL, NCL

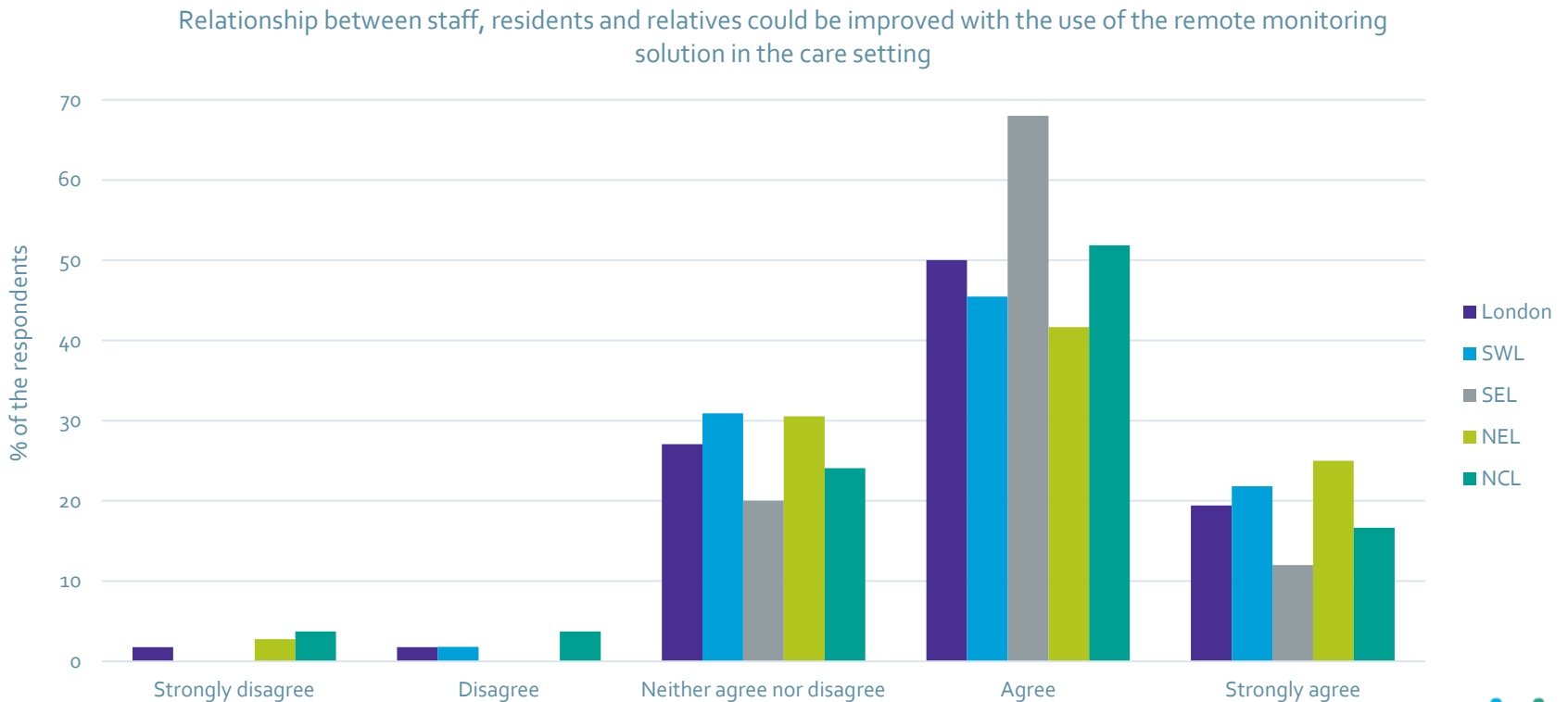*Responders can select all that apply

Confidence in the benefit of remote monitoring

- The figure below shows the survey respondents confidence that the use of remote monitoring solutions will benefit them, the residents they support, as well as the wider healthcare system

- Responses are presented together as there was little difference between the individual ICS responses

Thoughts on the whether the use of remote monitoring solutions in the care setting will have a benefit
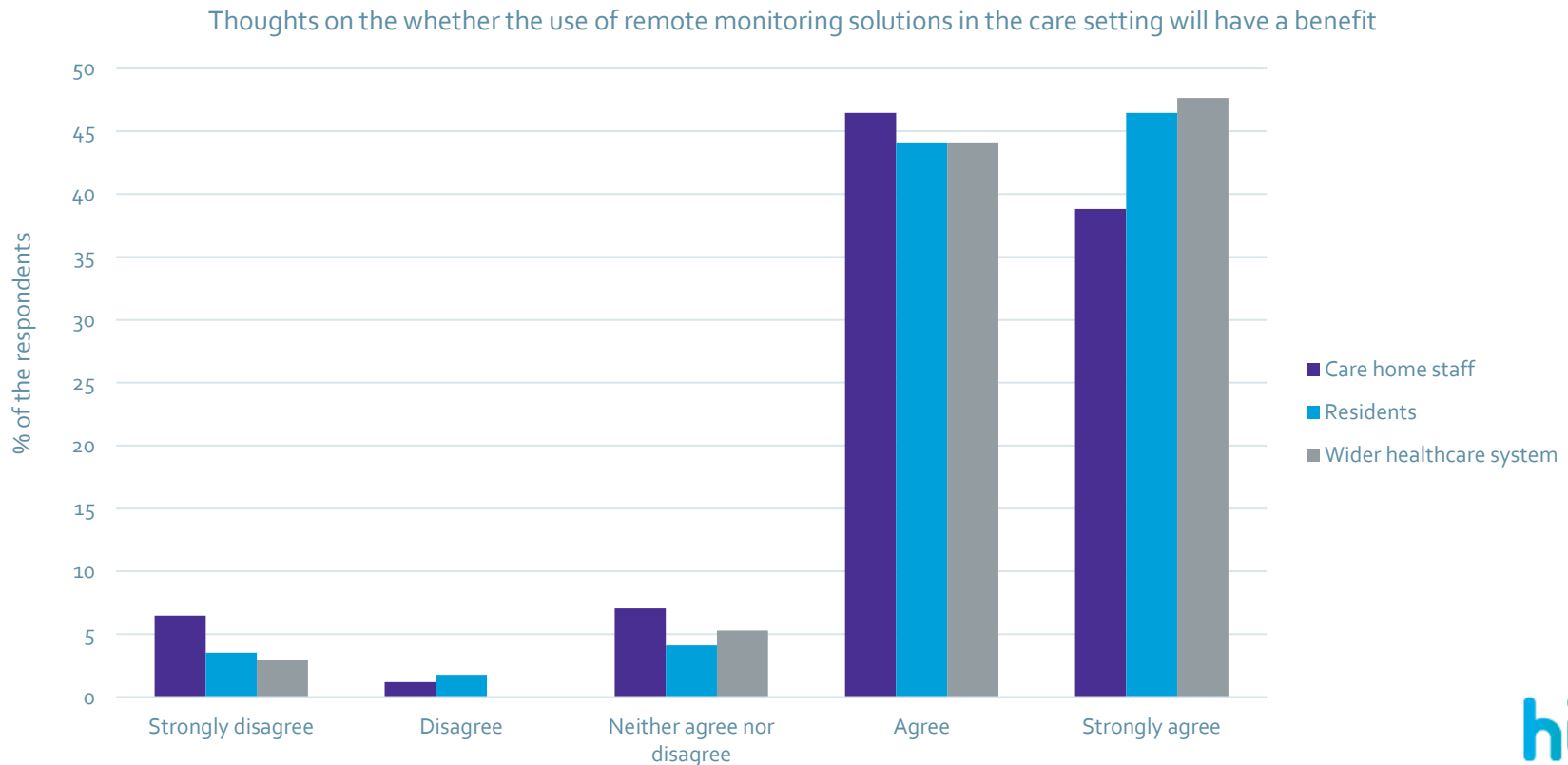
The relationships within the care home

- Staff were asked to respond to the statement below and the figure shows that while the majority of the surveys respondents agree with the potential improvement in the relationships, 27% of respondents are unsure if there is a benefit

Relationship between staff, residents and relatives could be improved with the use of the remote monitoring solution in the care setting

The quality of communication

- Staff were asked to respond to the statement below and the figure shows that the majority of respondents were confident that the quality of communication with primary care and urgent and emergency services would be improved with the use of a remote monitoring solution in a care setting

- Responses are presented together as there was little difference between the individual ICS responses

Communication quality will improve with the use of a remote monitoring solution in the care setting

% of the respondents

Primary care: Strongly agree 26, Agree 59, Neither agree nor disagree 13

Urgent and emergency services: Strongly agree 29, Agree 56, Neither agree nor disagree 10

Legend:
- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree