NHS

Protect

Lone worker estate mapping exercise

Final report - July 2015

Tackling fraud and managing security

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“District and community nursing teams visit patients at home in order to keep them well and out of hospital. Working in the community has its own challenges and it is saddening to hear stories of nurses and other health professionals who have felt afraid or under attack as they have gone about their work. It is hard to give the best care when you go to work in fear – and we need all employers to take the safety of their staff seriously”.

“There are times when a patient or relative can be aggressive or disruptive due to a medical condition, but there are measures recommended by NHS Protect that the RCN would support to keep nursing staff safe. Nursing staff should feel able to raise concerns about the situations they face, and either visit in pairs or have access to a safety device to raise the alarm. Many employers are saying the right things and have the right policies, but what is really needed is for those policies to be a reality in practice”

Kim Sunley, Senior Employment Relations Adviser, Royal College of Nursing

1. Executive summary

The lone worker estate mapping exercise was carried out by NHS Protect to build a complete picture of the different types of lone worker protection systems available in the NHS to provide a safe and secure environment for lone workers.

NHS Protect leads on work to protect NHS staff, patients and resources. We provide support and guidance that is strategic, co-ordinated, and intelligence-led and evidence based.

The security and safety of staff working alone is recognised as an issue under both the Health and Safety at Work Act 1974 and the Management of Health and Safety at Work Regulations 1999.

Under the NHS Standard Contract for 2015-16, all organisations providing NHS services must put in place and maintain appropriate counter fraud and security management arrangements. This includes procedures for the protection of lone workers.

The lone worker estate mapping exercise supports the operational requirement for the NHS Lone Worker Protection Service and NHS Lone Worker Framework Agreement, provided by NHS Protect to establish new initiatives in protecting NHS staff from violence, harassment and abuse. In addition, measures to ensure the property and assets of mobile workers are included in future works streams.

The NHS Lone Worker Framework Agreement has over 30,000 subscribers in 308 organisations using a lone worker solution they can use if they feel vulnerable or distressed when working alone. In addition to the framework agreement, the NHS Lone Worker Protection Service promotes the framework through national campaigns, following up on prosecutions, producing guidance and support and building a national database of lone worker assaults.

Both the NHS Lone Worker Framework Agreement and NHS Lone Worker Protection Service provide operational support and direction to the NHS organisations, NHS commissioned services and other sectors by increasing good practices and security methodologies through information sharing and joint working.

The exercise highlights that further work is needed to improve lone worker protection in some areas of the NHS. There is significant variation in the way in which lone worker protection is provided across different sectors, regions and organisations, suggesting that there is a need to understand the quality of systems used and improve training to make organisations aware of the importance of keeping lone workers safe.

2. Background

The lone worker estate mapping exercise was carried out to define lone working in the NHS and to map potential risks of violence and aggression, taking into account both lone worker activities and the lone worker protection systems adopted by organisations on their own initiative or facilitated by NHS Protect through the framework agreements.

In 2007 NHS Protect, then the NHS Counter Fraud and Security Management Service (CFSMS), highlighted that more than 50,000 assaults were taking place against NHS staff every year. In line with the Secretary of State's announcement on security management spending, and supported by the Royal College of Nursing (RCN), Unison, the Royal College of Midwives (RCM) and the Association of Chief Police Officers (ACPO), the Health Minister made a commitment to providing a lone worker service for NHS staff in England to enable them to call for assistance when working in isolation and to help prevent lone workers from being vulnerable or threatened if an incident occurs.

The framework for the provision of a lone worker alarm solution (LWAS) was prepared in 2008 in accordance with EU procurement rules. The provision of the LWAS was expected to make a significant contribution to enhancing lone worker security and deterring assaults and abuse, additionally providing a means to pursue the prosecution of offenders. The contract terms and conditions were set out by the NHS Business Services Authority (NHSBSA), with CFSMS providing technical expertise, defining the service specification and establishing an industry benchmark.

The contract for provision of the LWAS was awarded to Reliance High-Tech Ltd.

In order to encourage a critical volume of service take up by the NHS, the Department of Health (DH) centrally funded 30,000 lone worker devices for the first two years of the framework. The costs for the third and subsequent years were to be paid by the health body receiving the framework services.

The re-tender of the framework agreement for the provision of lone worker services (also known as NHS Lone Worker Framework Agreement) was announced in April 2013, providing customers with an end to end solution through an approved supplier. Reliance High-Tech Ltd was awarded the new contract following the re-tender.

The terms and conditions cover NHS services as the main area of activity, but they were negotiated to allow government departments, non-departmental public bodies, and local authorities to access the agreement using the same contractual arrangements.

In 2013 NHS Protect launched the NHS Lone Worker Protection Service to provide support and guidance and to promote good practices in lone working provision. This support was made available to framework users and those outside the framework agreement, to ensure the information was accessible to the wider NHS, including commissioned services and other partners.

Lone working in the NHS

NHS Protect describes lone working as ‘any situation in which someone works without a colleague nearby, or when someone is working out of sight or earshot of another colleague’.

The term ‘lone worker’ can refer to a wide variety of staff who work, either regularly or occasionally, on their own. Lone working is not unique to any particular staff group, working environment or time of day. It may apply to:

- people who work outside normal working hours
- people who work in direct contact with the public
- people who work remotely from or within a central office
- people who are remote from access to standard emergency services

Mobile working

In recent years, mobile working has increased due to the range of technology available, enabling NHS staff to work anywhere and at any time, with access to valuable resources at the point of care. Mobile working is also a way for NHS organisations to modernise, develop streamlined services and improve communication on the go without the need for staff to return to a central office.

A report by the Department of Health (National Mobile Worker Project, 2013) suggests that mobile deployments in community settings allow service improvements to be introduced, and that mobile working outside ‘normal’ hours has contributed to improving the safety of lone workers by avoiding unnecessary visits to unmanned offices.

Virgin Care is one of many providers issuing mobile tablets and smartphones to NHS staff to allow them access to information while they are visiting patients. The benefits identified by Virgin Care include the ability *“to have an oversight of resources in real time and to manage demand and capacity whilst ensuring the nurse who is most appropriately skilled visits the patient, maintaining continuity of care with improved lone worker safety”* (eHealthNews, 2014).

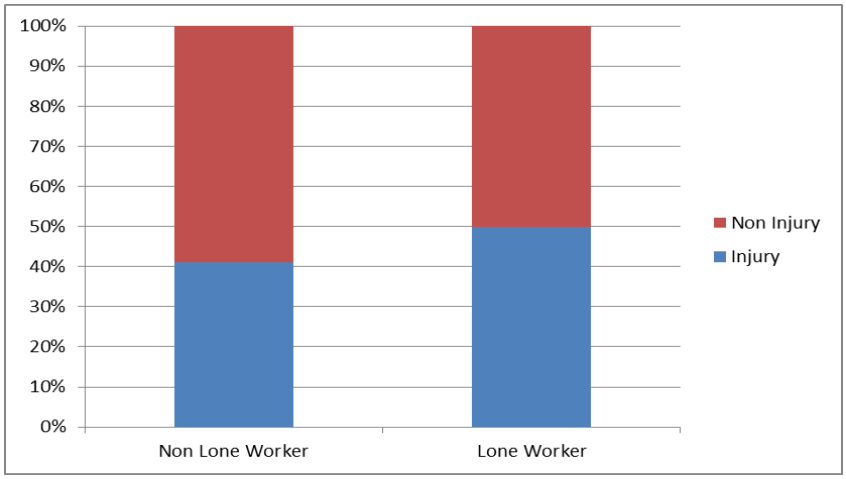
Lone working statistics

According to the 2014 NHS staff survey, “14% of NHS staff reported experiencing physical violence from patients, their relatives or other members of the public in the previous 12 months, down from 15% in 2013. 28% of all staff report that they experienced bullying, harassment and abuse from patients, their relatives or other members of the public in the previous 12 months – a decrease from 29% in 2013. Two-thirds (66%) of incidents of physical violence were reported compared to 64% in 2013 and 44% of staff reported bullying, harassment and abuse cases (43% in 2013)”

Previous NHS Protect research suggests the reasons NHS staff do not report all incidents of violence, assault and abuse is that they are either ‘used to it’ or see it as ‘part of their job’. Data indicates that a significant proportion of NHS staff appear to accept violence as something they are likely to experience in the workplace.

The Security Incident Reporting System (SIRS) is an electronic tool which allows NHS health bodies to report security incidents occurring on their premises to NHS Protect, enabling the creation of a national picture of such incidents across the NHS in England.

Figure 1 - Physical assaults in 2013-14 by percentage resulting in injury for lone workers/non lone workers



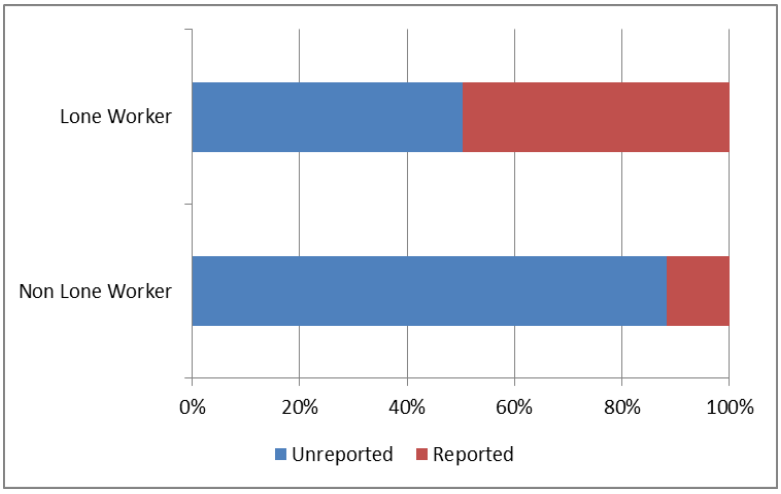
The proportion of lone workers sustaining injury from a physical assault is approximately 9% higher than for non-lone workers.

Previous research and observation suggests the following:

a) The lack of nearby support from a colleague may mean that lone workers are unable to prevent an incident from occurring.
b) If an incident does occur, lone workers are more limited in their ability to withdraw, defend themselves or restrain the assailant than they would be if they had colleagues present.

Additionally, over one in four of non-reporters say they did not report an incident because the situation was either resolved or not serious enough.

Figure 2 - Physical assaults in 2013-14 by percentage reported to police for lone workers/non lone workers



The number of physical assaults reported to the police is vastly higher for lone workers. Almost 50% of lone worker related assaults are reported to the police, whereas just over 10% of non-lone worker incidents were reported to the police.

Previous research and observation suggests the following:

a) Although it is not known how many assaults involved lone workers, it is widely recognised that this group of staff face significantly higher risk than non-lone workers because they do not have the immediate support of colleagues or others nearby.
b) The higher number of assaults reported to the police from lone workers is likely due to the severity of the incidents they experience. Of the 143 incidents that have required police intervention via the NHS Lone Worker Framework Agreement, 53 (37%) have involved physical assault on staff, with the majority of the remainder involving verbal aggression and threats of physical assault.

Key challenges

Low usage remains a significant concern for organisations using lone worker devices. Ensuring the support of line managers, following up non-usage with users and classifying devices as personal protective equipment seem to be the most effective solutions.

The benefit of having lone worker devices supported by line managers is that this ensures usage is monitored and maintained, therefore improving the level of protection for each staff member. The disadvantage is the difficulty to increase funding to further improve lone worker solutions for new and existing staff.

Gaps in lone worker protection are being recorded on the risk registers of some organisations, particularly where management buy-in and funding are not present. A tiered approach to lone worker protection is common, with different systems used to protect high and low risk workers.

There is also a need to provide comparative data on lone worker protection in similar organisations, to get a better understanding of the coverage and effectiveness of measures currently in place. This could also help to justify the need for increased protection and identify the level of risk faced by each organisation.

At times, lone worker protection systems and initiatives are introduced after an incident or when there is senior management buy-in to promote a ‘pro-security’ culture among staff. The requirement to identify, assess and manage the additional risks that NHS staff working alone experience needs to be taken seriously to achieve the desired outcome of appropriate protection for all staff.

3. Introduction

The decision to undertake the lone worker estate mapping exercise (collection number and publication reference SCCI2065 AMD 18/2014) was prompted in 2013 by a desire to understand the lone worker market outside the NHS Lone Worker Framework Agreement and NHS Lone Worker Protection Service. The exercise was designed to give NHS Protect an overview of different lone worker protection systems and user groups, and to provide an understanding of the lone worker market to make formal decisions for the next 2-3 years.

The priority areas from NHS Protect's 2014-2015 business plan and NHS England's Outcomes for 2014-15 (Domain 5 – Treating and caring for people in a safe environment and protecting them from avoidable harm) were the key drivers in carrying out the lone worker estate mapping exercise.

The lone worker estate mapping exercise was approved by the Standardisation Committee for Care Information (SCCI). Data collection took place from 5 January 2014 to 30 April 2015.

Over 2,000 stakeholders in the NHS were contacted by the Health and Social Care Information Centre (HSCIC) and over 700 commissioned services were invited by NHS Protect to participate in the completion of a survey as part of the exercise.

The findings from the lone worker estate mapping exercise are divided into **3 sections**:

- **Section 1** provides a review and summary of the lone worker application estate, i.e. the lone worker protection systems used by the NHS.
- **Section 2** provides a review and summary of the different types of lone workers.
- **Section 3** provides a review and summary of planning for lone worker protection systems in the next 2 years.

Intended audiences

It is important to note that this exercise does not represent the views of all NHS organisations. However, the data collection provides an overview of the lone worker estate in the NHS and the type of systems used in this area.

NHS organisations, government and non-departmental bodies

The data collection was aimed primarily at line managers with budgetary responsibilities. The results will also be of interest to risk managers, health and safety managers, human resources managers, Local Security Management Specialists (LSMSs) and procurement managers dealing with IT and mobile applications.

The data collection could also help end users recognise and understand the range of support mechanisms and initiatives provided by employers in the NHS.

Suppliers

The suppliers of alarms, mobile phones and other security support mechanisms, mostly provided for personal safety, may find the results of the data collection useful to improve or provide new initiatives to the market.

4. Methodology

Phase one

The process used for the data collection was as follows:

- **Lone worker estate mapping exercise submitted for approval (19/06/2014)**
  The proposal for the exercise was submitted, using the Review of Central Returns (ROCR) programme, later replaced by the Burden Advice and Assessment Service (BAAS), for an assessment.

- **Lone worker estate mapping exercise approved (24/11/2014)**
  The survey was accepted as a national collection by the Standardisation Committee for Care Information (SCCI). A national notification was issued to confirm and promote the collection.

- **Lone worker estate mapping exercise questions approved (09/12/2014)**
  A final set of questions for the survey was agreed, balancing the breadth of data required with the burden of time needed to complete the survey. The final questions selected were:

1. **Which of these (sectors) best describes your organisation?**

Acute Foundation Trust
Acute Non-foundation Trust
Ambulance Foundation Trust
Ambulance Non-foundation Trust
Care Foundation Trust
Care Non-foundation Trust
Care Home
Clinical Commissioning Group (CCG)
Commissioned Service (private provider)
Commissioning Support Unit (CSU)
Dentist
GP Practice
Independent or voluntary sector
Local Area Team
Mental Health Foundation Trust
Mental Health Non-foundation Trust
Social Enterprise
Special Health Authority
Other (please specify)

2. **In which region is your organisation based?**

East of England
East Midlands
London
North East & Yorkshire
North West
South East
South West
West Midlands
More than one region (England only)

3. Approximately how many staff currently work for your organisation?

up to 10
up to 50
up to 250
up to 1,000
up to 5,000
up to 10,000
up to 50,000
over 50,000

4. Approximately what proportion of staff are lone workers in your organisation?

100%
Up to 75%
Up to 50%
Up to 25%
Less than 25%
Don't know

5. Which of these roles are lone workers in your organisation?

Ambulance personnel
Assertive outreach workers
Care takers
Clinical staff
Community carers
Community health staff
Community pharmacist
Community psychiatric nurses
General Practitioner
Healthcare visitor
Inspector
Occupational therapists
Patient transport services
Receptionist
Security officers
Social workers
Technicians
Other (please specify)

6. Approximately what proportion of lone workers in your organisation use the following protection systems?

	All	Most	Some	None	Don't know
Lone worker devices					
Management systems – i.e. Buddy, diary, In/out board, Ringing back to base					
CCTV cameras					
Digital/portable camera surveillance devices					
Mobile phone					
Mobile phone with alert app (including Bring Your Own Device (BYOD))					
Panic alarm					
Personal alarm					

Static panic buttons i.e. in treatment rooms					
Training					
Other (please specify)					

7. Approximately how many lone worker devices are available to lone workers in your organisation?

Less than 10 devices
Between 10 and 25 devices
Between 26 and 50 devices
Between 51 and 100 devices
Between 101 and 500 devices
Between 501 and 1000 devices
Over 1000 devices

8. What is the make and model of the lone worker device(s) used by your organisation?

Supplier name	
Model of devices	

9. Are you planning to introduce or increase any of the following protection systems in the next 2 years?

Lone worker devices
Management systems – i.e. Buddy, diary, In/out board, Ringing back to base
CCTV cameras
Digital/portable camera surveillance devices
Mobile phone
Mobile phone with alert app (including Bring Your Own Device (BYOD))
Panic alarm
Personal alarm
Static panic buttons i.e. in treatment rooms
Training
*Digital imaging
*Digital pens
*Equipment tracking and monitoring
*Real time digital dashboards
*Remote face to face interaction
Other (please specify)

10. In your view, are there any barriers to making improvements to your lone worker protection in the next 2 years? What are the reasons for these barriers?

Yes
No

11. In your opinion, what are the likely impacts of greater use of technology to enable lone workers to become mobile? (1 = least, 5 = most)

	1	2	3	4	5
Lack of money					
Lack of time					
Lack of resources					

Lack of staff knowledge					
Other (please specify)					

12. **Do you have any other comments or feedback you would like to share with us on lone working or lone worker devices which haven't been covered in the survey?**

- **Survey created through QuestionPro (05/01/2015)**
  An online survey was selected as the method to be used, as it offered the greatest ease of completion and collection given the large number of organisations involved. Survey Monkey and QuestionPro were both considered, and QuestionPro was chosen because of the additional functionality available. The survey was created and tested in-house.

- **Bulk e-mail sent to LSMSs and SMDs notifying them of survey (05/01/2015)**
  LSMSs and Security Management Directors (SMDs) were ideal contacts to receive the survey for their organisations, as they were most likely to have the information required and were familiar with communications and requests from NHS Protect. A bulk e-mail was sent to all SMDs and LSMSs, providing an introduction to the exercise and a link to the online survey. Not all NHS organisations have these roles, so other methods were also needed to ensure the survey was distributed to all organisations concerned.

- **Communication sent by HSCIC to 2000 stakeholders on survey (06/01/2015)**
  The HSCIC offered to send the survey link to their list of 2000 stakeholders as part of their support for the collection; this was gratefully received and carried out.

- **E-mail sent to all CSUs notifying them of survey (12/01/2015)**
  Contact details for CSUs were obtained and an e-mail was sent to each, providing an introduction to the survey and a link to the online survey.

- **Reminder sent to participants (04/02/2015)**
  A reminder e-mail was sent to all organisations previously contacted, thanking them for their participation and reiterating the survey purpose, link and closing date.

- **Final reminder sent to participants (23/02/2015)**
  A final reminder e-mail was sent to all organisations previously contacted, thanking them for their participation and reiterating the survey link and closing date.

- **Survey closed (27/02/2015)**
  The online survey was closed for further submissions and all collected data was exported for analysis.

Data analysis

- **Data analysis methods chosen (02/03/2015)**
  Once all responses were received, a number of data analysis exercises were chosen, each looking at a specific set of the available data. Nine exercises were

selected: these were deemed to provide the most relevant insights into the trends and characteristics of organisations and security arrangements.

- **Full data reports received (11/03/2015)**
  The data from answers to all questions was exported into a spreadsheet along with tables summarising the responses received for each question. This allowed participant responses to be tracked across questions, which in turn enabled useful data analysis to be performed.

  The response rates for each of the questions were as follows:

1. Which of these (sectors) best describes your organisation?	77%
2. In which region is your organisation based?	77%
3. Approximately how many staff currently works for your organisation?	77%
4. Approximately what proportion of staff are lone workers in your organisation?	57%
5. Which of these roles are lone workers in your organisation?	57%
6. Approximately what proportion of lone workers in your organisation use the following protection systems?	57%
7. Approximately how many lone worker devices are available to lone workers in your organisation?	55%
8. What is the make and model of the lone worker device(s) used by your organisation?	34%
9. Are you planning to introduce or increase any of the following protection systems in the next 2 years?	47%
10. In your view, are there any barriers to making improvements to your lone worker protection in the next 2 years?	47%
11. In your opinion, what are the likely impacts of greater use of technology to enable lone workers to become mobile?	37%
12. Do you have any other comments or feedback you would like to share with us on lone working?	27%

- **Initial data analysis carried out (24/03/2015)**
  Based on the full data, analysis was carried out using the nine exercises mentioned above. Although this data was not the final set, carrying out the analysis allowed for trends to be recognised and discussed.

- **Cleaned data reports received (30/03/2015)**
  The survey data was cleaned, with partial and erroneous responses removed to improve the quality of data to be analysed.

- **Follow-up data analysis carried out (01/04/2015)**
  The exercises carried out on the full data were repeated on the cleaned data to ensure the trends were unchanged and the final figures were correct.

Phase two

As the data for the initial collection was analysed, it was noted that the response rate for the following types of respondents was very low (two responses received):

- Clinical Commissioning Group (CCG)
- Commissioning Support Unit (CSU)

The survey deadline for these groups was extended until the end of April to allow us time to improve the response rate, mainly from CCGs using emails as the main method of correspondence.

- **E-mail sent to all CCGs and CSUs notifying them of survey (01/04/2015)**
  Some CCGs and CSUs had been previously contacted via the HSCIC stakeholder list and LSMS bulk e-mail. The aim of this activity was to contact the rest and encourage responses from all. Contact details for CCGs and CSUs were obtained and an e-mail was sent to each one, providing an introduction to the lone worker estate mapping exercise and a link to the online survey.

- **Reminder sent to CCGs and CSUs (20/04/2015)**
  A reminder e-mail was sent to all CCGs and CSUs previously contacted, thanking them for their participation and reiterating the purpose of the survey.

- **Final reminder email to CCGs and CSUs (27/04/2015)**
  A final e-mail was sent to all CCGs and CSUs previously contacted, thanking them for their participation and reiterating the survey link and closing date.

- **CCG survey closed (30/04/2015)**

Data analysis

- **Full CCG data reports received (08/05/2015)**
  The data from all CCG questions was exported into a spreadsheet along with tables summarising the responses received for each question.

- **Initial CCG data analysis carried out (11/05/2015)**
  Data analysis was carried out on the additional responses provided during phase two.

- **Cleaned CCG data reports received (12/05/2015)**
  The CCG survey data was cleaned, with partial and erroneous responses removed.

- **Final data analysis carried out (13/05/2015)**
  The cleaned data from phases 1 and 2 was combined for the final analysis.

Data limitations and assumptions

It was assumed that all respondents would answer honestly, to the full extent of their knowledge. Where possible the survey was directly sent to individuals deemed to be the most likely to possess the answers to the survey questions. The survey link was provided using direct emails to participants, rather than a notification via a website or circular, to ensure that only the targeted audience had access to the survey. However, in some cases the emails were sent to an organisation and not a named person, hoping that the email would be directed to the relevant person. To support this method, additional support and information were provided to ensure the survey instructions were understood.

The responses were anonymous to minimise data manipulation and to protect the answers given. Precautions were taken in particular to ensure the participants were not easily

identifiable to protect the answers on security arrangements at each organisation. Similarly, questions referred to lone working as a whole within each organisation surveyed, without any reference to the arrangements for specific roles. Only the presence or absence of specific roles was recorded. This was achieved by using an aggregated approach to provide an overall staff sample figure.

As a consequence of the above, the data collection and the observations should not be taken as reflecting the situation in the NHS as a whole, but rather as applying to just the representatives group surveyed.

5. Analysis of the lone worker estate mapping exercise

Section 1 – A review and summary of the lone worker application estate, i.e. the different types of lone worker protection systems and technology used by the NHS

a) Device coverage by region

Count	All	East of England	East Midlands	London	North East & Yorkshire	North West	South East	South West	West Midlands	More than one region
Badge-holder	20045	2345	3263	1768	4623	5468	375	1358	805	42.5
Key fob	6543	642.5	0	510	2018	150	3018	115	90	0
Other	6718	0	750	1043	375	1750	0	300	2500	0
Unknown	19223	2585	760	447.5	6705	4340	2415	1925	35	10
All	**52528**	**5573**	**4773**	**3768**	**13720**	**11708**	**5808**	**3698**	**3430**	**52.5**

Percent	All	East of England	East Midlands	London	North East & Yorkshire	North West	South East	South West	West Midlands	More than one region
Badge-holder	38.2%	42.1%	68.4%	46.9%	33.7%	46.7%	6.5%	36.7%	23.5%	81.0%
Key fob	12.5%	11.5%	0.0%	13.5%	14.7%	1.3%	52.0%	3.1%	2.6%	0.0%
Other	12.8%	0.0%	15.7%	27.7%	2.7%	14.9%	0.0%	8.1%	72.9%	0.0%
Unknown	36.6%	46.4%	15.9%	11.9%	48.9%	37.1%	41.6%	52.1%	1.0%	19.0%
All	**100.0 %**	**100.0%**	**100.0%**	**100.0%**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0%**	**100.0%**

The first table shows device numbers, the second table shows these as a percentage of each region

Observations

- The number of lone worker devices varies in each region. The North East and North West have 26.1% and 22.3% of devices respectively, while the remaining regions have between 6.5% and 11.1%. This suggests that large organisations in the North East and North West may have invested in numerous devices, and/or word of mouth discussion on improving security arrangements has taken place in these regions, since they have twice the number of devices of any other region in England.

- The type of devices being used also shows a high degree of regional variation. The most common device overall is the badge-holder (38.2%). The key fob device is predominately popular in the South East region, and it accounts for 12.5% of devices overall. There is a small number of key fob devices in the London, Eastern and North Eastern regions, but very few in the other regions. As above, this seems likely to have occurred because of word of mouth discussions, and/or the badge-holder device could be the preferred option for a majority of end users.

- The proportion of devices whose type is unknown is 36.6%, making it the second largest category in this table. These devices are most likely to be badge-holder devices obtained under the framework, given the prevalence of these, but this cannot be established for certain. In any event this is a concerning figure, as a device of an unknown type seems

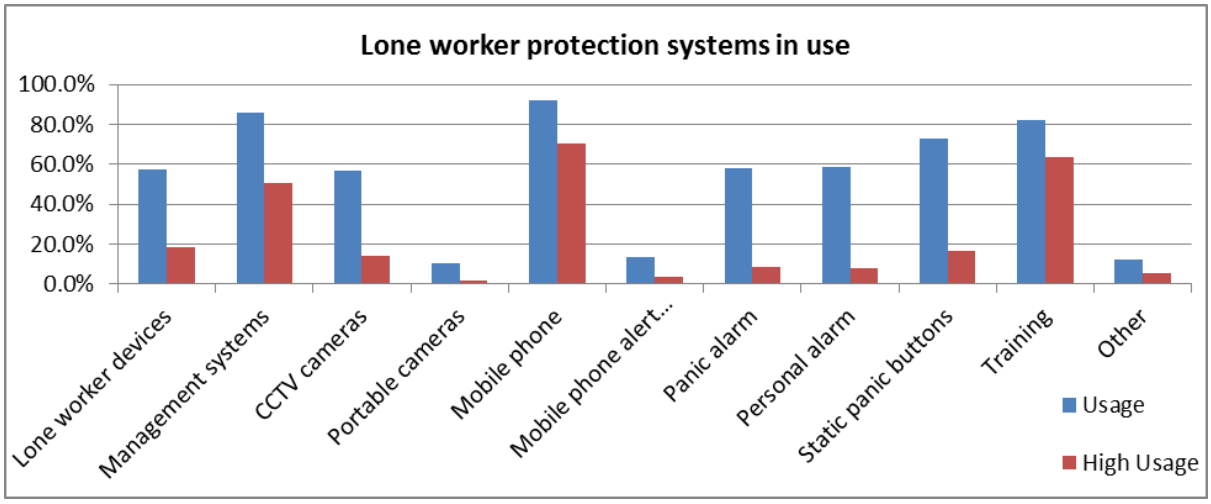
more likely to be used infrequently if at all, and may no longer be appropriate for the needs of the end user, depending on how long ago it was acquired.

b) Lone worker protection systems in use

PERCENTAGE USAGE	Lone worker devices	Management systems	CCTV	Portable camera devices	Mobile phone	Mobile phone with alert app	Panic alarm	Personal alarm	Static panic buttons	Training	Other
All	4.4%	22.2%	5.7 %	1.3%	36.4 %	1.3%	1.9%	2.8%	4.4%	40.5 %	2.8%
Most	13.9 %	28.5%	8.5 %	0.3%	34.2 %	2.2%	6.6%	5.1%	12.0 %	23.1 %	2.2%
Some	38.9 %	35.1%	42.7 %	8.5%	21.5 %	10.1 %	49.7 %	50.9 %	56.3 %	18.4 %	7.3%
None	35.4 %	6.3%	34.8 %	78.5 %	3.8%	61.1 %	25.6 %	23.4 %	18.7 %	9.2%	29.4 %
Don't know	7.3%	7.9%	8.2 %	11.4 %	4.1%	25.3 %	16.1 %	17.7 %	8.5%	8.9%	58.2 %
Usage*	57.3 %	85.8%	57.0 %	10.1 %	92.1 %	13.6 %	58.2 %	58.9 %	72.8 %	82.0 %	12.3 %
High usage**	18.4 %	50.6%	14.2 %	1.6%	70.6 %	3.5%	8.5%	7.9%	16.5 %	63.6 %	5.1%

*Usage = the sum of organisations where all, most or some staff use the system in question

**High usage = the sum of organisations where all or most staff use the system in question



Observations

- The lone worker protection systems most widely used are management systems (i.e. buddy, diary, in/out board, ringing back to base, etc.), mobile phones and training. This is to be expected due to the working practices of NHS staff, who require these types of support mechanisms as part of their day-to-day work. In most cases, these systems are

compulsory and are supported by existing policies and procedures provided by the organisation. These protection systems are appropriate for all lone workers, but should be complemented by other systems for those lone workers experiencing a higher degree of risk.

- ‘Alarm type devices’ follow closely, with about the same percentage in usage as training, mobile phones and management systems.

- Portable camera devices, mobile phones with alert apps and other systems are used less frequently.

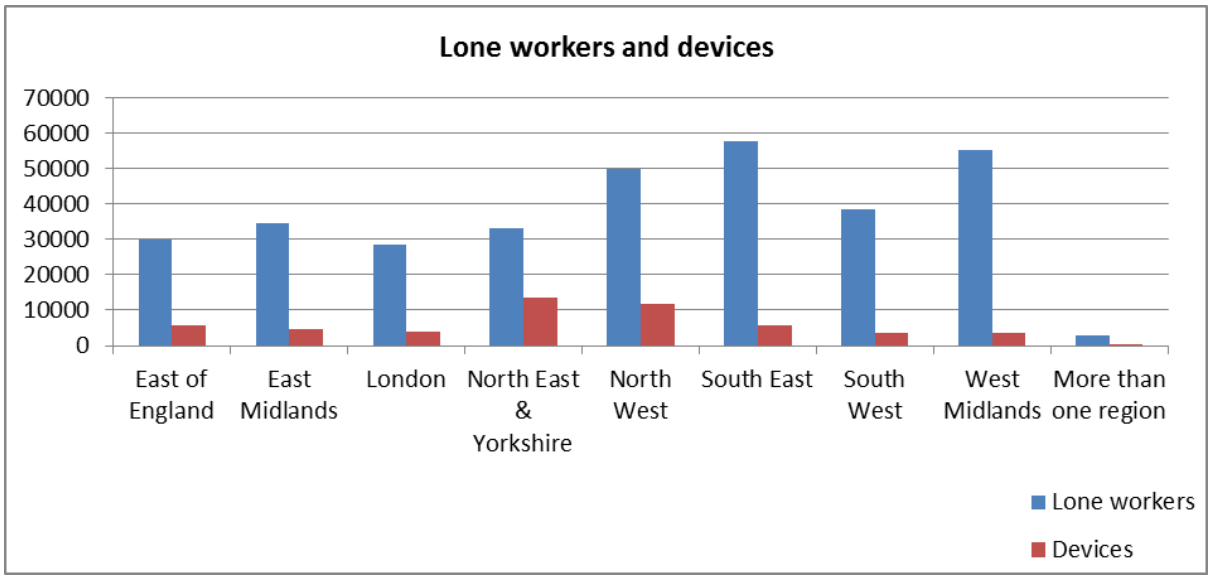
- The low usage of mobile phone alert apps is surprising, given the number of mobile phone users. While alert apps are less effective than a lone worker device, they still represent a cost-effective option for those who may not need a device. As apps are relatively new in the market, it may be that NHS organisations are either unaware of them or have signed up to other services. There could be other reasons for the low uptake of apps; further work is needed to explore these in detail.

c) Devices per lone worker

	Lone workers	Devices	Coverage
East of England	29779	5573	18.7%
East Midlands	34566	4773	13.8%
London	28604	3768	13.2%
North East & Yorkshire	33070	13720	41.5%
North West	50010	11708	23.4%
South East	57637	5808	10.1%
South West	38298	3698	9.7%
West Midlands	55253	3430	6.2%
More than one region	3000	10	0.3%
All	332468	52528	15.8%

Lone workers by region are calculated from organisation size multiplied by declared percentage of lone workers for each organisation.

Coverage was calculated using the number of devices divided by the lone workers in each region.



Observations

- Across all regions, 15.8% of lone workers have a lone worker device, which means that on average there is 1 device per 6.3 lone workers. However there is significant variation between regions, with the North East showing the highest device per lone worker ratio (41.50%, or 1 device per 2.4 lone workers) and the West Midlands showing the lowest (6.56%, or 1 device per 16.1 lone workers).

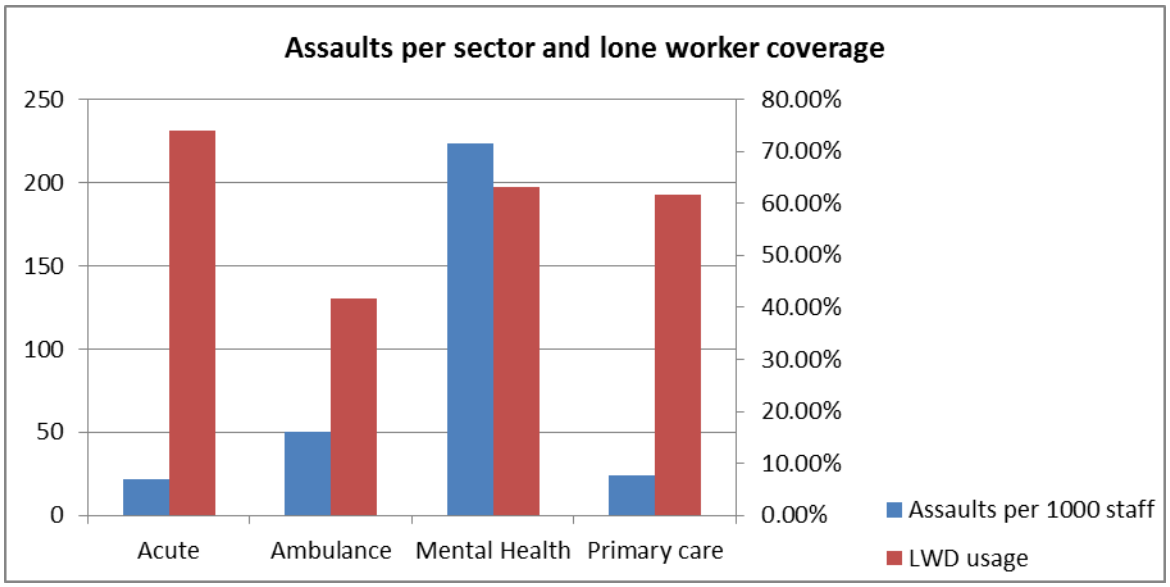
- The reason for the difference is likely to be the different investment decisions and word of mouth discussions taking place at regional level. The lone workers per device ration could also be influenced by other members of staff having access to devices through 'pooling', an option for sharing devices among staff who may not need to use them at every shift.

Section 2 – a review and summary of the different types of lone worker groups

d) Assaults per sector and lone worker coverage

Sector	Assaults 13/14	Total staff	Assaults per 1000 staff	LWD usage
Acute	17900	810838	22	73.83%
Ambulance	1868	37131	50	41.67%
Mental Health	47184	211632	223	63.16%
Primary care	1731	72748	24	61.54%

This table includes data from the Reported physical assaults on NHS staff statistics 2013-14, as well as data on lone worker coverage in each sector. This is calculated as per exercise 5.1b, where 'usage' is represented by the sum of organisations where devices are used by some, most or all lone workers.



Observations

- The acute and primary care sectors have similar numbers of assaults per 1000 staff, at 22-24. The ambulance sector has twice as many assaults per 1000 staff (50) and the mental health sector has over nine times as many (223). Lone worker systems are one

way to reduce the risk of assault among lone workers, but the difference in assault figures indicates that the required degree of protection varies across sectors.

- There is a potential correlation between the frequency of assaults and usage of lone worker devices in some sectors. The sector with the lowest number of assaults (acute) has the highest usage of devices (73.83 per cent), but while lone worker devices reduce the risk of assault, other factors may be contributing more to this figure, due to the balance of lone workers and non-lone working staff in these organisations. The ambulance sector has the lowest rate of lone worker device usage, despite the fact that they would be expected to have a higher proportion of lone workers. The mental health sector does not have a higher rate of lone worker device usage to reflect its higher frequency of assaults, though it is possible that lone working incidents make up a small proportion of these. It may be beneficial to specifically target the sectors with low usage with future communications on lone working systems.

e) Roles by region and organisation

PERCENTAGE	#	Ambulance personnel	outreach workers	Care takers	Clinical staff	Community carers	Community health staff	Community pharmacist	psychiatric nurses	General Practitioner	Healthcare visitor	Inspector	Occupational therapists	transport services	Receptionist	Security officers	Social workers	Technicians
Acute Foundation Trust	102	2	18	6	58	30	74	11	7	3	39	1	60	19	25	43	9	22
Acute Non-foundation Trust	46	0	11	11	61	30	78	11	11	2	41	0	65	24	41	61	4	26
Ambulance Foundation Trust	6	100	0	0	50	0	0	0	0	17	0	0	0	100	50	33	0	33
Ambulance Non-foundation Trust	6	100	0	0	67	0	0	0	0	0	0	33	0	67	50	0	17	50
Care Foundation Trust	2	0	50	0	100	50	100	50	100	0	100	0	100	0	100	50	0	0
Care Non-foundation Trust	11	0	9	18	82	73	100	18	27	18	91	18	73	27	9	0	9	18
Clinical Commissioning Group (CCG)	6	0	4	0	65	9	17	17	4	9	0	0	0	4	26	4	4	0
Commissioned Service (private)	2	0	0	0	50	50	50	0	0	0	50	0	50	0	50	0	0	0
Commissioning Support Unit (CSU)	3	0	0	0	50	0	0	0	0	0	0	0	0	0	50	0	0	50
GP Practice	1	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0
Local Area Team	1	0	100	0	100	100	100	0	100	0	100	0	100	0	0	0	0	0
Mental Health Foundation Trust	44	0	73	14	73	30	84	23	75	2	50	5	70	16	50	32	41	18
Mental Health Non-foundation Trust	13	0	85	8	54	31	77	15	92	15	62	0	77	31	54	23	62	31
Social Enterprise	13	0	0	15	85	23	92	8	8	31	69	0	77	0	46	23	0	15
Other: (please specify)	16	13	44	19	81	38	100	13	31	13	69	6	81	19	38	19	31	25
East of England	30	6	12	6	74	38	65	12	21	12	41	3	59	15	26	18	12	12
East Midlands	25	4	30	15	56	37	67	15	30	11	56	11	52	22	22	11	11	19
London	31	3	32	6	61	26	65	10	23	3	45	0	52	35	35	42	29	29
North East & Yorkshire	37	5	35	10	73	20	75	13	35	5	53	3	63	23	40	35	10	20
North West	40	5	34	14	59	39	80	20	30	7	45	0	66	14	30	34	25	11
South East	41	7	23	2	55	16	70	7	20	2	39	2	39	11	39	48	7	18
South West	35	6	29	14	71	31	74	11	11	11	29	3	69	20	40	46	11	26
West Midlands	30	6	16	3	71	32	71	19	23	3	35	3	68	26	52	35	23	35
More than one region	3	25	25	0	50	0	25	0	25	0	25	0	25	25	25	0	0	50

Text colour based on percentage of organisations of a certain type, organisations within a certain region, in which the role is found, from red = (low) to green = (high).

Observations

- The three most frequently occurring roles amongst all organisations surveyed are clinical staff (defined as staff who treat patients in a static setting only), community health staff

and occupational therapists. Other common roles include healthcare visitor, receptionist and security officer. Most of these roles have a high likelihood of involving lone working in some degree, particularly community health staff, healthcare visitor and security officer.

- The differences between regions are minimal, but the differences between organisations are quite pronounced. This indicates that the required roles for each organisation are similar irrespective of where they are based. Role differences between types of organisations are expected and there are some roles we would not expect to see outside certain organisations (i.e. ambulance personnel for ambulance trusts or general practitioners for GP practices).

- The survey prompted a large level of response from acute and mental health trusts, but lower returns from other organisations – this may be skewing the regional figures towards the roles heavily represented in these organisations.

f) Usage of lone worker protection systems for specific roles

PERCENTAGE USAGE	Lone worker devices	Management systems	CCTV cameras	Portable camera devices	Mobile phone	Mobile phone with alert app	Panic alarm	Personal alarm	Static panic buttons	Training	Other
Clinical staff	63.6%	93.0%	66.8%	11.8%	96.8%	16.0%	66.3%	67.4%	80.2%	86.6%	10.7%
Community health staff	70.2%	93.7%	62.4%	10.2%	94.6%	17.1%	70.2%	72.7%	88.3%	90.2%	12.2%
Occupational therapists	71.9%	97.0%	66.5%	13.2%	96.4%	14.4%	73.1%	77.8%	90.4%	94.0%	12.0%
All	**65.1%**	**97.5%**	**64.7%**	**11.5%**	**104.7%**	**15.5%**	**66.2%**	**66.9%**	**82.7%**	**93.2%**	**14.0%**

The roles selected were the three most common roles identified in exercise e) above.
The usage measure is as per exercise b) above, obtained by the sum of responses of 'all', 'most' and 'some'.
Green values are the highest for each lone worker protection system.

Observations

- The survey was not designed to collect data on the lone worker protection available for individual roles; the above measures are based on the overall lone worker protection available in organisations which have these roles.

- Occupational therapists and community health staff are shown as the highest users of management systems and alarm type solutions. This is to be expected given the nature of their role, which often has an element of lone working. The lowest usage of lone worker devices is seen among NHS organisations with a predominance of clinical staff, although this staff group do benefit from other support mechanisms such as CCTV, portable camera devices and mobile phones.

- The most common support mechanisms used by the three groups overall are management systems, mobile phones and training. NHS Protect's 2009 study on violence against frontline NHS staff[1] produced different results. 'Other alarms' (fixed emergency) was the top system then with 23%, followed by security guards/officers with 14%. Mobile phones featured with 13% and lone worker devices at 10%. Training and CCTV had a much lower score (less than 5 percent), suggesting that NHS organisations are investing in a wider range of support mechanism.

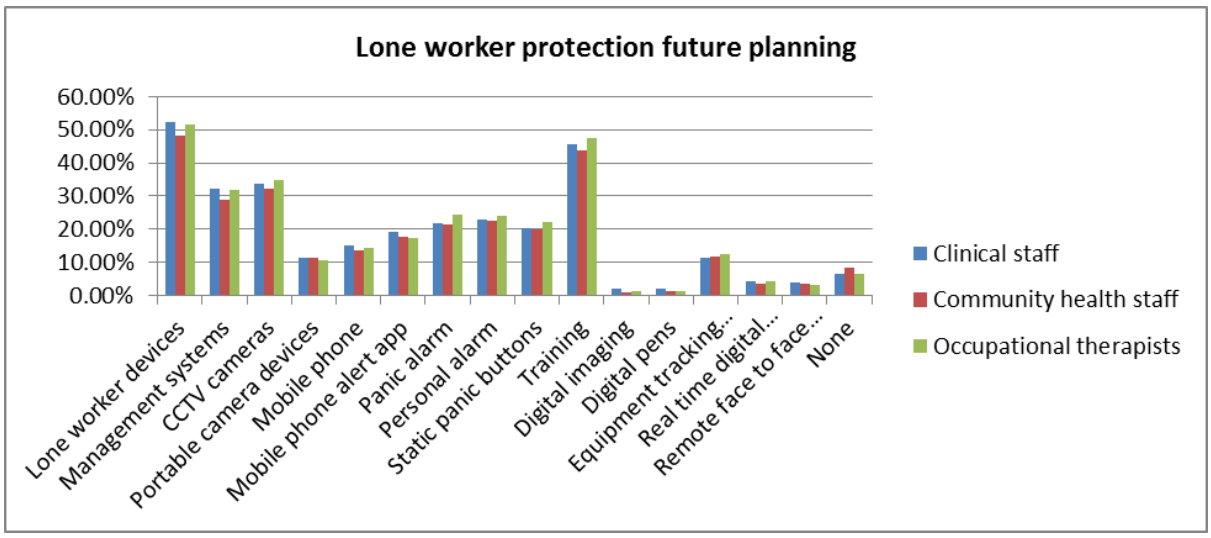
Section 3 – a review and summary of planning for lone worker protection systems in the next 2 years

g) Future planning for specific roles

PERCENTAGE	Lone worker devices	Management systems	CCTV cameras	Digital/portable camera devices	Mobile phone	Mobile phone with alert app	Panic alarm	Personal alarm	Static panic buttons	Training	Digital imaging	Digital imaging	Equipment tracking and monitoring	Real time digital dashboards	Remote face to face interaction	None
Clinical staff	**52**	**32**	**34**	**11**	**15**	**19**	**22**	**23**	**20**	**45**	**2**	**2**	**11**	**4**	**4**	**6**
Community health staff	**48**	**29**	**32**	**11**	**14**	**18**	**21**	**22**	**20**	**44**	**1**	**1**	**12**	**3**	**3**	**8**
Occupational therapists	**51**	**32**	**35**	**11**	**14**	**17**	**25**	**24**	**22**	**47**	**1**	**1**	**13**	**4**	**3**	**7**
All	**41**	**28**	**31**	**11**	**12**	**16**	**19**	**20**	**18**	**40**	**1**	**1**	**10**	**3**	**3**	**13**

The roles selected are the most common roles identified in exercise e) and are the same ones used in exercise f) above. The numbers refer to the percentage of organisations with the specific roles that are considering each system for adoption within 2 years.

[1] Sections were taken from the 'Violence against frontline NHS Staff' research study conducted by COI on behalf of the NHS Security Management Service.



Observations

- Lone worker devices are the most popular option with 48-52% of organisations thinking to invest in them in the next two years, followed by training at 44-47%. Management systems and CCTV also feature in the top three with 30%, suggesting NHS organisations are thinking to invest in existing support mechanism and/or introduce new ones.

- There is low overall interest in digital imaging, digital pens, real-time digital dashboards and remote face-to-face interaction. The reason for this could be that the digital technologies identified in the survey are not classified as personal safety equipment. However, it would be of interest to see whether this will feature as a tool under management systems in the forthcoming years.

h) Current and future investment

Lone worker device usage	Number of organisations in each category	Number of organisations looking to improve lone worker protection within the next two years	Percentage of organisations in each category looking to improve lone worker protection within the next two years
All	14	5	35.7%
Most	44	19	43.2%
Some	123	65	52.9%
None	112	33	29.4%
Don't know	23	4	17.3%

This table compares current level of lone worker device usage with plans to improve lone worker protection within the next two years

Observations

- The highest level of intention to improve lone worker protection within the next two years is among organisations with 'some' staff using lone worker devices (52.9%), followed by organisation with 'most' staff using such devices (43.2%).

- The intention to improve lone worker protection is lower for those organisations with devices available to 'all' staff or 'none'. In the case of those answering 'All', they may find

their level of lone worker protection suitable enough to not invest in other systems or enhance existing ones. For those answering 'None', they may see other protection systems as sufficient or have a lower priority to improve lone working protection systems.

- The lowest level of intention to improve lone worker protection is found among organisations which don't know whether they are using devices or not. It is a concern that organisations with an unknown level of protection are the least likely to try to improve protection in the future. This could have an impact on the number of lone workers without the appropriate support mechanisms to keep them safe while working alone.

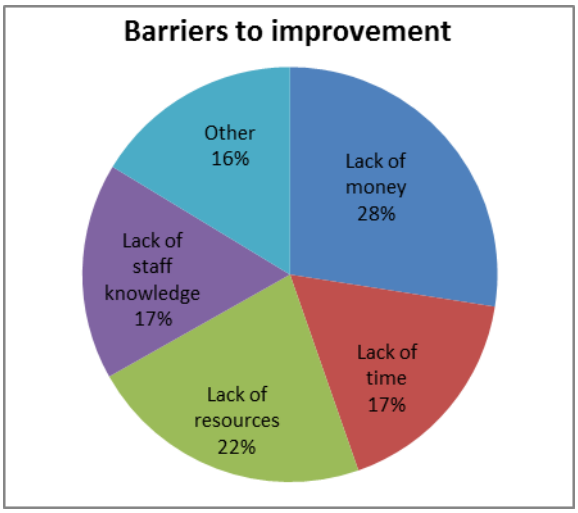
i) Barriers and impacts

In your view, are there any barriers to making improvements to your lone worker protection in the next 2 years?

Yes	136	59.65%
No	126	55.26%

What are these barriers? Please rank 1-5 (1 = least impacted and 5 = most impacted)

Barrier	1	2	3	4	5
Lack of money	8.1%	9.6%	7.4%	13.2%	61.8%
Lack of time	22.1%	22.1%	33.8%	16.9%	5.1%
Lack of resources	3.7%	17.6%	30.1%	43.4%	5.1%
Lack of staff knowledge	13.2%	44.1%	21.3%	16.2%	5.1%
Other	52.9%	6.6%	7.4%	10.3%	22.8%



Observations

- The majority of participants believe that there are barriers to improvement in their lone worker protection in the next two years. Lack of money is the greatest barrier for most, followed by lack of resources. This suggests that the importance of lone working should be recognised and that systems should be available that are cost effective, efficient and suited to different working practices in the NHS.

What other barriers are there?

Staff fear of tracking
Low staff usage of systems
Management reluctance
Supplier issues
Technical issues

- The above were the most common themes in responses. These issues have historically been highlighted as the most significant barriers in previous discussions.

- Staff fear of tracking could be addressed by explaining the purpose behind the protective measures, demonstrating the benefits provided and incorporating the system into normal working practices.

- Low staff usage of devices is connected to fear of tracking and also the next barrier, management reluctance to reinforce usage. This could be targeted by the classification of protection systems as PPE and measures to reprimand staff for not using the systems as well as re-training and internal support to encourage the use of systems.

- Management reluctance could be reduced by demonstrating both the advantages of the systems under discussion and the dangers of inaction, perhaps through examples of organisations which have failed to protect lone workers and the consequences.

- Supplier issues can be reported to NHS Protect; this is certainly the case for framework supplier issues. There are a number of options for systems and suppliers available for those who are not getting the support they require from their current supplier.

- Technical issues can be the most difficult to overcome, as the mobile and GPS technology at the heart of many systems is not infallible. Development is continuing on the technology and systems available but some technical issues must be worked around at this stage.

In your opinion, what are the likely impacts of greater use of technology to enable lone workers to become mobile?

Increased efficiency
Increased level of service
Increased staff safety
Increased confidence
Concerns about cost
Concerns about staff becoming too reliant on technology

Responses to this question were mostly positive, with the common themes listed above. The majority of participants believe that a greater use of technology will become prevalent in lone working, though there were some cautionary notes raised as well. Cost was raised again as a concern as systems become more complex and potentially expensive.

Staff becoming too reliant on technology is also a concern: dynamic risk assessment is still likely to be the most effective way that lone workers can protect themselves and it should not be forgotten as other protective measures become more prevalent.

6. Summary of all findings

The following findings emerged from analysis of the lone worker estate mapping exercise:

- There are large disparities between geographical areas in terms of the level of lone worker protection provided by organisations. This may be due to larger organisations investing in many devices, and/or word of mouth discussion of devices amongst trusts in a region. Regions with higher levels of protection should be further looked at to determine the reasons behind this, and regions with lower levels of protection could be targeted through regional meetings.

- There are a significant number of 'unknown' devices held by NHS organisations. This result may stem from the individual completing the survey not being aware of the devices in use by their organisation, though every effort was made to ensure that the survey reached the correct person. Alternatively, it may be that the devices in the organisation are unknown because they are being used infrequently, which is a concern as lone worker safety will suffer. Further work is needed in this area to improve awareness of lone working within organisations, particularly the systems which they have in place. The lone working standard in the NHS Standards for Providers refers to the need for regular assessments of lone working protection systems, which are what is likely, required in these situations.

- Mobile phones are also popular devices. Most mobile apps with lone working capabilities are more cost effective than lone worker devices. Further work is needed to investigate why some of the lower cost solutions have a low uptake when funding is the key barrier to investing in this area.

- There's a large difference in levels of assault in different sectors, but there is no obvious correlation between the frequency of assaults and usage of lone worker devices across the sectors. It may be worth looking into this further and targeting the mental health sector (which has the highest rates of assault) and the ambulance sector (which has the lowest use of lone worker devices) specifically to ensure that their needs are being met in terms of lone worker protection available.

- Organisations are primarily looking at lone worker devices, training, management systems and CCTV in terms of future planning for lone worker protection. Guidance documentation and options available on the framework should be tailored to support organisations appropriately with these plans, as well as ensuring they are informed about the full range of options available and the capabilities of the various systems available.

- The lowest level of intention to improve lone worker protection is found among organisations that currently have the lowest level of protection. There is a risk where most organisations improve their protection and a few organisations have an insufficient level of protection without the desire to improve. An initiative to contact organisations which have had little prior contact with the lone worker protection service may be beneficial in ensuring lone working is on their agenda.

- The main barriers identified to improving lone worker protection in the near future are lack of funding and lack of resources available. This suggests that there is more work to do to ensure that the importance of lone working is recognised and check that solutions are available at a range of costs. This may tie in with the aforementioned initiative on mobile phone alert applications, ensuring that organisations are aware of the lower cost systems that are currently available.

7. Recommendations

The following actions may provide ways to obtain further information and address the findings identified above:

- Look at reasons behind differences in regional protection and highlight good practice and risks by involving a number of organisations in the NHS and asking them specific questions. One of the options is to address these questions to the Lone Worker Steering Group (LWSG), organised by NHS Protect.

- Encourage organisations to understand the system they have in place and reassess it regularly. NHS Protect could improve existing support and guidance and regularly review the relevant standards for providers of NHS services.

- Find out why lone worker mobile phone apps are not used, and make organisations aware of their usefulness. NHS Protect engages with the LWSG and suppliers to examine the effectiveness of specific systems and understand their scope.

- Investigate and target specific sectors to ensure that they have sufficient levels of lone worker protection. NHS Protect's requirements are featured in the NHS Standard Contract to ensure that appropriate security management arrangements are in place and maintained in providers of NHS services.

- Educate on the range of lone worker protection options available and their capabilities. Further work is required to understand the information needed to support organisations in different sectors in the NHS.

- Contact organisations which have had little prior contact with the lone worker protection service. Further work by NHS Protect is needed to promote lone working and to examine how we could engage with organisations on non-related framework topics and issues.

- Support lone worker options with a range of costs, and ensure relevant management are aware. Further work is being undertaken by NHS Protect to review the existing framework agreement to examine new product and service offerings.

8. Conclusion

The most significant difficulty with current lone worker systems is usage, with a great deal of effort put into trying to monitor and improve use of devices. Numerous measures were identified with the potential to boost usage; the production and sharing of complementary guidance and training is something that all organisations may benefit from.

Organisations using lone worker devices don't have anything to compare their uptake and usage figure to, aside from historical data. It would be beneficial if some benchmarking could be created so an organisation can compare themselves to similar organisations and measure the effectiveness and coverage of their lone worker solution.

Awareness of lone working issues has improved since the launch of the framework agreement, but this is not uniform across all organisations. Further guidance for senior management would likely be beneficial, explaining the basics and options for lone worker protection.

There is an issue with ownership of lone worker responsibilities and systems; this can be seen in the number of 'unknown' lone worker devices used by organisations. Any new systems for lone working or mobile working introduced will likely face this same issue unless ownership is made clear in these organisations.

The cost of systems is a significant barrier for some; as the framework system is a high level option this may be resulting in an 'all or nothing' approach to protecting lone workers. The framework may benefit from more options with a tiered structure of cost and risk to allow organisations to make a decision about what they require. However, this must be combined with activities to increase awareness, to ensure that decision makers understand their needs and the options available.

In general the results of this exercise have been positive. Lone working is something that the surveyed organisations recognise and understand, and systems have been introduced in almost all organisations to protect them. The focus in future should be on improving this protection, be that through improved systems, greater understanding of the options or taking ownership for their success.