

# Pathways to interoperability and resilience across the Blue light Services

## Report and Recommendations



Skills for Justice is part of JSSC group, which is an independent, employer-led charity enabling employers and employees across the world to develop skills for success.

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## Executive Summary

The Joint Emergency Services Interoperability Programme (JESIP) has been established to bring about changes at the operational level that lead to the emergency services working together more effectively at major incidents.

Skills for Justice have delivered this research project as part of the Employer Investment Fund (EIF). The EIF, managed by UKCES, stimulates employer investment in skills. This project is one of a wider programme of projects designed to inform the development of working across boundaries in the Justice and Community Safety sector.

In 2012 Skills for Justice examined inquest reports from major incidents and identified recurring recommendations relating to interoperability between the emergency services. Following this research Skills for Justice have worked with JESIP to deliver an in depth survey in 2013 for these services. This survey of nearly 2000 employees from the emergency services builds upon our understanding of the barriers to interoperability and provides an evidence base that can support JESIP in developing interventions.

The following key findings have been drawn from the full survey:

- 95% of respondents stated that a **lack of joint training** was a barrier to effective interoperable working
- 93% of respondents stated that a **lack of joint exercising** was a barrier to effective interoperable working
- 71% of operational commanders have experienced joint training either **never or less than every two years**
- 91% of respondents stated that a **lack of practices, protocols, training and exercising** was the most significant barrier to effective sharing of information of the options included
- 62% of respondents considered the **lack of knowledge regarding each other's approach** was the most significant barrier to conducting successful joint assessment of risk
- 75% of respondents stated that **joint debriefing** from incidents happens either **never or only sometimes**
- 95% of respondents thought that a **move to a single joint decision making model** would support interoperability

These findings provide a measure to compare progress against following the conclusion of the JESIP workstreams.

Following analysis of the survey findings the report makes the following recommendations:

Joint training and exercising is consistently identified as the most important factor in the effectiveness of interoperability. Nationally developed and funded joint training should be provided for responders, particularly those working at an operational level.

An awareness of the role, approach and requirements of other services is a basic requirement of all interoperability principles and this knowledge should be considered a key training standard.

Joint training and exercising will be most beneficial where it provides personal contact with responders from other services and includes practical elements that allow assumptions and equipment to be tested.

Training does not guarantee that initiatives will become established in the emergency response. Initiatives that compete with intuitive, ingrained alternatives are easily abandoned under the pressure of the emergency response. Initiatives must address a real need, be simple, reliable and build on processes that are familiar from routine operations. If initiatives are not consistently used knowledge attrition will occur.

Organisational and cultural attitudes that reject joint working should not be a source of excessive concern. A lack of trust or willingness to work together is consistently rated as the least significant barrier to interoperability of those included in this survey.

A national interactive collaboration tool could be developed. This would be aimed at supporting the development of collaborative learning programmes to ensure that the needs of the three emergency services are met.

Responsibility for the procurement of communications technology sits with local organisations. National procurement or funding would be more cost effective and would increase standardisation. Compatibility of equipment makes communications protocols more efficient, reliable and resilient.

The survey results will help to ensure that the experiences and opinions of the emergency service workforce are taken into account when designing initiatives. However, people do not always behave in the way they predict they will. An important step in developing interventions is evaluating their effectiveness in eliciting behaviour change in responders.

## Background to the research

Emergency management has become a focus of attention in recent years. As technological capabilities and concerns over terrorist attack have grown, so too has the expectation that the Government and Emergency Services should have the capacity to handle emergencies as effectively as possible.

In 2012, Skills for Justice carried out desk research examining inquest reports from major incidents and extracting the recommendations that were concerned with improving interoperability between the emergency services. Certain recommendations tended to recur; lessons learnt were not being acted upon. This research hopes to add to what we know about the barriers to blue light interoperability and how to overcome them.

The overall programme, of which the workforce survey is a key part, is being carried out in partnership with the Joint Emergency Services Programme (JESIP). JESIP has been established to bring about changes at the operational level that lead to the emergency services working together more effectively at major incidents. The programme is run jointly by the three emergency services, working closely with the Home Office, the Cabinet Office, the Department of Health and the Department for Communities and Local Government.

The scope of this research is limited to interoperability between Category 1 Blue Light Responders at major incidents.

## The Research

This research project aims to provide an evidence base that can support JESIP in prioritising and developing solutions to increase interoperability. The longitudinal survey provides a baseline to establish current knowledge and skills. This will be revisited following the implementation of training interventions and the application of learning back in the workplace to measure progress.

This report will answer the following research questions:

- What is the current perception of interoperability within the emergency services workforce?
- What barriers to interoperability do the emergency services workforce consider important?



- What measures do the emergency services workforce consider effective in increasing interoperability?

## Methodology

Responses to an online survey were collected between 29 May and 22 July 2013. The survey was widely published. We monitored response rates and reviewed the sampling strategy to target Police and Ambulance responders who were not well represented in the sample initially. The survey was sent by email to the Chief Fire Officers Association (CFOA), JESIP working group members, JESIP mailing list and JESIP engagement event delegate lists. The link to the survey was placed on Skills for Justice and Ambulance Service websites and mentioned in an article in the Emergency Services Times.

1,923 respondents completed the survey. The sample consisted of On-Scene Commanders of all levels and Control Room staff and managers from all three Blue Light Services. This is a non-random sample where respondents were self selecting<sup>1</sup>. The survey focused on four priority areas identified as being important for interoperability: doctrine and organisation, learning and development, situational awareness and operational communications.

Respondents were encouraged to provide additional comments and feedback relating to interoperability not covered in the survey questions.

The survey responses were grouped together and imported back into the survey software (SNAP) where a summary report was produced. The responses of different groups were isolated and compared to identify differences in opinion and experience between groups. Respondents were grouped by: Service (Police, Fire and Rescue and Ambulance); Command Level (Gold, Silver and Bronze) and Incident Experience (Routine only or Routine and Major).

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<sup>1</sup>In a random sample all members of the population are equally likely to be selected, which increases the confidence that the results accurately represent the population under study. In this sample not all members of the population were equally likely to be selected, or volunteer to complete the survey. This means the results may not reliably represent those individuals who did not have access to or choose to complete the survey.

## Defining interoperability

JESIP define interoperability as:

“The extent to which organisations can work together coherently as a matter of routine”

The definition of interoperability formulated by the NPIA<sup>2</sup> before it was dissolved in 2012 points to how this can be achieved:

“The capability of organisations or discrete parts of the same organisation to exchange operational information and to use it in their decision making”

## Research scope

The scope of JESIP and this research is limited to Fire and Rescue, Ambulance and Police responders.

Category 1, Category 2, private and voluntary organisations play a vital role in emergency response and engagement and interoperability with these organisations is very important. However, the exponential growth in the number of organisations involved in a response as the definition is broadened, as well as organisations’ varying levels of accountability, means the focus here will be restricted to the core ‘Blue Light’ emergency services.

JESIP, in keeping with the bulk of previous interoperability research and guidance, is focused on improving interoperability at major, complex incidents (see reports by the Royal United Services Institute (RUSI), The National Police Improvement Agency (NPIA) and Skills for Justice). The emergency services are effective and interoperable when attending planned or routine incidents. Interoperability at routine incidents will therefore feature in this research as a tool for shaping recommendations, rather than as their target.

## Existing guidance

The Civil Contingencies Act 2004 provides the basis for the emergency services preparation for and response to major incidents. It is accompanied by statutory guidance ‘Emergency Preparedness – Guidance on Part 1 of the Civil Contingencies Act 2004’.

Each service provides non-statutory guidance on emergency preparedness: Association of Chief Police Offices ACPO ‘Guidance on Emergency Procedures’ 2009; Department of

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<sup>2</sup> The NPIA has transferred all of its operational functions to the College of Policing as of December 2012

Health 'The NHS Emergency Preparedness Guidance' 2013; HM Government 'Fire and Rescue Manual' (Volume 2). Fire Service Operations: 'Incident Command' 2008; and this is supplemented by guidance that focuses on the tri-service response such as NPIA 'Guidance on Multi-Agency Interoperability' 2009.

Skills for Justice and JESIP have reported on the recommendations and learnings from Coroners' inquest reports following major incidents and the Royal United Service Institute have prepared an occasional paper on Blue Light communications interoperability. Liverpool and Kings College London have research departments dedicated to studying the emergency services and this attention is reflected internationally. Overall, emergency management is becoming an increasingly theorised area (Power 2010, Strandberg 2012, Waugh 2006).

This list demonstrates that there is no absence of literature and knowledge. Indeed, at a conference held by JESIP in November 2012 Jenifer Cole of RUSI remarked that much of what is needed to improve interoperability is already written, and just needs to be badged JESIP.

The hope is that JESIP will be able to drive progress because it embraces a joined up, tri-service approach with governmental support, and we know that initiatives have struggled in the past when these criteria are not met. The response rate to this survey is an encouraging sign that the programme is able to achieve unprecedented engagement with this audience.

## **Measuring success**

Measuring interoperability can be difficult. The hope is that effective interoperability will improve safety for the public and blue light responders, and lead to increased resilience (NPIA 2009). We cannot measure these outcomes in a regular and controlled way because they only become apparent when a major incident occurs.

NPIA Guidelines on Multi-Agency Interoperability set out other outcomes of interoperable working, and how they are achieved:

- Information is shared and communications are interoperable
- Risk assessment and decision making is based on an understanding of responders' responsibilities and capabilities
- Confidence amongst blue light responders is high because responders are trained in, and understand their emergency role

The workforces' experience in these areas will form the main content of this report.

The understanding of interoperability is an important measure, and is found to be consistently high. 79% of survey respondents selected '*agree*' or '*strongly agree*' when asked if their organisation met the definition of interoperability provided.

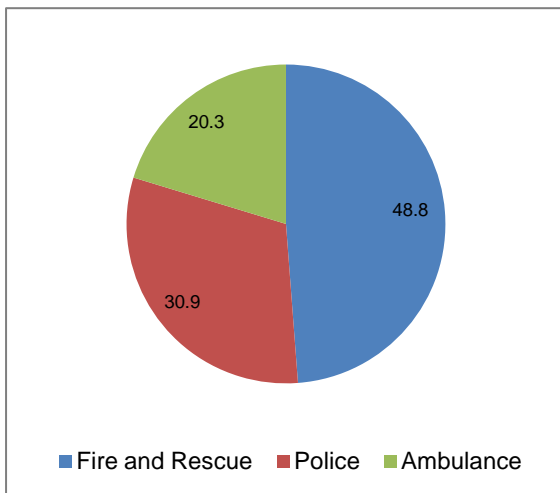
An even stronger result was produced by the recent National Capabilities Survey<sup>3</sup>, which reported that all respondents perceived their organisation as interoperable with the other emergency services in their Local Resilience Forum.

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<sup>3</sup> The National Capabilities Survey is a bi-annual longitudinal survey conducted by the Civil Contingencies Secretariat in the Cabinet Office which seeks to assess the UK's capability to respond to risks determined by the National Risk Assessment. The target sample is Category 1 and Category 2 responders. Completion was mandatory in 2008 and 2010 and voluntary in 2012.

# 1. Survey Population and Organisational Characteristics

Figure 1: Service Profile of Respondents



The survey was largely targeted at people who have held a Bronze Command role and those with a wider strategic remit.

Figure 2: Respondents' job roles

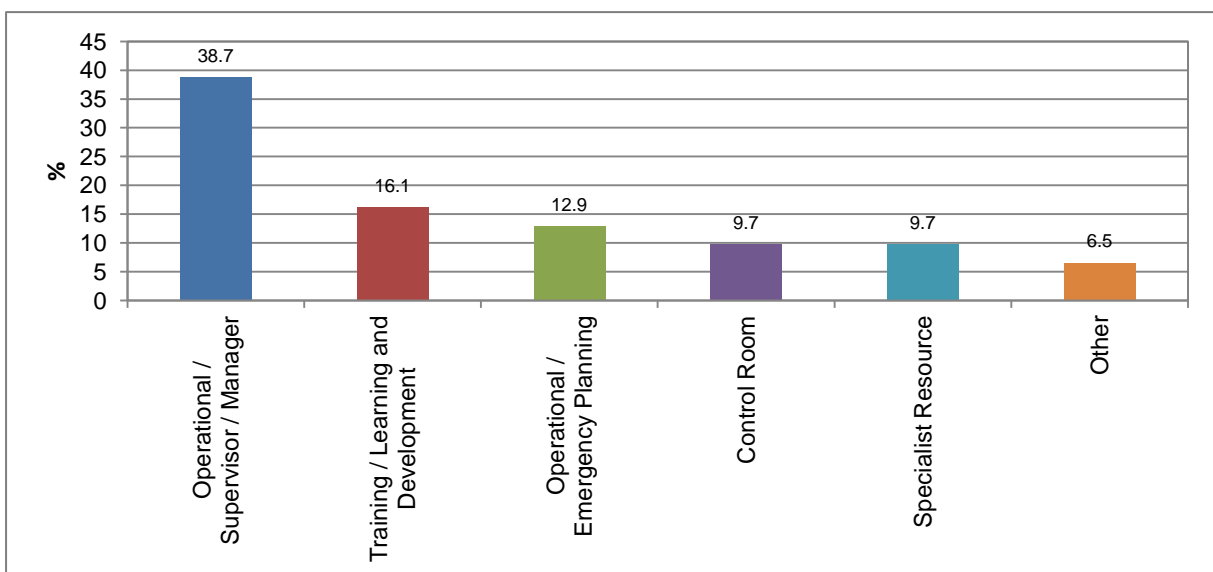


Figure 3: Respondents' Command Level

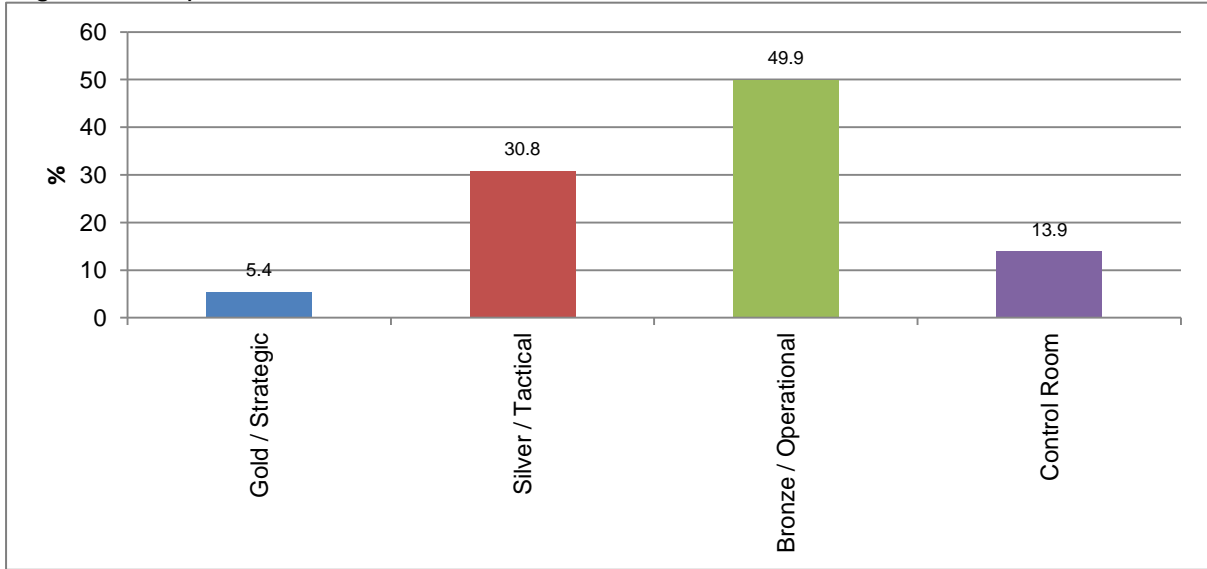


Figure 4: Respondents' Time in Role

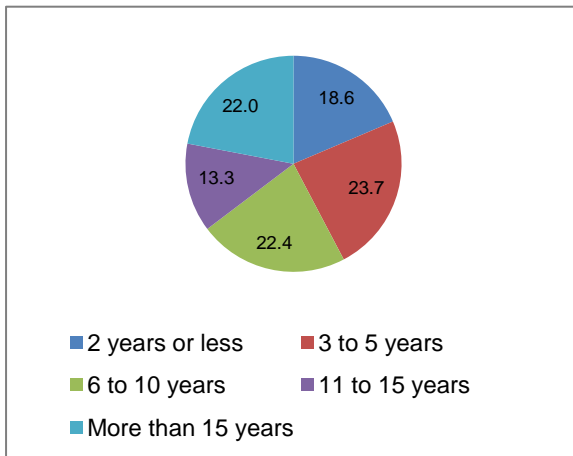
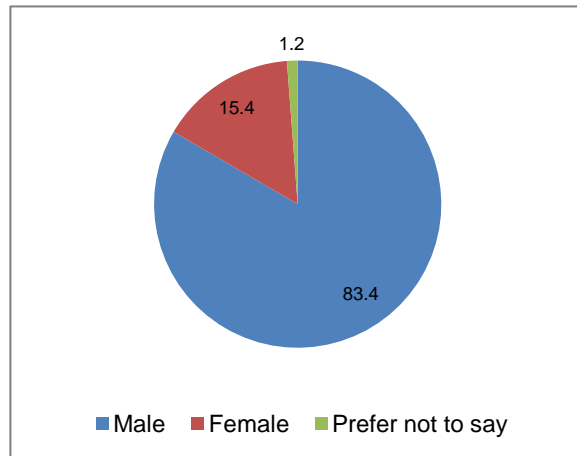


Figure 5: Respondents' Gender



## 2. Respondents' Experience at Major Incidents

All survey respondents included in the analysis have fulfilled a command role during a live incident that required the deployment of resources from two or three Blue Light Services.

Perceptions of interoperability did not differ significantly between those who have and have not fulfilled a Command role at a Major Incident.

Figure 6: Fulfilled a Command Role at a Major Incident

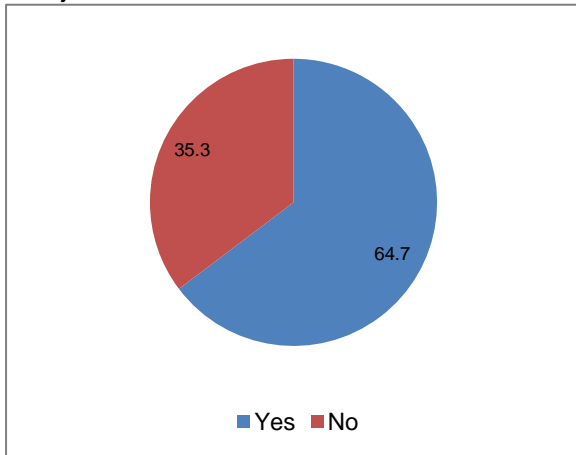
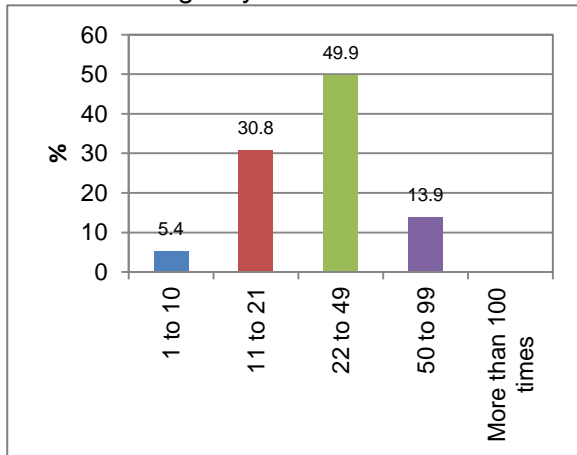


Figure 7: Times Fulfilled Command Role at a Multi-Agency Incident

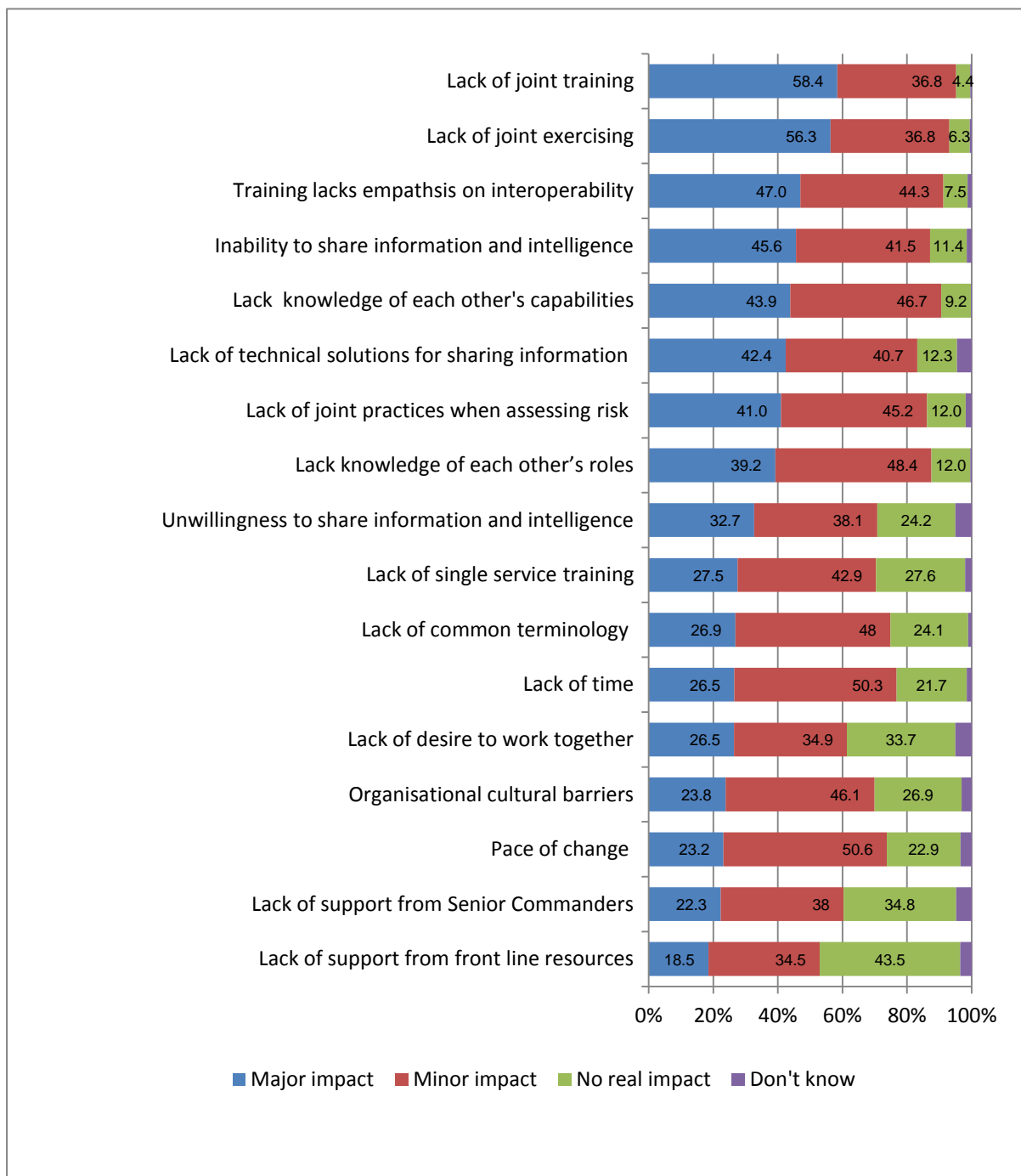


### 3. Training and Exercising

The lack of joint training and exercising is the biggest single barrier to interoperability identified in the survey.

Lack of joint training and exercising was considered the most significant barrier to interoperability of the options included in the survey. More than 90% of respondents believe this to be an issue (see Figure 8).

Figure 8: Barriers to Interoperability



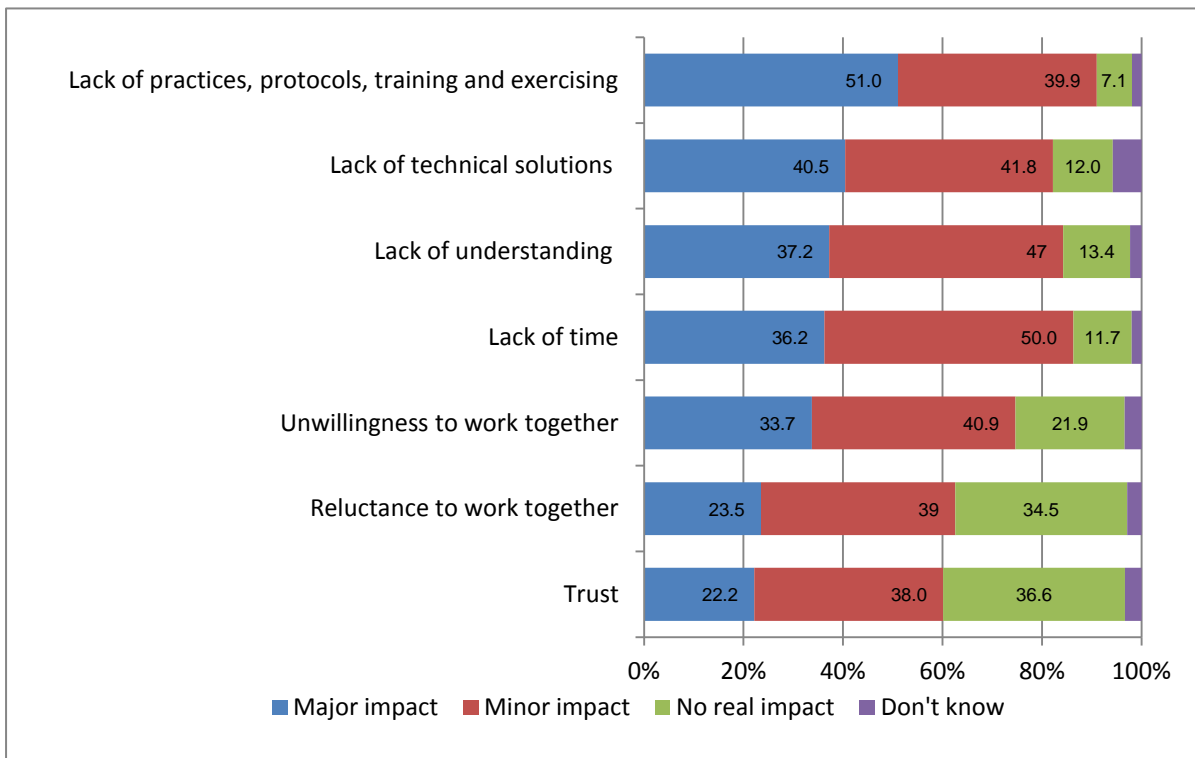


Survey questions explored what impact training and exercising provision had on specific aspects of the incident response compared to a range of other barriers.

Lack of joint training and exercising was repeatedly identified as the most significant of the barriers included.

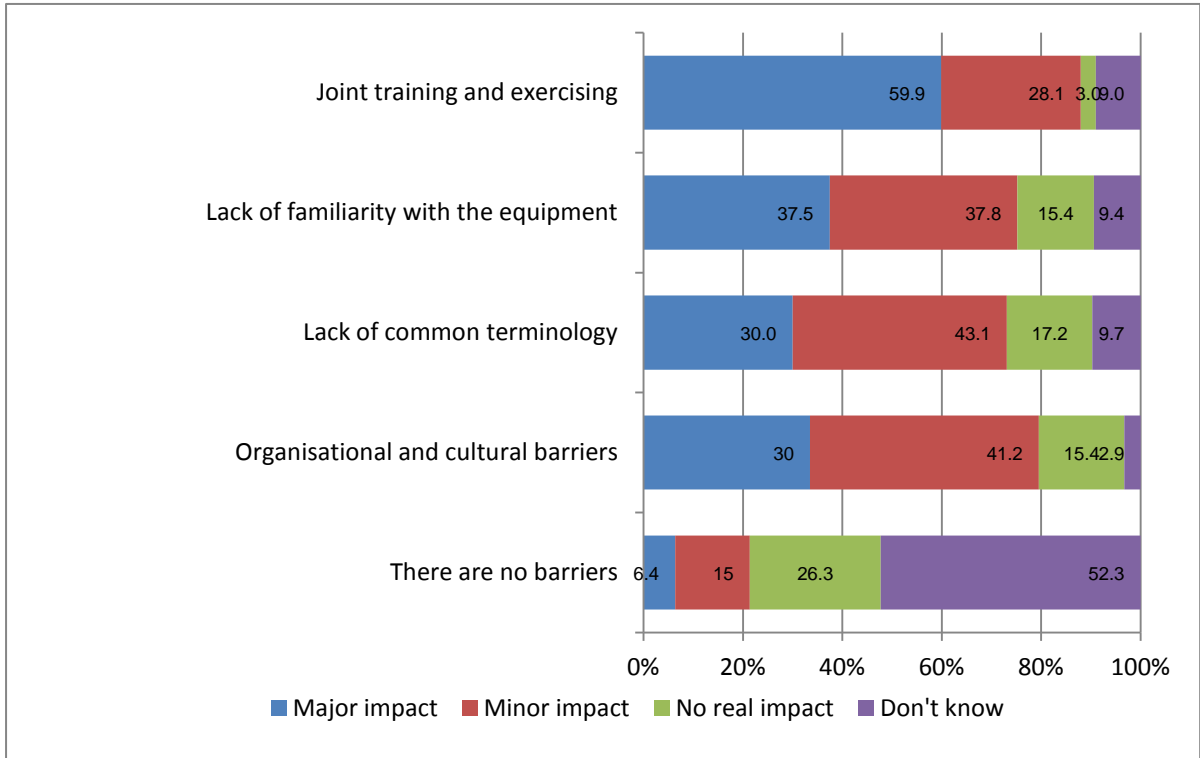
Lack of joint training and exercising is also perceived to be the most significant barrier to the effective and timely sharing of information (see Figure 9).

Figure 9: Barriers to Sharing Information



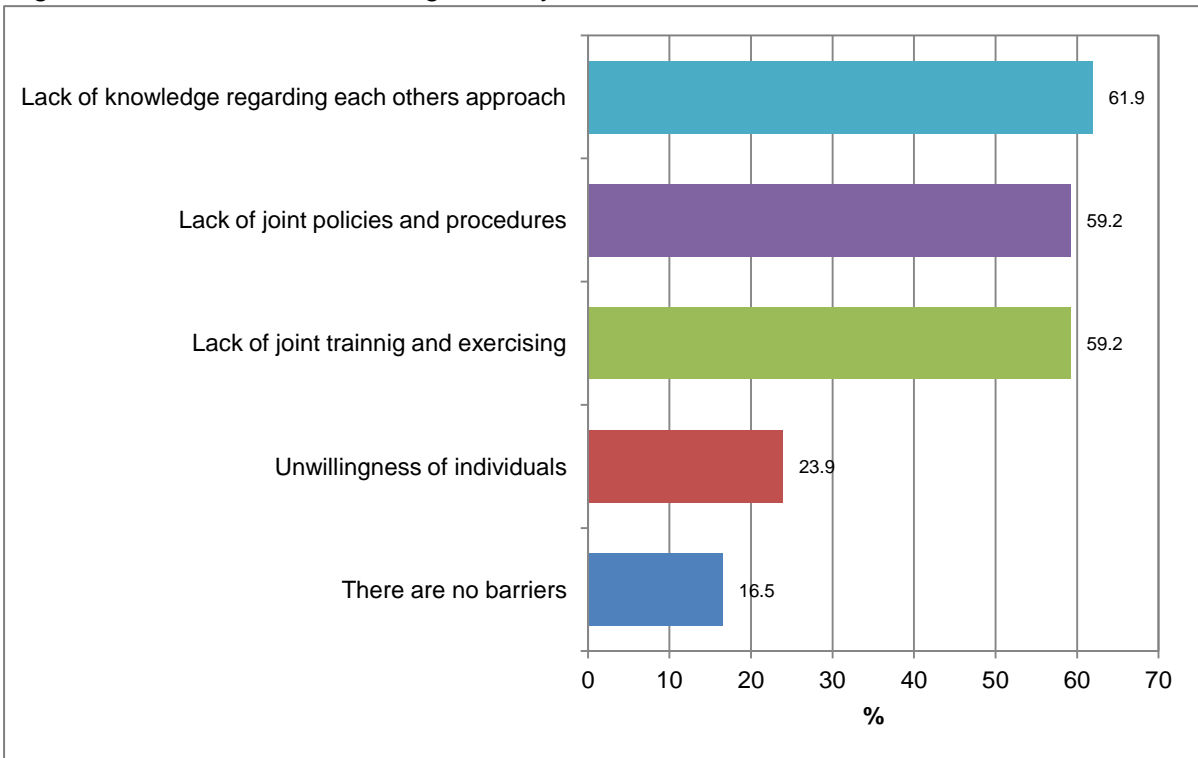
Lack of joint training and exercising is seen as the most significant barrier to communicating using Airwave Interoperability Channels (see Figure 10).

Figure 10: Barriers to using Airwave Interoperability Channels



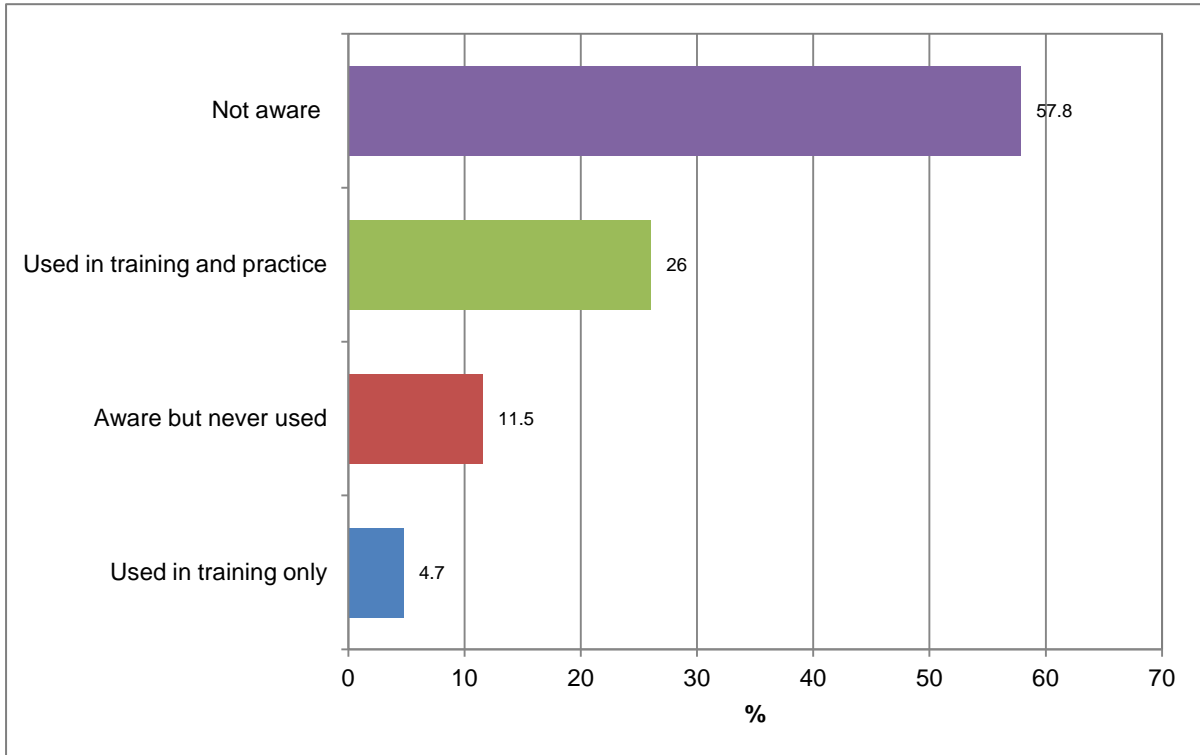
Lack of knowledge is considered the most significant barrier to conducting Joint Dynamic Hazard Assessments (see Figure 11)

Figure 11: Barriers to Conducting Joint Dynamic Hazard Assessments



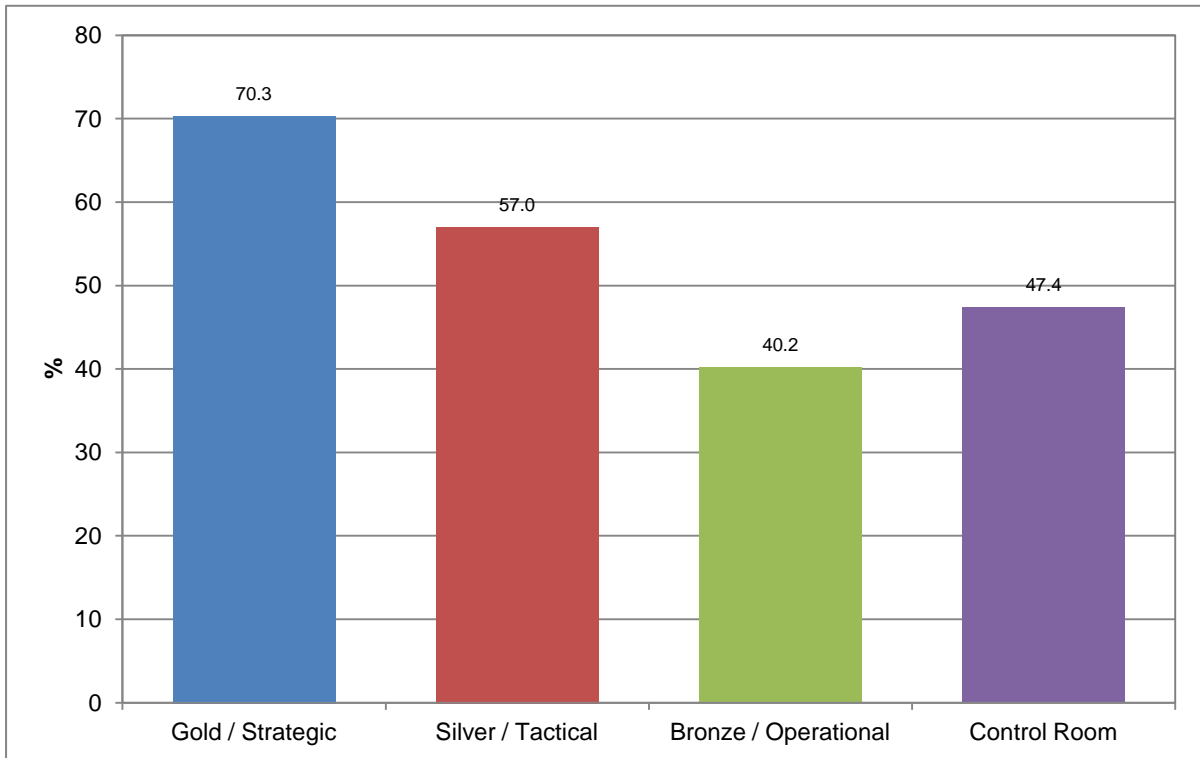
In addition to the significant concern about lack of joint training and exercise opportunities, other areas of concern emerged. For example, just 30% of respondents have received training in the use of the emergency management lexicon of terminology and symbology (see Figure 12).

Figure 12: Training in the Use of Lexicon and Terminology



Training levels are not sufficient to give responders confidence in their emergency role. The majority of Control Room and Bronze Command respondents have not received sufficient training to feel confident in their emergency role. Silver and Gold Command respondents receive more training, and are more likely to feel confident in their emergency role (see Figure 13)

Figure 13: Sufficiently Trained to Feel Confident in Emergency Role



Joint training happens infrequently, and is unevenly distributed between levels of command. Gold Commanders are most likely to have received recent training. The majority of Silver and Bronze Commanders who completed the survey participated in joint training less than once every 2 years (see Figure 14.). The numbers participating in joint exercising are roughly the same (see Figure 15). Police are less likely to have recently participated in joint training than their Ambulance and Fire and Rescue counterparts (see Figure 16 and Figure 17).

Figure 14: Frequency of Joint Training by Command Level

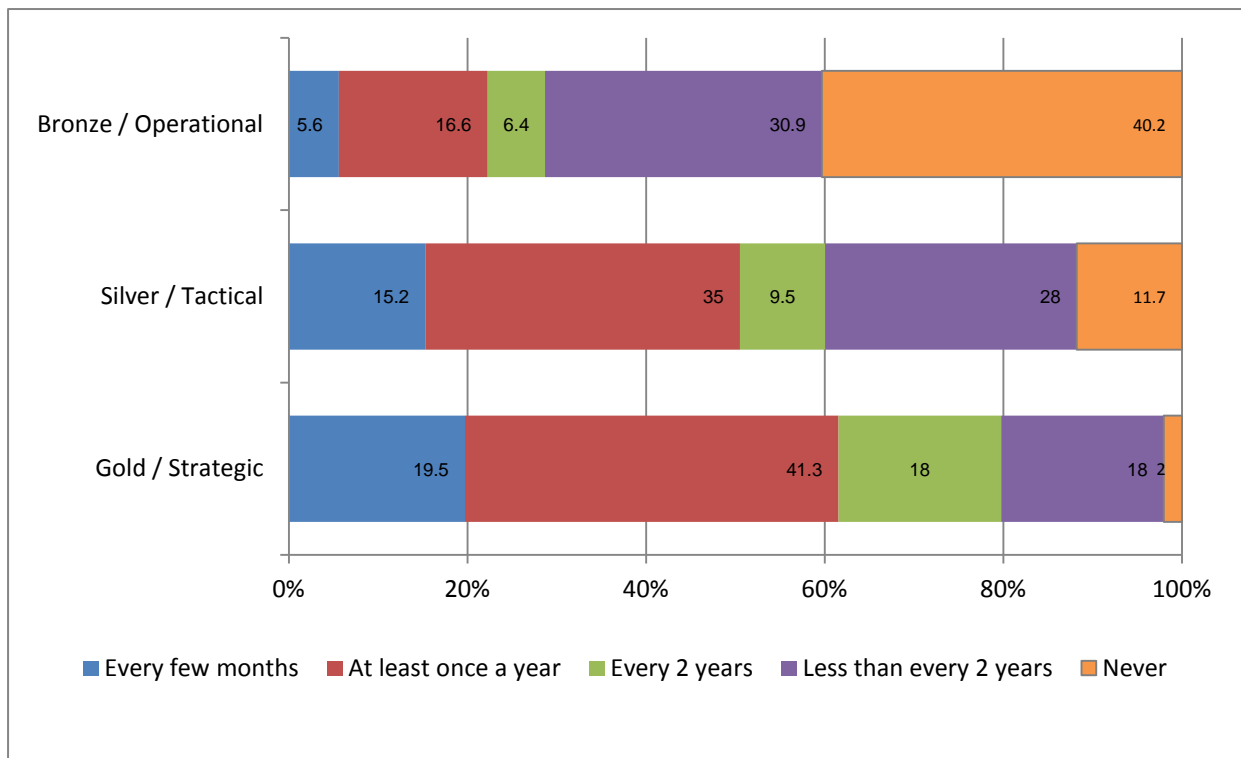


Figure 15: Frequency of Joint Exercising by Command Level

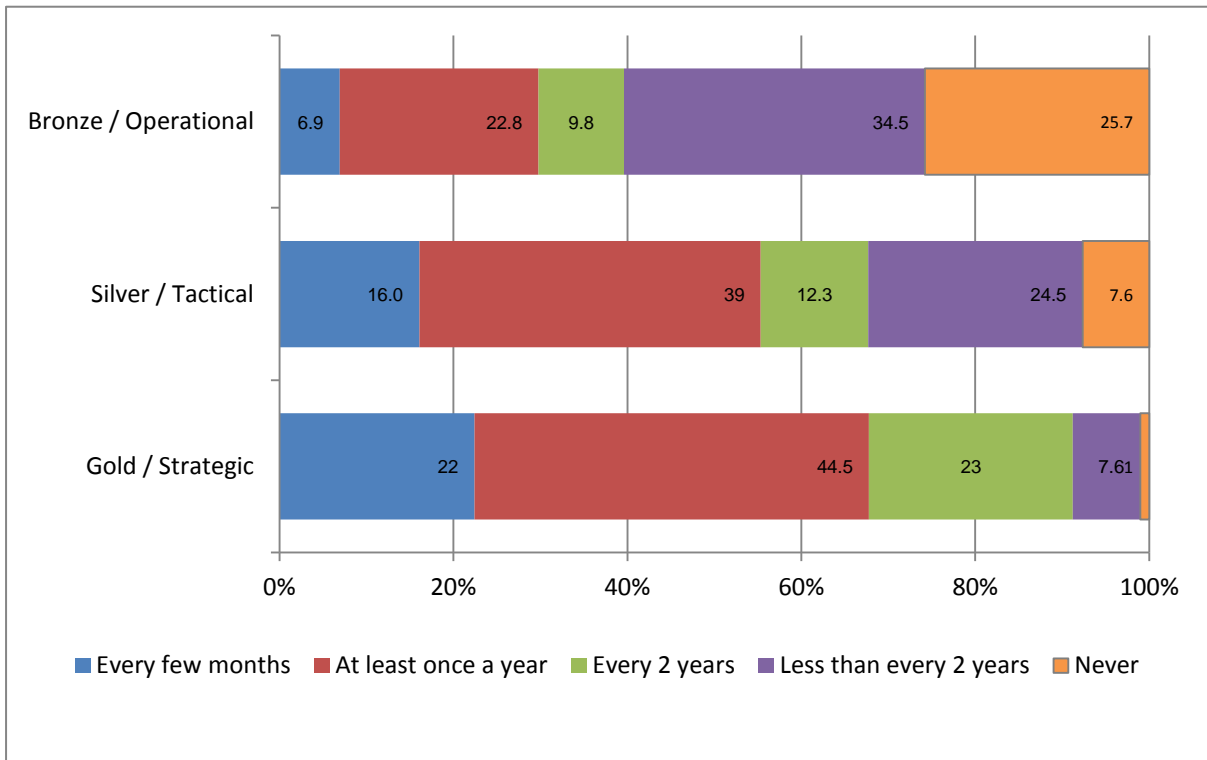


Figure 16: Frequency of Joint Training by Service

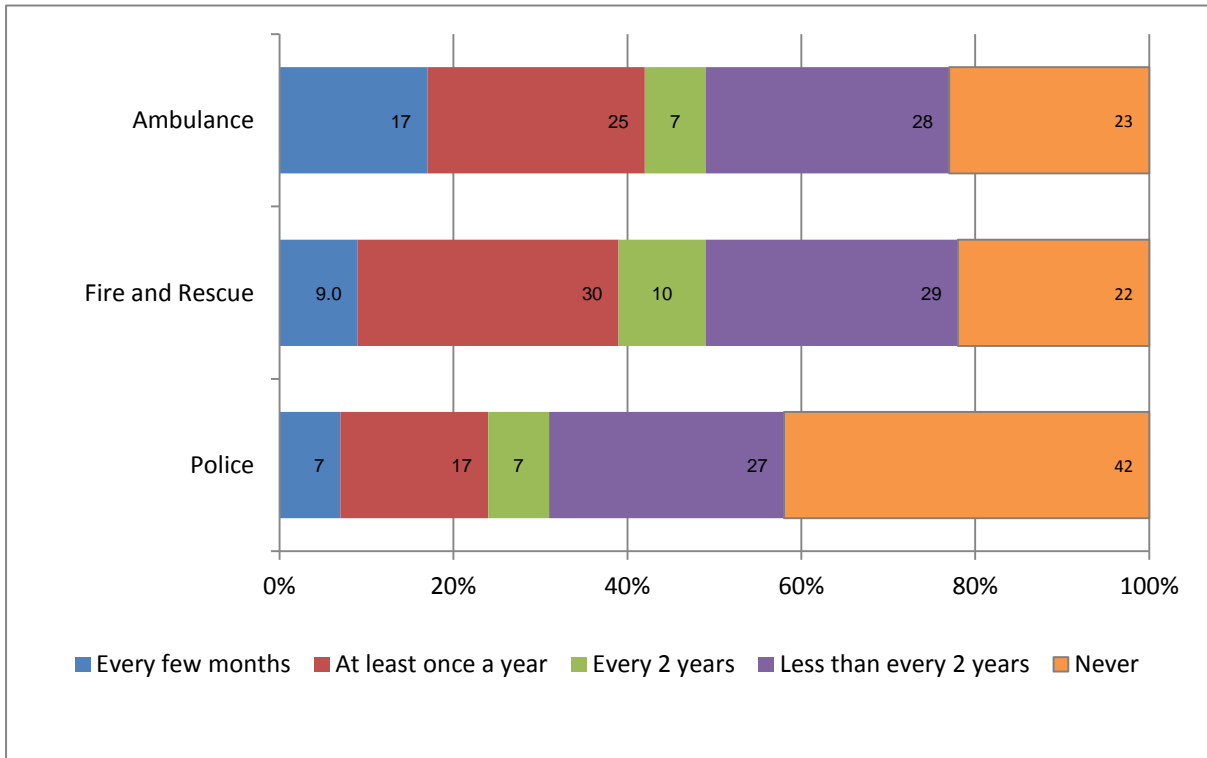
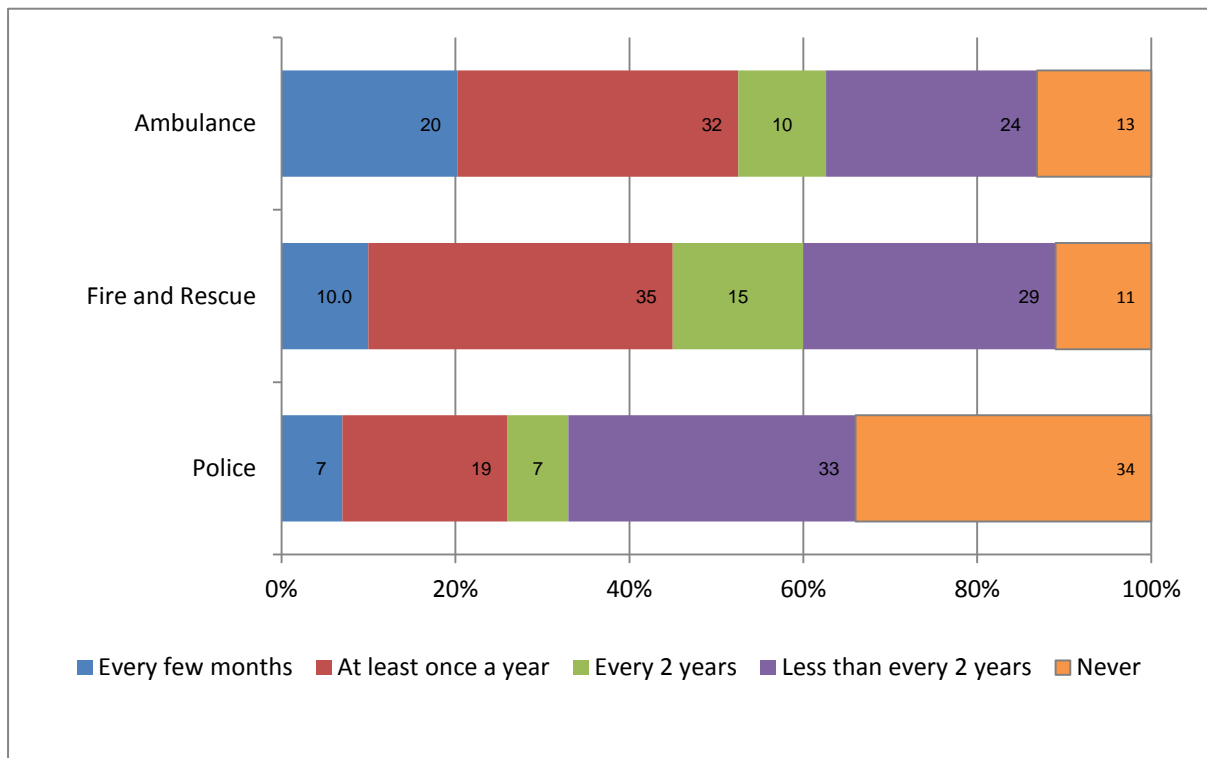


Figure 17: Frequency of Joint Exercising by Service



9 out of 10 respondents consider a lack of awareness of each other’s skills and capabilities to be a barrier to interoperability (see Figure 8).

Open responses suggest the main reason joint training and exercising does not happen is resource constraints. The fact that joint training and exercising are delivered regionally means that these resources must be found by individual forces. Joint training and exercising is very expensive to run, and is not mandatory. The pressures of managing a local budget and of day-to-day operations can lead to these activities being neglected. Regional delivery creates additional burdens because it is not cost effective and involves a great deal of duplicated effort and inconsistency.

*The single biggest barrier is the time and effort to deploy joint training and exercising in a safe environment given the extreme pressure of day-to-day operations and resource funding.*

**Ambulance Respondent, Gold Command**

National standards for interoperability which are delivered and funded centrally, and mandatory for all responders, would guarantee training is more consistent and frequent.



Standards make it more difficult for local level decision makers to ignore training needs, and can create accountability (Waugh 2006). Crucially, national standards mean all responders would learn the same curriculum, so they would be able to make quick, confident assessments of each other's knowledge and capabilities.

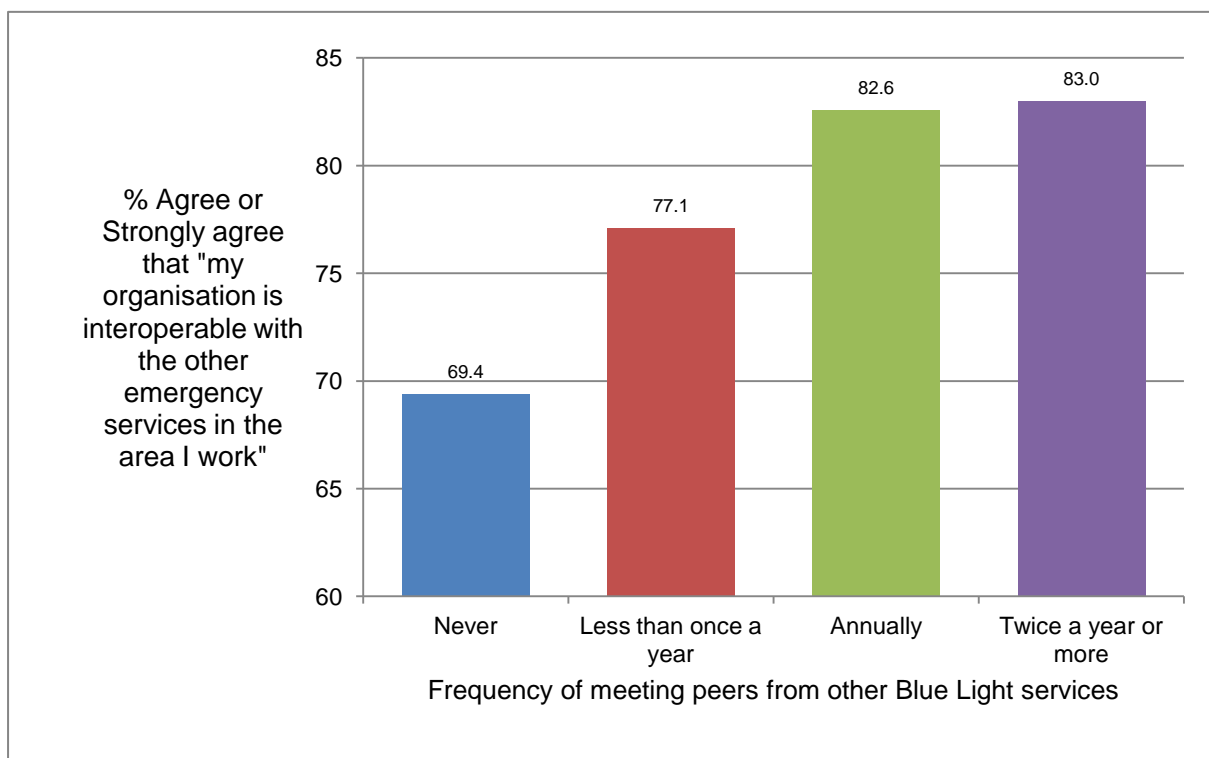
Reiterated throughout the survey results is the importance of increasing responders' awareness of each other's role, approach and requirements. This awareness is a prerequisite of all interoperability protocols and should feature significantly in training provision. For example, in considering communications one respondent explains:

*The biggest challenge is collectively understanding what is important information / intelligence. What may be critical information for one service may be of no interest to another.*

**Police respondent, Bronze Command**

Joint training provides an important opportunity for personal contact between the services. Survey data shows that any kind of personal contact can break down cultural barriers and create trust and good working relationships between responders (see Figure 18).

Figure 18: Perception of Interoperability and Time Spent with Peers

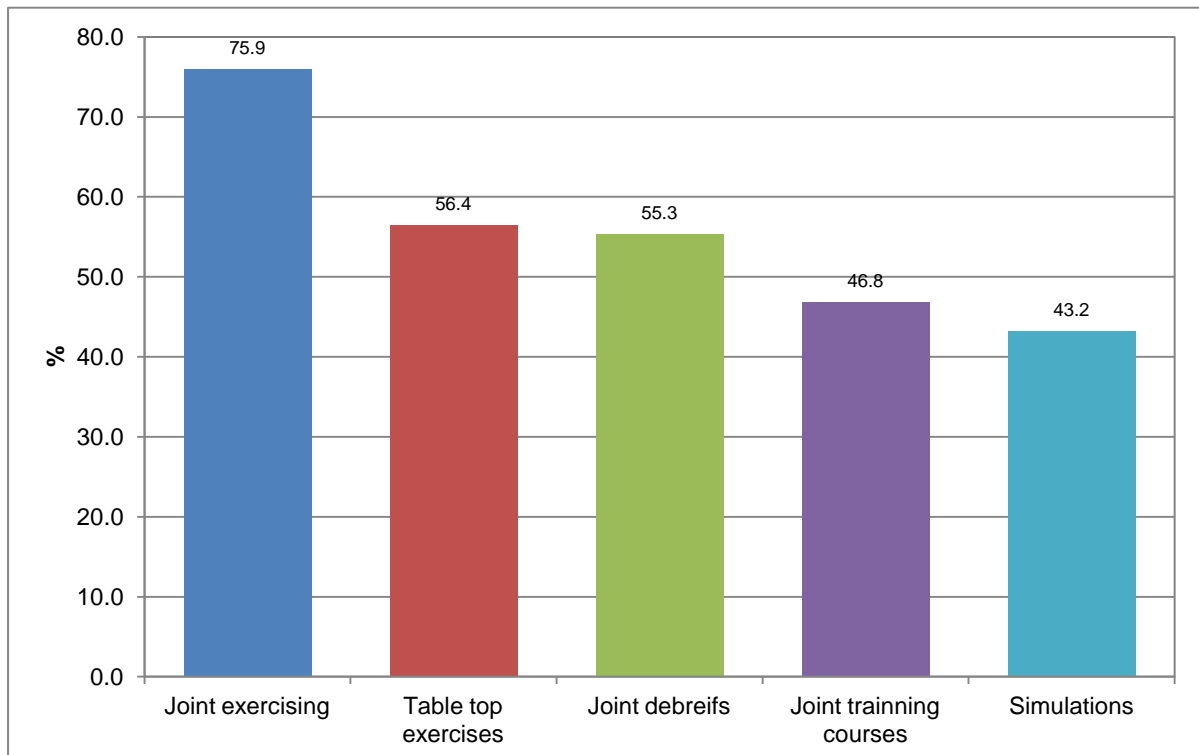


*As always with partnership working, knowing the individuals helps break down cultural and organisational barriers.*

**Police respondent, Gold Command**

Survey respondents value practical course content like table top and joint exercises over all other activities (see Figure 19).

Figure 19: Most Effective Training for Increasing Interoperability



Practical training and exercising provides the opportunity to test the compatibility of equipment and assumptions about the way services operate.

Increasing the training provision for Bronze Commanders and increasing their confidence in their emergency role should be a priority of training moving forward.

Joint training for responders who are just starting their career has also been identified as a particularly effective intervention because it can embed correct assumptions from the very beginning.

*Whilst I think that interoperability works quite well at Gold and maybe Silver Level, joint services training at a 'basic practitioner' level would break down organisational cultural barriers and give each service a better understanding of each other's priorities, capabilities and limitations, allowing incidents to be resolved more fluidly.*

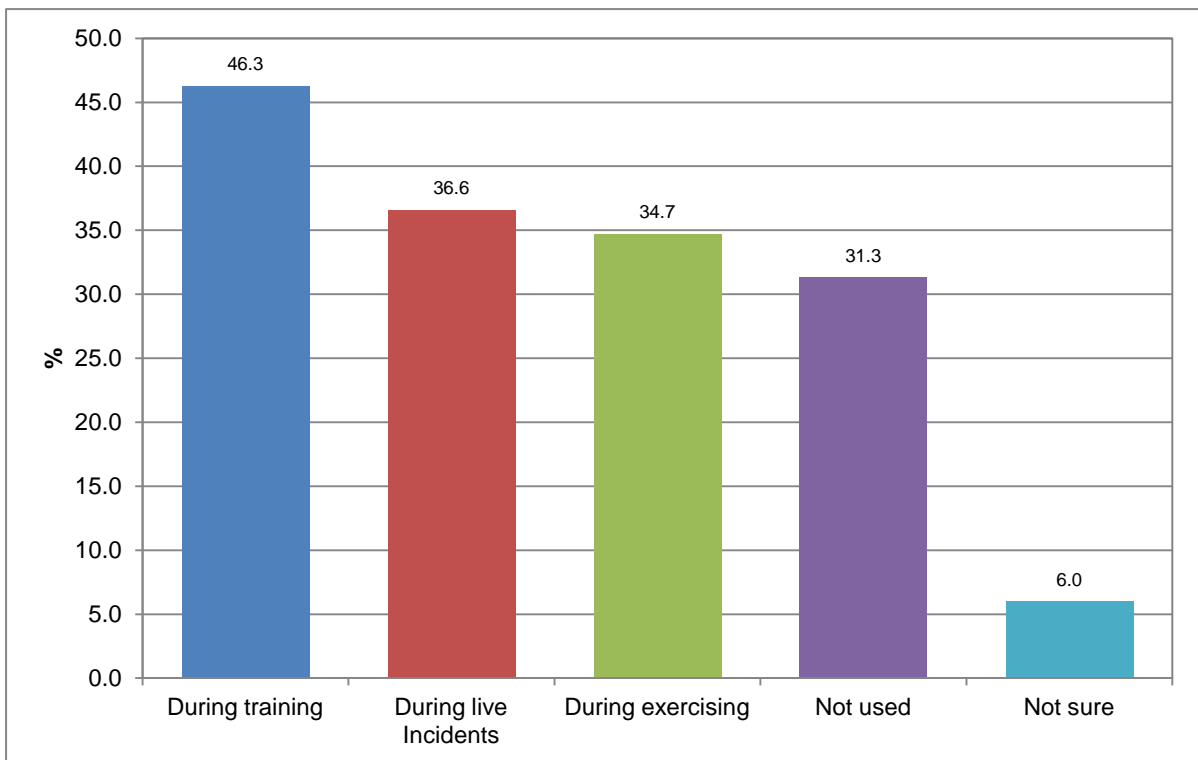
## 4. Knowledge Attrition and Encouraging Adoption of Initiatives

Knowledge attrition occurs because skills learnt are not regularly applied.

Designing processes and training people in their use is no guarantee they will become established in everyday practice. If they are not used they can be forgotten.

The majority of respondents have received training in the use of Airwave Interoperability Channels (see Figure 20), but less than half said they feel confident in the use of these channels.

Figure 20: Use of Airwave Interoperability Channels



It is not that airwave channels are considered excessively complex, but respondents said they had 'forgotten' how they worked because they are used so infrequently.

*[I am confident with Airwave Interoperability Channels only with the assistance of our laminated "short-cut" list of services and channels being at hand. I find it difficult to navigate around the talk-groups in the radio. This is purely due to lack of regular use of the radio terminal.*

***Fire and Rescue respondent, Control Room***

*I have used it a few times but not regularly so unsure if I would be confident to use in a live incident without guidance*

***Fire and Rescue respondent, Control Room***

Respondents from organisations that perform regular practice drills, as frequently as every week in some cases, felt more confident in the use of the channels.

The Airwave Tactical Advisor role suffers from the same lack of operational deployment. It is so rare to engage Airwave Tactical Advisors that most respondents did not know what they were, and those trained as Tactical Advisors are becoming de-skilled.

*Never come across one [an Airwave Tactical Advisor]. Or have I - I have so little knowledge of who they are or what they do I would not know.*

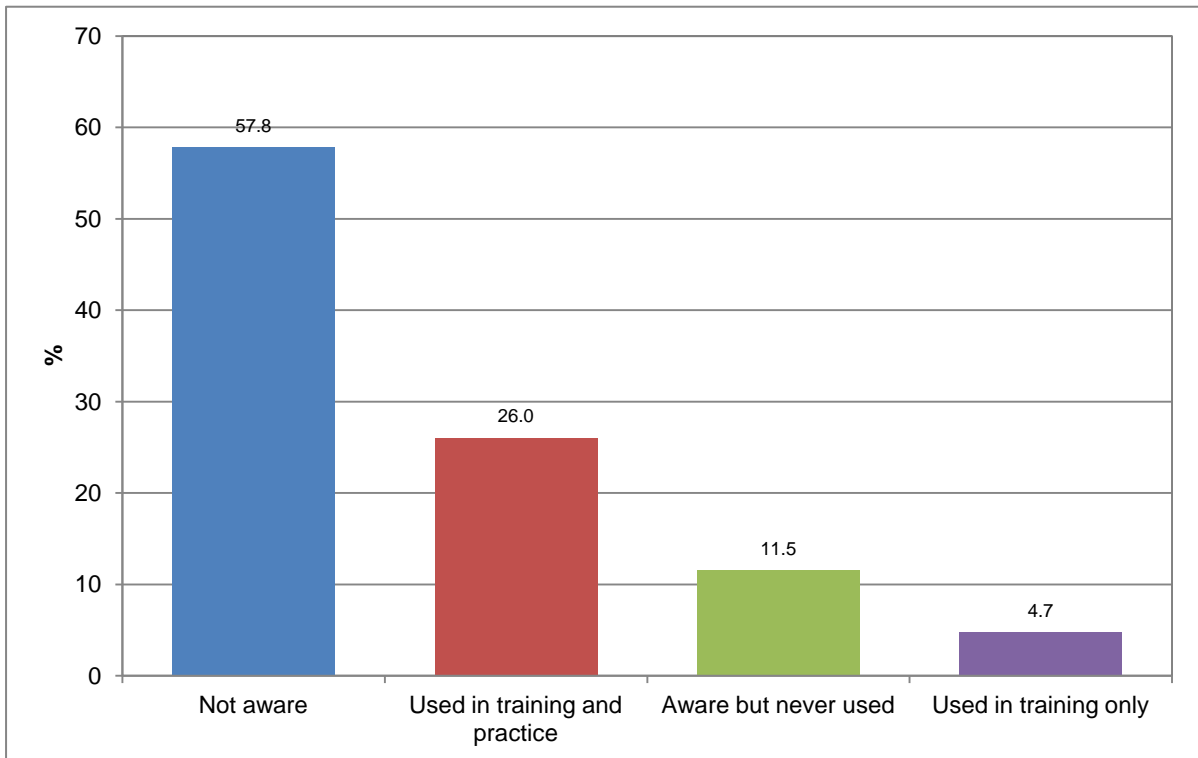
***Fire and Rescue respondent, Control Room***

*I am an Airwave Tactical Advisor, but not utilised and becoming de-skilled.*

***Police respondent, Control Room***

Interventions that compete with intuitive, ingrained alternatives are less likely to be adopted. The lexicon of terminology and symbology designed for use by the blue light services competes with plain English and does not fare well. The majority of respondents were not aware of this lexicon (see Figure 21). Police respondents are most likely to be unaware of the lexicon (66% unaware) and Ambulance respondents are least likely to be unaware (45% unaware).

Figure 21: Awareness of the Lexicon of Emergency Management Terminology



The most common reason those aware of the lexicon gave for not using it at live incidents was that responders default to plain English because it is much easier.

The lexicon will struggle to become embedded in normal practice if it is supplanted by an alternative and only used sporadically.

The lexicon, like any initiative intended for use at incidents, has to stand up to the extreme pressure of the emergency response.

Lack of time due to the dynamic nature of the incident was considered a barrier to interoperability and to sharing information during an incident by 78% and 88% of respondents respectively. Some responders admitted that 'getting the job done' is often the primary consideration at an incident.

Under these conditions, processes are easily trumped by more familiar, intuitive practices.

Interventions will be adopted when they address a real need, are simple, reliable and build on, or are compatible with, processes that are familiar from routine operations. Compliance with critical instructions should, of course, be mandatory.

## 5. Doctrine and sharing lessons learnt

Respondents do not reliably receive and read policy and documentation related to interoperability.

Some services were more likely than others to have received the documents we asked about (see Figure 22 and Figure 23).

Figure 22: Receipt of Pre-Olympics Package

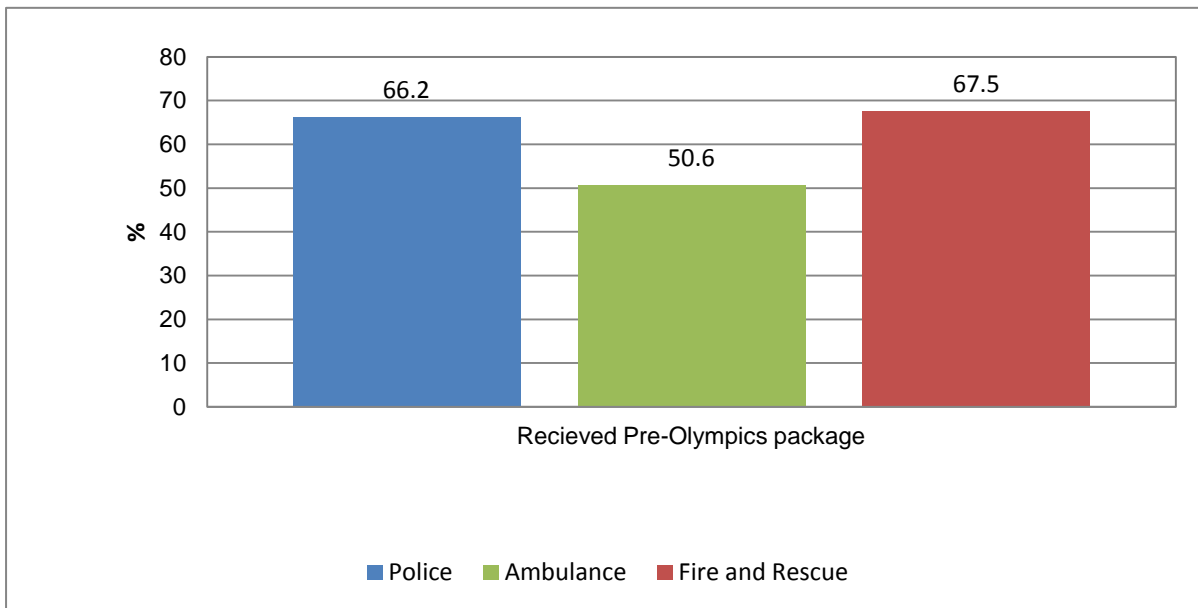
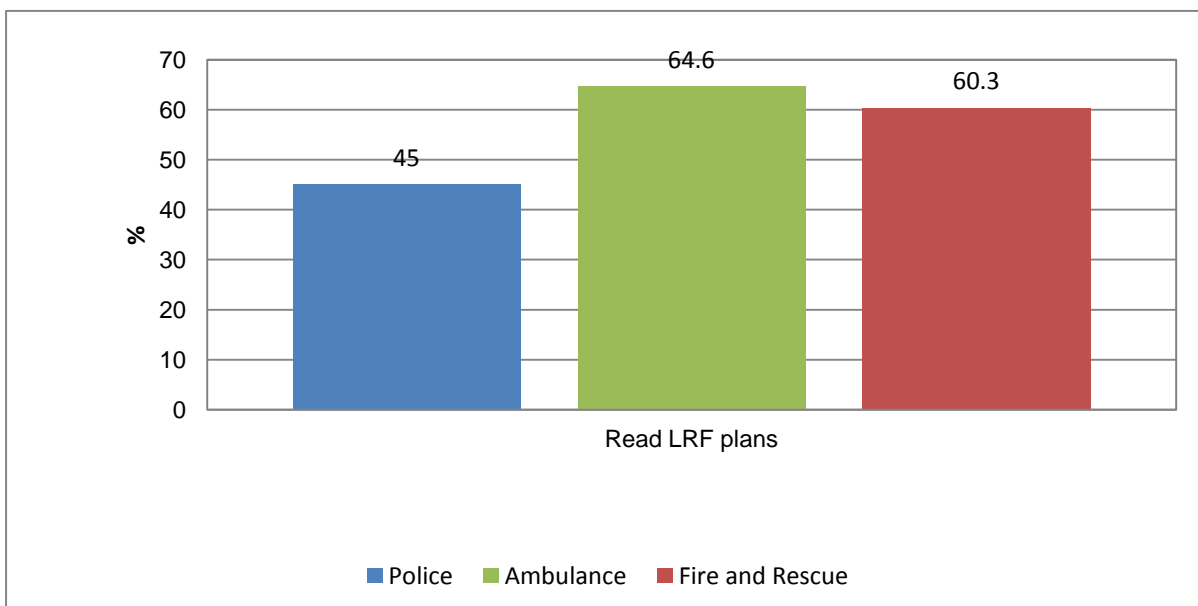


Figure 23: Read Local Resilience Forum (LRF) Plans



Respondents who had not received or read guidance were most likely to say this is because they were unaware of it. After awareness, access is the second biggest barrier, with about a third of respondents not being sent guidance or not knowing how to access it.

Respondents are not hindered by a lack of time, or by how user-friendly documents are (see Figure 24 and Figure 25).

Figure 24: Reasons Why pre-Olympics Training Package Not Received

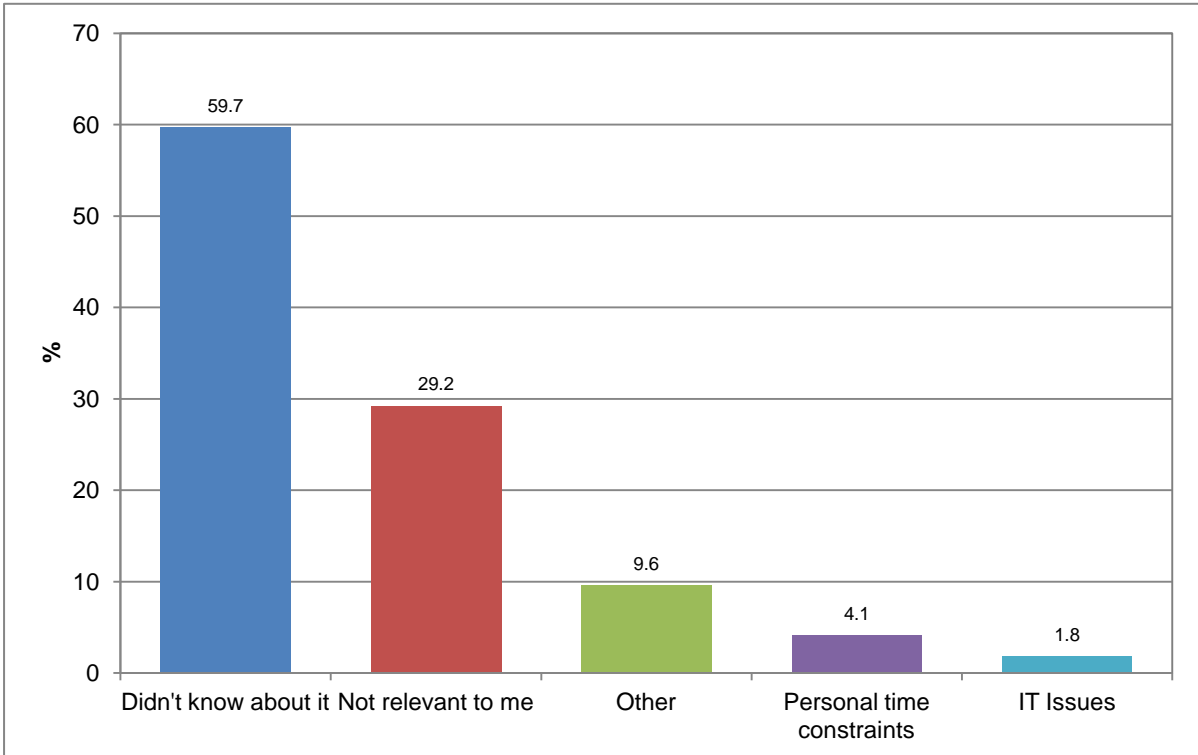
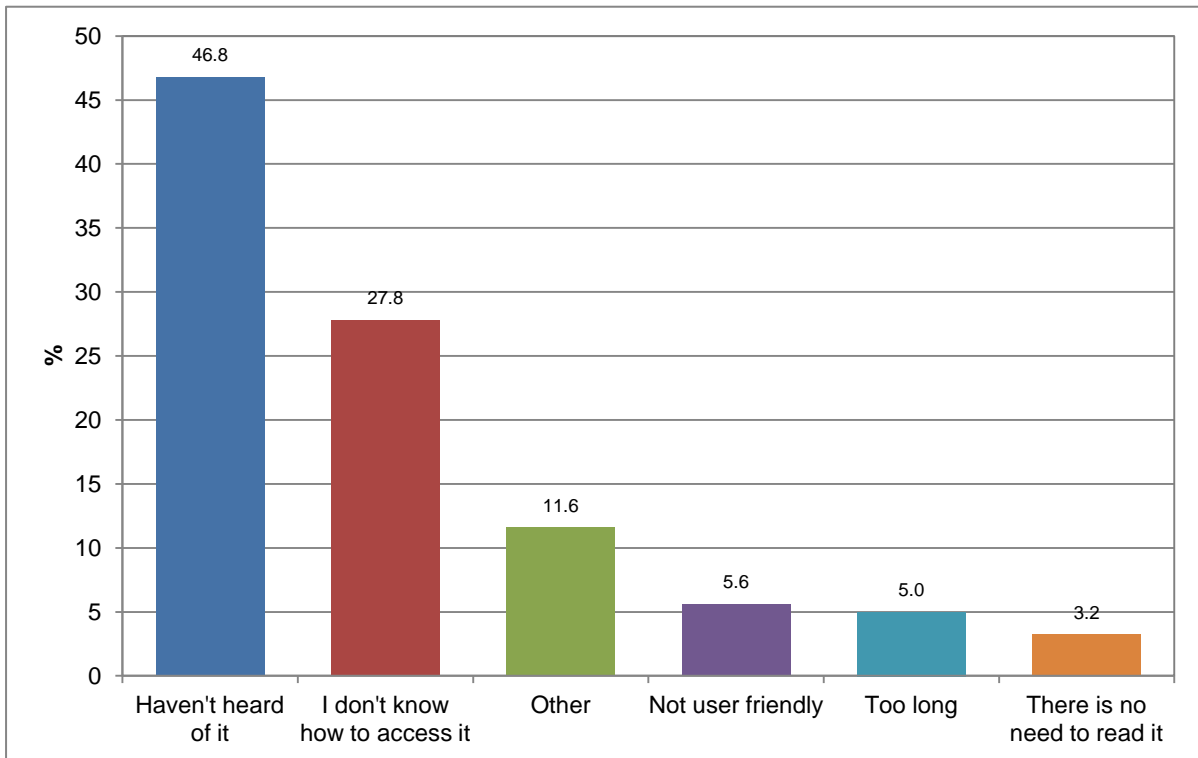


Figure 25: Reasons Why LRF Not Read



As noted in the introduction, a great deal of information is available regarding blue light interoperability.

In fact, the volume itself may be an issue; 73% of respondents feel the pace of change in policies and procedures is a barrier to interoperability (see Figure 8).

All three Blue Light Services have their own policy documents and doctrine. Any tri-service doctrine that is produced should be compatible with these existing doctrines and seek to build upon the fundamental principles that are embedded within them.

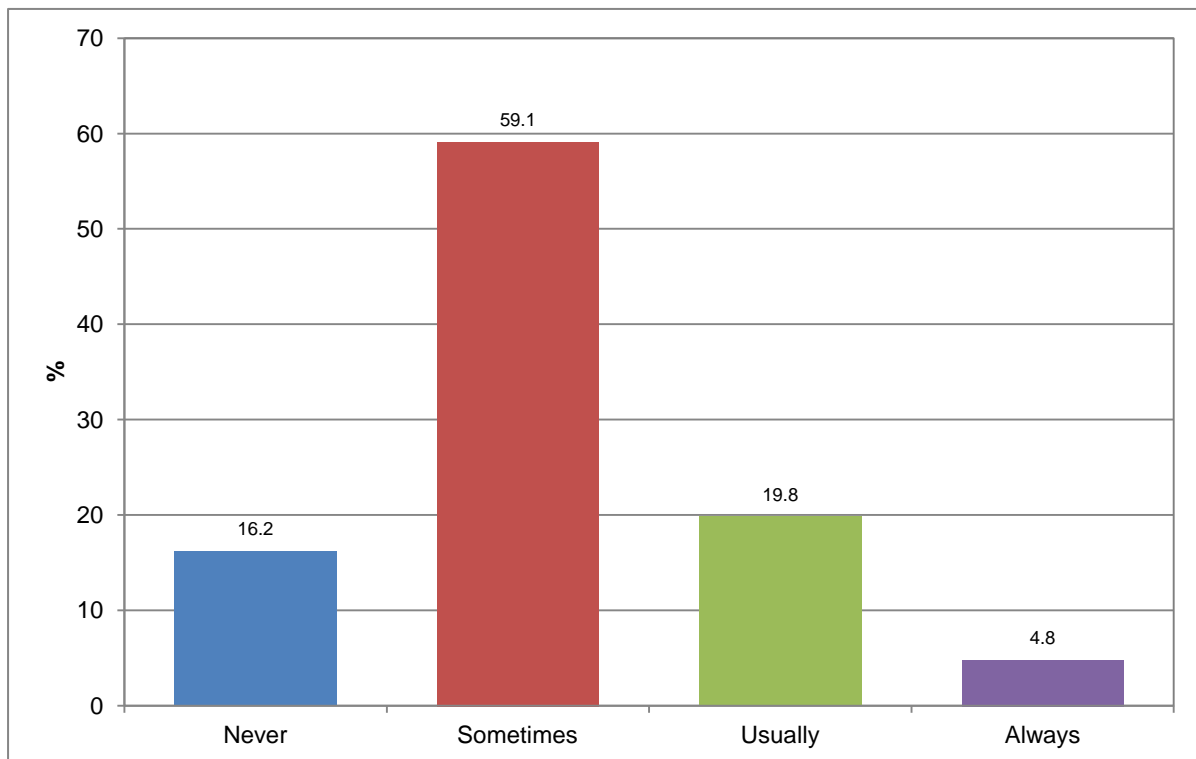
JESIP endorsing or publishing interoperability guidance could increase awareness and acceptance of current standards. Any form of tri-service ownership and endorsement is likely to increase acceptance of initiatives. When guidance is drafted by one service there may be a suspicion that the content is self serving on some level, or not sufficiently relevant or sensitive to another service's needs.

Multi-agency debriefs capture learning and provide meaningful feedback to the responders involved. The value of debriefs is recognised in numerous inquest reports and by the



responder community. However, these do not happen as a matter of routine (see Figure 26). Fewer than one quarter of respondents reported that debriefs ‘usually’ or ‘always’ take place.

Figure 26: Occurrence of Joint Debriefs Following Incidents



Responders are not always available to take part in debriefs

*The roles of the different organisations mean that as the fire service phase is closing the police would still be involved in the investigative phases so they may not enter into any hot debriefs*

**Fire and Rescue respondent, Bronze Command**

The value of debriefs is diminished when responders with valuable feedback are unable to contribute.

Debriefs will have the most impact when the outcomes are appropriately disseminated. Some respondents felt that outcomes were ‘watered down’ by the time they reached operational crews or that they failed to reach them at all.

The issue of access needs to be considered. The National Resilience Extranet (NRE) is specifically designed to support collaborative working during the preparation, response and recovery phases of an emergency. This resource has the potential to meet the challenge of sharing lessons learnt. It already supports (amongst other functions) the issuing of guidance for responders, and the administration of meetings. Research into the barriers to use and user experience of the NRE would be advantageous.

## **6. Organisational Culture and Willingness to Work**

### **Together**

Organisational and cultural barriers are not considered to pose a significant barrier to interoperability.

Survey questions explored the impact organisational and cultural attitudes had on interoperability compared to a range of other barriers. In every instance organisational and cultural attitudes were identified by survey respondents as the least significant barrier to interoperability (see Figure 8, Figure 9, Figure 10 and Figure 11).

Open responses throughout the survey reinforce these findings. The common goal the Services share was stressed by respondents.

Organisational culture, specifically prioritising 'getting the job done' is a factor in whether processes are adhered to (as discussed earlier in this report), but no evidence of cultural barriers that reject joint working has been identified in this survey.

The community are not resistant to new joint measures, like Joint Decision Making models. The vast majority of respondents (74%) feel a move to a Joint Dynamic Decision Making model would support interoperability; this was true across services and command levels.

## **7. Communications Technology**

Lack of technical solutions that support the sharing of information and intelligence are considered a barrier to interoperability by 89% of respondents (see Figure 8).

Significant investment has been made in new technologies to improve communication. The National Resilience Extranet and Airwave network are national systems that are designed to enable interoperability. The importance of training and usability in facilitating the use of Airwave Channels has been raised in this report.

As well as these issues, there is a problem with the lack of standardisation in the use of the Airwave network. Open responses identified practical difficulties arising from this lack of standardisation that include responders being unable to share equipment, confusion and delays at multi-agency briefings and, most significantly, resorting to the use of insecure mobile telephones to communicate with each other.

There are numerous companies selling equipment to the emergency services. Procurement happens at a local level, so each organisation is making purchase decisions independently. This inevitably leads to a lack of standardisation in the equipment bought.

The research findings support the proposal RUSI made in 2010 that a national resilience budget be made available from which organisations could be supplied with equipment that is compatible and up to date.

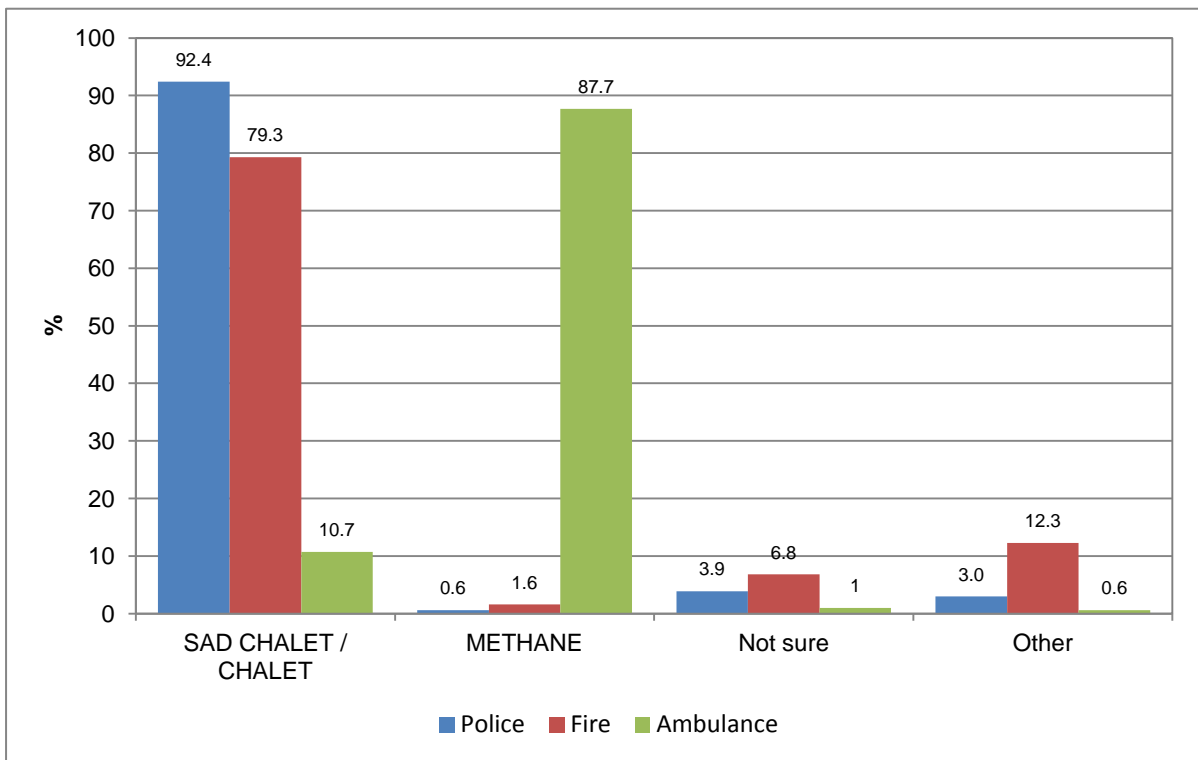
## **8. Situational Awareness**

Interoperability would be improved if the services used the same models when gathering information and assessing risk.

The services use different methods for gathering information and assessing risk at incidents.

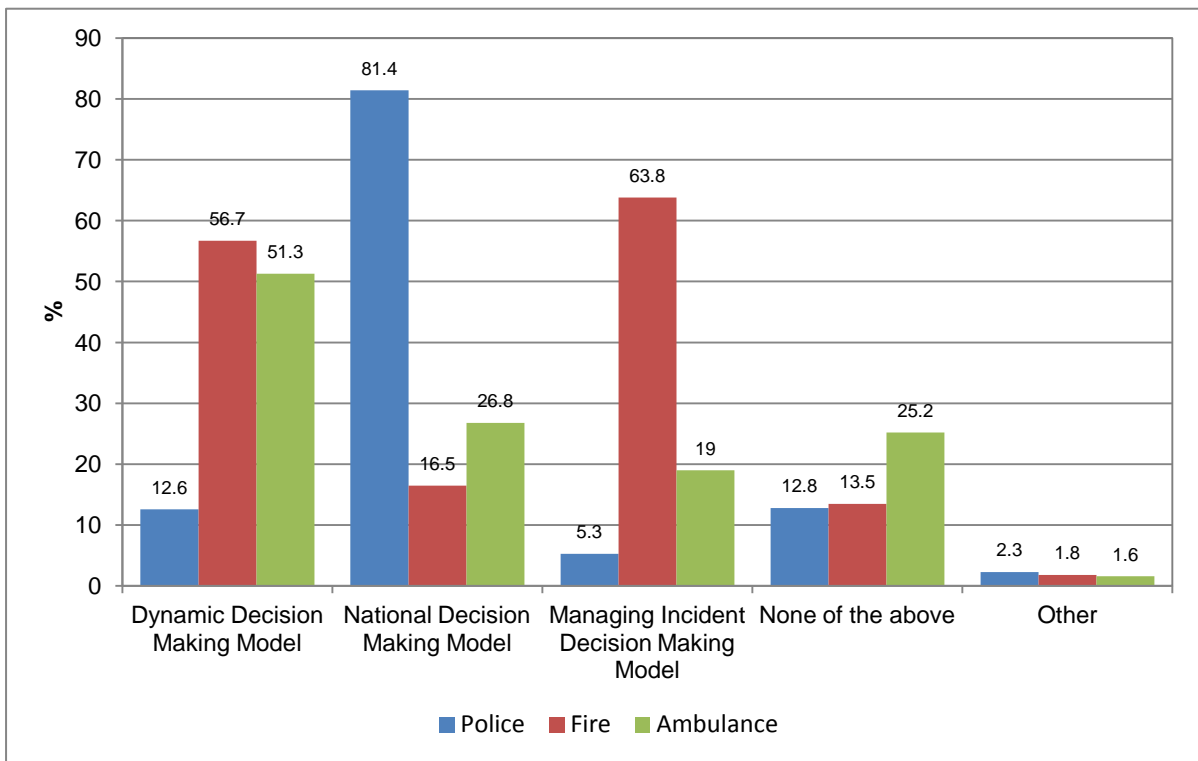
Mnemonics are used when reporting a major incident to facilitate information gathering. The vast majority of Police and Fire and Rescue respondents use CHALET; whereas most Ambulance respondents use METHANE (see Figure 27).

Figure 27: Mnemonics in Use



Decision Making Models are used by services to increase professional judgement and accountability in their decision making. There is a lack of consistency between and within services as to which model is commonly used (see Figure 28).

Figure 28: Decision Making Models in Use



Using different models is confusing for respondents. Respondents realise that the models fulfil (broadly) the same purpose, and that having multiple versions is unnecessary.

Using a single model would enable responders to work together with more understanding and in a more efficient way. Just 5% of respondents thought that a move to a single joint decision making model would not support interoperability.

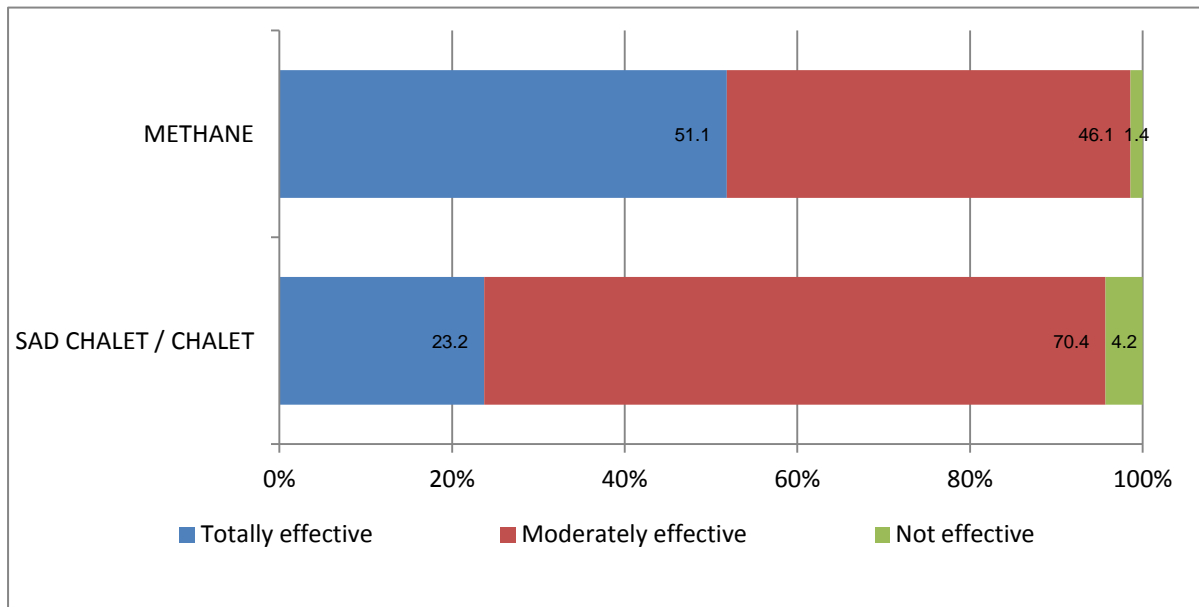
The issue with implementing a single model, for decision making or gathering information, is that the existing models are embedded within each service.

Responders will need training in order to use a new model. Training in the 'nuts and bolts' of the chosen model alone will not suffice: to use a single model for assessing risk and gathering information responders must have an understanding of the attitudes to risk and information needs of the other services.

Acceptance and adoption of a new model will be more likely if it is a demonstrable improvement on the existing model.

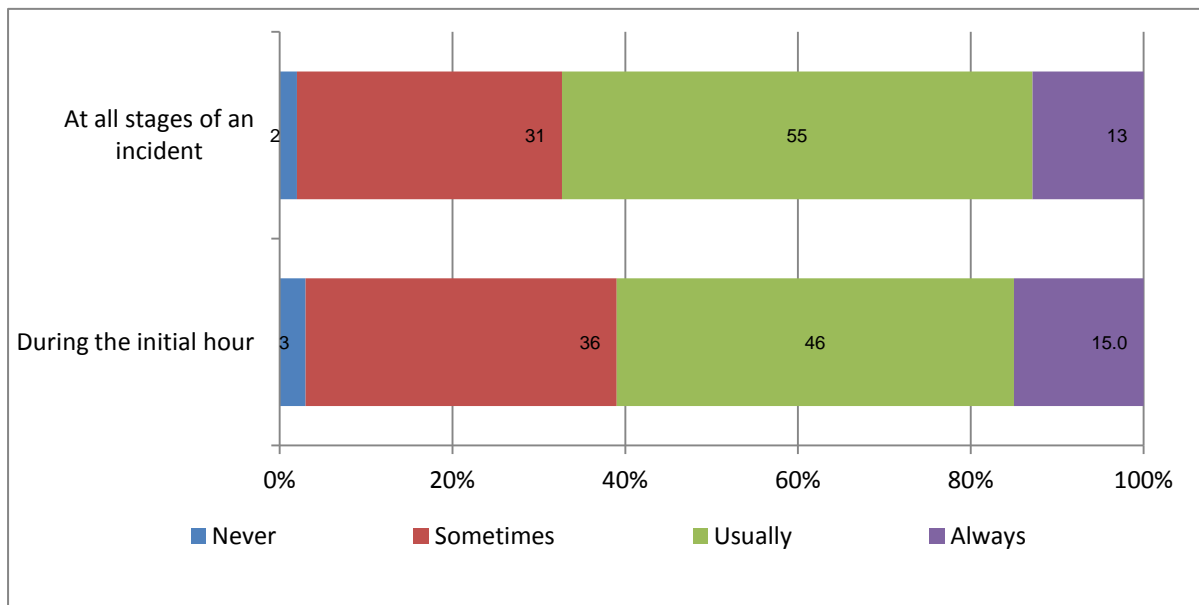
Users of METHANE rated the mnemonic as more effective than users of SAD CHALET (see Figure 29), though METHANE is confusing because of its real world meaning. Both mnemonics are criticised for being prohibitively long.

Figure 29: User Rated Mnemonic Effectiveness



Survey data shows that incident information is readily shared between commanders working at different levels of command most of the time (see Figure 30).

Figure 30: Information Sharing Between Different Levels of Command



Practically all respondents consider seeking out On Scene Commanders from different services to be a priority on arrival at an incident. The vast majority of respondents achieve this within the first 5 or 15 minutes (see Figure 31). This contact is maintained throughout an incident; just 1 in 5 respondents seek out On Scene Commanders from other services less frequently than every 30 minutes (see Figure 32).

Figure 31: Speed Seeking Out On Scene Commanders from Other Services

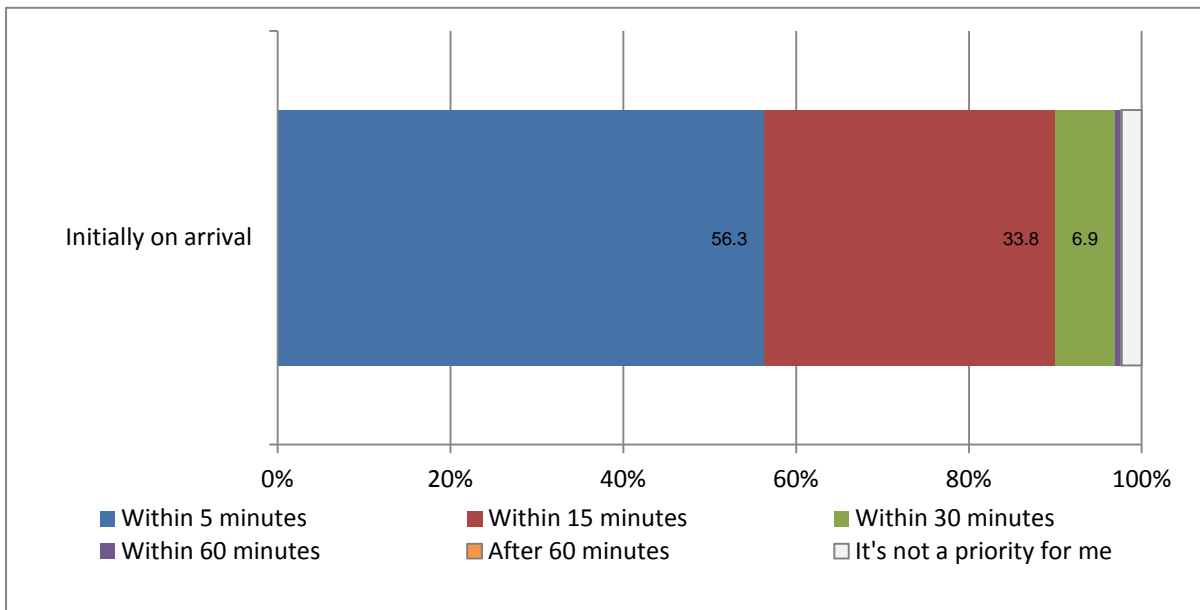
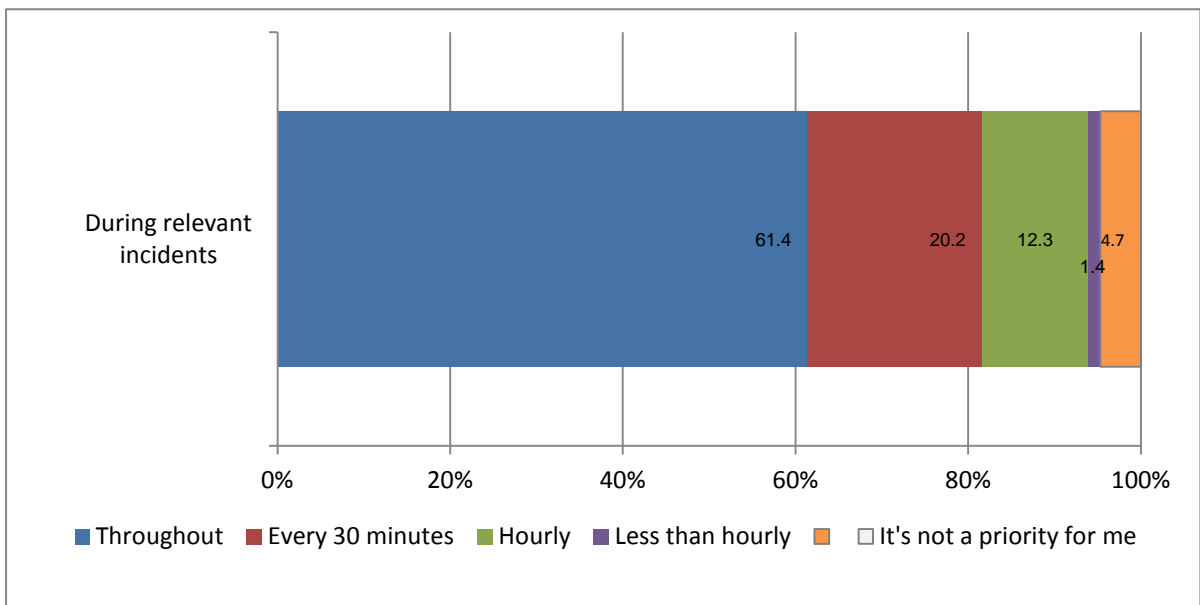
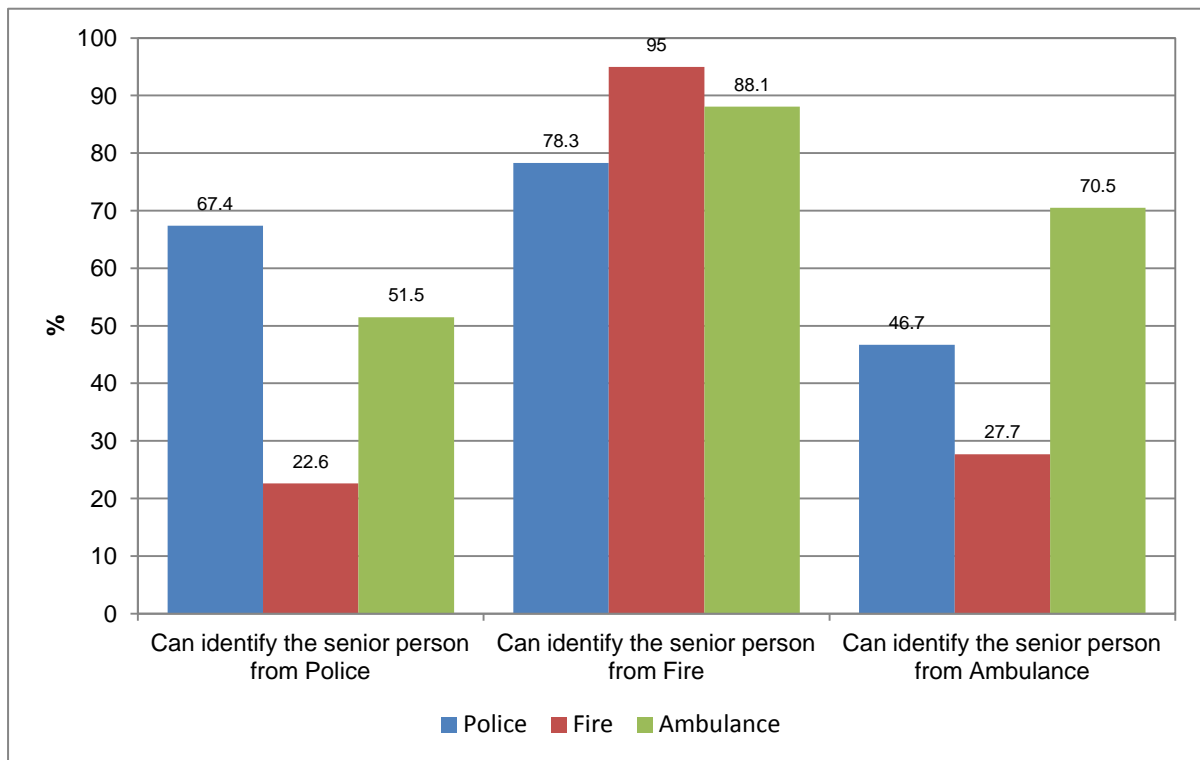


Figure 32: Frequency Seeking Out On Scene Commanders from Other Services



The most senior person from the Fire and Rescue Service at the incident is easily identified by respondents from all three services (see Figure 33).

Figure 33: Ability to Identify Senior Person Present



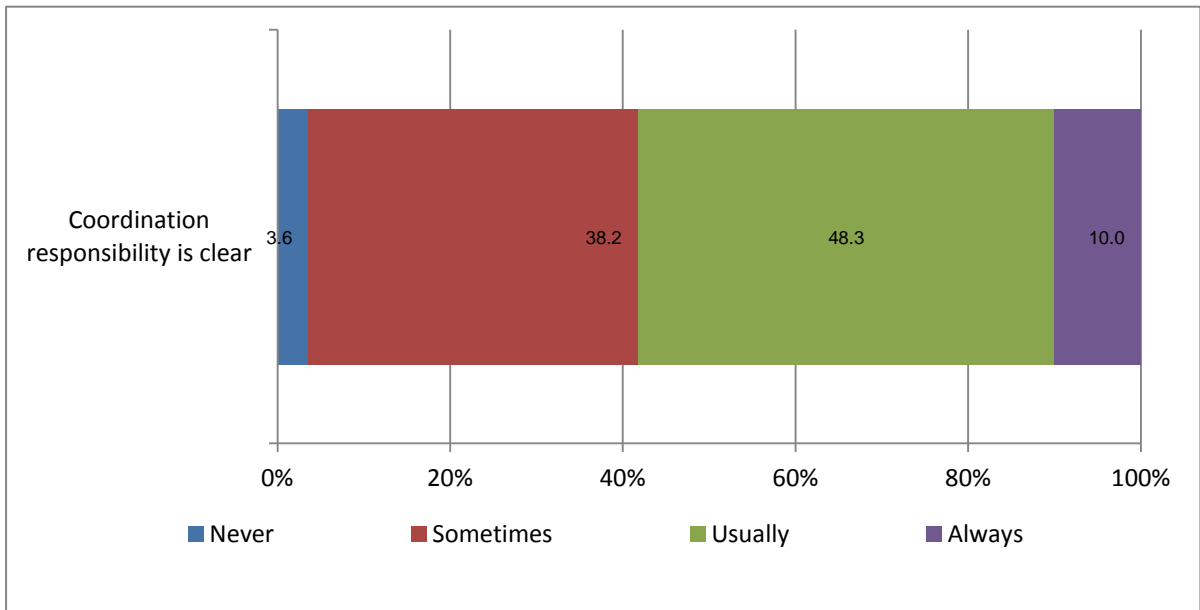
Open responses suggest this is because the most senior Fire Service attendee wears a tabard. The senior Ambulance and Police attendees generally do not wear tabards, and are much more difficult to identify. The indicators respondents rely on to identify the senior attendee from these services are fallible and inefficient (for example, knowing uniform rank markings or asking other commanders who is in charge).

This difficulty causes delay and frustration and could be resolved by facilitating the consistent use of tabards by senior attendees from all services.

6 out of 10 respondents are usually or always clear which service has overall co-ordination responsibility (see Figure 34).



Figure 34: Clarity of Co-ordination Responsibility



Respondents indicated some confusion concerning in the instances in which the Police do not have co-ordination responsibility.

Clarity over which service has overall co-ordination responsibility is achieved through an understanding of the roles and responsibilities of other services.

## Conclusion

Interoperable working practices are underpinned by knowledge and awareness of the way others work. This knowledge is learnt through contact between individual responders, at incidents, through joint training and exercising as well as through informal contact.

National training standards, and national funding for joint training, exercising and equipment procurement would support interoperability by increasing standardisation. The current situation of devolution of responsibility for these matters to a local level creates duplication of effort and inconsistency, and is not cost effective.

The workforce is not resistant to interoperable working practices. Increased participation in joint training and exercising is expected to further improve perceptions and relationships between responders from different services.

The findings from this survey provide critical baselines which will inform the work that JESIP carry out in order to ensure a more effective approach to interoperability. These findings underline the skills, knowledge, operational and cultural issues that need to be addressed in order to ensure a consistent approach across the emergency services. The extent to which these issues are resolved and the impact this has in the work place will be measured in the planned follow-up survey in the summer/autumn of 2014.

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