

Needlestick injury in 2008

Results from a survey of RCN members

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Employment Research Ltd

Employment Research Ltd, an independent research consultancy, was formed in 1995. The company conducts a range of research and evaluation, and since 2001 has undertaken the annual RCN Employment Surveys, the RCN 'Working Well' survey in 2000 and 2005, and several surveys of selected sub groups of the RCN membership. For further information: Employment Research Ltd: 45 Portland Road, Hove, BN3 4LR. www.employmentresearch.co.uk. Tel: 01273 299719

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Summary of key findings

4,407 nurses responded to a survey on needlestick injury, which represents 9% of the 50,000 who were sent a postcard along with the RCN magazine 'Bulletin'. A further 320 completed an online survey to give more detail of recent injuries and their access to safer needle devices. The surveys (managed by Employment Research Ltd and commissioned by the RCN) looked at the frequency of needlestick injury and explored nurses' perceptions of the risk they face whilst also detailing the measures taken to prevent injury.

Almost all (96%) the nurses taking part used needles as part of their jobs. At some point in their career a half (48%) had been stuck by a needle or sharp that had previously been used on a patient and 10% had sustained an injury in the last year.

Nurses gave details of their last injury through the online survey: in nine out of ten cases the injury drew blood and the nurse knew which patient the needle had been used on. The source patient was blood tested in a half of injuries, and 90% of nurses reported the injury.

A third (34%) regarded the risk of contracting a blood borne disease from the injury as medium or high. However, in more than a quarter of cases (28%) nurses did not receive any advice about the risk of blood borne diseases following the injury. More community/non-hospital staff had not received advice following the injury (42%).

Whilst two-thirds regarded the support offered by employers as adequate, those working outside NHS hospitals were less likely to be satisfied with employer support (45% of those outside the NHS were dissatisfied with the support offered).

The post-card survey revealed that although the vast majority of employers (94%) have a sharps policy that covers prevention and reporting, only a half (55%) of nurses have received any training from their employer on safe needle use.

A half of all nurses surveyed fear needlestick injury either 'a great deal' (23%) or a 'fair amount' (29%). Nurses in workplaces without a sharps policy covering prevention and reporting, are more likely to fear needlestick injury.

95% of nurses consider that the availability of safer needle devices is either essential (57%) or preferable (38%), yet only a half report that they currently have access to any of these devices. Nurses that already have access to these devices are more likely to regard them as essential – in 70% of cases compared with 40% of those who do not have them. The findings suggest those who have experience of these devices are more likely to see the benefit of them.

1. Introduction

The RCN commissioned Employment Research Ltd to conduct a survey of its members to explore the perceived and actual risks of needlestick and sharps injuries. The survey builds on previous research undertaken by ERL that covered needlestick injury as part of an RCN review of nurses' wellbeing at work¹. The research has been supported by an educational grant from sanofi-aventis.

The survey aimed to establish the prevalence of needlestick injury and look at nurses' perceptions of the risk they face whilst also exploring the measures taken to prevent injury.

Two approaches were used to collate the necessary information from nurses. A large scale post card survey of RCN members was undertaken to enable sufficient data to be collected on the issues that are pertinent to the majority of nurses: prevalence, prevention and perception of risk. This was twinned with a more detailed online survey to provide greater depth of information, particularly exploring nurses' experience of injury – reporting, employer response, testing & prophylactic treatment – but also looking in more detail at the availability of 'safer needle devices' and associated training.

The two approaches are outlined below:

- 1) **Postcard survey.** This was inserted into a random selection of 50,000 RCN members' Bulletins in the first week of September 2008. The questionnaire contained only 11 questions and sought information on the prevalence of needlestick injury and employer policies, provision and training in relation to safer needle devices, and nurses' fear of injury.
- 2) **Online survey.** The online survey enabled respondents to provide more detailed responses, exploring the experiences of those who had sustained an injury in the last 12 months. The link to the survey was provided on the postcards, publicised in the RCN Bulletin and was also accessible via the RCN website.

The postcard survey received 4,407 responses (9% response rate) and 320 online questionnaires were submitted. Both responses were higher than anticipated at the outset of the research, perhaps reflecting the importance of this issue to nurses.

Mirroring the approaches taken, the report presents an overview of needlestick injury based on the postcard survey, before exploring in greater detail nurses' experience of injury through the online survey data.

¹ Ball J, Pike G and Bradley M (2005) *At Breaking Point? A Survey of the wellbeing and working lives of nurses in 2005*, Royal College of Nursing, 2006

2. Use of needles

Across all respondents 96% of nurses use needles/sharps in the course of their work. The equivalent figure from the 2005 'Working Well?' survey was 90% - showing that not surprisingly, the current *Needlestick* survey has attracted more respondents who use needles/sharps in their work than the earlier generic survey.

Two background questions explored where respondents worked – firstly respondents were asked about their employer and secondly they were asked whether they were hospital based. 82% of those responding to the postcard survey reported that they work in the NHS, and 65% report that they work in a hospital. These two variables have been combined to produce a four category place of work variable.

Table 1 shows the proportion working in each environment and level of needlestick use.

Table 1: Place of work and use of needles as part of job

	Use needles as part of your job?	Total %	Total n
NHS hospital	98%	60%	2632
NHS community/other	93%	22%	972
Non-NHS hospital	99%	5%	225
Non-NHS other	90%	13%	549
<i>Total</i>	<i>96%</i>	<i>100%</i>	<i>4378</i>

Source: Employment Research 2008

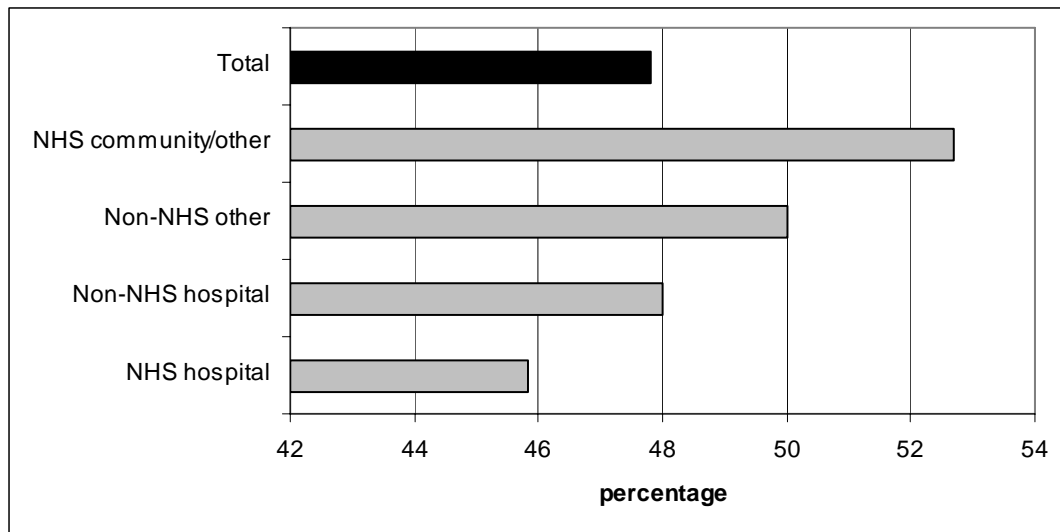
Among NHS nurses 96% of respondents use needles or sharps compared to 92% of non-NHS nurses. Overall, those working outside of hospitals are less likely to use needles in their work, although the vast majority of those responding do (92%).

The remainder of this report is based on those nurses who use needles or sharps as part of their jobs.

3. Prevalence of needlestick injury

Nearly a half (48%)² of all respondents reported that they have been stuck by a needle or sharp used on a patient at some point in their careers. This rate is highest in the NHS community/other sector (53%) as can be seen in Figure 1. This will in part be due to the different length of service profiles in each setting; nurses in the NHS community sector have typically worked as nurses for longer than respondents working in NHS hospitals, and hence have had more opportunity to have sustained an injury.

Figure 1: Ever been stuck with a needle/sharp used on a patient



Source: *Employment Research 2008*

One in ten respondents (10%) had been stuck by a needle or sharp in the last year. This figure was almost identical for each of the workplaces described above. The average injury rate was 1.2 times in the last year, and 16% of nurses had been injured more than once.

² In the 2005 'Working Well?' 35% reported they had been injured at some point in their careers. The higher level found in this survey will in part relate to the fact that the current survey will have attracted more respondents affected by needlestick injury than the generic 'At Breaking Point?' survey.

4. The last occasion stuck by needle/sharp

Through the online survey, more detailed data were collected on the last time that respondents were injured by a needle or sharp used on a patient. 181 (57%) respondents provided details of the last time they were stuck/cut.

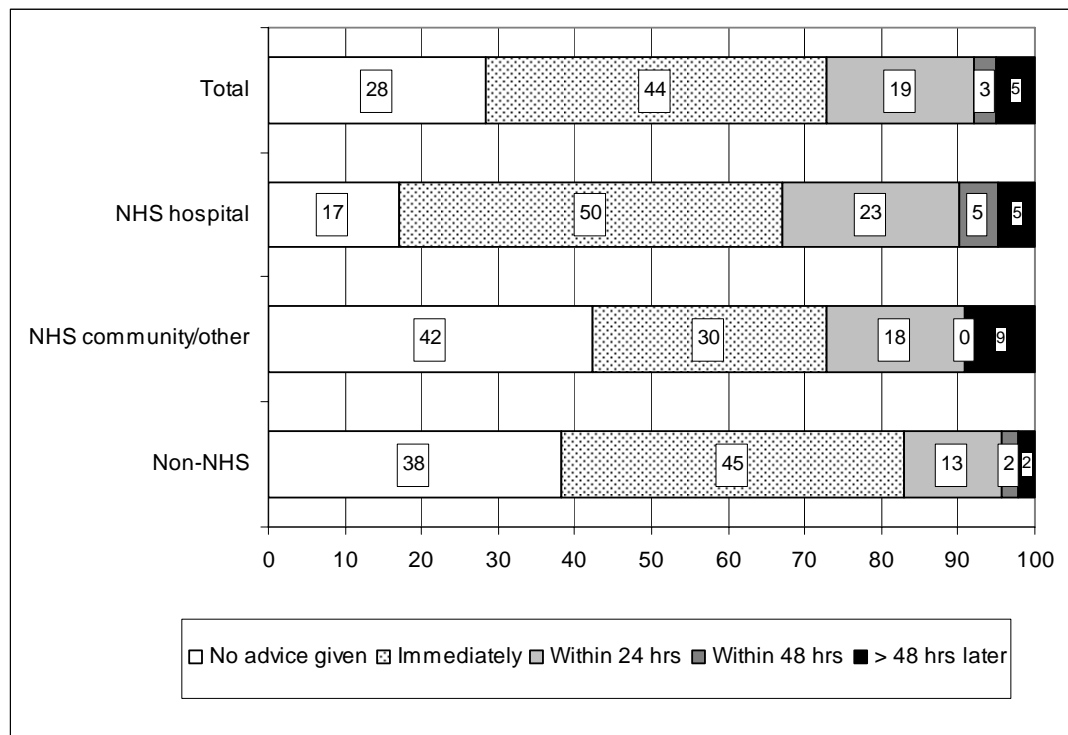
In 86% of cases the injury drew blood, in 92% of cases the nurse knew which patient the needle/sharp had been used for, in a half of cases the source patient was blood tested and in 90% of cases the nurse reported the incident. There was very little variation in reports between NHS and non-NHS respondents or between hospital and community nurses in the NHS.

The vast majority (90%) reported the incident (the 2005 survey found that 88% of nurses had reported their most recent injury). Of the small number (19 cases) who did not report the incident, the most common reason for non-reporting was that they believed the injury was associated with a very low risk of transmission at the time. A few (3 cases) said that they had not reported it, as they were not aware that they had to.

Of those who had been injured, 28% said that they were never given any advice about the risk of blood borne diseases (the same figure as in 2005). Compared to those in the community or outside of the NHS, a smaller proportion (17%) in NHS hospitals had not received advice, with 83% having had advice at some point.

Typically nurses had received advice immediately (44%), with prompt advice being more prevalent within NHS hospitals (50% compared to just 30% in NHS community). Figure 2 shows how the speed of advice received varies by workplace. Community staff are more likely to have received advice later or not at all.

Figure 2: Point at which advice was given about the risk of blood borne disease



Source: Employment Research 2008

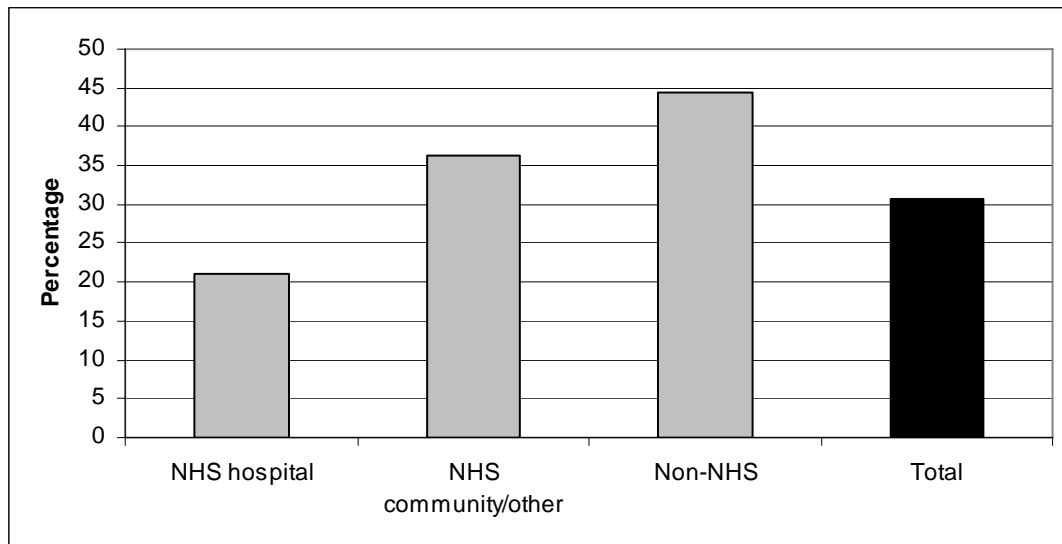
Two thirds (66%) of all respondents said they perceived the level of risk of contracting a blood borne disease from their last injury as low with 19% indicating it to be a medium risk and 15% a high risk. These figures are roughly the same as in 2005 (69%, 19% and 12%).

Three in ten respondents did not have their blood tested following the incident (21% among NHS hospital nurses and 47% among non-NHS nurses). Of those who had their blood tested 71% attended the follow up but 23% did not (16% in NHS hospitals and 36% in non-NHS settings).

Just 15% of all respondents who gave details of the last time they were stuck/cut were offered prophylactic treatment (84% were not, with little difference between settings).

Overall however, 69% (79% of those in NHS hospital settings) felt their employer offered adequate support – 31% did not. This represents a reduction relative to the 2005 survey, when 78% felt their employer support was adequate.

Figure 3: Employer did not offer adequate support – percentage by sector



Source: *Employment Research 2008*

5. Prevention of needlestick injury

More than nine in ten (94% across all, 96% in NHS hospital settings) nurses who work with needles or sharps say that their employers have a sharps policy that covers prevention and reporting. However in non-hospital settings outside the NHS this figure is lower, with 81% reporting a sharps policy. These figures are roughly the same as found in the 2005 ‘*Working Well?*’ survey, when 97% reported that their employers have procedures in place for dealing with needlestick or sharps injuries.

The online survey asked whether needlestick injuries are recorded on an approved register such as EPINet. More than half (61%) of respondents did not know (76% of those in NHS hospitals indicated they did not know.) Just 17% reported that needlestick injuries are recorded in this way.

Online respondents also provided details of whether or not their employers had undertaken organisation wide risk assessments. Again, a large proportion (45% of all and 48% of NHS hospital respondents) did not know. 42% said there had been an organisation wide risk assessment and 13% said there had not (30% among nurses reporting from non-NHS settings).

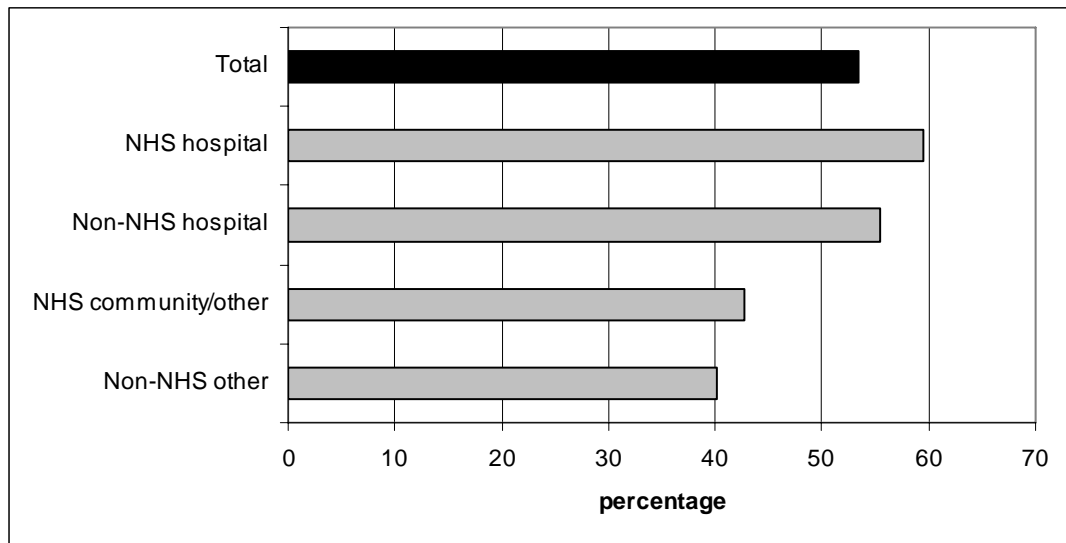
Table 2: Organisation-wide risk assessment provided by employer (online survey) – percentage by setting

	NHS hospital	NHS community/other	Non-NHS setting	All respondents
Yes	46	37	37	42
No	6	9	30	13
Don't know	48	54	33	45
<i>Base N=100%</i>	<i>86</i>	<i>35</i>	<i>51</i>	<i>172</i>

Source: *Employment Research 2008*

Nurses were also asked to indicate whether or not they have access to ‘safer needle devices’ such as safety lock syringes, retractable needle devices, shielded needles or needle free connectors. Just under a half (47%) indicate that they do not have access to any form of safer needle device where they work. Nurses in NHS hospitals are more likely to report that they have access to safer needle devices (60% - see Figure 3).

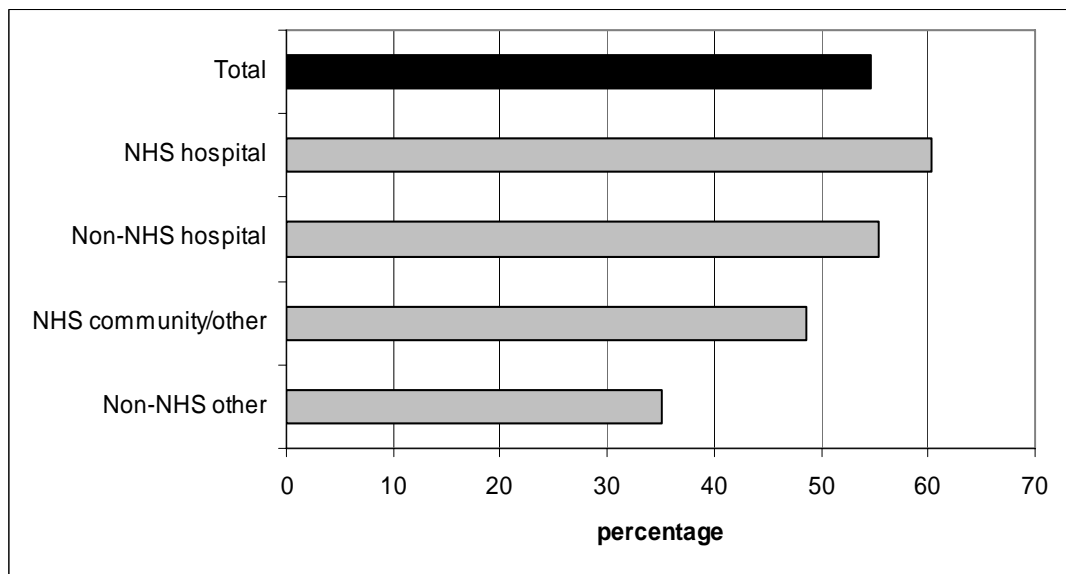
Figure 3: Access to 'safer needle devices' such as safety lock syringes retractable devices, shielded needles or needle free connectors



Source: Employment Research 2008

Nearly a half (45%) of nurses reported that they have not received training from their employer on safe needle use (55% have). In NHS hospitals 60% say they have received training, while in non-NHS other settings just 35% say they have received training on safe needle use (see Figure 4).

Figure 4: Received any training from employer on safe needle use - percentages



Source: Employment Research 2008

More detail on the devices available and the training given on each was captured through the online survey, as Table 3 shows.

Table 3: Safer needles devices: availability & training received (percentages)

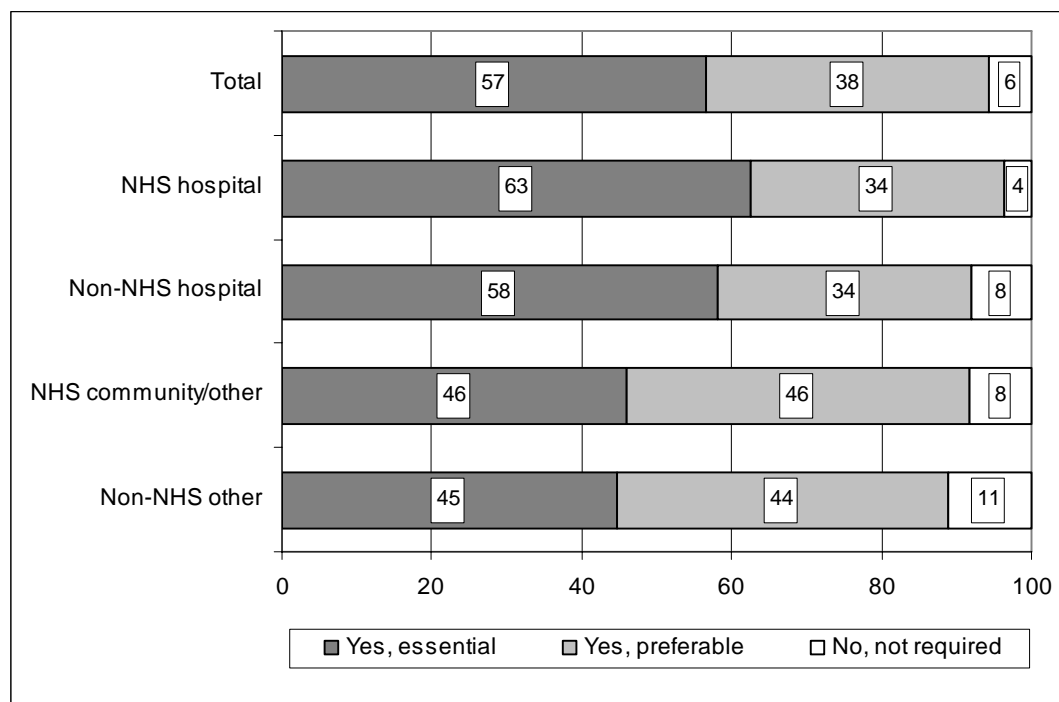
	Available at work	Training received
Safety lock syringe	18	70
Retractable needle device	14	83
Manual needle protection	20	70
Other devices	12	-
<i>Base N=</i>	<i>163</i>	

Source: *Employment Research 2008*

Although most respondents have access to some form of safer needle devices, when considering each device in turn less than 20% had access to each one, and only 6% had access to all three. Most of those that have access to a device had received some training on its use.

Nonetheless nurses surveyed are very clear about the importance of having safer needle devices made available where they work. Ninety-five percent of nurses regarded having safer needle devices made available as essential or preferable (57% indicated ‘essential’, 38% ‘preferable’), as Figure 5 shows.

Figure 5: Importance of having safer needle devices made available to nurses



Source: *Employment Research 2008*

Nurses that already have access to safer needle devices are more likely to regard it as essential to have access to safer needle devices. For example, of those respondents who have access to retractable needle devices (where the needle automatically retracts after use) 82% think it is essential to have access to safer needle devices generally, compared to 54% of those that do not have access to retractable devices. Similarly, where nurses have access to safety lock syringes more think it is essential to have access to safer needle devices (73% compared to 56% of those that do not have access to safety lock syringes).

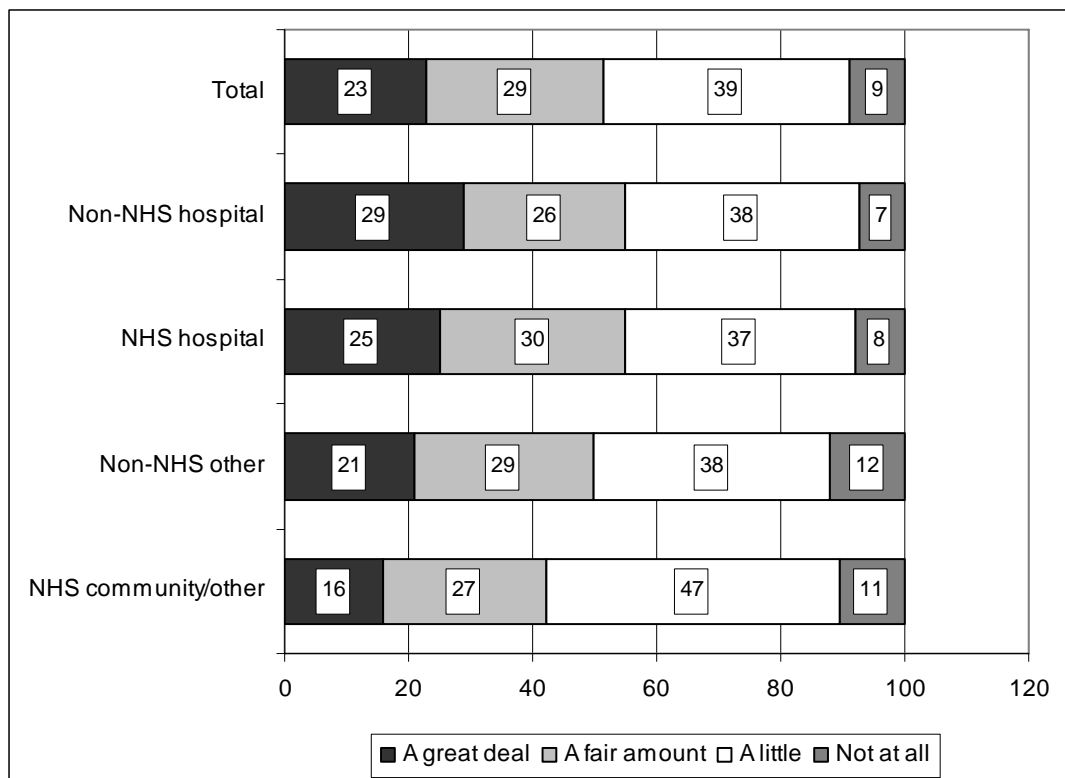
The findings suggest that nurses who have experience of these devices are more likely to see the benefit of them.

6. Fear of needlestick injury

Respondents were asked to indicate the degree to which they fear needlestick injury. Nearly one in four (23%) nurses who use needles or sharps in their work say that they fear needlestick injury a great deal, 29% say they fear it a fair amount, 39% a little and just 9% say they do not fear injury in this way at all.

Nurses working in hospital settings (both NHS and non-NHS) are most likely to fear needlestick injury: 55% reporting that they fear it either a great deal or a fair amount (see Figure 6).

Figure 6: Degree to which nurses fear needlestick injury – percentages



Source: *Employment Research 2008*

Interestingly, the level of stress or fear surrounding needlestick injuries is greater in situations when there is no employer policy covering prevention and reporting. Two thirds of these respondents say they fear injury a great deal (46%) or a fair amount (21%). Similarly, nurses who report that it is essential to have safer needle devices where they work are more likely to say that they fear injury a great deal (33%) or a fair amount (32%).

There is little difference in the fear or stress reported by individuals in relation to whether or not they have safer devices where they work.

7. RCN overview and recommendations

Needlestick injuries are a significant risk to the health of nurses. Every day nurses face the possibility that they may injure themselves on a sharp object such as a needle or scalpel blade. Although many injuries will have no adverse effect the possibility of developing a disease such as hepatitis B, hepatitis C or HIV can cause untold psychological harm.

After a number of years of campaigning for a voluntary approach to address this issue, the RCN has advocated and lobbied for a legislative solution to protect healthcare workers from blood borne infections due to needlestick injuries.

Nurses are the largest occupational group of healthcare workers and deliver the largest portion of patient care. These are not incompetent or badly trained nurses but they are subject to human error in a system which does not apply the lessons of ergonomics. Safer needle devices are an effective means of reducing needlestick injuries and their use is supported by the Health and Safety Executive (HSE)³. Evidence suggests that the majority of needlestick injuries could be prevented by the use of safety devices and compliance with guidance.⁴ However, as this survey shows nurses' access to safer needle devices is low. A recent HSE report indicates that devices with safety mechanisms constitute only 5% of all instruments sold to the NHS.²

The estimated costs relating to needlestick injury is around £500, 000 per NHS trust per annum. The estimated total cost of introducing safer devices to prevent needlestick injuries is £136,000 per NHS Trust per annum.⁵ A recent impact assessment carried out by the HSE indicated that the costs and benefits of both a legislative and non-legislative approach to reducing injuries are roughly equal.²

In the USA, the Needlestick Safety and Prevention Act passed in the USA in November 2000 requires employers to monitor the incidence of needlestick injuries and train their staff in appropriate safety procedures. The legislation also requires that employers provide safety engineered medical devices and related equipment to protect their staff from needlestick and other "sharps" injuries. Similar regulations are in place in regions of Spain.

In 2006 a Resolution was adopted by the European Parliament which provided a starting point for social partners to develop improvements to Directive 200/54/EC to extend minimum standards of occupational health and safety to the issue of needlestick injury. The European Commission recently consulted on measures to protect healthcare workers, including a legislative option.

³ Health and Safety Executive Board Paper HSE/08/60 "European Commission measures for protecting healthcare workers from infections due to needlestick injuries"

⁴ Cullen BL., Genasi F., Symington I., Bagg J., McCreddie M., Taylor A., (2006) "Potential for reported needlestick injury prevention among healthcare workers in NHS Scotland through safety device usage and improvement of guideline adherence: an expert panel assessment" J Hosp Infection 2006, 63:445-451.

⁵ Memorandum submitted by the Safer Needle Network to Select Committee on Public Accounts 2nd May 2003

In England section 10e of the Code of Practice for the prevention and control of healthcare-associated infections issued under the Health Act 2006, with particular reference to the requirement to prevent needle stick injuries through the provision of medical devices incorporating sharps protection mechanisms. However, the use of devices which incorporate sharps protection mechanisms is not mandatory. Trusts have to consider the use of these devices but are not obliged to use them.⁶

Nevertheless, a number of healthcare organisations have already taken progressive steps to protect their employees by reducing the risks of needlestick injuries and we want to see this practice reflected in every healthcare organisation where needles and sharps are used.

In response to this research report, the RCN is calling for:

- **A Preventive Approach** – *less than 50% of respondents have access to safer needle devices.* Safer needle devices are an effective means of eliminating the risk of injuries and form an important part of an organisational wide approach to reducing needlestick injuries. All healthcare organisations should move towards the use of safer needle devices. Risk assessments should identify the need for such devices.
- **Comprehensive Policies** - *nearly 20% of respondents working outside the NHS do not have access to a needlestick policy.* The existence of a policy is key to reducing the fear associated with needlestick injuries. Healthcare organisations must have comprehensive policies that cover prevention and support following an injury.
- **Effective Training** - *nearly a half of respondents reported that they have not received training from their employer on safe needle use.* While training on its own may not reduce needlestick injuries it is an essential part of an organisation's approach to managing the risk of needlestick injuries. Training should include safe systems of work, use of safer needle devices, disposal of waste, actions to take post incident and how to access support.
- **Appropriate Support** – *the respondents indicated varying levels of support following an incident. Of particular concern is the lack of support for those working outside the NHS and in the community setting.* All nurses should be able to access timely and competent advice following a needlestick injury, 24 hours 7 days a week. The emotional impact on staff and their family members can never be underestimated and access to effective counselling support is also essential.

For further information on the RCN's position contact: kim.sunley@rcn.org.uk

⁶ Response to Parliamentary Question: Sandra Gidley MP to Dawn Primarolo 6th October 2008



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