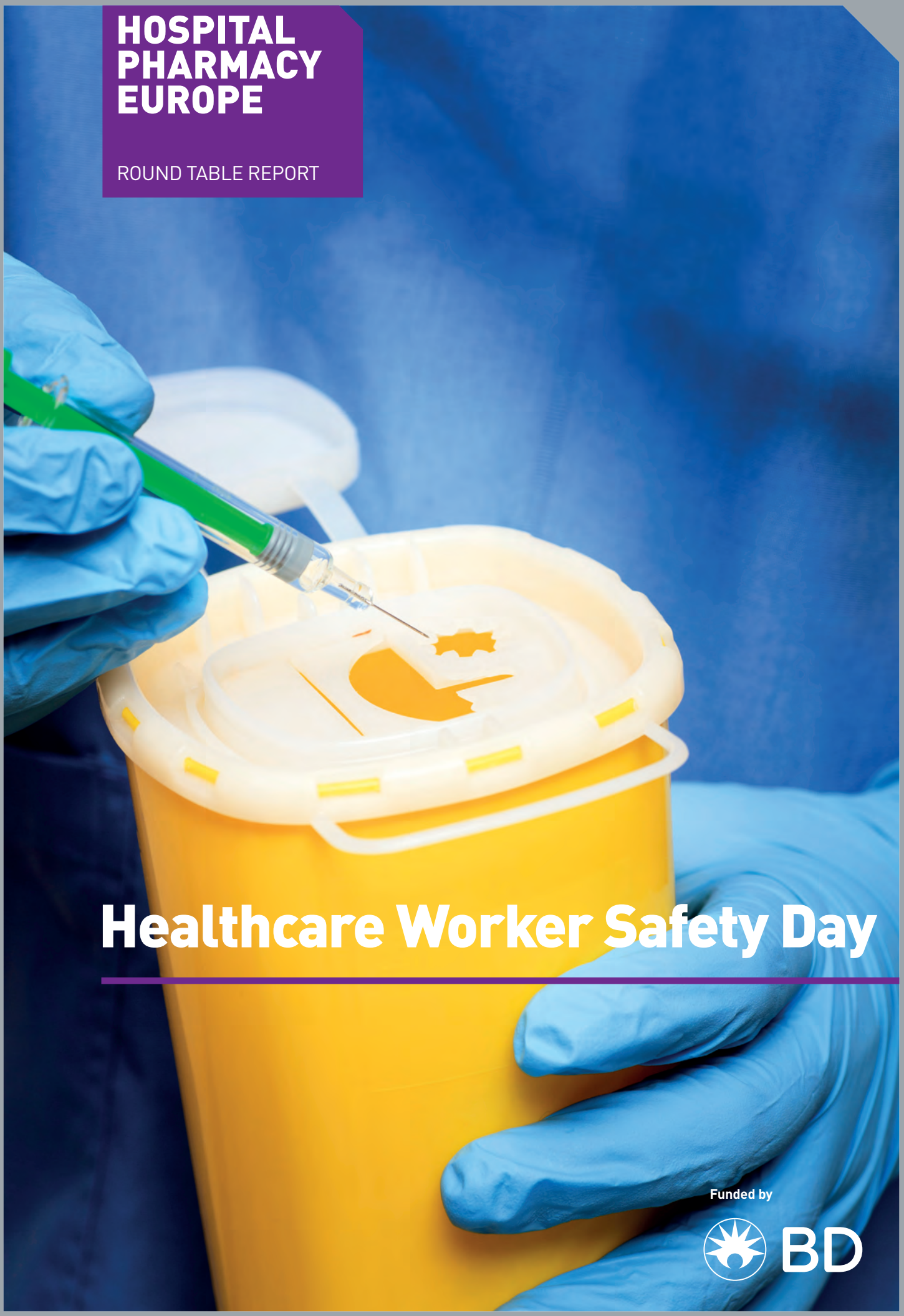
HOSPITAL PHARMACY EUROPE

ROUND TABLE REPORT



Healthcare Worker Safety Day

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The delegate from France was unable to attend, and her views were reported by Gabriella De Carli

EC Directive 2010/32 is focused on eliminating, as far as possible, the risk of injury or infection to healthcare workers (HCW) from medical sharps. It was required to be transposed into national law of the EU Member States by 11 May 2013.

On 3 October 2019, senior EU hospital professionals from seven EU countries met at the BD Innovation and Engagement Centre in Eysins, Switzerland, to compare experiences and policies governing the protection of HCW from medical sharps injuries in their Member States. They discussed who is at risk of needlestick injuries (NSI), compared the specific risk assessment and weighed the economic and human impact of NSI. Following analysis of the contribution of safety-engineered devices (SEDs) in the prevention of NSI, they concluded with recommendations for improving HCW safety through the avoidance of NSI.

» Council Directive 2010/32/EU (the Sharps Directive) introduces six principles to prevent workers' injuries caused by all medical sharps through an integrated approach: risk assessment; elimination, prevention and protection; information and awareness-raising; training; reporting, and response and follow-up.[1]

Implementation of the Directive and national policies governing HCW safety

A quick tour of Europe sees that every country has implemented the Sharps Directive, with varying degrees of compliance. Awareness of the effectiveness of the Directive in the national/local setting is given in a series of reports:[2]

Countries that indicated that reports [of the impact of the Directive] have been made available are, France (10. Surveillance nationale des accidents exposants au sang chez les soignants : réseau AES-Raisin 2015 [National Surveillance of Accidents Exposing to Blood in Caregivers: AES-Raisin Network] (available in FR) retrieved 17 April 2018), Germany (Trade Union and Employers, 11 separately: Unfallmeldungen zu Nadelstichverletzungen bei Beschäftigten in Krankenhäusern, Arztpraxen und Pflegeeinrichtungen [Workers' Compensation Claims for Needlestick Injuries Among Healthcare Personnel in Hospitals, Doctors' Surgeries and Nursing Institutions] retrieved on 17 April 2018), the Netherlands (13, joint response: Werkdruk, Agressie en Geweld in Zorg & Welzijn 2014 [Work pressure, Aggression and Violence in Care & Welfare]

(available in NL) retrieved on 17 April 2018) and the United Kingdom (14. Report on the post implementation review (PIR) of the Health and Safety Sharps Instruments in Healthcare) Regulations 2013 HSE 17 53 retrieved on 17 April 2018)

Italy deploys a practical, evidence-based approach to the implementation of the Directive, incorporating an integrated approach to the prevention of sharps injuries. It rests on the premise that the health and safety of HCW is paramount and is closely linked to the health of patients, the ultimate goal being the provision of better care. A recent national survey conducted in 2017 on a representative sample of 97 hospitals showed that all the Directive requirements were implemented, with, however, only a partial conversion from conventional devices to devices integrating a safety mechanism. Every hospital is obliged to provide education and training on risks from biological agents and exposure prevention to the whole staff, whose length is differentiated according to their level of risk, to be repeated every five years or in case of a change of duties, according to EU directives. Additionally, since 1990, all HCW working in infectious diseases receive 36 hours of training annually, with a specific focus on the prevention of occupational exposures. In a national survey, 89% of nurses reported having participated in training activities on the safety of needles and sharps: 35% in previous years, and 54% in the last year, for an average of 3.3 days.

In the **UK**, 'The Health and Safety (Sharp Instruments in Healthcare) Regulations 2013 Guidance for employers and employees' implemented aspects of the European Council Sharps Directive that were not specifically addressed in existing British legislation. *The Health and Social Care Act 2008: code of practice on the prevention and control of infections* (the 'Hygiene Code', last updated July 2015)[3] applies to registered providers of all healthcare and adult social care in England. While not mandatory, it sets out ten criteria against which the Care Quality Commission judges a registered provider on how it complies with infection prevention requirements. Criterion 10 specifically states that providers must have a system in place to manage the occupational health needs and obligations of staff in relation to infection. These include training for infection prevention, HCW protection, monitoring and follow-up of NSI, and training in the use of SEDs.

Reporting of NSIs is disseminated throughout the organisation. Notwithstanding the fact that there is a general process of Ward-to-Board escalation, compliance with the Directive may not be as strong as it could be, owing to cost constraints and a competing list of priorities. In common with **Ireland**, training in all infection prevention may be as little as one hour per year. This is supplemented by reactive, targeted education when NSI incidents occur. As reported by UK Trade Unions (please refer to Report):[3]

> *"Follow-up of the root causes of the incident is very poor, i.e. an investigation into how it happened covered by clause 10 is lacking by employers. How can one report on the main causes (locally and nationally) if no local investigation of the incident as required under clause 10 has been done?"*
>
> *"It could be the focus on [the] implementation of safety devices has led to employers being less vigorous re[garding] disposal of sharps. There is evidence that although there is [a] decline in injuries to clinical staff, there has not been a corresponding decline in injuries to cleaning and housekeeping staff. UNISON personal injury data suggest these injuries are being caused by failure to dispose of non-safety devices."*

The Directive has been fully implemented in **The Netherlands**, and rests on four pillars: communication, the safe handling of biological waste, distribution of SEDs when there is risk of infection and strict enforcement of the banning of recapping of needles. When sharps are not necessary, they are not used. The delegate from The Netherlands reported that, in her hospital, blunt needles are used where possible (for example, in drug preparation), and only one type of SED for each type of needle in the hospital is used in all departments throughout the hospital, so as to promote uniform working methods and standardise nurse training. The Netherlands cites cost as a major barrier to the uptake of SEDs. As elsewhere in the EU, there is competition between cost and safety.

Transposition has also been effected in **Poland**, where hospitals are required to write their own internal procedures according to the estimated risk of injury.

In **Spain**, where the employer has responsibility for HCW safety (HCWS), there is no global reporting system for NSI, and no penalties for non-reporting of NSI. In 2013, all aspects of the Directive were transposed into Spanish legislation. Some Spanish regions have legislated more rigorously than others have.

Excerpts from the 2019 HOSPEEM-ESPU Report[2] highlight the state of the Directive implementation in Spain, and include the following sample of Trade Union conclusions:

> *"Not all sharps instruments that are currently used in health centres have the same level of protection for avoiding accidents."*
>
> *"sharps instruments [injuries] are included under the "Contact with unspecified sharp, pointed or hard instruments" section" but explained that "The Autonomous Community of Madrid pioneered the obligatory use of products with safety devices, established by Order 827/2005(16)."*
>
> *"owing to the [economic] crisis ..., there has been a rise in temporary contracts, meaning that healthcare workers are contracted to provide nursing care for short periods of time. As a result, accidents may not be registered by staff for fear of losing their jobs."*
>
> *"occupational risk assessments are carried out in most health centres, but there is usually a delay in implementing preventive and corrective measures."*
>
> *"new employees are not given training prior to using safety devices, which is usually the most common cause of accidents."*
>
> *"after the Directive was issued, information sessions were held, with UGT involved in the organisational elements." This involvement concerned the aspects of "elimination, prevention and protection", "training"* »

and "reporting": "Most health centres have working protocols to follow, including behaviour and monitoring protocols in the event of biological accidents. Most health centres have been given specific instructions on prohibiting the recapping of needles. […] We are also aware that verbal instructions were given regarding the Directive, for example, not to cap needles, and the use of prepared containers for disposing of sharps was insisted upon – these specialist containers already existed prior to the transposition of the Directive. In terms of implementing these measures, we are only referring to the public health sector; we do not have as much information on the private health sector."

"the government [to] establish monitoring mechanisms to verify the presence of safety equipment, in accordance with the Directive, and that the equipment does not pose any risks in itself."

"the "importance of understanding occupational risks in employee training, as well as how to prevent them" was emphasised."

The status in **Germany** is encapsulated below:[2]

"Needlestick injuries fell steadily from 159 in 2007 to 109 in 2014 and to 95 in 2016."

"In all 3 settings [i.e. hospitals, doctors' surgeries and care facilities] about half of the NSI did not occur during the invasive procedure, but during the subsequent disposal of the instruments. 30% of all NSI were caused by needles for subcutaneous injections; in care facilities, the proportion was above 50%."

"despite improved statutory regulation, needlestick injuries and cuts are among the most frequent causes of accidents in the health sector. […] Colleagues in the hospitals note that steps are being taken to reduce risk [and that] stress in the workplace continues to be the prime risk factor for injury". Concretely: 1) Injuries are better recorded, leading to an increased number of incidents reported; 2) Technical and organisational risk minimisation measures are being implemented; 3) Guides and training measures helped to raise the awareness of staff and managers. 4) A report on injuries and their reasons is being produced in the hospitals at least once a year, which, however, does not always imply that counter-measures are taken.

For **Germany** both social partners indicated particular challenges for handling medical sharps in their disposal for doctors.[2]

"Risk assessments are being performed, but associated measures are not being adequately implemented. Another aspect is the inadequate supervision by monitoring bodies – both [commerce] inspectorates and accident insurance organisations, which are the bodies that need to provide [a] more detailed specification of the disclosure requirements associated with risk assessments."

"there should be a standard system of assessment/evaluation. Because of Germany's federal structure, the results have to be laboriously collated. A national register might perhaps be useful here."

"early suitable briefing and education of all apprentices and employees" as a crucial element for training.

In **Ireland**:[2]

"information and awareness raising, training and reporting are always challenges in an organisation of such scale and complexity."

"The National Incident Management System (NIMS) was introduced in 2015 by the State Claims Agency (SCA). This requires all incidents to be reported through a national centralised system and will ultimately improve the quality of incident data collected(9). The HSE has long been proactive in encouraging staff to report all incidents – also all "near misses" and incidents, even those that do not result in harm – and this is enshrined in the Corporate Safety Statement, Sharps Policy and Incident Management Framework and Guidance. The number of incidents reported through the National Incident Management System appears to have gradually reduced in the years since the introduction of the Sharps legislation", from 572 in 2012 to 408 in 2017.

"in 2016 following a period of consultation with all key stakeholders, including Unions, the Health Service Executive approved and published a Policy on the Prevention of Sharps Injuries. The purpose of the Policy is to inform all HSE Managers (Responsible Persons) and employees of the key issues to address when developing safe work practices for the prevention of sharps injuries. Under this Policy, HSE is committed to eliminating or reducing the risk of exposure. […] The National Health and Safety Function has developed a number of resources to support managers in implementing the policy.

"a possible consideration was to the "development of learning and education resources, such as e-learning (e.g. to be delivered as part of blended learning approach), which can be tailored for local implementation by healthcare organisations across member states".

And in **France**:[2]

"The staff representative bodies, and essentially in the Health, Safety and Working Conditions Committee, must ensure that the single document is up to date as part of risk prevention. During nursing training, time is spent on the provision of information. on [the] prevention of accidents with exposure to blood." Other improvements are that staff now better respects procedures, that the disposal of products used has improved and that health and safety at work services monitor the serological results of accidents at work, with serological tests are carried out, even though those declarations of accidents at work are not done in a completely systematic manner.

BOX 1

Costs of NSI to the individual and the organisation

	Direct	**Indirect**
Organisation	• Absence of exposed HCW during diagnosis/treatment/follow-up/side effects • Testing for blood-borne viral transmission • Lawsuits and claims • Compensation fees • Investigation of incidents • Post-exposure prophylaxis	• Exposed HCW may not be able to discharge everyday responsibilities in personal environment, e.g. child minding • Time diverted by colleagues of the injured HCW to managing, testing and providing post-exposure prophylaxis for the colleague, and to providing care for the patient • Reputational damage: once lost, difficult to regain • Changing career/qualifications • Recruiting staff replacement
Individual	• Nurses/doctors may have to be redeployed if no definitive treatment is available, in the interest of patient safety	• Emotional disturbance • Family stress/relationships • Psychological damage • Loss of job, loss of self-confidence and loss of confidence in institution

The safety of healthcare workers is closely linked to the health of patients

Gabriella De Carli

Directives governing the protection of HCW from medical sharps injuries have been implemented across Europe, with varying degrees of thoroughness, owing to ever-growing cost constraints, inconsistencies in reporting and follow-up of NSI, (sometimes) inadequate training and competing priorities.

A more in-depth look at the specific preventive measures required by the Directive across Europe reveals similarities and difference in greater detail.

Specific measures to prevent NSI

Employees and HCWs must work in an **integrated** fashion in creating a safe work environment, through a combination of prevention and monitoring of incidents, awareness-raising, and information, education and training, to create a **no-blame culture** in **systematic reporting** of NSI. The creation of this safe working environment extends to workplace design and the placement of sharps containers. Anyone working in a clinical setting is potentially at **risk** of NSI. Nurses are perceived to be at greatest risk, insofar as they conduct the majority of invasive procedures involving the use of needle devices, but risk of contamination is aligned with the clinical setting of the procedure, and extends to, for example, surgeons in operating theatres and logistical, housekeeping and outsourced staff for cleaning and waste disposal activities. One delegate (**Spain**) shared reports of patients bringing unsafe needles with them to hospital, introducing a new risk for the healthcare workers when they are not disposed of in the right way by the patient. Sharps can be found inappropriately discarded practically anywhere in the hospital: on the floors, high up on shelves, in lab coat pockets. And the greater the number of procedures in any given location in the hospital, the higher the risk to the housekeeping staff. The only exception to this, reported in **Italy**, is the lower risk of infection in infectious disease departments. This is attributed to the annual 36-hour mandatory training for all HCW at risk of blood-borne infection and exposure, a programme that includes doctors, nurses and housekeepers.

Those at risk extend to independent, self-employed nurses (who are not covered by the Directive) who work outside the hospital, providing home care (for example), an issue raised especially in **France**, where a specific study on this group has started.

It should never be assumed that there is no risk. Healthcare workers are predominantly responsible for the operational avoidance of NSI, with the CEO and Hospital Board holding ultimate **responsibility** for the safety of its employees. In the Irish private sector here represented, for example, everyone working with sharps is responsible for their safe disposal.

Personnel and managers may have completely different perceptions of the adequacy of **information and training** in their hospital, necessitating frequent and varied initiatives. All delegates strongly support the introduction of training of students in medical and nursing schools in all aspects of risk prevention, as well as initiatives to support temporary staff, whose access to education and training may be limited by time constraints.

Regarding the importance of training/education in the reduction of NSIs, a meta-analysis reported by the delegate from **Italy** showed that

> While sharps safety is a priority, it is a priority along with everything else being a priority
> **Debra Adams**

a combination of education/training and use of **SEDs** is more effective in lowering incidence of NSI than either on its own.[4] Safety devices reduce the exposure by *modifying and isolating the hazard*, while training *modifies the behaviour* (e.g. providing instructions on how to safely manipulate used, blood-contaminated needles) without modifying the hazard. Both elements are necessary, as shown by the persistence of needle **recapping** despite its explicit banning by the Directive: Italy reports as many as one-third of nurses continue to recap.

However, an effective use of SEDs also requires specific training, e.g. to ensure that SEDs are correctly activated. In **The Netherlands**, a train-the-trainer network of super-users from different departments has proven very effective in supporting proper use of SEDs.

The replacement of conventional needles with SEDs will always be less than 100% in those instances where existing stock has first to be exhausted: the delegate from **Italy** reported that, in a 2017 nationwide survey, fewer than 50% of needles were originally replaced with SEDs, with one of the main reasons being the cost implication of losing existing stock. Additional costs of SEDs were also perceived as an obstacle to total replacement of conventional devices.

Regardless of whether conventional or safety devices are in use, in all instances there should be the ambition to **use fewer needles**, as required by Clause 6 of the Directive. Eliminating the unnecessary use of sharps when there are alternatives, e.g. not using a fingerstick for glucose monitoring in diabetic patients when a subcutaneous electrochemical glucose sensor can be implanted; or, using buttonhole technique to access fistula with a blunt needle in dialysis patients, or sutureless devices to fix central catheters to the skin. Decreasing the necessary use should also be a priority, achievable, for example, by minimising the number of blood drawing/blood tests through careful planning (several software are available), only inserting peripheral intravenous catheters where needed, administering drugs by oral therapy where feasible. Replacing the necessary devices with safer alternatives completes the process: in those instances where needles must be used, SEDs and training in their use are vital in order to design out human faults of non-activation prior to disposal.

The delegate from **Ireland** raised interesting comparisons between **private and public sectors**. Operating currently within the private sector, she cites mandatory training for all staff (one hour) on sharps and infection control, driven by the Joint Commission International (JCI) as being essential for accreditation – a requirement not reflected in the public sector. This private/public position on SEDs is reversed in other countries.

In **Italy** and **France**, the uptake of SEDs in the private sector is lower than that in the public sector, though only limited data are available; although every hospital will have a Safety Manager and will run education and training courses, data collection on NSI is poor. HCWs in these settings will have private contracts and may be in fear of losing their jobs if they report NSIs. In **Ireland**, data collection in the private sector is very good because it is driven by JCI accreditation, without which hospitals receive no income.

Poland reports no data from the private sector: hospitals keep their own records, and the employer is not required to report. Private and public sectors have implemented the Directive, but data collection is solely for the hospital's needs.

In Spain, it was reported that public hospitals »

Recommendations for improving HCWS and eliminating NSI

- Timely national and international data to enable benchmarking between hospitals of similar size across the EU
- Meaningful penalties for not conducting risk assessments combined with incentives for quality improvement/CQUINS (UK: Commissioning for Quality and Innovation)
- Companies designing out potential SED issues
- HCW who incur NSI have stories to share about how it has affected their lives and careers; these should be brought to bear on decisions regarding the procurement of SEDs
- Creation of a safety checklist that could be used for accreditation
- Hospital inspections that are proactive rather than reactive
- Cost of devices to be integrated into the cost of the procedure
- Mandatory HCWS training in medical/nursing schools
- Convincing insurance companies that HCWS and patient safety are linked
- Develop protocols to shorten time for infection testing

are responsible for preventing NSI and for treating injury to its workers; in the private sector, responsibility for the prevention service is outside the hospital, as is the responsibility for care of the worker who has sustained the injury.

Employers and HCWs must integrate their work practices to create a no-blame culture for the systematic reporting of NSI, of which everyone working in a healthcare setting is at risk. Training and education must be perceived by managers and personnel alike to be aligned to practical needs, nowhere more so that in the correct use of SEDs.

In France, there is national legislation to prevent accidental blood exposure (ABE), which includes the prohibition of recapping, the disposal of sharps in specific containers and the strong recommendation to use SEDs. These measures are part of a multidimensional preventative program to be carried out in hospitals and other affected settings to prevent the transmission of blood borne pathogens. These measures include vaccination, training, compliance with Standard Precautions, surveillance of ABE, evaluation of preventive measures and management of occupational exposures. It is the obligation of the employer to provide this preventive program to protect employees.

In summary, there are notable similarities in the preventative measures against NSI in hospital settings across Europe, such as a consistent practice of disposing of sharps in specific containers. While countries may have their own legislation, health systems and working cultures, it is the universally the collective responsibility of HCWs to take action to stop potentially hazardous situations from arising.

The discussion then moved on to assessing the risk of NSI.

Risk assessment

The assessment of the risks to safety and health at work has been a pillar of all EU legislation on these issues since release of the first Council Directive 89/391/EEC, and procedures to conduct risk assessment are included in this first Directive as well as in subsequent ones. The employer shall carry out the assessment of all risks, including those from biological agents, mandatorily whenever a new facility opens, when changes occur in the working activity that are significant for the purposes of safety and health at work and, in any case, within a maximum of three years since the last assessment (all EU countries).

In Directive 2010/32/EU, however, aiming at preventing sharps injuries in the healthcare sector, it is further specified that 'risk assessment shall include an exposure determination,[…] and shall cover all situations where there is injury, blood or other potentially infectious material', to 'reveal a risk of injuries with a sharp and/or infection'. This risk assessment is mainly finalised to deciding where and when to provide medical devices incorporating safety-engineered protection mechanisms as well as implementing other general or specific measures to prevent injuries and infections. In this regard, some differences within countries emerged during the discussion.

> We should aim at zero tolerance for avoidable accidents
> **Gabriella De Carli**

Hospitals in **Italy** appear to rely mostly on NSI to tell them where the risk is. Accordingly, in national surveys, a trend was observed towards the introduction of SED in high-risk units, and in units with a high prevalence of blood-borne pathogens. Also, conversion to safety was most frequent for high-risk devices (e.g. hollow-bore, blood-filled needles). What is needed is a procedure based on systematic factors, rather than individual mistakes, e.g. identifying and addressing risky healthcare procedures in all units, regardless of whether accidents occurred, or were reported. In greater detail, the methodology applied for the assessment of biological risk is that of carrying out an evaluation and weighting as follows:

- analysis of work processes and safety procedures, of the tasks involved in the various phases and the consequent workload per HCW
- identification of the phases at risk of injuries and contact with blood or other potential infectious fluid
- evaluation of historical data to assess the incidence of injuries, accidents and near misses caused by sharps and needle devices
- analysis of the levels of harm caused by accidents
- assessment of the devices used and related safety devices
- ascertainment of worker training/information
- definition of the risk index (frequency x magnitude)
- development of improvement and adaptation plan
- periodic check and review of procedures.

Risk assessment in **The Netherlands** is also based on incidents, and is conducted annually by the occupational hygienist.

In the **UK**, risk assessments tend to be dynamic rather than scheduled at yearly intervals, but constant reminders are necessary. Trusts may be fined for non-compliance with respect to the Safer Sharps Regulations (2013)[5] by the Health and Safety Executive. However, the fines may be too small to be punitive, and the risk to reputational damage may have a greater impact.

The delegate from **Ireland** reports that risk assessments in some cases are being analysed at hospital level, and are not being driven by CEOs. Waste managers will report NSIs but may or may not have capacity to drill down to safety measures. Risk assessments are not a key performance measure for either CEOs or department managers: further lobbying is needed for this to come into effect.

In **France** (as reported by Gabriella De Carli), the risk assessment process for the prevention of ABE is comparable to that of the risk assessment in the Single Occupational Risk Assessment Document required by Directive 89/391/EEC, but it is specific to ABE. In any event, the procedures (ABE risk and other risks) must be linked to each other; they

are complementary and fall under the same concern. The Single Document is therefore not the only element of the evaluation: assessment is above all an approach.

As observed by a French National Network Survey of occupational blood exposures in Healthcare facilities (AES-Raisin Network), between 2008 and 2015, the overall ABE incidence rates per 100 beds decreased significantly by 23%; however, ABE remained avoidable in 32% of cases.

The number of reported injuries year-on-year may remain similar despite Directive compliance, but numbers looked at in isolation may be misleading, and standardisation of the data collected using appropriate denominators and developing rates is absolutely imperative.

In **Poland**, the risk assessment is prepared at least once every two years, unless there have been changes before in a given workplace. The Injury Regulation also provides that a risk assessment is also carried out after occurrence of an injury incident to verify previous applications.

Assessing the risk of NSI, as opposed to recording individual mistakes, remains the aim of risk assessment as set out in the EU Directive, and the effectiveness of its implementation across Member States varies.

NSI data collection is not mandatory nationally in any of the countries involved in this analysis. However, there are national requirements, or hospital networks recording data on NSI on a voluntary basis, in all countries, so that some benchmarking will be possible.

Given the continuing reports of NSI, what is the institutional and human cost burden?

Economic and human impact of NSI

Debra Adams provided an overview of the reputational damage, psychological effect and disease and legal implications of NSI in the **UK**.

NHS Resolution (formerly NHS Litigation Authority) seeks to ensure that valuable NHS resources are focused on benefitting patients, resolving concerns and helping to improve safety. Its main contribution to the NHS is to manage the cost that arises when things go wrong, and to help prevent the same thing recurring.

In the years 2012–2017, 1213 of the 1833 claims (66%) for NSIs made to NHS Resolution were successful.[6] They involved 914 downstream workers and 137 clinical staff, pertained to non-compliance with standard infection control precaution, inadequate disposal of clinical waste, overfull sharps bins, not using SEDs and not using personal protective equipment, and cost more than £4million.

Delegates discussed the most significant costs encountered on a human and organisational level, both direct and indirect (See Box 1):

Mitigation of costs is dependent on the prevention of NSI, and might be supported by the following:

- nurturing an institutional culture of safety
- actively learning from incidence of NSI
- incentivising work participation in procedures
- formalising a protocol for reducing the time-to-test result, which is a major barrier to NSI reporting
- running CME/CPD workshops in prevention of NSI
- championing quality improvement initiatives from within the workforce as opposed to a top-down approach
- NSI benchmarking is an issue that should be implemented sooner rather than later
- convincing insurance companies that HCW and patient safety are linked
- capitalising on the fact that anecdotal evidence/patient stories, not just cost, has a profound effect on the Board: because the CEO answers to the Board and the Non-Executive Directors, a strong patient story can definitely win hearts and minds. And if you are providing a poor service and your HCW are getting NSI, no CEO will want to sustain the reputational damage
- integrating the cost of the devices into the cost of the procedure
- realising that money spent by a hospital on treatment of NSI is money wasted: direct cost savings will never compensate for the cost of SED, and wasted cost must factor into consideration of return on investment.

Above all, remember that cost alone is insufficient justification for failure to implement SED uptake.

The cost of NSI to the institution and to the HCW, direct and indirect, can be immense, and the only way to mitigate these costs is through the prevention of NSI.

Contribution of safety-engineered devices

SEDs are a technical measure to reduce risk of exposure by modifying or isolating the hazard. In consideration of advantages and disadvantages of different SED designs, and optimal design for new safety needles, delegates identified the following preferred features:

- devices that are intuitive – you will always have staff turnover who may be (temporarily) without training
- blunt needles for drug preparation
- audible activation
- ergonomic design
- not bulky
- needle alignment, such that the bevel (tip) of the needle is not obscured
- devices that meet the needs of hospital nurses
- hard surface activation results in splatter contamination – AVOID
- an active system, i.e. it is reassuring to use a system that you must actively activate NOTE: the delegate from **The Netherlands** voiced a preference for passive systems that become safe without any activity from the healthcare worker.

A NOTE ON PROCUREMENT: most hospitals across Europe are moving from a points-based criterion to selection based primarily/principally on cost. And the price argument will always win unless a business case can be made that incorporates patient stories and anecdotal evidence. For this reason, the choice not to buy SEDs may be driven simply and entirely by cost.

But to repeat an earlier conclusion, combining behaviour-changing training with SEDs is more effective than either intervention on its own.

Conclusion

After exhaustive discussion of the need to collect benchmarking data in the drive to reach toward zero NSI, the delegates agreed that what was needed was not more costly surveillance and analysis, but a Healthcare Worker Safety Day for sentinel hospitals across the EU, with active observers trained to focus on data from a set list of requirements. Is there a sharps injury policy? Have SED risk assessments been conducted? What percentage of healthcare workers have been trained in correct sharps management and NSI prevention? Are lessons learned from NSI disseminated throughout the organisation? What SEDs are available? What recapping has occurred in that day? What appears in the sharps containers? And it would be apt to publish such a study in May 2020, to mark the tenth anniversary of the release of Council Directive 2010/32/EU.

This roundtable was funded by BD

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 Published in the United Kingdom by Cogora Limited, 140 London Wall, London EC2Y 5DN, UK.

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