EFN Report on EU Health Professionals' Perceptions of Preparedness for Ebola and Infectious Diseases of High Consequences (IDHC)

We are not prepared, unless we are all prepared!

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This report presents the results of an online questionnaire developed by the EFN on infectious diseases of high consequences (IDHC) and Ebola. Through its members, the EFN has contacted the frontline workforce across the EU and Europe to answer questions relating to the perceived level of preparedness for IDHC and Ebola in the European countries.

We would like to thank the EFN members, the national nurses' associations, for their engagement in distributing the questionnaire among their membership and in this way contributing to wide dissemination and outreach.

Furthermore, we are grateful to the thousands of respondents who took the time to fill out the online questionnaire and who have made this report possible. Although we are overloaded with questionnaires to make research recommendations, the frontline workforce appreciates concrete approaches, showing the reality of daily practice.

Finally, many colleagues and experts have supported the design of the questionnaire and reviewed the first draft report for feedback. We highly appreciate the support given to us.

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Executive Summary

In response to a question about the extent to which the European Union (EU) is prepared to respond to Ebola, the special advisor to the United Nations on Ebola, Dr Paul Farmer, noted that 'we cannot be prepared anywhere if we are not prepared everywhere', such is the nature of pandemics[1]. The European Federation of Nurses' Associations (EFN) has therefore developed an online questionnaire on infectious diseases of high consequences (IDHC)[2] and Ebola to explore the perceived level of preparedness among the frontline healthcare workforce across the EU. The results of this questionnaire are presented and analysed in this report.

The data were collected through the networks of the members of EFN, reaching out to National Nurses' Associations from 34 Member States. A total of 1800 responses, from 23 Member States were secured from nurses, healthcare assistants, physicians and social workers. The data analysed was facilitated by Survey Monkey®, Excel and SPSS.

The overall objective of the report is to identify the frontline workforce's needs for capacity building in the EU in relation to pandemic preparedness and management. Furthermore, this report aims at raising awareness for targeted capacity building at EU and Member State level, especially at a time when Ebola gets under control in Africa. It is imperative to identify gaps in the daily practice of health professionals in EU Member States on preparedness in order to identify ways for improvement. We cannot ignore that health professionals have been infected in Member States because they volunteered for the caring process with insufficient safety measures to protect them. The study results will therefore identify necessary action to be taken, to address any shortcomings and increase the preparedness of nurses caring for patients with IDHC and Ebola.

The data analysis revealed that from the perspective of the frontline staff who responded to the questionnaire, there are currently varying degrees of preparedness for Ebola and IDHC among countries in Europe. While certain areas of preparedness appear well within countries' reach, others still require substantial investment to improve. It is significant, that health professionals report a lack of policies to protect them from working overtime and from stigma. It is especially worrying that 58% of those respondents who have cared for a patient with Ebola noted being stigmatised.

Interventions to increase the level of preparedness for Ebola are straightforward and inexpensive, yet these require still more attention. It was surprising to find in the data that health professionals do not feel they are being consulted enough on the equipment and protocols they are to use, and are not adequately briefed from their organisation, for example

[1] Farmer P (2015) Failure to collide: Ebola and Modern Medicine. Kapuscinski Development Lectures. http://kapuscinskilectures.eu/lectures/failure-to-collide-ebola-and-modern-medicine/

[2] Infectious diseases of high consequence (IDHC) are serious threats to human health. Patients with such diseases typically develop severe symptoms, require a high level of care, and the case-fatality rates can be high. Often, there is no specific vaccine, prophylaxis or treatment available. Several IDHC are transmissible from person to person and therefore require transmission precautions in healthcare workers (HCW). From ECDC: http://ecdc.europa.eu/en/publications/Publications/Use-of-PPE-for-safe-first-assessment.pdf

about the conclusions of risk assessment exercises. These difficulties persist regardless of the settings in which staff work.

Staff views are a critical resource in assessing the preparedness of different countries at the level of everyday practice, there were patients are cared for and staff risk exposure to dangerous IDHC. It is vital that policy-makers pay attention to the voices and messages of frontline staff, represented in this report, as it is they who ultimately act as the guardians against the threat of IDHC and Ebola in the EU and Europe. DG SANTE and the European Centre for Disease Prevention and Control (ECDC) should therefore take the results serious and support the health workforce, particularly the nurses, in more practical actions to be better prepared for the next potential outbreak.

Therefore it is of utmost importance that the EU provides funds that can be used to support the capacity building of the health workforce, including the provision of education and training, while stigmatisation needs special attention when health professionals care for patients with Ebola. To handle stigmatisation in a systematic way, its causes and consequences need to be researched thoroughly. Designing a proposal for effective crisis management and investing in capacity building by drawing conclusions from past experiences will move policy-makers and politicians forward in strengthening health systems.

It is equally important that Ebola reference centres are identified and that the public and health professionals have a clear understanding how the network operates. Overall, awareness-raising initiatives are imperative in improving preparedness for IDHC and Ebola; nurses have first-hand knowledge and experience of the reality of caring for patients with IDHC and Ebola, can give valuable contributions and consequently need to be involved in the decision-making, selection of material, development of protocols, as well as the design of policies and procedures which are “fit for practice”. Finally, in order to ensure better preparedness and redesign an EU preparedness strategy based on a stakeholder engagement approach, investments in health systems, in quality and in safety will need to be made to counter the cuts in the healthcare sector since 2009.

Background

Infectious diseases of high consequences (IDHC) can pose a real threat to the life of healthcare professionals, especially nurses, if they are not adequately equipped with education, training and protective equipment. The result of this can be seen in the case of Ebola, often described as a caregivers' disease. The Ebola outbreak in West Africa, since March 2014, has led to thousands of deaths. As of 27 May 2015 there have been 15015 laboratory-confirmed cases and 11157 total deaths[3]. Ebola is not only a challenge for Africa but also a great concern of the European Union (EU). Although the outbreak is getting under control due to joint efforts to fight Ebola, it is crucial to continue to learn from our mistakes as complacency is dangerous and can lead to more unnecessary deaths.

Overall, the EU and its Member States have contributed over 1.1 billion Euros[4] to the fight against Ebola. Nevertheless, equipment and training for the health professionals involved in managing people with Ebola is not consistent and in some cases lacking[5]. This exists despite the fact that according to the EU policy strategies[6], healthcare professionals are required to be equipped with the right material and to have received adequate and appropriate training; this requirement was confirmed by the Health Council on the 1st December 2014[7].

IDHC such as Ebola impact significantly on the work of nurses. Every day, nurses who are involved in the treatment (mainly caring) of a patient with Ebola, work in the knowledge that they and their families are at risk of infection which could be life threatening or fatal, especially if denied access to proper equipment and training. For this reason, it is of utmost importance that Ebola coordinators and employers take the working conditions of nurses seriously when their facility accepts a potential or confirmed patient with Ebola virus disease.

The importance of this can be illustrated by the case of Spain, where a health professional was infected while taking care of an Ebola patient[8]. In reaction to this, and in order to evaluate the situation and share experiences, the Spanish General Nursing Council and the International Council of Nurses organised a World Summit on 'Nursing & Ebola' in Madrid[9] in October

[3] http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/index.html
[4] EU Commission (2014) The European Union's response to Ebola emergency.
[5] Spanish General Council of Nurses (2014) Report on the Actions for Care of Ebola Virus Disease Patients in Spain.
[6] Council of the EU (2014) Council Conclusion on the Ebola Crisis in West Africa.
[7] http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%2015979%202014%20INIT
[8] ECDC (2014) Outbreak of Ebola virus disease in West Africa.
[9] Consejo General de Enfermería (2014) Madrid declaration.

2014. The Spanish General Council of Nursing[10] examined this case and found that the hospital concerned had inadequately developed protocols and risk techniques set up; while the health professionals were not educated on the correct handling of equipment in a case of Ebola. Of particular concern is that the nurses were neither consulted on the choice of personal protective equipment (PPE), nor the practicalities and suitability of the care environment to be used. Some Ebola Coordinators confirmed they spoke with epidemiologists, but never with the nurses working in the field. Policies cannot be fit for practice without consulting the frontline workers. These examples demonstrate how easily the virus can be contracted among nurses or other healthcare workers if they are not equipped appropriately with adequate measures. This includes education, PPE and safe working conditions.

The Spanish summit also highlighted that 'stigmatisation' is a great concern for nurses when caring for patients with Ebola. They report as a result of their role, rejection by family and friends in fear of contamination[11], leading to isolation and a diminished quality of life[12]. However, there are ways that stigmatisation can be addressed, such as through adequate education and prevention[13]. The summit therefore concluded, that it is vital to provide biological, psychological and social support to nursing staff involved in such cases.

Given the learning that is developing within Europe on Ebola it is becoming increasingly clear that sufficient and appropriate resources are available and that capacity (to have an appropriate number of professionals available), as well as the needed protection measures are important factors that will contribute to the safety of staff and patients[14]. This is especially important for nurses, considering that anecdotal evidence from EFN members indicate that the majority of caring activities for a patient with Ebola are carried out by them.

Hence, action at EU level is essential. Broader EU legislative frameworks are already in place, which protect the health and safety of healthcare workers such as from risks related to exposure of biological agents at work and from sharp injuries (2000/54/EC[15], 2010/32/EU[16]). Additionally, the ECDC has set up a tutorial on Personal and Protective Equipment (PPE). In

[10] Spanish General Council of Nurses (2014) Report on the Actions for Care of Ebola Virus Disease Patients in Spain.
[11] EFN (2014) Fieldworkers safety at high risk due to cuts in health sector. EFN
[12] Kinsman (2012) A time of fear
[13] Global Life (2014) Addressing Ebola-related Stigma: Lessons Learned from HIV/AIDS
[14] Boozary AS, Farmer PE, Jha AK. (2014) The Ebola Outbreak, Fragile Health Systems, and Quality as a Cure. JAMA 312(18):1859-1860. doi:10.1001/jama.2014.14387
[15] Directive 2000/54/EC on the protection of workers from risks related to exposure to biological agents at work.
[16] Directive 2010/32/EC on implementing the Framework Agreement on prevention from sharp injuries in the hospital and healthcare sector concluded by HOSPEEM and EPSU.

its Strategic Framework on Health and Safety at Work 2014-2020, the Council confirms that there is a need to improve the implementation of occupational safety and health legislation; to prevent risks to health and safety at work; and to address the challenges posed by an ageing workforce and longer working careers[17]. Nevertheless, it is important that the existing EU legislation is being implemented correctly and that action is being taken by the Commission in making sure Member States comply with EU legislation that protects the frontline workforce.

In line with the ECDC, data is crucial to better understand and address the needs of the frontline staff possibly dealing with an IDHC. Hence, the data collected from the EFN questionnaire aim to inform the ECDC's future support in training and capacity development and will furthermore provide the basis for a standard training for the protection of care workers. The ECDC needs to move closer to the frontline workforce to provide practical support where it is highly needed. Academic insights are crucial, but not at the expense of those caring daily for Ebola (IDHC) patients. The Commission, especially DG Sante, should recognise this responsibility.

Recently, in response to a question about the extent to which the EU is prepared to respond to Ebola, the special advisor to the United Nations on Ebola Dr Paul Farmer, argued that we cannot be prepared anywhere if we are not prepared everywhere, such is the nature of pandemics[18]. The European Federation of Nurses' Associations' (EFN)[19] mapping of the level of preparedness in European countries for a possible outbreak of IDHC, aims at raising awareness on the importance of the correct implementation of existing EU legislation and further EU action supporting capacity building and appropriate training and equipment. Nurses need to feel supported and empowered, since they are the backbone of bedside care. They need to be included in the decision-making process in order to address the existing gaps in preparedness for a future possible outbreak of such diseases.

[17] Council of the European Union (2015) EU Strategic Framework on Health and Safety at Work 2014-2020: Adapting to new challenges. Retrieves from: http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%206535%202015%20INIT

[18] Farmer P (2015) Failure to collide: Ebola and Modern Medicine. Kapuscinski Development Lectures. http://kapuscinskilectures.eu/lectures/failure-to-collide-ebola-and-modern-medicine/

[19] http://www.efnweb.be/?page_id=766

Method

Survey Objectives and Questionnaire design

The questionnaire aims to provide a first step in mapping the implementation of the new EU coordination mechanism for Ebola patients' evacuation and to understand the impact from a nursing perspective with regard to health and safety of healthcare workers. The mapping makes it possible to identify the actions needed for future capacity building for the health professionals working at the bedside.

Therefore, the questionnaire addresses issues pertinent to frontline clinical healthcare workers such as risk assessment, prevention and protection, information and awareness raising, and education and training. It also considers whether the correct equipment and facilities are available to nurses. An important part of the questionnaire takes into account also whether nurses are being consulted on the choice of equipment and if the psychological aspects of being in touch with IDHC, such as stigma, are considered. The questions were formulated with the aim of understanding whether the facilities in the Member States are taking specific preventable measures and are sufficiently prepared for a possible patient with an IDHC. The questionnaire provides a clear view of the state of play in the European countries.

The questionnaire was comprised of 20 questions and was available in 21 languages, including Bulgarian, Croatian, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Icelandic, Italian, Lithuanian, Polish, Portuguese, Romanian, Serbian, Slovak, Slovenian and Spanish. It consisted of three different parts. In the first part, personal data from the participant was collected. The second part aimed at gathering information about whether the respondent had previous experience with IDHC and/ or Ebola. And finally, the third part addressed the issues of education and equipment. Questionnaire items were formed out of a combination of Yes/No questions and Liker type scales ranging from Strongly Disagree to Strongly Agree; and based on the ECDC toolkit and the clauses of Directive 2010/32/EU[20] on the prevention of blood-borne infections and injuries for health workers. The English version of the questionnaire can be found in the Appendix.

[20] Directive 2010/32/EC on implementing the Framework Agreement on prevention from sharp injuries in the hospital and healthcare sector concluded by HOSPEEM and EPSU.

Dissemination of the Online Questionnaire

The target group of the questionnaire were health professionals working in hospitals, community care, and elderly care homes across Europe. The questionnaire was distributed among EFN members and published on the EFN website. The EFN members disseminated the questionnaire among their local networks, in order to reach the frontline staff. Furthermore, members promoted the existence of the survey through social media.

The questionnaire was hosted on the online platform 'Survey Monkey'. The questionnaire was open and accessible through the EFN website from 1st February until 31st March 2015. Reminders were sent on a regular basis to the members, especially to members from countries with a low response rate, in order to encourage them to promote the questionnaire among their network.

Survey Limitations

Centred translation was applied in order to maintain loyalty to the original scale items. Therefore, it was taken into consideration that the use of different languages might have led to distinct interpretations of questions. To counter this limitation, the EFN members contributed to translating the questionnaire, in order to achieve conceptual and semantic equivalence. In addition, where possible, back translation was considered[21].

The analysis presented herewith reports on the perceptions of the respondents as indicated on the questionnaire items. The extent to which perceptions translate to actual practice will vary between respondents, settings and countries. The survey drew from the ECDC definition of IDHC, which, while comprehensive, does not include a definitive list of diseases. Given that the target sample was health professionals, it was accepted that respondents would be able to interpret this within the context of their practice.

This report represents the perceptions of 1800 health professionals who responded to our call. Given that there are millions of health professionals employed in the EU, this report is not meant to be representative of everyone's views. However, it does give an indication of the current state of play from the views of the frontline workforce across countries and settings. Based on a potential population of 3 million nurses (represented via EFN) this survey acknowledges a 3% margin of error at the 95% confidence level.

[21] Brislin R (1970) Back translation for cross-cultural research. Journal of Cross-Cultural Psychology 1: 185-216

Ethical Considerations

The participants of the questionnaire were informed that their answers would provide the basis for getting a clearer view on the capacity building needed in their country and that the results would be available online. Completion of the questionnaire was taken as consent to participate. Their responses were anonymous and the information given treated confidentially.

Statistical Analysis

To ease presentation of findings the results of the analysis are summarised below while the tables are shown separately in the Appendix.

Profile of Respondents

The questionnaire reached health professionals from 23 countries in Europe and secured 1800 responses (see Appendix, Table 1). Most of the respondents (1246; 69%) worked in a hospital, with a further 133 working in an Ebola Reference Hospital. In addition, 421 (23.4%) of respondents worked in an elderly care home or in the community (see Table 2). Respondents who were hospital based, represented a mixture of settings, from intensive and emergency care, to internal medicine and specialist infection control units. This shows that the questionnaire did not just reach infection prevention and control professionals, but actually had a wider representation of frontline staff across settings (see Table 3). Most of respondents were nurses (96%), but there was also some representation from healthcare assistants, physicians and social workers. Most of the nurse respondents were general care nurses (931, 51%), which reflects the profile of the workforce in general (see Table 4).

Question by Question analysis

The responses to the questionnaire were all exported into the Statistical Package for the Social Sciences (SPSS) Version 21.0; the database was split to those responses from within the hospital sector (n=1379) and those from elderly homes and community care sector (n=421) because the two were likely to represent heterogeneous views and experiences about Ebola preparedness. Below, is a question-by-question analysis of responses from the hospital sector.

Q1 & 2: I took care of confirmed patients with Ebola virus/IDHC.

Out of the 1379 respondents, 3% (n=41) had participated in the care of a patient with Ebola. Moreover, 387 respondents (28%) indicated to have had previous care experiences in IDHC. In the sections to follow, where appropriate, we compare responses between these two subgroups (Ebola n=41; IDHC n=387) on the hypothesis that the perceived level of preparedness will differ accordingly.

The 41 respondents who had experience of caring for a patient with Ebola were from: Germany (32%), Belgium (12%), Hungary (10%), Spain (10%), Greece (2%) and the UK (7%) (see

Table 5). The data show that almost a third of the questioned healthcare professionals have had past experience caring for a patient with Ebola or IDHC. This shows the importance of adequate measures to ensure the workers' safety at work and the need for the identification of actions needed for capacity building. These numbers are especially significant, since 69% of the respondents indicated that they are working in a regular hospital and only 7.4% in an Ebola Reference Hospital (see Table 2). This means that there is the need to not only equip and prepare specialised hospitals but also 'regular' ones accordingly.

Q3. All necessary personal protective equipment is available in my unit

Question 3 relates to the availability of Personal Protective Equipment (PPE), including body, foot, hand, respiratory and eye protection in the unit, in line with the ECDC toolkit. The question is measured on a Likert scale, ranging from strongly disagree to strongly agree, with only 4 levels (Swanborn, 2003; Joreskog, 2003).

The median response showed that respondents agreed with the statement that all necessary PPE was available. In particular, 38.5% of respondents agreed with the statement and 279 respondents (20%) strongly agreed. However, almost half of the respondents (41%) were in disagreement with the statement (see Table 6). This question shows that there is still a lack of appropriate equipment for health professionals caring for (potential) patients with Ebola. Adequate equipment is key when caring for patients with Ebola or IDHC, since direct contact has to be avoided by all means, due to the high risk of infection of these diseases. Furthermore, this question is key for the ECDC, as it reveals the need to build capacity on the use of its toolkit. It shows that the establishment of the toolkit alone is not enough to ensure the availability of personal protective equipment in hospitals.

The need for further investments in PPE was also raised amongst those respondents who have cared for patients with Ebola (n=41). It is concerning that a third of professionals (32%) who have had contact with a patient with Ebola reported lack of all necessary PPE (see Table 7). Therefore, the EFN strongly encourages the ECDC and the European Commission to intensify efforts, for example through capacity building sessions.

Q4. I am consulted on the choice of equipment

Concerning Q4, being consulted on the choice of equipment that will be used in case of caring for patients with IDHC e.g. Ebola, views appear rather negative: 766 respondents disagreed

(55.5%) while 613 (44.5%) were in agreement (see Table 8). This implies that overall, engaging staff in decision-making processes needs improvement. It is within this context that European Public Procurements are crucial, as the departments purchasing material and equipment will need to recognise the voice of the users, mainly the nurses as they deploy these materials most in their daily practice. Furthermore, frontline workers know best which equipment work in reality and can give valuable advice regarding its selection.

When we analyse Q4 for the other two samples, past care experience in IDHC (387 respondents) and care for patients with Ebola (41 respondents) results show that 47% and 44% disagree, respectively, on being consulted on the choice of equipment (see Tables 9 and 10). Although these numbers are slightly lower, it remains concerning that professionals providing care for patients with Ebola or other IDHC are not consulted on the equipment they will use in the course of their employment. It is especially surprising because nurses who have already cared for patients with IDHC or Ebola have first-hand experience with the equipment and know what has proven to be practical in every day use; and which material have proven to be most secure.

Q5. Isolation rooms with negative pressure are available

Question 5, on the availability of isolation rooms with negative pressure (>12 air changes per hour) for patients with suspected or confirmed IDHC, e.g. Ebola, Tuberculosis, etc., 397 respondents confirmed the availability of these rooms in the units where they work (33%). However, 814 (67%) answered that these are not available (see Table 11). The results shown in Table 11 might seem reasonable considering that non-specialist hospitals are included in this analysis. Hospitals that are not specialised in dealing with patients with Ebola or IDHC might be unlikely to have an isolation room suitable for these needs.

When analysing in more detail the different subsets of respondents, those with experiences of caring for patients with IDHC or Ebola have a higher percentage of agreement with the statement (47% and 59% respectively) (see Tables 12 and 13). However, these numbers continue to remain low in these subsets; this means that 53% and 41% of people caring for patients with IDHC and Ebola, respectively, did not have an isolation room at their availability. Therefore, the coordinators of Ebola and IDHC need to reflect if these results support a need to invest more in isolation rooms with negative pressure.

The need to invest in such rooms is especially important in Ebola reference centres since professionals working in these also noted absence or lack of awareness of such rooms (27%) (see Table 14). It is of utmost importance that these specialised centres have an isolation room. Nevertheless, the results show that it is not only important for these centres to have these rooms but also to inform their personnel about their existence and use.

Q6. Availability of alternative protective equipment

On question 6, having alternative protective equipment available when protective goggles and masks do not fit appropriately, 534 respondents (39%) confirmed having an accessible alternative (see Table 15). When caring for patients with IDHC or Ebola, these percentages increase to 46% and 54% respectively (see Table 16 and 17). However, these percentages remain low overall and need to improve. This can be done by improving procurement processes and stimulating industry partners to produce 'fit for practice' equipment and consumables by engaging the end-users in its design. Furthermore, infection control nurses play a crucial role in securing the right equipment to frontline staff and should be involved in such decision-making process. Nevertheless, the importance of having one set of right equipment available needs to be stressed. When this is the case, units can concentrate on providing alternative solutions. As it can be seen from the analysis above, to have a set of protective equipment available is not always a reality.

Q7. Possibility of opt-out

Question 7 explores the availability of an "opt-out" possibility when required to care for patients with suspected or confirmed IDHC or Ebola; the healthcare professional can decline to take care of a patient with Ebola. Overall 436 respondents (34%) state the 'opt out' exists; these respondents were mainly professionals working in infection control units or in Ebola reference centres (see Tables 18 and 19). This is an interesting result that needs further exploring as it has implications for capacity in pandemic or outbreak situations.

These percentages increase slightly within the group of respondents who have had experience with IDHC (36%) (see Table 20) and who have taken care of patients with Ebola (59%) (see Table 21). Caring for patients with Ebola can be professionally more difficult. As such, nurses are given a choice whether to care for patients with Ebola (on a voluntary basis). It is not clear from the survey if compensation or incentives exist for such voluntary work.

Q8. Display of related posters or videos

On the use of posters/videos in the care setting about how to manage suspected or confirmed cases of Ebola, only 409 respondents (32%) answered positively. This shows that in 68% of the cases there does not appear to be a sufficient awareness campaign that includes use of such material (see Table 22). This finding should be further analysed by the ECDC as it is relevant when providing basic information about the healthcare sector. Videos and posters serve as useful visual communication methods. They are functional means in teaching personnel how to manage cases of Ebola or IDHC. By being on display constantly, they make information available to everyone at any one time.

Q9. Regular education on relevant protocols

Question 9 looks at having regular education on protocols when caring for patients with IDHC or Ebola. Of the 1290 respondents to this question, 57% reported no theoretical education on protocols (see Table 23). Not surprisingly these figures improve when we look at the responses of those in the sample with past experience of IDHC or Ebola where 55% and 69% of respondents respectively indicated to have received theoretical education (see Tables 24 and 25).

Although it was expected that the positive responses within the sample who had past experience of IDHC or Ebola would be higher, it is quite concerning that a large percentage of respondents received no theoretical education. As the data indicate, not only Ebola reference centres can have cases of Ebola. Therefore, important that health professionals receive adequate theoretical education on relevant protocols. It is not only crucial that these protocols are established, but also that the personnel is informed about them and can turn their theoretical knowledge into practice.

Q10. Regular drills on donning and doffing

On having regular drills on donning and doffing (i.e. putting on and removing personal protective equipment), numbers are less positive: 76% of respondents indicated no system for regular drills (see Table 26). This result may be because not all IDHCs require strict donning and doffing processes; for example, for tuberculosis (TB) professionals only need to use a standard N95 mask.

When examining the two subgroups of respondents with past experiences of IDHC or Ebola, a similar picture is seen, with 66% and 49% of respondents respectively indicating there are no regular drills (Tables 27 and 28). It is essential to increase the availability of regular drills for nurses, especially those caring for patients with Ebola. Since it is special protective equipment that has to be used in a case of IDHC or Ebola, the health professionals should have regular practice on how to use and put them on. Therefore, regular drills are essential to minimise the risk of infection.

Q11. Received education and training

Taking into account the above findings, it is important to assess the perceptions of healthcare professionals on the received education and training needed to sufficiently prepare them for a potential case of IDHC, e.g. Ebola. As can be seen from the tables, 67% of the overall respondents disagreed that the education and training they receive sufficiently prepares them for a potential case of IDHC (see Table 29). This negative score improves when looking at the two subgroups who have had prior experience with IDHC or Ebola; 55% and 33% respectively disagreed with the statement (see Tables 30 and 31).

These results show that there is still room for improvement in this area. It is important to identify the gaps in educational preparation, which can then be addressed accordingly, for example through Continuous Professional Development (CPD). Healthcare professionals taking care of patients with Ebola or other IDHC could also be assessed through competency training. For example, checklists and learning outcomes could be used to confirm that they are competent to take care of such patients and are furthermore, competent in donning and doffing of PPE. As it was stated above, it is not only important to have the necessary equipment available, but also equally crucial is that healthcare personnel is adequately educated and trained in making use of this equipment. The needed resources need to be allocated for CPD and for having appropriate replacement of staff in order to allow colleagues to follow CPD during work time.

Q12. Donning and doffing

Where donning and doffing takes place (Q12), there must be a nurse available who can assist the user in putting the PPE on and taking it off. According to the analysis, 54% of the respondents reported that this practice was not in place (see Table 32). These figures are

important in that they provide a view on the working conditions and practices of nurses caring for patients with Ebola.

When focussing on those participants who have had past experience with Ebola we can see that 21% of the respondents replied that they cared for a patient with Ebola without the necessary support in donning and doffing. Although this number is much smaller than the one above, it is still a potentially dangerous practice in terms of infection control (see Table 33).

It is not only important to have the adequate equipment available, but also to follow the correct procedure on how to put it on when dealing with a patient with Ebola (donning and doffing). If this procedure is not being followed adequately, the risk for infection is increased and the person caring for the patient is not protected sufficiently. Hence, the responsible persons planning the numbers of staff have to take this aspect into account to have, when appropriate, a nurse available to assist the user with the PPE.

Q13. Knowledge of protocols

Question 13 asked whether every member of staff knows the protocol for 1st contact that is to follow in cases where a patient is suspected to have an IDHC, e.g. Ebola. Results show that only 33% of the respondents believed everyone knew of the procedure when a patient with suspicion of IDHC was admitted. Two thirds of the respondents (67%) answered negatively to this question (see Table 34). This number is concerning and requires further attention to understand the factors behind it. It is crucial that every health professional knows how to react to a potential case of IDHC or Ebola and do not make any mistakes. In this moment, nurses are in danger of infecting themselves if they do not follow the correct procedure. These results also indicate that awareness among the workforce should be increased; this could be through professional campaigns, with clear messages and consistent standards throughout the EU. ECDC could lead on this through utilisation of available communication channels of all professional organisations involved in outbreak or pandemic management.

Q14. Professional opinion in the development of protocols

On whether professionals' opinion is taken into account in the development of protocols for caring for patients with IDHC, e.g. Ebola, 61% of the respondents disagreed (see Table 35). This means that their opinion and views are not taken on board. This suggests that most professionals still operate within a top-down healthcare system, which is a major overall

concern. When focussing on respondents with past experience of IDHC, 48% believe their opinion is taken on board, while this percentages increases to 59% for those with experience of working with confirmed cases of Ebola (see Table 36 and 37).

Healthcare professionals, especially those who have had past experience with IDHC or Ebola, can make a valuable contribution to developing protocols. They possess first-hand experience and can point out weaknesses in the process. The fact that health professionals feel that their opinion is not being considered as relevant is worrying. Only with a bottom-up approach, existing procedures can be improved and the engagement, commitment and safety of health professionals ensured.

Q15. Organisational risk assessments

Concerning Question 15, on the undertaking of regular risk assessments of possible incidents related to IDHC, e.g. Ebola by organisations, 51% of respondents replied that they disagreed, while there were 565 respondents (49%) who agreed with the statement (see Table 38). However, when more specialised care takes place, the results show that the opportunity to perform risks assessments increases by 10% for those respondents with past experience of IDHC (59%) (see Table 39); while the percentage increases by 15% for those with past experience of Ebola (64%) (see Table 40).

Regular risk assessments are of utmost importance to identify weaknesses in the procedures and the system. Only by performing these assessments hospitals and healthcare centres can ensure that they are adequately prepared for a possible case of IDHC or Ebola. The results of such risk assessment indicate if there is a need for more/ different equipment, the level of preparedness of staff and hence the need for education and training. By performing regular risk assessments, hospitals and healthcare centres can save themselves a lot of trouble in the future. However, not only are regular risk assessments crucial, they are also mandatory for EU Member States as the EU requires countries to perform this practice[22]. Hence it is significant that the results of this questionnaire show that in many places EU law is neither implemented nor followed correctly. The implementation of such important legislation needs to be followed-up more closely and consequences must be put in place in cases where a Member State is in breach of this legislation. IDHC and Ebola are real threats and only by following established

[22] Directive 2010/32/EC on implementing the Framework Agreement on prevention from sharp injuries in the hospital and healthcare sector concluded by HOSPEEM and EPSU.

legislation thoroughly can it be ensured that an outbreak in the EU and Europe can be kept under control. The European Commission and social partners need to make sure EU legislation gets implemented correctly.

Q16. Communication of risk assessment results

Furthermore, concerning the results of the risk assessments being communicated to staff, 66% of the respondents indicated that feedback is insufficient (see Table 41). With regard to those respondents with past experience of IDHC, results indicate that 61% find that risk assessment results are insufficiently reported back (see Table 42). Concerning those who have cared for a patient with Ebola, 50% of the respondents find the feedback insufficient (see Table 43). This percentage is unacceptably high within this subgroup and shows that the problem of insufficient feedback about risk assessment is widespread in the sector.

From a respondents' distribution perspective, we can see some improvement between the subgroups, but overall feedback on the results of risk assessments is inadequate. It is important to inform all staff about the results of the risk assessment. First, knowing the results can make them feel safer in their work. Second, as frontline workers, they are the ones that need to put the findings into practice and for this reason they need to know which procedures work and which ones do not.

Q17. Number of staff per shift in the unit

On Question 17, in the event of an Ebola case, the facility where I work takes actions to increase the number of staff per shift in the unit, 59% of the respondents disagreed and only 41% agreed (see Table 44). This suggests that most facilities are not aware what nursing of a single patient with Ebola means for staff allocation; anecdotal evidence from the experience of EFN members suggest that one patient with Ebola under intensive care nursing requires a minimum of 20 staff/24h.

These percentages improve slightly when analysing the subgroup of respondents with past experience of IDHC where 51% disagreed (see Table 45), and the subgroup with past experience of Ebola where 33% disagreed (see Table 46). The results are partly reassuring given that the workforce composition follows the principle that nurses can only care for patients with Ebola for a maximum of 2 hours. However, actual experiences, e.g. with the Tychem C suit and goggles, indicate that nurses cannot spend 2 hours because of the heat stress index,

even if the room is air-conditioned. In some areas, local protocols stress that health professionals should not exceed 45 minutes when caring for a patient with Ebola. Therefore, the team needs to be adjusted and the number of staff increased. Nevertheless, over a third of respondents reported inadequate staffing provision where they work and so we encourage those facilities to adjust their workforce composition to reach the best working conditions for nurses volunteering to take care of patients with Ebola. Taking these results into account and considering the above mentioned limitations, the EU and the Member States need to take adequate measures to ensure that a sufficient number of nurses are available in such facilities. Many facilities are struggling with their nursing workforce and the number of available qualified registered nurses. Often they would like to increase the staff per shift (open posts) but are not able to do so due to restrictions with financing (savings to be made). Hence, it is the responsibility of the Member State / EU Level to ensure financial support and to establish a realistic and deployable nursing workforce strategy which addresses these shortcomings.

Q18. Policy to prevent overtime

Concerning the working conditions on Question 18 – in the event of an Ebola case there is a policy to prevent staff from working overtime – 73% disagreed with only 218 (27%) respondents reporting an agreement with this statement (see Table 47). When analysing the subgroup of respondents who have actually cared for a patient with Ebola, we find that the results show that 69% of the respondents disagree that there is a policy to prevent overtime (see Table 48).

These results show that in the majority of the cases there is no policy in place that prevents working overtime. The existence of such a policy is important, since dealing with a patient with IDHC or Ebola is highly stressful for staff, especially nurses as they carry out the majority of the caring activities for these patients. This question also relates with Question 17, regarding the number of staff per unit; many facilities struggle with a lack of nurses and therefore the risk of overtime is very high. Professionals need to be able to adequately treat the patient and use the protective measures that require a lot of time and concentration.

Q19 & Q20. Stigma

Concerning stigma, there are two important questions. The first (Q19) relates to knowing of cases of stigmatisation of colleagues that have taken care of patients with Ebola. Results show that 61 respondents know of such a case (see Table 49). The second question (Q20) relates to

the respondents experiencing stigma themselves; when looking at the subgroup of respondents who have taken care of a patient with Ebola in the past, we see that 58% of those who respondent to this question report experiencing stigma (see Table 50). This is extremely high and a very worrying statistic.

Stigmatisation is a major challenge for nurses, their families and friends. People surrounding the nurse who has taken care of a patient with IDHC or Ebola tend to avoid contact. Hence, affected persons are subject to isolation and a diminished quality of life. The Ebola Summit in Spain included testimonies indicating that nurses caring for patient with Ebola are asked by their family and friends to quit their job, so as to eliminate the risk of becoming infected and 'bringing it home'. Education and prevention are crucial to combating stigmatisation. People need to be educated on the real risk of infection for a nurse dealing with a patient with IDHC or Ebola. Furthermore, it is crucial to provide psychological support to professionals caring for a patient with IDHC or Ebola. It is the role of the facilities, financially supported by their government to ensure that education and prevention is in place. The more is done to ensure the safety and health of the professionals, the less likely is that stigma will occur.

Cluster Analysis

In addition to the descriptive data analysis leading to the interpretation of frequencies for each variable, and even cross table comparisons, a hierarchical cluster analysis visualises the views and experiences from respondents in such a way that variables can be combined according to the response trends measured at a Likert scale.

The cluster analysis is based on the assignment of a set of observations into different subsets (clusters) aligning data based on similarities or differences. The basic criterion for clustering is distance in opinion, in views, in experience as expressed in the statements rated on a Likert scale from 'strongly disagree '(1) to 'strongly agree' (4). Nevertheless, nominal data (yes and no) can be used to cluster variables.

Hierarchical cluster analysis begins by separating each case into a cluster by itself. At each stage of the analysis the criterion by which cases are separated is relaxed in order to link the two most similar clusters until all of the objects are joined in a complete classification tree. The dendrogram is used to visualise the steps in a hierarchical clustering solution; this shows the

clusters being combined and the values of the distance coefficients as each step merges. Connected vertical lines designate joined cases (see Table 51).

Views from respondents that are near each other should belong to the same cluster, and views that are far from each other should belong to different clusters. Through cluster analysis patterns can be identified which can lead to a higher level of interpretation, compared to frequency tables and cross tables with a descriptive analysis. This is particular interesting as the Directive 2010/32/EU[23] composes of specific articles (clauses): Clause 5 on Risk Assessment, Clause 6 on Elimination, prevention and protection, Clause Art 7 on Information and awareness-raising, Clause Art 8 on Education and training, Clause Art 9 and 10 on Reporting, Response and follow up.

A first analysis deals with all items concerned and shows a clear structure. Q15 (risk assessment- RA) and Q16 (results RA) merge very quickly and as such it could be argued they measure both the same concept, and Q11 (education) joins the cluster followed by Q14 (opinion design protocol). As in the total database, the health system, the answers were quite negative. These domains are not well developed. Q17 (staff per shift) and Q18 (overtime) constitute one cluster from the start of the iterations, but do not merge together quickly. However, they merge with cluster 1, which shows that these domains, especially a protocol for overtime, needs further development. Instead, Q12 (nurse supporting donning & doffing) stays for a long time on its own, but after 18 iterations joins cluster one. In contrast, Q3 (PPE) and Q4 (selecting material) only merge after almost 20 iterations, and stay a separate cluster. The Cluster analysis show the areas where capacity building is needed at EU level.

[23] Directive 2010/32/EC on implementing the Framework Agreement on prevention from sharp injuries in the hospital and healthcare sector concluded by HOSPEEM and EPSU.

Inferential analysis

The questionnaire was developed primarily to assess the level of preparedness for Ebola as reported by health professionals in the European countries and in this sense, it did not set out to examine a specific hypothesis. However, exploratory analysis did indicate significant associations between particular statements and sample characteristics that warrant some attention.

In particular, three Ebola awareness interventions were found to significantly link with key preparedness elements at the 95% significance level (Chi-square, x^2). Firstly, respondents who indicated having regular opportunity for drills were more likely (OR 7.5, 95% CI 5.7-9.7) to report being sufficiently prepared for a potential case of IDHC, compared with those that did not have this opportunity. Secondly, perceptions around availability of all PPE was associated with whether respondents were consulted or not about the choice of such equipment; respondents who indicated being consulted were more likely to also indicate that all PPE were available in their areas of work (OR 8.1, 95% CI 6.4-10.1). Thirdly, the availability of posters/videos on how to manage cases of Ebola was related with whether staff had knowledge of the protocol to follow in case of a suspected case of Ebola (OR 6.5, 95% CI 51-8.3).

Therefore, it is sensible to promote the use of the above three interventions as effective options to improving individual staff knowledge and sense of preparedness about caring for patients with Ebola. Having opportunity for drills, consulting staff on the choice of PPE, and providing informational posters about Ebola are all relatively inexpensive interventions that could be easily implemented in all settings across European countries, with potentially significant positive effects on improving the safety of frontline staff.

Furthermore, cross tabulation revealed a trend among the responses of the sample relating to health professionals' areas of work. As the table shows (see Table 52), the elderly and community care sectors consistently fail to achieve key Ebola preparedness statements in comparison with other settings. With the experience in Europe this would be expected since the frontline for a repatriated small number of patients will most often be specialist units. It is only when there is a widespread outbreak situation that we would see community and care of the elderly involvement.

Country Profile

The questionnaire was designed to assess the perceived level of preparedness among the various countries by seeking responses to key questions, while taking into account available guidelines and advice on preparedness for Ebola. Exploratory factor analysis of the various statements revealed significant associations among certain statements that indicated these could be grouped to produce a measurement scale on the 'level of preparedness'. Following analysis of variance and reliability utilising Cronbach's Alpha, 10 items showed statistical potential and were therefore brought together in the analysis, using standardised and average values to account for missing items and give equal weight to the different questions[24]. This grouping achieved a satisfactory Cronbach's Alpha of 0.860. The individual items and their Alpha scores are shown in table 53. It is acknowledged that the development of this grouping is a by-product of the survey and although its development followed standard statistical procedures an element of caution in its interpretation should be exercised.

Responses were calculated per country, which gave a unique score applicable to each. The score is not meant to be representative of an international standard as such, but is used to help inform decisions about where action is more urgently needed. Grouped together, these items can achieve a minimum score of 10 and a maximum score of 28; the median score in the sample was 17. Graph 1 shows scores for each country's perceived level of preparedness within the sample, based on the responses to the questionnaire. While no country scores particularly low, it is clear that some countries could benefit from more targeted attention in order to raise their staff's perceived level of preparedness to an EU average, and ensure the safety of their workforce (see Graph 1).

It should be noted that the respondent profile was not the same for each country and therefore cross-country comparisons should be avoided; each country's score is unique to its context. Moreover, the results may portray a more accurate picture for some countries than others, because in some cases it is derived from a limited set of responses. For example, Austria, Hungary, Malta and Romania had 5 responses or less to the questionnaire; whereas Italy, Poland, Germany and Belgium had over 150 responses each. The analysis is not meant to demonstrate the *actual* level of preparedness in the various countries but rather the *perceived* level of preparedness of the respondents to this survey. The next section explores preparedness areas in need of attention in the various countries in greater depth.

[24] De Vaus D (2002) Analyzing Social Science Data. London: SAGE

Member States Compliance with EU Legislation

We could not disagree with the statement that 'Capacity building at EU level is essential in order to be better prepared'. This can only be achieved by mapping the gaps of compliance with existing EU legislation and reflecting in partnership about what needs to be done to address the identified challenges.

On 10 May 2010, an EU legislative framework (2010/32/EU)[25] was approved by the EU Institutions to prevent injuries and blood-borne infections to healthcare professionals and workers. This EU Directive establishes a framework that includes measures to address risk assessment, risk prevention, training and information, awareness raising, monitoring and response and follow-up procedures.

In its Strategic Framework on Health and Safety at Work 2014-2020, the Council confirms that there is a need to improve the implementation of occupational safety and health legislation to prevent risks to health and safety at work and to address the challenges posed by an ageing workforce and longer working careers[26]. It is therefore important that the existing EU legislation is being implemented correctly and that concrete action to support 'frontline staff' is taken.

The transposition of the Directive 2010/32/EU Clause 5 (Risk Assessment), Clause 6 (Elimination, Prevention and Protection), Clause 7 (Information and Awareness-raising), Clause 8 (Education & Training), Clause 9 (Reporting), Clause 10 (Response & Follow-up), Clause 11 (Implementation) into daily practice was already measured through a qualitative survey in 2013 (EFN Report[27]), with results presented on the 2nd December 2013 at the European Biosafety Summit, in the Polish Parliament in Warsaw. Results showed that the Directive 2010/32/EU had a positive impact in the daily practice and clinical environment of health professionals, with safe mechanisms at their disposal and available basic information at the workplace. However, respondents also identified areas that were less covered, in particular the ones concerning specific education and training, the performance of risk assessments at the workplace and surprisingly the lack of awareness campaigns. These findings do not differ from the current 2015 Ebola Preparedness Survey outcomes. Equally, findings show again that

[25] Directive 2010/32/EC on implementing the Framework Agreement on prevention from sharp injuries in the hospital and healthcare sector concluded by HOSPEEM and EPSU.
[26] Council of the European Union (2015) EU Strategic Framework on Health and Safety at Work 2014-2020: Adapting to new challenges. Retrieves from: http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%206535%202015%20INIT
[27] EFN (2013) EFN Report on the Implementation of Directive 2010/32/EU on the prevention of sharps injuries in the healthcare sector. Available online: http://www.efnweb.be/wp-content/uploads/EFN-Report-on-Sharps-Injuries-DIR32-Implementation-forwebsite1.pdf

guidelines need to be better rooted into daily practices. Therefore, it is very important that nurses are engaged in protocol development and risk assessment. The 2013 EFN report stressed the actions needed for training, emphasising that "Member States should strengthen Continuous Professional Education and make use of the available European Social Funds during the period 2014-2020 with the objective of strengthening knowledge transfer and implementation (Horizon 2020)".

With regard the current 2015 EFN Ebola Questionnaire, in which we measure indirectly compliance with the Directive, the different clauses can be evaluated individually as they are mapped to particular questions (see Table 54). We have the 2013 data, which now can be set against the 2015 data, not in a comparative way, but as indications for better preparedness.

In relation to Clause 4 of Dir2010/32/EU on Principles, 2 questions in the current survey are indicators of compliance: question 2 (In my facility, I am consulted on the choice of equipment that will be used in case of infectious diseases of high consequence (IDHC), e.g. Ebola); and question 12 (I believe that my opinion is taken into account when developing protocols for caring for patients with infectious diseases of high consequence (IDHC), e.g. Ebola). The Directive 2010/32/EU promotes that employers' and health professionals' representatives work together at the appropriate level to prevent risks, protect workers' health and safety, and create a safe working environment, including consultation on the choice and use of safe equipment, identifying how best to carry out training, information and awareness campaigns.

In relation to Clause 5 of Dir2010/32/EU on Risk Assessment, we have data from question 13 (My organisation undertakes regular risk assessments of the possible incidents related to infectious diseases of high consequence, e.g. Ebola) and question 14 (The results of the risk assessments are sufficiently communicated to staff) on compliance with EU legislation. As set out in the Directive, employers are required to undertake regular risk assessment of all situations and take into account technology, organisation of work, working conditions, level of qualifications, work related psycho-social factors and the influence of factors related to the working environment. This will identify how exposure could be eliminated and consider possible alternative systems. The results of the risk assessment should be shared with all those affected at the workplace. Risk assessment should be carried out by trained clinical staff with expertise in occupational health. The occupation of Reference Nurse or Link Nurse is of particular importance in certain areas of healthcare requiring additional knowledge, as is the case for example in infection control. The Link Nurse is a nurse working in the unit giving

special attention to a specific topic, which can be data collection and infection control. This role can be very successful and effective when engaging colleagues in a process of change. EU Social Funds can be used to build capacity around education and training in order to support the development of personnel specifically trained in risk assessments and information (awareness).

Clause 6 of Dir2010/32/EU on Elimination, prevention and protection, is evaluated through three questions: question 1 (All necessary PPE (Personal Protective Equipment- body, foot, hand, respiratory and eye protection) is available in my unit, according to the ECDC toolkit), question 3 (Isolation rooms with negative pressure (>12 air changes per hour) for patients with suspected or confirmed infectious diseases of high consequence (IDHC), e.g. Ebola, Tuberculosis, etc. are available in my facility), and question 4 (There is alternative protective equipment available, when the protective goggles and masks do not appropriately fit); these three questions measure compliance with the Directive which indicates that premises, furnishing and equipment shall be designed so as to avoid the risks associated with biological agents, to limit the spread of biological agents and to facilitate any decontamination required. The 2013 survey indicated that appropriate PPE, including gloves, masks and gowns, are available when needed. Still, although results are very positive, the availability of necessary PPE should reach 100%, as no health professionals should see her/his risk of exposure increased due to a lack of protection.

In relation to Clause 7 of Dir2010/32/EU on information and awareness-raising, question 6 (Posters/videos on how to manage suspected or confirmed cases of Ebola are sufficiently displayed in the facility where I work) is an indicator of compliance. The Directive outlines that employers shall take appropriate measures to raise awareness amongst workers and their managers related to giving guidance on existing legislation and local policies; promoting good practices and safe systems of work to prevent contamination; and raise awareness by developing activities and promotional materials in partnership with representative trade unions and/or workers' representatives; and provide information on available support programmes. Acknowledging the existence of agencies (EU-OSHA), which provide awareness around safety at work, more efforts are needed to ensure that all workplaces have information on Ebola Preparedness. Awareness campaigns are needed to inform professionals and patients, in order to ensure the dissemination of information on the importance of workers' health and safety for European social and economic stability and growth.

In relation to Clause 8 of Dir2010/32/EU on Education and training, three questions indicate compliance: question 7 (I have regular theoretical education on protocols when caring for patients with infectious diseases of high consequence (IDHC), e.g. Ebola), question 8 (I have regular drills on donning and doffing (i.e. putting on and removing personal protective equipment) and question 9 (I feel that the received education and training sufficiently prepare me for a potential case of infectious diseases of high consequence (IDHC), e.g. Ebola). According to Directive 2010/32/EU, appropriate training shall be made available on policies and procedures associated with sharps injuries. Healthcare professionals shall be trained about risk assessment and controls and the proper procedure for using medical devices and disposal of equipment. Health professionals shall receive training on policies and procedures associated with prevention and management. This training shall include the correct use of devices, the use of protection mechanisms, preventive measures including standard precautions and monitoring procedures and their importance.

Clause 9 relates to Reporting, which is not addressed in this survey as the Ebola cases are most of the time known by the coordinator. Directive Clause 10 Response and Follow-up, outlines that policies and procedures shall be in place and all workers must be made aware of these policies and procedures. Questions 15 (In the event of an Ebola case, the facility where I work takes actions to increase the number of staff per shift in the unit) and 16 (In the event of an Ebola case, there is a policy to prevent the staff to work overtime) provide evidence of compliance with this clause.

On the Directive Clause 11, Implementation, the survey suggests that positive actions are being taken in most Member States, but implementation from a nursing perspective, knowing nurses are the professional group most vulnerable when caring for patients with Ebola, needs the attention of all national coordinators. The role of national coordinators for Ebola will be critical in ensuring full compliance with EU legislation. Question 5 (There is an 'opt-out' possibility when taking care of suspected or confirmed infectious diseases of high consequence (IDHC), including Ebola patients (I can refuse to take care of Ebola patients), question 11 (Every member of staff knows the protocol for 1st contact that is to follow in case of a patient with suspicion of infectious diseases of high consequence (IDHC), e.g. Ebola) and question 12 (There is a nurse supporting me in donning and doffing) are seen here as indicators of compliance.

In order to analyse the data per country in more depth, and explore the areas of success as well as those that require more immediate attention and improvement, the questionnaire data were grouped, cross tabulated and colour coded (see Tables 55-56-57-58). Statements on preparedness with which respondents on average disagreed were coded in red and indicate an area that requires further attention. Statements with which respondents on average agreed were coded in green; within these, there would still be room for improvement, but the responses did not indicate these as a high risk for concern. In order to explore the representativeness of the responses within the sample, a subgroup analysis approach was followed with four tables developed to present the perceptions of: all respondents (Table 55), those with experience of IDHC (Table 56), those who cared for confirmed cases of Ebola (Table 57), and finally the perceptions of the infection control nurses (Table 58).

First, the table of all 1800 respondents (see Table 55) reveals that in general, the seven relevant clauses of the directive still require some attention in most countries. Moreover, the respondents to this survey reported varying levels of compliance with the recommendations of the ECDC specifically around: the availability of isolation rooms, alternative PPE, regular drills on donning and doffing, protection against overtime and knowledge of the protocol for first contact. There could be a reasoned argument made that not everyone would be aware of the availability of the above mentioned policies, although we would expect that those with actual experience of IDHC or Ebola would be; the next two tables explore this hypothesis in more depth.

The second table presents the views of the 469 respondents (see Table 56) who indicated having past experience of caring for patients with IDHC. The awareness of the various policies is shown to be higher among this group of respondents since on average they agreed with more of the statements. While this suggests greater overall compliance, clause 10 of the directive on ‘response’ and clause 5 on ‘risk assessment’ are still not fully implemented according to the respondents. Specifically, a policy on protecting staff from working overtime when caring for patients with IDHC is reported to be missing, which risks the wellbeing of professionals. Of greater concern is that this group of respondents overall did not agree that the results of risk assessments are sufficiently communicated to staff. Undertaking risk assessments only to later archive the results without communicating these to the professionals involved is not in line with the spirit of clause 5 of the directive. This hinders awareness among staff about the

organizational responses to the risk assessment and preparedness for IDHC; and does not demonstrate adequate involvement of frontline staff.

It was expected that respondents' awareness and perceptions with respect to compliance with the relevant clauses of the directive, and with the recommendations of the ECDC, would improve dramatically when focusing on those who actually had experience of caring for patients with confirmed cases of Ebola. The third table that presents the views of these 41 respondents (see Table 57), however, does not show the dramatic improvement expected. These respondents, who had actually cared for patients with Ebola, do not all feel adequately prepared especially with respect to clause 10 on response and specifically on being protected from overtime; clause 8 on education and training, specifically on having regular drills; and clause 6 on protection and specifically on the availability of alternative PPE.

Finally, the fourth table presents the responses of the 148 infection control nurses (see Table 58), whose views may carry more weight and reflect a more accurate picture around preparedness and compliance. The responses from these experts on the topic do not differ substantially from the other groups and the wider sample, revealing weaknesses in terms of preparedness and compliance. The same concerns continue to surface as expressed by the other groups around clause 5 on risk assessment, specifically on communicating the results to staff; clause 6 on protection, especially on the availability of isolation rooms; clause 8 on training, specifically having regular drills; clause 10 on response and the availability of a policy to protect staff from overtime; and clause 11 on implementation, specifically on the possibility for 'opt-out'.

The comparison of responses across the various subgroups within the overall sample shows alignment of views on key Ebola preparedness statements and relevant clauses. Therefore, we can confidently conclude that overall this survey does not show full Member State compliance with the Directive or the ECDC policy.

Each country can utilize this analysis to help them identify areas that would benefit from further focused attention and investment. In summary, based on the responses to this survey awareness about the relevant clauses of the Directive could be strengthened in the following countries:

- Clause 4: Austria, Belgium, Cyprus, Czech Republic, Germany Greece, Iceland, Poland, Portugal, Serbia, Slovak Republic, Spain;
- Clause 5: Bulgaria, Czech Republic, Germany, Greece, Iceland, Italy, Poland, Portugal, Serbia, Slovak Republic, Spain;
- Clause 6: Austria, Belgium, Cyprus, Czech Republic, Greece, Hungary, Lithuania, Portugal, Serbia, Slovak Republic, Spain;
- Clause 7: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Finland Germany, Greece, Poland, Portugal, Romania, Serbia, Slovak Republic, Spain;
- Clause 8: Belgium, Bulgaria, Czech Republic, Germany, Greece, Iceland, Lithuania, Poland, Portugal, Romania, Slovak Republic, Serbia, Spain;
- Clause 10: Austria, Belgium, Cyprus, Czech Republic, Germany, Greece, Italy, Lithuania, Poland, Portugal, Slovak Republic, Spain;
- Clause 11: Belgium, Cyprus, Czech Republic, Germany, Greece, Italy, Poland, Slovak Republic, Spain.

While it is acknowledged, and reminded, that the above may not portray an accurate picture of the current state of play in all countries, the concerned voices of the 1800 professionals who responded to the survey cannot be ignored. Adequate preparation is essential to prevent future outbreaks, protect the frontline workforce and safeguard EU healthcare services.

Conclusions

There are 21 million workers active in the hospital and healthcare sector in Europe, all of whom are potentially at risk and in need of adequate preparation and protection. In this survey, 1800 health professionals from across 23 countries shared their insight about the current level of preparedness for Ebola in Europe from the perspective of frontline staff. This report provided an analysis of this rich and unique dataset, which has led to important lessons for policy makers and health professionals.

The level of preparedness for IDHC and Ebola varies across countries in Europe, with some countries appearing to be ahead of others. It is important that EU citizens, including patients and health professionals, have equitable access to safe and quality healthcare regardless of the country in which they may find themselves. The ECDC and the EU institutions can support those countries that find certain areas of preparedness challenging in order for the EU to reach a common and safe level of preparedness. It is important to note that adequate EU legislation is in place, however, it needs to be correctly transposed by the Member States and implemented in daily practice.

While further resources would likely be welcomed by many, it is capacity building that appears to be lacking and that health professionals require. Education and training on how to manage cases of IDHC and Ebola needs further support through continued professional development for all staff. Involvement of staff in decision-making also needs to improve, in terms of the necessary PPE, development of protocols and sharing of risk assessment outcomes; implementation of all three of these is currently lacking.

The EU Social Funds are available to address the challenges of the economic crisis and the development of an EU workforce for health and skill development, employment and growth. The proposals to be submitted can develop separate work packages using the key articles of the EU Directive 2010/32/EU on prevention in the hospital and healthcare sector. A good example is the urgent need for a wider availability of safety equipment so that this reaches 100% coverage, since no health professional should see her/his risk of exposure increase due to lack of protective material. Investments in times of austerity are always politically difficult but this cannot be an excuse. In order to reverse this lack of specific training, Member States should make more use of the approved European Social Funds for the period 2014-2020, with the objective of strengthening the capacity of the health workforce. Areas for this specific training must cover: a) use and disposal of PPE; b) risk assessment; c) infection prevention and

control procedures; d) protocols for managing patients with Ebola; e) drills on donning and doffing; f) staffing level and skill-mix policies. Being a compulsory requirement of Directive 2010/32/EU, more actions are needed to engage nurses, the health workforce, to appropriately manage IDHC. Engagement goes way beyond employers and managers consulting workers' representatives on the choice and use of safety devices; it must extent to identifying 'fit for practice' training, next to what information is needed to create safe working environments and using awareness-raising campaigns to make change possible.

Professionals working in the field, at the bedside, must be involved in better preparedness for IDHC. A first step to improve the situation could be the development of a reference colleague, a link nurse, being located within the team of nurses, health professionals and other workers, who can be consulted flexibly and take up a more prominent role in policy design and implementation. Nurses need to have a say on the equipment and technologies deployed, the organisation of their work, their working conditions, the composition of the levels of qualifications, the importance of work related psycho-social factors (stigma) and the influence of factors related to the difficult working environment in which 'opt out' must be an option.

The EU institutions should encourage transparency of learning following incidents leading to health professionals' exposure to Ebola both in European and Ebola care settings (e.g. affected countries). The need for timely and transparent information following analysis of incidents is crucial (e.g. breach of PPE and/or needle-stick injuries) in allowing any learning to be identified and transferred to nurses working clinically within Member States in order to help reduce risks of transmission in these settings whether hospital or community based.

Moreover, nursing representation at strategic, national and local level decision making/advisory forums is essential to ensure that decisions made can be implemented safely and effectively, and avoiding potential risks to health professionals as well as to the delivery of health services and patient safety. It is also important to encourage consistency of advice on selection and use of PPE. Several different organisations have issued guidance on the use of PPE and language terminology can vary between different guidance. There is currently guidance from WHO, ECDC, various NGO's and individual Member States. Manufacturers have also provided guidance and have been reported as using this opportunity to sell products that may vary in standards and fall between the guidance requirements, thus placing staff potentially at risk. The issuing of multiple guidance risks leading to inconsistency, confusion and potentially increased risks if staff transfer between different countries/organisations within and outside Europe.

In addition, timely planning of reactive strategies to recognise and manage potential cases of Ebola is crucial. Reactive practices, for example screening at entry ports, requires considerable planning and thought to implement in a safe and effective manner. Whilst individual Member States will make individual decisions on what reactive needs are, the Commission should provide advice on the impact on capacity of areas where staff are drawn from, payment and hours worked in excess of contracts, as well as training and selection of staff to ensure suitability for the task required.

Finally, it is important to acknowledge that IDHC and Ebola know of no borders, boundaries or healthcare settings. It is therefore important to provide support to health professionals working across settings, not just in Ebola reference hospitals. While different healthcare settings appear to face similar challenges, the elderly and community care sectors seem particularly overlooked and suffer from substantial disinvestment.

If we are to be adequately prepared for Ebola, then we must all be prepared - across sectors, professions and countries. Our understanding and response to Ebola has so far been hindered by lack of first-hand data, from the workforce, at the level of daily practice. This report contributes to international efforts to build up an evidence base that can inform policy making in order to ensure concrete actions on preparedness for Ebola and other future IDHCs; and secure the safety and quality of healthcare provision in Europe.

Recommendations

Based on the analyses of the 1800 responses of the professionals who took part in this survey, the EFN recommends to the EU Institutions and Health Stakeholders to:

- Support the EU health workforce to respond to the challenges of IDHC without compromising its safety and wellbeing, through coordinating the release of EU funds towards building capacity in the health workforce, providing further access to vital education and training that includes opportunities for regular drills on donning and doffing, and assuring the provision of adequate resources and support for a safe working environment.

- Explore the causes, mechanisms and consequences of stigmatisation related to the care and treatment of IDHC within Horizon 2020 and based on outcomes, take appropriate actions to tackle it.

- Continue to encourage investment in Ebola preparedness, learning from the lessons and knowledge gained so far, and enhancing monitoring and follow up initiatives. Protecting the health workforce, as well as the public, from future health threats should continue to remain a priority for all Member States individually and the European Commission collectively, ensuring that relevant protective equipment, appropriate education and training, and protocols are made available to frontline staff.

- Identify reference centres and make sure the public and health professionals are well aware about an existing network of Ebola centres, but ensure that information and support is provided across all healthcare settings, including centres not specialised in IDHC, community care and elderly care homes.

- Consult and engage with the frontline health workforce and involve them in the political decision-making processes concerning Ebola and IDHC preparedness, protocols and training, and selection of appropriate material, as it is their daily lives that are directly influenced; and it is their and their families' safety that is put at risk.

- Encourage and support the health workforce with relevant surveillance and awareness raising initiatives; and incorporate the views of frontline staff in future refinement of relevant recommendations, toolkits and guidance.

- Coordinate responses as regard Ebola preparedness, giving attention to the concerns of all relevant parties; and communicate and share information on areas of progress as well as of future developments to ensure awareness at all levels.

- Work closely with local organisations and relevant parties in the development of policies that protect staff from overtime or being continuously understaffed when caring for patients with Ebola.

- Commit to preventing future outbreaks from becoming epidemics by engaging the frontline health workforce in the design of policies and procedures. The Ebola crisis has shown that the EU needs to improve its capacity to prevent, protect against, detect, report and respond to public health emergencies.

- Draw lessons from this crisis and draw up a comprehensive proposal for effective crisis management in the area of health, taking up frontline needs and views.

- Analyse the impact that the economic crisis and the cuts in healthcare (decreased resources, decreased staff, overtime, etc.) have in influencing the capacity of health systems and health professionals in responding to Ebola and other IDHC outbreaks.

The Ebola outbreak has shown that the timely mobilization and disbursement of appropriate response capacities, both funding and human resources, is crucial.

Appendix

Questionnaire:

Q1. I took care of confirmed patients with Ebola Virus Diseases.

Q2. I have past care experiences in IDHC (infectious diseases of high consequence).

Q3. All necessary PPE (Personal Protective Equipment- body, foot, hand, respiratory and eye protection) is available in my unit, according to the ECDC toolkit.

Q4. In my facility, I am consulted on the choice of equipment that will be used in case of infectious diseases of high consequence (IDHC), e.g. Ebola.

Q5. Isolation rooms with negative pressure (>12 air changes per hour) for patients with suspected or confirmed infectious diseases of high consequence (IDHC), e.g. Ebola, Tuberculosis, etc. are available in my facility.

Q6. There is alternative protective equipment available, when the protective goggles and masks do not appropriately fit.

Q7. There is an “opt-out” possibility when taking care of suspected or confirmed infectious diseases of high consequence (IDHC), including Ebola patients (I can refuse to take care of Ebola patients).

Q8. Posters/videos on how to manage suspected or confirmed cases of Ebola are sufficiently displayed in the facility where I work.

Q9. I have regular theoretical education on protocols when caring for patients with infectious diseases of high consequence (IDHC), e.g. Ebola

Q10. I have regular drills on donning and doffing (i.e. putting on and removing personal protective equipment).

Q11. I feel that the received education and training sufficiently prepare me for a potential case of infectious diseases of high consequence (IDHC), e.g. Ebola.

Q12. There is a nurse supporting me in donning and doffing.

Q13. Every member of staff knows the protocol for 1st contact that is to follow in case of a patient with suspicion of infectious diseases of high consequence (IDHC), e.g. Ebola.

Q14. I believe that my opinion is taken into account when developing protocols for caring for patients with infectious diseases of high consequence (IDHC), e.g. Ebola.

Q15. My organisation undertakes regular risk assessments of the possible incidents related to infectious diseases of high consequence (e.g. Ebola).

Q16. The results of the risk assessments are sufficiently communicated to the staff.

Q17. In the event of an Ebola case, the facility where I work takes actions to increase the number of staff per shift in the unit.

Q18. In the event of an Ebola case, there is a policy to prevent the staff to work overtime.

Q19. I know of cases of stigmatisation of colleagues that have taken care of Ebola patients.

Q20. I have experienced stigmatisation when I have worked with Ebola patients.

Tables:

Table 1 - Respondents by Member State (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Austria**	5	,3	,3	,3
	Belgium	170	9,4	9,4	9,7
	Bulgaria	77	4,3	4,3	14,0
	Croatia	4	,2	,2	14,2
	Cyprus	35	1,9	1,9	16,2
	Czech Republic	79	4,4	4,4	20,6
	Denmark	13	,7	,7	21,3
	Finland	26	1,4	1,4	22,7
	Germany	175	9,7	9,7	32,4
	Greece	56	3,1	3,1	35,6
	Hungary	4	,2	,2	35,8
	Iceland	39	2,2	2,2	37,9
	Italy	548	30,4	30,4	68,4
	Lithuania	36	2,0	2,0	70,4
	Malta	5	,3	,3	70,7
	Poland	160	8,9	8,9	79,6
	Portugal	61	3,4	3,4	82,9
	Romania	4	,2	,2	83,2
	Serbia	15	,8	,8	84,0
	Slovak Republic	138	7,7	7,7	91,7
	Spain	23	1,3	1,3	92,9
	Sweden	25	1,4	1,4	94,3
	UK	102	5,7	5,7	100,0
	Total	**1800**	**100,0**	**100,0**	

Table 2 - Working in: (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Ebola Reference Hospital**	133	7.4	7.4	7.4
	Hospital	1246	69.2	69.2	76.6
	Elderly Care Home	163	9.1	9.1	85.7
	Community Care	258	14.3	14.3	100.0
	Total	**1800**	**100.0**	**100.0**	

Table 3 - If Hospital, please select the unit where you work: (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Other (please specify)	732[a]	40.7	50.6	50.6
	Intensive care unit	218	12.1	15.1	65.6
	Emergency unit	171	9.5	11.8	77.4
	Internal medicine	174	9.7	12.0	89.4
	Infection control unit	153	8.5	10.6	100.0
	Total	1448	80.4	100.0	
Missing	System	352	19.6		
Total		**1800**	**100.0**		

[a]69 of the responses to the 'other' category did not indicate a hospital setting

Table 4 - I am a(n): (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Other (please specify)	303	16.8	16.8	16.8
	General Care Nurse	931	51.7	51.7	68.6
	Intensive Care Nurse	212	11.8	11.8	80.3
	Emergency Nurse	144	8.0	8.0	88.3
	Infection Control Nurse	148	8.2	8.2	96.6
	Healthcare Assistant	51	2.8	2.8	99.4
	Social Worker	3	.2	.2	99.6
	Physician	8	.4	.4	100.0
	Total	**1800**	**100.0**	**100.0**	

Table 5 - Respondents who had experience of caring for a patient with Ebola were from:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Austria**	2	4.9	4.9	4.9
	Belgium	5	12.2	12.2	17.1
	Bulgaria	1	2.4	2.4	19.5
	Croatia	1	2.4	2.4	22.0
	Germany	13	31.7	31.7	53.7
	Greece	1	2.4	2.4	56.1
	Hungary	4	9.8	9.8	65.9
	Iceland	1	2.4	2.4	68.3
	Italy	2	4.9	4.9	73.2

	Poland	2	4.9	4.9	78.0
	Portugal	1	2.4	2.4	80.5
	Serbia	1	2.4	2.4	82.9
	Spain	4	9.8	9.8	92.7
	UK	3	7.3	7.3	100.0
	Total	**41**	**100.0**	**100.0**	

Table 6 - Q3 - All necessary PPE (Personal Protective Equipment- body, foot, hand, respiratory and eye protection) is available in my unit, according to the ECDC toolkit (all hospital sector respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	214	15.5	15.5	15.5
	Disagree	355	25.7	25.7	41.3
	Agree	531	38.5	38.5	79.8
	Strongly agree	279	20.2	20.2	100.0
	Total	**1379**	**100.0**	**100.0**	

Table 7 - Q3 - All necessary PPE (Personal Protective Equipment- body, foot, hand, respiratory and eye protection) is available in my unit, according to the ECDC toolkit (subset of respondents who have cared for patients with Ebola)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	8	19.5	19.5	19.5
	Disagree	5	12.2	12.2	31.7
	Agree	7	17.1	17.1	48.8
	Strongly agree	21	51.2	51.2	100.0
	Total	**41**	**100.0**	**100.0**	

Table 8 - Q4 - In my facility, I am consulted on the choice of equipment that will be used in case of infectious diseases of high consequence (IDHC), e.g. Ebola (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	378	27.4	27.4	27.4
	Disagree	388	28.1	28.1	55.5
	Agree	414	30.0	30.0	85.6
	Strongly agree	199	14.4	14.4	100.0
	Total	**1379**	**100.0**	**100.0**	

Table 9 - In my facility, I am consulted on the choice of equipment that will be used in case of infectious diseases of high consequence (IDHC), e.g. Ebola (subset past care experience with IDHC)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	87	22.5	22.5	22.5
	Disagree	96	24.8	24.8	47.3
	Agree	132	34.1	34.1	81.4
	Strongly agree	72	18.6	18.6	100.0
	Total	**387**	**100.0**	**100.0**	

Table 10 - In my facility, I am consulted on the choice of equipment that will be used in case of infectious diseases of high consequence (IDHC), e.g. Ebola (subset past care for patients with Ebola)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	8	19.5	19.5	19.5
	Disagree	10	24.4	24.4	43.9
	Agree	11	26.8	26.8	70.7
	Strongly agree	12	29.3	29.3	100.0
	Total	**41**	**100.0**	**100.0**	

Table 11 - Q5 - Isolation rooms with negative pressure (>12 air changes per hour) for patients with suspected or confirmed infectious diseases of high consequence (IDHC), e.g. Ebola, Tuberculosis, etc. are available in my facility (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	814	59.0	67.2	67.2
	Yes	397	28.8	32.8	100.0
	Total	1211	87.8	100.0	
Missing	**System**	168	12.2		
Total		1379	100.0		

Table 12 - Isolation rooms with negative pressure (>12 air changes per hour) for patients with suspected or confirmed infectious diseases of high consequence (IDHC), e.g. Ebola, Tuberculosis, etc. are available in my facility (subset past care experience with IDHC)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	185	47.8	52.6	52.6
	Yes	167	43.2	47.4	100.0
	Total	352	91.0	100.0	
Missing	System	35	9.0		
Total		387	100.0		

Table 13 - Isolation rooms with negative pressure (>12 air changes per hour) for patients with suspected or confirmed infectious diseases of high consequence (IDHC), e.g. Ebola, Tuberculosis, etc. are available in my facility (subset past care for patients with Ebola)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	16	39.0	41.0	41.0
	Yes	23	56.1	59.0	100.0
	Total	39	95.1	100.0	
Missing	System	2	4.9		
Total		41	100.0		

Table 14 - Isolation rooms with negative pressure (>12 air changes per hour) for patients with suspected or confirmed infectious diseases of high consequence (IDHC), e.g. Ebola, Tuberculosis, etc. are available in my facility * Working in: Cross tabulation (all respondents)

		Working in:		
		Ebola Reference Hospital	**Hospital**	Total
No	Count	33	781	814
	% within Working in:	27.3%	71.7%	67.2%
Yes	Count	88	309	397
	% within Working in:	72.7%	28.3%	32.8%
Total	Count	121	1090	1211
	% within Working in:	100.0%	100.0%	100.0%

Table 15 - There is alternative protective equipment available, when the protective goggles and masks do not appropriately fit (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	844	61.2	61.2	61.2
	Yes	534	38.7	38.8	100.0
	Total	1378	99.9	100.0	
Missing	System	1	.1		
Total		1379	100.0		

Table 16 - There is alternative protective equipment available, when the protective goggles and masks do not appropriately fit (subset past care experience with IDHC)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	209	54.0	54.1	54.1
	Yes	177	45.7	45.9	100.0
	Total	386	99.7	100.0	
Missing	System	1	.3		
Total		387	100.0		

Table 17- There is alternative protective equipment available, when the protective goggles and masks do not appropriately fit (subset past care experience with Ebola)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	19	46.3	46.3	46.3
	Yes	22	53.7	53.7	100.0
	Total	41	100.0	100.0	

Table 18 - There is an "opt-out" possibility when taking care of suspected or confirmed infectious diseases of high consequence (IDHC), including Ebola patients (I can refuse to take care of Ebola patients) (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	854	61.9	66.2	66.2
	Yes	436	31.6	33.8	100.0
	Total	1290	93.5	100.0	
Missing	System	89	6.5		
Total		1379	100.0		

Table 19 - There is an "opt-out" possibility when taking care of suspected or confirmed infectious diseases of high consequence (IDHC), including Ebola patients (I can refuse to take care of Ebola patients) * Working in: Crosstabulation (all respondents)

		Working in:		Total	If Hospital, please select the unit where you work:					Total
		Ebola Hospital	Hospital		Intensive Care Unit	Emergen-cy Unit	Internal Medicine	Infection Control Unit	Other	
No	Count	63	791	854	138	121	104	77	408	848
	% :	49.6%	68.0%	66.2%	66.3%	74.2%	64.6%	59.2%	66.2%	66.4%
Yes	Count	64	372	436	70	42	57	53	208	430
	%	50.4%	32.0%	33.8%	33.7	25.8%	35.4%	40.8%	33.8%	33.6%
Total	Count	127	1163	1290	208	163	161	130	616	1278
	%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 20 - There is an "opt-out" possibility when taking care of suspected or confirmed infectious diseases of high consequence (IDHC), including Ebola patients (I can refuse to take care of Ebola patients) (subset IDHC)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	238	61.5	63.8	63.8
	Yes	135	34.9	36.2	100.0
	Total	373	96.4	100.0	
Missing	System	14	3.6		
Total		387	100.0		

Table 21 - There is an "opt-out" possibility when taking care of suspected or confirmed infectious diseases of high consequence (IDHC), including Ebola patients (I can refuse to take care of Ebola patients) (subset Ebola)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	16	39.0	41.0	41.0
	Yes	23	56.1	59.0	100.0
	Total	39	95.1	100.0	
Missing	System	2	4.9		
Total		41	100.0		

Table 22 - Posters/videos on how to manage suspected or confirmed cases of Ebola are sufficiently displayed in the facility where I work (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	881	63.9	68.3	68.3
	Yes	409	29.7	31.7	100.0
	Total	1290	93.5	100.0	
Missing	System	89	6.5		
Total		1379	100.0		

Table 23 - I have regular theoretical education on protocols when caring for patients with infectious diseases of high consequence (IDHC), e.g. Ebola (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	736	53.4	57.1	57.1
	Yes	554	40.2	42.9	100.0
	Total	1290	93.5	100.0	
Missing	System	89	6.5		
Total		1379	100.0		

Table 24 - I have regular theoretical education on protocols when caring for patients with infectious diseases of high consequence (IDHC), e.g. Ebola (subset IDHC)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	169	43.7	45.3	45.3
	Yes	204	52.7	54.7	100.0
	Total	373	96.4	100.0	
Missing	System	14	3.6		
Total		387	100.0		

Table 25 - I have regular theoretical education on protocols when caring for patients with infectious diseases of high consequence (IDHC), e.g. Ebola (subset Ebola)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	12	29.3	30.8	30.8
	Yes	27	65.9	69.2	100.0
	Total	39	95.1	100.0	
Missing	System	2	4.9		
Total		41	100.0		

Table 26 - I have regular drills on donning and doffing (i.e. putting on and removing personal protective equipment) (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	975	70.7	75.6	75.6
	Yes	315	22.8	24.4	100.0
	Total	1290	93.5	100.0	
Missing	System	89	6.5		
Total		1379	100.0		

Table 27 - I have regular drills on donning and doffing (i.e. putting on and removing personal protective equipment) (subset IDHC)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	246	63.6	66.0	66.0
	Yes	127	32.8	34.0	100.0
	Total	373	96.4	100.0	
Missing	System	14	3.6		
Total		387	100.0		

Table 28 - I have regular drills on donning and doffing (i.e. putting on and removing personal protective equipment) (subset Ebola)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	19	46.3	48.7	48.7
	Yes	20	48.8	51.3	100.0
	Total	39	95.1	100.0	
Missing	System	2	4.9		
Total		41	100.0		

Table 29 - I feel that the received education and training sufficiently prepare me for a potential case of infectious diseases of high consequence (IDHC), e.g. Ebola (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	367	26.6	30.0	30.0
	Disagree	449	32.6	36.7	66.8
	Agree	313	22.7	25.6	92.4
	Strongly agree	93	6.7	7.6	100.0
	Total	1222	88.6	100.0	
Missing	System	157	11.4		
Total		1379	100.0		

Table 30 - I feel that the received education and training sufficiently prepare me for a potential case of infectious diseases of high consequence (IDHC), e.g. Ebola (subset IDHC)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	71	18.3	19.6	19.6
	Disagree	130	33.6	35.9	55.5
	Agree	116	30.0	32.0	87.6
	Strongly agree	45	11.6	12.4	100.0
	Total	362	93.5	100.0	
Missing	System	25	6.5		
Total		387	100.0		

Table 31 - I feel that the received education and training sufficiently prepare me for a potential case of infectious diseases of high consequence (IDHC), e.g. Ebola (subset Ebola)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	8	19.5	22.2	22.2
	Disagree	4	9.8	11.1	33.3
	Agree	14	34.1	38.9	72.2
	Strongly agree	10	24.4	27.8	100.0
	Total	36	87.8	100.0	
Missing	System	5	12.2		
Total		41	100.0		

Table 32 - There is a nurse supporting me in donning and doffing (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	288	20.9	28.1	28.1
	Disagree	266	19.3	25.9	54.0
	Agree	299	21.7	29.1	83.1
	Strongly agree	173	12.5	16.9	100.0
	Total	1026	74.4	100.0	
Missing	System	353	25.6		
Total		1379	100.0		

Table 33 - There is a nurse supporting me in donning and doffing (subset Ebola)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	4	9.8	11.8	11.8
	Disagree	3	7.3	8.8	20.6
	Agree	10	24.4	29.4	50.0
	Strongly agree	17	41.5	50.0	100.0
	Total	34	82.9	100.0	
Missing	System	7	17.1		
Total		41	100.0		

Table 34 - Every member of staff knows the protocol for 1st contact that is to follow in case of a patient with suspicion of infectious diseases of high consequence (IDHC), e.g. Ebola (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	821	59.5	67.2	67.2
	Yes	401	29.1	32.8	100.0
	Total	1222	88.6	100.0	
Missing	System	157	11.4		
Total		1379	100.0		

Table 35 - I believe that my opinion is taken into account when developing protocols for caring for patients with infectious diseases of high consequence (IDHC), e.g. Ebola (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	334	24.2	27.3	27.3
	Disagree	417	30.2	34.1	61.5
	Agree	357	25.9	29.2	90.7
	Strongly agree	114	8.3	9.3	100.0
	Total	1222	88.6	100.0	
Missing	System	157	11.4		
Total		1379	100.0		

Table 36 - I believe that my opinion is taken into account when developing protocols for caring for patients with infectious diseases of high consequence (IDHC), e.g. Ebola (subset IDHC)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	85	22.0	23.5	23.5
	Disagree	105	27.1	29.0	52.5
	Agree	135	34.9	37.3	89.8
	Strongly agree	37	9.6	10.2	100.0
	Total	362	93.5	100.0	
Missing	System	25	6.5		
Total		387	100.0		

Table 37 - I believe that my opinion is taken into account when developing protocols for caring for patients with infectious diseases of high consequence (IDHC), e.g. Ebola (subset Ebola)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	7	17.1	19.4	19.4
	Disagree	5	12.2	13.9	33.3
	Agree	15	36.6	41.7	75.0
	Strongly agree	9	22.0	25.0	100.0
	Total	36	87.8	100.0	
Missing	System	5	12.2		
Total		41	100.0		

Table 38 - My organisation undertakes regular risk assessments of the possible incidents related to infectious diseases of high consequence (e.g. Ebola) (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	192	13.9	16.7	16.7
	Disagree	396	28.7	34.3	51.0
	Agree	460	33.4	39.9	90.9
	Strongly agree	105	7.6	9.1	100.0
	Total	1153	83.6	100.0	
Missing	System	226	16.4		
Total		1379	100.0		

Table 39 - My organisation undertakes regular risk assessments of the possible incidents related to infectious diseases of high consequence (e.g. Ebola) (subset IDHC)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	41	10.6	11.7	11.7
	Disagree	104	26.9	29.7	41.4
	Agree	159	41.1	45.4	86.9
	Strongly agree	46	11.9	13.1	100.0
	Total	350	90.4	100.0	
Missing	System	37	9.6		
Total		387	100.0		

Table 40 - My organisation undertakes regular risk assessments of the possible incidents related to infectious diseases of high consequence (e.g. Ebola) (subset Ebola)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	5	12.2	13.9	13.9
	Disagree	8	19.5	22.2	36.1
	Agree	16	39.0	44.4	80.6
	Strongly agree	7	17.1	19.4	100.0
	Total	36	87.8	100.0	
Missing	System	5	12.2		
Total		41	100.0		

Table 41 - The results of the risk assessments are sufficiently communicated to the staff (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	268	19.4	23.4	23.4
	Disagree	485	35.2	42.3	65.7
	Agree	328	23.8	28.6	94.3
	Strongly agree	65	4.7	5.7	100.0
	Total	1146	83.1	100.0	
Missing	System	233	16.9		
Total		1379	100.0		

Table 42 - The results of the risk assessments are sufficiently communicated to staff (subset IDHC)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	64	16.5	18.4	18.4
	Disagree	150	38.8	43.1	61.5
	Agree	106	27.4	30.5	92.0
	Strongly agree	28	7.2	8.0	100.0
	Total	348	89.9	100.0	
Missing	System	39	10.1		
Total		387	100.0		

Table 43 - The results of the risk assessments are sufficiently communicated to the staff (subset Ebola)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	6	14.6	16.7	16.7
	Disagree	12	29.3	33.3	50.0
	Agree	13	31.7	36.1	86.1
	Strongly agree	5	12.2	13.9	100.0
	Total	36	87.8	100.0	
Missing	System	5	12.2		
Total		41	100.0		

Table 44 - In the event of an Ebola case, the facility where I work takes actions to increase the number of staff per shift in the unit (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	283	20.5	32.0	32.0
	Disagree	242	17.5	27.4	59.4
	Agree	241	17.5	27.3	86.7
	Strongly agree	118	8.6	13.3	100.0
	Total	884	64.1	100.0	
Missing	System	495	35.9		
Total		1379	100.0		

Table 45 - In the event of an Ebola case, the facility where I work takes actions to increase the number of staff per shift in the unit (subset IDHC)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	74	19.1	25.9	25.9
	Disagree	73	18.9	25.5	51.4
	Agree	91	23.5	31.8	83.2
	Strongly agree	48	12.4	16.8	100.0
	Total	286	73.9	100.0	
Missing	System	101	26.1		
Total		387	100.0		

Table 46 - In the event of an Ebola case, the facility where I work takes actions to increase the number of staff per shift in the unit (subset Ebola)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	3	7.3	10.0	10.0
	Disagree	7	17.1	23.3	33.3
	Agree	9	22.0	30.0	63.3
	Strongly agree	11	26.8	36.7	100.0
	Total	30	73.2	100.0	
Missing	System	11	26.8		
Total		41	100.0		

Table 47 - In the event of an Ebola case, there is a policy to prevent the staff to work overtime (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	292	21.2	36.4	36.4
	Disagree	293	21.2	36.5	72.9
	Agree	169	12.3	21.0	93.9
	Strongly agree	49	3.6	6.1	100.0
	Total	803	58.2	100.0	
Missing	System	576	41.8		
Total		1379	100.0		

Table 48 - In the event of an Ebola case, there is a policy to prevent the staff to work overtime (subset Ebola)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Strongly disagree**	5	12.2	17.2	17.2
	Disagree	15	36.6	51.7	69.0
	Agree	5	12.2	17.2	86.2
	Strongly agree	4	9.8	13.8	100.0
	Total	29	70.7	100.0	
Missing	System	12	29.3		
Total		41	100.0		

Table 49 - I know of cases of stigmatisation of colleagues that have taken care of Ebola patients (all respondents)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	1081	78.4	94.7	94.7
	Yes	61	4.4	5.3	100.0
	Total	1142	82.8	100.0	
Missing	System	237	17.2		
Total		1379	100.0		

Table 50 - I have experienced stigmatisation when I have worked with Ebola patients (subset Ebola)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**No**	11	26.8	42.3	42.3
	Yes	15	36.6	57.7	100.0
	Total	26	63.4	100.0	
Missing	System	15	36.6		
Total		41	100.0		

Table 51 – Dendrogram using Average Linkage

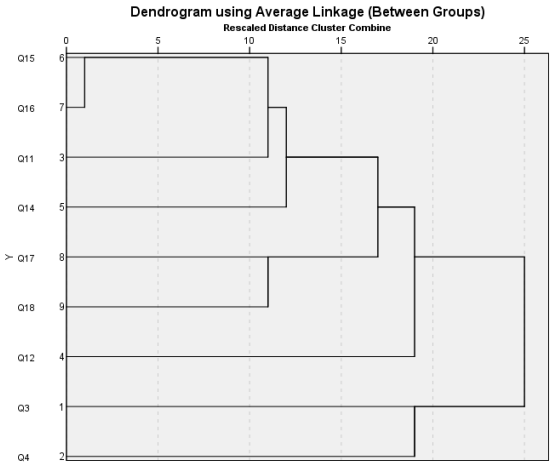

Table 52 – Cross Tabulation (all respondents)

% within Working in:

Questionnaire items		Working in: Ebola Reference Hospital	Hospital	Elderly Care Home	Community Care	Total Sample
Every member of staff knows the protocol for 1st contact that is to follow in case of a patient with suspicion of IDHC, e.g. Ebola	**No**	50.4%	69.1%	89.9%	62.2%	68.5%
	Yes	49.6%	30.9%	10.1%	37.8%	31.5%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%
All necessary PPE is available in my unit according to the ECDC toolkit	**Disagree/ Strongly Disagree**	30.8%	42.4%	61.3%	51.2%	44.5%
	Agree/ Strongly Agree	69.2%	57.6%	38.7%	48.8%	55.5%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%
I feel that the received education and training sufficiently prepare me for a potential case of IDHC	**Disagree/ Strongly Disagree**	40.7%	69.7%	77.0%	66.8%	67.7%
	Agree/ Strongly Agree	59.3%	30.3%	23.0%	33.2%	32.3%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%

My organisation undertakes regular risk assessments of the possible incidents related to IDHC	**Disagree/ Strongly Disagree**	37.2%	52.6%	76.0%	54.3%	53.5%
	Agree/ Strongly Agree	62.8%	47.4%	24.0%	45.7%	46.5%
Total		100.0%	100.0%	100.0%	100.0%	100.0%

Table 53 – Perceived Level of Preparedness for Ebola

Perceived Level of Preparedness for Ebola	Corrected Item-Total Correlation
All necessary PPE (Personal Protective Equipment- body, foot, hand, respiratory and eye protection) is available in my unit, according to the ECDC toolkit	.633
Isolation rooms with negative pressure (>12 air changes per hour) for patients with suspected or confirmed infectious diseases of high consequence (IDHC), e.g. Ebola, Tuberculosis, etc. are available in my facility	.493
There is alternative protective equipment available, when the protective goggles and masks do not appropriately fit	.542
Posters/videos on how to manage suspected or confirmed cases of Ebola are sufficiently displayed in the facility where I work	.606
I have regular theoretical education on protocols when caring for patients with infectious diseases of high consequence (IDHC), e.g. Ebola	.566
I have regular drills on donning and doffing (i.e. putting on and removing personal protective equipment)	.603
There is a nurse supporting me in donning and doffing	.733
Every member of staff knows the protocol for 1st contact that is to follow in case of a patient with suspicion of infectious diseases of high consequence (IDHC), e.g. Ebola	.540
My organisation undertakes regular risk assessments of the possible incidents related to infectious diseases of high consequence (e.g. Ebola)	.648
In the event of an Ebola case, the facility where I work takes actions to increase the number of staff per shift in the unit	.659

Graph 1 – Perceived level of preparedness

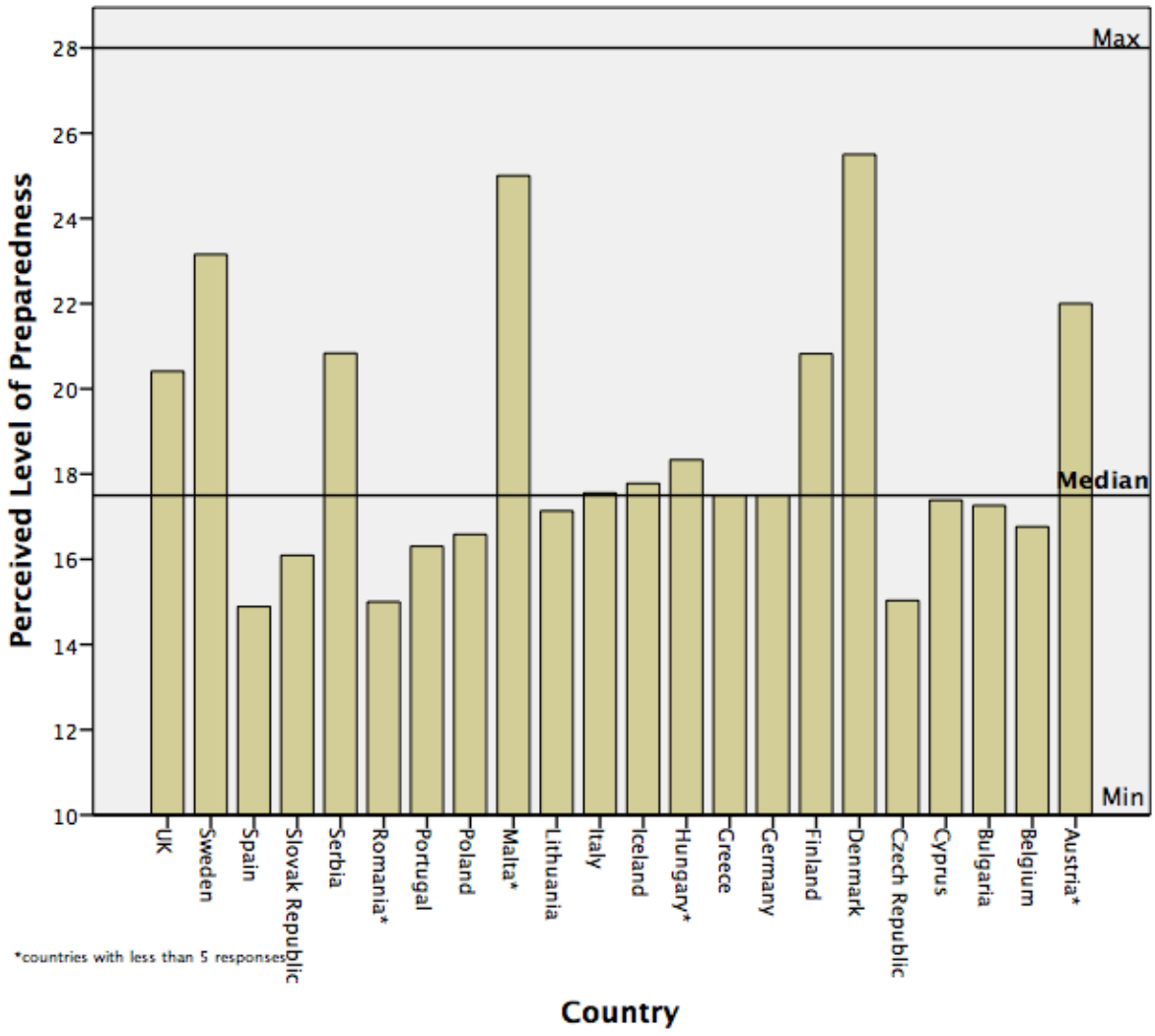

Table 54 – Links of Questions to the Directive Clauses

Directive Clauses	EFN Questionnaire items
Clause 4: Principles	Question 2: In my facility, I am consulted on the choice of equipment that will be used in case of infectious diseases of high consequence (IDHC), e.g. Ebola Question 12: I believe that my opinion is taken into account when developing protocols for caring for patients with infectious diseases of high consequence (IDHC), e.g. Ebola
Clause 5: Risk Assessment	Question 13: My organisation undertakes regular risk assessments of the possible incidents related to infectious diseases of high consequence, e.g. Ebola Question 14: The results of the risk assessments are sufficiently communicated to the staff

Directive Clauses	EFN Questionnaire items
Clause 6: Elimination, prevention and protection	Question 1: All necessary PPE (Personal Protective Equipment- body, foot, hand, respiratory and eye protection) is available in my unit, according to the ECDC toolkit Question 3: Isolation rooms with negative pressure (>12 air changes per hour) for patients with suspected or confirmed infectious diseases of high consequence (IDHC), e.g. Ebola, Tuberculosis, etc. are available in my facility Question 4: There is alternative protective equipment available, when the protective goggles and masks do not appropriately fit
Clause 7: Information and awareness raising	Question 6: Posters/videos on how to manage suspected or confirmed cases of Ebola are sufficiently displayed in the facility where I work
Clause 8: Education and training	Question 7: I have regular theoretical education on protocols when caring for patients with infectious diseases of high consequence (IDHC), e.g. Ebola Question 8: I have regular drills on donning and doffing (i.e. putting on and removing personal protective equipment Question 9: I feel that the received education and training sufficiently prepare me for a potential case of infectious diseases of high consequence (IDHC), e.g. Ebola
Clause 10: Response and follow-up	Questions 15: In the event of an Ebola case, the facility where I work takes actions to increase the number of staff per shift in the unit Question 16: In the event of an Ebola case, there is a policy to prevent the staff to work overtime
Clause 11: Implementation	Question 5: There is an "opt-out" possibility when taking care of suspected or confirmed infectious diseases of high consequence (IDHC), including Ebola patients (I can refuse to take care of Ebola patients) Question 11: Every member of staff knows the protocol for 1st contact that is to follow in case of a patient with suspicion of infectious diseases of high consequence (IDHC), e.g. Ebola Question 12: There is a nurse supporting me in donning and doffing)

Table 55 - All respondents n=1800

	CLAUSE 4		CLAUSE 5		CLAUSE 6			CLAUSE 7		CLAUSE 8		CLAUSE 10			CLAUSE 11	
Country	In my facility, I am consulted on the choice of equipment that will be used in case of IDHC, e.g. Ebola	I believe that my opinion is taken into account when developing protocols for caring for patients with IDHC, e.g. Ebola	My organisation undertakes regular risk assessments of the possible incidents related to IDHC (e.g. Ebola)	The results of the risk assessments are sufficiently communicated to staff	All necessary PPE (Personal Protective Equipment- body, foot, hand, respiratory and eye protection) is available in my unit, according to the ECDC toolkit	Isolation rooms with negative pressure (>12 air changes per hour) for patients with suspected or confirmed IDHC, e.g. Ebola, are available in my facility	There is alternative protective equipment available, when the protective goggles and masks do not fit	Posters/ videos on how to manage suspected or confirmed cases of Ebola are sufficiently displayed in the facility where I work	I have regular theoretical education on protocols when caring for patients with IDHC, e.g. Ebola	I have regular drills on donning and doffing (i.e. putting on and removing personal protective equipment)	I feel that the received education and training sufficiently prepare me for a potential case of IDHC, e.g. Ebola	In the event of an Ebola case, the facility where I work takes actions to increase the number of staff per shift in the unit	In the event of an Ebola case, there is a policy to prevent the staff to work overtime	There is a nurse supporting me in donning and doffing	Every member of staff knows the protocol for 1st contact that is to follow in case of a patient with suspicion of IDHC, e.g. Ebola	There is an "opt-out" possibility when taking care of suspected or confirmed IDHC, including Ebola patients (I can refuse to take care of Ebola patients)
Austria (n=5)																	
Belgium (n=170)																	
Bulgaria (n=77)																	
Croatia (n=4)																	
Cyprus (n=35)																	
Czech R. (n=79)																	
Denmark (n=13)																	
Finland (n=26)																	
Germany (n=175)																	
Greece (n=56)																	
Hungary (n=4)																	
Iceland (n=39)																	
Italy (n=548)																	
Lithuania (n=36)																	
Malta (n=5)																	
Poland (n=160)																	
Portugal (n=61)																	
Romania (n=4)																	
Serbia (n=15)																	
Slovak R. (n=138)																	
Spain (n=23)																	
Sweden (n=25)																	
UK (n=102)																	

NOTES: Based on median response to items, grouped by Country; Likert scales: Strongly disagree/ Disagree = RED, Strongly agree/ Agree = GREEN; Yes/No items: No = RED, Yes = GREEN

Table 56 - Past care experience in Infectious Diseases of High Consequence n=469

	CLAUSE 4		CLAUSE 5		CLAUSE 6			CLAUSE 7		CLAUSE 8		CLAUSE 10			CLAUSE 11	
Country	In my facility, I am consulted on the choice of equipment that will be used in case of IDHC, e.g. Ebola	I believe that my opinion is taken into account when developing protocols for caring for patients with IDHC, e.g. Ebola	My organisation undertakes regular risk assessments of the possible incidents related to IDHC (e.g. Ebola)	The results of the risk assessments are sufficiently communicated to staff	All necessary PPE (Personal Protective Equipment- body, foot, hand, respiratory and eye protection) is available in my unit, according to the ECDC toolkit	Isolation rooms with negative pressure (>12 air changes per hour) for patients with suspected or confirmed IDHC, e.g. Ebola, are available in my facility	There is alternative protective equipment available, when the protective goggles and masks do not fit	Posters/ videos on how to manage suspected or confirmed cases of Ebola are sufficiently displayed in the facility where I work	I have regular theoretical education on protocols when caring for patients with IDHC, e.g. Ebola	I have regular drills on donning and doffing (i.e. putting on and removing personal protective equipment)	I feel that the received education and training sufficiently prepare me for a potential case of IDHC, e.g. Ebola	In the event of an Ebola case, the facility where I work takes actions to increase the number of staff per shift in the unit	In the event of an Ebola case, there is a policy to prevent the staff to work overtime	There is a nurse supporting me in donning and doffing	Every member of staff knows the protocol for 1st contact that is to follow in case of a patient with suspicion of IDHC, e.g. Ebola	There is an "opt-out" possibility when taking care of suspected or confirmed IDHC, including Ebola patients (I can refuse to take care of Ebola patients)
Austria (n=2)																
Belgium (n=10)																
Bulgaria (n=14)																
Croatia (n=2)																
Cyprus (n=14)																
Czech R. (n=11)																
Denmark (n=4)																
Finland (n=5)																
Germany (n=56)																
Greece (n=20)																
Hungary (n=3)																
Iceland (n=25)																
Italy (n=157)																
Lithuania (n=4)																
Poland (n=26)																
Portugal (n=23)																
Serbia (n=5)																
Slovak R. (n=37)																
Spain (n=6)																
Sweden (n=12)																
UK (n=23)																

NOTES: Based on median response to items, grouped by Country; Likert scales: Strongly disagree/ Disagree = RED, Strongly agree/ Agree = GREEN; Yes/No items: No = RED, Yes = GREEN

Table 57 - Care experience of confirmed patients with Ebola n=43

	CLAUSE 4		CLAUSE 5		CLAUSE 6			CLAUSE 7		CLAUSE 8		CLAUSE 10			CLAUSE 11	
Country	In my facility, I am consulted on the choice of equipment that will be used in case of IDHC, e.g. Ebola	I believe that my opinion is taken into account when developing protocols for caring for patients with IDHC, e.g. Ebola	My organisation undertakes regular risk assessments of the possible incidents related to IDHC (e.g. Ebola)	The results of the risk assessments are sufficiently communicated to staff	All necessary PPE (Personal Protective Equipment- body, foot, hand, respiratory and eye protection) is available in my unit, according to the ECDC toolkit	Isolation rooms with negative pressure (>12 air changes per hour) for patients with suspected or confirmed IDHC, e.g. Ebola, are available in my facility	There is alternative protective equipment available, when the protective goggles and masks do not fit	Posters/ videos on how to manage suspected or confirmed cases of Ebola are sufficiently displayed in the facility where I work	I have regular theoretical education on protocols when caring for patients with IDHC, e.g. Ebola	I have regular drills on donning and doffing (i.e. putting on and removing personal protective equipment)	I feel that the received education and training sufficiently prepare me for a potential case of IDHC, e.g. Ebola	In the event of an Ebola case, the facility where I work takes actions to increase the number of staff per shift in the unit	In the event of an Ebola case, there is a policy to prevent the staff to work overtime	There is a nurse supporting me in donning and doffing	Every member of staff knows the protocol for 1st contact that is to follow in case of a patient with suspicion of IDHC, e.g. Ebola	There is an "opt-out" possibility when taking care of suspected or confirmed IDHC, including Ebola patients (I can refuse to take care of Ebola patients)
Austria (n=2)																
Belgium (n=5)																
Bulgaria (n=1)																
Croatia (n=1)																
Germany (n=13)																
Greece (n=3)																
Hungary (n=4)																
Iceland (n=1)																
Italy (n=2)																
Poland (n=2)																
Portugal (n=1)																
Serbia (n=1)																
Spain (n=4)																
UK (n=3)																

NOTES: Based on median response to items, grouped by Country; Likert scales: Strongly disagree/ Disagree = RED, Strongly agree/ Agree = GREEN; Yes/No items: No = RED, Yes = GREEN

Table 58 - Infection Control Nurses n=148

	CLAUSE 4		CLAUSE 5		CLAUSE 6			CLAUSE 7	CLAUSE 8			CLAUSE 10			CLAUSE 11	
Country	In my facility, I am consulted on the choice of equipment that will be used in case of IDHC, e.g. Ebola	I believe that my opinion is taken into account when developing protocols for caring for patients with IDHC, e.g. Ebola	My organisation undertakes regular risk assessments of the possible incidents related to IDHC (e.g. Ebola)	The results of the risk assessments are sufficiently communicated to staff	All necessary PPE (Personal Protective Equipment- body, foot, hand, respiratory and eye protection) is available in my unit, according to the ECDC toolkit	Isolation rooms with negative pressure (>12 air changes per hour) for patients with suspected or confirmed IDHC, e.g. Ebola, are available in my facility	There is alternative protective equipment available, when the protective goggles and masks do not fit	Posters/ videos on how to manage suspected or confirmed cases of Ebola are sufficiently displayed in the facility where I work	I have regular theoretical education on protocols when caring for patients with IDHC, e.g. Ebola	I have regular drills on donning and doffing (i.e. putting on and removing personal protective equipment)	I feel that the received education and training sufficiently prepare me for a potential case of IDHC, e.g. Ebola	In the event of an Ebola case, the facility where I work takes actions to increase the number of staff per shift in the unit	In the event of an Ebola case, there is a policy to prevent the staff to work overtime	There is a nurse supporting me in donning and doffing	Every member of staff knows the protocol for 1st contact that is to follow in case of a patient with suspicion of IDHC, e.g. Ebola	There is an "opt-out" possibility when taking care of suspected or confirmed IDHC, including Ebola patients (I can refuse to take care of Ebola patients)
Austria (n=1)																
Belgium (n=8)																
Croatia (n=1)																
Cyprus (n=3)																
Czech R. (n=1)																
Denmark (n=12)																
Finland (n=9)																
Germany (n=3)																
Greece (n=10)																
Iceland (n=1)																
Italy (n=22)																
Malta (n=4)																
Poland (n=14)																
Portugal (n=5)																
Slovak R. (n=4)																
Sweden (n=8)																
UK (n=42)																

NOTES: Based on median response to items, grouped by Country; Likert scales: Strongly disagree/ Disagree = RED, Strongly agree/ Agree = GREEN; Yes/No items: No = RED, Yes = GREEN

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