European Statements of Hospital Pharmacy

Survey Results 2015-16

Statements Sections 2, 5, 6

Contents

Executive Summary 3
Introduction & background 5
Method 6
Response Rates 8
Section A
Results of the general questions regarding hospital activity 9
Section B
B1: European results combined 13
B2: Questions asked in the survey 14
B3: Focus on those statements where the barriers to implementation were greatest
1)Research 16
2)Medication shortages 20
3)Use of computerised decision support to reduce medication errors 23
4) Developing local/national guidelines 26
5)Undertaking an audit to identify priorities for improvement in medicines use processes 28
Section C
Results of the implementation questions 32
Discussion 37
Recommendations 38
References 38

Executive summary

The European Statements of Hospital Pharmacy express commonly agreed objectives which every European health system should aim for in the delivery of hospital pharmacy services. They were formulated via a methodological consultation process with EAHP's 34 member country associations and 34 patient and healthcare professional organisations. Keele University were commissioned to conduct an annual survey amongst European hospital pharmacists to measure progress of the implementation of the Statements and to identify the key barriers and drivers of this. The baseline survey was conducted from January 2015 to March 2015, while the 2015 EAHP Statements Survey was conducted between October and, December 2015 across 33 countries*. The focus on this year's survey was to take a closer look at the statements from the following sections:

- Section 2: Selection, procurement and distribution
- Section 5: Patient safety and quality assurance
- Section 6: Education and research

As with the baseline survey, the 2015 EAHP Statements Survey consisted of three sections:

- Section A: general questions about the participant's hospital pharmacy, such as workforce skill-mix and number of beds served
- Section B: questions about the current activity of pharmacists around each statement
- Section C: questions about the hospital's readiness and ability to implement the statements

In section B, a value was allocated to each response to rate the degree to which they were able to comply with each statement (where 1=never able to comply, 5=always complied. In section C, they were asked to what degree they agreed with the question (1 for strongly disagree, 5 for strongly agree). A response of 3, 4 or 5 was deemed to indicate less difficulty in complying with that statement – a 'positive response'. Where this was **not** the case, the participant was asked the reasons for their difficulty for complying with the statement.

Similar to the baseline survey, the overall response rate was 18%, again with wide variation across different countries. 22 of the 33 countries had a response rate of over 30%. The 5 questions where implementation of the statement in question seems to provide the greatest challenge were:

S 6.4 The pharmacists in our hospital routinely publish hospital pharmacy practice research.
S2.5.2 Have you had reason to contact the medicines authority in your country because of medicines shortages?
S5.5.2 Our hospital pharmacy uses computerised decision support to reduce the risk of medication errors
S6.4.4 Have you or your pharmacists engaged in development of local/national guidelines?
S5.2.4 In the past three years have you undertaken an audit to identify priorities for improvement in medicines use processes?

As with the baseline survey, there appear to be multiple barriers preventing hospital pharmacies from engaging in more clinically focused activities, such as publishing practice research and developing systems to reduce medication errors. There was considerable variation across the different countries, reflecting the role of pharmacists in those countries.

By far the most common reason given for being unable to implement those statements is capacity and capability. A lack of support from hospital managers is also a commonly cited reason. Much work can be done to share business cases where successful investment in pharmacy services has been achieved, winning the hearts and minds of other clinicians and managers to invest in pharmacy services to improve patient care (and save money in the longer term). There would appear to be a role for EAHP in helping support such activities within individual countries.

Disappointingly, there does not seem to have been much improvement in the awareness of the statements within responders to the survey. Imagination is required to improve this, both by the EAHP in formulating an implementation strategy and by those countries where awareness is still very low. These data allow the individual countries who participated in the survey to compare their activities with others around Europe. A set of recommendations are suggested at the end of this report.

*Poland decided not to participate in the 2015 EAHP Statements Survey

Introduction and background

The European Statements of Hospital Pharmacy are designed to assist European health systems in ensuring safe, effective and optimal use of medicines in collaboration with multi-disciplinary teams.[1]

The statements were formulated following an 18-month review process, which included two rounds of online Delphi consultation with EAHP's 34 member country associations and patient and healthcare professional organisations and a 'World Café'.[2] As outlined by Horak et al in their report on the future of the EAHP survey[3], implementation of the Statements remains a challenge. Generally, the biggest challenges in implementing the Statements are perceived to be around the varying levels of practice, the different healthcare systems, and problems with staffing (capacity and capability). In order to facilitate better implementation of the Statements, it is essential to capture a baseline of where different countries are now in relation to each Statement and then measure their progress on a regular basis. Based on previous feedback and the Summit, EAHP decided to change its data collection tool, the EAHP Survey, by designing a shorter annual survey, optimising data collection while minimising workload for survey respondents. The primary focus of the annual survey is to identify the barriers to the implementation of the Statements.

Keele University were commissioned to conduct an annual survey amongst European hospital pharmacists to assess the progress of each country with the implementation of the Statements and to identify the common barriers and drivers of success. The initial baseline survey was conducted from January 2015 to March 2015, spanning 16 languages and 34 countries. The results from that survey can be found on the EAHP website.

The 2015 EAHP Statements Survey was conducted from October 2015 to December 2015 with the focus on the statements from the following sections:

- Section 2: Selection, procurement and distribution
- Section 5: Patient safety and quality assurance
- Section 6: Education and research

This document focuses on the results of the survey across 33 member countries, focusing on the Statements identified as being those being the largest barriers to implementation across the whole of Europe. There are also appendix documents which contain the full survey results and anonymised free text responses.

Note: The survey asked questions regarding most of the 23 European Statements of Hospital Pharmacy from sections 2, 5 and 6, but not all of them. The questions asked were based on statements that had a resonance at an individual hospital level.

Method

The survey was drafted following a meeting of the EAHP Survey Group and then conducted from October 2015 to December 2015, spanning 33 countries. Poland decided not to participate in the 2015 EAHP Statements Survey.

As with the baseline survey, the 2015 EAHP Statements Survey (see appendix 1) consisted of three sections:

- Section A: general questions about the participant's hospital pharmacy, such as workforce skill-mix and number of beds served
- Section B: questions about the current activity of pharmacists around each statement from Sections 2, 5 and 6
- Section C: questions about the hospital's readiness and ability to implement the statements

The questions in Section B of the survey can be divided into three categories. The first was to identify if the participant thought that the statements of hospital pharmacy are already being implementing within their hospital. To achieve this aim, the pharmacists who participated in the survey were asked to rate the degree to which they were able to comply with each statement. A value was allocated to each response using a scale of 1-5, where a 1 indicated that they were never able to comply with the statement, while a 5 indicated that they always complied with the statement. In section C, they were asked to what degree they agreed with the question and the same Likert scale was used (1 for strongly disagree, 5 for strongly agree).

For the purposes of identifying those statements where the barriers to implementation were greatest, a response of 3, 4 or 5 was deemed to indicate less difficulty in complying with that statement – a 'positive response'. Where this was **not** the case, the participant was asked a follow up question to identify the barriers in implementing the statement.

In order to improve the efficiency in the analysis of the results and provide greater insight into the key drivers and barriers to implementation of the statements, for the 2015 EAHP Statements Survey, the respondent was given a range of pre-selected options to choose from n their response. These options were based on the most frequent answers given in the baseline survey. Five standard pre-selected options were used for every question, although some questions have additional specific options. The five main options were:

1. We are prevented by national policy and/or legislation
2. Not considered to be a priority by my managers
3. Not considered to be a priority by me
4. We would like to do this but we have limited capacity
5. We would like to do this but we have limited capability.

There was also has an 'Other' option, where the respondent could still give a free-text response if they have a unique answer to give. Respondents were given the ability to select multiple options. In order to gain further insight into particular topics, participants were also asked additional questions for certain statements. For example, in addition to asking a participant if medication errors are reported in their hospital, and then, if not, why not, they are also asked how many medication errors were reported in the last year and what have they done with the results of any medication error reports.

The 2015 EAHP Statements Survey was conducted in English only. The baseline survey was translated into 15 languages, which carried a significant logistical and financial burden to the EAHP. A large amount of time was required to provide the translated text for the surveys, and to create 15 separate surveys containing each translated text. When the survey was completed, the free text responses required translating back for analysis which increased the analysis time further. In light of this, the General Assembly of the EAHP decided to conduct the 2015 EAHP Statements Survey in English only, with an option for individual country co-ordinators to provide translations to and from the survey results if required.

The survey was created using the online survey software SurveyMonkey, which allowed the survey to incorporate a variety of question formats and necessary logic, whilst also incorporating EAHP branding and logos. It was distributed using a SurveyMonkey email collector. A coordinator for each country participating provided a list of emails for the hospital pharmacists in their country, which were added to the mailing list. The SurveyMonkey email collector meant each person was sent an email containing a personal link to their own copy of the survey. The benefits of this approach meant that the responses were automatically monitored, and reminder emails could easily be sent to those who had not yet responded. These reminders were sent out weekly over the duration of the survey.

There were a small number of countries who did not wish to share the emails of their countries pharmacists. In those cases, a weblink version of the survey was created. This meant a single link was given to a coordinator to distribute to the hospital pharmacists in their country. The weblink version of the survey began by asking for a unique code to identify the respondent. This method was comparatively much more time intensive to implement, as the tracking of respondents was a much more manual process. When the survey closed, there were a total of 949 responses, the results of which were exported from SurveyMonkey for further analysis and reporting.

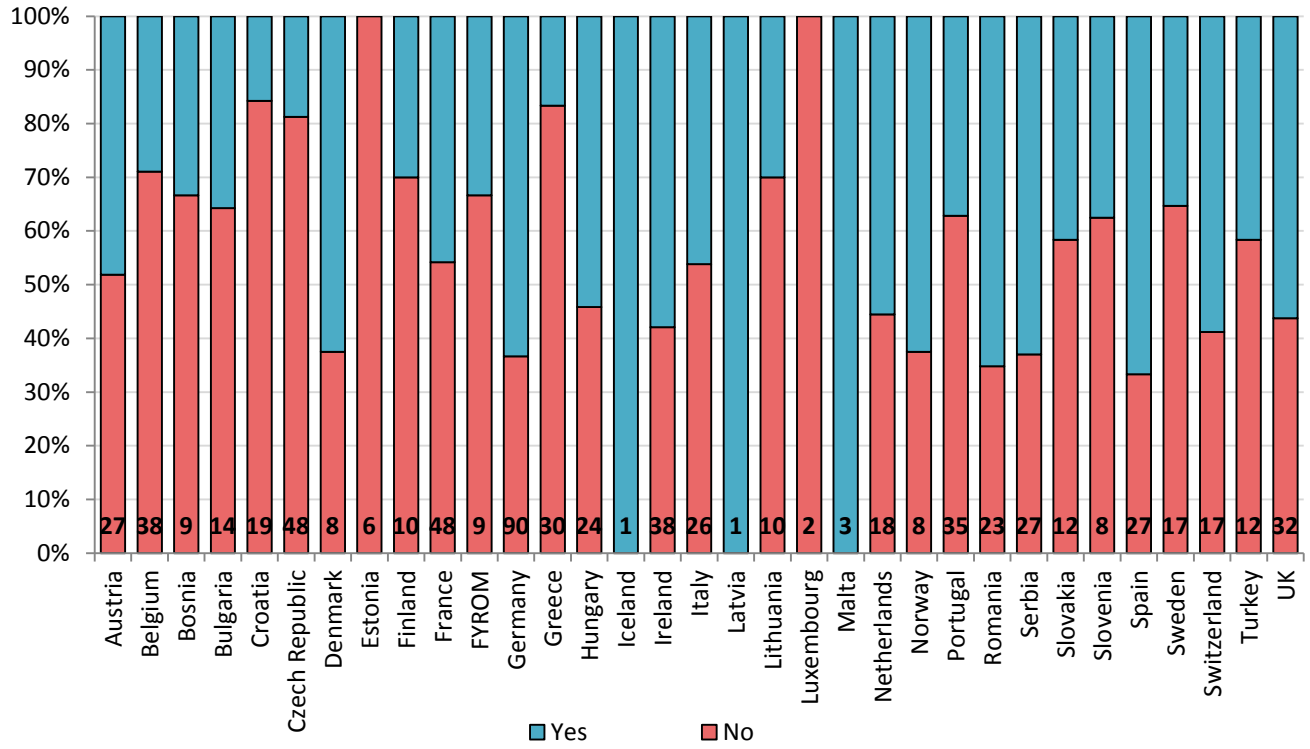
Results: EAHP Survey Response Rates

The response rates for 2015 EAHP Statements Survey are listed in the table below, broken down by country. The response rates from the baseline survey are given in the final column for comparison. If an incomplete survey was submitted, the quantitative data was not used in the results, although any free text responses were still incorporated. For the majority of cases, the country's coordinator provided a list of emails for people they wished to include in the survey, which was distributed via a SurveyMonkey email collector. However, the countries highlighted in red below used a different distribution method, and were instead provided a web link to the survey and a list of unique codes to allocate and distribute to people themselves.

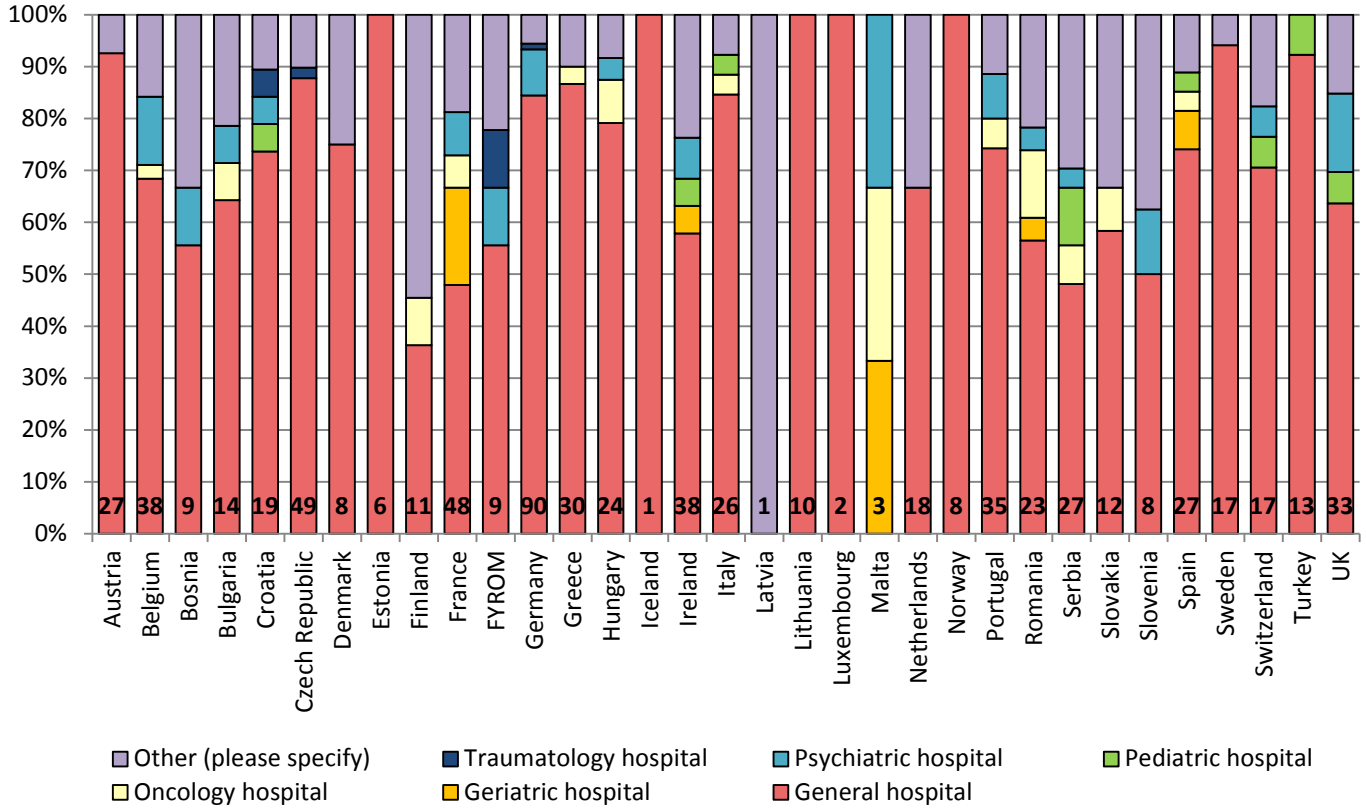
Country	Responses	Requests	Percentage	Percentage (last year)
Denmark	8	8	100%	88%
Iceland	1	1	100%	100%
Malta	4	6	67%	67%
Austria	29	46	63%	49%
Sweden	23	37	62%	47%
Ireland	41	70	59%	53%
Croatia	20	39	51%	82%
Serbia	32	63	51%	63%
Czech Republic	49	95	52%	61%
Portugal	40	89	45%	20%
Bosnia	9	21	43%	48%
Slovenia	12	28	43%	68%
Greece	44	108	41%	30%
Romania	26	65	40%	44%
Norway	12	33	36%	66%
FYROM	11	31	36%	58%
Germany	137	388	35%	25%
Switzerland	21	60	35%	48%
Luxembourg	2	6	33%	50%
Estonia	7	22	32%	46%
Hungary	32	103	31%	64%
Lithuania	12	39	31%	13%
Belgium	45	166	27%	25%
Finland	22	82	27%	27%
Bulgaria	17	68	25%	17%
Netherlands	19	80	24%	35%
UK	38	183	21%	38%
Spain	41	250	16%	18%
Slovakia	13	83	16%	48%
Italy	55	606	9%	6%
Turkey	25	509	5%	9%
Latvia	2	43	5%	13%
France	100	1888	5%	8%
Total	949	5,316	18%	18%

Section A: Results of the General Questions Regarding Hospital Activity

G1 Is your pharmacy within a teaching hospital?

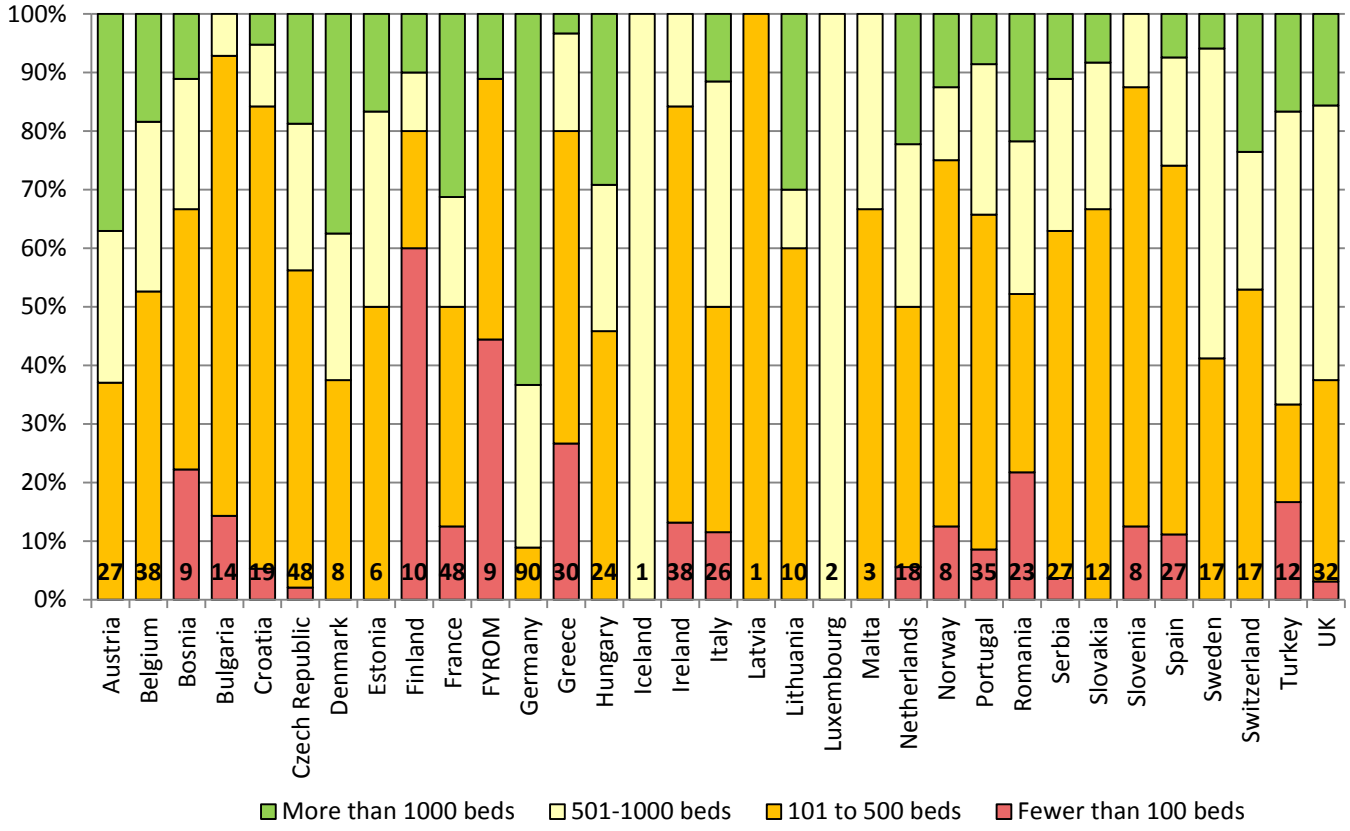


G2 What type of hospital is your pharmacy within?

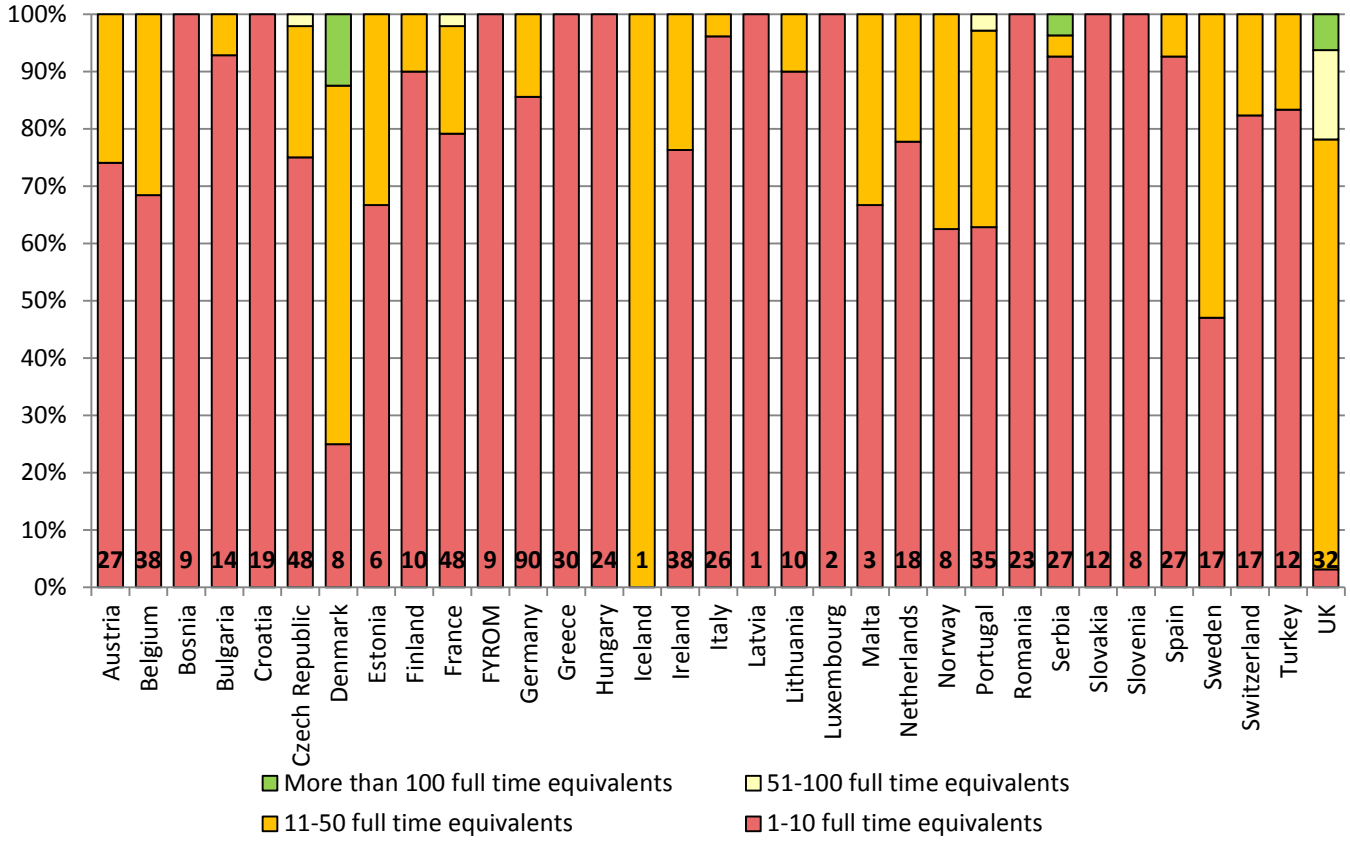


The most common responses relating to 'Other' were University hospital, Cardiology hospitals, Rehabilitation hospitals or multidisciplinary hospitals.

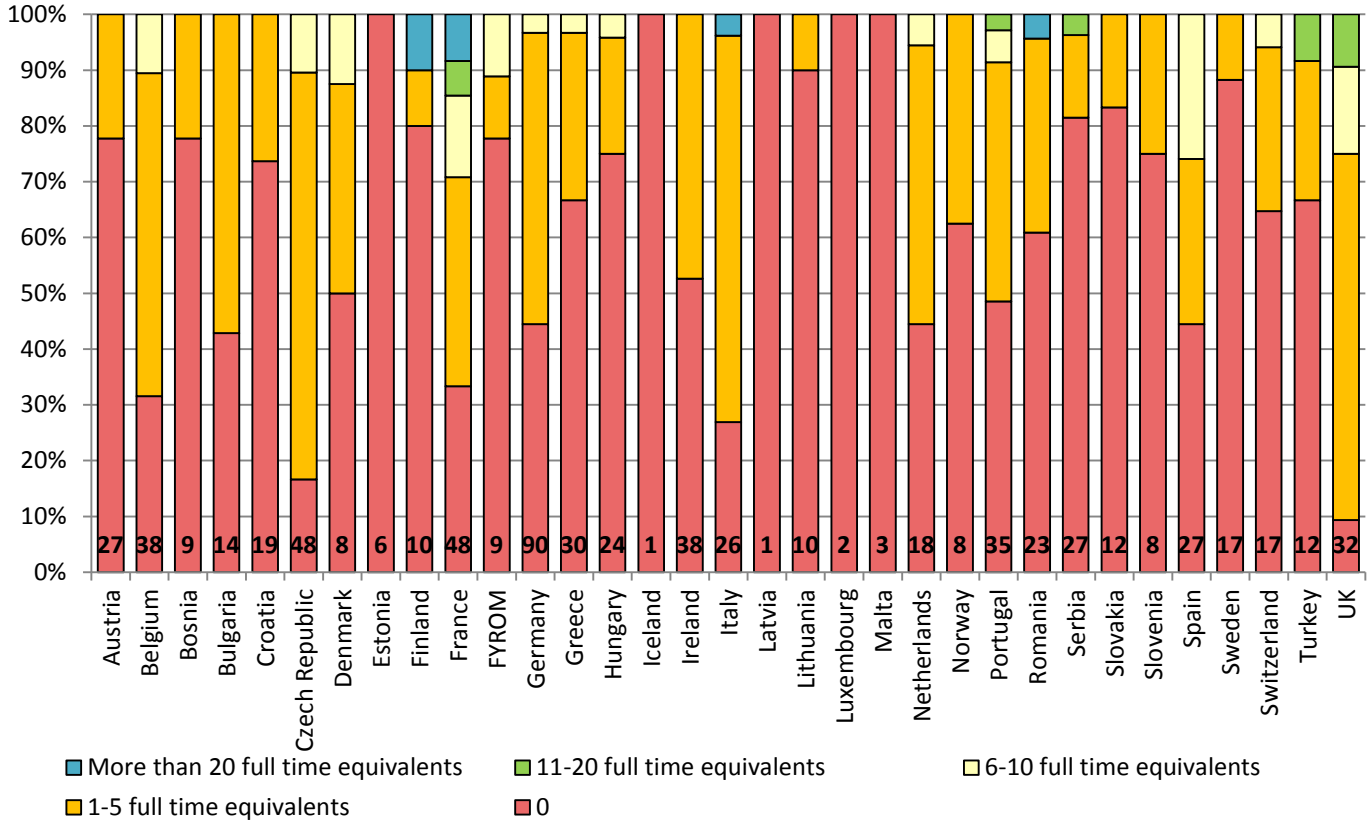
G3 How many beds are served by your pharmacy?



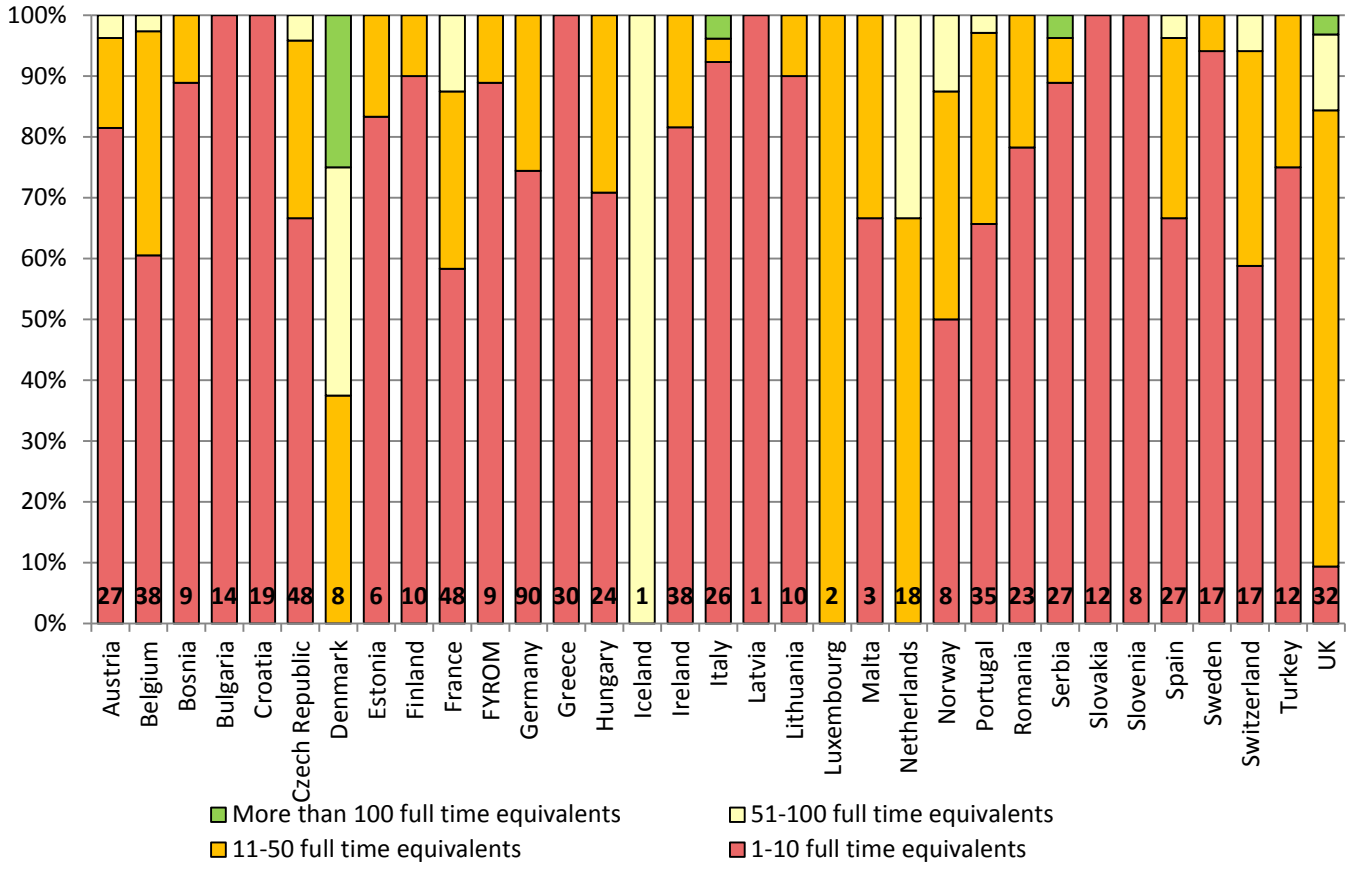
G4 How many fully qualified pharmacists are employed by your hospital?



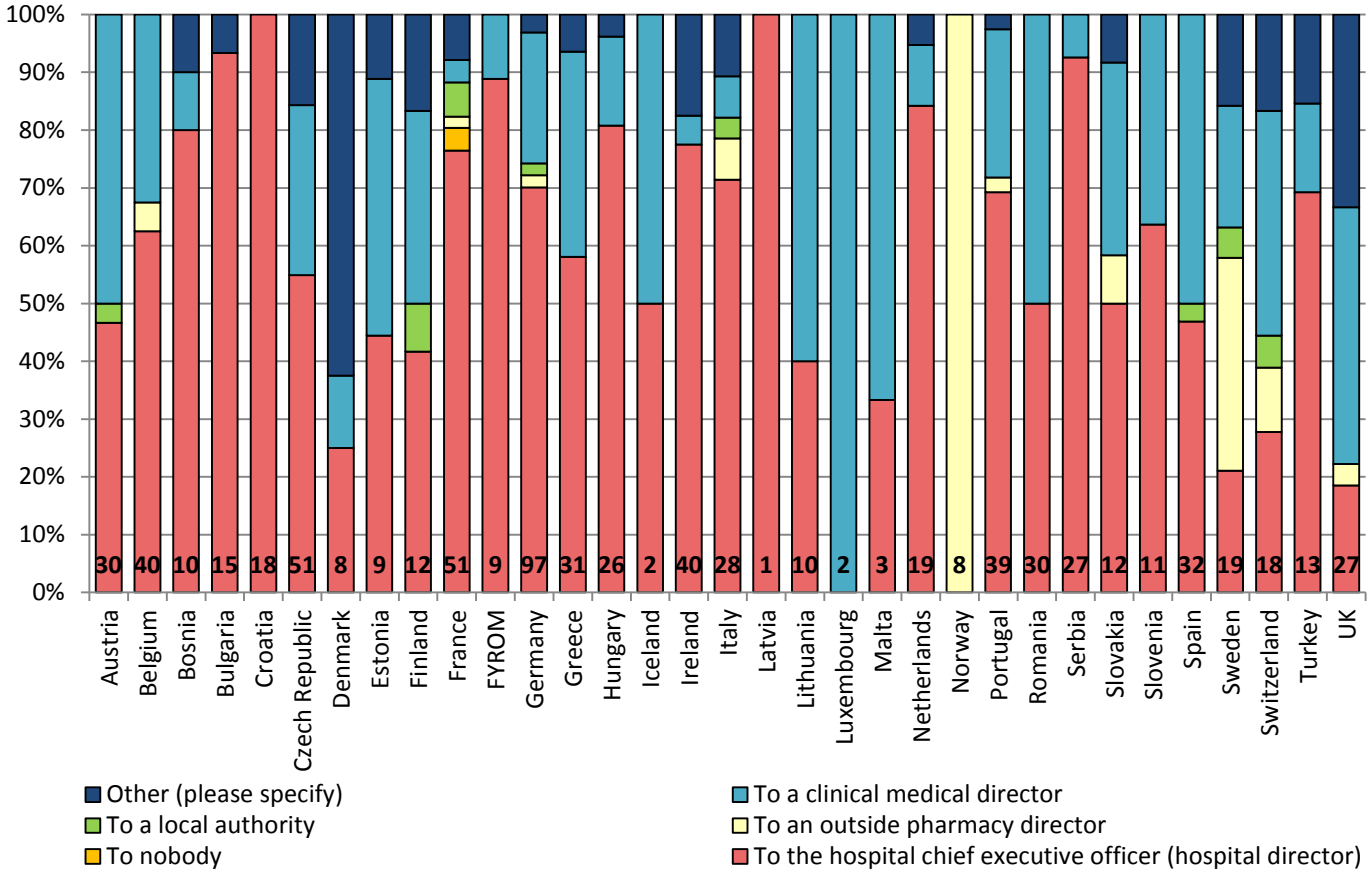
G5 How many trainee pharmacists are employed by your hospital?



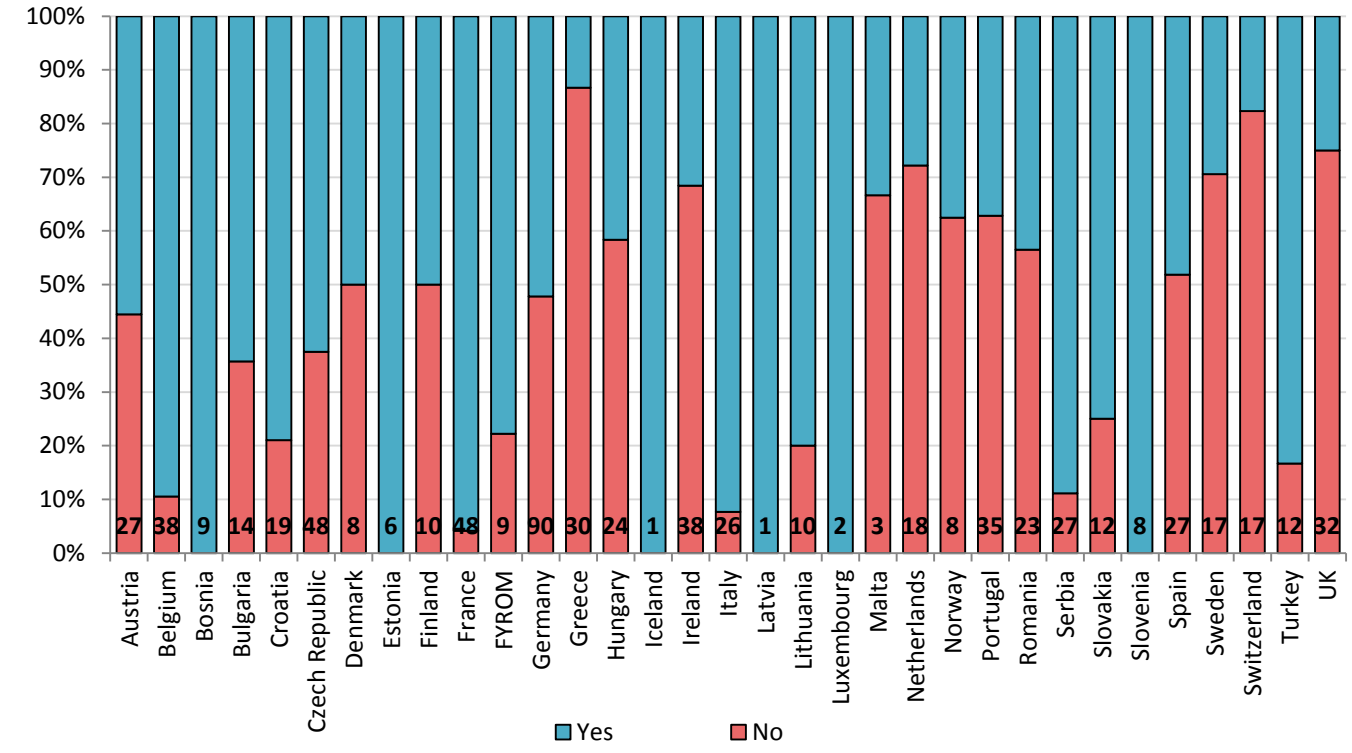
G6 How many technicians are employed by your hospital?



G7 To whom is the pharmacy director responsible?



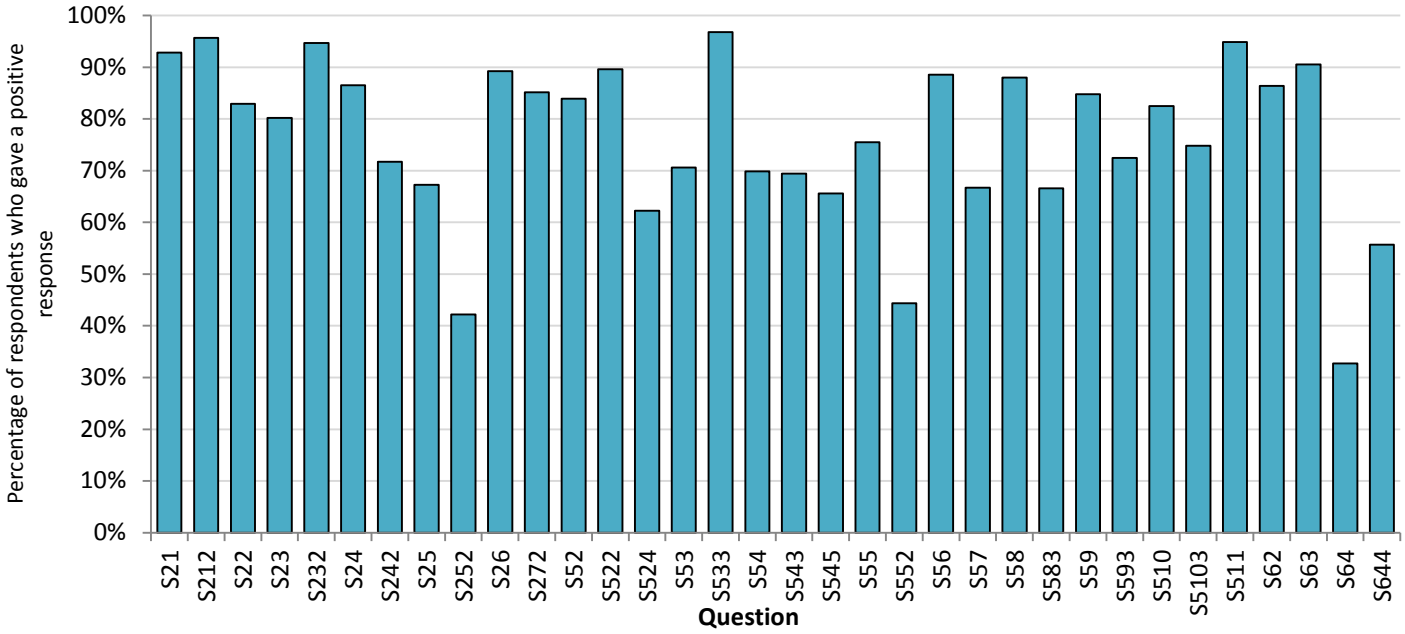
G8 Is your pharmacy involved with the procurement, supply or supervision of medical devices?



Section B

B1: Results of the EAHP Statement Questions: All of Europe's results combined

The graph below shows the results of the questions relating to each of the statements in sections 2,5 and 6, for all of the surveyed countries. As the focus of the survey was to identify barriers and drivers to implementation, the data have been presented as showing the percentage of respondents who indicated they did not have difficulty complying with the particular statement in question ('positive responses'). Therefore, **a higher bar means** responders are saying **they are not having difficulty complying**. A more in depth look may be required to address any issues in the implementation of the statements with a lower bar.



The five questions which received the least positive responses were identified, and are subject to a more in-depth analysis on the subsequent pages. This includes a breakdown of the results by country, as well as an analysis of the free text responses and any associated questions. The percentage of respondents giving a positive response was calculated for each question, broken down by country. The mean value across all countries was calculated for each question, and were then ranked in ascending order to determine the questions receiving the least positive response. This method was done to ensure the views of each country were considered equally, regardless of how many responses were received. The five questions are:

	Question	Mean*
S6.4	The pharmacists in our hospital routinely publish hospital pharmacy practice research.	32%
S2.5.2	Have you had reason to contact the medicines authority in your country because of medicines shortages?	40%
S5.5.2	Our hospital pharmacy uses computerised decision support to reduce the risk of medication errors	47%
S6.4.4	Have you or your pharmacists engaged in development of local/national guidelines?	57%
S5.2.4	In the past three years have you undertaken an audit to identify priorities for improvement in medicines use processes?	58%

**Mean: The mean percentage of positive responses to a question across all respondent countries.*

B2: Questions asked in the survey

The table below shows **all** of the questions asked in the survey regarding the 23 European Statements of Hospital Pharmacy from Sections 2, 5 and 6, and where applicable, the overall percentage of participants who gave a 'positive response' to the question. Whenever a participant gave a negative response to a question, there was usually a follow up question of 'What is preventing this?'

Questions where less than 75% of participants gave a positive response have been highlighted in red, and questions where more than 90% of participants gave a positive response have been highlighted in green.

EAHP Survey Questions
Section 2: Selection, Procurement and Distribution
S21 Our hospital has clear processes in place around the procurement of medicines. (94% of responses were positive.)
S212 Were hospital pharmacists involved in the development of these? (93% of all responses were positive.)
S214 Which processes were pharmacists involved in?
S22 The pharmacists in our hospital take the lead in developing, monitoring, reviewing and improving medicine use processes and the use of medicine related technologies. (82% of all responses were positive.)
S23 Do you have a formulary in place in your hospital (79% of all responses were positive.)
S232 The pharmacists in our hospital coordinate the development, maintenance and use of our formulary. (92% of all responses were positive.)
S234 How would you categorise the level of influence your pharmacists have over the formulary?
S235 What kinds of evidence do you use for development and maintenance of the formulary?
S24 Procurement of non-formulary medicines in our hospital is done to a robust process. (85% of all responses were positive.)
S242 Has a written complaint ever been made to your hospital about a patient missing a dose of a critical medicine? (72% of all responses were positive.)
S25 The pharmacy in our hospital has contingency plans for medicines shortages. (67% of all responses were positive.)
S252 Have you had reason to contact the medicines authority in your country because of medicines shortages? (40% of all responses were positive.)
S2.5.3 What was the reason(s) for contacting the medicines authority due to medicines shortage?
S26 The pharmacy in our hospital takes responsibility for all medicines logistics, including for investigational medicines. (88% of all responses were positive.)
S262 For which of these do your pharmacies have responsibility? (applies to all medicines, including investigational medicines)
S27 Which of these statements are true in your hospital?
S272 Were pharmacists involved in producing this policy? (71% of all responses were positive.)
Section 5: Patient Safety and Quality Assurance
S52 Our hospital has appropriate strategies to detect errors and identify priorities for improvement in medicines use processes. (82% of all responses were positive.)
S522 Were pharmacists involved in approving these procedures? (80% of all responses were positive.)
S524 In the past three years have you undertaken an audit to identify priorities for improvement in medicines use processes? (58% of all responses were positive.)
S526 What have you done with the results?
S53 Does your hospital have a quality assessment programme? (69% of all responses were positive.)
S532 Is this quality assessment programme internal or external?
S533 Our hospital acts on these reports to improve the quality and safety of our medicines use processes (96% of all responses were positive.)
S535 For which parts of your service do you use the quality assessment programme?
S54 The pharmacists in our hospital report adverse drug reactions. (65% of all responses were positive.)

S543 Our hospital has a process for reporting adverse drug reactions and the staff report these regularly (67% of all responses were positive.)
S545 The pharmacists in our hospital report medication errors. (62% of all responses were positive.)
S547 Approximately how many medication errors (e.g. were reported by each of your pharmacists (on average) last year?
S548 What have you done with the results of these medication error reports?
S55 The pharmacists in our hospital use evidence-based approaches to reduce the risk of medication errors. (78% of all responses were positive.)
S552 Our hospital pharmacy uses computerised decision support to reduce the risk of medication errors. (47% of all responses were positive.)
S554 Our hospital pharmacy uses computerised decision support in:
S56 Our hospital has appropriate procedures in place to identify high-risk medicines and minimise the risks from their use in the following areas. (88% of all responses were positive.)
S57 The medicines administration process in our hospital ensures that transcription steps between the original prescription and the medicines administration record are eliminated. (70% of all responses were positive.)
S58 Our patient's health records accurately record all allergy and other relevant medicine-related information. (89% of all responses were positive.)
S582 Who audits the information held in patient records/medication charts?
S583 Have there have been incidents resulting in patient harm that may have been prevented if the pharmacist had been able to access the patient records/medication charts? (63% of all responses were positive.)
S59 The pharmacists in our hospital ensure that the information needed for safe medicines use is accessible at the point of care. (82% of all responses were positive.)
S593 Have there have been incidents resulting in patient harm that may have been prevented if the information provided at the point of care had been improved? (70% of all responses were positive.)
S510 Medicines in our hospital are packaged and labelled to assure they are safely optimised for administration. (85% of all responses were positive.)
S5103 Hospital pharmacists are involved in processes of secure stocking and dispensing of drugs on wards, including a policy for LASA drugs and regular inspections (75% of all responses were positive.)
S511 Which best describes the traceability of medicines dispensed by our pharmacy? (96% of all responses were positive.)
Section 6: Education and Research
S62 The pharmacists in our hospital are able to demonstrate their competence to perform their roles. (82% of all responses were positive.)
S621 How do the pharmacists in your hospital demonstrate their competence?
S63 Pharmacists in our hospital are able to engage in relevant educational opportunities. (90% of responses were positive.)
S632 What educational opportunities are available to your pharmacists?
S64 The pharmacists in our hospital routinely publish hospital pharmacy practice research. (32% of all responses were positive.)
S641 How many external presentations/papers/posters were submitted last year by your pharmacy?
S642 How often are internal presentations given by your pharmacy?
S644 Have you or your pharmacists engaged in development of local/national guidelines? (57% of all responses were positive.)

B3: Focus on those statements where the barriers to implementation were greatest

1. Research

EAHP Statement 6.4: Hospital pharmacists should actively engage in and publish research, particularly on hospital pharmacy practice. Research methods should be part of undergraduate and postgraduate training programmes for hospital pharmacists.

This statement received the least amount of positive responses, which is consistent with the baseline survey where many respondents said they did not have time to conduct research. Figure 1 shows the percentage of respondents who gave a positive response when asked if the pharmacists in their hospital routinely publish research. With the exception of Latvia, the Netherlands and Spain, less than half of the respondents gave a positive response.

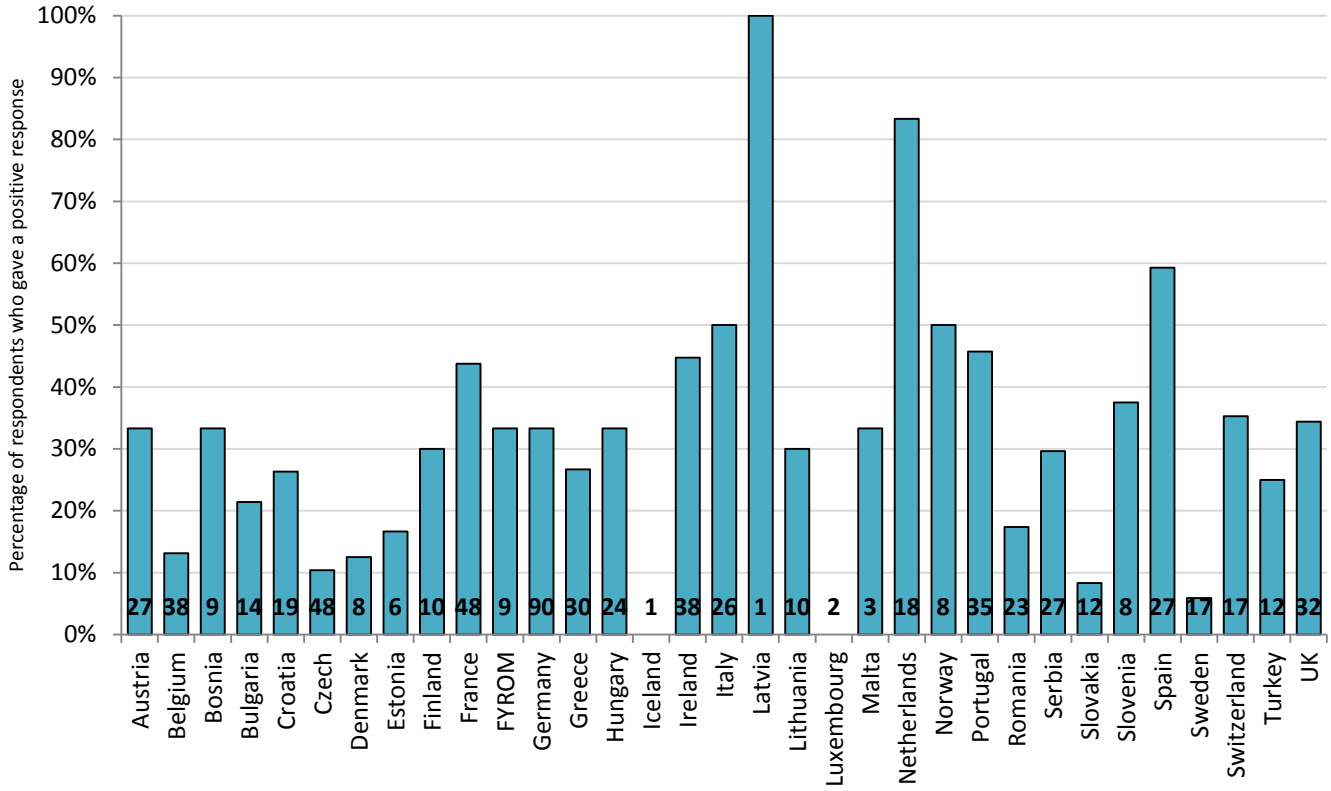


Figure 1 Percentage of respondents who gave a positive response to the statement 'The pharmacists in our hospital routinely publish hospital pharmacy practice research'.

To further understand how much research was being conducted, respondents were asked how many external papers/presentations and posters were submitted last year by their pharmacy. The results are shown in Figure 2 in the form of a stacked bar chart to show the difference between countries. The most frequent overall responses were none (265 across all countries) and '1 to 2' (245 across all countries). The proportion of responses indicating 3 or more publications is typically low across countries, although this varies and is a lot higher in some countries. The results for Spain, for example, show 52% of respondents answered 3 or more publications.

Participants were also asked how often internal presentations are given by their pharmacies (Figure 3). Results to this question are similar to Figure 2; the most frequently given responses are 'Never' and 'Less often than monthly'. Note that the countries who indicate they are involved in internal presentations more frequently (such as Spain, Norway and the Netherlands) also indicate in Figure 1 they are experiencing fewer barriers to publishing research.

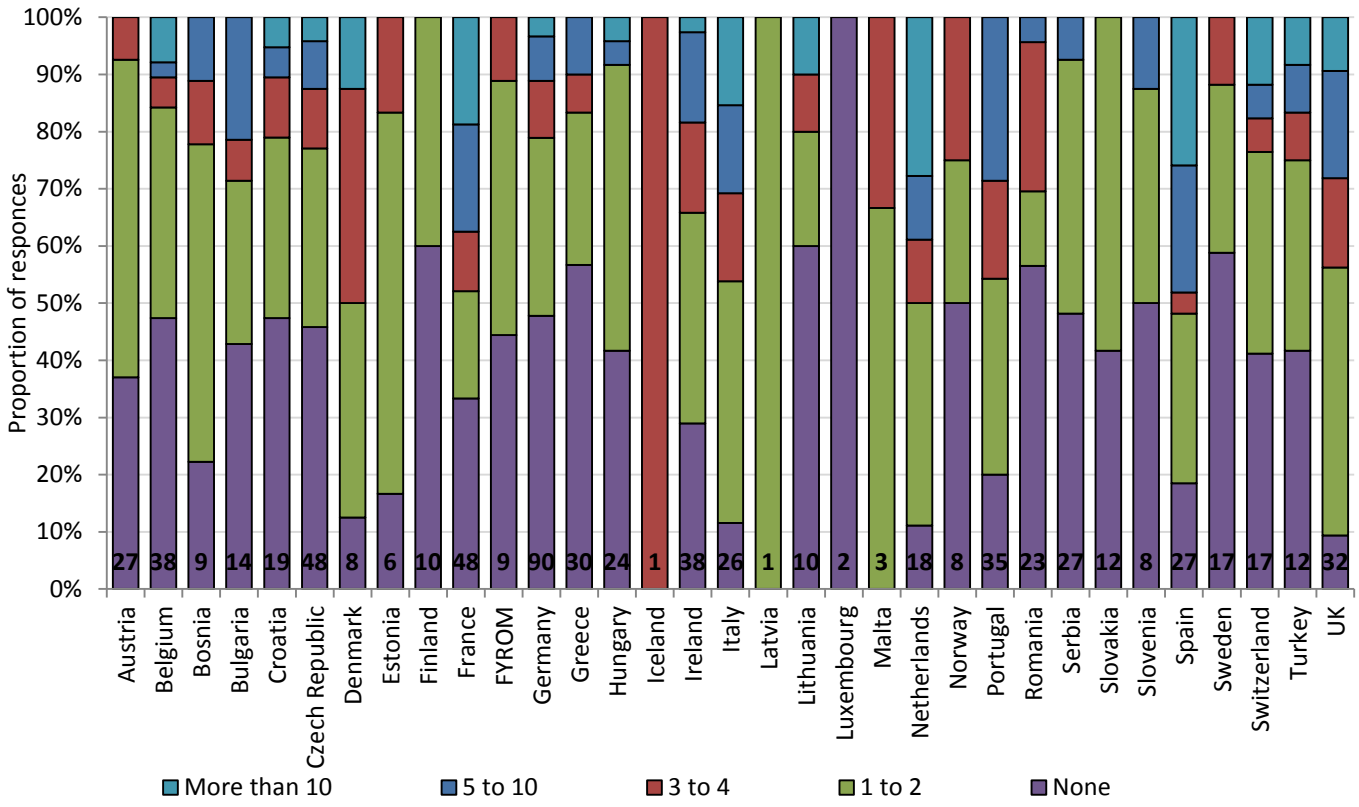


Figure 2 Results of the question 'How many external presentations/papers/posters were submitted last year by your pharmacy?'

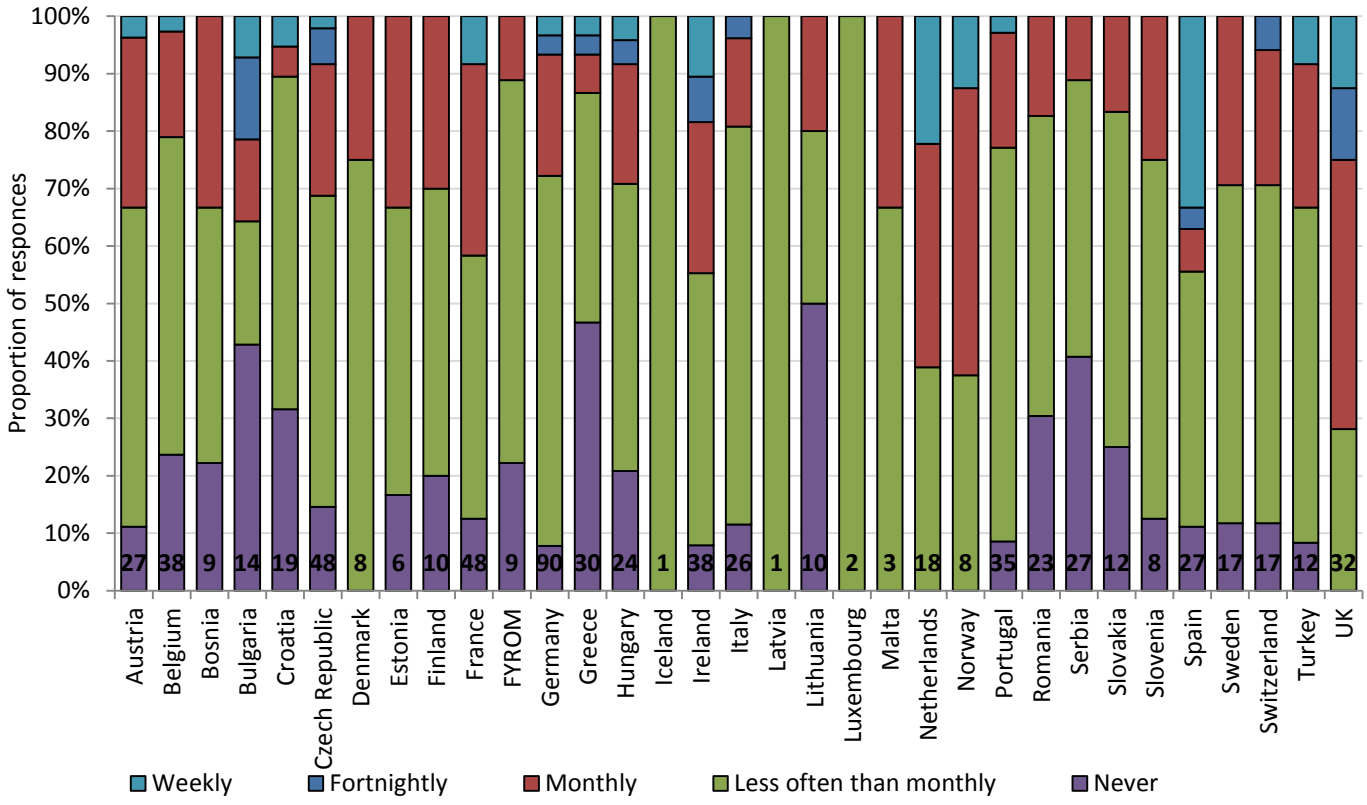


Figure 3 Results of the question 'How often are internal presentations given by your pharmacy?'

Figure 4 shows the overall responses to the question 'What are the barriers to being able to publish more often?' The most frequent response given by a large margin was 'We would like to do this but have limited capacity' (69% of all participants who completed the survey said they have limited capacity to conduct research). There were similar results in the free-text responses to this question in last year's survey, with replies indicating pharmacists don't have enough time or staff to conduct any research.

There are also a large amount of respondents saying they have limited capability, indicating they might not have staff with sufficient knowledge or experience in conducting research and getting it published. There were also a large number of respondents saying conducting research is not considered a priority by their managers. Some of the comments listed in the 'Other' category were a lack of time (13 comments), a lack of interest in doing research (6 comments) and a lack of experience in writing publications (5 comments).

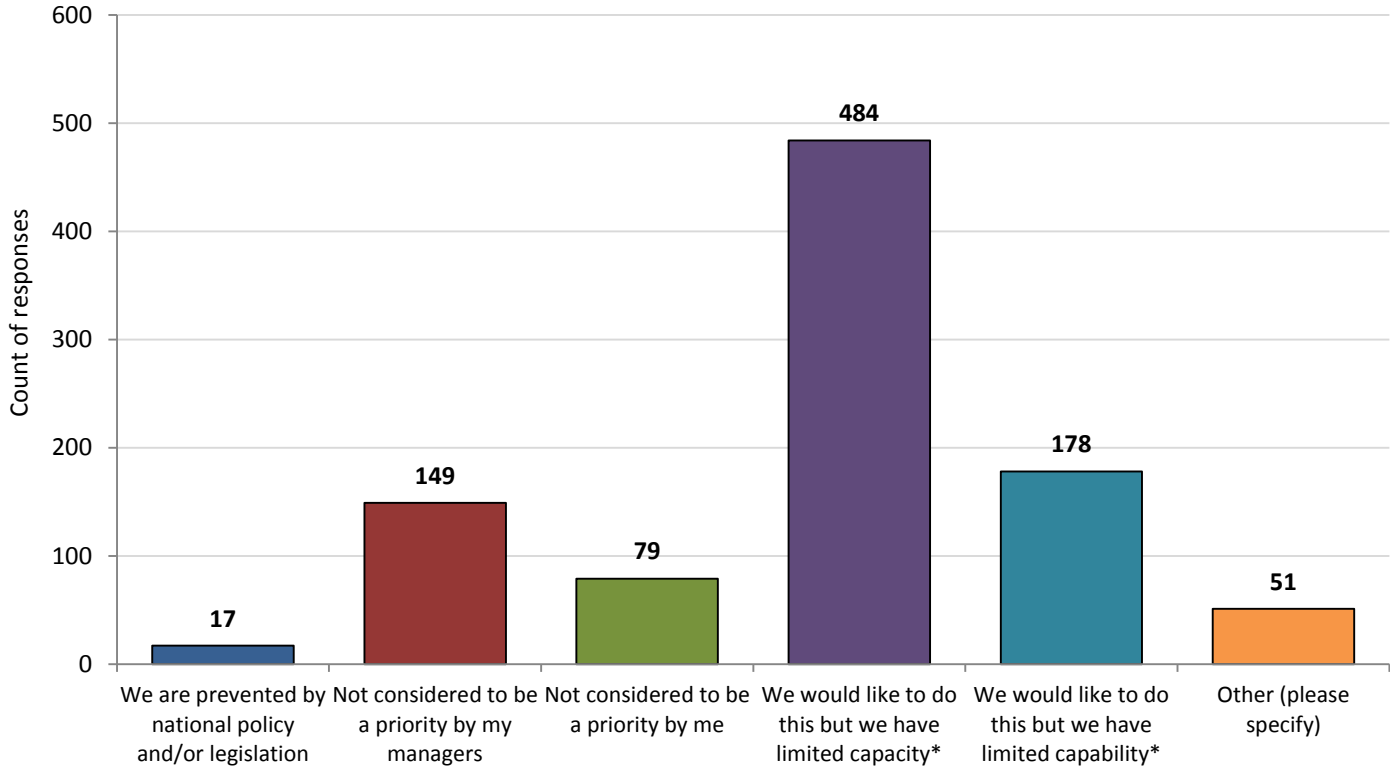


Figure 4 Overall results of the question 'What is preventing research from being published more often?

Figure 5 shows the results of the question broken down by country. In most countries the primary barrier is capacity, although there are a small number of countries the most commonly given option is something else. For example Slovakia has more responses saying it is not considered to be a priority by their managers, and in Lithuania the most common response is lack of capability.

The mean percentage of responses that gave a positive response when asked if the pharmacists in their hospital routinely publish research has decreased compared to the results from last year's survey; from 49% last year to 32% this year. When looking at these numbers by country, 25 of the 33 countries involved in this year's survey has given a less positive response to this question this year.

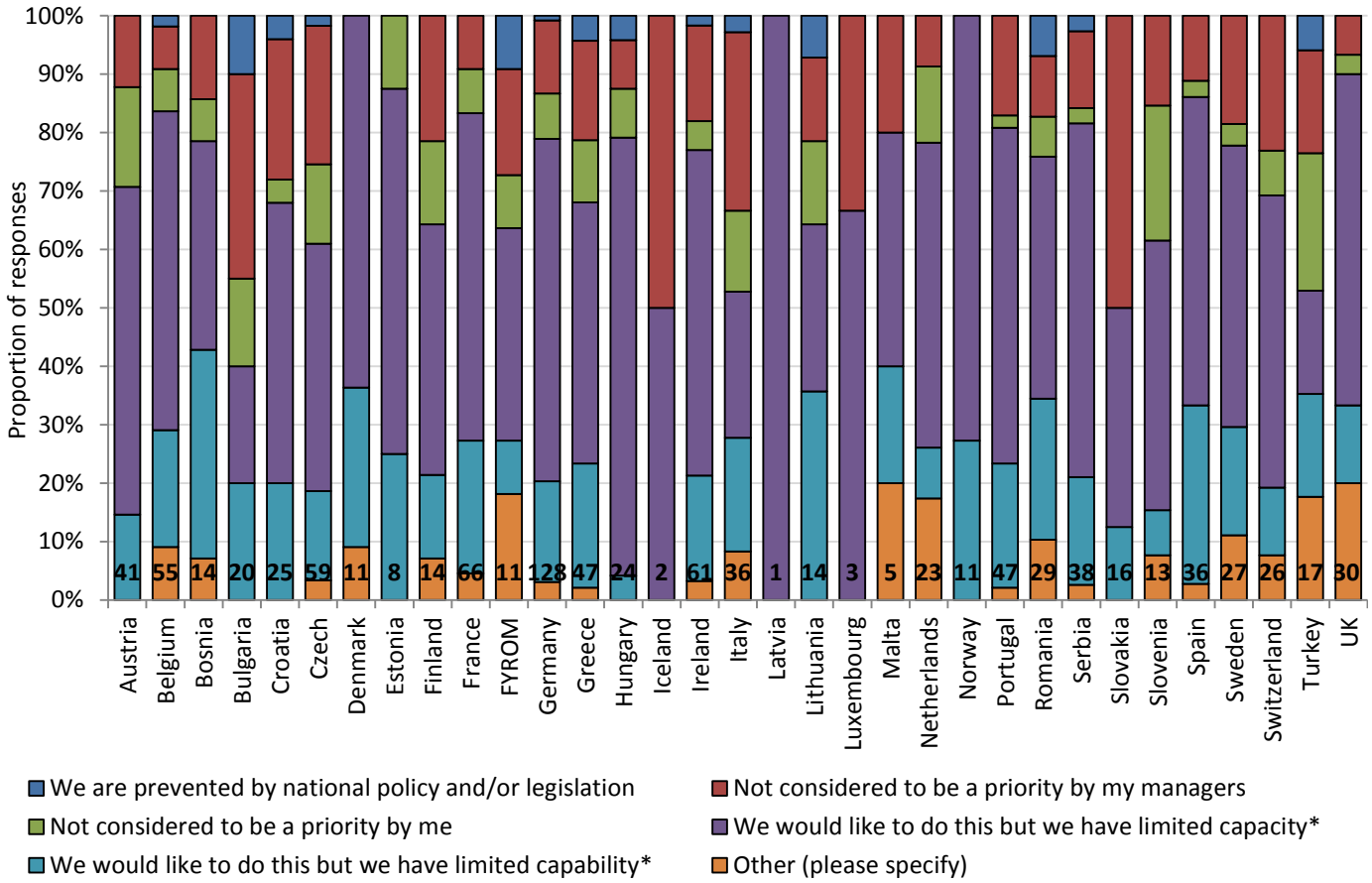


Figure 5 Results of the question 'What is preventing research from being published more often? (Grouped by country)

2. Medication shortages

EAHP Statement 2.5: Each hospital pharmacy should have contingency plans for shortages of medicines that it procures.

Figure 6 shows that very few countries have **not** had to contact their medicines authority regarding medicine shortages; the mean value for countries is 60% of participants saying they have had to. 100% of participants answered 'Yes' in Estonia, Iceland and Luxembourg, although these countries also had a small amount of total responses.

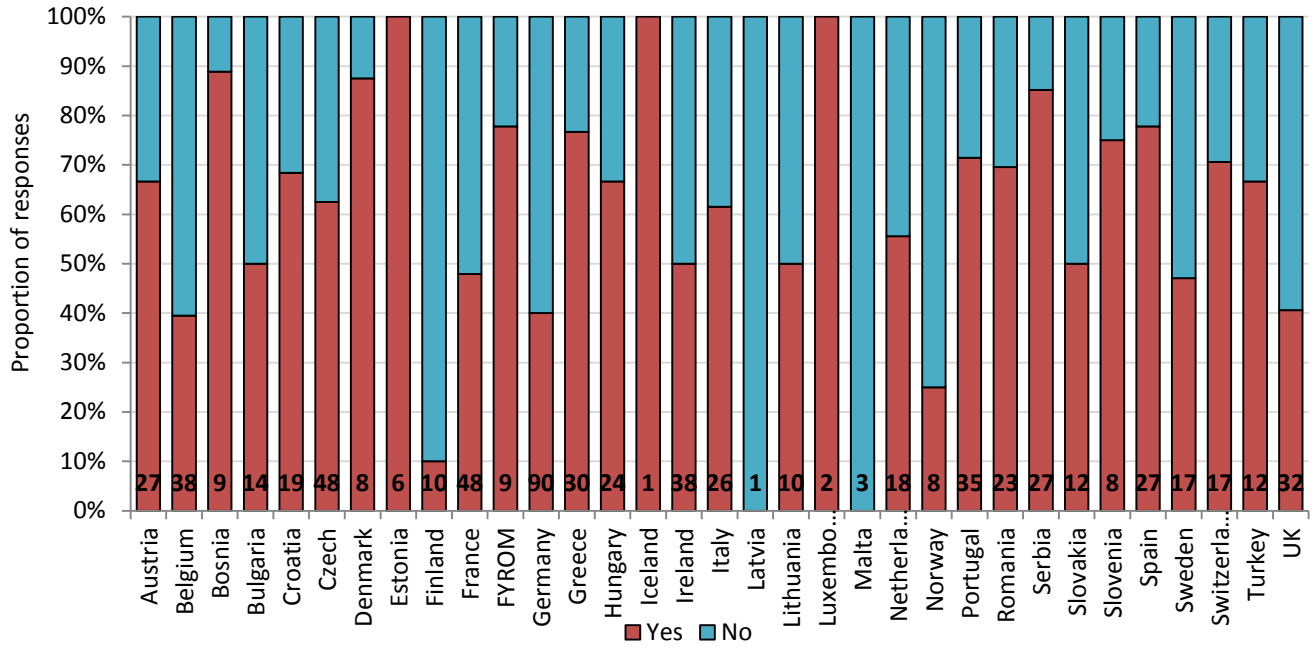


Figure 6 Results of the question 'Have you had reason to contact the medicines authority in your country because of medicines shortages?' (Note: In this case, 'No' is considered to be the positive response.)

The participants who answered 'Yes' were asked what specific reason they had for contacting the medicines authority, as seen in Figure 7. All three of the listed choices were reported with similar frequencies, and upon further investigation it was revealed that 123 of the respondents answering this question selected all 3 options, implying the pharmacists had been trying to get as much information as possible from their medicines authority. The majority of the 44 'Other' comments were regarding acquiring alternate medicines, alternate suppliers or approval to use imported drugs.

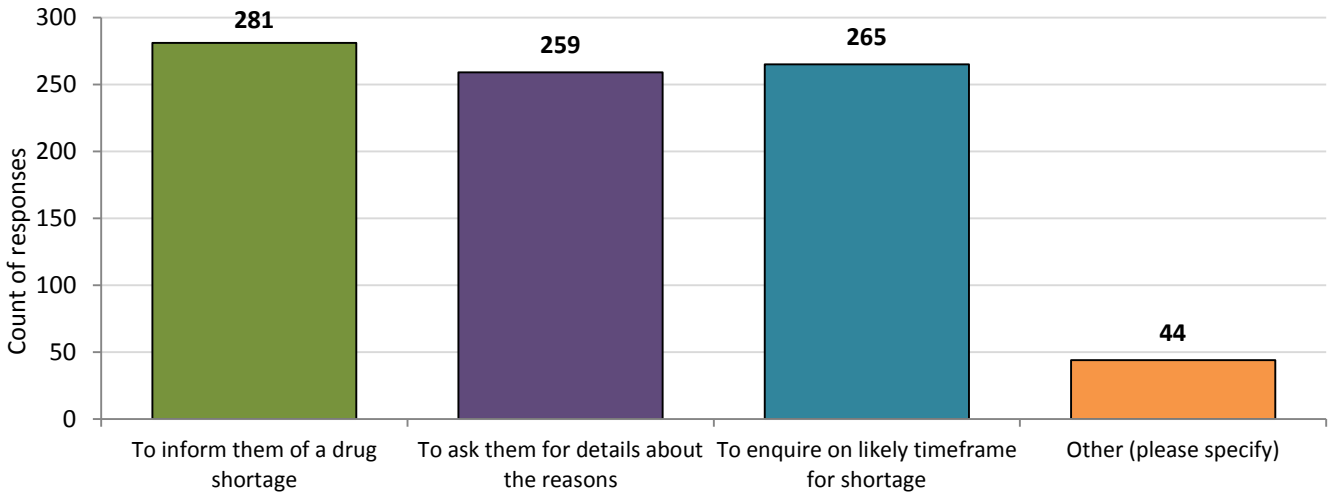


Figure 7 Overall results of the question 'What was the reason(s) for contacting the medicines authority due to medicines shortage?'

Figure 8 shows that reasons for contacting the medicines authority are largely consistent between countries.

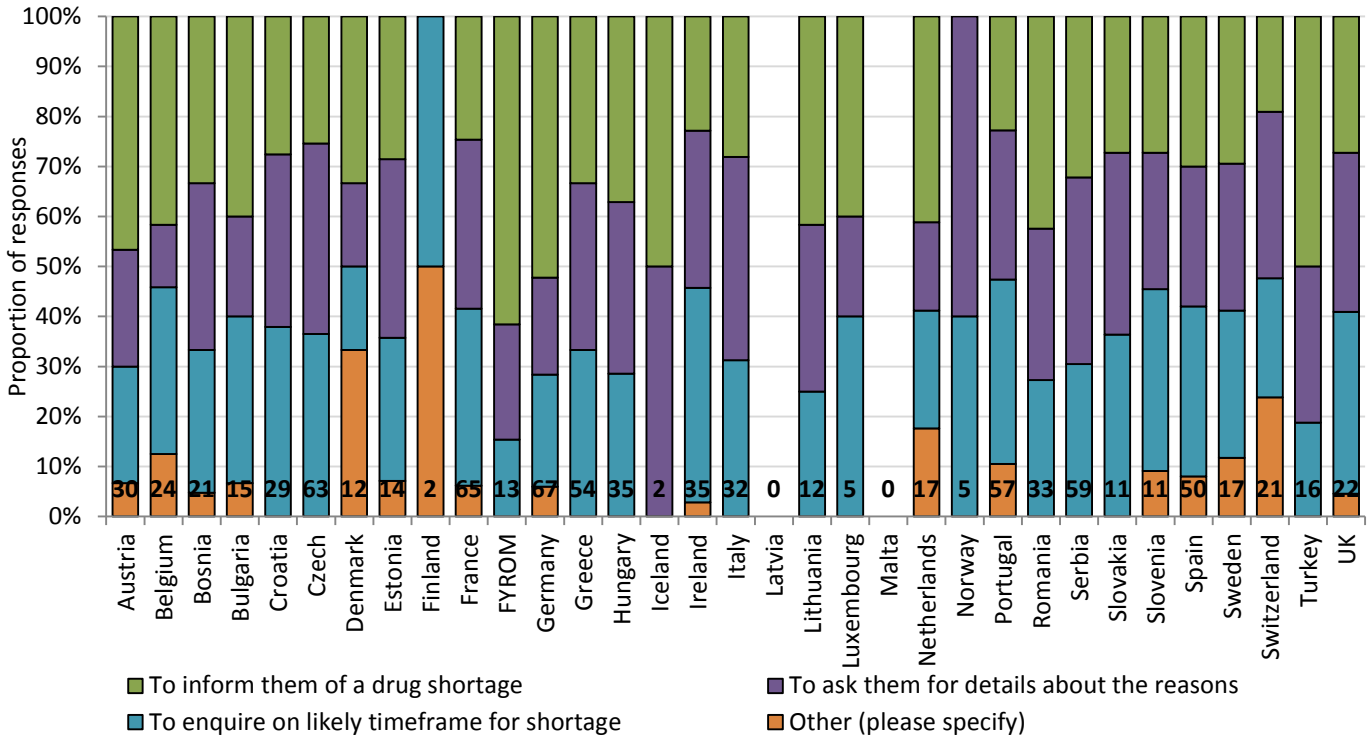


Figure 8 Results of the question 'What was the reason(s) for contacting the medicines authority due to medicines shortage?' (Grouped by country)

Participants were also asked if the pharmacies in their hospital had contingency plans for medication shortages (Figure 9). The mean response for countries was 67% positive, slightly lower than last year's result of 70%. The range of responses between countries was very high for this question; some reported over 90% positive responses, and others less than 10%.

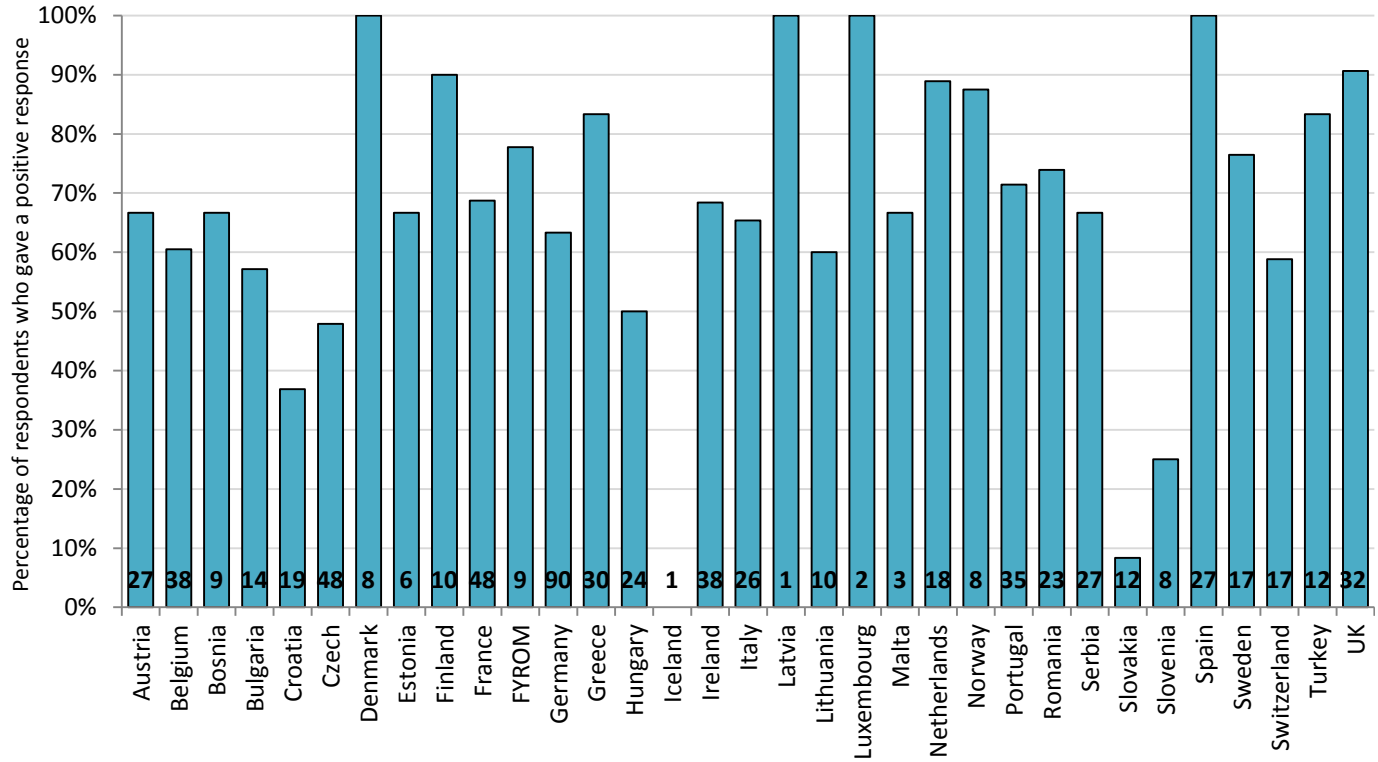


Figure 9 Percentage of respondents who gave a positive response to the statement 'The pharmacy in our hospital has contingency plans for medicines shortages'.

When asked what are the barriers to making contingency plans for medication shortages, the most frequent response was lack of capacity (106 responses), as seen in Figure 10. Not considered to be a priority by my managers had 69 responses, with the remaining options receiving a similar amount. A common theme from the 'Other' comments suggest hospitals treat each shortage individually, and reactively, as one plan does not fit all situations (13 comments under this theme). 7 comments suggest they do not find it necessary to do so.

The results are shown in Figure 11, grouped by country. This shows that being prevented by national policy is affecting some countries, and not being considered to be a priority by the participant in several others.

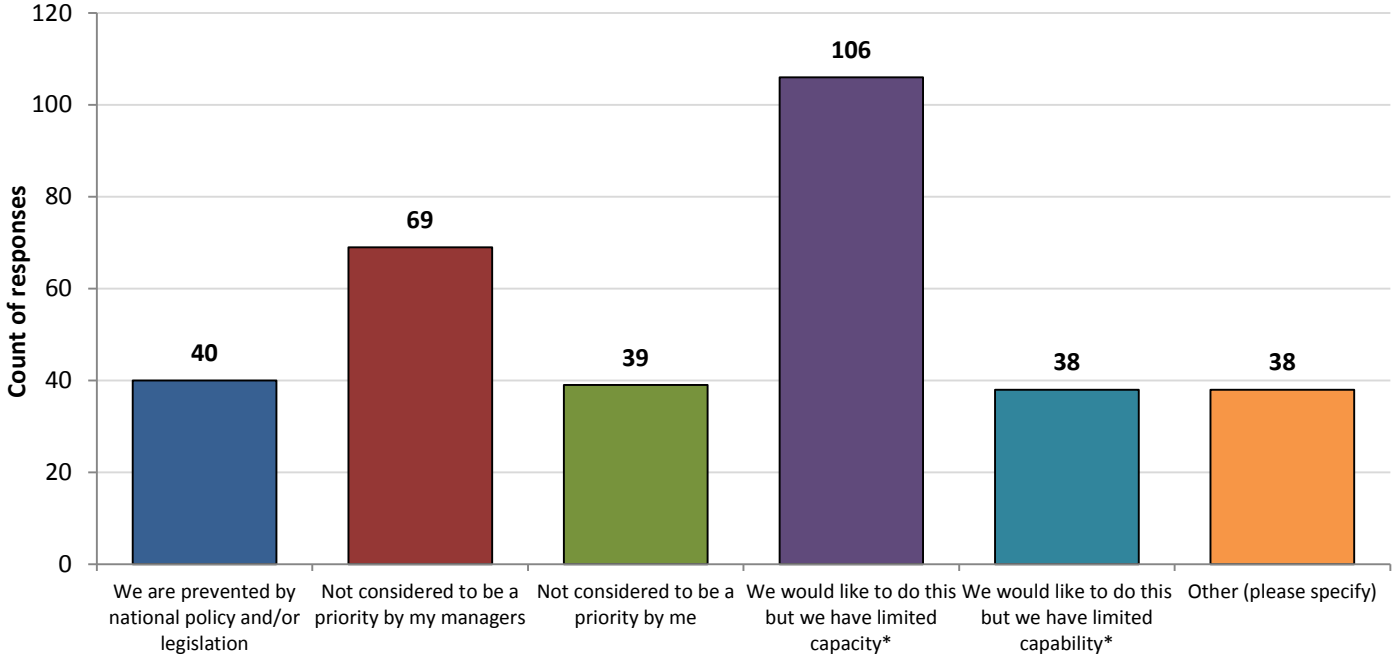


Figure 10 Overall results of the question 'What is preventing having contingency plans for medicines shortages'

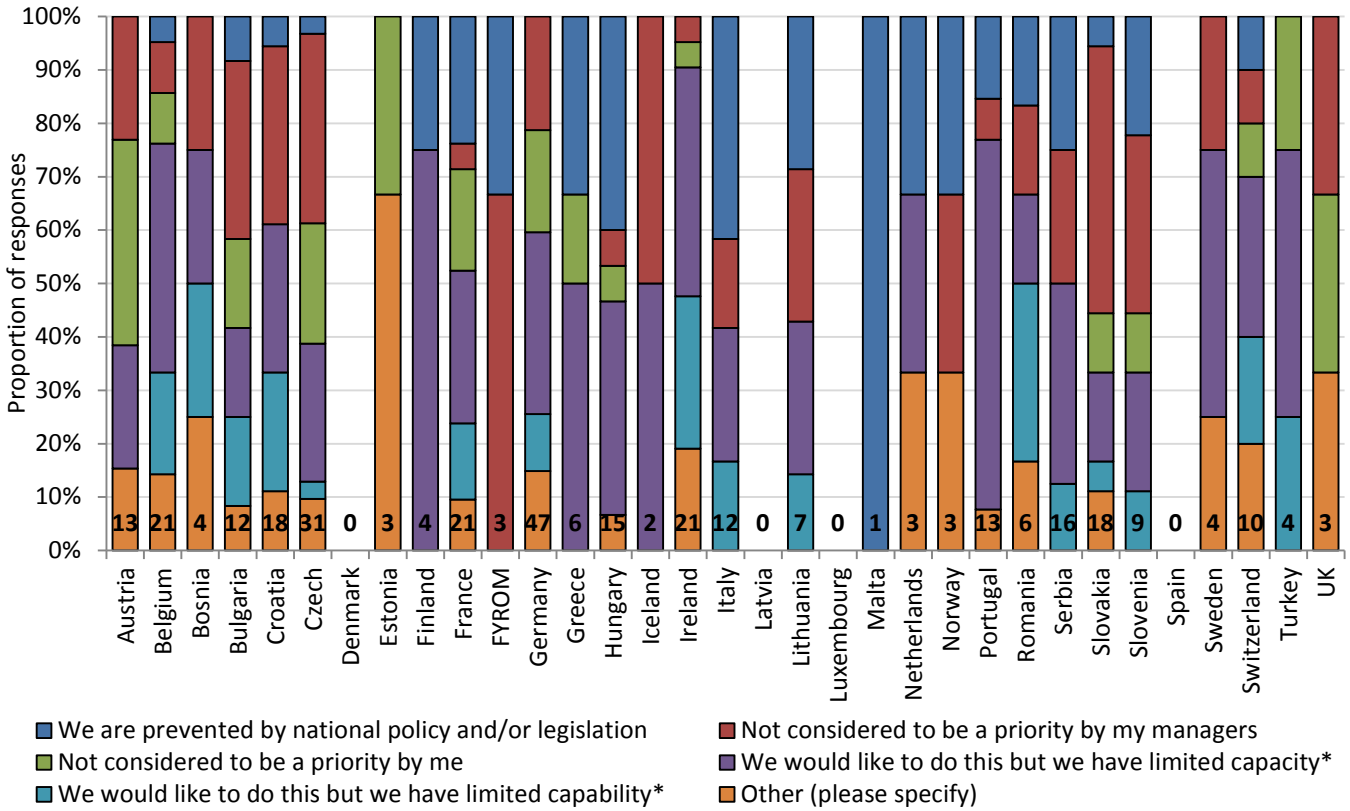


Figure 11 Results of the question 'What is preventing having contingency plans for medicines shortages' (Grouped by country)

3. Use of computerised decision support to reduce the risk of medication errors

EAHP Statement 5.5: Hospital pharmacists should help to decrease the risk of medication errors by disseminating evidence based approaches to error reduction including computerised decision support.

When asked if their hospital pharmacy uses computerised decision support to reduce the risk of medication errors, Figure 12 shows the response was mixed. Although some countries indicate they do this activity, the results show the majority of countries (20) have less than half of respondents using computerised decision support to reduce the risk of medication errors.

The results show that the mean percentage of positive responses for a country is 47%, down from the 61% observed in last year's survey.

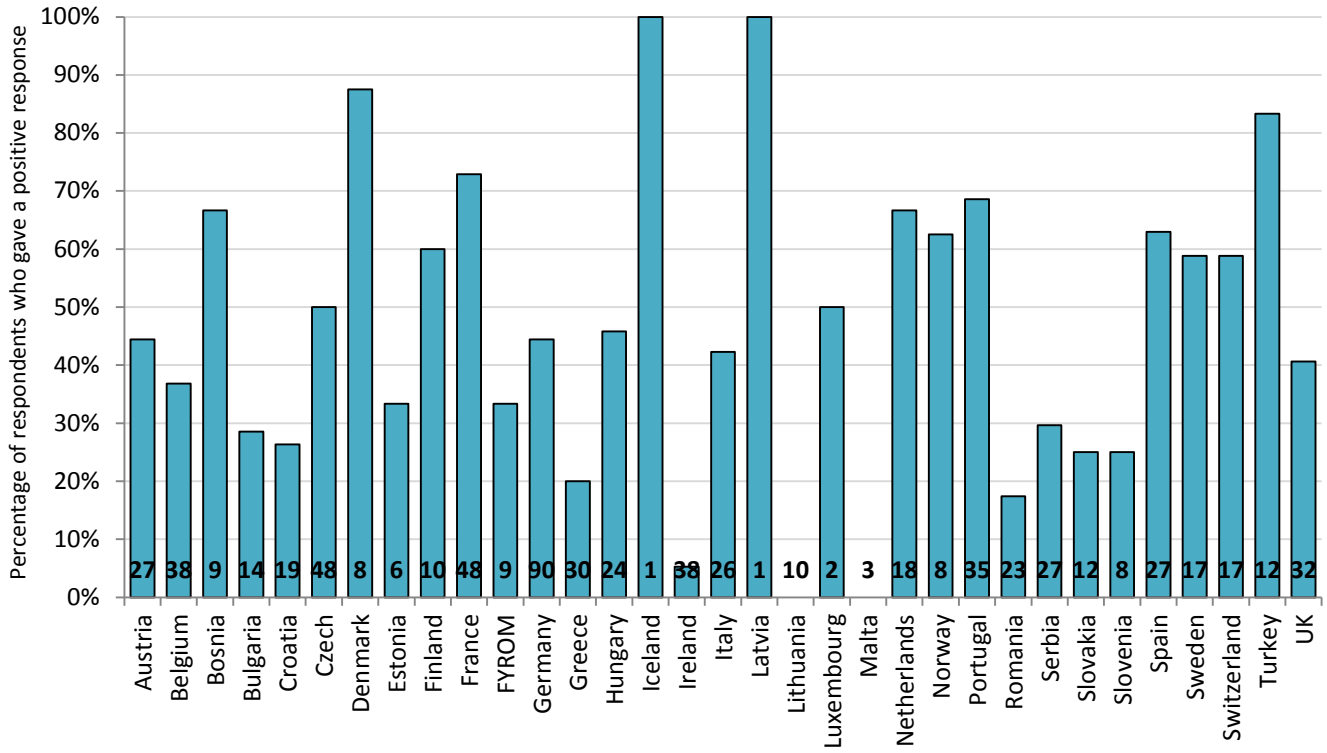


Figure 12 Percentage of respondents who gave a positive response to the statement 'Our hospital pharmacy uses computerised decision support to reduce the risk of medication errors'.

Participants who gave a positive response to the question were asked a follow up question to see what areas of pharmacy they use computerised decision support in. The results can be seen in Figure 13. The most frequently given response is 'clinical pharmacy services' (262 total responses), and this is also the main reason given by most individual countries. The remaining options have also been selected relatively frequently; cytoxics (168 total responses), compounding (128 total responses) and parenteral nutrition/aseptic compounding (107 total responses).

Very few people selected 'Other' (23 total responses). Some of the comments given here include drug interactions, dispensing to patients and to support practitioners who prescribe and administer medicines.

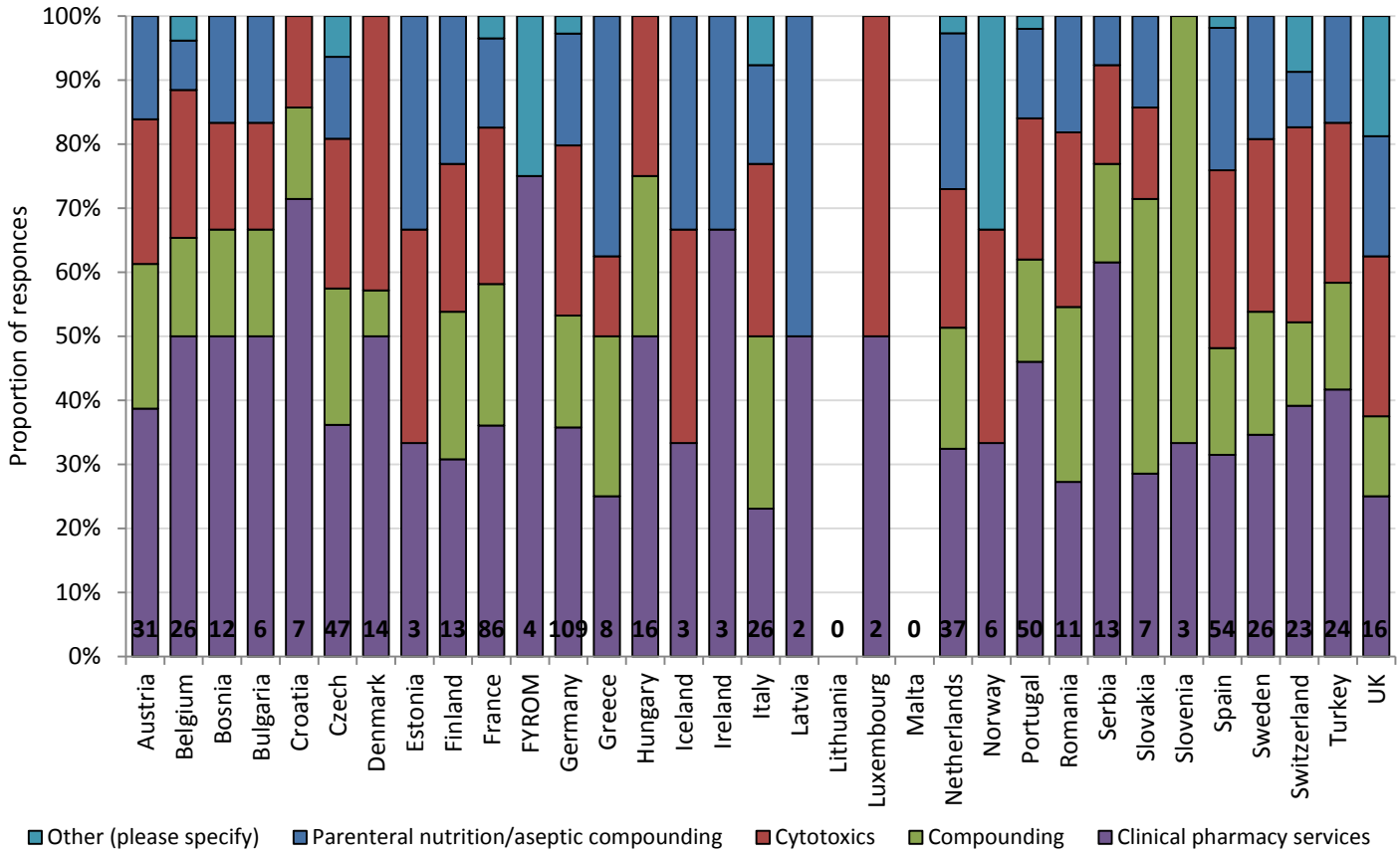


Figure 13 Results of the question 'Which areas does your hospital pharmacy use computerised decision support in?'

Participants who gave a negative response when asked if their hospital pharmacy uses computerised decision support were asked to identify the barriers that were preventing this. Figure 14 shows the biggest barriers to implementing computerised decision support are limited capacity (166 total) and that it is not considered a priority by the respondent's managers (147 total). Very few people have said they don't consider it a priority (17 total), indicating this is something a lot of participants may want to be implemented.

The most common response from the 'Other' category was the hospital is currently in the process of setting up such a system (21 comments). There are 19 comments saying they do not have sufficient IT support or capability to setup or maintain a system. The lack of finance to setup a system was also given (8 comments). There were 7 comments saying the hospital has a similar system set up, but it is the clinicians that use it, and not the hospital pharmacists (7 comments).

Figure 15 shows the results of the question grouped by country. This shows that the reasons given as to why computerised decision is not being used are not very consistent between countries. Some countries list limited capability as the main barrier, but others have no issue with this. Several countries say the main barrier is not being considered a priority by managers, but there are several countries that do not report this as an issue (Romania, Turkey and the UK)

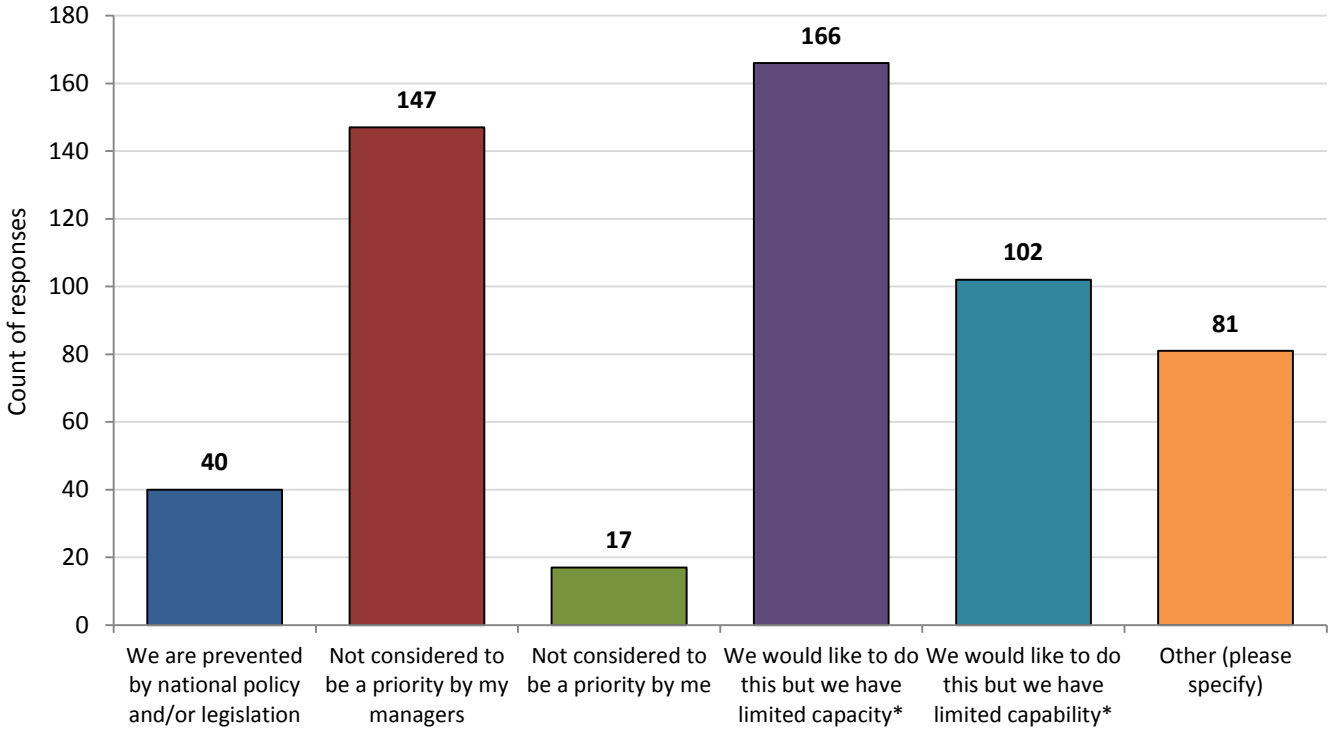


Figure 14 Overall results of the question 'What is preventing the use of computerised decision support to reduce the risk of medication errors?

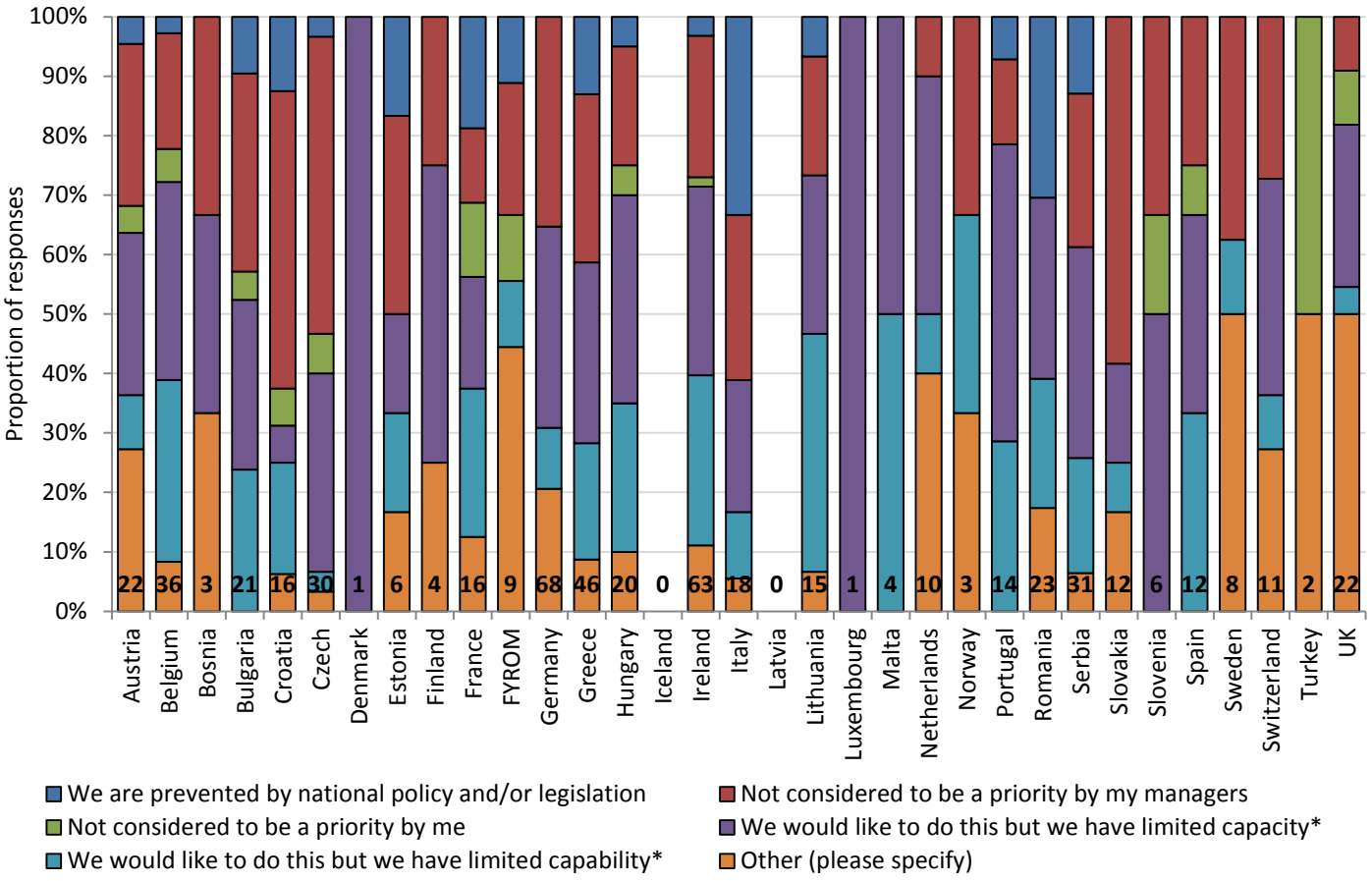


Figure 15 Results of the question 'What is preventing the use of computerised decision support to reduce the risk of medication errors?' (Grouped by country)

4. Involvement in the development of local/national guidelines

Question 6.4.4: Have you or your pharmacists engaged in development of local/national guidelines?

Response between countries when asked if pharmacists are engaged in the development of local/national guidelines was varied. Figure 16 suggests this activity is commonplace in some countries like Luxembourg, Denmark and the UK, but less commonplace in others, for example, Serbia and Bulgaria. This question is new to this year's survey, so there is no baseline data to compare to.

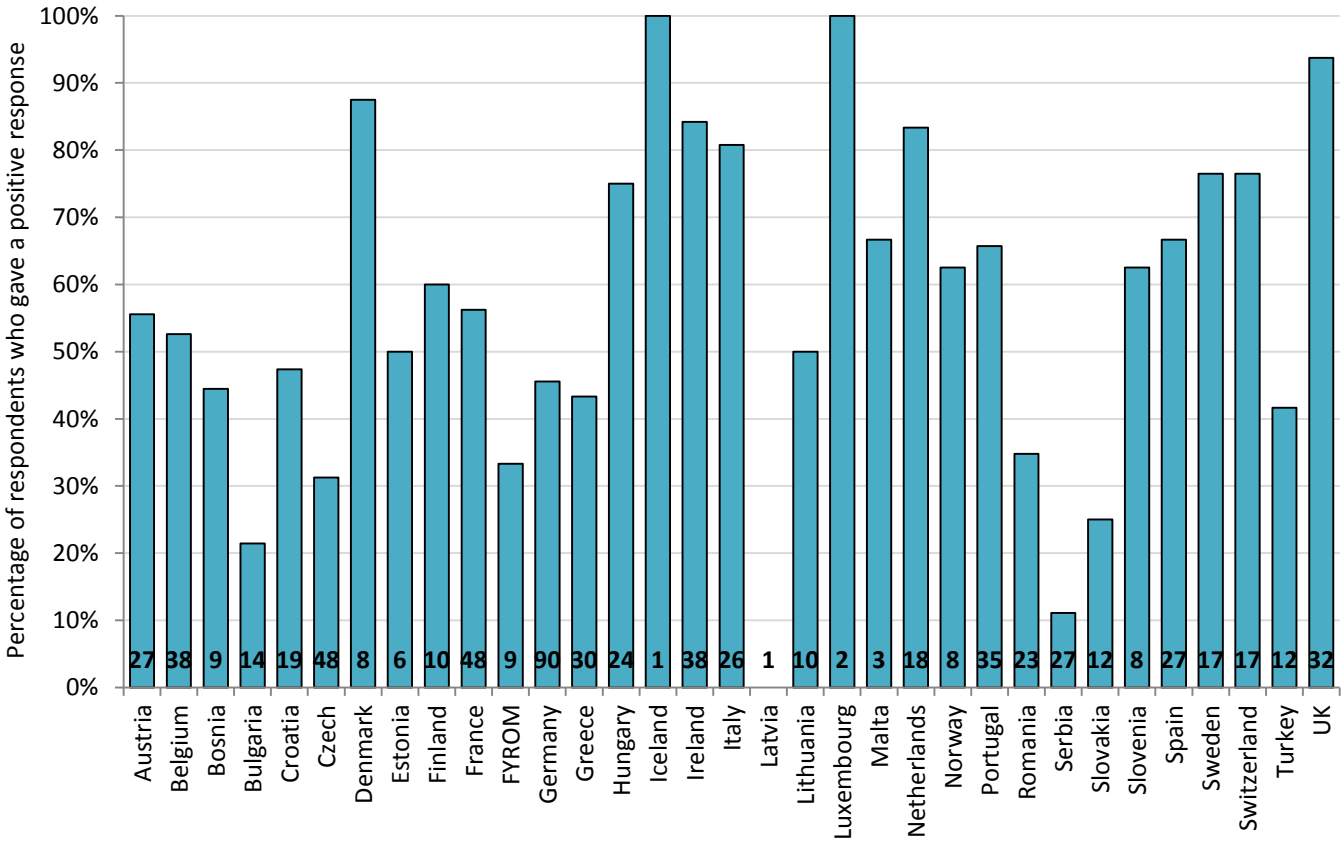


Figure 16 Percentage of respondents who gave a positive response to the question 'Have you or your pharmacists engaged in development of local/national guidelines?'

Again the most frequent response when asked what is preventing pharmacists from engaging in the development of local guidelines is a lack of capacity (177 total responses), as seen in Figure 17. The second most common barrier had almost 100 less responses, and that is limited capability (78 total responses).

From the 'Other' category, the most common theme is that pharmacists are not valued, or invited to the process (7 comments). This is in agreement with data from last year's survey, where many pharmacists indicated they do not work in multidisciplinary teams, and often feel pharmacists are not valued as other medical personnel. There are 2 comments saying they do not have time to be involved and 3 comments saying they do not know why pharmacists are not involved in the process.

Figure 18 shows how the results broken down by country. Limited capacity is seen to be the biggest barrier in most countries still, but note that the countries with the least positive responses in Figure 16 have all indicated they are prevented by national policy or legislation more frequently than other countries.

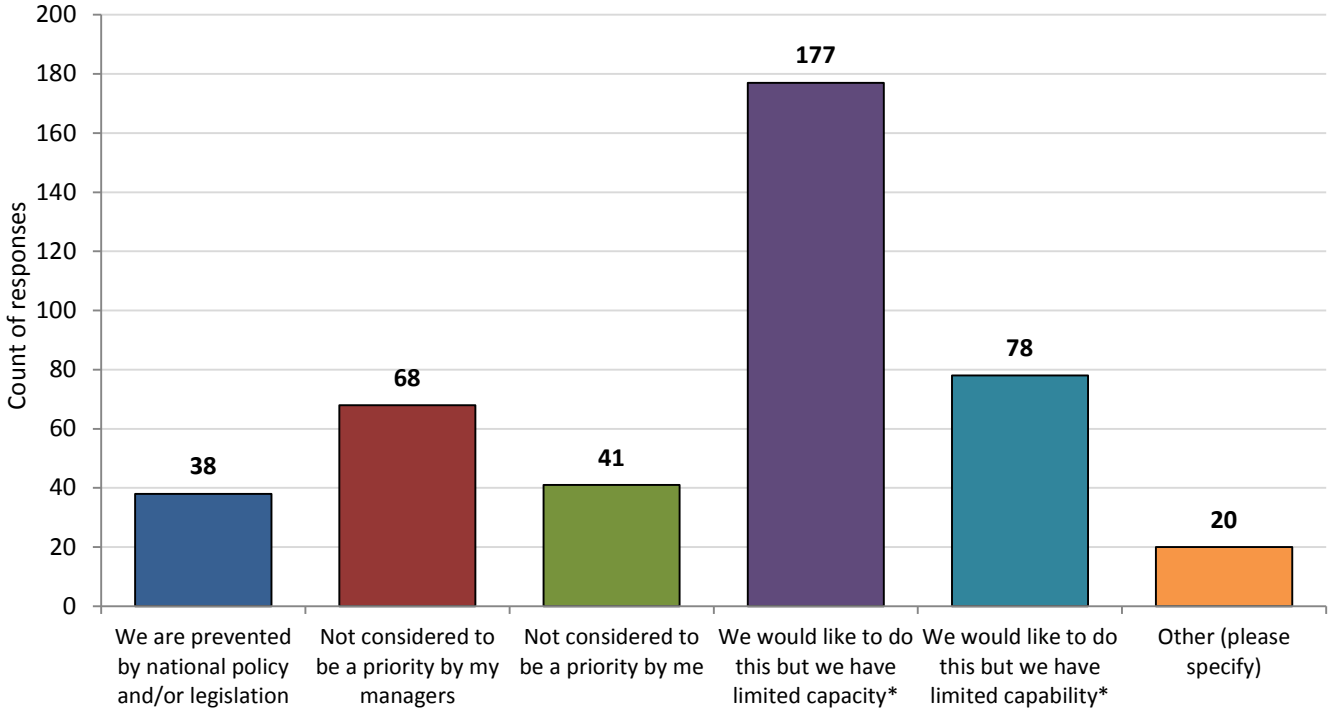


Figure 17 Overall results of the question 'What is preventing you or your pharmacists engaging in the development of local/national guidelines?'

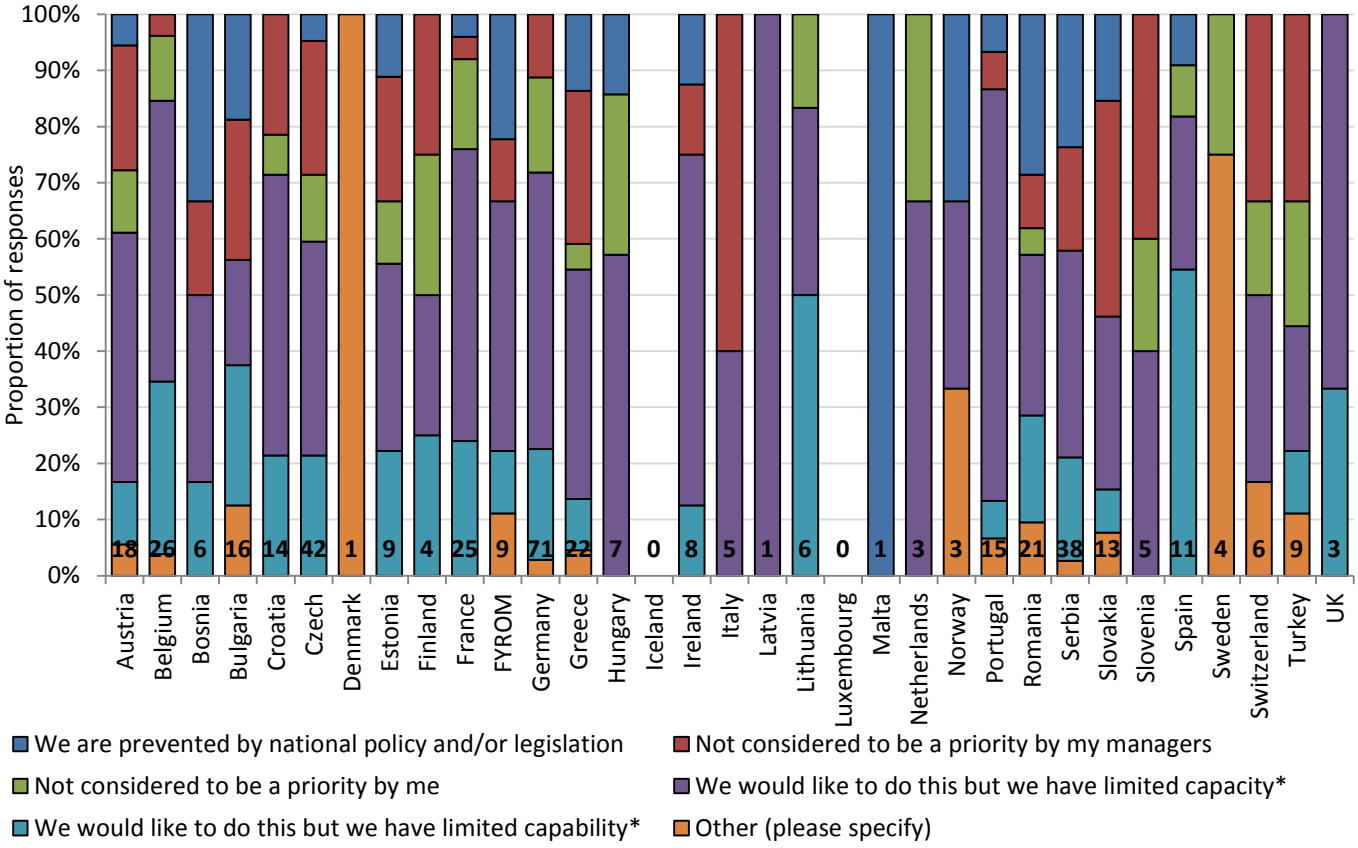


Figure 18 Results of the question 'What is preventing you or your pharmacists engaging in the development of local/national guidelines?' (Grouped by country)

5. Undertaking an audit to identify priorities for improvement in medicines use processes

EAHP Statement 5.2: Hospital pharmacists should ensure the development of appropriate quality assurance strategies for medicines use processes to detect errors and identify priorities for improvement.

When asked if an audit had been undertaken in the last three years to identify priorities in medicines use processes, the mean percentage of positive responses for a country was 58%. This question was not asked in last year's survey, so there is no data for comparison between years.

Figure 19 shows the results broken down by country, which shows over 90% of respondents from France, Luxembourg and the Netherlands report having conducted an audit in the last 3 years. Most other countries show a much smaller proportion of positive responses.

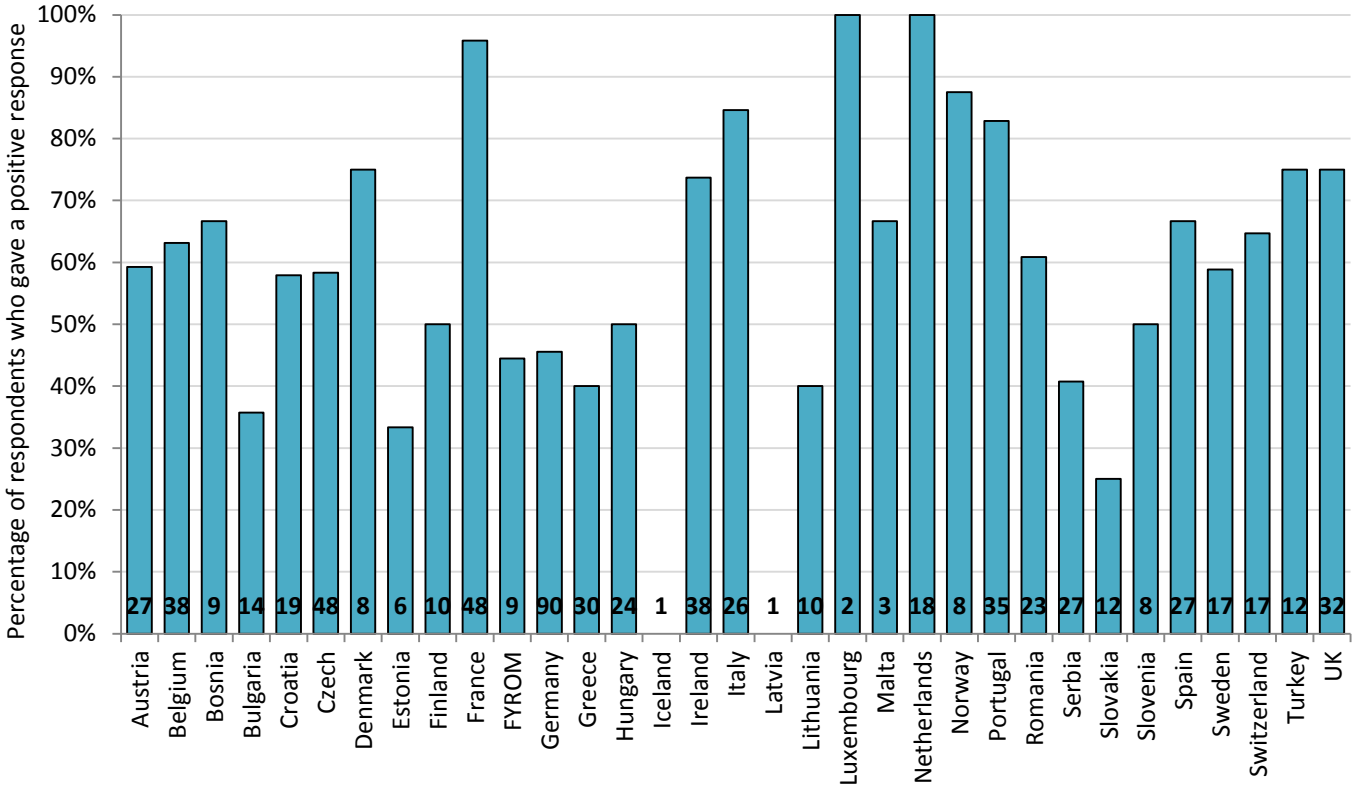


Figure 19 Percentage of respondents who gave a positive response to the question 'In the past three years have you undertaken an audit to identify priorities for improvement in medicines use processes?'

Participants who said they had conducted an audit within the last three years were then asked what they did with the results. Figure 20 shows the results of this, and it can be seen that the most common actions were writing a report for the hospital board (248 responses) and using the results for feedback to their team (233 responses). All of the listed options received over 100 responses, with the exception of using the reports for education on a regional/national level (69 responses).

Some of 'Other' comments include; the results are used for certification/accreditation, the results are used for feedback to a multidisciplinary team, and used as part of a business case for recruitment.

Figure 21 shows the results grouped by country, where it can be seen that each country uses the results for a variety of reasons. The proportion of responses for the different uses of the results seems to be fairly consistent between countries.

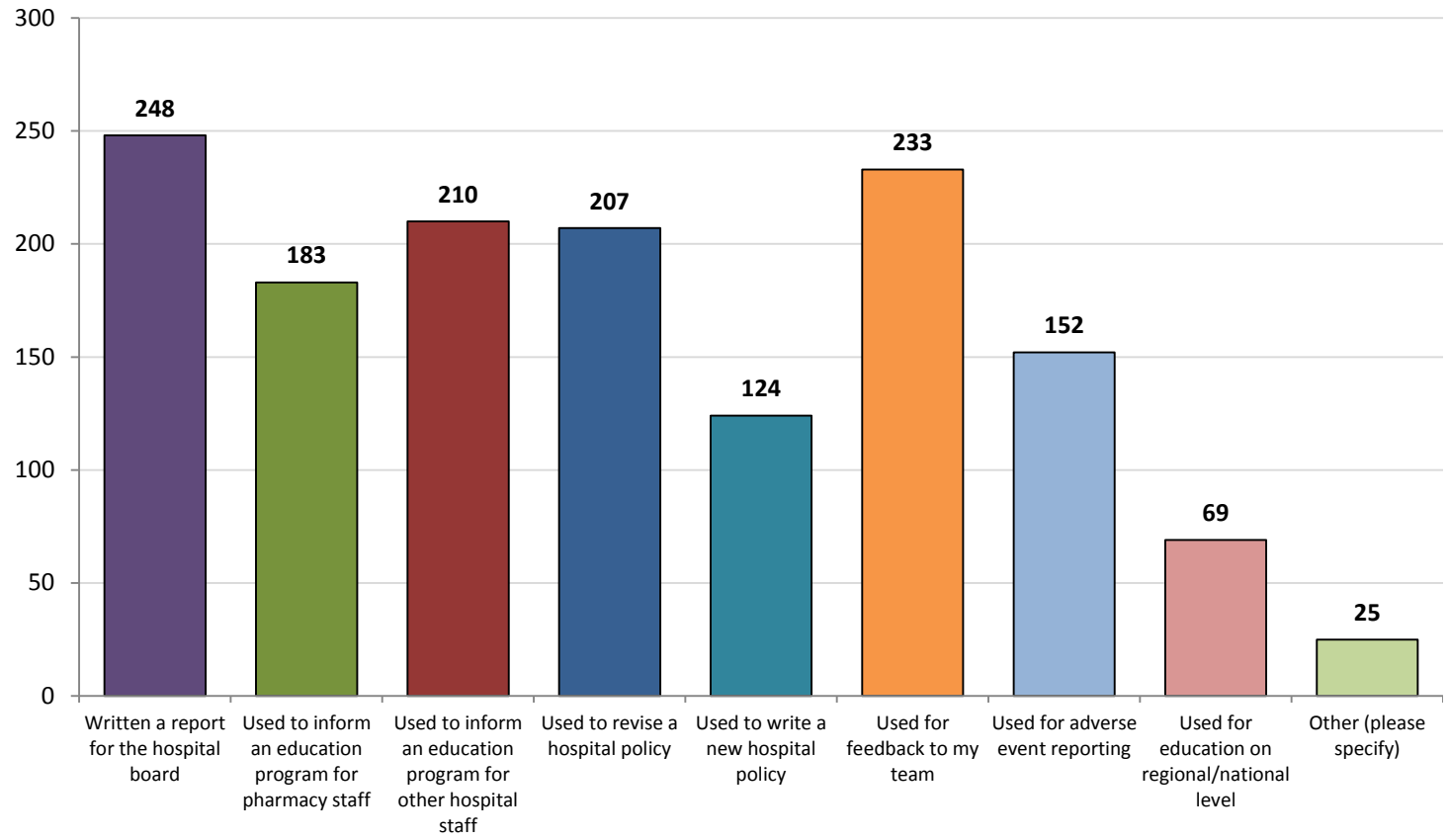


Figure 20 Results to the question 'What have you done with the results of the audit?'

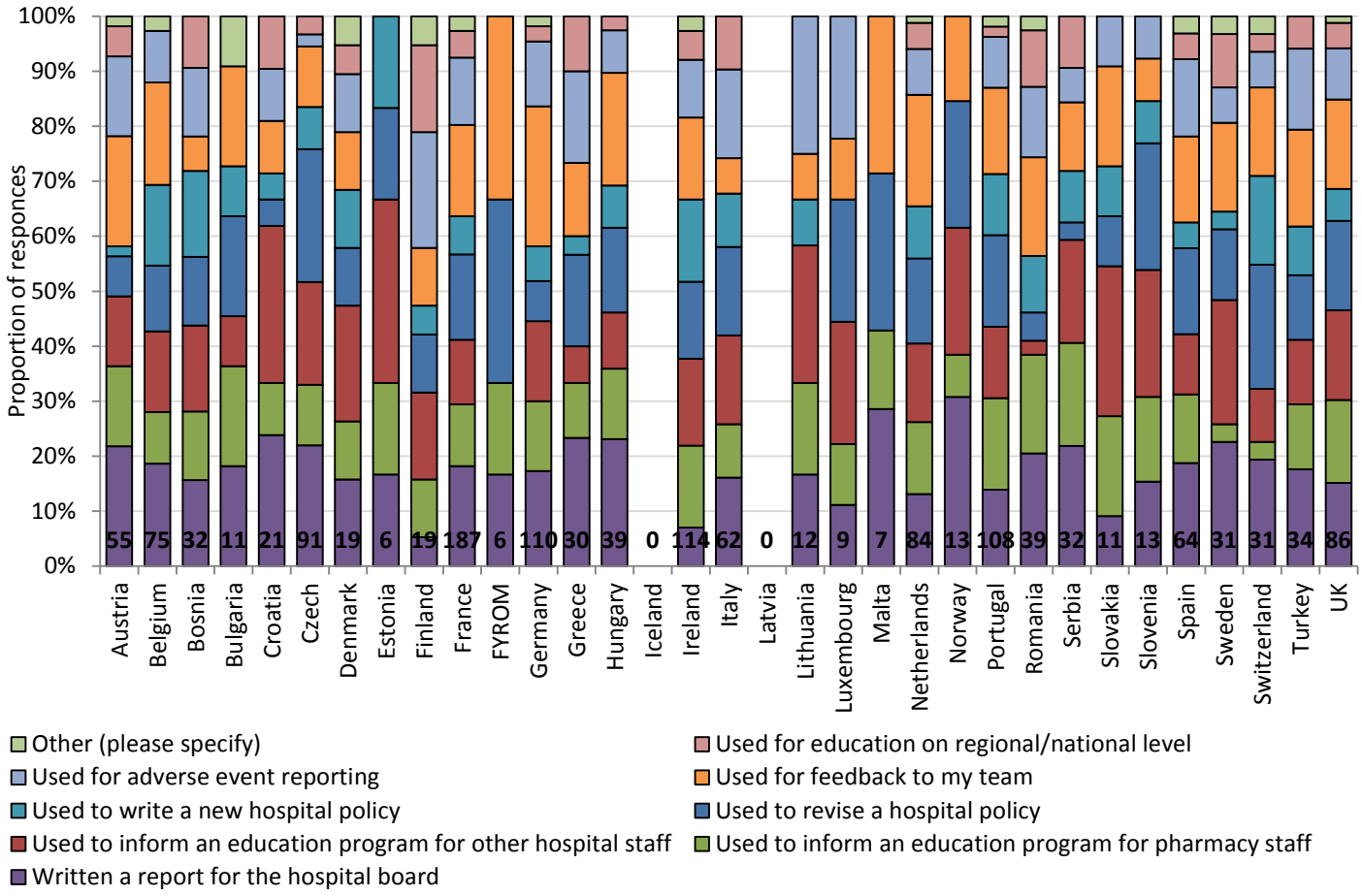


Figure 21 Results of the question 'What have you done with the results of the audit?' (Grouped by country)

The participants who indicated that they have not conducted an audit to identify priorities in medicines use processes in the last 3 years were asked what is preventing this from happening. Figure 22 shows that as with the other questions looked at in this report, the most frequent barrier listed was a lack of capacity (147 comments), followed by 'not considered to be a priority by my managers' (98 comments). Only 19 people selected 'not considered to be a priority by me' as an option.

The most common theme from the 'Other' category was that the hospital does its own self-assessment (7 comments). Some say that this process is conducted at a higher level, either regional or national (4 comments). There are some respondents saying that an audit is planned for the future (3 comments) or their hospital is too new to have conducted an audit (2 comments). There are also 2 comments stating capacity issues and not enough staff.

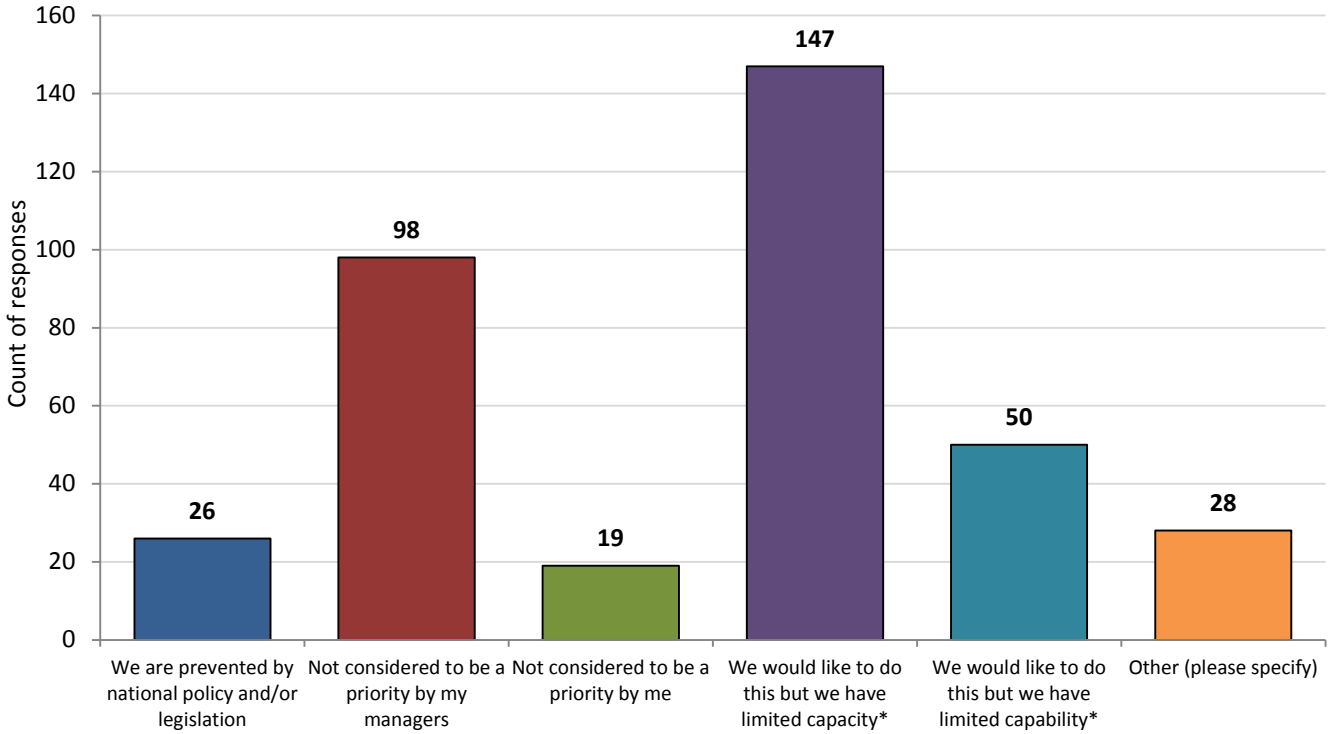


Figure 22 Overall results of the question 'What is preventing an audit to identify priorities in medicines use processes from being undertaken?'

Figure 23 shows the same results, grouped by country. The biggest barrier reported by most countries is either limited capacity or not considered to be a priority by me. In Denmark and France the biggest barrier is 'not considered to be a priority by me'. However, it is important to note that the majority of participants from these countries are saying in Figure 19 that they have conducted an audit; it seems that the few people who have not conducted an audit have not done so because they do not consider it to be a priority.

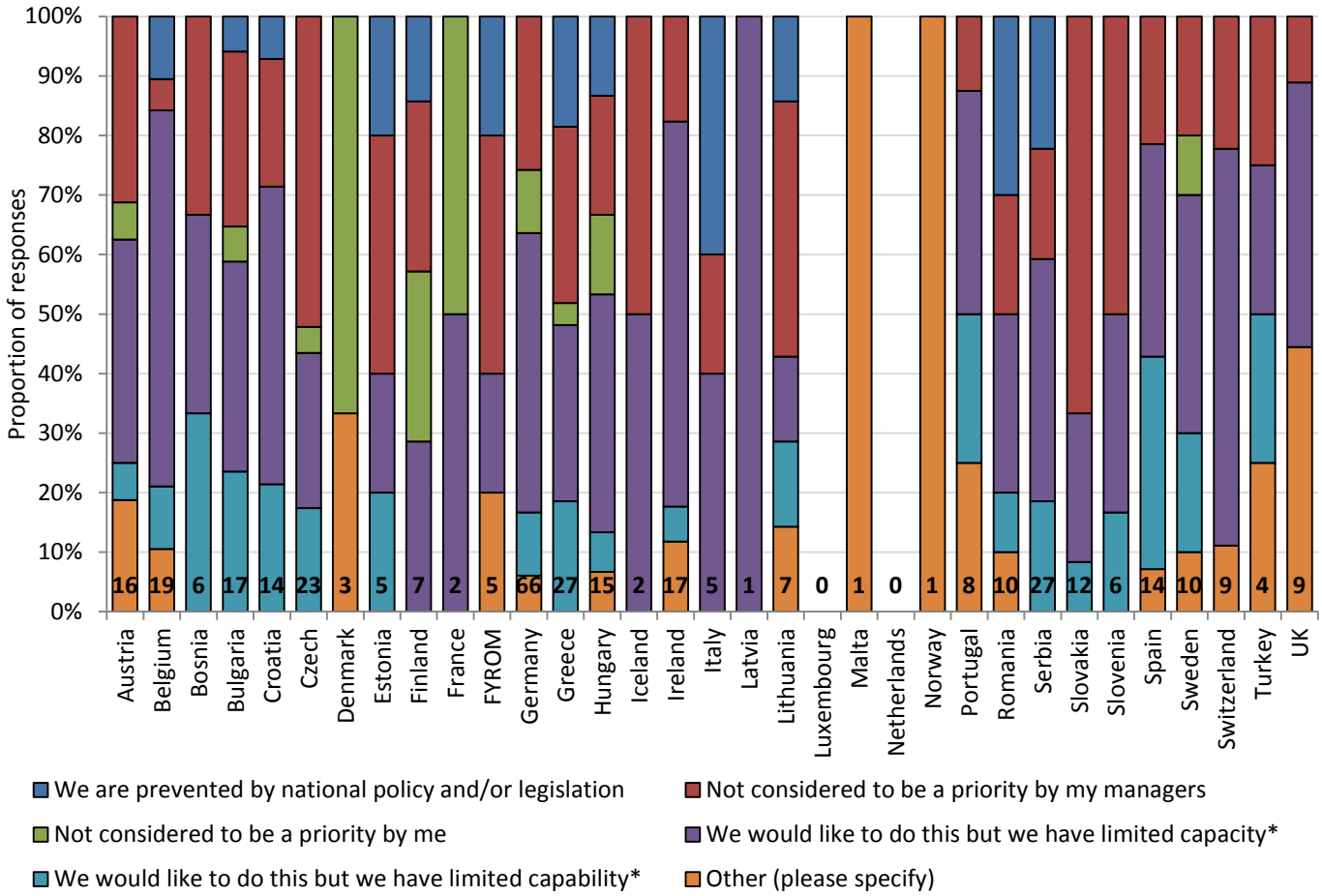
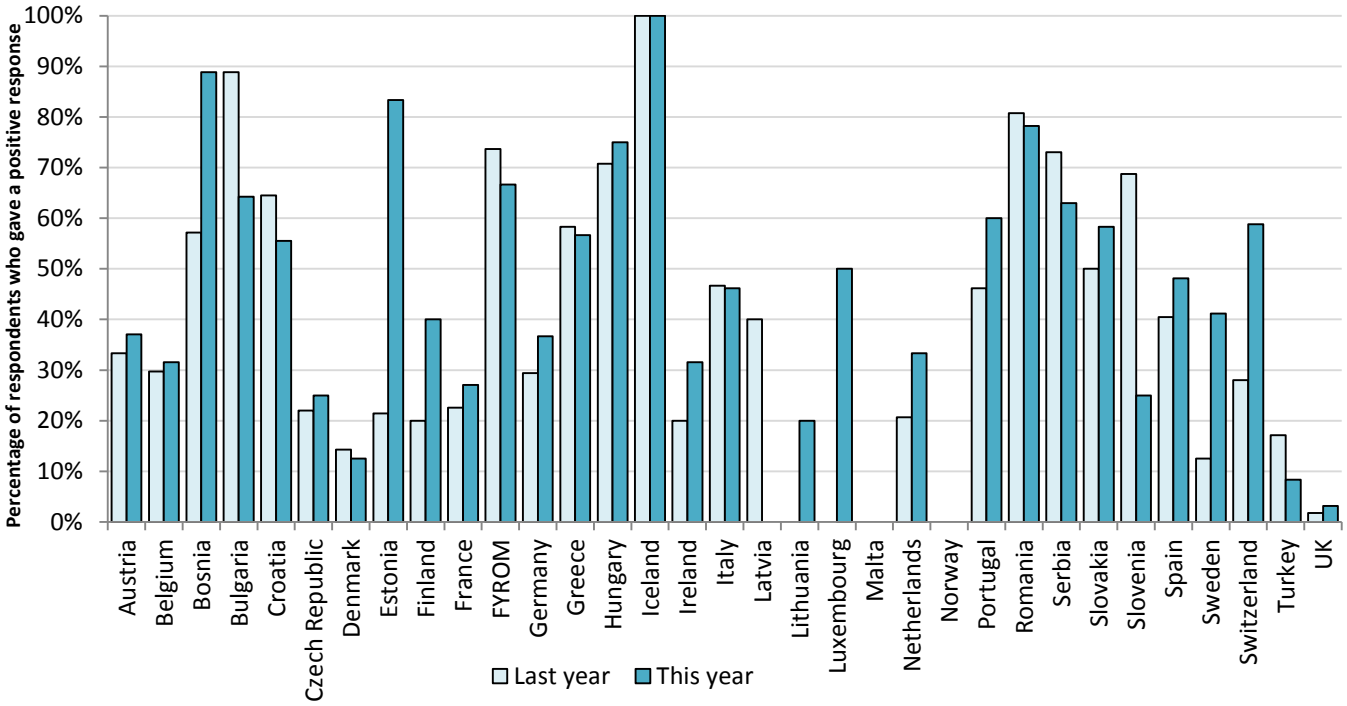


Figure 23 Results of the question 'What is preventing an audit to identify priorities in medicines use processes from being undertaken? (Grouped by country)

Section C: Results of the Implementation Questions

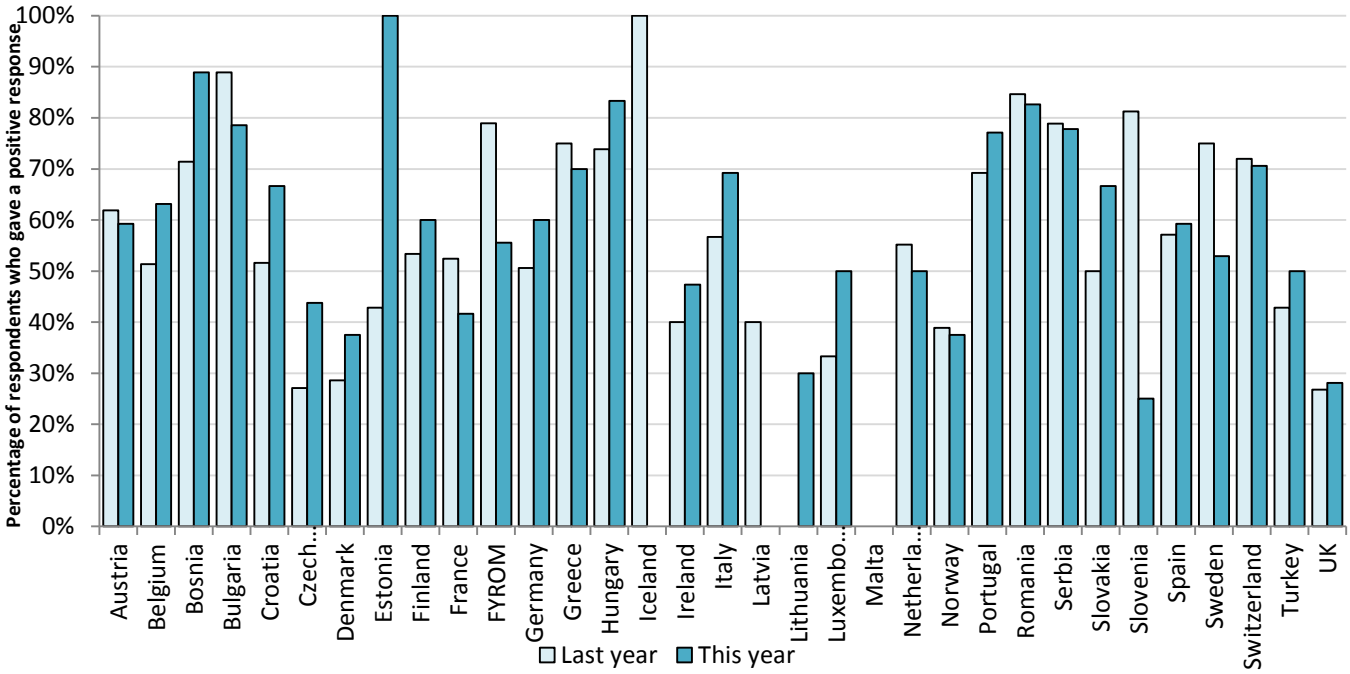
The questions in this section explore further the barriers to implementation of the statements in general. They seek to explore the common reasons such as lack of awareness, agreement, workforce barriers and those related to confidence in their ability to implement them. Responders were asked to state the level of their agreement with each question posed, from 1 (strongly disagree) to 5 (strongly agree). In these graphs, a **higher bar indicates agreement with the question** posed. Last year's results to these questions have been included for comparison.

I1 The pharmacists within our hospital are aware of the 44 European Statements for Hospital Pharmacy.



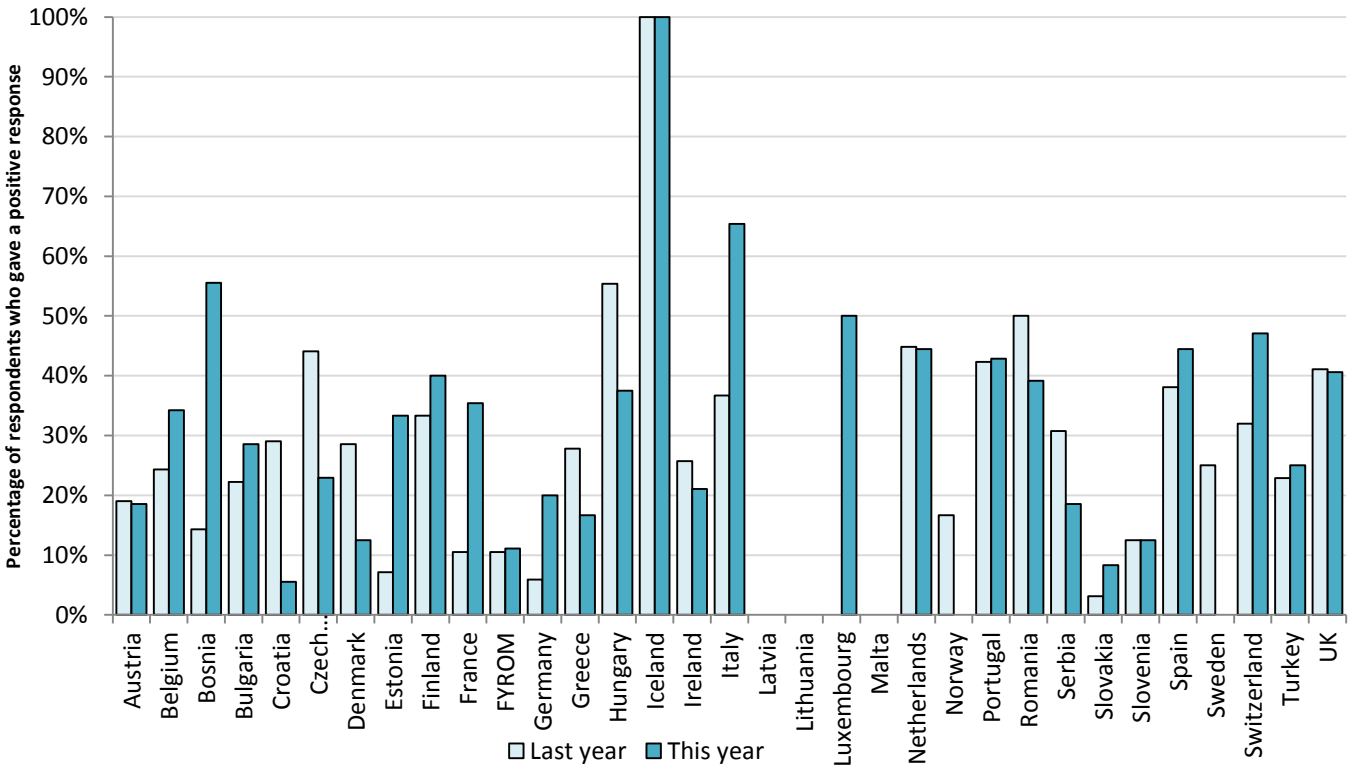
Overall awareness has increased from 37% to 42%. 22 countries show an increase in awareness.

I2 The pharmacists within our hospital agree in principle with the Statements.



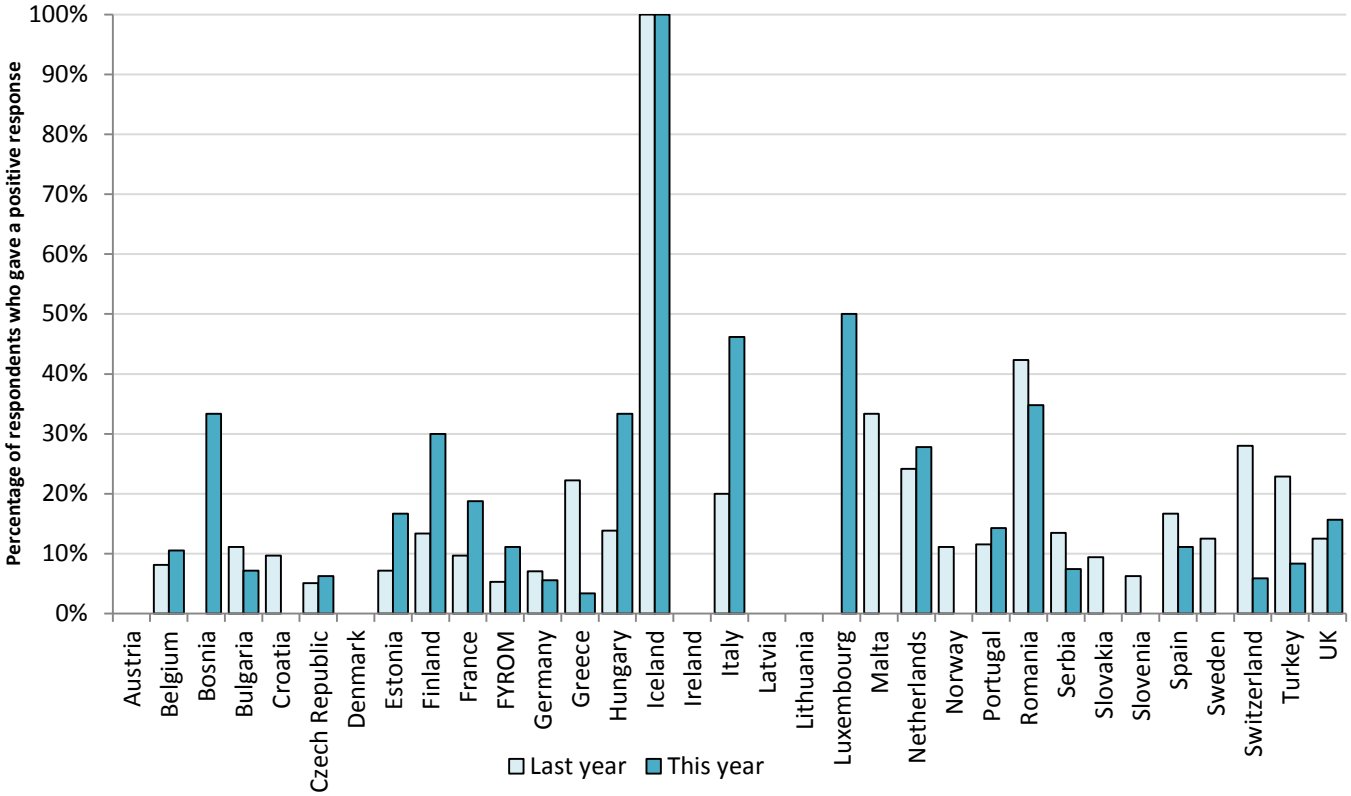
I3 Our hospital has the capability* to implement all of the Statements now.

**Capability: Does the organisation have staff with the right skills and experience to support the change effort?*

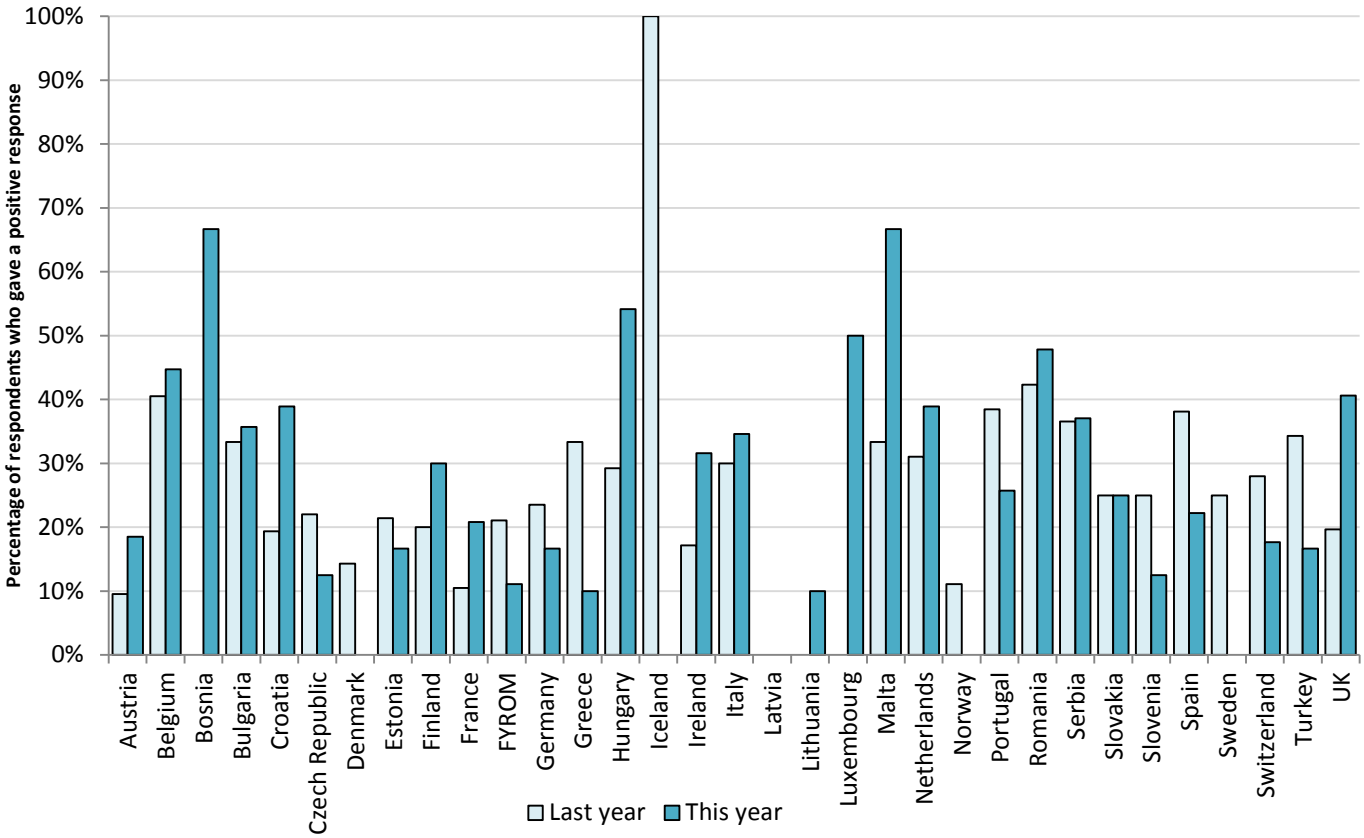


I4 Our hospital has the capacity* to implement all of the Statements now.

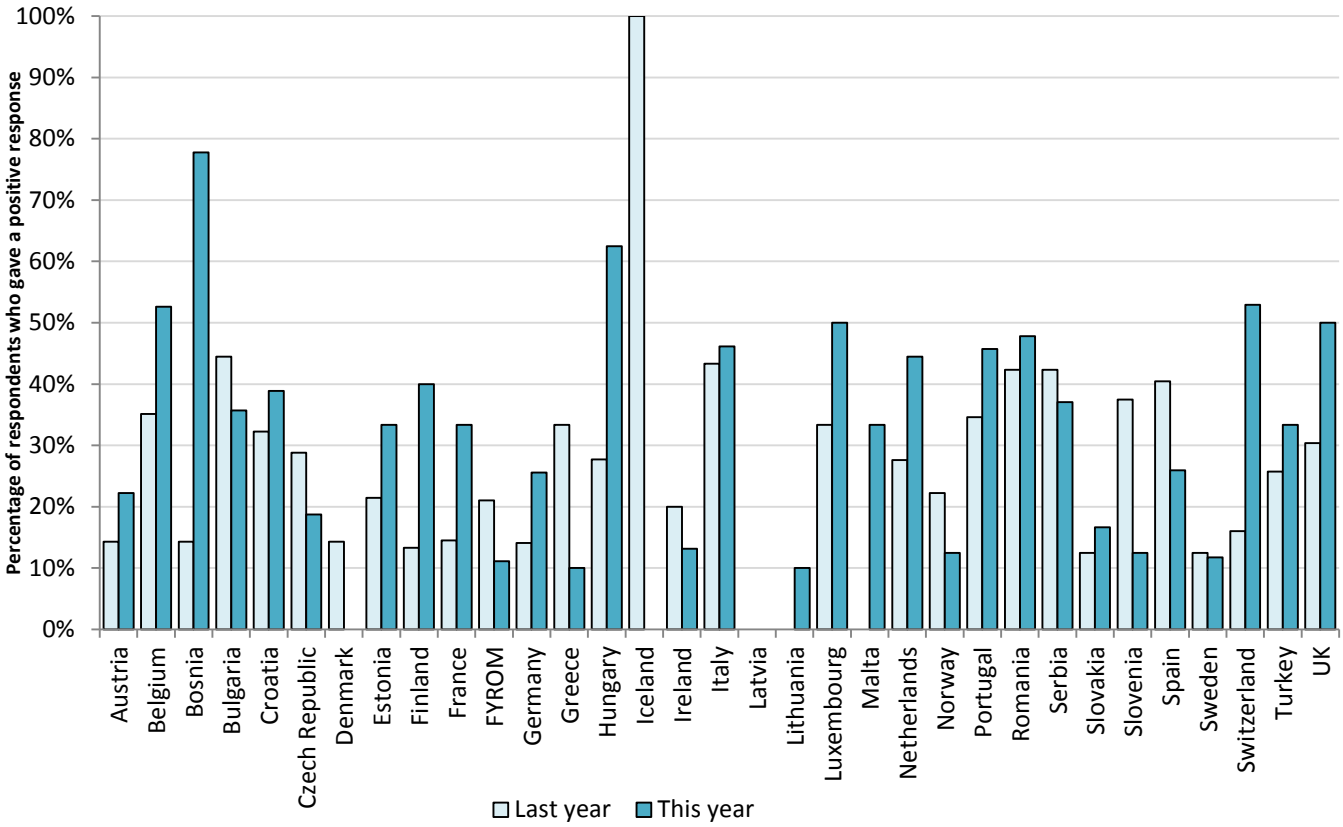
**Capacity: Does the organisation have the sufficient number of people or time to undertake the change?*



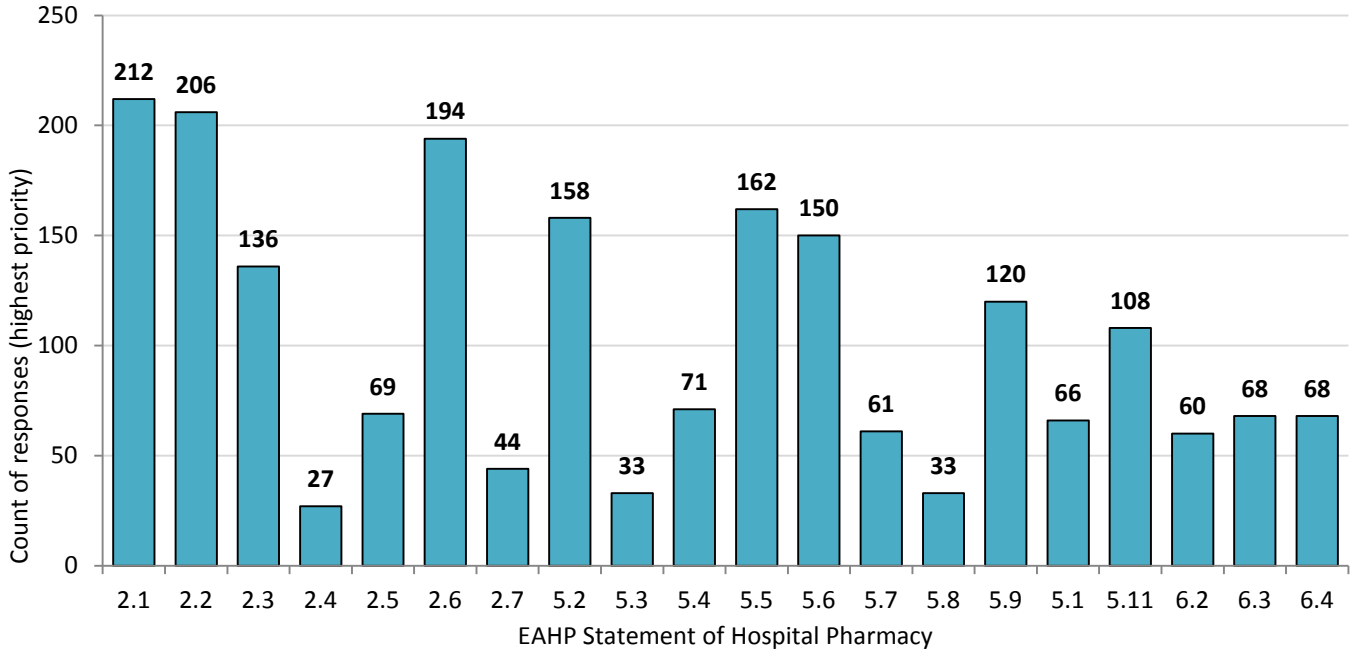
I5 My hospital is committed to help the pharmacy department implement the Statements.



I6 Our hospital has the confidence to make changes and implement the Statements.



I7. Which three statements are the highest priority for you to implement first? (Participants could choose 3 statements)



The following three statements have been identified as the highest priority to implement first, based on the frequency they were selected:

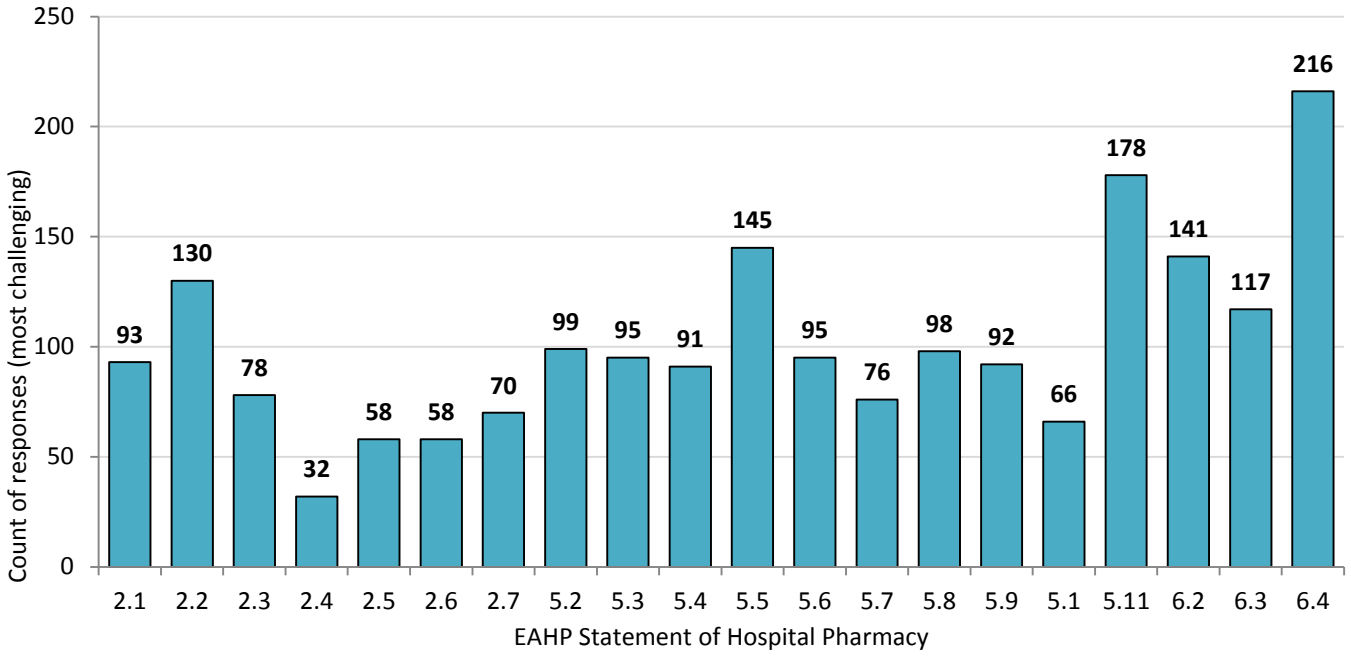
- 2.1 Hospital pharmacists should be involved in the complex process of procurement of medicines. They should ensure transparent procurement processes are in place in line with best practice and national legislation.
- 2.2 Hospital pharmacists should take the lead in developing, monitoring, reviewing and improving medicine use processes and the use of medicine related technologies.
- 2.6 Hospital pharmacies should have responsibility for all medicines logistics in hospitals. This includes proper storage, preparation, dispensing, distribution and disposal conditions for all medicines, including investigational medicines.

Similarly, the following statements have been identified as the lowest priority to implement first, based on the frequency they were selected:

- 2.4 Procurement should be according to the medicine formulary and informed by the formulary selection process.
- 5.3 Hospital pharmacists should ensure their hospitals seek review of their medicines use processes by an external quality assessment accreditation programme, and act on reports to improve the quality and safety of these processes.
- 5.8 Hospital pharmacists should ensure accurate recording of all allergy and other relevant medicine-related information in the patient's health record. This information should be accessible and evaluated prior to prescription and administration of medicines

Statements which have been identified as having a lower priority to be implemented could be due to several reasons. It is possible that the statement is already being implemented in the hospital, and hence few see it as a priority any more. For example, 85% of participants gave a positive response to 2.4, indicating they are doing this already. However, only 69%of responses were positive for 5.3, indicating there are many not yet implementing it and also do not see it as a priority.

I8. Which three statements might be more challenging to implement? (Participants could choose 3 statements)



The following three statements have been identified as the most challenging to implement, based on the frequency they were selected:

- 6.4 Hospital pharmacists should actively engage in and publish research, particularly on hospital pharmacy practice. Research methods should be part of undergraduate and postgraduate training programmes for hospital pharmacists.
- 5.11 Hospital pharmacists should support and implement systems that allow traceability of all medicines dispensed by the pharmacy.
- 5.5 Hospital pharmacists should help to decrease the risk of medication errors by disseminating evidence based approaches to error reduction including computerised decision support.

Similarly, the following statements have been identified as the least challenging to implement, based on the frequency they were selected:

- 2.4 Procurement should be according to the medicine formulary and informed by the formulary selection process
- 2.5 Each hospital pharmacy should have contingency plans for shortages of medicines that it procures.
- 2.6 Hospital pharmacies should have responsibility for all medicines logistics in hospitals. This includes proper storage, preparation, dispensing, distribution and disposal conditions for all medicines, including investigational medicines.

It is interesting to see that Statement 2.5 was considered one of the least challenging to implement, as the results in section B of this report show 106 participants saying they do not have the capacity to implement the statement.

Of the challenging statements, 6.4 and 5.5 have been examined in section B of this report. Statement 5.11 is interesting because only 4% of participants reported that no medicines were traceable at any level, although the challenge could be reaching the level where all medicines dispensed are traceable (only 21% participants report being able to do this currently)

Discussion

This survey provides a good overall picture of where the different member countries are in relation to each of the Statements. Overall, the response rate was 17.8%, which is slightly lower than last year's rate (18.5%) but the variation in this was marked. 22 of the 33 countries had a response rate of over 30%. The overall number of responses was slightly lower for this survey (948 responses) when compared to last year (1094 responses), although the response rate increased for many individual countries. One major cause for the lower response rate could be the survey only being conducted in English this year, when it was conducted in 15 languages last year. However, the improvements to the design of the questions, particularly in the 'What is preventing this?' questions, means the responses were of a far higher quality.

The 5 Statements where implementation seems to provide the greatest challenge are:

S6.4 - The pharmacists in our hospital routinely publish hospital pharmacy practice research.
S2.5 - The pharmacy in our hospital has contingency plans for medicines shortages
S5.5.2 - Our hospital pharmacy uses computerised decision support* to reduce the risk of medication errors.
S6.4.4 - Have you or your pharmacists engaged in development of local/national guidelines?
5.5 Hospital pharmacists should help to decrease the risk of medication errors by disseminating evidence based approaches to error reduction including computerised decision support.

As with the baseline survey, there appears to be a greater number of barriers to hospital pharmacies engaging in more clinically focused activities such as publishing practice research and use of systems to reduce medication error. Lack of capacity (not having enough staff), capability (not having staff with the required skills), and support from managers are the commonly cited reasons for this. Again, there was considerable variation across the different countries, reflecting the role of pharmacists in those countries. The role of the 'clinical pharmacist' where the pharmacist is visible on the ward and in clinics, while well established in some countries, is still a rarity in others. Pharmacist prescribing is established in some countries like the UK, but is not legally permissible in the majority. In addition, it would appear that many hospitals employ low numbers of pharmacists and technicians in relation to the number of beds they contain, which would support the 'lack of capacity' responses.

Generally, and which supports the baseline survey findings, there appeared to be few barriers for hospital pharmacies to engage in the procurement, compounding and distribution of medicines. This is a very important role and the work of pharmacists in reducing the risks associated with these functions should not be underestimated, as pharmacists engage in more clinically focused roles.

The results from section C where the questions specifically related to the implementation of the Statements, the theme of lack of capability to implement statements, particularly the more clinically orientated statements, may be linked to the lack of a clinical pharmacy workforce. Likewise, the theme of lack of capacity to implement the statements may be linked to the observation of low numbers of pharmacists and technicians in many hospitals. Disappointingly, there did not seem to be a large increase in the awareness of the statements which suggests a lack of engagement with the statements by pharmacists actually responsible for delivering the hospital pharmacy services. This is supported by the variable response rate and low commitment to implement the statements, and the wide variability in agreement with the statements with countries such as Czech, Denmark and U.K showing low positive responses. There is a role for EAHP in helping country co-ordinators increase awareness and engagement with the statements, perhaps with the provision of educational and promotional materials that can be used at National Meetings and beyond.

Recommendations

General recommendations

- Further work is needed to raise awareness of the statements, and engagement with them by with hospital pharmacists on the ground responsible for delivering services
- Work is needed to get better engagement of pharmacists on the ground with the statements, this may include sense checking whether all the statements are realisable (e.g. if external QA of services is not mandated by a regulatory body then it is unlikely to be implemented).
- Further work is needed to understand the engagement of hospital pharmacists in clinically focused activities.
- Further more detailed work is required to investigate the impact of workforce numbers and skill mix linked to number of beds or activity to better understand if this is a real barrier to the implementation of the statements, particularly the more clinically focused statements. This could include statistical analysis of responses in relation to number of staff and skill mix for both years.
- To encourage awareness of the Statements and participation in practice research, the educational content of the EAHP congress (posters and presentations) should continue to be linked to the relevant statements

Recommendations for future surveys

- Changes to the 2015 EAHP Statements Survey appear to have been well received and should be continued in subsequent surveys:
    - Keep the survey short and easy to complete (to within 20 minutes)
    - Specifically enquire for each question if capacity and capability are the key barriers to implementation
    - Construct survey response options for each question to identify barriers other than capacity and capability
    - Identify the key drivers for change in countries where implementation has occurred or is occurring
- Further work is needed to better understand the low response rate in some countries to determine how this may be improved.
- A named person (country co-ordinator) to send out invite survey link
- Weekly reminders should be sent out by the named person (country co-ordinator)

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2. Maskrey N and Underhill J. The European Statements of Hospital Pharmacy: achieving consensus using Delphi and World Café methodologies *Eur J Hosp Pharm* 2014;21:264-266 doi:10.1136/ejhpharm-2014-000520 (http://ejhp.bmj.com/content/21/5/264.full)
3. Horák P et al. EAHP survey and European Statements of Hospital Pharmacy – can we achieve a perfect match? Eur J Hosp Pharm 2014;21:5 291-293 doi:10.1136/ejhpharm-2014-000541