



Keele University
Centre for
Medicines Optimisation



European Statements of Hospital Pharmacy Survey Results 2018

Statements Sections 1, 3, 4

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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, and subsequently an annual statements survey was conducted in October to November in 2015, 2016, 2017 and 2018.

The 2018 EAHP Statements Survey was conducted across 35 countries from October 2018 to November 2018 with the focus on the statements from the following sections:

- Section 1: Introductory Statements and Governance
- Section 3: Production and Compounding
- Section 4: Clinical Pharmacy Services

As with previous surveys, the 2018 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.

The overall response rate to the survey was 16.9% (873 total responses), with wide variation across different countries. 21 of the 35 countries had a response rate of over 30%. 82% of participants completed the survey, resulting in 719 complete responses. This represents a slight decrease from the 2016 EAHP Statements Survey, which had 903 replies. Both surveys had a similar completion rate; 2018 had a completion rate of 82% and 2016 had a completion rate of 81%.

The 5 questions from sections 1, 3 and 4 where implementation of the statement in question seems to provide the greatest challenge were:

- S 4.4 The pharmacists in our hospital enter all medicines used onto the patient's medical record on admission.
- S4.5 The pharmacists in our hospital contribute to the transfer of information about medicines when patients move between and within healthcare settings.
- S4.8 Do you have an agreed strategic plan for the development of clinical pharmacy services in your hospital?
- S1.1 The pharmacists in our hospital work routinely as part of a multidisciplinary team.
- S4.2 All prescriptions in our hospital are reviewed and validated as soon as possible by a pharmacist.

Barriers to hospital pharmacies engaging in more clinically focused activities seems to be greater than for more traditional areas such as compounding. 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, although there was considerable variation across the different countries. The role of the 'clinical pharmacist' where the pharmacist is visible on the ward and in clinics in a 'patient-facing role', 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. In fact statistical analysis of the results indicates a clear relationship between staffing numbers and responses to the delivery of clinically orientated services (Figures 15, 19, 23, and 29).

The response to question S4.4 'The pharmacists in our hospital enter all medicines used onto the patient's medical record on admission' suggests that the barriers identified in previous surveys for this statement (other healthcare professionals doing this and lack of capacity) have improved in some countries. Although not asked specifically in this survey, electronic medication systems may also have developed in some countries which allow this to be done from the pharmacy, thereby reducing the challenge to capacity.

It is of concern that in some countries clinical pharmacy services are not well developed since pharmacists are the medicines expert. Whilst it is encouraging that a mean of 56% of respondents gave a positive response to the question 'all prescriptions are reviewed and validated by a pharmacist' (Figure 30), it indicates that in over 40% of cases this is not happening. Furthermore, in those who responded positively to this question 11% of the reviews did not take place before administration. This activity is an important part of medication safety systems.

Awareness of the statements and agreement with the statements has both been steadily increasing since the baseline survey. In the case of awareness of the statements, the average percentage of positive responses across countries has increased each year since the baseline survey, from 34.8% to 53.9% in 2018. This is important as pharmacists' awareness of the statements and agreement in principle with their contents are fundamental to implementing change.

It would appear that awareness and the importance given to the statements is beginning to increase. The role of the EAHP Statement Ambassadors in this is important and their influence may well continue to grow across Europe. Use of the [self-assessment tool](#) may also help support the awareness and adoption of the Statements. The EAHP now has a published implementation strategy for the statements. The data generated from this latest iteration of the survey 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.

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 survey³, 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 2015 EAHP Statements Survey was conducted from October 2015 to December 2015 and focused on the statements from Section 2: Selection, procurement and distribution, Section 5: Patient safety and quality assurance and Section 6: Education and research. This survey was repeated in 2017 to observe progress, and the results from that survey can be found here. The 2016 EAHP Statements Survey was conducted from October 2016 to November 2016 with the focus on the statements from Section 1: Introductory Statements and Governance, Section 3: Production and Compounding, Section 4: Clinical Pharmacy Services. The results from the previous EAHP Statement surveys can be found on the [EAHP website](#).

The 2018 EAHP Statements Survey was conducted from October 2018 to November 2018 with the focus on the statements from the following sections:

- Section 1: Introductory Statements and Governance
- Section 3: Production and Compounding
- Section 4: Clinical Pharmacy Services

This document focuses on the results of the 2018 EAHP Statements Survey across 34 participating 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 1, 3 and 4, 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 using the same questions as the 2016 survey and then conducted from October 2018 to November 2018, spanning 34 countries.

As with previous surveys, the 2018 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 1, 3 and 4
- Section C: questions about the hospital's readiness and ability to implement the statements

The questions in Section B of the survey were to identify if the participant thought that the statements of hospital pharmacy are already being implemented 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. For some questions in the survey a Yes/No option was used, as it deemed more appropriate to use rather than a scale of 1-5 in those cases. 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 in 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. This approach proved successful, and the same approach was repeated for all subsequent EAHP Statements Surveys. 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 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 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 (one per hospital), 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.

A weblink version of the survey was also created in the case that a country did not wish to share the emails of their countries pharmacists, this approach required respondents to provide a unique code at the start of the survey.

When the 2018 EAHP Statements Survey closed, there were a total of 873 responses, the results of which were exported from SurveyMonkey for further analysis and reporting. As was done in previous years, if an incomplete survey was submitted, the quantitative data was not used in the results.

Significance testing was performed to compare the results of some of the survey questions to the same question asked in the 2016 EAHP Statements Survey. Testing was performed using IBM SPSS software, and firstly the Shapiro Wilk's test was performed to check for normality. In most cases the differences between the distributions of data were considered to be approximately normal so paired t-tests were performed to test for significance between 2 years of survey data. For the few cases where a parametric test was not appropriate, the Wilcoxon signed rank test was used instead.

Some testing was also done to compare the results of statement survey questions to staff levels (Results of the question G4, 'How many fully qualified pharmacists are employed by your hospital?'). For Likert scale survey questions a Kruskal-Wallis test was performed after checking for normality, and for the categorical (Yes/No) survey questions Pearson's chi-squared test was used.

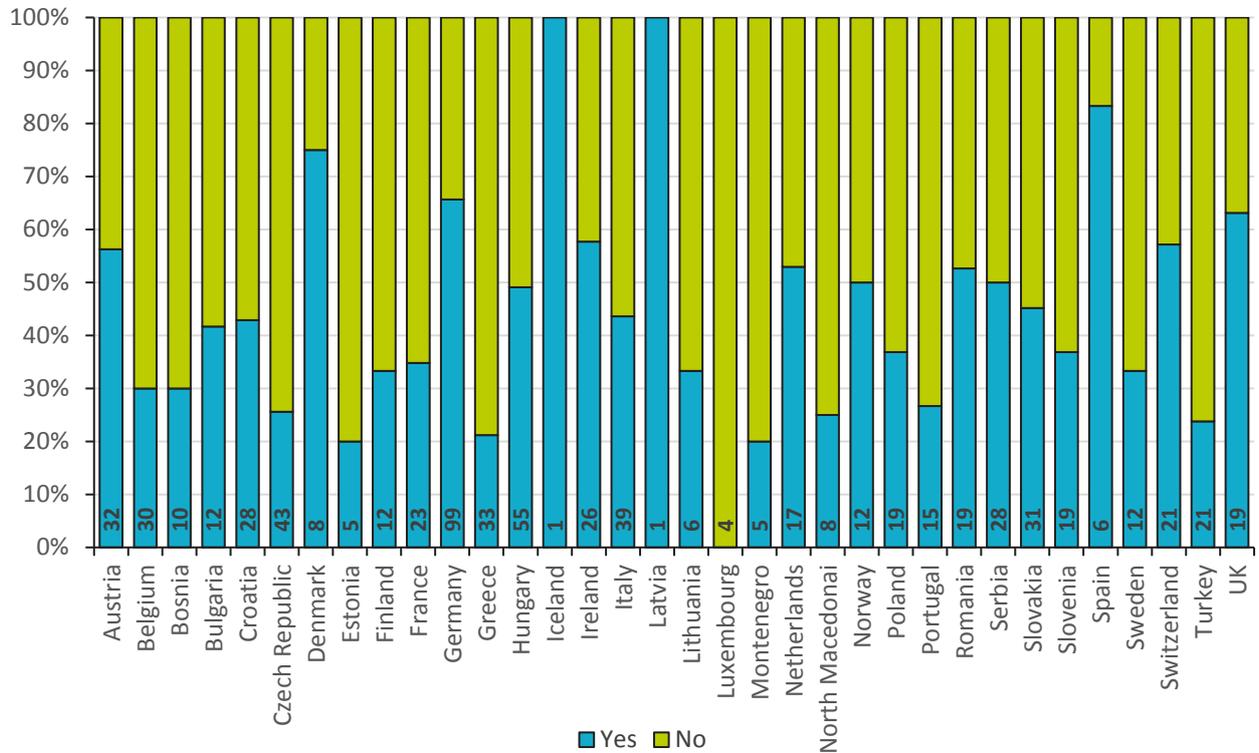
Results: EAHP Survey Response Rates

The response rates for 2018 EAHP Statements Survey are listed in the table below, broken down by country. The response rates from the 2015 baseline survey are given in the final column for comparison. If an incomplete survey was submitted it was not used in the results.

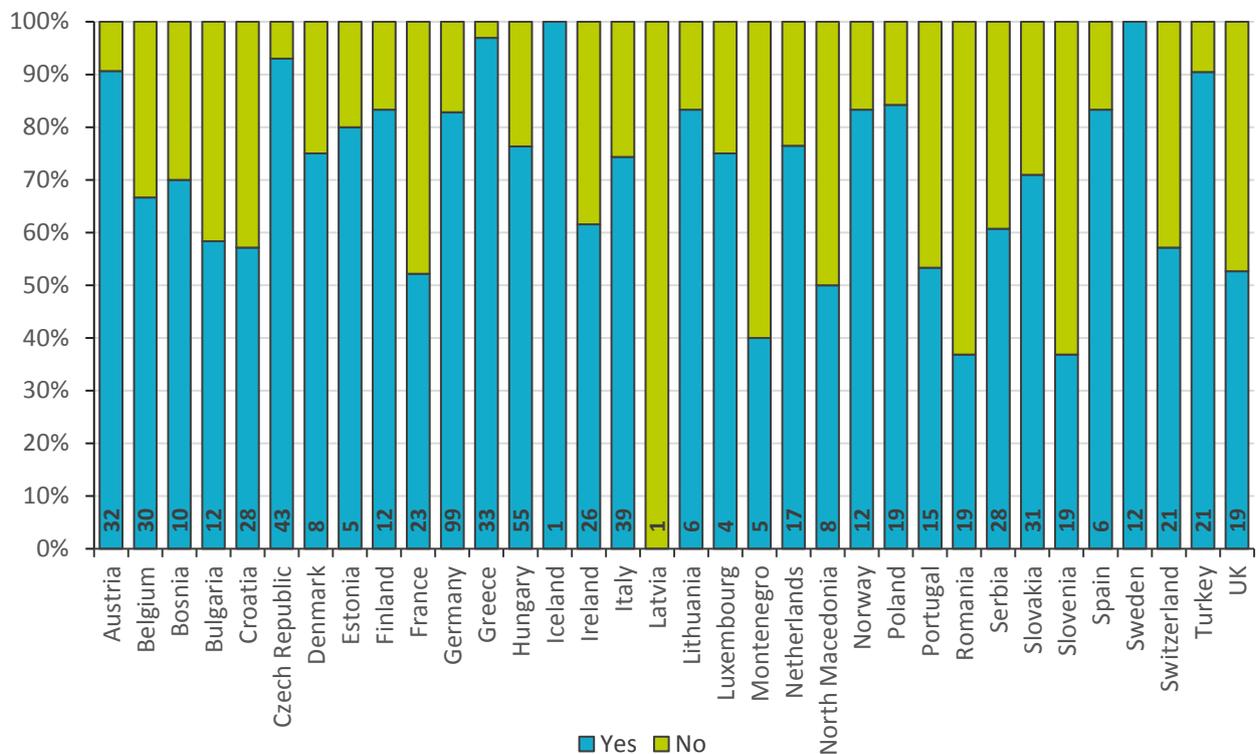
Country	Complete responses (This year)	Requests	Percentage	Baseline
Austria	32	45	71%	47%
Belgium	30	135	22%	22%
Bosnia	10	20	50%	33%
Bulgaria	12	66	18%	14%
Croatia	28	42	67%	79%
Czech Republic	43	92	47%	63%
Denmark	8	9	89%	88%
Estonia	5	24	21%	64%
Finland	12	62	19%	17%
France	23	1560	1%	7%
Germany	99	342	29%	22%
Greece	33	119	28%	31%
Hungary	55	99	56%	62%
Iceland	1	2	50%	100%
Ireland	26	66	39%	48%
Italy	39	585	7%	5%
Latvia	1	37	3%	11%
Lithuania	6	38	16%	7%
Luxembourg	4	5	80%	50%
Malta	0	5	0%	50%
Montenegro	5	6	83%	N/A
Netherlands	17	98	17%	35%
North Macedonia	8	29	28%	58%
Norway	12	31	39%	56%
Poland	19	81	23%	7%
Portugal	15	89	17%	22%
Romania	19	67	28%	41%
Serbia	28	63	44%	78%
Slovakia	31	71	44%	52%
Slovenia	19	29	66%	57%
Spain	6	250	2%	17%
Sweden	12	34	35%	24%
Switzerland	21	60	35%	43%
Turkey	21	696	3%	6%
UK	19	207	9%	36%
Total	719	5164	14%	17%

Section A: Results of the General Questions Regarding Hospital Activity

G1 Is your pharmacy within a teaching hospital?

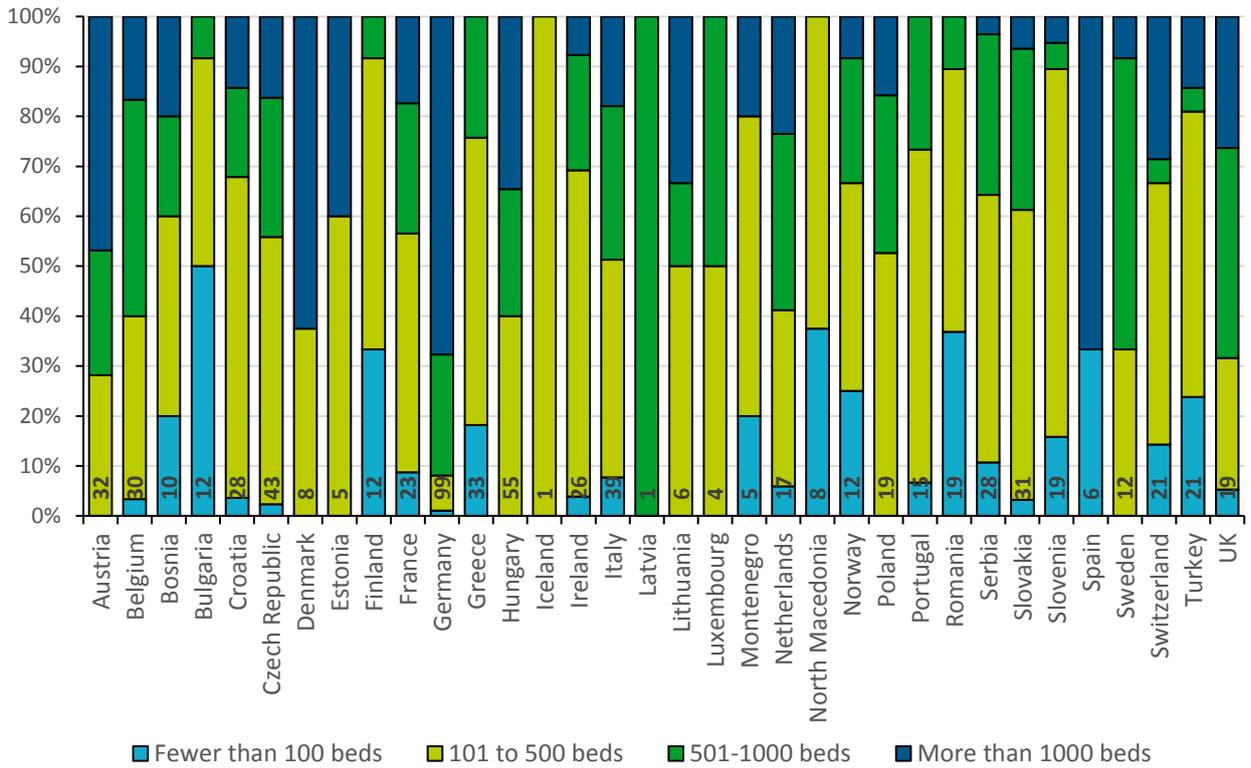


G2 Is your pharmacy within a general hospital?

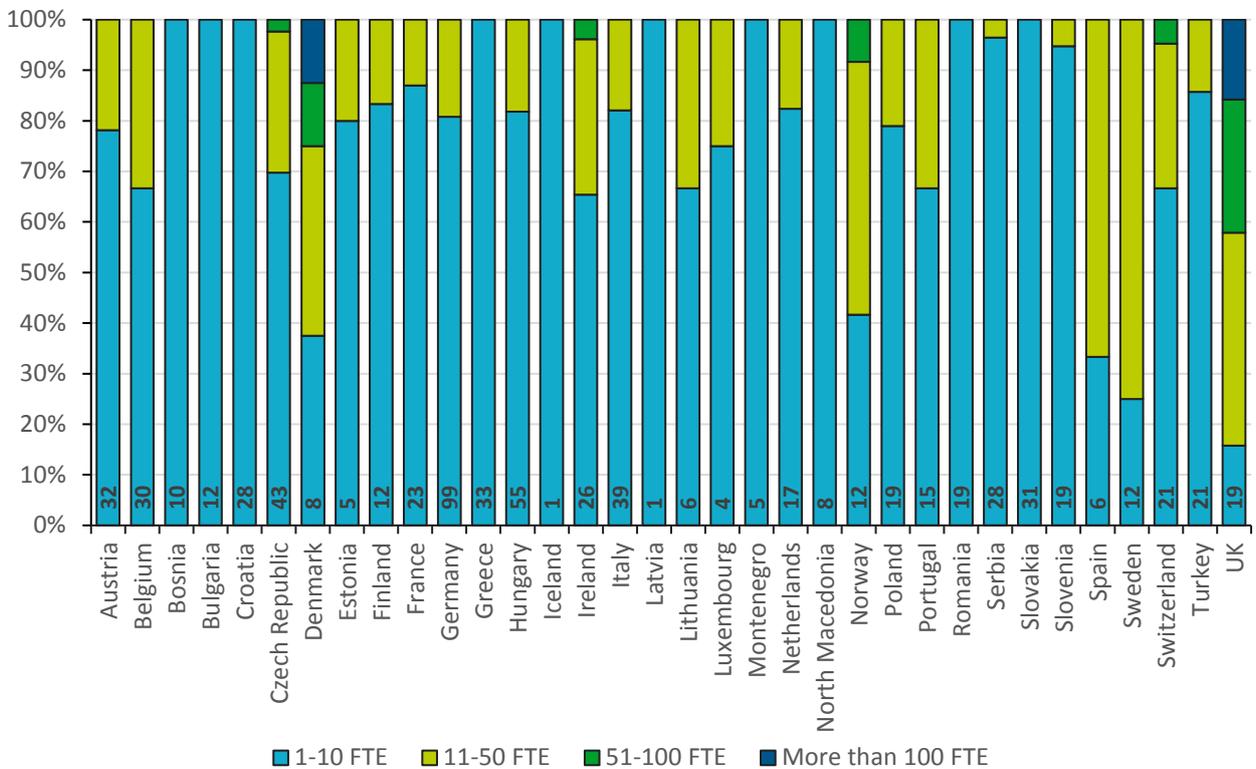


The numbers in the base of each bar show the number of responses from that country

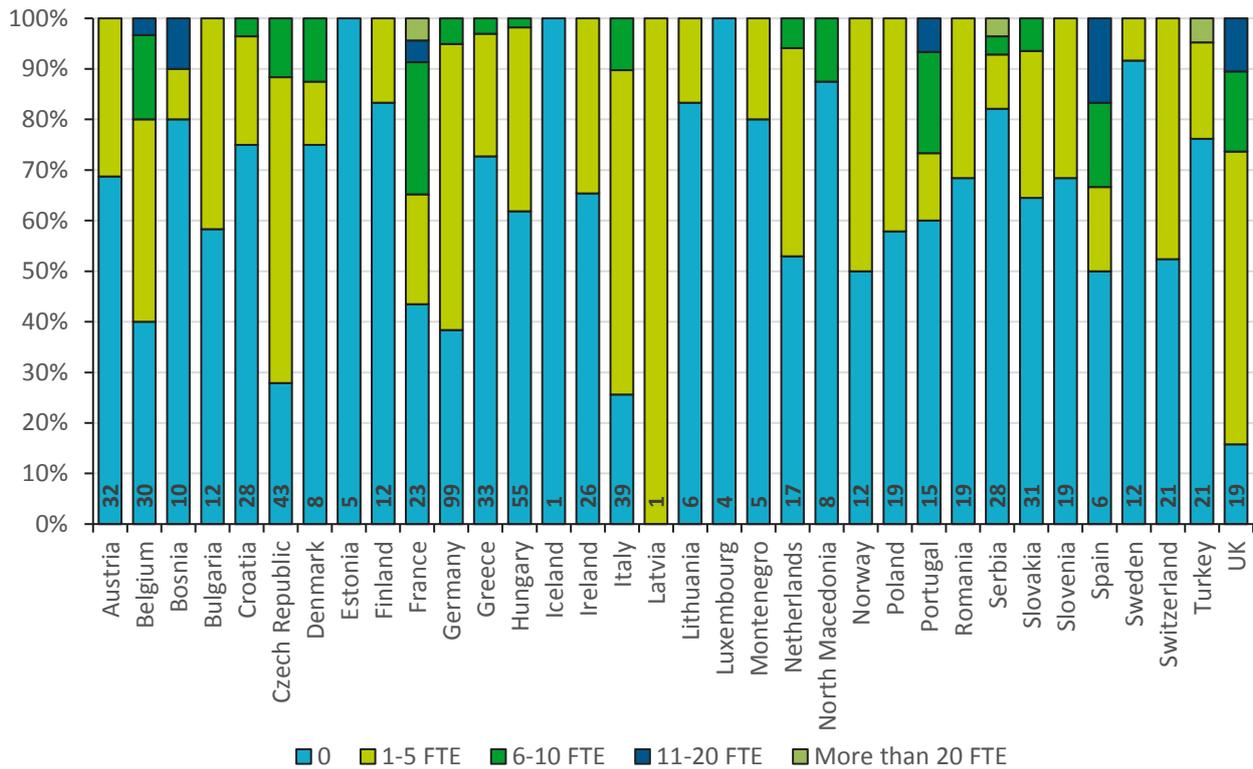
G3 How many beds are served by your pharmacy?



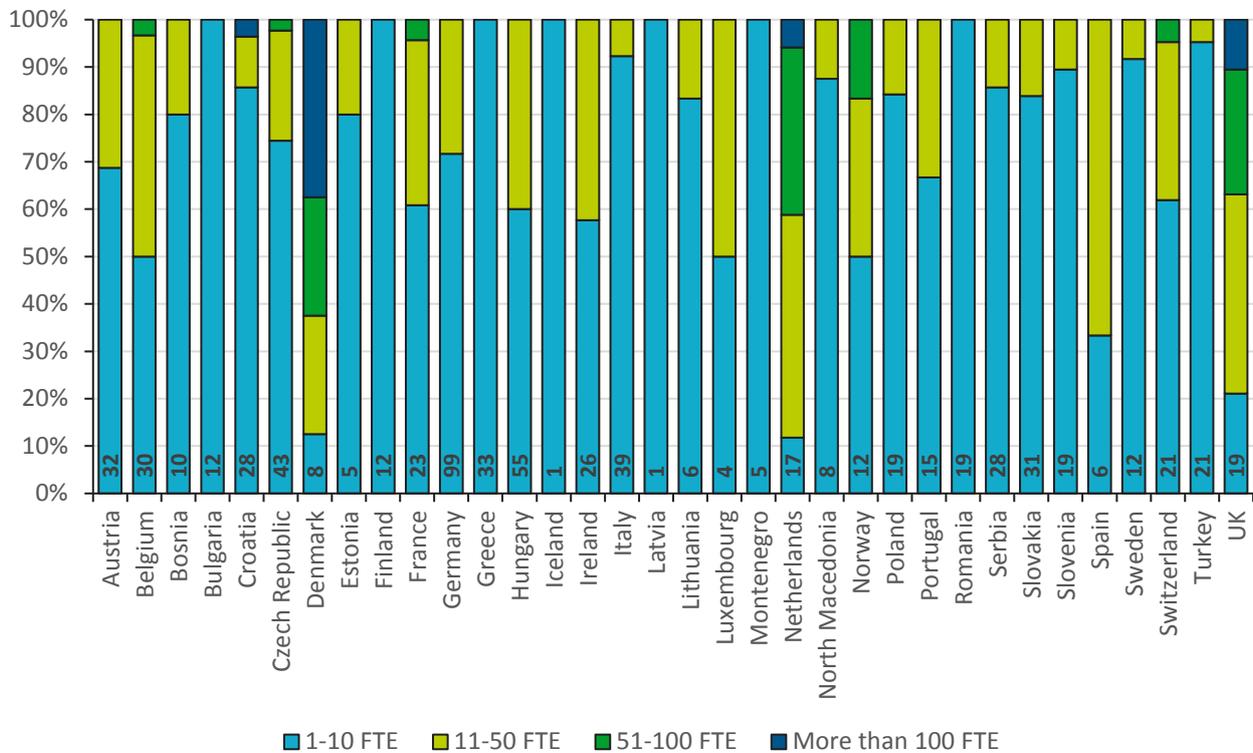
G4 How many fully qualified pharmacists are employed by your hospital?



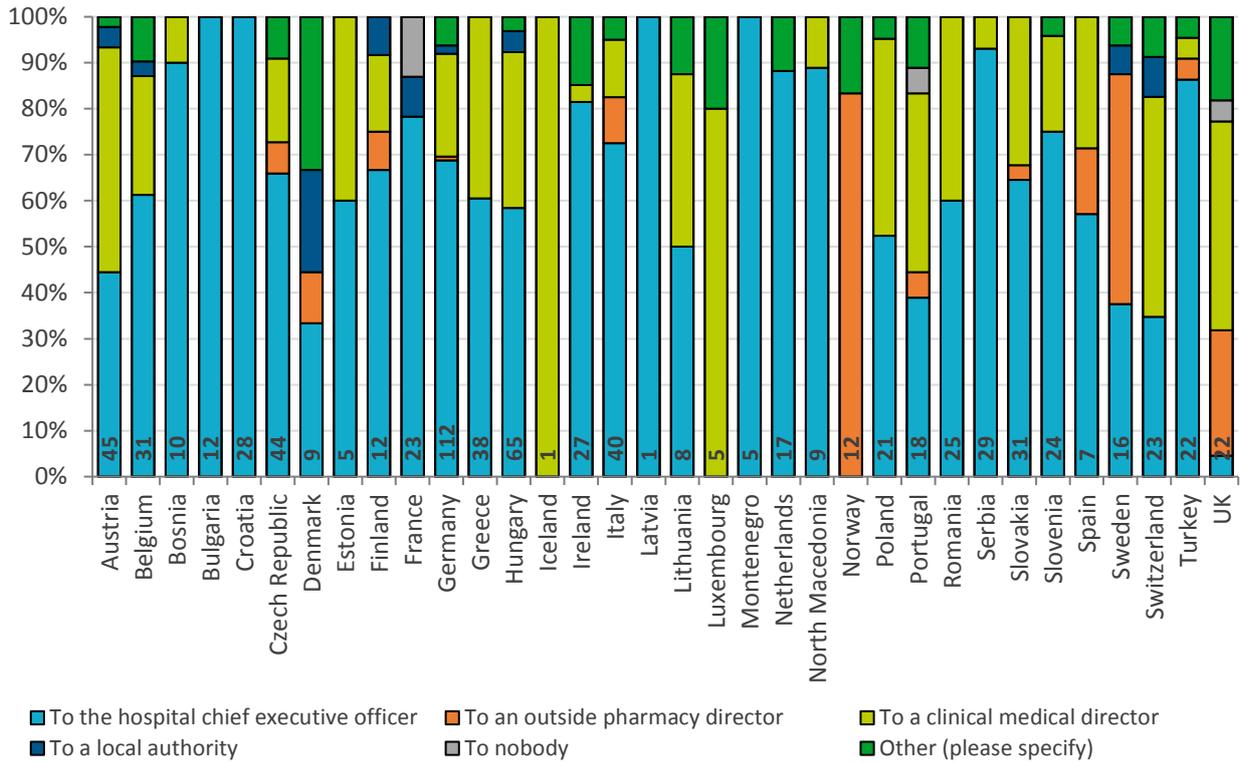
G5 How many trainee pharmacists are employed by your hospital?



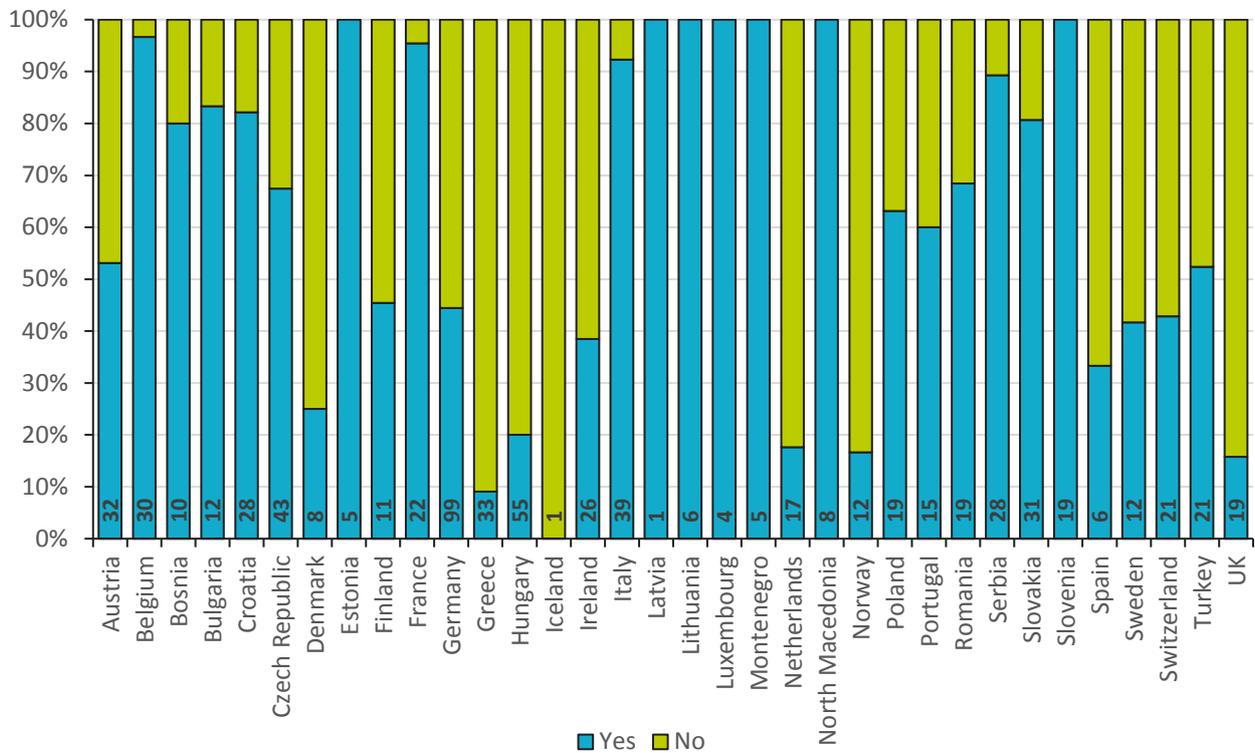
G6 How many technicians are employed by your hospital?



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 EHP Statement Questions: All of Europe's results combined

Figure 1 shows the results of the questions relating to each of the statements in sections 1, 3 and 4, 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.

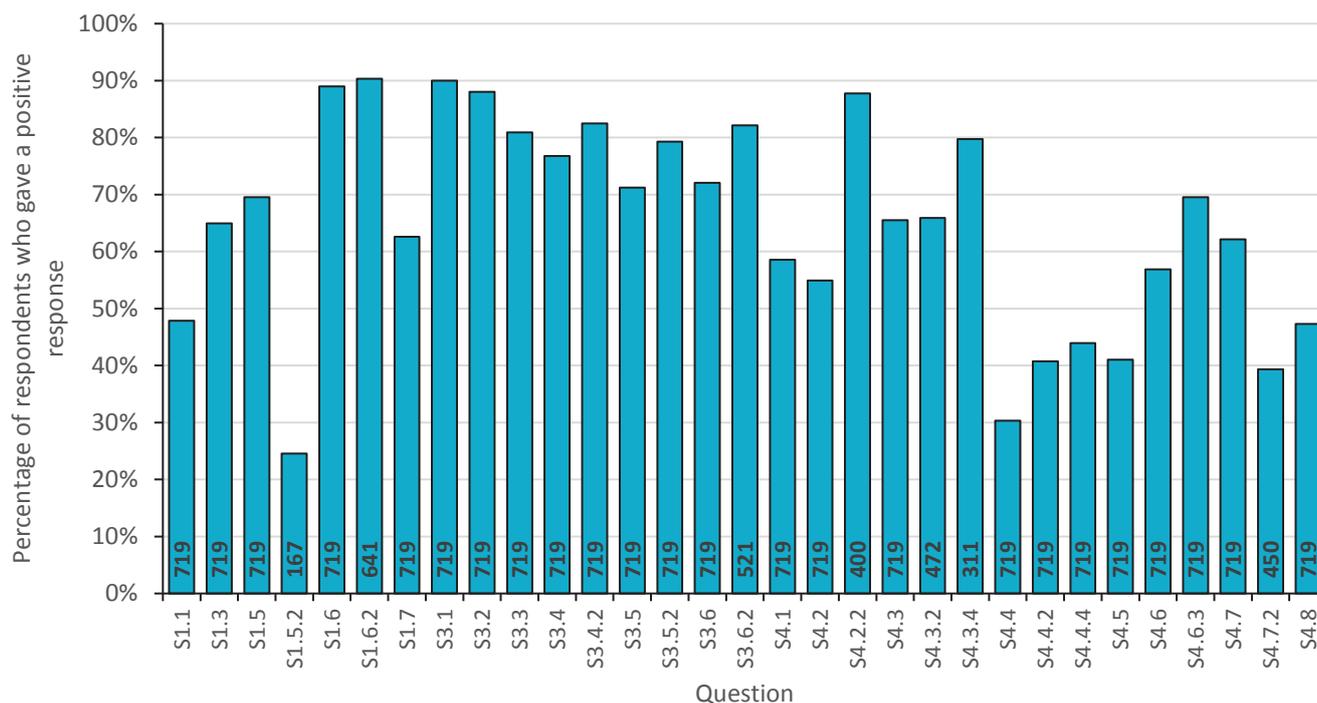


Figure 1 Mean percentage of positive responses from countries in the 2018 EHP Statements survey. Numbers at the base of the bars represent how many responses the question had. (Differences are due to question logic)

Responses across all three of the sections surveyed were mixed, only 11 of the 31 questions returned a positive response percentage of 75% or greater. Section 1 (introductory statements and governance) contained questions that were mostly answered very positively, although an exception to this was question 'S1.1 - The pharmacists in our hospital work routinely as part of a multidisciplinary team.' which was only 48% positive. Section 3 (production and compounding) questions were all generally answered positively with results ranging from 71% to 90%. However, results for Section 4 (Clinical pharmacy services) returned lower levels of positivity with responses from 9 of the 15 questions being less than 60%.

The five questions which received the least positive responses were identified and subjected 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 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:

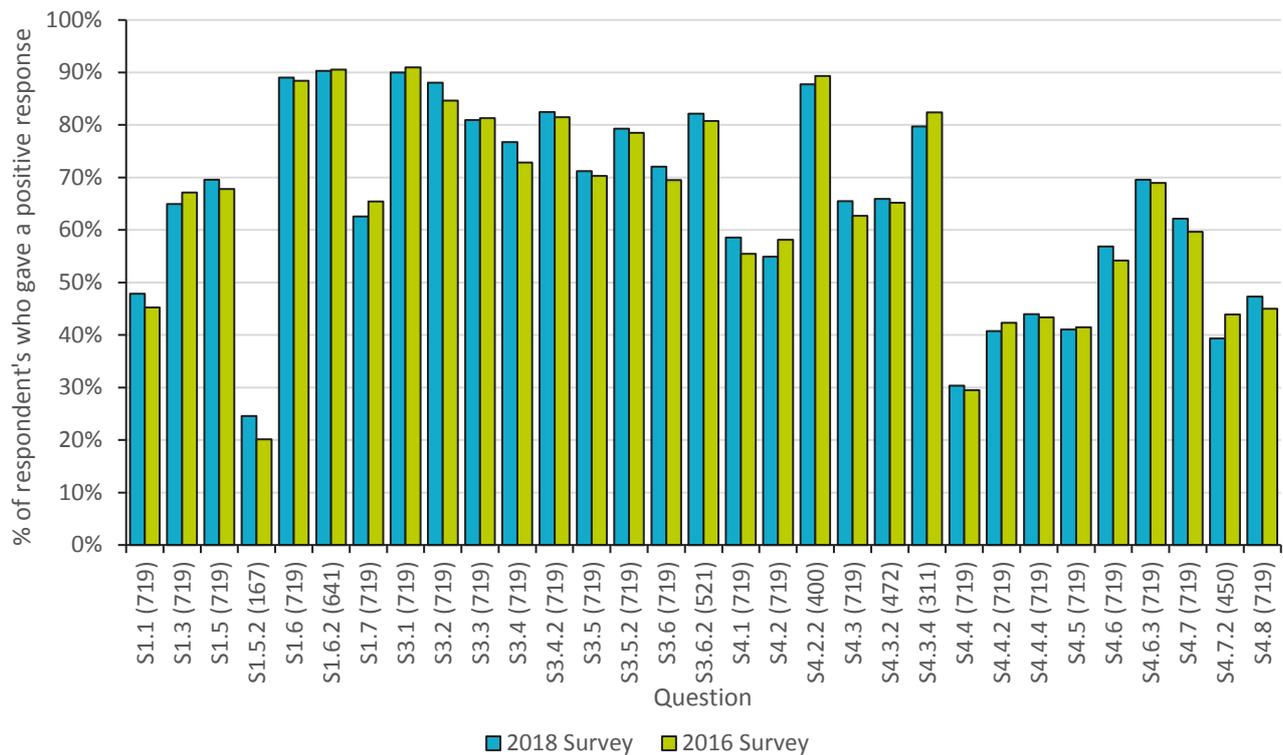
	Question	Mean* (2018)	Mean* (2016)	Mean* (Baseline)
S4.4	The pharmacists in our hospital enter all medicines used onto the patient's medical record on admission.	30.3%	29.3%	28.5%
S4.5	The pharmacists in our hospital contribute to the transfer of information about medicines when patients move between and within healthcare settings.	41.0%	41.4%	44.0%
S4.8	Do you have an agreed strategic plan for the development of clinical pharmacy services in your hospital?	47.3%	45.0%	N/A
S1.1	The pharmacists in our hospital work routinely as part of a multidisciplinary team.	47.8%	47.7%	59.1%
S4.2	All prescriptions in our hospital are reviewed and validated as soon as possible by a pharmacist.	54.9%	58.1%	62.9%

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

The individual question with the least positive response was S4.4, which was 'The pharmacists in our hospital enter all medicines used onto the patient's medical record on admission'. This question received a very poor response (only 30.3% of responses were positive), although this was slightly higher than both the 2016 survey and the baseline. Question S4.8 'Do you have an agreed strategic plan for the development of clinical pharmacy services in your hospital' also showed a slight improvement in comparison to the 2016 survey. Question S4.2 'All prescriptions in our hospital are review and validated as soon as possible by a pharmacist' responses continued to decline with 55% being positive, down from 58% in the 2016 survey and 63% in the baseline survey.

Figure 2 shows the results of the 2018 EAHP Statements survey alongside the results of the 2016 survey. The numbers in brackets on the bottom axis are the number of responses by country for the 2018 survey. It can be seen that generally for each question the mean number of positive responses from countries remains similar but in most cases the percentage has increased slightly. Out of the 31 questions surveyed, 20 showed an increase in positive responses, with 11 questions showing a decrease. As the changes between the two survey results are slight, this indicates that the barriers to implementing the statements that countries were reporting in 2016 have remained in place.

Figure 2 Comparative data: Overall percentage of positive responses from the 2018 EAHP Statements survey and 2016 survey.



The results of the 2018 EAHP Statements were also compared to both the 2016 survey and the baseline survey, so change in responses can be tracked over time. Since this is a lot of information to display on a single graph, the results have been split to show the results of questions from Sections 1, 3 and 4 separately ([Figure 3](#), [Figure 4](#) and [Figure 5](#) respectively). Note that several new questions were introduced in the 2016 survey, and hence no baseline data exists for them. The numbers in brackets on the bottom axis are the total number of responses for the 2018 survey.

Out of the 24 questions that were asked in both the baseline and 2018 surveys 18 showed a decrease in the number of positive responses. There were also several questions that demonstrated notable increases in positive responses, in particular S1.6.2 'The pharmacists in our hospital take the lead or have an active role in coordinating the activities of the Drug & Therapeutic Committees or equivalent' which increased from 74% in the baseline to 90% in the 2018 survey.

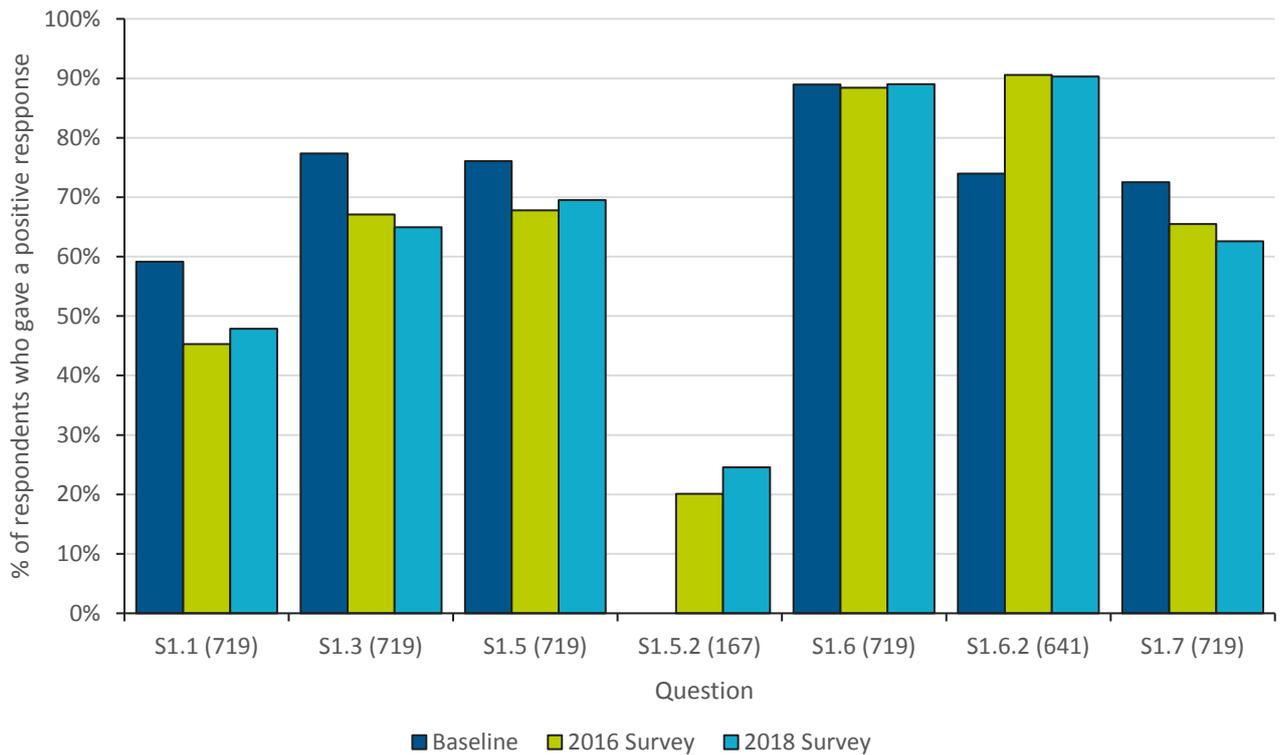


Figure 3 Comparative data: Mean percentage of positive responses from countries in the 2018 EAHP Statements survey, 2016 survey and baseline survey for questions from Section 1: Introductory Statements and Governance.

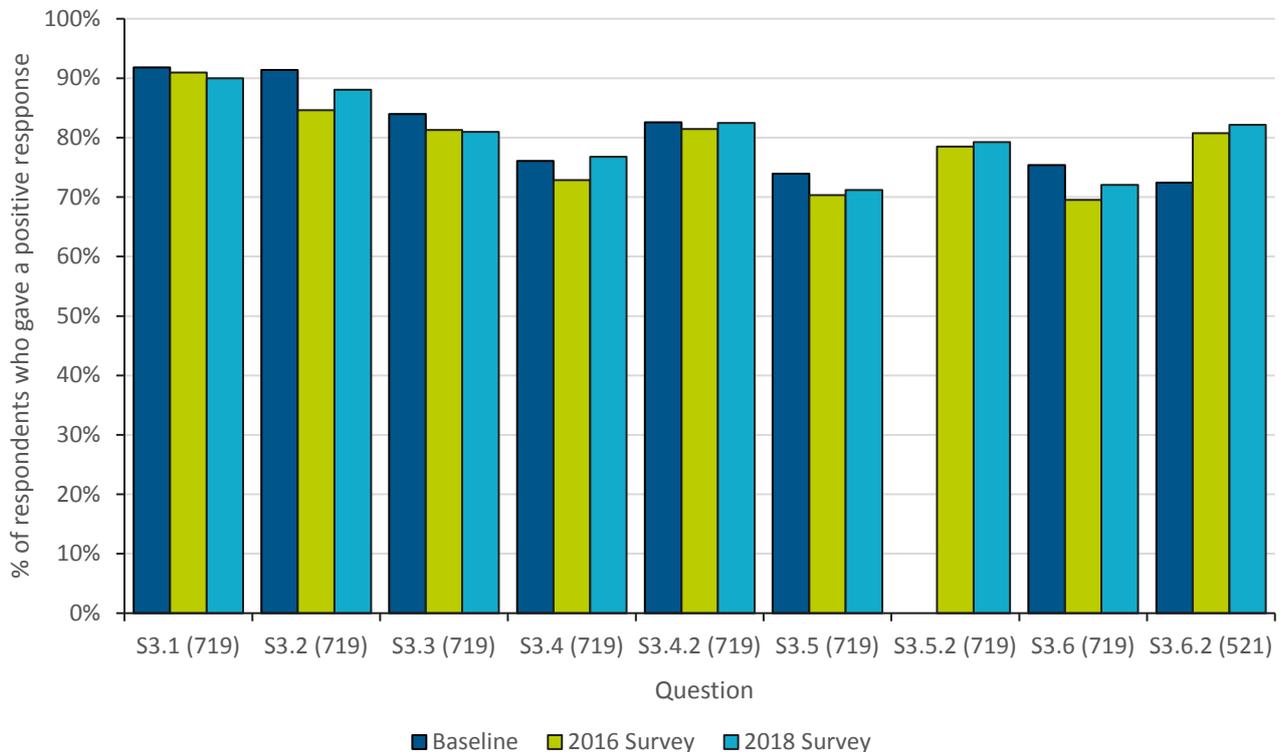


Figure 4 Comparative data: Mean percentage of positive responses from countries in the 2018 EAHP Statements survey, 2016 survey and baseline survey for questions from Section 3: Production and Compounding.

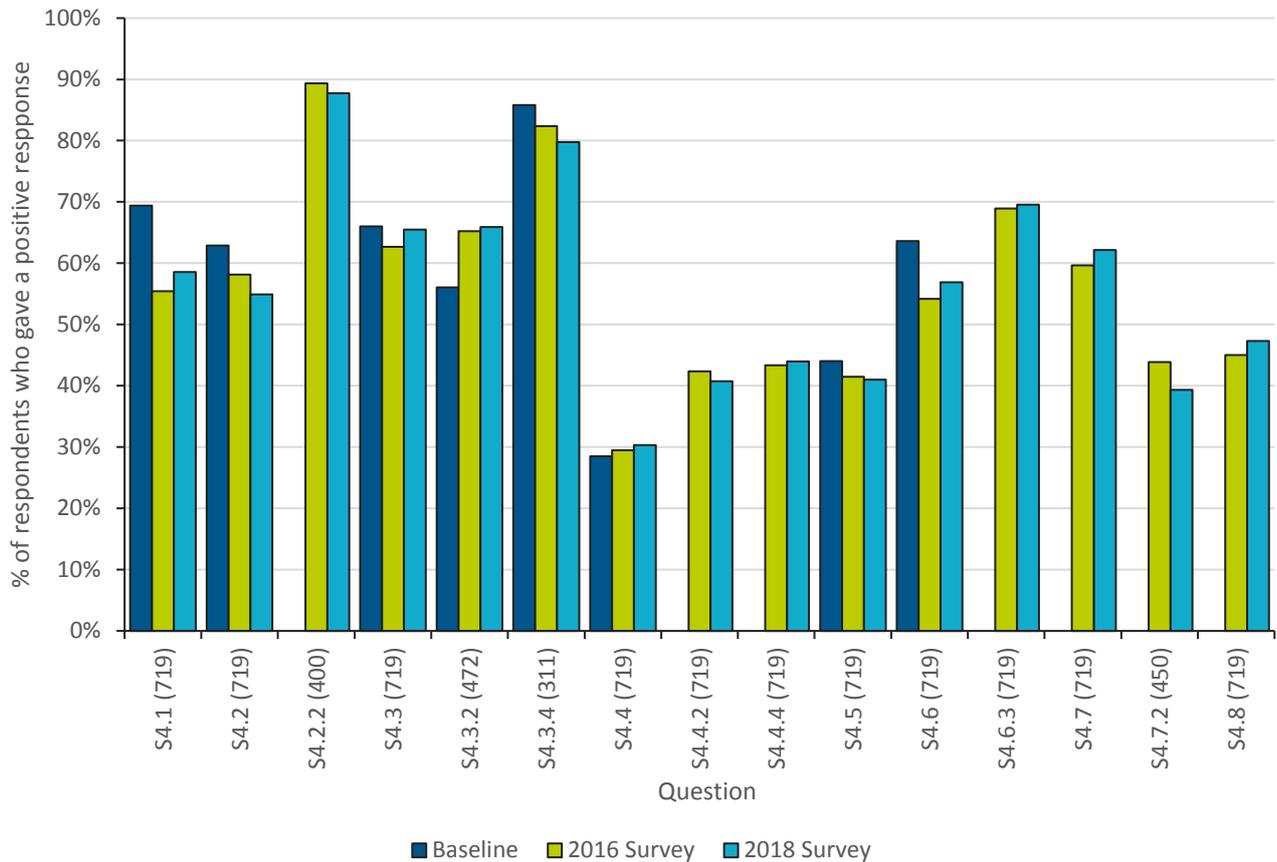


Figure 5 Comparative data: Mean percentage of positive responses from countries in the 2018 EAHP Statements survey, 2016 survey and baseline survey for questions from Section 4: Clinical Pharmacy Services.

As can be seen from the figures the responses in the 2018 survey were broadly similar to previous years. Most of the questions in section 1 (introductory statements and governance) and all of the questions in section 3 (production and compounding) produced a high percentage of positive responses. However, response to questions in section 4 (clinical pharmacy services) produced more variable responses with 6 of the 15 questions producing less than 50% positive responses. This is explored in more detail in the sections below.

A major theme that emerged from previous surveys was the biggest barrier to implementing the statements was a lack of capacity to implement the statements. A possible broad explanation for the decrease in positive responses could be that the overall capacity of hospital pharmacists has been further stretched since the baseline survey.

Another possible explanation for this increase in negative responses could be that some respondents may now be familiar enough with the EAHP Statements surveys to know that if they give a negative response to a question they are then offered the opportunity to provide further feedback on an issue, which they wish to do.

B2: Questions asked in the survey

The table below shows **all** of the questions asked in the survey regarding the 21 European Statements of Hospital Pharmacy from Sections 1, 3 and 4, 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 50% of participants gave a positive response have been highlighted as red, and questions where more than 75% of participants gave a positive response have been highlighted as green.

EAHP Survey Questions	
Section 1: Introductory Statements and Governance	
S1.1 The pharmacists in our hospital work routinely as part of a multidisciplinary team.	48% of responses were positive
S1.3 Our hospital is able to prioritise hospital pharmacy activities according to the agreed criteria.	65% of responses were positive
S1.5 The pharmacists in our hospital are engaged in the supervision of all steps of all medicine use processes.	70% of responses were positive
S1.5.2 Do you have an approved human resource plan in place to address this?	25% of responses were positive
S1.6 At least one pharmacist from our team is a full member of the Drug & Therapeutics Committee or equivalent.	89% of responses were positive
S1.6.2 The pharmacists in our hospital take the lead or have an active role in coordinating the activities of the Drugs & Therapeutics Committees or equivalent.	90% of responses were positive
S1.7 The pharmacists in our hospital are involved in the design, specification of parameters and evaluation of ICT used within medicines processes.	63% of responses were positive
Section 3: Production and Compounding	
S3.1 The pharmacists in our hospital check if a suitable product is commercially available before we manufacture or prepare a medicine.	90% of responses were positive
S3.2 When medicines require manufacture or compounding, we either produce them in our hospital pharmacy or we outsource to an approved provider.	88% of responses were positive
S3.3 The pharmacists in our hospital undertake a risk assessment to determine the best practice quality requirements before making a pharmacy preparation.	81% of responses were positive
S3.4 The pharmacy in our hospital has an appropriate system in place for the quality assurance of pharmacy prepared and compounded medicines.	77% of responses were positive
S3.4.2 The pharmacy in our hospital has an appropriate system in place for the traceability of pharmacy prepared and compound medicines.	82% of responses were positive
S3.5 Our hospital has appropriate systems in place for the preparation and supply of hazardous medicines.	71% of responses were positive

S3.5.2 Our hospital has appropriate systems in place to minimise the risk of exposing hospital personnel, patients and the environment to harm from hazardous medicines.	79% of responses were positive
S3.6 Our hospital has written procedures that ensure staff are appropriately trained to reconstitute or mix medicines in a patient care area.	72% of responses were positive
S3.6.2 Were pharmacists involved in approving these procedures?	82% of responses were positive
Section 4	
S4.1 The pharmacists in our hospital play a full part in shared decision-making on medicines, including advising, implementing and monitoring medication changes.	59% of responses were positive
S4.2 All prescriptions in our hospital are reviewed and validated as soon as possible by a pharmacist.	55% of responses were positive
S4.2.2 Does this review and validation by a pharmacist take place prior to the administration of medicines?	88% of responses were positive
S4.3 The pharmacists in our hospital have access to the patients' health record.	66% of responses were positive
S4.3.2 The pharmacists in our hospital document their clinical interventions into the patients' health record.	66% of responses were positive
S4.3.4 We analyse these clinical pharmacy interventions to inform quality improvement plans.	80% of responses were positive
S4.4 The pharmacists in our hospital enter all medicines used onto the patient's medical record on admission.	30% of responses were positive
S4.4.2 The pharmacists in our hospital reconcile medicines on admission	41% of responses were positive
S4.4.4 When reconciling medicines, the pharmacists in our hospital assess the appropriateness of all patients' medicines, including herbal and dietary supplements.	44% of responses were positive
S4.5 The pharmacists in our hospital contribute to the transfer of information about medicines when patients move between and within healthcare settings.	41% of responses were positive
S4.6 The pharmacists in our hospital ensure patients and carers are offered information about their medicines in terms they can understand.	57% of responses were positive
S4.6.3 Have the pharmacists in your hospital received appropriate education and support to help them explain the risks and benefits of medicines, in terms patients/carers can understand?	70% of responses were positive
S4.7 The patients in our hospital are informed when medicines are used outside of their marketing authorisation.	62% of responses were positive
S4.7.2 Do hospital pharmacists do this?	39% of responses were positive
S4.8 Do you have an agreed strategic plan for the development of clinical pharmacy services in your hospital?	47% of responses were positive

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

1. EAHP Statement 4.4

EAHP 4.4: *The pharmacists in our hospital enter all medicines used onto the patient's medical record on admission.*

Figure 6 shows the percentage of respondents who gave a positive response when asked if pharmacists enter all medicines used onto the patient's medical record on admission. Overall, only 30% of responses were positive to this question, a similar result to the 2016 survey where 29% of the total responses were positive. However, a paired samples t-test indicated that an increase in the mean percentage of positive responses for countries between the 2016 survey (mean = 25.0%) and the 2018 survey (mean = 31.1%) was statistically significant ($p=0.023$).

In every country surveyed less than half of the respondents gave a positive response, except for Netherlands, Spain, Turkey and UK. When looking at the responses from individual countries who participated in both surveys the percentage of positive responses increased in 16 countries, decreased in 14 countries and stayed the same in 4 countries.

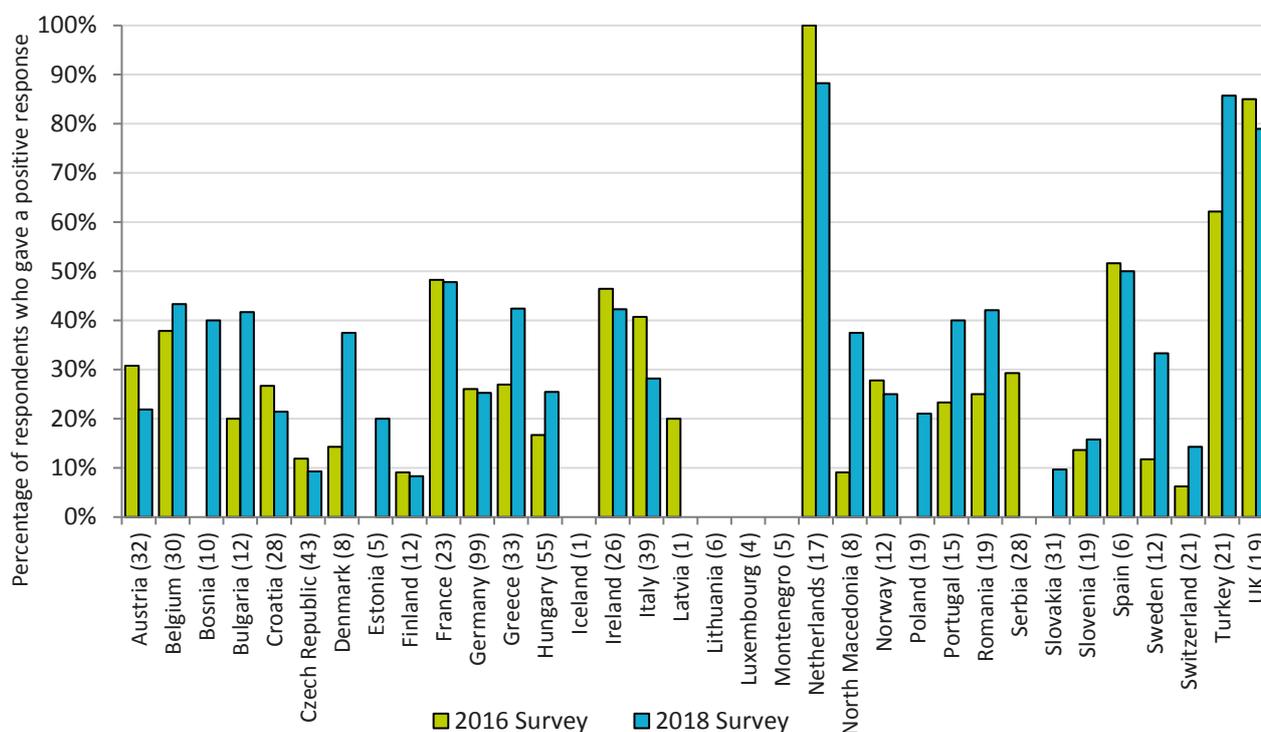


Figure 6 Percentage of respondents who gave a positive response to the statement "The pharmacists in our hospital enter all medicines used onto the patient's medical record on admission."

To further understand this, respondents who answered the question with a negative response were asked what is preventing pharmacists from entering medicines onto patient's medical records. The overall results are shown in Figure 7. The most frequent overall response was that 'other healthcare professionals do this' with a total of 313 responses. This was observed in previous EAHP surveys, where in many countries and hospitals, the role of the hospital pharmacists is limited to the procurement of medicines, rather than engage in clinical responsibilities.

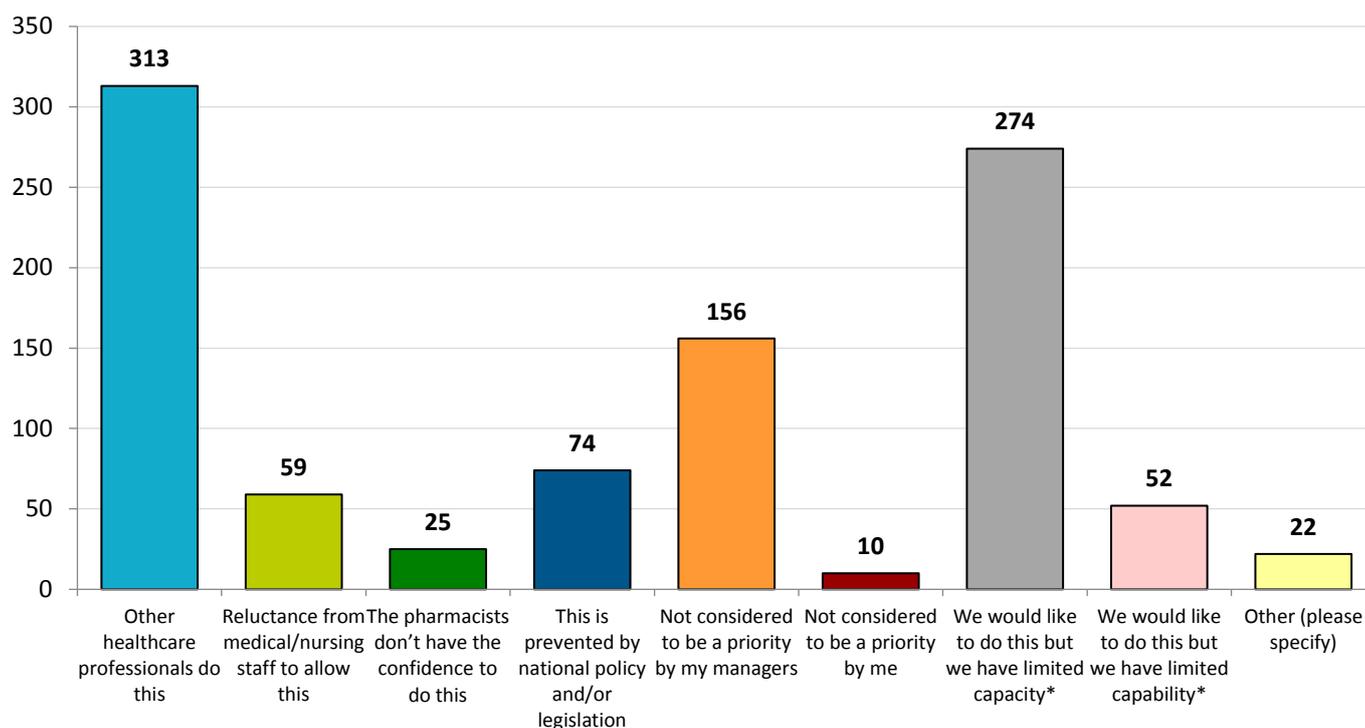


Figure 7 Results from the question S4.4.1 'What is preventing pharmacists from entering medicines onto patient's records on admission?'

Another major barrier was 'We would like to do this but we have limited capacity' (274 responses across all countries). Not being considered a priority by managers was also identified with 156 responses. These 3 options accounted for 75% of all responses. In the 'Other' category lack of staff was again highlighted as a potential issue, but on a more positive note some responses suggested improvements on this issue are due to take place in the near future. When compared to the 2016 survey the results to this question were very similar, again suggesting little progress has been made. [Figure 8](#) shows the results in form of a stacked bar chart showing the differences between individual countries.

Participants were also asked if 'pharmacists in our hospital reconcile medicines on admission', as seen in [Figure 9](#). Overall 41% of all responses were positive, a slight decrease from the 42% observed in the 2016 survey. Of the 34 countries participating, 20 returned a more positive result when compared to the 2016 survey. The largest increase was seen in Turkey where the percentage of positive responses increased from 65% to 95%.

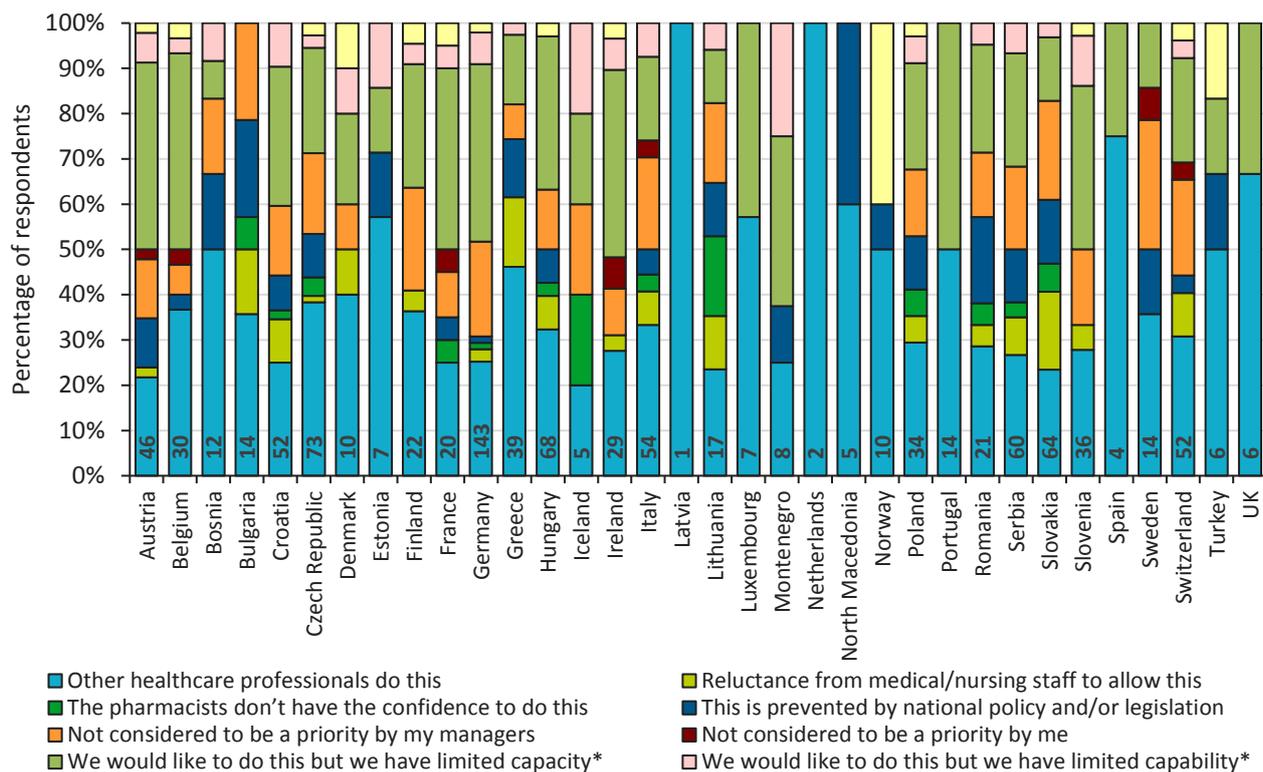


Figure 8 Results from the question S4.4.1 'What is preventing pharmacists from entering medicines onto patient's records on admission?' (Grouped by country)

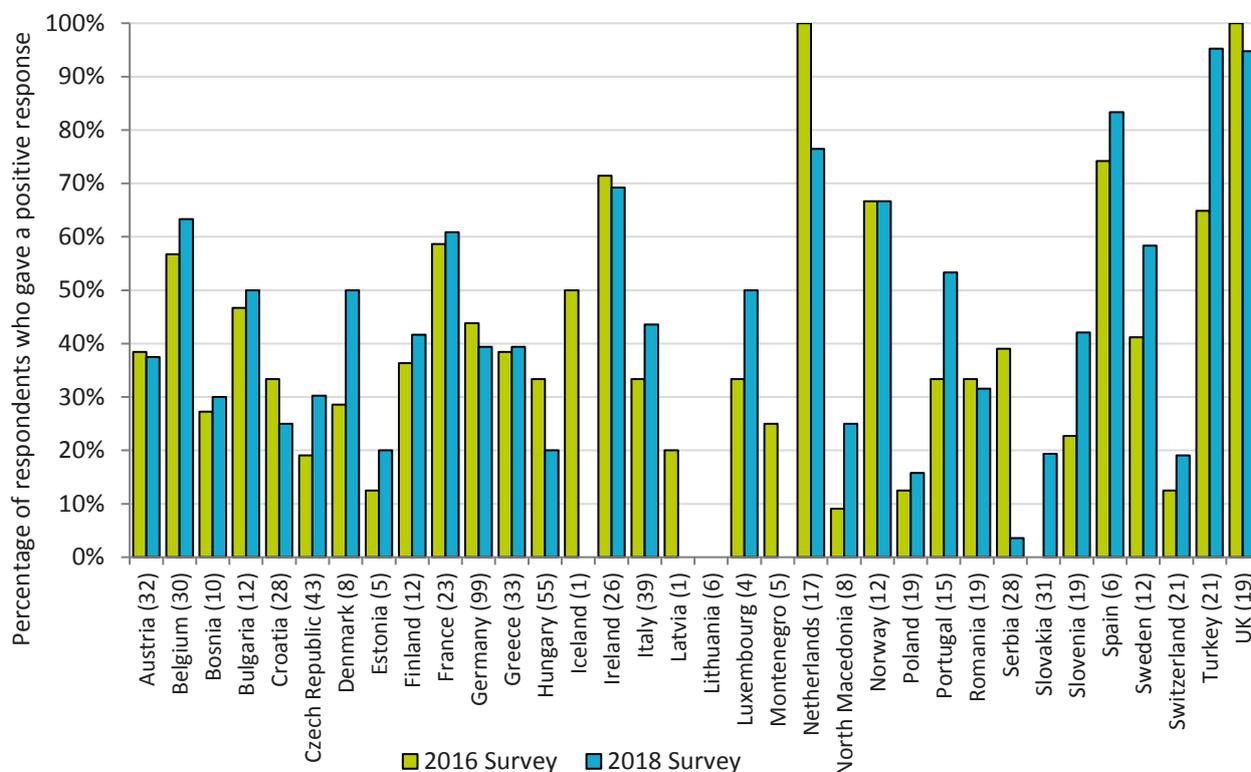


Figure 9 Percentage of respondents who gave a positive response to the statement "The pharmacists in our hospital reconcile medicines on admission".

Figure 10 shows the responses to the follow up question 'What is preventing pharmacists in your hospital from reconciling medicines on admission'. The results are similar to those of the previous question (Figure 7) with 'Other healthcare professionals do this' with 222 responses and 'We would like to do this but have limited capacity' with 253 responses being the top two options. These results are also similar to the 2016 survey; however there has been a notable decrease in responses indicating national policy or legislation was an issue (76 in 2016, down to 47 in 2018). Despite this overall decrease, this option was selected at least once in 16 out of the 34 countries surveyed. In the free text responses a lack of clinical pharmacists in the hospital was again highlighted as a potential issue. Figure 11 shows the results of the question broken down by country. From this it is observed that other healthcare professionals performing this task and lack of capacity in the pharmacists are the primary responses given in most countries.

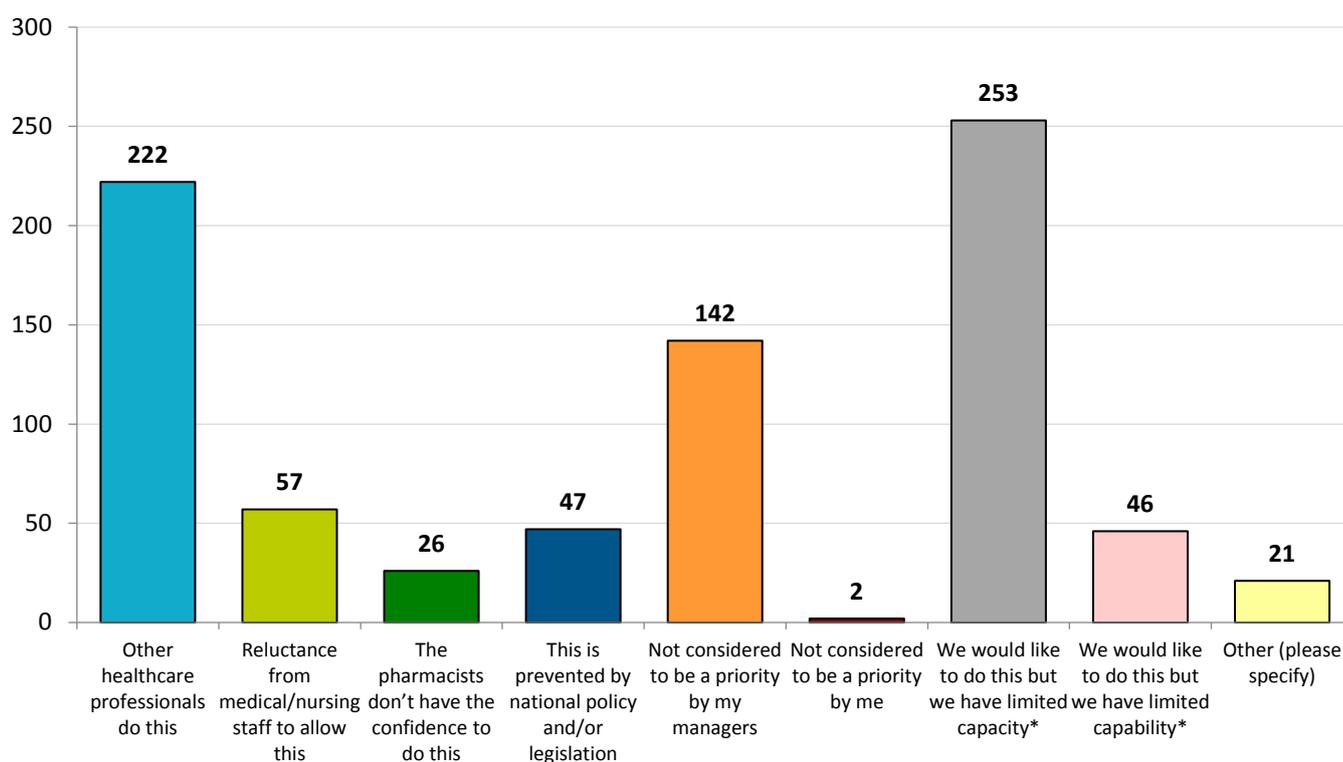


Figure 10 Overall results of the question "What is preventing you or your hospital pharmacists from entering all medicines used onto the patient's medical record on admission?"

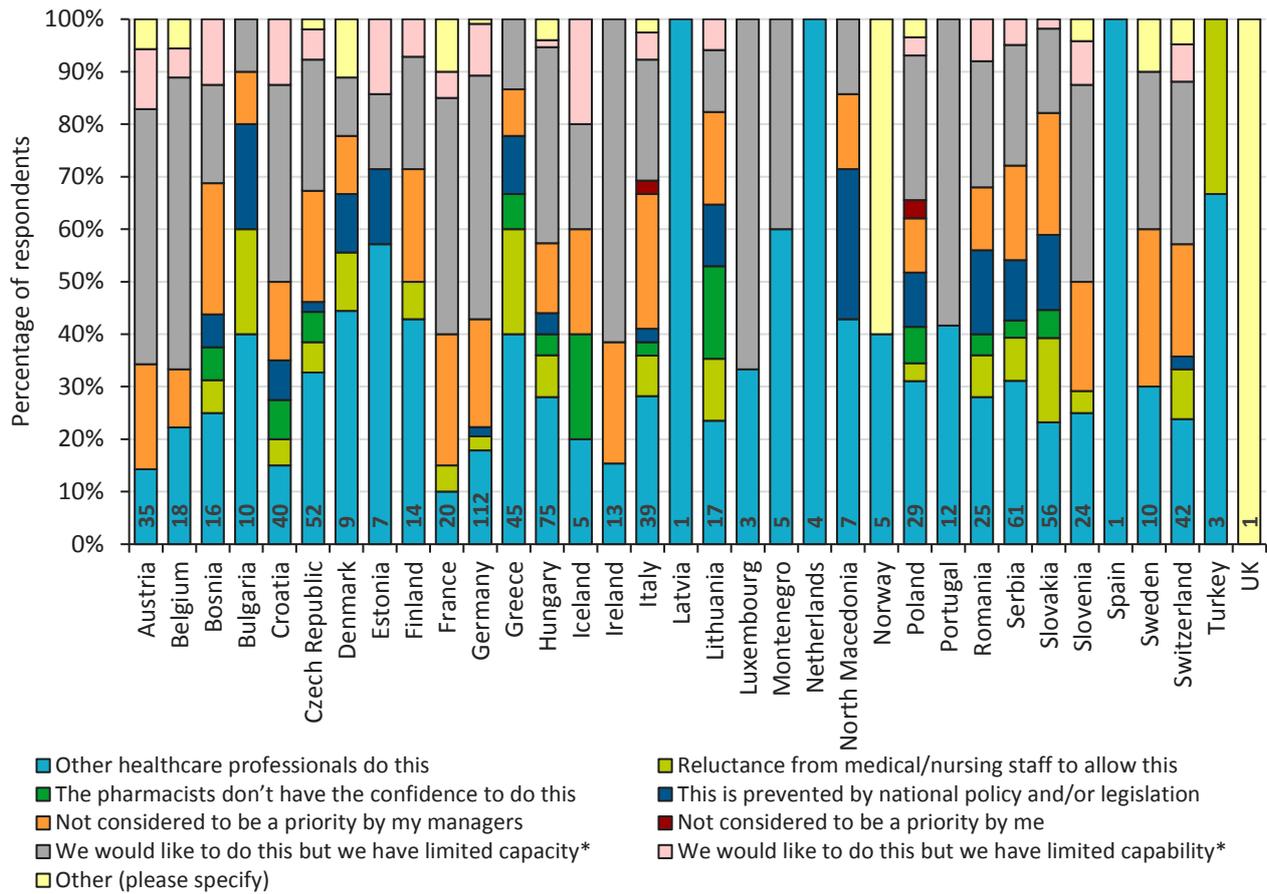


Figure 11 Overall results of the question “What is preventing you or your hospital pharmacists from entering all medicines used onto the patient’s medical record on admission?” (Grouped by country)

Figure 12 shows the responses to the question 'The pharmacists in our hospital assess the appropriateness of all patient's medicines, including herbal and dietary supplements' with 44% of all responses being positive. This is a very slight increase from 43% of all responses being positive in the 2016 survey. Nationally some progress has been made with 23 out of 34 countries returning a more positive result when compared to 2016. The response in Bulgaria improved from 7% to 33% and in Switzerland it increased from 38% to 62%.

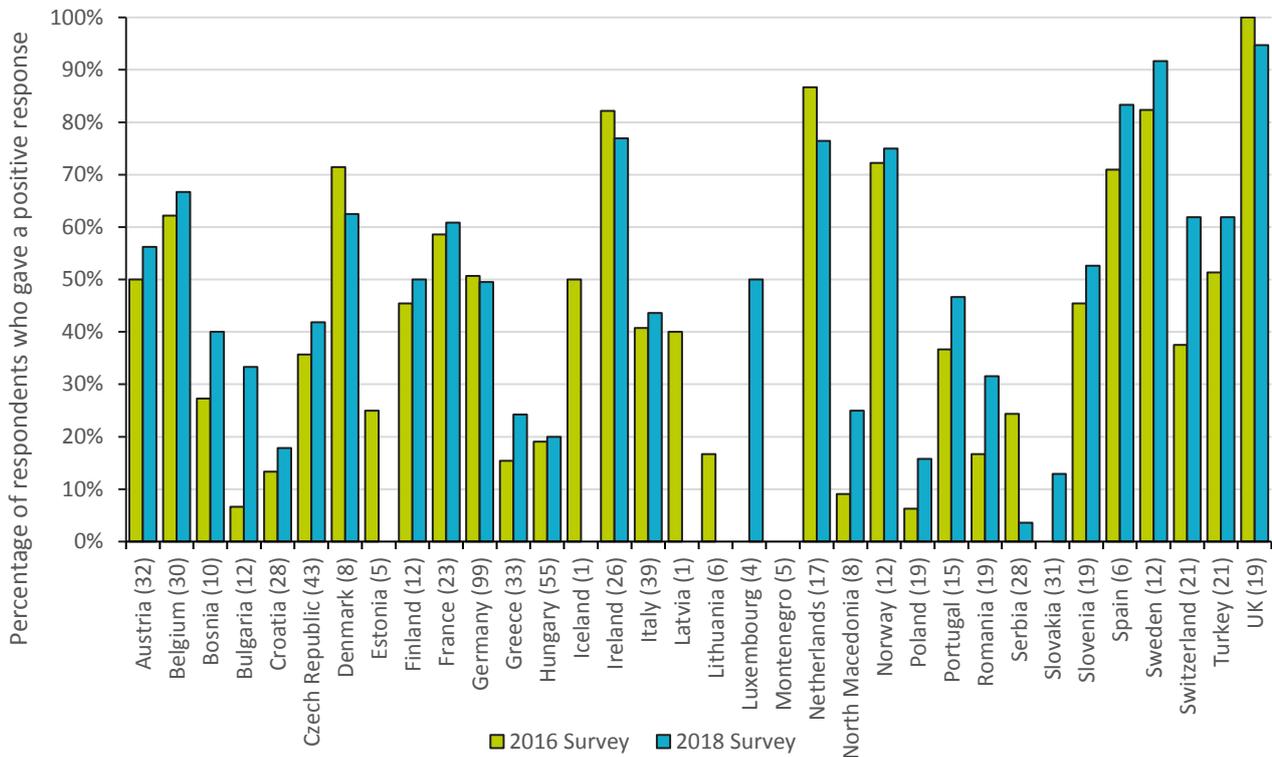


Figure 12 Percentage of respondents who gave a positive response to the statement "The pharmacists in our hospital assess the appropriateness of all patient's medicines, including herbal and dietary supplements".

Figure 13 shows the results to the question 'What is preventing pharmacists from assessing the appropriateness of all patient's medicines, including herbal and dietary supplements'. The responses are similar to the other follow up questions related to EAHP statement 4.4 with 'Other healthcare professionals do this' with 182 responses and 'We would like to do this but have limited capacity' with 226 responses remaining the most popular choices. The responses in the 'Other' category include not having enough pharmacists to do this, or that it may be done by other healthcare professionals, in some cases by pharmacy technicians. These results are also similar in nature to those observed in the 2016 survey. **Figure 14** shows the same results broken down by country.

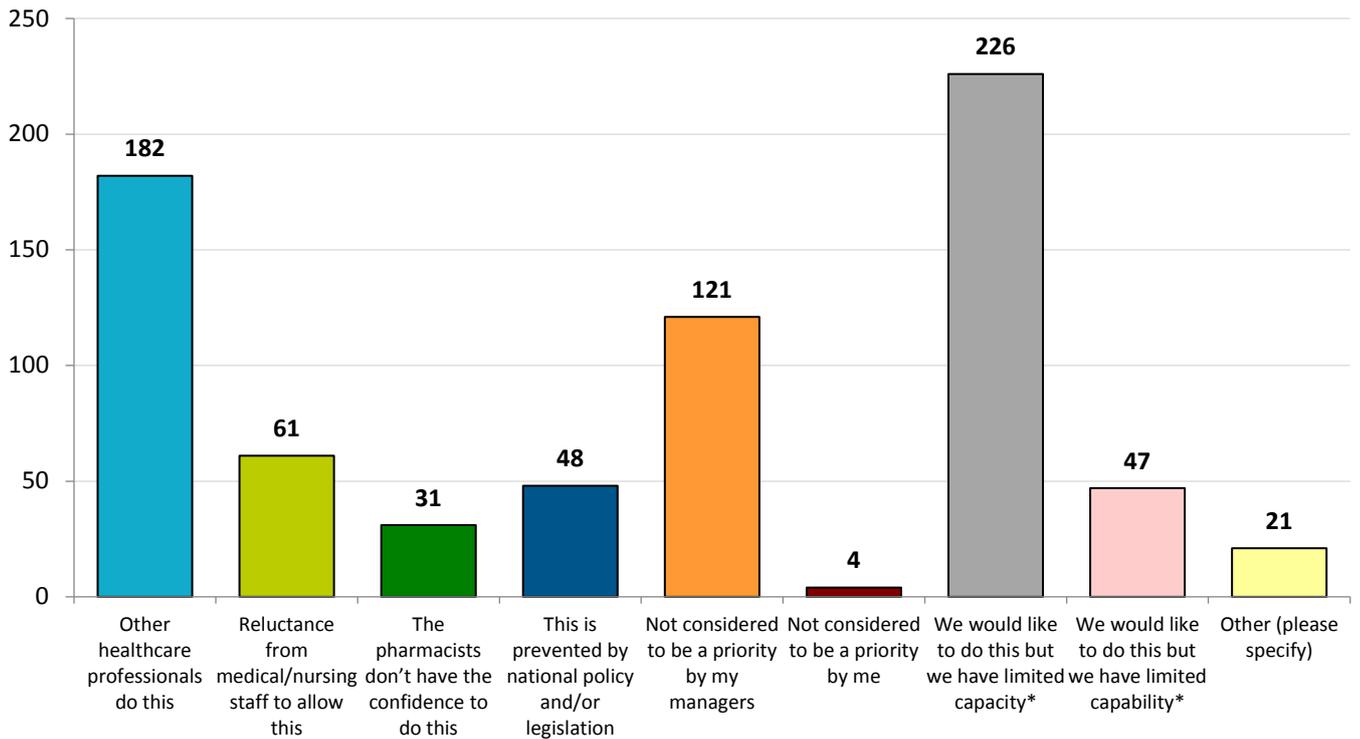


Figure 13 Overall results of the question “What is preventing the pharmacists in your hospital from assessing the appropriateness of all patients’ medicines, including herbal and dietary supplements?”

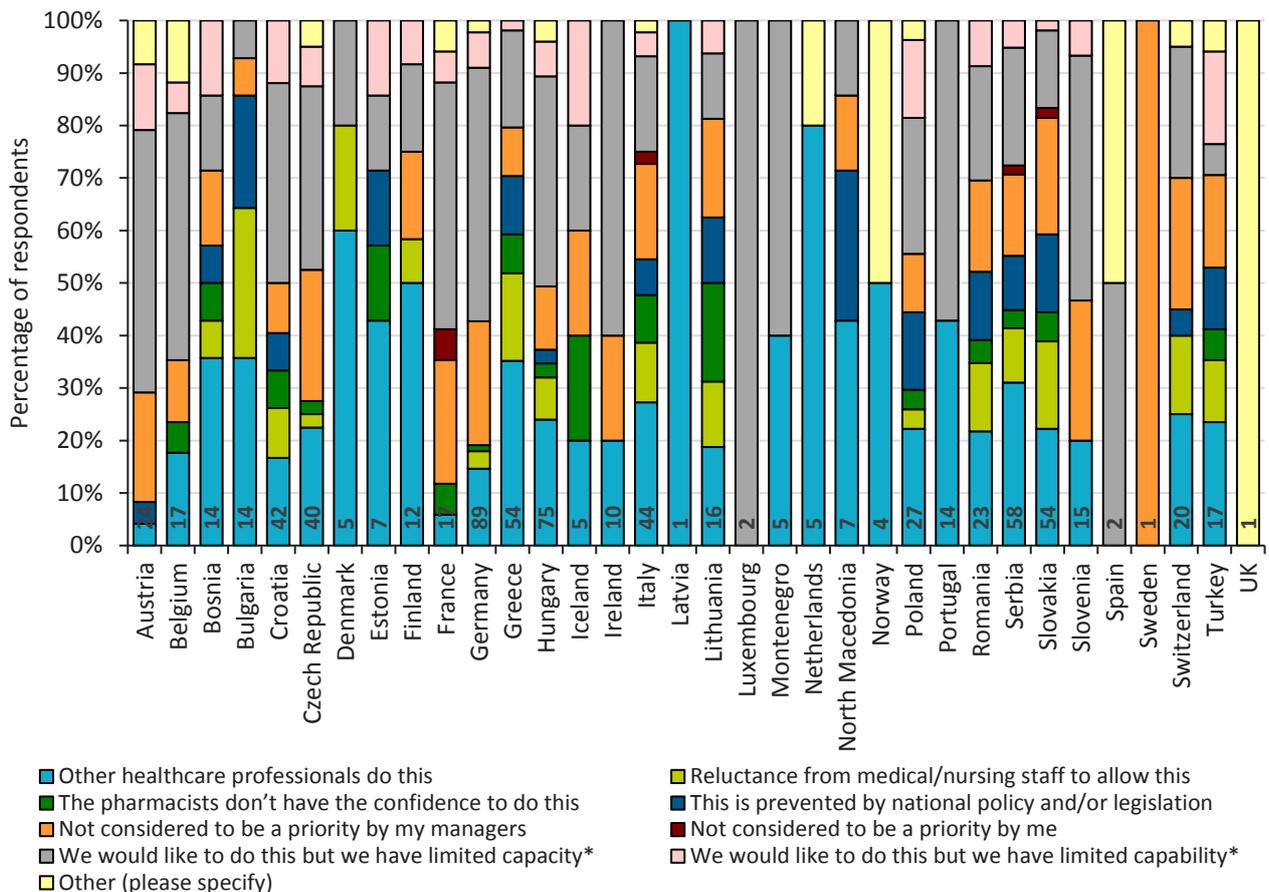


Figure 14 Results of the question “What is preventing the pharmacists in your hospital from assessing the appropriateness of all patients’ medicines, including herbal and dietary supplements?” (Grouped by country)

Figure 7 showed that lack of capacity was cited as the second largest barrier to pharmacists entering medicines used onto patients' records on admission, so the relationship between this activity and pharmacist workforce was investigated further. The responses when asked if hospital pharmacists enter all medicines used onto the patient's medical record on admission are shown in Figure 15, where the results are grouped by the number of fully qualified pharmacists employed by the hospital. The proportion of more negative responses (1 or 2) is much higher for the lowest staffing level (1-10 pharmacists), although it is important to note that the total numbers of responses for the higher staffing levels are fairly small.

A Kruskal-Wallis H test showed that there was a statistically significant difference in responses to pharmacists entering medicines used onto patients records on admission between the groupings of working pharmacist numbers, $\chi^2(3) = 30.0, p < 0.01$, with a mean rank of 342 for the '1 to 10 pharmacists' group, 418 for the '11 to 50 pharmacists' group, 492 for the '51 to 100 pharmacists' group and 621 for the 'More than 100 pharmacists' group. Hospitals employing more pharmacists were more likely to have pharmacists regularly entering medicines used onto patients' medical record on admission.

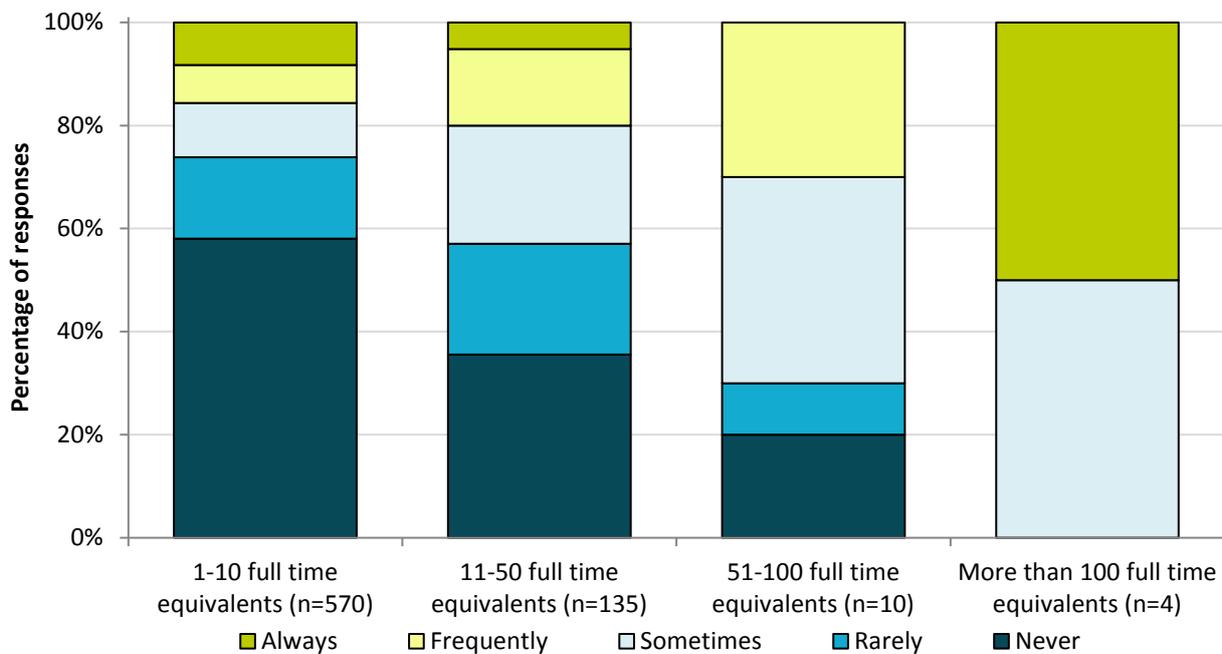


Figure 15 Overall results of responses to the statement "The pharmacists in our hospital enter all medicines used onto the patient's medical record on admission" (Grouped by number of fully qualified pharmacists employed by the hospital)

2. EAHP Statement 4.5

EAHP 4.5: *The pharmacists in our hospital contribute to the transfer of information about medicines when patients move between and within healthcare settings.*

The responses to the question 'The pharmacists in our hospital contribute to the transfer of information about medicines when patients move between and within healthcare settings' are shown below in [Figure 16](#). The overall response was only 41% positive, showing this statement is not currently implemented widely across European hospitals. The overall response observed in the 2016 survey which was also 41%, indicating that progress on this issue may be minimal. The positive response rate between countries was varied; in 21 countries less than half of the respondents gave a positive response but 5 countries gave an average positive response of 75% or greater. This variation in responses between countries is similar to what was observed in [Figure 6](#), which also described a more clinical role suggesting the role of hospital pharmacists in some countries is less focused on clinical activities than others.

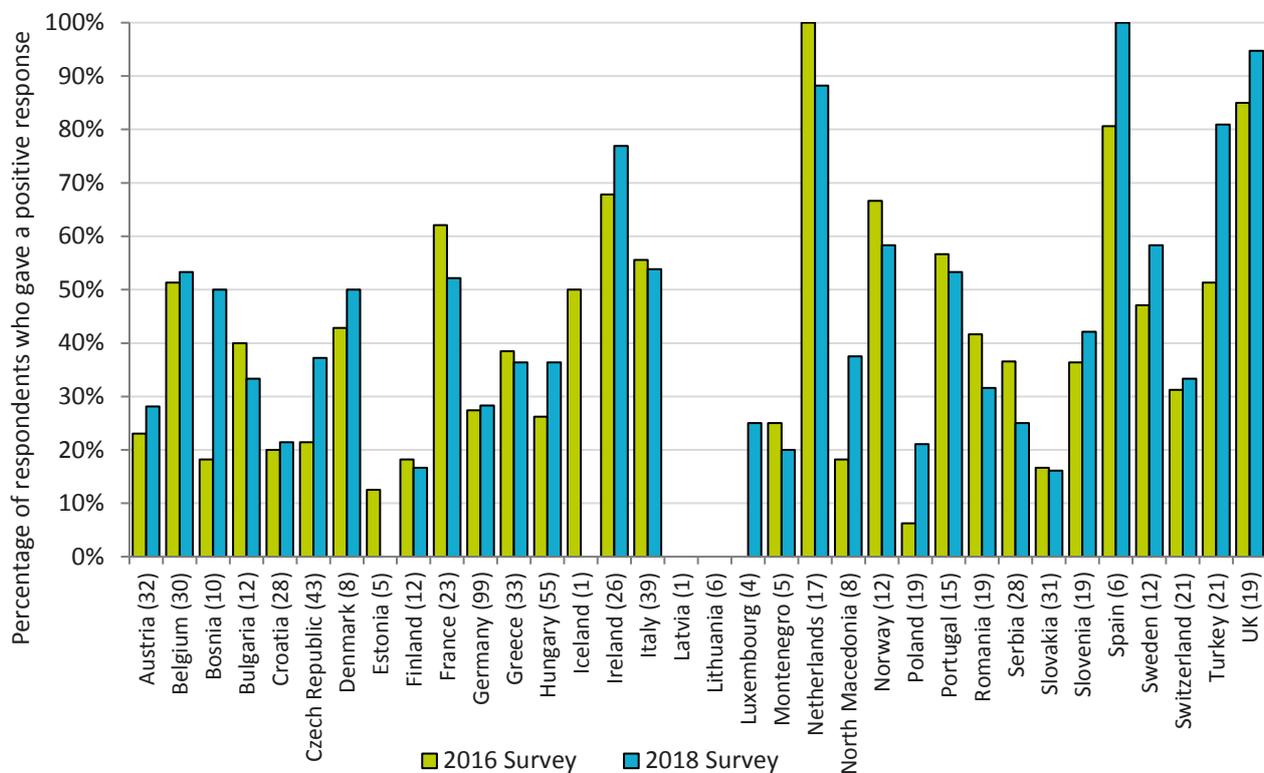


Figure 16 Percentage of respondents who gave a positive response to the statement "The pharmacists in our hospital contribute to the transfer of information about medicines when patients move between and within healthcare settings".

Although the mean percentage of positive responses for countries increased between the 2016 survey (mean = 38.3%) and the 2018 survey (mean = 42.5%), a t-test showed this increase was not quite statistically significant ($p=0.056$).

When asked what are the barriers to pharmacists contributing to the transfer of information about medicines when patients move between healthcare settings, the most frequent response was other healthcare professionals do this (249 responses), limited capacity (213 responses) and not considered to be a priority by my managers (132 responses), as seen in [Figure 17](#). From the 'Other' category are several comments from different countries stating that this is something that is being currently developed/implemented. Some

comments mention that pharmacists may not be informed when a patient is moved and are not included in the process.

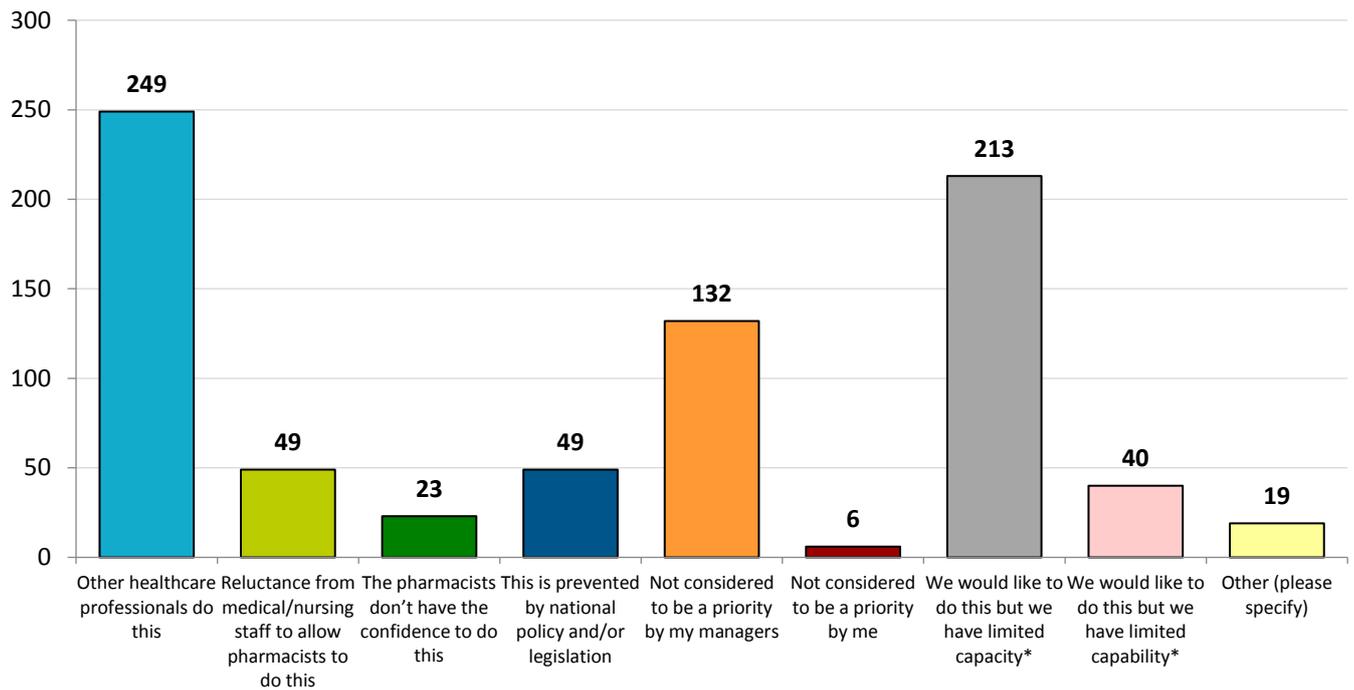


Figure 17 Overall results of the question 'What is preventing you or your hospital pharmacists from contributing to the transfer of information about medicines when patients move between and within healthcare settings'.

The results for the same question, grouped by country, are shown below in **Figure 18**. From this it can be seen that nearly all countries identified 'other healthcare professionals do this' or 'limited capacity' as the biggest barrier to implementation. Several countries highlighted national policy/legislation as a barrier, most notably North Macedonia, Bulgaria and Poland.

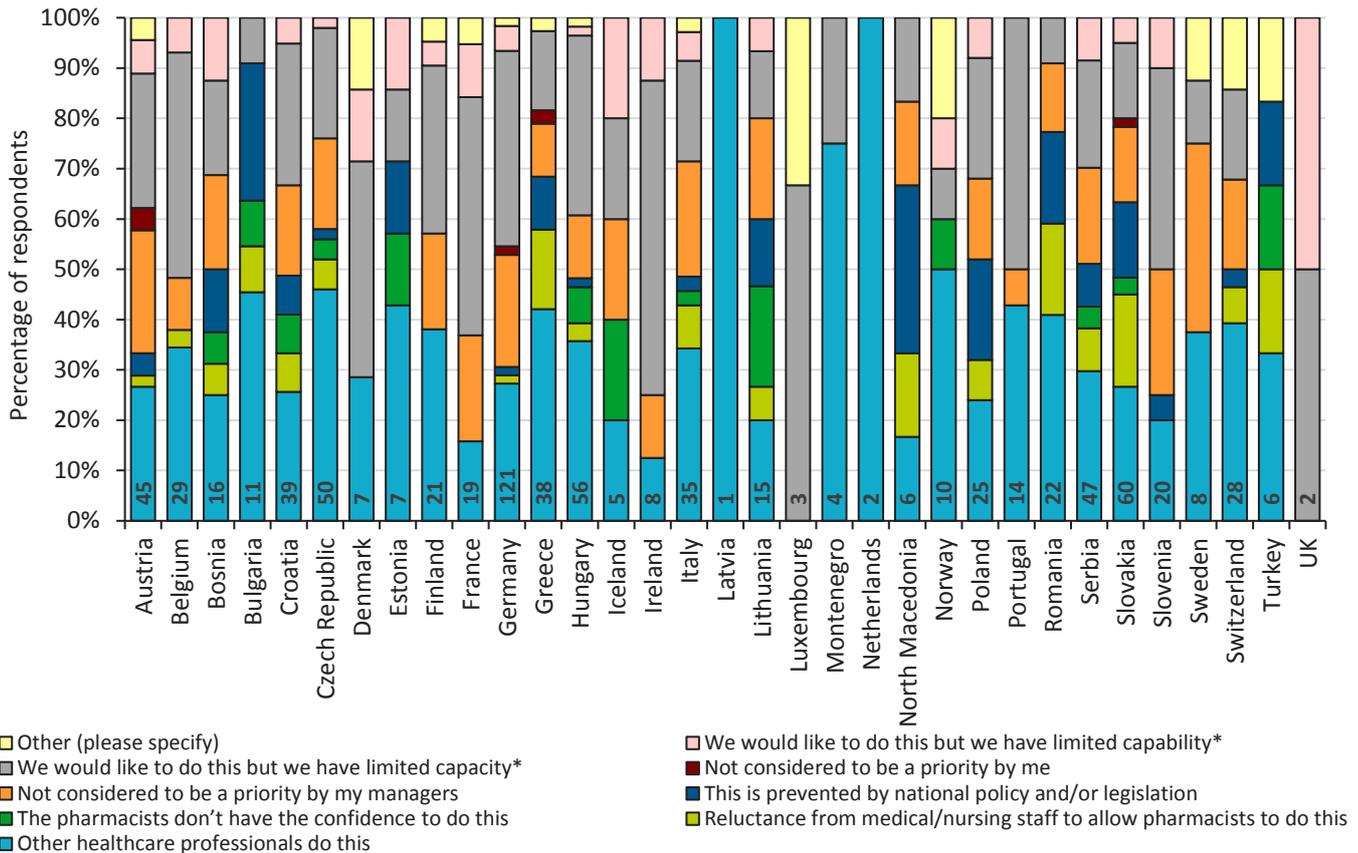


Figure 18 Results of the question 'What is preventing you or your hospital pharmacists from contributing to the transfer of information about medicines when patients move between healthcare settings' (Grouped by country).

Figure 19 shows the overall results for this statement question grouped by the number of fully qualified pharmacists working at the hospital. As with the previous statement, the amount of positive responses was much lower for the lowest grouping of working pharmacists (36.5% for the 1-10 pharmacists group) compared to the groups with more working pharmacists (increasing to 55.5%, 80% and 100% as the staffing group level increments).

A Kruskal-Wallis H test showed that there was a statistically significant difference in responses to pharmacists contributing to the transfer of information about medicines when patients move between and within healthcare settings between the groupings of working pharmacist numbers, $\chi^2(3) = 36.1, p < 0.01$, with a mean rank of 339 for the '1 to 10 pharmacists' group, 427 for the '11 to 50 pharmacists' group, 547 for the '51 to 100 pharmacists' group and 605 for the 'More than 100 pharmacists' group. Hospitals employing fewer pharmacists were less likely to have pharmacists contributing to the transfer of information about medicines when patients move between and within healthcare settings.

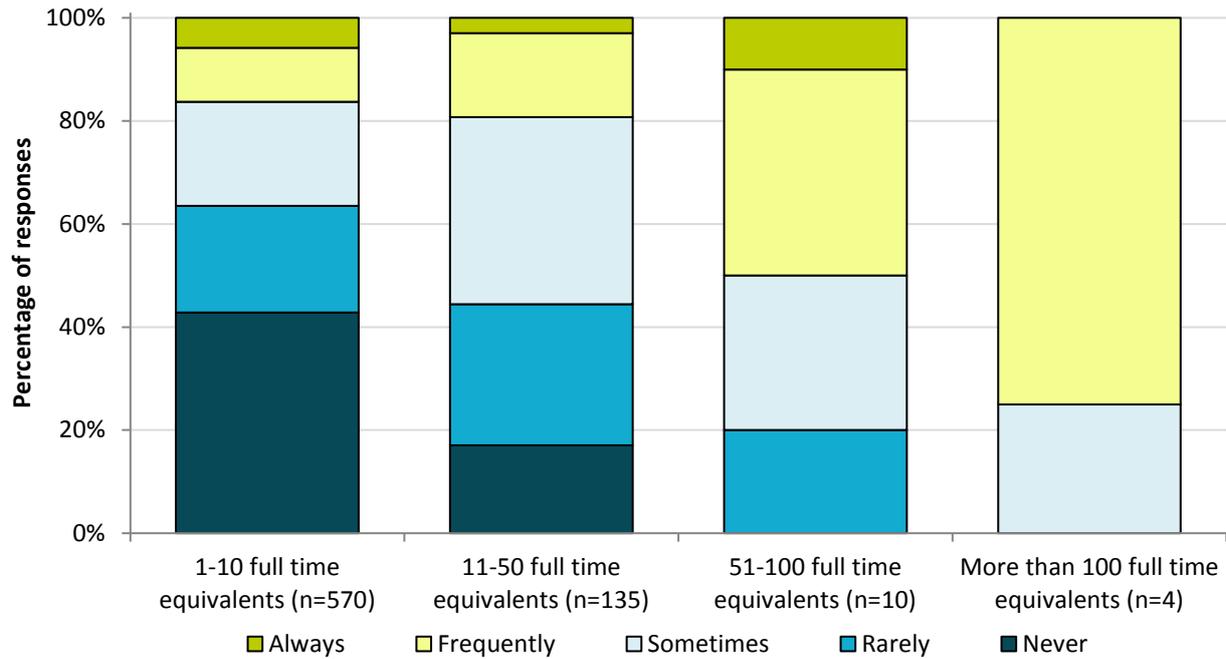


Figure 19 Overall results of responses to the statement “The pharmacists in our hospital contribute to the transfer of information about medicines when patients move between and within healthcare settings” (Grouped by number of fully qualified pharmacists employed by the hospital)

3. EAHP Statement 4.8

EAHP Statement 4.8: Do you have an agreed strategic plan for the development of clinical pharmacy services in your hospital?

Figure 20 shows the percentage of respondents who gave a positive response when asked “Do you have an agreed strategic plan for the development of clinical pharmacy services in your hospital?”. The overall positive response rate for this question was 47%, up from 45% from the 2016 survey. This question was not included in the original baseline survey. Of the countries who participated in both 2016 and 2018 surveys, 21 saw an increase in the percentage of positive responses, whilst 11 saw a decrease and 2 remained the same. Response rate between countries remained variable, in 16 countries less than half of the respondents gave a positive response but 4 countries gave an average positive response of 75% or greater.

A paired samples t-test indicated that the mean percentage of positive responses for countries for the 2016 survey (mean = 43.3%) was not significantly different when compared to the 2018 survey (mean = 49.2%) ($p=0.062$).

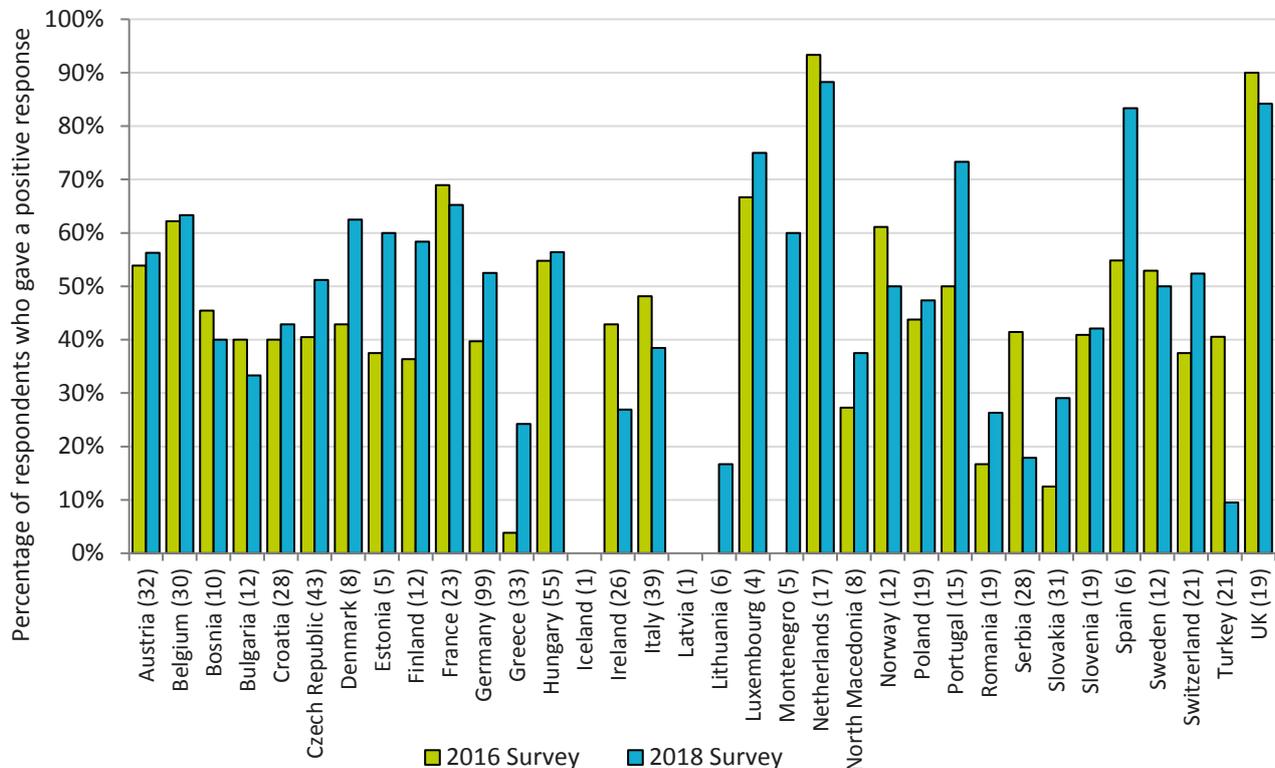


Figure 20 Percentage of respondents who gave a positive response to the statement “Do you have an agreed strategic plan for the development of clinical pharmacy services in your hospital?”

The main barriers to implementing this statement were identified as ‘not considered to be a priority by my managers/clinicians’ (256 responses) and ‘limited capacity’ (219 responses) as seen in Figure 21. There were 32 free text responses from the ‘Other’ category, where many of these responses highlight capacity and not being a priority to be the main barriers. On a positive note 9 responses say they are currently working on a strategic plan. Figure 22 shows the results of the question grouped by country. All countries identified the biggest barrier as either not being considered a priority by managers or limited capacity. The figure also shows which countries reported lack of capability was a barrier. There are very few responses for ‘not considered to be a priority by me’, suggesting many pharmacists see the importance of a strategic plan.

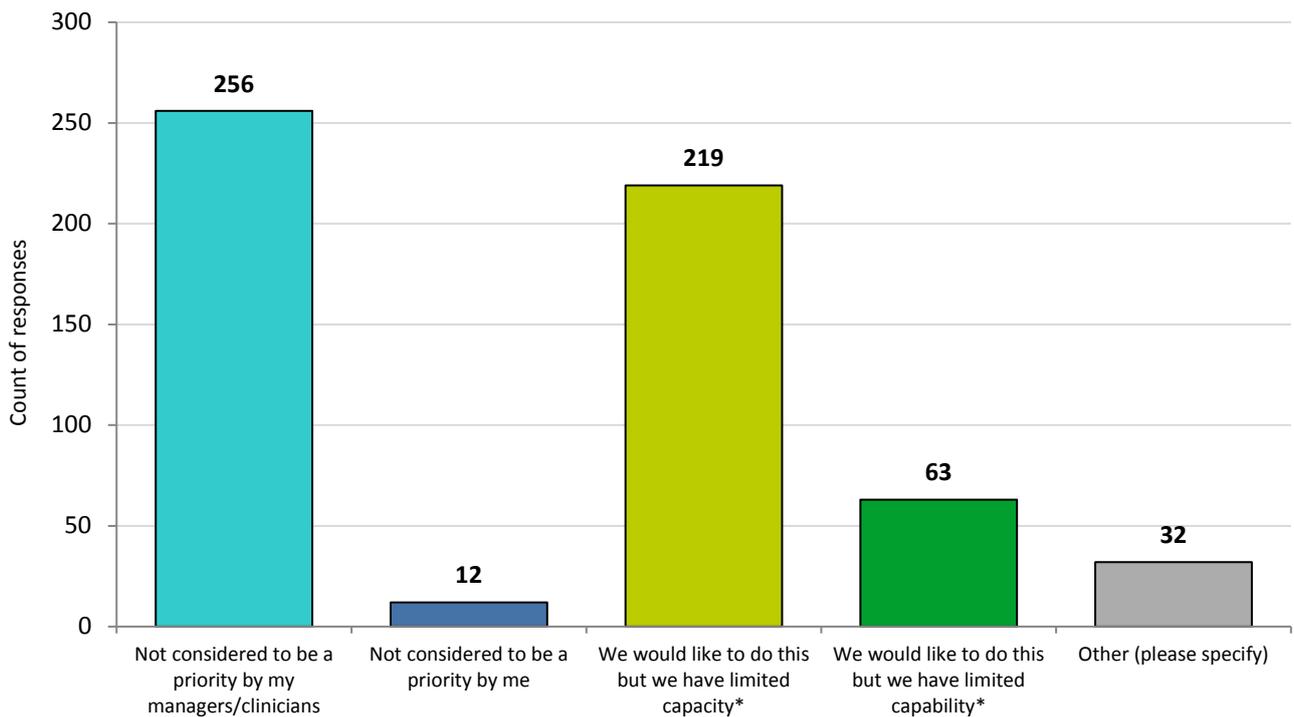


Figure 21 Overall results of the question “What is preventing you or your pharmacists from having an agreed strategic plan for the development of clinical pharmacy services in your hospital?”

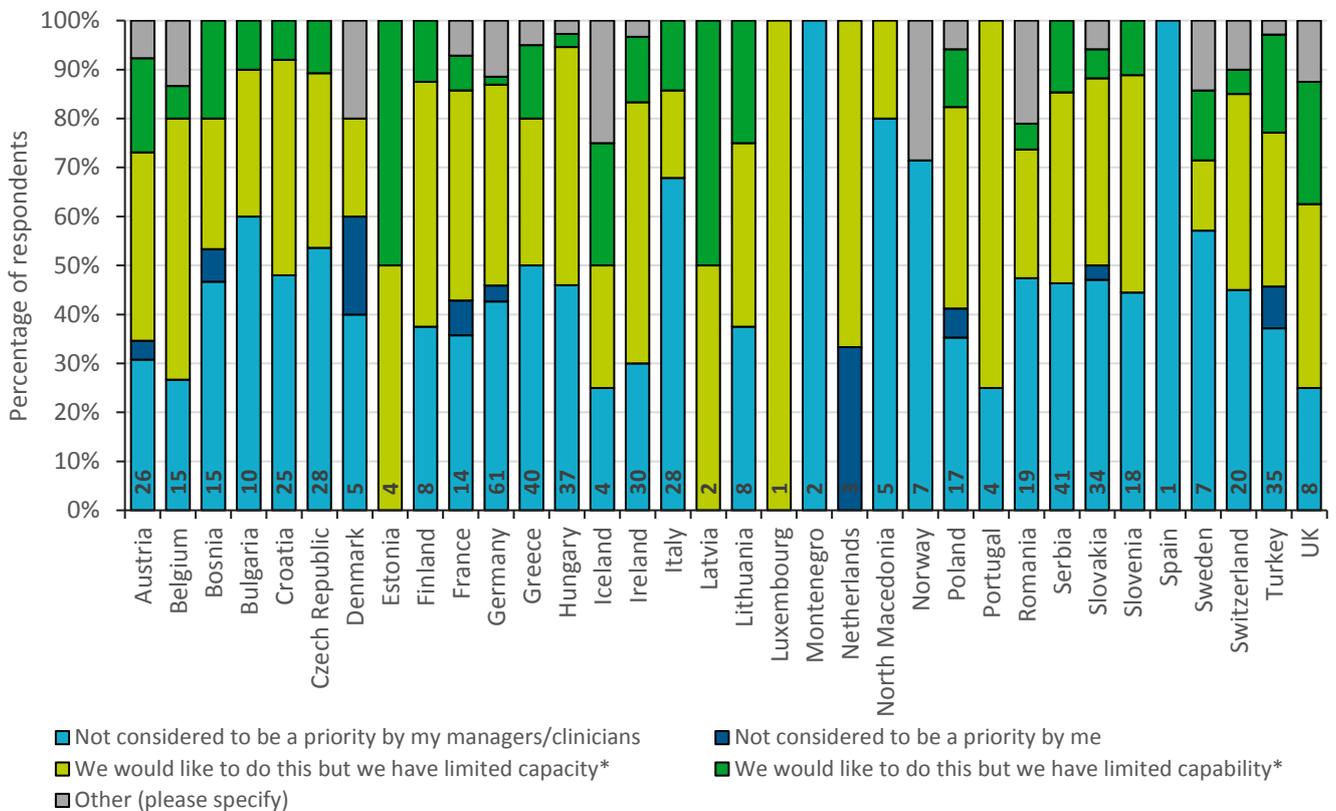


Figure 22 Results of the question “What is preventing you or your pharmacists from having an agreed strategic plan for the development of clinical pharmacy services in your hospital?” (Grouped by country).

The percentage of pharmacists responding that they have an agreed strategic plan for the development of clinical pharmacy services in their hospital grouped by the number of fully qualified pharmacists working at the hospital is shown in **Figure 23**. It is seen again that the amount of positive responses was much lower for the lowest grouping of working pharmacists (43.3% for the 1-10 pharmacists group) compared to the groups with more working pharmacists (ranging from 60.7% - 80.0%). An explanation could be that pharmacists working in hospitals employing fewer pharmacists do not have time to spare for additional responsibilities such as this.

A chi-square test of independence was performed to examine the relation between number of pharmacists employed in a hospital and the number of pharmacists having an agreed strategic plan for the development of clinical pharmacy services in their hospital. The relation between these variables was significant, $\chi^2(3) = 18.9$, $p < 0.01$. Hospitals employing fewer pharmacists were less likely to having an agreed strategic plan for the development of clinical pharmacy services in their hospital.

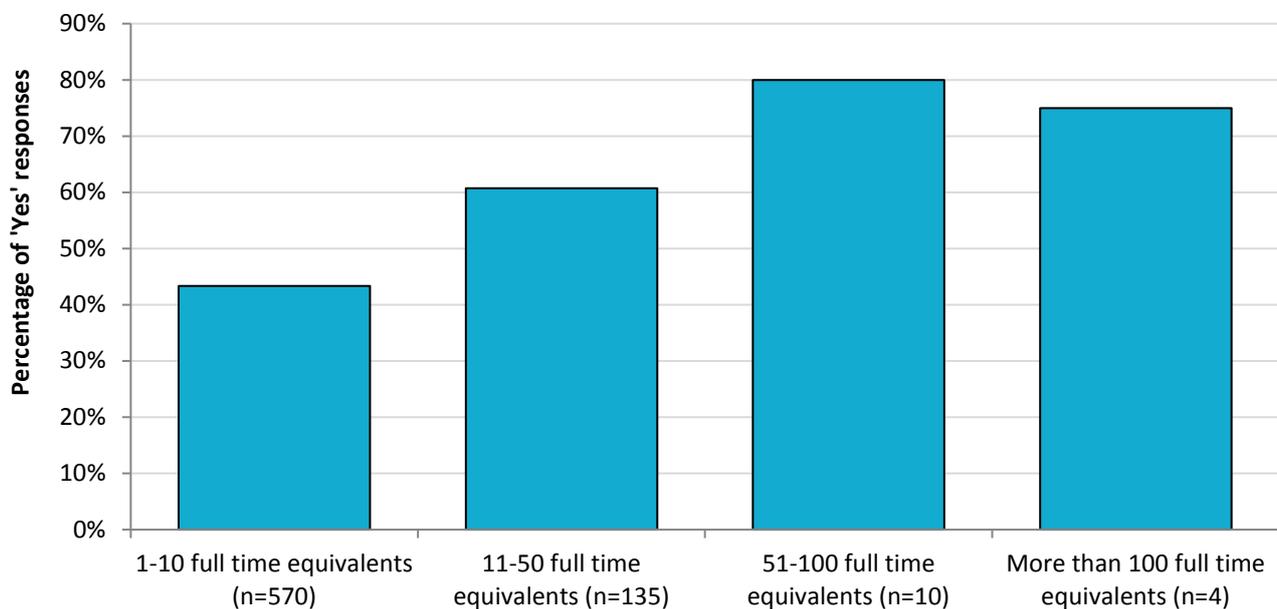


Figure 23 Overall results of responses to the statement "Do you have an agreed strategic plan for the development of clinical pharmacy services in your hospital?" (Grouped by number of fully qualified pharmacists employed by the hospital)

4. EAHP Statement 1.1

EAHP 1.1: *The pharmacists in our hospital work routinely as part of a multidisciplinary team.*

Figure 24 shows the responses to the question “The pharmacists in our hospital work routinely as part of a multidisciplinary team”. The overall positive response rate for this question was 48%, up from 46% from the 2016 survey. Out of the 34 countries that participated in both the 2018 and 2016 surveys, 18 countries increased their percentage of positive responses, 15 decreased and 1 stayed the same. The mean percentage of positive responses for countries increased in the 2018 survey (mean = 51.0%) compared to the 2016 survey (mean = 44.7%), although a t-test showed this result just fell short of being statistically significant ($p=0.051$).

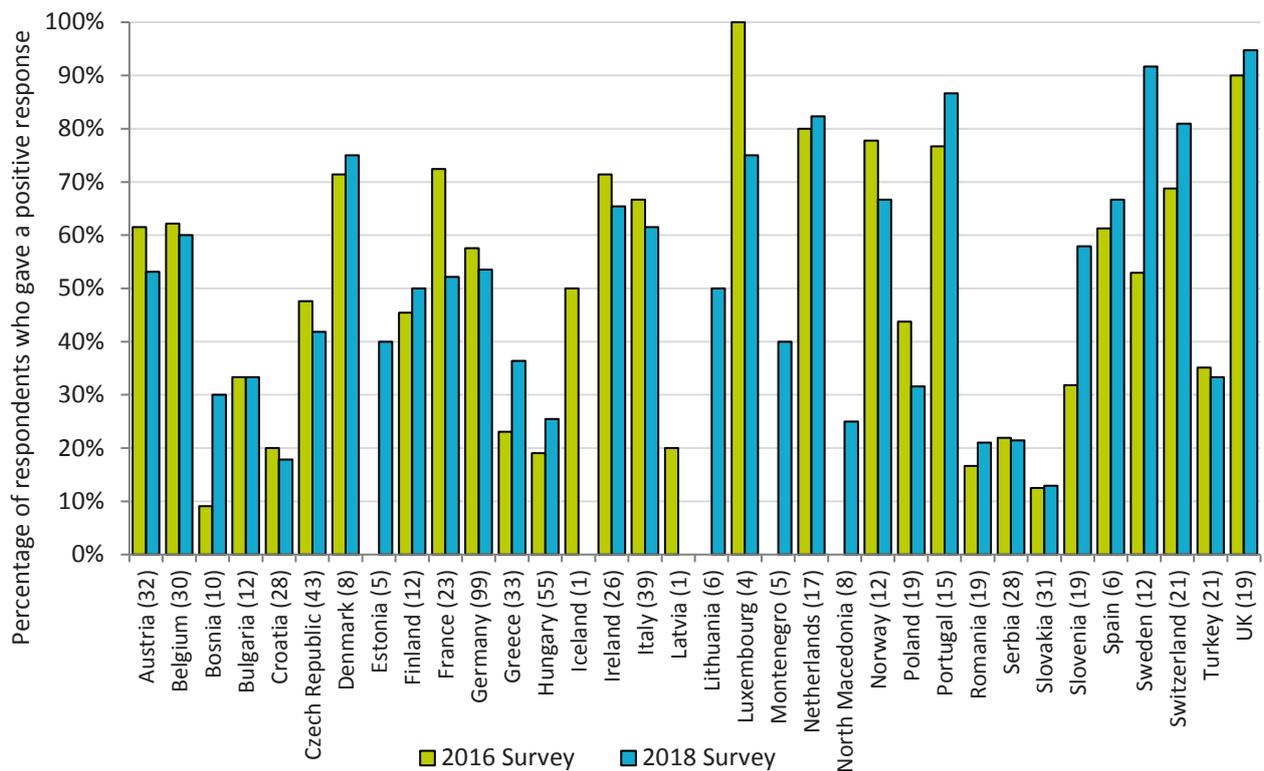


Figure 24 Percentage of respondents who gave a positive response to the statement “The pharmacists in our hospital work routinely as part of a multidisciplinary team?”

Respondents who gave a positive response were asked ‘What type of multidisciplinary activities are you involved with?’, the overall results of which are shown in Figure 25. Membership of multidisciplinary committees, specific therapeutic groups and educational activities all received a high number of responses. Multidisciplinary ward rounds and consulting with patients about medicines received fewer responses. A similar pattern of responses was observed for the 2016 survey. Figure 26 shows the same results broken down by country. Here it can be seen that multidisciplinary activities vary greatly between different countries.

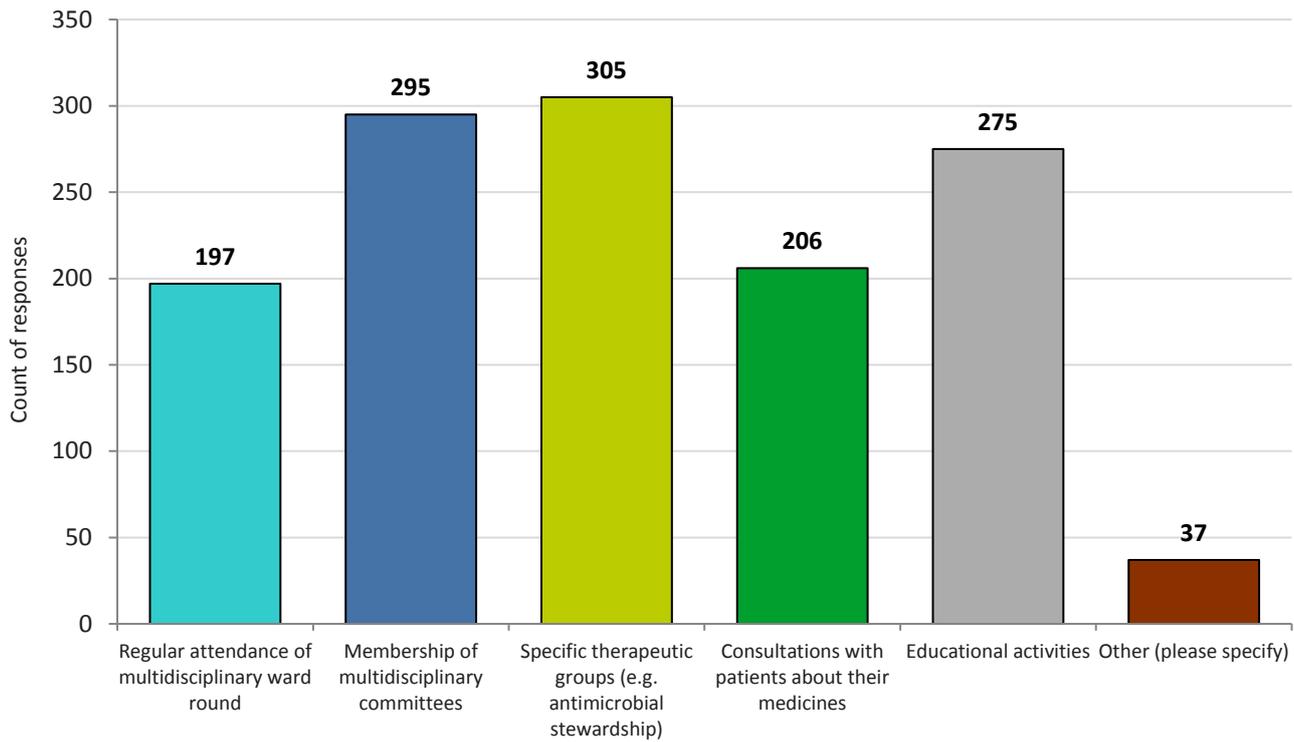


Figure 25 Overall results of the question “What type of multidisciplinary activities are you involved in?”

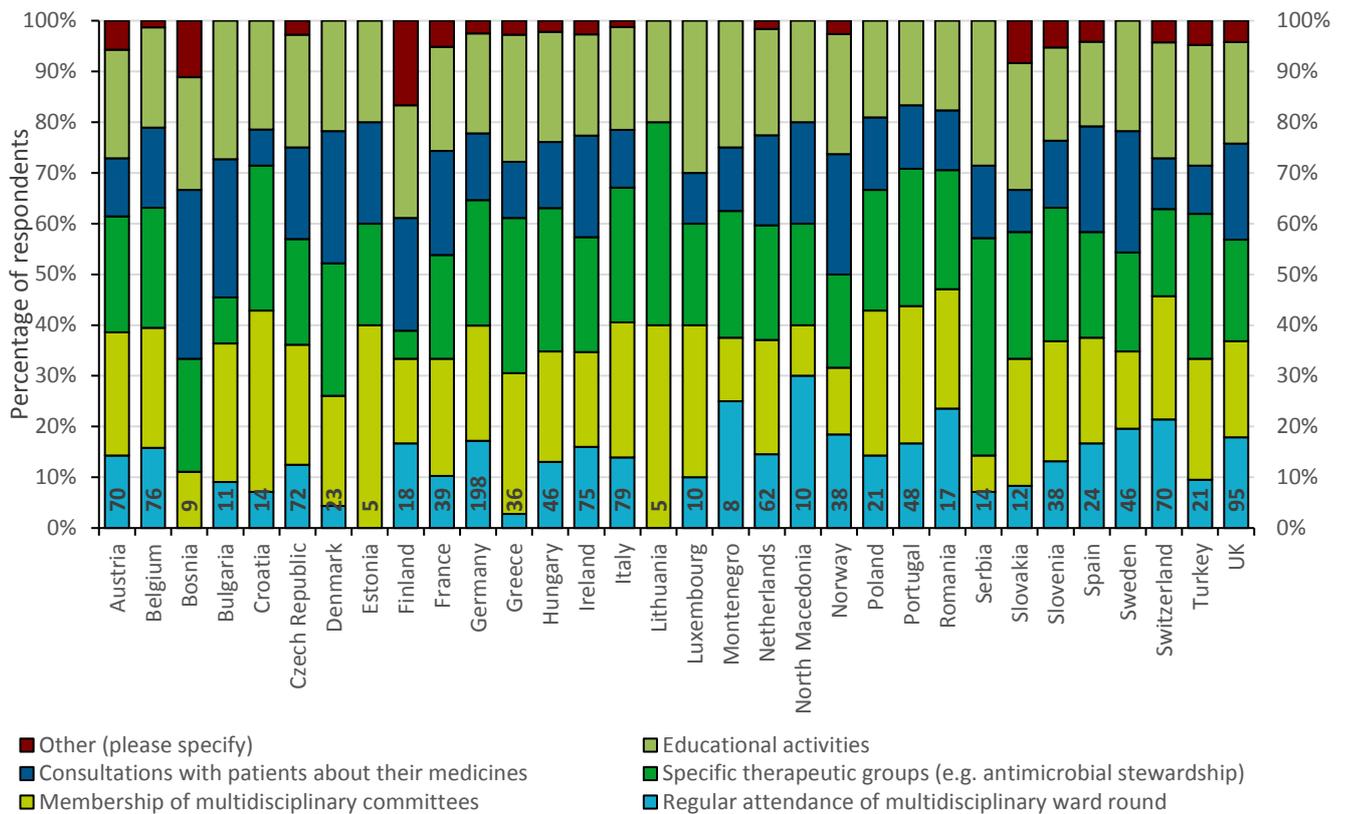


Figure 26 Results of the question “What type of multidisciplinary activities are you involved in?” (Grouped by country).

Respondents who gave a negative response to the initial question were asked “What is preventing you or your pharmacists from routinely working as part of a multidisciplinary team?”, the results of which are shown in **Figure 27**. Limited capacity is the largest barrier to implementation with 267 responses, this is more than double the second most popular choice ‘not considered to be a priority by my managers’ which recorded 122 responses. **Figure 28** shows the results broken down by country, where it is seen that limited capacity is a barrier in almost every country surveyed.

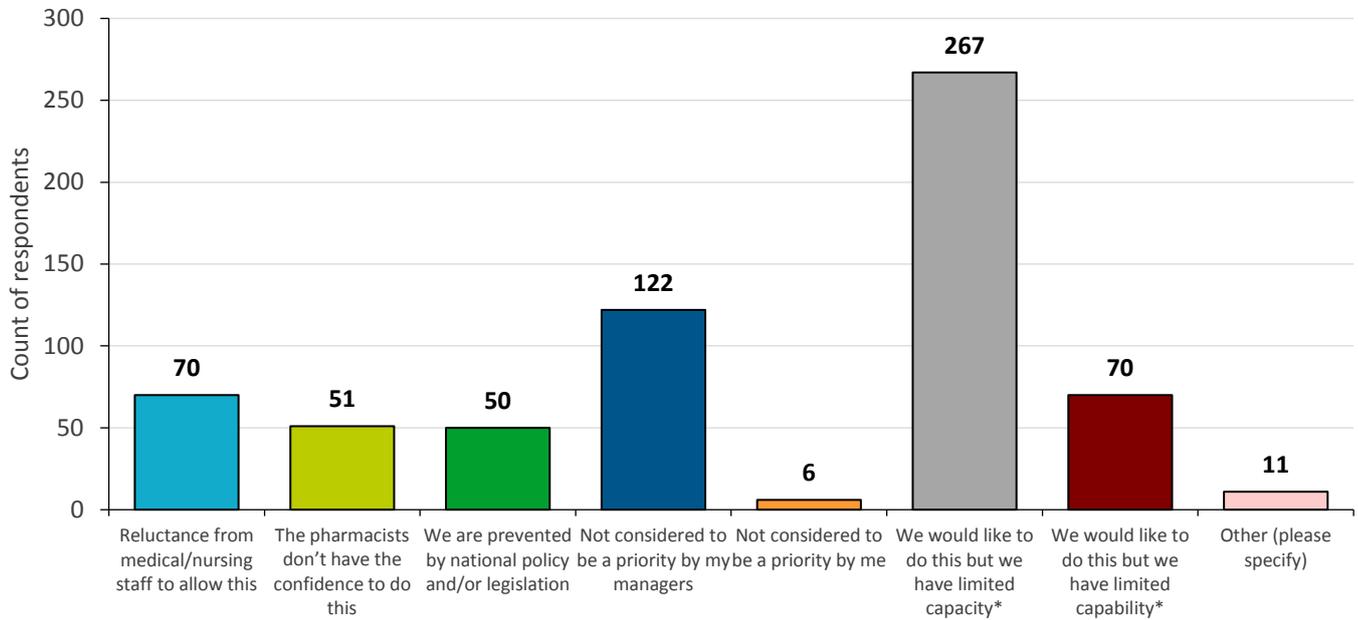


Figure 27 Overall results of the question “What is preventing you or your pharmacists from routinely working as part of a multidisciplinary team?”

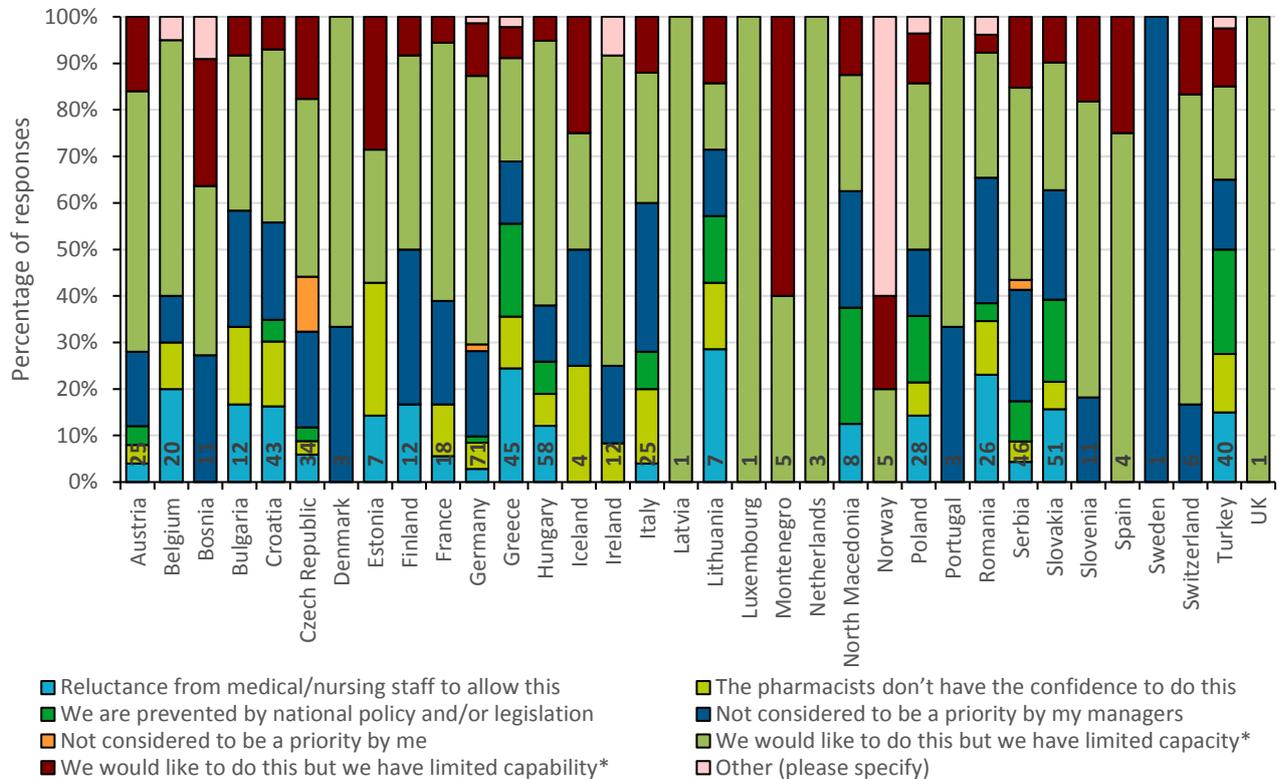


Figure 28 Overall results of the question “What is preventing you or your pharmacists from routinely working as part of a multidisciplinary team?” (Grouped by country)

Figure 29 shows the overall results for this statement question grouped by the number of fully qualified pharmacists working at the hospital. It is again observed that the percentage of positive responses increases as the staffing levels increase (38.2% for the 1-10 pharmacists group, increasing to 83.7%, 90% and 100% as the staffing group level increments).

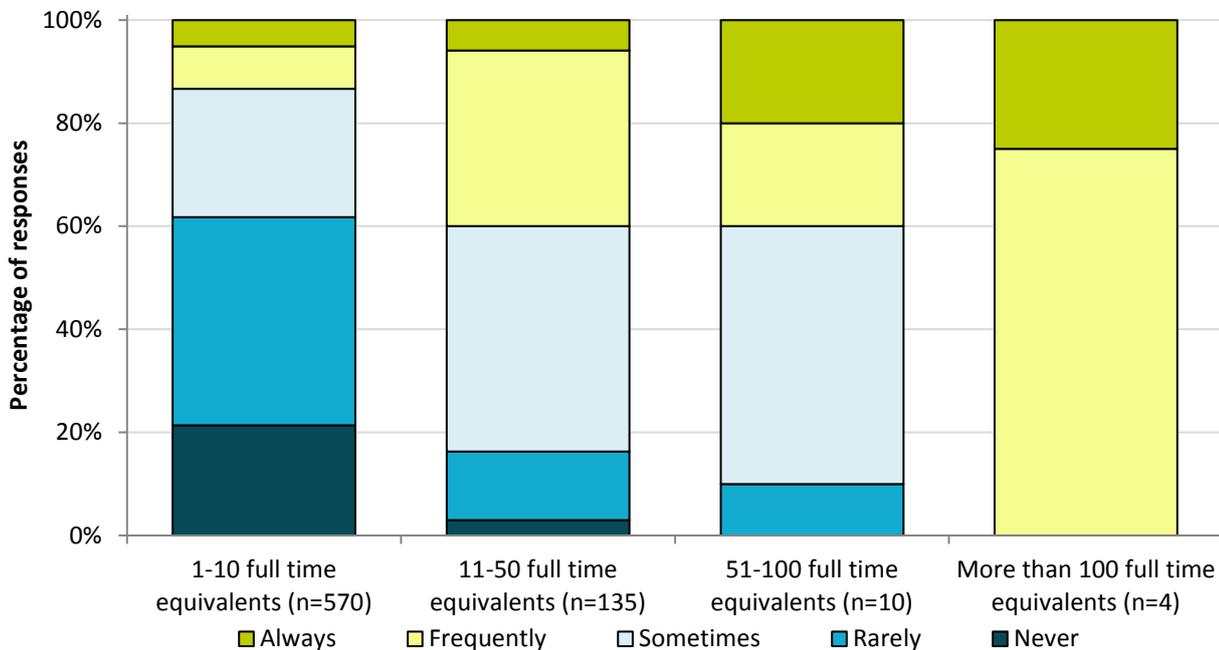


Figure 29 Overall results of responses to the statement “The pharmacists in our hospital work routinely as part of a multidisciplinary team?” (Grouped by number of fully qualified pharmacists employed by the hospital)

A Kruskal-Wallis H test showed that there was a statistically significant difference in responses to pharmacists working routinely as part of a multidisciplinary team between the groupings of working pharmacist numbers, $\chi^2(3) = 103.4, p < 0.01$, with a mean rank of 322 for the '1 to 10 pharmacists' group, 501 for the '11 to 50 pharmacists' group, 530 for the '51 to 100 pharmacists' group and 648 for the 'More than 100 pharmacists' group. Hospitals employing fewer pharmacists were less likely to have pharmacists working routinely as part of a multidisciplinary team.

Additionally, a Mann-Whitney test indicated that teaching/university hospitals reported more positive responses when asked if pharmacists in the hospital routinely work as part of a multidisciplinary team than non-teaching hospitals ($p < 0.01$), with a mean rank of 390 for teaching/university hospitals and 335 for non-teaching hospitals.

5. EAHP Statement 4.2

EAHP Statement 4.2: All prescriptions in our hospital are reviewed and validated as soon as possible by a pharmacist.

When asked “All prescriptions in our hospital are reviewed and validated as soon as possible by a pharmacist” the overall positive response rate for this question was 55%. This is a less positive response than the 2016 survey (58% positive) and the baseline survey (63% positive). **Figure 30** shows the results broken down by country, which shows that the response between countries is mixed, with a large range between results. In 6 countries 100% of responses are positive, while many more countries have a very low number of positive responses. When compared to the 2016 survey 15 countries increased their percentage of positive responses, 14 countries saw a decrease and 5 remained the same.

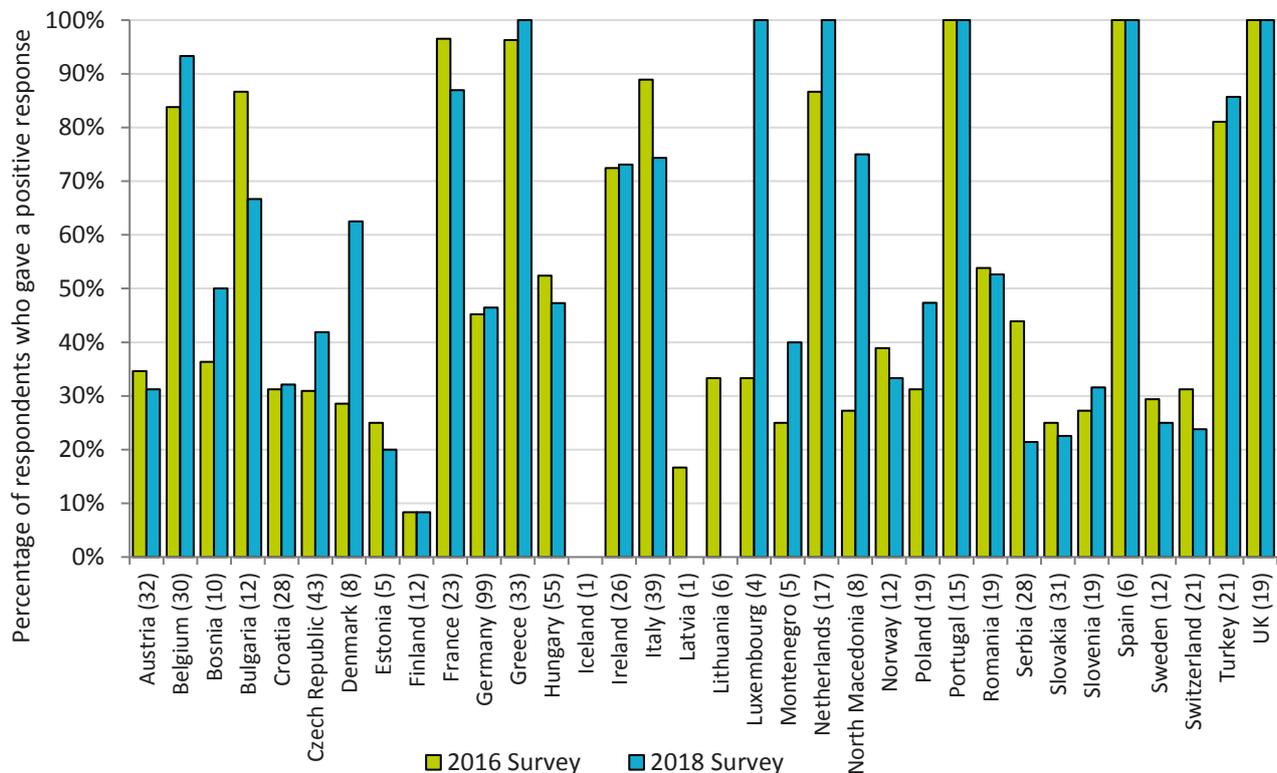


Figure 30 Percentage of respondents who gave a positive response to the statement “All prescriptions in our hospital are reviewed and validated as soon as possible by a pharmacist”.

A paired samples t-test indicated that the mean percentage of positive responses for countries was not significantly different for the 2016 survey (mean = 52.6%) compared to the 2018 survey (mean = 56.0%), ($p = 0.322$).

Participants who gave a negative response to statement 4.2 were then asked what was preventing this. **Figure 31** shows the results of this, where the most common response was limited capacity with 218 responses. Not considered to be a priority by my managers (154 responses) also had many responses. Only 13 people selected ‘not considered to be a priority by me’ as an option. Additional barriers from the ‘Other’ category included pharmacists not having access to patients records. **Figure 32** shows the results broken down by country.

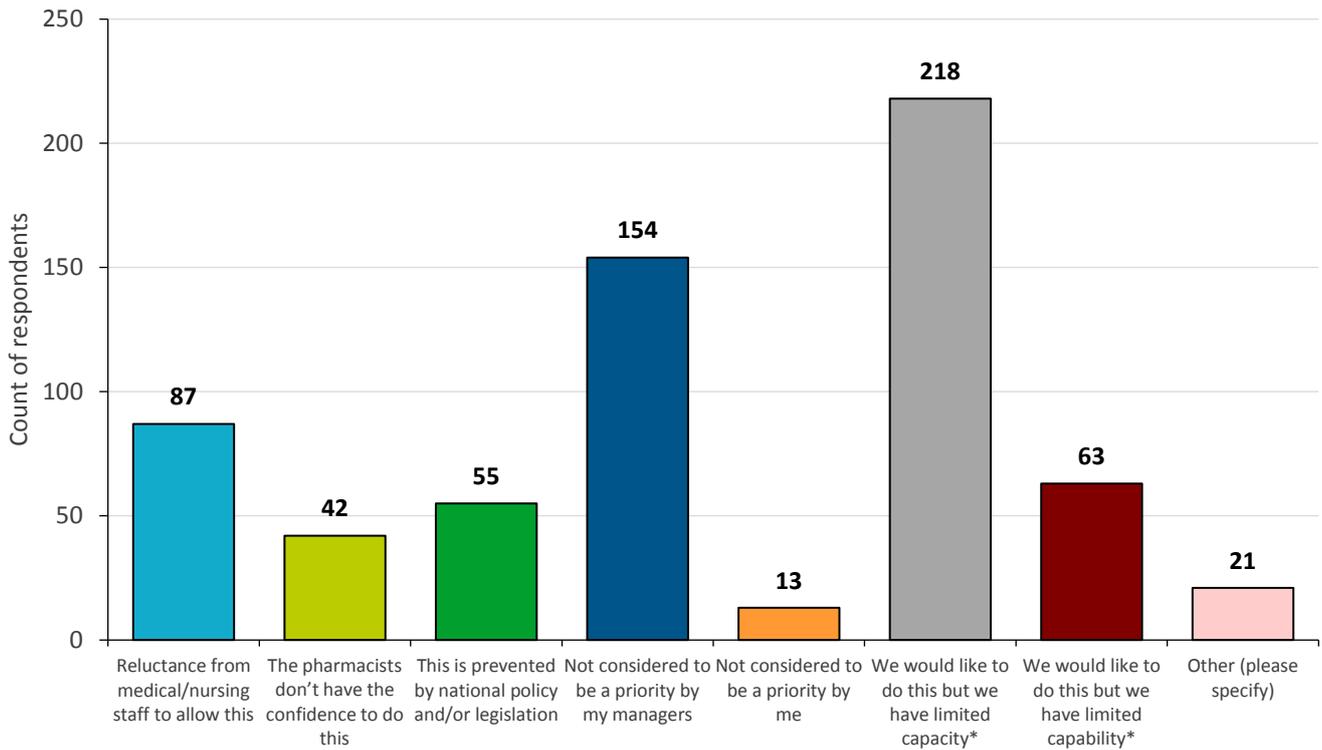


Figure 31 Overall results to the question “What is preventing all prescriptions in your hospital from being reviewed and validated as soon as possible by a pharmacist?”

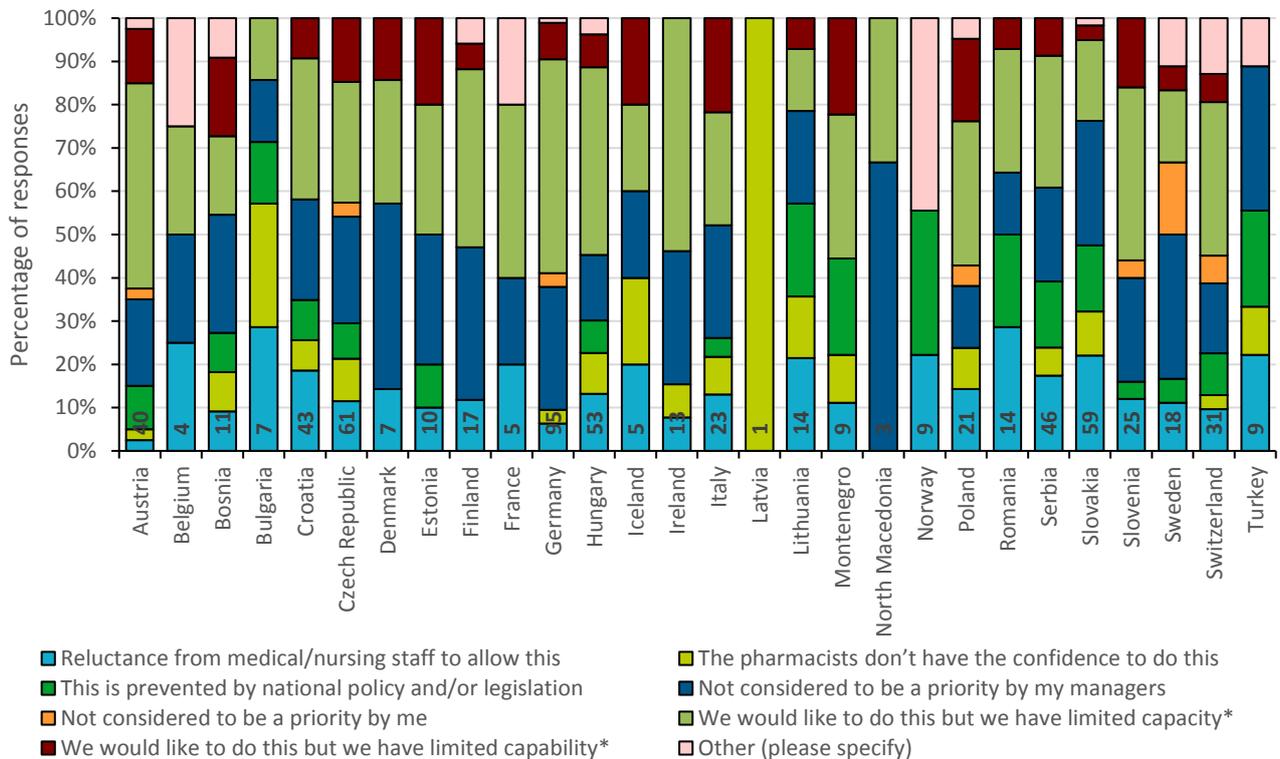


Figure 32 Results to the question “What is preventing all prescriptions in your hospital from being reviewed and validated as soon as possible by a pharmacist?” (Grouped by country).

Respondents who gave a positive response to the initial question were asked 'Does this review and validation by a pharmacist take place prior to the administration of medicines?', the results of which are shown in **Figure 33**. The overall positive rate for the 2018 survey is 88%, similar to the 2016 survey figure which was 89%. This question was not included in the baseline survey. Out of the 34 countries that participated in both the 2018 and 2016 surveys, 14 countries increased their percentage of positive responses, 15 decreased and 5 stayed the same.

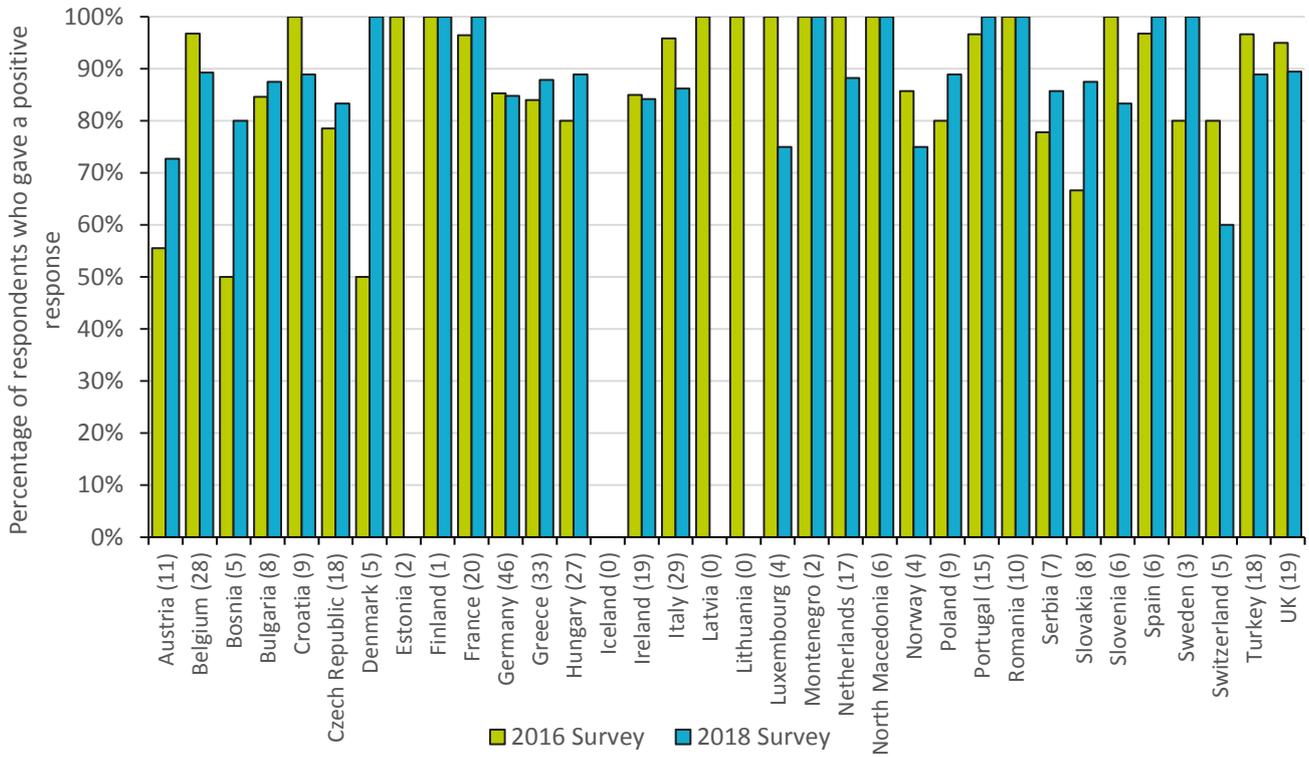


Figure 33 Results to the question “Does this review and validation by a pharmacist take place prior to the administration of medicines?”.

Figure 34 shows the overall results for this statement question grouped by the number of fully qualified pharmacists working at the hospital. Compared to the other statement questions examined this way, the difference between the groups' responses is smaller. For example, the percentage of positive response was 52% for the '1 to 10 pharmacists' group and 61% for the '11 to 50 pharmacists' group, a much smaller range than what was observed in Figure 29.

A Kruskal-Wallis H test showed that the difference in responses to pharmacists reviewing all prescriptions in the hospital between the groupings of working pharmacist numbers was not statistically significant, $\chi^2(3) = 5.5$, $p = 0.137$, with a mean rank of 354 for the '1 to 10 pharmacists' group, 372 for the '11 to 50 pharmacists' group, 460 for the '51 to 100 pharmacists' group and 510 for the 'More than 100 pharmacists' group.

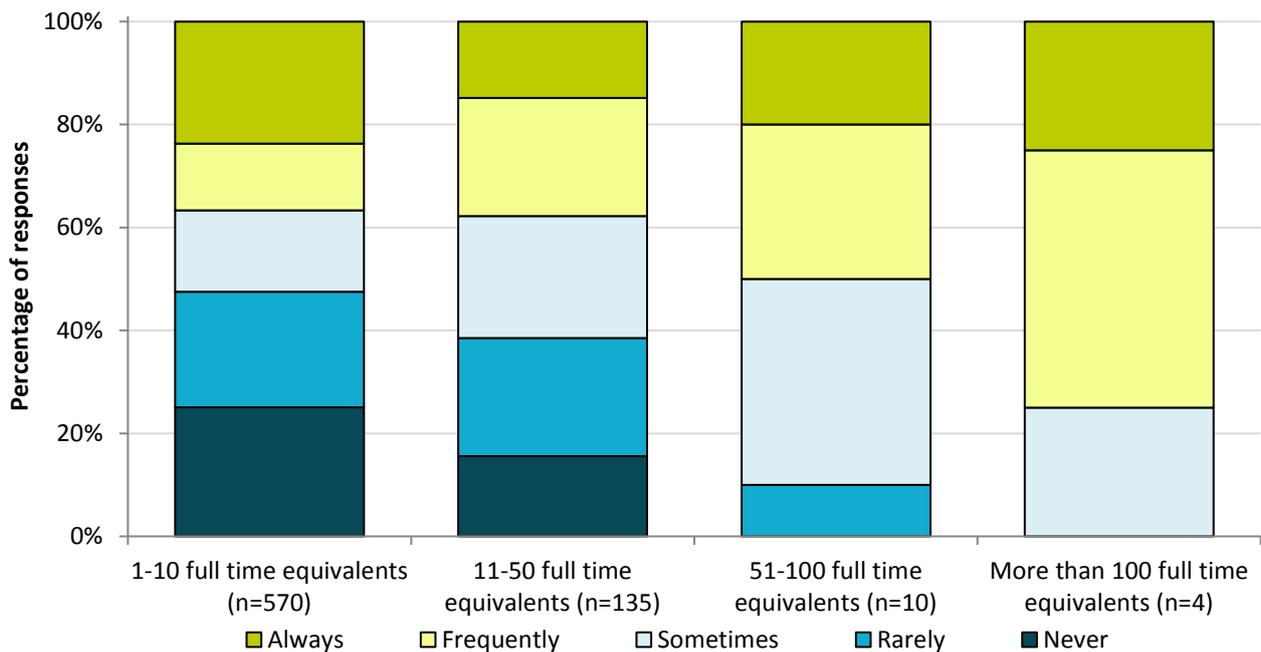


Figure 34 Overall results of responses to the statement "All prescriptions in our hospital are reviewed and validated as soon as possible by a pharmacist" (Grouped by number of fully qualified pharmacists employed by the hospital)

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).

The implementation questions have been asked in every EAHP statements survey to date, meaning there are more data points for these questions than the questions from Section B. Trends of the average percentage of positive responses for countries have been plotted below.

Figure 35 shows that awareness of the statements and agreement with the statements has both been steadily increasing since the baseline survey. In the case of awareness of the statements, the average percentage of positive responses across countries has increased each year since the baseline survey, from 34.8% to 53.9% in 2018. This is important as pharmacists' awareness of the statements and agreement in principle with their contents are fundamental to implementing change.

Figure 36 shows that the percentage of respondents agreeing that their hospital pharmacy has the capability to implement the statements (I4) and the hospital is committed to helping the pharmacy implement the statements (I5) is relatively low and has seen no growth since the baseline survey. Although also low, the percentage of respondents agreeing their hospital pharmacy has the capacity to implement the statements (I3) has seen some growth. Confidence to implement the statements (I6) is seen to be relatively more variable across the surveys.

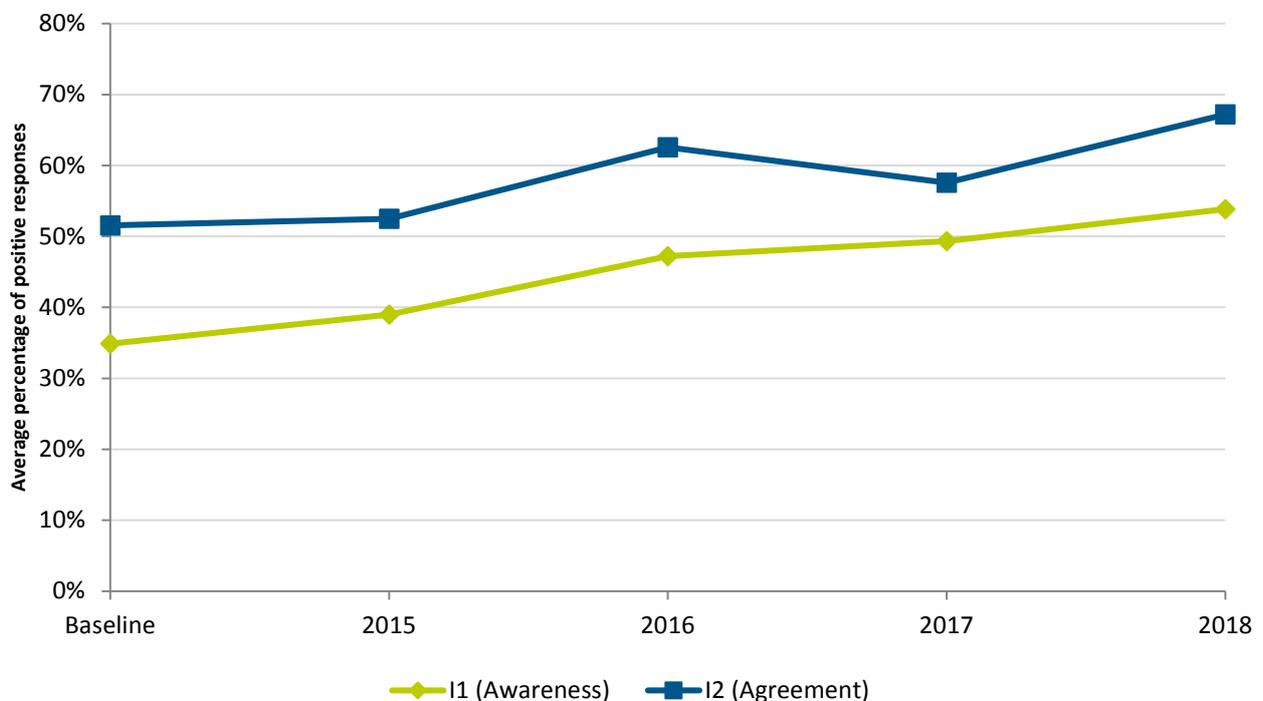


Figure 35 Average percentage of responses by country to the questions 'I1. The pharmacists within our hospital are aware of the 44 European Statements for Hospital Pharmacy' and 'I2. The pharmacists within our hospital agree in principle with the Statements'

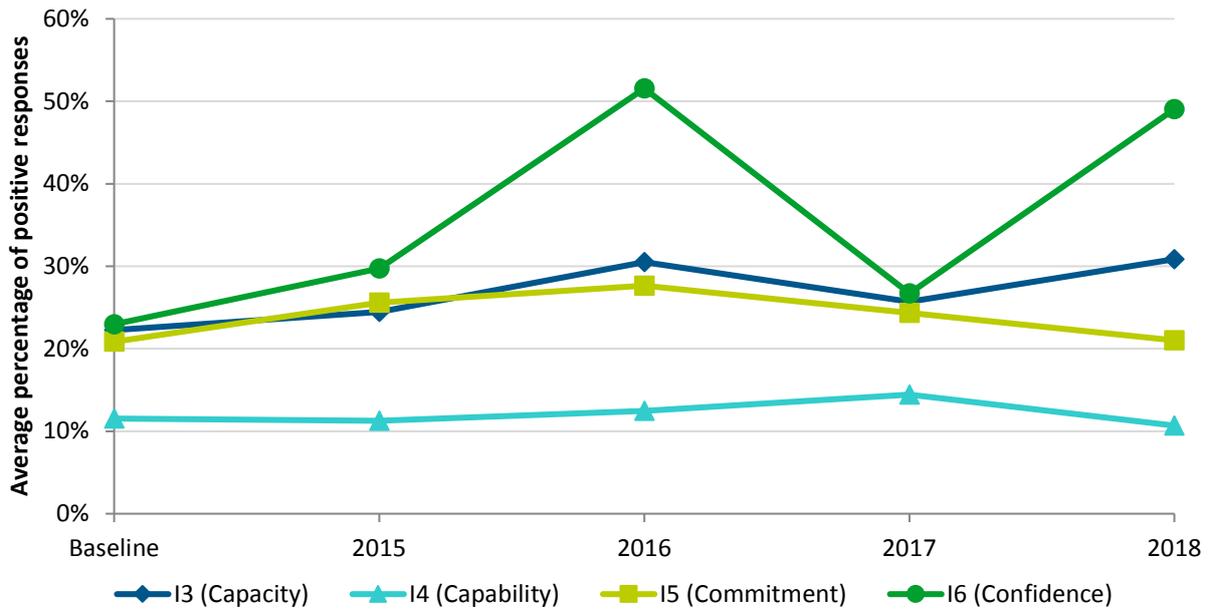
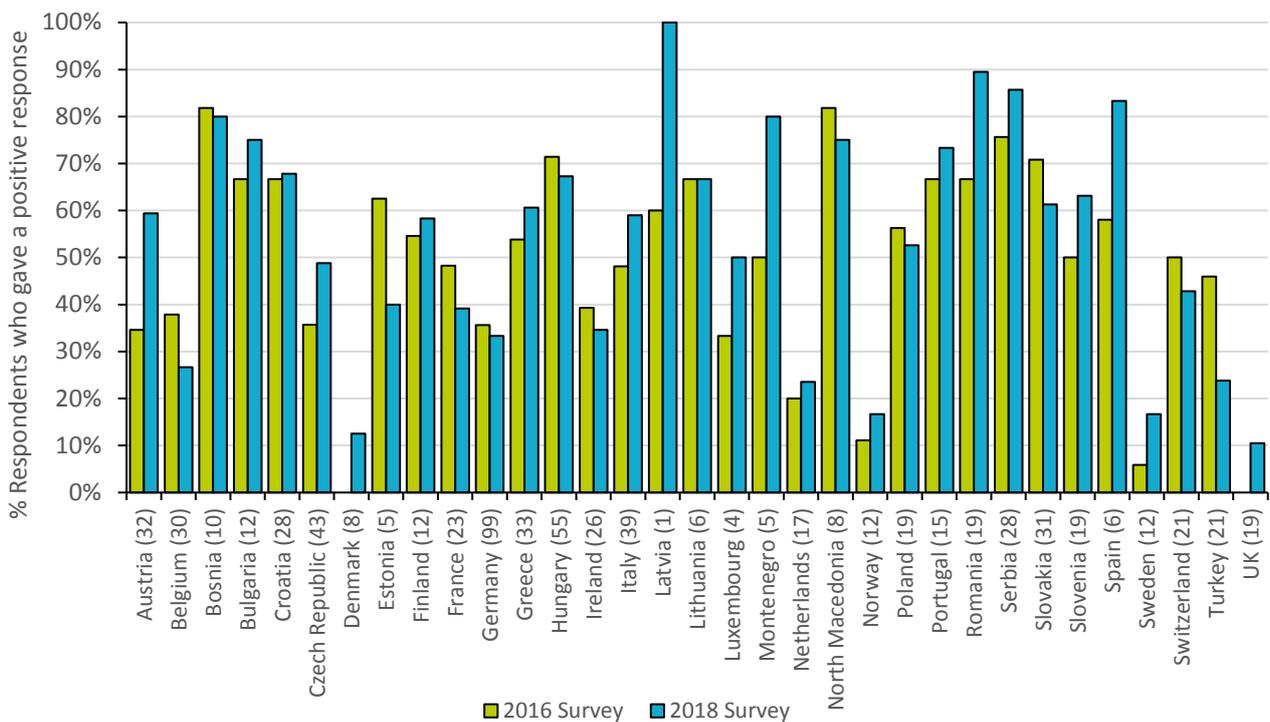


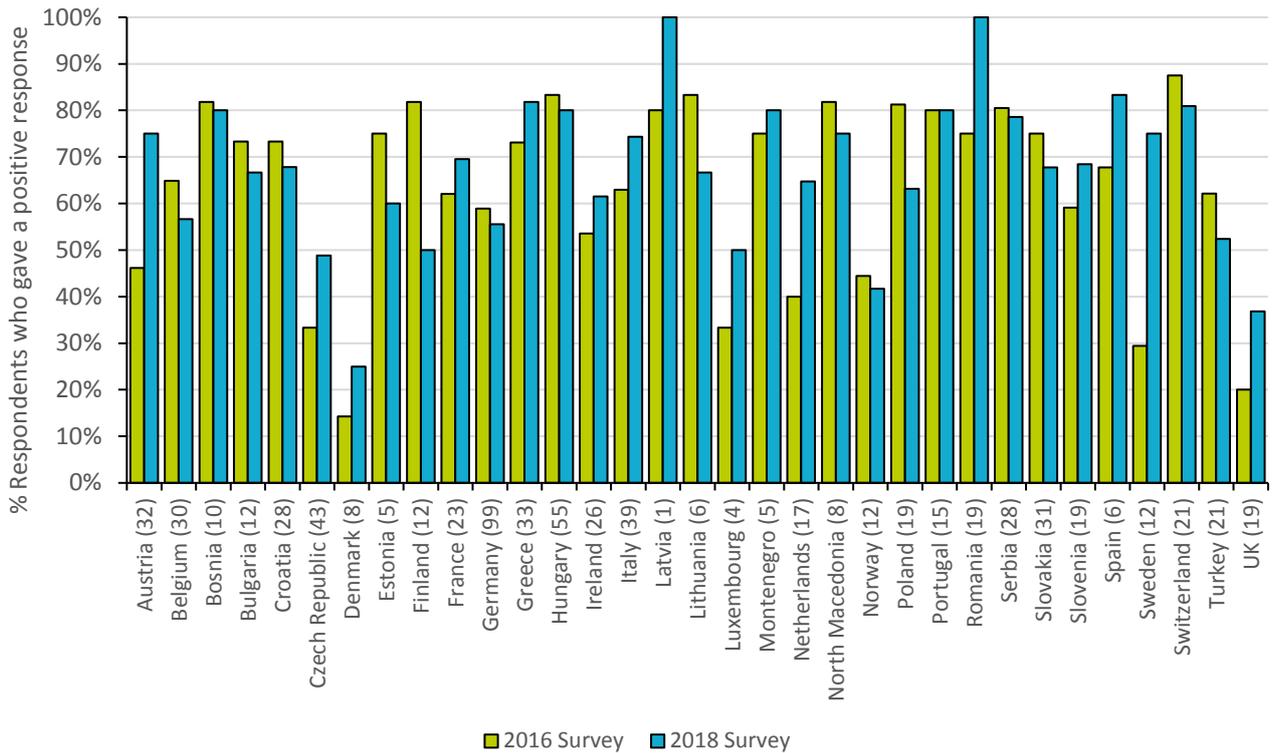
Figure 36 Average percentage of responses by country to the questions 'I3. Our hospital pharmacy has the capability to implement all the Statements now', 'I4. Our hospital pharmacy has the capacity to implement the Statements now', 'I5. My hospital is committed to help the pharmacy department implement the Statements' and 'I6. Our hospital pharmacy has the confidence to make changes and implement the Statements'

Included below are the results of the implementation questions broken down by country to demonstrate the variation between responses. Results from 2016 survey have been included for comparison. In these graphs, a **higher bar indicates agreement with the question** posed. The numbers in brackets on the bottom axis are the number of responses by country for the 2018 survey.

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

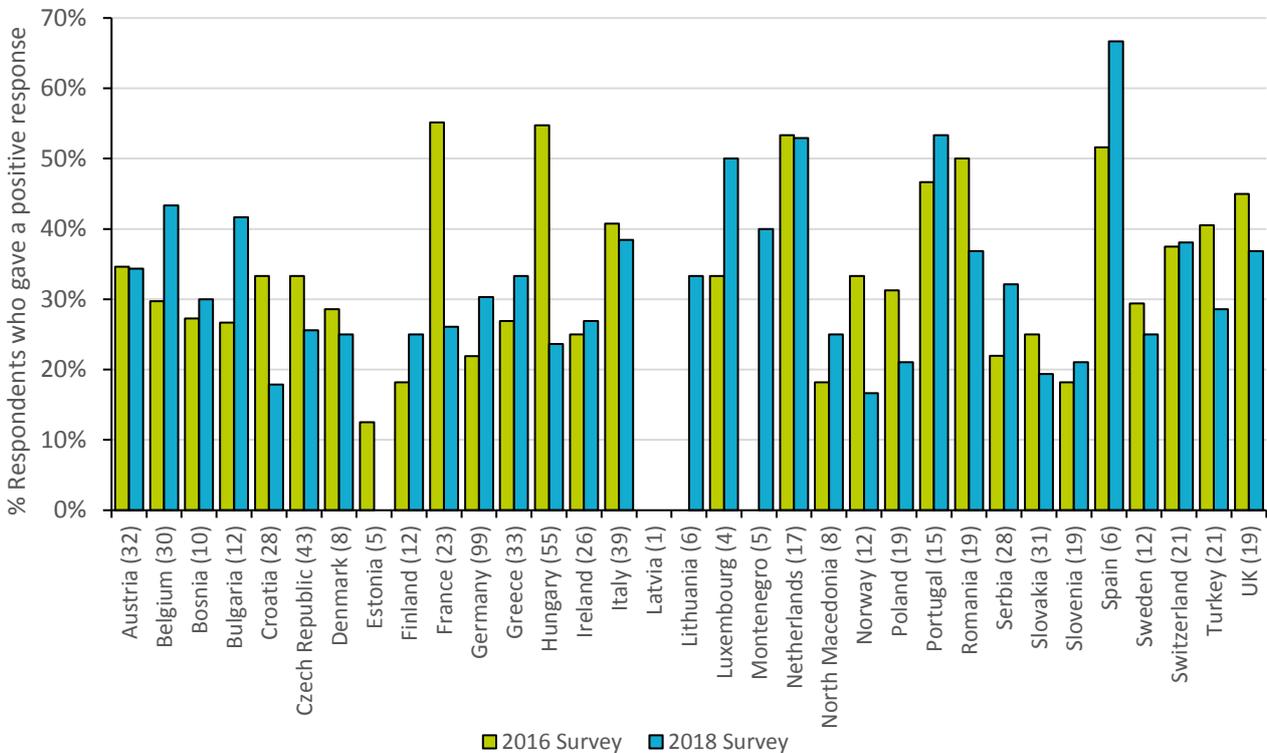


I2 The pharmacists within our hospital agree in principle with the Statements.



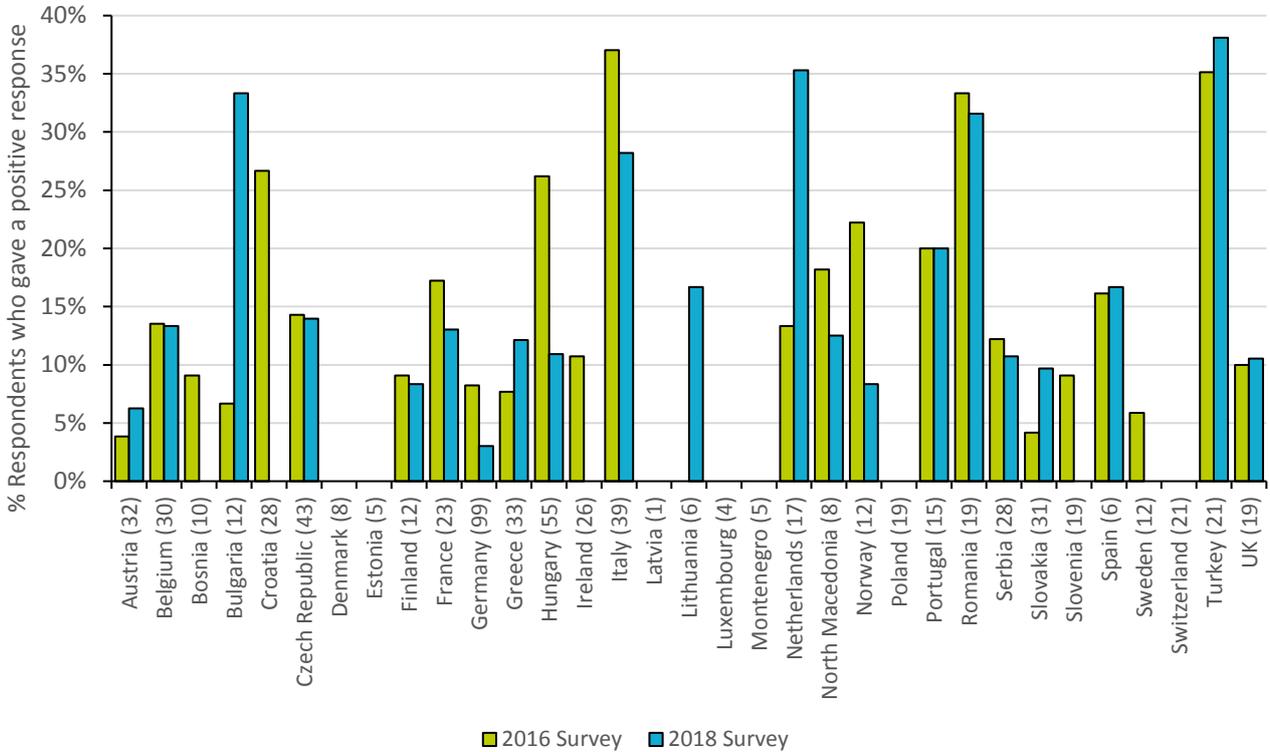
I3 Our hospital has the capability* to implement all of the Statements now.

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

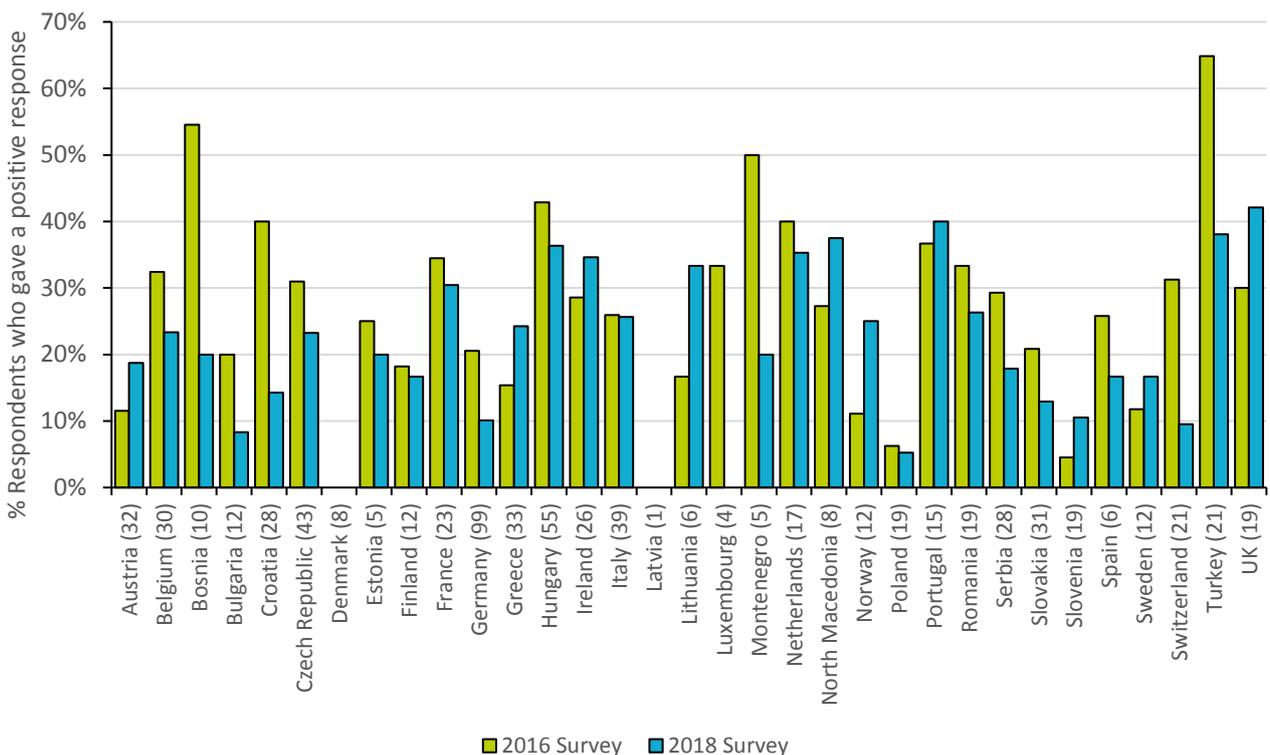


I4 Our hospital has the capacity* to implement all of the Statements now.

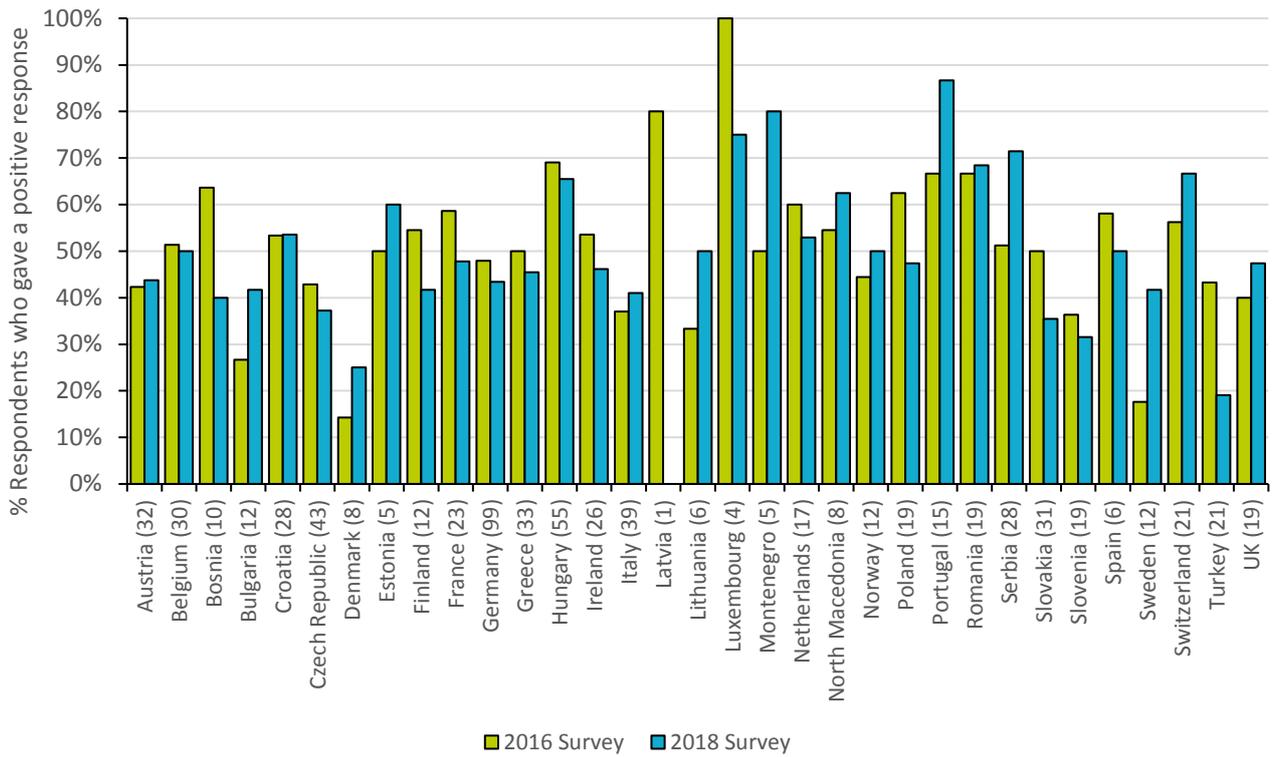
*Capacity: Does the organisation have the sufficient number of people or time to undertake the change?



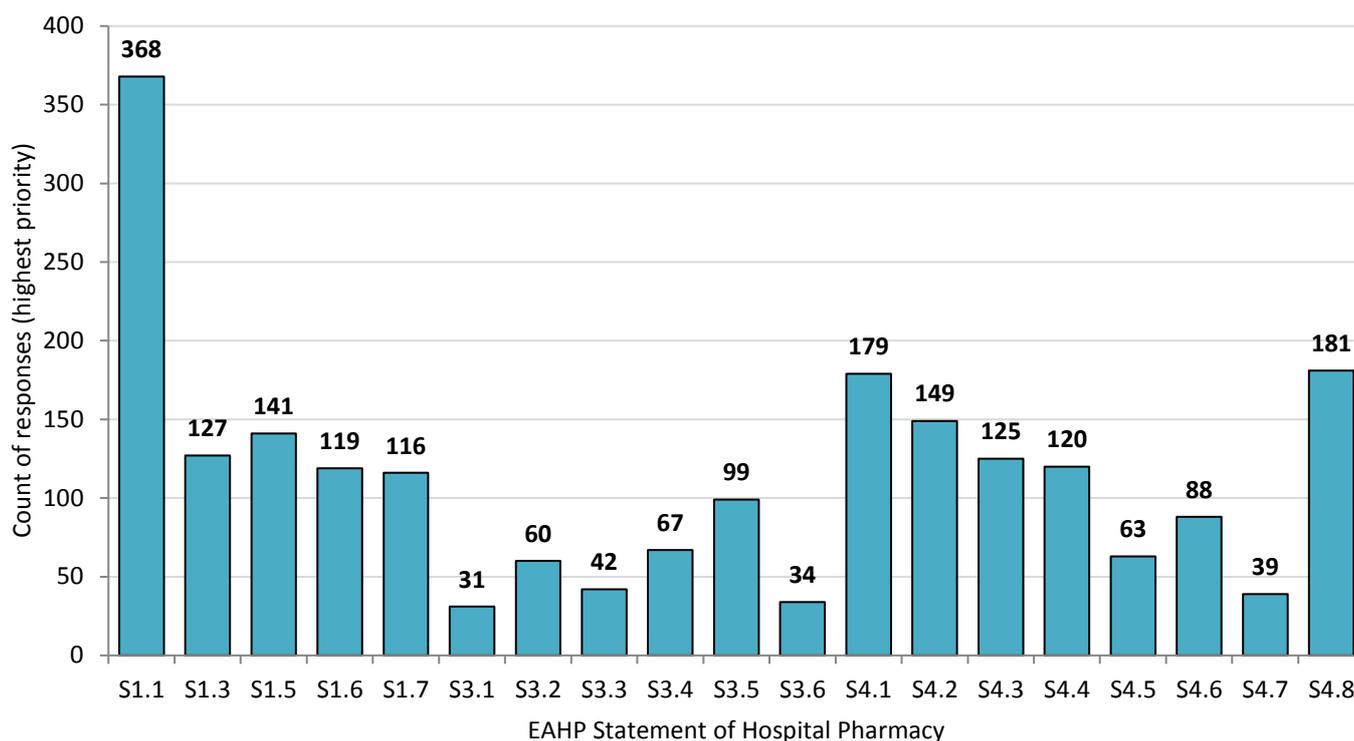
I5 My hospital is committed to help the pharmacy department implement the Statements.



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



17. 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:

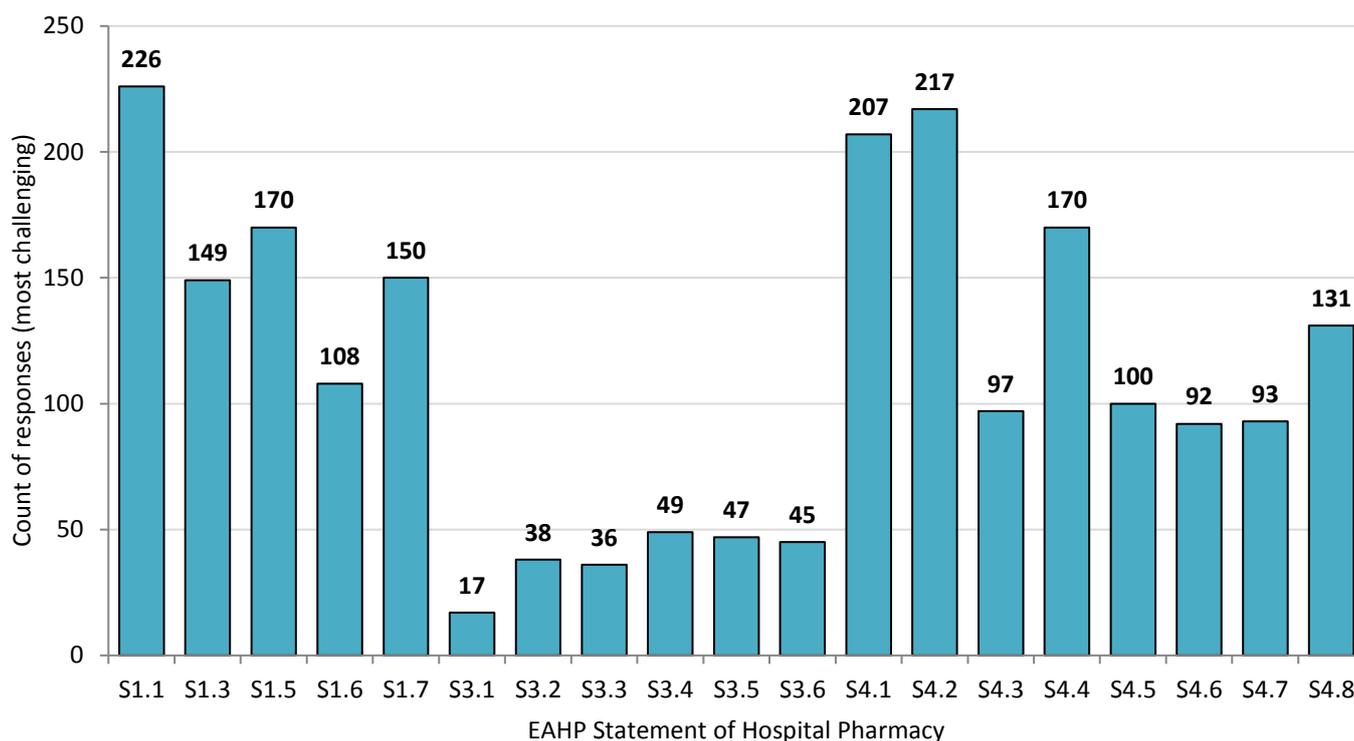
- S1.1 The overarching goal of the hospital pharmacy service is to optimise patient outcomes through working collaboratively within multidisciplinary teams in order to achieve the responsible use of medicines across all settings.
- S4.8 Clinical pharmacy services should continuously evolve to optimise patients' outcomes.
- S4.1 Hospital pharmacists should be involved in all patient care settings to prospectively influence collaborative, multidisciplinary therapeutic decision-making; they should play a full part in decision making including advising, implementing and monitoring medication changes in full partnership with patients, carers and other health care professionals.

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

- S3.1 Before pharmacy manufacture or preparation of a medicine, the hospital pharmacist should ascertain whether there is a suitable commercially available pharmaceutical equivalent, and if necessary, discuss this decision with the relevant stakeholders.
- S3.6 When the reconstitution or mixing of medicines takes place in a patient care area, a hospital pharmacist should approve written procedures that ensure staff involved in these procedures are appropriately trained.
- S4.7 Hospital pharmacists should inform, educate and advise patients, carers and other health care professionals when medicines are used outside of their marketing authorisation.

Working as part of a multidisciplinary team was overwhelmingly considered to be the highest priority statement to implement, with 368 responses. Of the 34 countries participating in the 2018 survey, 29 considered this statement to be the highest priority.

18. 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:

- S1.1 The overarching goal of the hospital pharmacy service is to optimise patient outcomes through working collaboratively within multidisciplinary teams in order to achieve the responsible use of medicines across all settings.
- S4.2 All prescriptions should be reviewed and validated as soon as possible by a hospital pharmacist. Whenever the clinical situation allows, this review should take place prior to the supply and administration of medicines.
- S4.1 Hospital pharmacists should be involved in all patient care settings to prospectively influence collaborative, multidisciplinary therapeutic decision-making; they should play a full part in decision making including advising, implementing and monitoring medication changes in full partnership with patients, carers and other health care professionals.

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

- S3.1 Before pharmacy manufacture or preparation of a medicine, the hospital pharmacist should ascertain whether there is a suitable commercially available pharmaceutical equivalent, and if necessary, discuss this decision with the relevant stakeholders.
- S3.3 Before making a pharmacy preparation, the hospital pharmacist must undertake a risk assessment to determine the best practice quality requirements. These must consider premises, equipment, pharmaceutical knowledge and labelling.
- S3.2 Medicines that require manufacture or compounding must be produced by a hospital pharmacy, or outsourced under the responsibility of the hospital pharmacist.

Discussion

When the 2018 EAHP Statements Survey closed, there were a total of 873 responses, the results of which were exported from SurveyMonkey for further analysis and reporting. The number of responses slightly decreased from the 2016 EAHP Statements Survey, which had 903 replies. Both surveys had a similar completion rate; 2018 had a completion rate of 82% and 2016 had a completion rate of 81%. Therefore the number of complete responses has slightly decreased from 730 last year to 719 this year. As was done in previous years, if an incomplete survey was submitted, the quantitative data was not used in the results.

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

- S 4.4 The pharmacists in our hospital enter all medicines used onto the patient's medical record on admission.
- S4.5 The pharmacists in our hospital contribute to the transfer of information about medicines when patients move between and within healthcare settings.
- S4.8 Do you have an agreed strategic plan for the development of clinical pharmacy services in your hospital?
- S1.1 The pharmacists in our hospital work routinely as part of a multidisciplinary team.
- S4.2 All prescriptions in our hospital are reviewed and validated as soon as possible by a pharmacist.

As was observed in previous EAHP statement surveys, there still appears to be a greater number of barriers to hospital pharmacies engaging in more clinically focused activities.⁴ Four of these five statements also provided the greatest challenge in the 2016 survey. 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 differing role of pharmacists in those countries. The role of the 'clinical pharmacist' where the pharmacist is visible on the ward and in clinics in a 'patient-facing role', 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. In fact statistical analysis of the results indicates a clear relationship between staffing numbers and responses to the delivery of clinically orientated services (Figures 15, 19, 23, and 29).

When looking at the 5 statements where the barriers to implementation were greatest, most of the questions did not show a statistically significant difference when compared to the results from previous surveys. This is not surprising since creating the capacity and developing the capability in the workforce to deliver clinically oriented services is a gradual process, so any changes on a large scale may happen slowly and are not reflected in the survey results yet. Note that this result is measuring an average change across all countries, and that individual countries may have seen more drastic changes in the implementation of the statements.

The exception for this was question S4.4 'The pharmacists in our hospital enter all medicines used onto the patient's medical record on admission.' A paired samples t-test indicated that an increase in the mean percentage of positive responses for countries between the 2016 survey (mean = 25.0%) and the 2018 survey (mean = 31.1%) was statistically significant ($p=0.023$). This could be that the barriers identified in previous surveys for this statement (other healthcare professionals doing this and lack of capacity) have improved in some countries. Although not asked specifically in this survey, electronic medication systems may also have developed in some countries which allow this to be done from the pharmacy, thereby reducing the capacity challenge.

It is of concern that in some countries clinical pharmacy services are not well developed since pharmacists are the medicines expert. Whilst it is encouraging that a mean of 56% of respondents gave a positive response to the question 'all prescriptions are reviewed and validated by a pharmacist' (Figure 30), it indicates that in over 40% of cases this is not happening. Furthermore, in those who responded positively to this question 11% of the reviews did not take place before administration. This activity is an important part of medication safety systems.

Additionally, a Mann-Whitney test indicated that teaching/university hospitals reported more positive responses when asked if pharmacists in the hospital routinely work as part of a multidisciplinary team than non-teaching hospitals ($p < 0.01$), with a mean rank of 390 for teaching/university hospitals and 335 for non-teaching hospitals. This may have something to do with teaching/University hospitals having greater capacity or capability in their pharmacy workforce.

Generally, and which supports previous survey findings, there appeared to be few barriers for hospital pharmacies to engage in the procurement, compounding and distribution of medicines. Responses to questions from this section are very positive overall (Figure 3), which is not surprising since this has always been a core function of hospital pharmacy. 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. The analyses of the relationship between workforce and responses to the survey questions (Figures 15, 19, 23, and 29) would appear to support this.

Figure 35 shows that awareness of the statements and agreement with the statements has both been steadily increasing since the baseline survey. In the case of awareness of the statements, the average percentage of positive responses across countries has increased each year since the baseline survey, from 34.8% to 53.9% in 2018. This is important as pharmacists' awareness of the statements and agreement in principle with their contents are fundamental to implementing change.

This increase in the awareness of the statements suggests that engagement with the statements by pharmacists actually responsible for delivering the hospital pharmacy services is beginning to gain traction. The roles and work of the EAHP Statement Ambassadors may have had some impact on this. However, there remains considerable variation in the commitment to implement the statements, and the wide variability in agreement with the statements in some countries. The EAHP has made some progress in helping country co-ordinators and Statement Ambassadors 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, but the variable responses to the awareness and agreement questions (I1, and I2) indicates that more work needs to be done in this area.

Recommendations

- The role of the EAHP Statement Ambassadors should continue to be a priority with support given to their development. This will help to build on progress made increasing awareness of the statements, and engagement with them with hospital pharmacists on the ground responsible for delivering services.
- Further work is needed to support the development of hospital pharmacists in clinically focused activities.
- It is clear from analysis of the results from this survey that there is a relationship between workforce numbers /skill mix and implementation of statements related to clinically focused activities. Therefore, consideration needs to be given on how to support hospitals develop the capacity and capability to deliver clinically orientated services.
- Sharing of good practice initiatives and the development of the EAHP website to facilitate sharing of best practice should continue. EAHP should encourage those countries where clinical pharmacy is well developed to share evidence/business cases which support the development of these services. The EAHP website could also act as a repository of evidence of the benefits of pharmacists involvement in clinically orientated services or signposting to where there is published evidence in journals
- 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.
- The use of the [Self-assessment tool](#) to measure progress with the implementation of the Statements should be encouraged to increase their adoption.

Recommendations for future surveys

- Changes to the previous EAHP Statements Surveys appear to have been well received and should be continued in subsequent surveys:
 - Keep the survey as short and as easy to complete as possible.
 - 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).
- Involvement of the Board members in communication with the countries.

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