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# EAHP European Statements survey 2017, focusing on Sections 2 (Selection, Procurement and Distribution), 5 (Patient Safety and Quality Assurance) and 6 (Education and Research).

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## Abstract

### Objectives

The 2017 EAHP European Statements survey was related to sections 2, 5 and 6 of the European Statements of Hospital Pharmacy (Statements). The statistical data about the level of implementation, and main barriers to the implementation of the Statements were collected. It was also intended to identify barriers in general, such as lack of awareness.

### Methods

The online questionnaire was sent to all hospital pharmacies in EAHP member countries. Data were analysed at Keele University School of Pharmacy, UK and the EAHP Survey Group.

### Results

There was a total of 783 complete responses (response rate 17,4%). 42% of responders worked in teaching hospitals. 76% of hospital pharmacies had 10 or less pharmacists, while 46% hospital pharmacies served over 500 beds.

Five questions with the lowest implementation level were further analysed more in detail. Only 30% of respondents reported that their hospital pharmacists routinely publish hospital pharmacy practice research, and only 50% are involved in development of local or national guidelines. 45% of respondents answered that the computerised decision support was used to reduce the risk of medication errors in their hospitals. 69% of participants stated that they had contingency plans for medicines shortages and 60% answered that they had a reason to contact their medicines authority because of drug shortage. 63% reported that the transcription step had been eliminated from the medicines administration process.

### Conclusions

EAHP has gained an informative overview of the implementation level as well as the barriers to and drivers of implementation in sections 2, 5 and 6. This is important to inform the plans for EAHP and its members to best support the implementation.

## Introduction

Since 2015, the European Association of Hospital Pharmacists (EAHP) survey has been focused on measuring the implementation of the European Statements of Hospital Pharmacy (‘Statements’)[1] across 35 European countries. This new survey model, developed and approved by delegates of the EAHP General Assembly in 2014, modernised the survey by using an online tool to optimise data collection while minimising workload for survey respondents. This tool was intended to support EAHP efforts in implementation of the summit outcomes – the Statements and other EAHP major projects. The EAHP Survey Group established a model with a 'baseline survey' and two 'statements surveys', rotating in 2-year cycles, each year covering three of six sections of the Statements. [2] This article provides an overview of the most important results of the latest survey that covered sections 2, 5 and 6 of the Statements and compares these data with the results of 2015 survey, which focused on the same sections, and baseline survey in some cases. [3] [4]

## Methods

The survey was drafted using the same questions as the 2015 survey and then conducted from October 2017 to November 2017, spanning 34 (of 35) EAHP member countries.

As with previous surveys, the 2017 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 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 were to identify if the participants 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.

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 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. 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.

The survey was created using the online survey software SurveyMonkey and was conducted in English. It was distributed using a SurveyMonkey email collector. Survey was distributed to hospital pharmacies (one link per one hospital pharmacists) using the contact lists provided by EAHP Survey coordinators.

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 done manually.

Significance testing was performed to compare the results of some of the survey questions to the same question asked in previous years’ surveys. The survey questions from section B were identical for the 2017 and 2015 surveys but slightly different from the baseline survey which did not contain as many questions, so not every survey question had three points of data. Testing was performed to compare the 2017 survey data with the baseline data, or the 2015 survey data in the event of there being no baseline data for a given question. To limit the effect of outliers on the result, countries with less than 5 responses were excluded from testing. 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 staffing 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. [5]

## Results

When the 2017 EAHP Statements Survey closed, there were a total of 979 responses, of which 783 had completed the survey. As was done in previous years, if an incomplete survey was submitted, the quantitative data were not used in the results, but the qualitative data were still included.

The overall response rate to the 2017 survey was 17%, with wide variation across different countries. 19 of the 35 countries had a response rate of over 30%. The survey had more hospital pharmacies complete the entire survey than any of the previous surveys.

The response rates for 2017 EAHP Statements Survey are listed in the table 1 [online only], broken down by country. The response rates from the 2015 baseline survey are given in the final column for comparison.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Country** | | **Total Responses 2017 Survey** | | | **Complete responses 2017 Survey** | | **Requests** | | **Percentage** | | **Baseline** |
| Austria | | 35 | | | 32 | | 46 | | 76% | | 49% |
| Belgium | | 71 | | | 57 | | 173 | | 41% | | 25% |
| Bosnia | | 10 | | | 10 | | 21 | | 48% | | 48% |
| Bulgaria | | 16 | | | 13 | | 72 | | 22% | | 17% |
| Croatia | | 31 | | | 29 | | 48 | | 65% | | 82% |
| Czech Republic | | 52 | | | 49 | | 97 | | 54% | | 61% |
| Denmark | | 8 | | | 8 | | 9 | | 89% | | 88% |
| Estonia | | 11 | | | 8 | | 25 | | 44% | | 45% |
| Finland | | 20 | | | 15 | | 80 | | 25% | | 27% |
| France | | 46 | | | 29 | | 1808 | | 3% | | 8% |
| FYROM | | 13 | | | 10 | | 31 | | 42% | | 58% |
| Germany | | 101 | | | 86 | | 374 | | 27% | | 24% |
| Greece | | 52 | | | 45 | | 122 | | 43% | | 30% |
| Hungary | | 40 | | | 29 | | 109 | | 37% | | 64% |
| Iceland | | 0 | | | 0 | | 2 | | 0% | | 100% |
| Ireland | | 42 | | | 41 | | 70 | | 60% | | 53% |
| Italy | | 37 | | | 26 | | 561 | | 7% | | 6% |
| Latvia | | 2 | | | 1 | | 45 | | 4% | | 13% |
| Lithuania | | 12 | | | 10 | | 36 | | 33% | | 13% |
| Luxembourg | | 1 | | | 1 | | 5 | | 20% | | 50% |
| Malta | | 4 | | | 4 | | 5 | | 80% | | 66% |
| Montenegro | | 3 | | | 3 | | 6 | | 50% | | N/A |
| Netherlands | | 25 | | | 20 | | 99 | | 25% | | 35% |
| Norway | | 15 | | | 13 | | 30 | | 50% | | 66% |
| Poland | | 22 | | | 11 | | 82 | | 27% | | 6% |
| Portugal | | 26 | | | 22 | | 93 | | 28% | | 19% |
| Romania | | 29 | | | 23 | | 102 | | 28% | | 44% |
| Serbia | | 38 | | | 35 | | 65 | | 58% | | 63% |
| Slovakia | | 26 | | | 18 | | 72 | | 36% | | 48% |
| Slovenia | | 22 | | | 22 | | 28 | | 79% | | 68% |
| Spain | | 22 | | | 18 | | 250 | | 9% | | 18% |
| Sweden | | 19 | | | 16 | | 35 | | 54% | | 47% |
| Switzerland | | 29 | | | 21 | | 60 | | 48% | | 48% |
| Turkey | | 66 | | | 37 | | 694 | | 10% | | 9% |
| UK | | 33 | | | 21 | | 212 | | 16% | | 38% |
| **Total** | | **979** | | | **783** | | **5561** | | **17%** | | **18%** |

Table 1 Response rate by participating countries

### Section A

The results showed that 42% (332, n=783) of responders worked in teaching hospitals. These numbers are similar to those in the baseline survey (42%) and the 2015 survey (43%). 72% of respondents were from general hospitals (566, n=783). This number is again very similar to those seen in previous surveys (71% in both baseline and 2015 surveys). The results of the 'other hospitals' category indicated that 43 responses were from psychiatric hospitals, 9 from paediatric hospitals, 7 from traumatology hospitals, 18 from oncology hospitals and 9 from geriatric hospitals. A total of 46% of hospital pharmacies served hospitals with 100–500 beds (359; 45% in 2015 and 50 in baseline survey), 24% served hospitals with 500–1000 beds, 21% served hospitals with >1000 beds while 9% served hospitals with <100 beds. The majority of the hospital pharmacies (598, 76%) only employed 1-10 fully qualified pharmacists at the time of survey and similar number of pharmacy technicians and pharmacy technicians (563 pharmacies, 72%). 54% (425, n=783) of responders reported that their hospital pharmacy is involved with procurement, supply or supervision of medical devices.

These numbers are very similar to those from the baseline and 2015 survey.

### Section B: Questions related to sections 2, 5 and 6 of the EAHP Statements

Table 2 [online only] shows all of the questions asked in the survey regarding sections 2, 5 and 6 of the Statements and, where applicable, the overall percentage of participants who gave a 'positive response' to the question. When a participant gave a 'negative response' to a question, there was usually a follow-up question of "What is preventing this?" Questions where <50% of participants gave a positive response and questions where >75% of participants gave a positive response are highlighted. The question numbering indicates the relationship between the questions and respective Statements (eg, S21 is related to Statement 1 in section 2, etc).

|  |  |
| --- | --- |
| 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 procurement processes? | 95% of responses were positive |
| **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 | 81% of responses were positive |
| **S23** Do you have a formulary in place in your hospital? | 79% of responses were positive |
| **S232** The pharmacists in our hospital coordinate the development, maintenance and use of our formulary | 93% of responses were positive |
| **S24** Procurement of non-formulary medicines in our hospital is done to a robust process | 83% of 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 responses were positive |
| **S25** The pharmacy in our hospital has contingency plans for medicines shortages | 69% of responses were positive |
| **S252** Have you had reason to contact the medicines authority in your country because of medicines shortages? | 40% of responses were positive |
| **S26** The pharmacy in our hospital takes responsibility for all medicines logistics, including for investigational medicines | 90% of 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 responses were positive |
| **S522** Were pharmacists involved in approving these procedures? | 89% of responses were positive |
| **S524** In the past three years have you undertaken an audit to identify priorities for improvement in medicines use processes? | 65% of responses were positive |
| **S53** Does your hospital have a quality assessment programme? | 74% of responses were positive |
| **S533** Our hospital acts on these reports to improve the quality and safety of our medicines use processes | 95% of responses were positive |
| **S54** The pharmacists in our hospital report adverse drug reactions | 68% of responses were positive |
| **S543** Our hospital has a process for reporting adverse drug reactions and the staff report these regularly | 69% of responses were positive |
| **S545** The pharmacists in our hospital report medication errors | 65% of responses were positive |
| **S55** The pharmacists in our hospital use evidence-based approaches to reduce the risk of medication errors | 74% of responses were positive |
| **S552** Our hospital pharmacy uses computerised decision support to reduce the risk of medication errors | 45% of 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 | 63% of responses were positive |
| **S58**  Our patient’s health records accurately record all allergy and other relevant medicine-related information | 86% of responses were positive |
| **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? | 66% of 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 | 87% of 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? | 73% of responses were positive |
| S510 Medicines in our hospital are packaged and labelled to assure they are safely optimised for administration | 84% of responses were positive |
| S5103 Hospital pharmacists are involved in processes of secure stocking and dispensing of drugs on wards, including a policy for LASA (look-alike, sound-alike) drugs and regular inspections | 76% of responses were positive |
| S511 Which best describes the traceability of medicines dispensed by our pharmacy? | 95% of responses were positive |
| Section 6: Education and Research | |
| S62 The pharmacists in our hospital are able to demonstrate their competency in performing their roles | 86% of responses were positive |
| S63 The pharmacists in our hospital engage in relevant educational opportunities | 88% of responses were positive |
| S64 The pharmacists in our hospital routinely publish hospital pharmacy practice research | 30% of responses were positive |
| S644 Have you or your pharmacists engaged in development of local/national guidelines? | 50% of responses were positive |

Table 2 Questions in the 2015 European Association of Hospital Pharmacists (EAHP) Statements Survey

Figure 1 shows the results of the 2017 EAHP Statements survey alongside the results of the 2015 survey. The numbers in brackets on the bottom axis are the number of responses by country for the 2017 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 decreased slightly. Out of the 33 questions surveyed, 20 showed a decrease in positive responses, 9 showed an increase, and 4 remained the same. This indicates that the barriers to implementing the statements that countries were reporting in 2015 are still in place.

The five questions which received the least positive responses were identified (table 2) and were subjected to a more in-depth analysis. These five questions were related to four Statements: 6.4, 5.5, 2.5 and 5.7.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Question | | Mean\* (2017) | Mean\*  (2015) | Mean\*  (Baseline) |
| S6.4 | The pharmacists in our hospital routinely publish hospital pharmacy practice research | 30.3% | 32.7% | 44.2% |
| S5.5.2 | Our hospital pharmacy uses computerised decision support to reduce the risk of medication errors | 45.2% | 44.3% | N/A |
| S6.4.4 | Have you or your pharmacists engaged in development of local/national guidelines? | 50.1% | 55.7% | N/A |
| S2.5.2 | Have you had reason to contact the medicines authority in your country because of medicines shortages? | 59.8%^ | 57.8%^ | N/A |
| S5.7 | The medicines administration process in our hospital ensures that transcription steps between the original prescription and the medicines administration record are eliminated | 63.2% | 66.7% | 67.9% |

Table 3 Five questions with the lowest mean percentage of positive responses across the different countries. \*Mean: The mean percentage of positive responses to a question across all respondent countries.^ Respondents did have a reason to contact the medicines authority.

**Questions related to S6.4**

The question with the lowest overall percentage of positive responses was S6.4, related to the 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.*

Figure 2 shows the percentage of respondents who gave a positive response when asked if pharmacists routinely publish hospital pharmacy practice research. Overall, only 30% of responses were positive to this question. In every country surveyed less than half of the respondents gave a positive response, except for FYROM, Italy, Spain, Netherlands and Latvia (which only had a single response). When looking at the responses from individual countries who participated in both surveys the results show more promise, as the percentage of positive responses increased in 16 countries, decreased in 14 countries and stayed the same in 2 countries. A paired samples t-test indicated that the mean percentage of positive responses for countries significantly decreased between the baseline survey (M = 0.433, SD = 0.198) and the 2017 survey (M = 0.316, SD = 0.135), t(27) = 4.154, p < 0.01, d = 0.785.

Following on from the initial question, respondents were also asked 'How many external presentations/papers/posters were submitted last year by your pharmacy?' (S6.4.1) and 'How often are internal presentations given by your pharmacy?' (S6.4.2) The most frequent responses to question S6.4.1 was 'none' (354 responses across all countries) and '1 to 2' (233 responses across all countries). These two categories of response account for 75% of total responses to the question. The proportion of responses indicating 3 or more publications is generally low although there is variance across different countries, for instance results from Italy showed 20 out of 26 respondents answered 3 or more publications. The most common response for S6.4.2 (how often are internal presentation given by your pharmacy?) was 'less often than monthly' (400 responses across all countries). This was significantly higher than the next most popular response 'monthly' (185 responses across all countries). 153 responses indicated that their pharmacy never gives internal presentations with just 18 responses stating that they do this weekly. Countries who indicate that they are involved in internal presentations more frequently (e.g. Netherlands or Spain) also show that they are experiencing fewer barriers to publishing research.

To further understand this, respondents were asked what the barriers to publishing more were, the overall results of which are shown in Figure 3 [online only]. The most frequent overall response was lack of capacity, with 570 responses in total, suggesting many pharmacists do not have time to perform this activity. Another major barrier identified was lack of capability with 247 responses. Not being considered to be a priority by managers was also raised as a barrier with 186 responses. The most common freetext responses in the 'other 'category were lack of time/capacity (9 responses) and lack of experience/no previous research culture (5 responses).

The barriers identified in the 2017 survey, and the proportion of responses they account for, are very similar to the results from the 2015 survey. For example, lack of capacity represented 48% of the responses in the 2017 survey compared to 51% of the total responses in the 2015 survey. Lack of capability represented 21% of the responses in 2017 compared to 19% of the total responses in the 2015 survey, and not being considered a priority by managers represented 16% of the responses in both the 2015 and 2017 surveys.

As lack of capacity was cited as the biggest barrier to publishing by such a large amount, the relationship between pharmacist workforce and publishing ability was investigated further. The responses when asked if pharmacists routinely publish hospital pharmacy practice research are shown in Figure 4, 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 note that the total numbers of responses for the higher staffing levels are fairly small.

An intuitive assumption may be that teaching or university hospitals would produce more research, as they may have more academic links or training available for writing papers and explaining the publishing process, and testing showed this assumption to be true. A Mann-Whitney test indicated that teaching/university hospitals reported more positive responses when asked if pharmacists in the hospital routinely publish their work than non-teaching hospitals (U = 49748, p < 0.01, r = 0.302), with a mean rank of 467.7 for teaching/university hospitals and 336.3 for non-teaching hospitals. Note that as the responses are ranked from lowest to highest in this test, the teaching university hospitals group (which has a higher mean rank) will have more positive responses in it than the non-teaching hospitals group (which has a lower mean rank).

Survey question 6.4.4 read *“Have you or your pharmacists engaged in development of local/national guidelines?”*, and the percentage of respondents who gave a positive response to this question can be seen in Figure 5. The overall positive response rate for this question was 50%, down from 58% from the 2015 survey. This particular question was not included in the original baseline survey. Responses between countries are highly varied for this question. Of the countries who participated in both 2015 and 2017 surveys, 20 saw a decrease in the percentage of positive responses, whilst 10 saw an increase and 2 remained the same.

A paired samples t-test indicated that the mean percentage of positive responses for countries was not significantly different for the 2015 survey (M = 0.560, SD = 0.216) compared to the 2017 survey (M = 0.548, SD = 0.210), t(27) = 0.419, p = 0.679, d = 0.0792.

With more than twice as many responses as the next option, the main barrier to implementing this statement was identified to be ‘limited capacity’ (236 responses), followed by ‘limited capability’ (117 responses) and ‘Not considered a priority by my manager' (108 responses). It is notable that the Statement 6.4 was also considered to be most challenging when asked this question in Section C of the Survey.

**Question related to the 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’.* Survey question 5.5.2 read “*Our hospital pharmacy uses computerised decision support to reduce the risk of medication errors”.*

The responses to the question *‘Our hospital pharmacy uses computerised decision support to reduce the risk of medication errors'* are shown in Figure 6. The mean response for countries was 45% positive, showing this statement is not currently implemented widely across European hospitals. This response is slightly higher than the result from the 2015 survey, which was 44%, indicating that progress on this issue may be stagnant. For the countries who responded to both surveys, 18 countries saw an increase in the number of positive responses, and 14 countries saw a decrease in the number of positive responses in the 2017 survey compared to the 2015 survey. The positive response rate between countries was variable, as in 19 countries less than half of the respondents gave a positive response but 6 countries gave an average positive response of 75% or greater.

When asked what is preventing the use of computerised decision support to reduce the risk of medication errors, the most frequent response was lack of capacity (223 responses), not considered to be a priority by my managers (168 responses) and lack of capability (126 responses). From the ‘Other’ category are several comments from different countries stating that they are in the process of setting up or developing a system, but other respondents indicated IT infrastructure and lack of finance were problematic. A number of responses also indicated that documentation is paper based.

**Question related to Statement 2.5:** *Each hospital pharmacy should have contingency plans for shortages of medicines that it procures*. This Statement is clearly linked to medicines shortages. Shortages are a persistent problem in current healthcare systems.[6] Survey question 2.5.2 read *“Have you had reason to contact the medicines authority in your country because of medicines shortages?”*

Figure 7 shows the percentage of respondents who indicated that they did have reason to contact the medicines authority because of a shortage. The overall percentage of ‘Yes’ responses was 60%, slightly higher than the 58% observed in the 2015 survey. A paired samples t-test indicated that the mean percentage of ‘Yes’ responses for countries was not significantly different for the 2015 survey (M = 0.617, SD = 0.202) compared to the 2017 survey (M = 0.620, SD = 0.188), t(27) = -0.079, p = 0.938, d = -0.0149.

Respondents who replied that they have had reason to contact the medicine authority due to a shortage were asked ‘What was your reason to contact the medicines authority?’. The results were split quite evenly with ‘To inform them of a drug shortage (323 responses), ‘To ask them for details about the reasons’ (302 responses) and ‘To enquire on a likely timeframe for shortage (292 responses). There were 160 respondents who selected all three options. Of the 58 responses in the other category the most common reasons were ‘to get permission or guidance on importing drugs’ and ‘to enquire about what alternative drugs can be used instead’. The reasons for contacting the medicines authority are largely consistent between countries.

Participants were also asked if the pharmacies in their hospital had contingency plans for medication shortages, 69% responded positively. The biggest barrier to having contingency plans for medicines was identified to be limited capacity (100 responses) but there were also a sizeable number of responses for not being considered a priority by managers (65 responses) and being prevented by national policy or legislation (62 responses). The majority of the ‘Other’ responses can be summarised that shortages are handled on a case by cases basis without a formal plan in place (22 of 42 responses).

**Question related to the EAHP Statement 5.7:** ‘*Hospital pharmacists should ensure that the medicines administration process is designed such that transcription steps between the original prescription and the medicines administration record are eliminated’.* When asked “The medicines administration process in our hospital ensures that transcription steps between the original prescription and the medicines administration record are eliminated” the overall positive response rate for this question was 63%. This is a less positive response from when the question was asked two years ago in the 2015 survey (67% positive). Figure 8 shows the results broken down by country, which shows that the response between countries is mixed, with a large range between results.

As this question was also asked in the baseline survey, comparisons can be made to that data as well. A paired samples t-test indicated that the mean percentage of positive responses for countries was not significantly different for the baseline survey (M = 0.679, SD = 0.157) compared to the 2017 survey (M = 0.665, SD = 0.220), t(27) = 0.383, p = 0.705, d = 0.0724.

Participants who gave a negative response to statement 5.7 were then asked what was preventing this. Figure 9 [online only] shows the results of this, and it can be seen that the most common response was limited capacity with 150 responses. Not considered to be a priority by my managers (108 responses) and limited capability (75 responses) also had many responses. There were also a large number of ‘Other’ responses (53 responses), with 24 responses describing how electronic systems are not used, or paper records are still used mainly. 10 responses indicate work on implementing an electronic system is in progress.

The overall results for this statement question were also grouped by the number of fully qualified pharmacists working at the hospital. Unlike the other statement questions examined this way, the difference between the groups’ responses is much smaller, with a range of 62.0%-70.0% between groups. Although lack of capacity was still given as the main barrier to implementing to this statement, this could be more to do with lack of funding for the necessary electronic systems to implement the statement rather than the capacity of the workforce.

### 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 results from this Section show a statistically significant increase in awareness about the European Statements among the hospital pharmacists, from ( *M* = 0.398, *SD* = 0.251) in the baseline survey compared to (*M* = 0.485, *SD*  = 0.244) in the 2017 survey, *t*(27) = -2.859, *p* = 0.008, *d* = -0.540. However, no statistically significant change could be proved in overall capacity, capability or commitment to implement the Statements.

## Discussion

There are several limitations to this study. The first and most important limitation was that the number of responses from some member countries was very small, and hence did not allow a precise statistical evaluation on country level. The reason for this is that some countries have a much smaller population and therefore a much smaller number of hospitals (and, therefore hospital pharmacists). The second limitation was the necessity to find a balance between the length of the questionnaire (and the workload for responders) and level of detail sought in identification of the main implementation barriers.

Despite these limitations, the survey results provide an up to date picture of the current state of our profession in Europe in relation to the Statements. 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 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 addition to that, the capacity of hospital pharmacists is often consumed by inevitable external causes, such as medicine shortages.

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 (with exception of S6.4 showing statistically significant decrease). An explanation for this could be that implementing the statements 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 positive change in the level of awareness suggests that the EAHP role of the EAHP Statement Ambassadors should continue to be developed. Removing the main barriers such as the insufficient staffing will take a long time, and increasing awareness is a necessary first step in this journey

The next survey, in autumn 2018, will focus on sections 1, 3 and 4.

## Conclusion

The main objective of the 2017 EAHP Statements survey was to provide an assessment of the level of implementation of sections 2, 5 and 6 of the Statements throughout European countries and to identify the main barriers to and drivers of implementation and investigate a possible progress in the implementation. This enables the EAHP to prioritise efforts in its implementation activities. This objective has been reached, thanks to the enormous efforts of national coordinators and all of our members who responded to the survey. The data will now be used to inform the EAHP Statements implementation project as well as other major projects of EAHP.

## Key messages

### What is already known on this subject

The 2014/2015 European Association of Hospital Pharmacists (EAHP) baseline survey and the 2015 Statements Survey provided general knowledge of the baseline level of implementation of the Statements in Sections 2, 5 and 6.

### What this study adds

This paper updates our knowledge of the level of implementation of sections 2, 5 and 6 of the Statements together with identification of the main barriers to and drivers of implementation. The biggest challenges for implementation in hospital pharmacies are:

* publication of research activities
* creating contingency plans for medicines shortages and high occurrence of the shortages
* implementing and using computer supported decision tools
* involvement in developing local and national guidelines, and policies
* removing transcription from medicines administration process

The most important barrier to implementation is insufficient capacity and different priorities of hospital and health system managers.

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