

PHARMACEUTICALS AND PHARMACEUTICAL CARE

Abridged Survey Report on Quality and Safety Assurance Standards for the Preparation of Medicinal Products in Pharmacies

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1. INTRODUCTION

The preparation of medicinal products in pharmacies is important because industrial products with marketing authorisations cannot satisfy all the health needs of patients. The regulations for products manufactured by the pharmaceutical industry and pharmacy-made preparations are not the same. This is why the Committee of Experts on Quality and Safety Standards for Pharmaceutical Practices and Pharmaceutical Care (CD-P-PH/PC), coordinated by the European Directorate for the Quality of Medicines & HealthCare (EDQM), Council of Europe, started working on the harmonisation of quality and safety assurance standards for pharmacy-made medicines in Europe. The activity was inspired by the results of a survey on quality and safety standards for pharmacy-made medicines in the states parties to the Convention on the Elaboration of a European Pharmacopoeia. This report describes the survey results.

2. METHOD

The questionnaire for the survey (Appendix) was prepared by a working party of the CD-P-PH/PC chaired by the corresponding author with the participation of the delegations from Austria, Norway and Switzerland. The European Association of Hospital Pharmacists (EAHP) also participated in the work. The questionnaire was divided into 4 chapters, as follows:

- legal provisions and definitions;
- general safety and quality systems;
- provisions and practices for preparation and delivery (supply) between pharmacies;
- quality and safety of pharmacy preparations.

The questionnaire was sent to the states parties of the Convention on the elaboration of a European Pharmacopoeia at expert level, the delegations of the CD-P-PH/PC on 15 September 2008, and at the level of the delegations of the steering body, the European Committee on Pharmaceuticals and Pharmaceutical Care (CD-P-PH) (Partial Agreement) on 6 April 2009.

3. RESULTS

The delegations of 19 countries completed the questionnaire. These countries are: Austria, Belgium, Bosnia and Herzegovina: Federation of Bosnia-Herzegovina and Republica Srpska, Cyprus, the Czech Republic, Denmark, Finland, France, Hungary, Ireland, Italy, Latvia, Macedonia, the Netherlands, Norway, Poland, Portugal, and Switzerland.

The delegation from the United Kingdom referred to the Medicines and Healthcare products Regulatory Agency (MHRA) Guidance Note No. 14, revised January 2008, entitled *The Supply of Unlicensed Relevant Medicinal Products for Individual Patients*. The manufacturer or assembler of 'specials' must hold a manufacturer's 'specials' licence granted by the licensing authority. The manufacturing/assembly site and its operations are inspected for compliance with Good Manufacturing Practice (GMP) and the relevant regulatory provisions. Export from the United Kingdom to other EU/EEA member states of unlicensed relevant medicinal products may take place under certain conditions.

It should be noted that the Pharmaceutical Inspection Convention and Pharmaceutical Inspection Co-operation Scheme (PIC/S) Guide has another scope and focus: the PIC/S Expert Circle on Hospital pharmacy has recently issued the guide to good practices to the preparation of medicines in healthcare establishments, PE 010-3, 1 October 2008, containing the basic quality related requirements for the preparation of medicinal products normally performed by healthcare establishments and pharmacies for direct supply to their own patients. Concerning this guide the following remarks are relevant:

- the guide does not contain specific requirements for pharmacies preparing on a larger scale and delivering to other pharmacies;
- national legislation and regulatory policies laid down by the relevant competent authority should always be referred to when determining the extent to which the provisions laid down in this guide are binding/applicable¹.

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¹ Link: <http://www.picscheme.org/publication.php> (go to "documents for inspectors")

3.1. Legal provisions and definitions

3.1.1. Requirements for preparation in pharmacies and other healthcare establishments

In 16 of the 19 respondent countries, general quality and safety requirements are in place for preparation of medicines in pharmacies such as the general chapters and monographs of the European Pharmacopoeia. In some respondent countries more specific additional requirements are defined (e.g. for the preparation of sterile products; exemption only for 'own formula' preparation).

As regards the preparation in other healthcare establishments (e.g. wards in hospitals), general quality and safety requirements are only present in 8 of the 19 respondent countries. There seems to be a discrepancy between the regulations in pharmacies and in other healthcare establishments, respectively. Reconstitution or extemporaneous blend in hospital wards of industrial medicinal products with a marketing authorisation falls under the definition of preparation in some respondent countries, but does not fall under this definition in other respondent countries.

Excerpts from survey replies:

"Healthcare establishments are allowed to prepare medicinal products for immediate use or for use within a few hours after preparation without possessing a special licence. These preparations are poorly regulated, but the products still have to fulfil the requirements laid down in the European Pharmacopoeia. There is an old regulation dating from 1971 on hygiene which we consider outdated. The national medicines agency is now looking to harmonise this regulation among pharmacies and healthcare establishments."

"Specific types of medicinal products prepared for 'own patients' are exempted from the need to have a marketing authorisation."

"The maximum allowed quantity given in a national ordinance on simplified marketing authorisation is 1 000 packs, which includes a maximum of 30 000 daily doses per year except for hospitals. Hospitals can prepare up to 90 000 individual doses per year. Revision of these quantities is being discussed"

3.1.2. Restrictions related to the preparation of medicines in pharmacies

In some respondent countries there are restrictions concerning the preparation of medicines in pharmacies, whereas in others no restrictions are put in place. Restrictions relate to the scale of the preparations, implying that preparations should be limited to individual patients or to stock preparations reserved for supply to the patients served by that pharmacy. In 12 of the 19 respondent countries a license for pharmacy-made medicines is not required, though some others do require such a license. The license system may discriminate between presentation forms (e.g. specific licenses for sterile products, liquids or tablets, respectively), may concern enterprises which are not pharmacies themselves and may be dependent on the production scale.

Excerpts from survey replies:

"All pharmacies must be registered, but once registered they are entitled to prepare medicinal products."

"A differentiated licensing system is in place for pharmacies specialised in liquids, tablets and sterile products."

³ Not from national pharmacopoeia

"A special licence is required for activities in pharmacy-made preparations. Contracted manufacturers for pharmacies, which are not themselves pharmacies, and, which are not allowed to supply patients directly, require a specific national license from the national medicines agency"

3.1.3. Definitions for pharmacy preparations

The definitions used for pharmacy preparations vary widely between respondent countries. The terms magistral and official preparation are used in 14 of the 19 respondent countries, but are obviously not clear enough to distinguish between the different forms of preparations. In most respondent countries the need is felt to indicate the degree of standardisation of the preparation (standardised versus non-standardised), the stock size (small versus large batch), the use of raw materials or marketed medicines or pharmacopoeial versus own formulation, etc. Reconstitution or blend of authorised medicinal products is considered a grey area as to whether it falls under the definition of preparation or not. In some countries like France it is forbidden.

Many respondent countries have indicated that other terms are being used for pharmacy-made preparations, such as: *"...hospital preparations..."; "...individual preparations and large batch preparations..."; "...own formula³..."; "...extemporaneous or small stock..."; "...stock preparations (standardised), individually standardised preparations, individually non-standardised preparations, extemporaneous preparations in hospital wards, preparations from raw materials, preparations to modify already marketed medicines"; "...bulk intermediate products, batch production, hospital pharmacies, pharmacy-prepared brand medicines..."; "...galenic drugs (stock preparations for own patients), herbal drugs, herbal substances, traditional drugs..."; "...extemporaneous compounding..."*

3.1.4. Delivery to other pharmacies

In 13 of the 19 respondent countries there are pharmacies that deliver medicinal products to other pharmacies. In some of these respondent countries companies specialised in the preparation of medicines, but which are not pharmacies, are licensed. Concerning the specialisation in the preparation of medicines, hospital pharmacies are more often involved than community pharmacies.

Excerpt from survey replies:

"There are companies, not being pharmacies, which possess a licence to manufacture medicines on behalf of pharmacies. According to the pharmacy act, most of the manufacturing should be executed by such companies..."

3.1.5. Authorisation of pharmacies

In 15 of the 19 respondent countries no special authorisations are required for pharmacies other than the 'normal' authorisation for a pharmacy by the authorities, which automatically includes permission to produce pharmacy preparations. In the remaining respondent countries, a license for pharmacy preparations is required.

Excerpt from survey replies:

"Special authorisation to prepare pharmacy-made medicines is not currently required. However, the Pharmaceutical Practice Bill is in process and it will include such a requirement. This bill will require that

pharmacies with laboratories making galenic preparations for other pharmacies must comply with GMP when preparing small quantities”.

3.2. General safety and quality standards

In 17 of the 19 respondent countries there are general safety and quality standards for pharmacy preparations. In most respondent countries, the typical GMP chapters are covered in the quality and safety standards, but to a varying extent. Quality control is included in the standards in the majority but not all of the respondent countries. Even when included, quality control is in most cases performed by external bodies and not for all preparations. Provisions for product recall are not included in the standards of all respondent countries. Although these standards are specifically aimed at pharmacies which prepare medicines exclusively for their own patients, a clear distinction with preparations on a larger scale is not made in most of the respondent countries.

Excerpts from survey replies:

“Pharmacies must comply with the good practices for preparations set by the national medicines agency.”

“Products must comply with the national or European Pharmacopoeia. The European Pharmacopoeia has supremacy”.

3.2.1. Additional standards for preparations carrying a higher risk

In 7 of the 19 respondent countries additional safety and quality standards are required for preparing larger batches. However, the definitions for a large batch vary widely from country to country. In some respondent countries a stock preparation is considered a large batch, even when the supply of the prepared medicines is restricted to the patients of the pharmacy in question. In 1 of the respondent countries the standards state specifically that the existence of adequate premises is required for large-scale production.

Excerpts from survey replies:

“The maximum production permitted for small-scale preparations is set at 300 units per galenic lot.”

“Preparation for stock building is considered as a larger batch.”

“The Professional Standard states that large batch production should only be carried out in appropriate premises licensed to manufacture medicinal products. Stock preparation is considered as a larger batch.”

“AMBO 2009 applicable to industry is also applicable to pharmacies supplying medicinal products to other pharmacies, hospitals etc. and when the usual frequency and amount is exceeded.”

“No exact definition exists for a larger batch; the additional standards are applied to all stock preparations.”

“A preparation is considered as a larger batch if more than 10 units are produced. Stock preparation is considered as a larger batch”.

In 12 of the 19 respondent countries additional safety and quality standards are in place for delivery to other pharmacies, whereas in the remaining respondent countries there are no such additional standards. In some of the respondent countries the delivery of medicines to other pharmacies is legally forbidden, whereas in some other respondent countries it is restricted to very specific cases, where the preparation is in the clear interest of health

care. In 1 of the respondent countries delivery of medicines to other pharmacies is not allowed without a marketing authorisation.

Excerpts from survey replies:

“Pharmacies must comply with the good practices for preparations set by the national medicines agency.”

“Delivery to other pharmacies is not allowed without having a marketing authorisation for the medicinal product.”

“AMBO 2009 applicable to the industry is also applicable to pharmacies when medicinal products are supplied to other pharmacies, hospitals etc. and when the usual frequency and amount is exceeded.”

“Delivery to other pharmacies is not allowed.”

“Delivery to other pharmacies is not allowed unless certain requirements are fulfilled.”

“Regulation 6 of the Regulation of Retail Pharmacy Businesses Regulations 2008 which were commenced on 29 November 2008 place restrictions on the sourcing of medicinal products by registered pharmacies. Pharmacies are now only entitled to source medicines from persons with manufacturing or wholesaling authorisations or from another pharmacy only to meet the immediate prescription need of a patient. This will have the effect of preventing practices of delivery of medicines from one pharmacy to another except in very specific, and upon occasional, circumstances”.

3.2.2. Clinical relevance and added value of the pharmacy preparation

Justification of therapeutic benefit/risk of the pharmacy preparation is included in the quality and safety standards in 4 of the 19 respondent countries.

There are respondent countries where pharmacy-made medicines are not allowed if authorised medicines as therapeutic alternatives are available on the market. In 1 of the other respondent countries pharmacies are obliged to deliver all medicines prescribed by doctors, whereas another country requires a sound and documented proof for the therapeutic rationale of the prepared medicine.

Excerpts from survey replies:

“Therapeutical rationale has to be demonstrated by the pharmacy in accordance with a classification scheme (e.g. an individual choice of a doctor versus proof by means of clinical trials).”

“Production is according to prescription or good therapeutic tradition. Pharmacies are obliged in our country to deliver all medicines that doctors or veterinarians prescribe”.

3.2.3. Testing of raw materials

Determination and testing of the identity of the raw materials is required in 12 of the 19 respondent countries, and further analysis is required in 8 of the 19 respondent countries. In some respondent countries an authorisation system, organised by the pharmacists and based on audits of the suppliers, is in place for suppliers/manufacturers of raw materials, allowing the pharmacist to rely upon a certificate in the case of an ‘approved’ supplier/manufacturer.

Excerpts from survey replies:

“Pharmacies are required to use pharmaceutical grade raw materials where possible. However, no further specifications are mandated at present.”

“Possibility of certification of the identity of individual containers is possible under specific condition for explicitly authorised raw material suppliers or manufacturers.”

“In practice, pharmacies can rely on the identity guarantee given by the supplier. A special laboratory tests almost all raw materials for pharmacies.”

“A content and/or purity assay etc. is required to be performed if the certificate of suitability of the relevant pharmacopoeia monograph is not provided by the source from which the substance is purchased”.

3.2.4. Pharmacovigilance

In 9 of the 19 respondent countries pharmacy-made medicinal products are subjected to the pharmacovigilance system for medicinal products, but in the remaining respondent countries this is not the case. In the respondent countries where no exceptions are made for pharmacy-made medicinal products, the national registries for adverse drug events are not always specific enough for pharmacy-made medicinal products in the sense that reporting on the generic name and/or name of the raw materials is difficult or even impossible.

Excerpts from survey replies:

“Pharmacy-made preparations are subjected to the same pharmacovigilance system as medicinal products prepared by industry.”

“As medicinal products, extemporaneous products are subject to the same requirements in terms of the reporting of adverse events and pharmacovigilance monitoring. There is no specific system in place for monitoring pharmacovigilance issues associated with extemporaneously prepared products.”

“According to Article 67 of the Law on medicinal products and medical devices the manufacture of galenic preparations produced in a galenic laboratory of an authorised pharmacy for up to 100 finished packages per day shall not be considered as a manufacturer of medicinal products. Therefore, a pharmacovigilance system is not required.”

“Adverse effects to drugs should be reported to the national medicines agency. The national register allows for reporting of adverse effects on the generic name and/or the name of the raw materials being used”.

3.2.5. Marketing authorisation

In 17 of the 19 respondent countries a marketing authorisation is not required for medicinal products prepared in pharmacies. In 1 country a marketing authorisation is only required for pharmacy-made branded medicinal products, whereas in another country a marketing authorisation is required if the maximal quantity for pharmacy-made medicinal products is exceeded. The number of marketing authorisations for pharmacy-made medicinal products varies from 0 to more than 100, depending on the country.

3.3. Provisions and practices for preparation and delivery (supply) between pharmacies

3.3.1. Trade in pharmacy-made medicines

Pharmacies which trade own pharmacy-made medicinal products to other pharmacies exist in 9 of the 19 respondent countries. In 14 of the 19 respondent countries trade in pharmacy-made medicinal products between pharmacies is regulated by the national legislation. In 8 of the

19 respondent countries trade is not allowed unless specific conditions are met (e.g. marketing authorisation; absence of registered alternatives on the market; availability of product dossiers; documented evidence concerning the therapeutic relevance; and GMP). In 1 country trade is restricted to very specific and occasional circumstances. In 6 respondent countries a license is required for the pharmacy. One country does not differentiate between different kinds of medicinal products regarding trade between pharmacies.

The requirements for pharmacies which trade pharmacy-made medicinal products to other pharmacies may differ from country to country. Some respondent countries require a license (based on GMP or GMP-like conditions and/or Good Distribution Practices (GDP)) for such pharmacies. In some respondent countries there is a requirement for the absence of an equivalent medicinal product with marketing authorisation on the market. In 2 respondent countries chemical, pharmaceutical and microbiological (for sterile/aseptic preparations) data, comparable to the data in a registration dossier, should be available in the pharmacy upon request of the authorities.

Excerpts from survey replies:

“The regulatory provisions of contained in the national acts on pharmacies are being adopted. They aim to provide greater safety guarantees to patients who consume pharmacy-made preparations. To guarantee the quality of preparations, these provisions establish the conditions for issuing, by the State representative in the department, authorisation for a pharmacy to work as a subcontractor.”

“Trade is not allowed in our country.”

“Trade is not permitted. No trade or wholesale distribution of such preparations is allowed without marketing authorisation.”

“Trade in pharmacy-made preparation is not permitted. Only retail sale is allowed”.

3.3.2. Centralisation trends

Most respondent countries found it difficult to identify a trend concerning the number of pharmacies that trade own pharmacy-made medicinal products to other pharmacies.

In some respondent countries there are enterprises (so called chains) on the market, which own a number of pharmacies. It seems that these chains do not want to have production in all of their pharmacies.

In some respondent countries legislation allows pharmacies to a larger extent than before to buy pharmacy-made preparations instead of preparing them in their own pharmacy.

In some other respondent countries the requirements for pharmacy-made medicinal products are reinforced, leading to a possible ‘shake out’ of pharmacies, which are not able to meet the requirements. Pharmacies may give the following reasons for not being able to comply with the requirements when preparing medicinal products: the level of education of personnel, equipment and premises and new regulations. The consequences for the pharmacy may be either to close down or to stop with the preparation of medicines and to buy these medicines from other pharmacies. In the case that pharmacies are obliged by law to prepare all medicines themselves whereas they are not able to comply with quality standards, harmful consequences for the patient cannot be excluded.

These developments may lead to more centralisation/specialisation of pharmacies with regard to the preparation of medicinal products and also to a decrease in the number of pharmacies involved in preparation of medicinal products.

Excerpt from survey replies:

“New pharmacy chains owners do not want to have production in all of their outlets. The new pharmacy act allows, to a larger extent than before, pharmacies to buy pharmacy-made preparations instead of preparing them themselves. Centralisation with fewer pharmacies and/or companies offering this service is expected.”

“As the new Regulation of Retail Pharmacy Businesses Regulations 2008 introduced recently places new restrictions on the sourcing of medicinal products by registered pharmacies, it is envisaged that this practice should decrease. However, it is difficult to estimate the impact on the ‘trade’ of pharmacy-made preparations between hospitals treating inpatients”.

3.3.3. Products with marketing authorisation

The number of pharmacy-made medicinal products with a marketing authorisation issued by their national drug regulatory authority differs from country to country. In 10 of the 19 respondent countries no marketing authorisations are issued for pharmacy-made medicinal products, whereas 4 other respondent countries did not provide information on this matter. In 1 of the respondent countries new regulations are underway, and it is not envisaged to have marketing authorisations for these preparations. In 13 of the 19 respondent countries the number of pharmacy-made medicinal products with a marketing authorisation is between 0 and 10. In 2 respondent countries the number of marketing authorisations for pharmacy-made medicinal products is higher than 100.

3.4. Quality and safety of pharmacy preparations

Objective data

In 8 of the 19 respondent countries there are data from national surveillance authorities and/or independent academic institutions on the quality and safety of the pharmacy preparations. In some respondent countries there are official medicines control laboratories which take care of the surveillance of the product quality. These laboratories sometimes perform analyses upon request of the pharmacies and very often only a limited number of products are assessed. Information on the preparation process, e.g. incorporation of quality into the end product by means of quality systems (like GMP in the industry) is missing in most respondent countries. In 1 of the respondent countries a recent study shows that there are shortcomings, especially concerning batch documentation, labelling and the assessment of therapeutic value of the medicinal product/pharmacy preparation. The authors of the study suggest that the same requirements should apply to pharmacies that prepare medicinal products on a semi-industrial scale as to pharmaceutical manufacturers (industry).

Excerpt from survey replies:

“A national survey was conducted in 300 pharmacies by inspectors. The results obtained were submitted to the national authorities from February to May 2007. The national synthesis of the Public Health Department specifies the main pharmacy-made preparations (paediatric, geriatric, slimming and magistral preparations made on a small scale based on DHEA) and the conditions for their realisation (i.e. premises, equipment, control

system and quality assurance). The national medicines agency has analysed 900 prescriptions. Preparations containing forbidden substances have not been identified. The provision prohibiting the inclusion in the same preparation of poisonous substances belonging to different groups (diuretics, psychotropic anorectics...) is respected. Several points need to be improved. In particular, the need to develop documentation, the generalisation of a quality assurance system and further formalisation of registration operations outsourcing to obtain better traceability was mentioned”.

4. CONCLUSIONS

The results show that there is a wide variety between respondent countries in quality assurance and standards for pharmacy-made medicinal products. There is a gap in quality assurance between preparation in pharmacies and manufacture at the industry level. The terminology used for pharmacy-made medicinal products varies greatly between the member states. There is also a quality and safety gap between medicinal products prepared in pharmacies and in hospital wards, respectively. In most countries even fewer quality and safety requirements are defined for preparations in hospital wards.

The CD-P-PH/PC discussed the survey results at a workshop with experts from the health authorities and from the field in order to identify criteria and key elements of standards for the quality and safety assurance of medicinal products prepared in pharmacies in Europe, taking into account existing quality guidelines, and new trends and possible issues in the fields of preparation and distribution which were not covered by current legal provisions and guidance documents. Taking account of the debates held at the above workshop the CD-P-PH/PC requested proposals on guidelines for quality and safety standards for pharmacy-prepared medicines with a view to recommending them to the superior bodies of the Council of Europe and its EDQM.

The proposed guidelines for quality and safety assurance for pharmacy-made medicinal products will comprise criteria for evaluating the added value of pharmacy preparation; responsibilities of healthcare professionals, preparation process, product dossier, compliance with pharmacopoeial requirements, reconstitution of medicinal product, authorisation for pharmacies or licenses for companies making preparations for pharmacies, transparency and safety, communication and information to patients, and distribution of pharmacy-preparations.

Guidelines (manufacturing) structures and procedures, documentation, stressing also the needs to apply where possible international standards (WHO, Pharmaceutical Inspection Convention and Pharmaceutical Inspection Co-operation Scheme (PIC/S), the European Pharmacopoeia. In case a pharmacy-preparation is needed and if applicable, a standard formula should be searched in a national pharmacopoeia or nationally recognised formularies. Active substances and excipients used for the pharmacy-preparations, dosage forms and containers must comply with the relevant chapters and monographs of the European Pharmacopoeia or in absence thereof, of a national pharmacopoeia of a State Party of the Convention on the Elaboration of a European Pharmacopoeia.

The guidelines should be complementary to the current and ongoing works by the European Pharmacopoeia Commission and the European Network on Official Control Laboratories (OMCL) coordinated by the EDQM.

APPENDIX

Questionnaire on quality and safety standards for pharmacy preparations

I. Legal Provisions and Definitions

1. Do your national regulations include requirements for preparations of medicinal products in

- Pharmacies: YES/NO/DO NOT KNOW
 - If yes, please describe requirements (enclose document or web link):
- Other healthcare establishments: YES/NO/DO NOT KNOW
 - If yes, please describe requirements (enclose document or web link):

2. Do your national regulations include the following restrictions

- Preparation is only allowed for an individual patient: YES/NO/DO NOT KNOW
- Preparation of medicinal products in a pharmacy, including preparation on stock, is only permitted if the products are supplied to the patient(s) served by that pharmacy: YES/NO/DO NOT KNOW

Comment:

3. Do your national regulations require a special licence for pharmacies to prepare medical products?
YES/NO/DO NOT KNOW

- If YES: valid for all types of preparations and/or medicinal products? YES/NO/DO NOT KNOW
 - OR restricted to stock preparations : YES/NO/DO NOT KNOW
 - OR restricted to preparations delivered to other pharmacies? YES/NO/DO NOT KNOW
 - OR limited to a maximal quantity? YES/NO/DO NOT KNOW
- Other restrictions?

Comment:

4. Which definitions are used in your country for pharmacy preparations?

- Magistral preparations:

Please describe:

Source (e.g. law, professional standard)

Please enclose document or web link:

- Officinal preparations:

Please describe:

Source (e.g. law, professional standard)

Please enclose document or web link:

- Other types of preparations:

Please describe:

Source (e.g. law, professional standard)

Please enclose document or web link:

5. What types of pharmacies do you have in your country?

- Community pharmacies: YES/NO/DO NOT KNOW
- Hospital pharmacies: YES/NO/DO NOT KNOW
- Community pharmacies, which deliver medicinal products to other pharmacies.
- Hospital pharmacies which deliver medicinal products to other pharmacies
- Other: which

Comments:.....

II. General Safety and Quality Systems

6. Are special authorisations required for pharmacies (other than the 'normal' authorisation of a hospital pharmacy and/or community pharmacy) in your country for the preparation of medicinal products in pharmacies?
YES/NO/DO NOT KNOW

- If yes, please describe:

Note: GMP like, GMP for small quantities, other authorisation types.

7. Are there general safety - and quality standards in your country for Pharmacy preparations:
YES/NO/DO NOT KNOW

- If yes, please describe requirements (enclose document or web link):

8. Are pharmacy preparations subjected to the pharmacovigilance system for medicinal products?
YES/NO/DO NOT KNOW

- If yes, please describe requirements (enclose document or web link):

9. Are there any additional safety and quality standards in your country for pharmacies for

- Preparing larger batches: YES/NO/DO NOT KNOW
 1. if yes, please describe the definition for larger batch in your country:
 2. Is preparation for stock building considered as large(r) batch? YES/NO/DO NOT KNOW
- Delivery to other pharmacies? YES/NO/DO NOT KNOW
- For any other operation linked to pharmacy preparations: YES/NO/DO NOT KNOW
- If yes to any of these 3 questions, please describe source (enclose document or web link):
- Other standards:

10. Do quality and safety standards for pharmacy preparations cover the following topics:

- Quality system: YES/NO/DO NOT KNOW
- Personnel: YES/NO/DO NOT KNOW
- Equipment and premises: YES/NO/DO NOT KNOW
- Documentation: YES/NO/DO NOT KNOW
- Quality control (QC): YES/NO/DO NOT KNOW
- Recalls: YES/NO/DO NOT KNOW
- Justification of therapeutic benefit/risk of the pharmacy preparation link: YES/NO/DO NOT KNOW
- Quality of raw materials: YES/NO/DO NOT KNOW
- Other standards:

If yes, please describe:

Please enclose document or web link:

11. Please answer the following questions concerning the use of raw materials (including packing materials) in pharmacy preparations:

- Do pharmacies have access to raw materials with the required specifications? YES/NO DO NOT KNOW
- Is the performance of identity testing by the receiving pharmacy required? YES/NO DO NOT KNOW
- Is further analysis (e.g. content, purity) required? YES/NO/DO NOT KNOW

If yes, please describe which analyses:

III. Provisions and practices for preparation and delivery (supply) between pharmacies

12. Are medicinal products prepared in pharmacies required to have a marketing authorisation before they are delivered to a patient? YES/NO/DO NOT KNOW

If yes, under which conditions:

- Batch size exceeding a certain quantity YES/NO/DO NOT KNOW
- If yes, which quantity:
- Other:

13. Is the preparation and delivery of pharmacy made medicinal products regulated in your national legislation

- Based on a specific (GMP type) contract between
 - Pharmacies? YES/NO/DO NOT KNOW
 - Pharmacies and companies that are not pharmacies? YES/NO/DO NOT KNOW
 - Pharmacies and companies abroad? YES/NO/DO NOT KNOW
- Without contract between
 - Pharmacies? YES/NO/DO NOT KNOW
 - Pharmacies and companies that are not pharmacies? YES/NO/DO NOT KNOW
 - Pharmacies and companies abroad? YES/NO/DO NOT KNOW
- Other:

Please enclose relevant article of legislation or web link:

14. Is trade in pharmacy preparations between pharmacies regulated in your national legislation?
YES/NO/DO NOT KNOW

If trade is permitted, please describe the conditions:

- License required? YES/NO/DO NOT KNOW
- Fulfilment of quality standards: YES/NO/DO NOT KNOW
- Written agreement between the pharmacies? YES/NO/DO NOT KNOW
- Absence of an equivalent medicinal product with marketing authorisation on the market?
YES/NO/DO NOT KNOW
- Availability upon request of authorities of chemical-pharmaceutical data:
 - Microbiological data for sterile/aseptic preparations? YES/NO/DO NOT KNOW
 - Environmental monitoring? YES/NO/DO NOT KNOW
- Other:
- Are pharmacies permitted to export their pharmacy preparations? YES/NO/DO NOT KNOW

Please enclose all documents or web link (legislation, ordinance, letter, professional standards) relevant for this question:

15. Do you have pharmacies in your country, which trade own pharmacy preparations to other pharmacies?
YES/NO/DO NOT KNOW

If yes, do you think that the number of pharmacies which trade own pharmacy preparations to other pharmacies in your country **over the last 10 years** has INCREASED/DECREASED/DO NOT KNOW.

In your view, what are the main reasons or the change in the number of pharmacies, which trade own preparations to other pharmacies in your country over the last 10 years?

- Level of education of personnel: YES/NO/DO NOT KNOW
- Equipment and premises? YES/NO/DO NOT KNOW
- Compliance of community pharmacies with national quality and safety standards: YES/NO/DO NOT KNOW
- Compliance of hospital pharmacies with national quality and safety standards: YES/NO/DO NOT KNOW
- New regulations (restriction/authorisation of these activities): YES/NO/DO NOT KNOW
- Other:

What is your expectation for the number of pharmacies, which trade own pharmacy preparations to other pharmacies in the next 10 years to come? INCREASED/DECREASED/DO NOT KNOW

Comment:

What is your estimation of the number of pharmacy preparations with a marketing authorisation issued by your national Drug regulatory authority?

- 0-10: YES/NO/DO NOT KNOW
- 10-15: YES/NO/DO NOT KNOW
- 50-100: YES/NO/DO NOT KNOW
- > 100: YES/NO/DO NOT KNOW

IV Quality and safety of pharmacy preparations

16. Do you have data from national control authorities, academic institutions (objective, independent) on the quality and safety of the pharmacy preparations? YES/NO/DO NOT KNOW

Comments:

If yes, do these data point out to specific risks concerning pharmacy preparations?

- Quality system: YES/NO/DO NOT KNOW
- Personnel? YES/NO/DO NOT KNOW
- Equipment and premises: YES/NO/DO NOT KNOW
- Documentation: YES/NO/DO NOT KNOW
- Quality control: YES/NO/DO NOT KNOW
- Recalls: YES/NO/DO NOT KNOW
- Safety: YES/NO/DO NOT KNOW
- Other:

Comments:

17. Do you think that your national authorities could support harmonisation of the quality and safety standards for pharmacy preparations between the states parties of the Convention on the Elaboration of a European Pharmacopoeia? YES/NO/DO NOT KNOW.

Comment:

- Pharmacy preparations: YES/NO/DO NOT KNOW
- If yes, please describe requirements (enclose document or web link):
- Preparation of medicines in other healthcare establishments? YES/NO/DO NOT KNOW
- If yes, please describe requirements (enclose document or web link):