



## **PAINT-Consult®**

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# Statement relating to the

# ePI intended for use in the European Union

(status of discussion: 31<sup>st</sup> of January 2019)

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#### 1 Introduction

The European Medicines Agency (EMA), Heads of Medicines Agencies (HMA) and European Commission (EC) initiated a public consultation on draft key principles, which shall form the basis on how the electronic product information (ePI) for human medicines will be developed and used in the European Union. The intended ePI shall cover the product information (PI) of a medicine in the EU, which includes the package leaflet for patients and the summary of product characteristics (SmPC) for healthcare professionals, as well as the labelling for the outer and inner packaging.

This public consultation comprises:

- the draft key principles document "Electronic product information for human medicines in the EU – draft key principles" (appendix 1) [1] and
- the "Report from an EMA–HMA–EC workshop held on 28 November 2018 Electronic product information for medicines in the EU" (appendix 2) [2]

In the following, we at PAINT-Consult avail of the opportunity to offer our thoughts in relation to the draft key principles on ePI. This is based on our cumulative experiences as a provider of SmPC, labelling, package leaflet and readability test services to the pharmaceutical industry. Furthermore, these comments are borne by our scientific experience in these fields since 1999 and our experience as pharmacists in working with healthcare professionals and patients.

#### 2 PAINT-Consult's thoughts to ePI draft key principles

#### 2.1 General comment to ePI

We at PAINT-Consult agree to the definition of ePI and welcome a common electronic standard for the dissemination of product information about each medicine used in the European Union, in addition to the existing methods. However, we must raise our concern in relation to development of a completely new electronic standard and agree to the concerns voiced by Mr. Bachmann during the EMA–HMA–EC workshop held on 28 November 2018 relating to the expected major difficulties and problem of building a "new cathedral" - a common electronic standard for ePI. It would more effective to use current solutions as much as possible, rather than to reinvent the wheel. The area of IT is hallmarked by the rapid pace of change; thus it seems certain that within a couple of months of commencement of the new ePI EU electronic standard, the intended solution may already be outdated due to incomplete involvement of stakeholders, time consuming procedures from time of call for bids up until

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the completed solution, existing regulatory files not being available in an ePI structure, etc. The pharmaceutical area has already had its share of cost-extensive EU projects with negative outcomes.

Furthermore, private IT business and solution providers could do this significantly quicker, with a focus on existing solutions which could significantly reduce time and costs; therefore, already available open data solutions allowing interoperable work with other e-health systems should be employed wherever possible to achieve the intended goal in a more cost-and time-efficient fashion. For example, see ePI projects already being provided at national level. Moreover, it cannot be assumed that we are confined to just one solution carved in stone for any time.

#### 2.2 Expanding access to information

"Availability of regulator-validated ePI will counterbalance unreliable and spurious claims about medicines ..." would be a welcome feature of ePI; however, this intended new service will be always in competition with unreliable and spurious claims as they cannot be completely eliminated. Furthermore, the EU ePI will be also in competition with product information about the same medicines used in other non-EU countries/areas with same languages, such as USA, Canada, Switzerland, Australia and South America. Product information used in non-EU countries/areas often differs in comparison to EU versions in information covering indications, contraindications, special warnings and side effects. Therefore, the EU must ensure that users of ePI know at all times that this product information is an EU approved version.

Please note, with regard to the draft key principles mentioned in 2.1 under "Implication" to ensure that the most up-to-date ePI version should be always easily available: "To achieve this principle, ePI should be made available through various technologies and applications, including mobile scanning technology (such as a 2D barcode) on the medicine package." The provided example "2D barcode" is misleading and should be changed into "2D code" as this code does not contain any bars.

#### 2.3 Complementing paper package leaflet

We agree that currently ePI shall not supersede or negate the requirement of the pharmaceutical legislation (Article 58 of 202 Directive 2001/83/EC1) to provide a package leaflet in or on the packaging of all medicines.

#### 2.4 Open access to regulator-approved information only

We also agree to: "ePI is intended for the delivery of regulator-approved medicine PI only. The content of ePI should be identical to the latest version of the PI approved by regulatory authorities. ePI will not be used for delivery of promotional information. ePI should always be published as open data, freely accessible for use and reuse."

However, an additional statement must be provided stating that the date of last update must be always provided in conjunction with every product information, to ensure users have the latest version. If users print out the product information or save it in a file, they should have the last update information visible in the document. In case of centralised approved medicines, for example, the date of last update is currently only published on the website of the EMA, but not within the product information files [3].

#### 2.5 Governance (Processes)

We recommend for the short and medium term that ePI be used as is done currently with EU product information - to convert the PI to ePI once the regulatory procedure is completed. Any extension or publishing during the approval procedure should not be discussed before the system works properly and clear agreements exist governing what must/should be published at what stage of the procedure.

#### 2.6 Interoperability with EU and global initiatives

The global harmonisation of product information should be initiated and completed as soon as is possible, in parallel to the creation of the EU ePI electronic standard – to prevent different contents appearing in product information in different areas of the globe for identical medicines.

#### 3 Conclusion

Despite the positive and welcome initiative of introducing EU ePI system, improvements to current package leaflet texts – especially their total volume of text and that caused by the QRD template – have yet to be performed, even though this was outlined as a need in the European Commission report published in March 2017 and in the EMA action plan of November 2017 [4, 5]. The current average volume of text in EU package leaflets is around 2600 words and the QRD template text intended for each EU package leaflet contains already 840 words [6-9]. Since 2012, three readability test studies have been published (in total 1538 participants) establishing that using a 200-word template would significantly improves package leaflets and reduces the volume of text by around 15 % in all EU package

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leaflets, without deleting medical specific information. This alternative version is based on the QRD template, but optimised by avoiding repetitions and long sentences [10-13]. According to the PAINT3 study with 5091 participants and the PAINT1 study with 1105 participants, every decrease in the volume of text leads to a significant:

- increase in patients' motivation to read package leaflets
- decrease in the time required to locate the provided information
- increase in patients' trust in using the medicines [13, 14].

Last but not least, any text compression of current EU product information would noticeably ease and support the use of ePI via modern electronic media, such as tablets and smartphones - a highly important issue that the QRD group of the EMA should use as an inducement to begin implementation of the proposed and scientifically proven shorter template version.

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#### References

- 1 EMA, HMA, European Commission. Electronic product information for human medicines in the EU – draft key principles - 31 January 2019, EMA/849614/2018. https://www.ema.europa.eu/documents/regulatory-procedural-guideline/electronicproduct-information-human-medicines-european-union-draft-key-principles\_en.pdf (accessed July 31, 2019).
- 2 EMA, HMA, European Commission. Electronic product information for medicines in the EU - Report from an EMA–HMA–EC workshop held on 28 November 2018. https://www.ema.europa.eu/documents/report/report-european-medicines-agencyema/heads-medicines-agencies-hma/european-commission-ec-workshop-electronicproduct-information-epi\_en.pdf (accessed July 31, 2019).
- 3 EMA. Medicines Search. https://www.ema.europa.eu/en/medicines. (accessed July 31, 2019).
- 4 European Commission. Report from the Commission to the European Parliament and the Council in accordance with Article 59(4) of Directive 2001/83/EC of the European Parliament and of the Council of 6 November 2001 on the Community code relating to medicinal products for human use.

http://ec.europa.eu/health/sites/health/files/files/documents/2017\_03\_report\_smpcpl\_en.pdf (accessed July 16, 2019)

5 EMA. EMA action plan related to the European Commission's recommendations on product information. http://www.ema.europa.eu/docs/en\_GB/document\_library/Other/2017/11/WC5002383

http://www.ema.europa.eu/docs/en\_GB/document\_library/Other/2017/11/WC500238305 .pdf (accessed July 16, 2019).

- 6 Wolf A, Fuchs J, Schweim H. Implemention of the European QRD template in package leaflets of centralized approved medicines. Therapeutic Innovation & Regulatory Science 2016, 50(1):106-114. https://journals.sagepub.com/doi/abs/10.1177/2168479015620247 (accessed July 16, 2019).
- Fuchs J, Kraft S, Vettermann A, Reiche M. Typographic changes in package leaflets of the European Union based on the example of German versions between 2005 and 2015. Therapeutic Innovation & Regulatory Science 2017, 51(4):431-438. https://journals.sagepub.com/doi/abs/10.1177/2168479017699654?journalCode=dijc (accessed July 31, 2019).
- 8 Wolf A, Fuchs J, Schweim H. QRD template texts intended for package inserts -Development from the first QRD template up to the new draft of July 2012. PharmInd 2012, 74(9):1540-1549. https://www.paintconsult.com/fileadmin/editorial/downloads/publikationen/PAINT-Consult\_QRD\_template\_development.pdf (accessed July 31, 2019).

- EMA. Product information templates; Centralised procedures version 10.1 6/2019; MR/DC/Referral procedures - Rev. 4 - 2/2016. http://www.ema.europa.eu/ema/index.jsp?curl=pages/regulation/document\_listing/document\_listing\_000134.jsp&mid=WC0b01ac0580022c59 (accessed July 31, 2019).
- 10 Fuchs J, Scheunpflug C, Götze E. The influence of the European Union's template on the use of package inserts compared with a shorter model template. PharmInd 2012, 74(1):126-136. https://www.paintconsult.com/fileadmin/editorial/downloads/publikationen/PAINT-Consult\_The\_influence\_QRD\_template\_shorter\_model-template.pdf (accessed July 31, 2019).
- 11 Wolf A, Fuchs J, Schweim H. Readability of the European QRD template The European QRD template version 8 in comparison to its predecessor and a shorter model template. PharmInd 2014, 76(8):1312-1322. https://www.paintconsult.com/fileadmin/editorial/downloads/publikationen/PAINT-Consult\_Readability\_European\_QRD\_Template.pdf (accessed July 31, 2019).
- 12 Fuchs J, Hippius M. Inappropriate dosage instructions in package inserts. Patient Education and Counseling 2007, 67:157-168. https://www.sciencedirect.com/science/article/pii/S0738399107001036 (accessed July 31, 2019).
- 13 Fuchs J. The way forward in package inserts user tests from a CROs perspective. Drug Information Journal 2010; 44(2): 119-29. https://www.paintconsult.com/fileadmin/editorial/downloads/publikationen/PAINT-Consult\_The\_way\_forward\_in\_package\_insert\_user\_tests.pdf (accessed July 31, 2019).
- Fuchs J. Patient information via package inserts within the European Union pages 24 to 26. https://www.paint-consult.com/fileadmin/editorial/downloads/vortraege/PAINT-Consult\_Presentation\_chin\_Deligation\_Bonn\_2010\_engl.pdf (accessed July 31, 2019)

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Appendix 1: The draft key principles document; "Electronic product information for human medicines in the EU – draft key principles"







- 1 31 January 2019
- 2 EMA/849614/2018
- 3 Stakeholders and Communication Division

# Electronic product information for human medicines in the EU – draft key principles

#### 6 A joint EMA-HMA-EC collaboration

Start of public consultation	31 January 2019
End of consultation (deadline for comments)	31 July 2019

#### 7

Comments should be provided using the online form: https://ec.europa.eu/eusurvey/runner/ePI\_Public\_Consultation

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An agency of the European Union

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#### 30 List of abbreviations

- 31 EC European Commission
- 32 EEA European Economic Area
- 33 EHR Electronic health record
- 34 EMA European Medicines Agency
- 35 ePI Electronic product information
- 36 EU European Union
- 37 HCP Healthcare professional
- 38 HMA Heads of Medicines Agencies
- 39 IDMP Identification of Medicinal Products
- 40 ISO International Organization for Standardization
- 41 MAH Marketing authorisation holder
- 42 NCA National competent authority
- 43 PDF Portable document format
- 44 PI Product information
- 45 PL Package leaflet
- 46 SME Micro, small or medium-sized enterprises
- 47 SmPC Summary of product characteristics
- 48 SPOR Substance, product, organisation and referential (EMA implementation of ISO IDMP standards)

49

#### 50 Background

- 51 In the European Union (EU), a medicine's product information (PI), which includes the summary of
- 52 product characteristics (SmPC, intended for healthcare professionals), labelling (outer and inner
- 53 packaging information) and package leaflet (PL, for patients/consumers and generally included as a
- 54 printed copy in the medicines package<sup>1</sup>), is the pivotal source of regulated and scientifically validated
- 55 information that assists healthcare professionals in prescribing and dispensing the medicine and
- 56 informs patients and consumers about its safe use.<sup>2</sup>
- 57 A report from the European Commission (EC) in March 2017, and a subsequent EMA action plan,
- identified areas where the SmPC and PL could be improved to meet the needs of patients and
- 59 healthcare professionals and proposed actions to address these shortcomings. These wide-ranging
- 60 actions relate to enhancing readability, improving patient input in development and testing, promoting
- 61 best practices and developing an electronic format. Throughout 2018, a joint EMA-HMA-EC
- 62 <u>collaboration</u> has worked on the latter: identifying stakeholder needs from a future electronic PI for
- 63 medicines (ePI) and mapping ongoing initiatives in the field to create an overview of the current
- 64 landscape. The electronic format is the most pressing priority out of the actions from a public health
- 65 perspective as it will ensure patients have timely access to up-to-date information and coordination
- among the many initiatives ongoing in the EU. The current scope of this work is all human medicines
- authorised in the EU.
- 68 A workshop held at EMA on 28 November 2018 brought together patients/consumers, healthcare
- 69 professionals, industry stakeholders, academia, not-for-profit organisations and regulators to discuss
- stakeholder needs and concerns, give an overview of the main ePI initiatives ongoing in the EU and
- 71 decide how to move forward with a common approach. The outcome of the workshop is the following
- proposal for 'key principles' on ePI to be released for public consultation. These key principles do not
- represent final guidance from EMA on ePI; they are intended, following the outcome of public
- consultation, to form the basis of follow-up implementation plans for ePI.

75

<sup>&</sup>lt;sup>1</sup> The legal requirement to include the PL in the packaging is laid down in Article 58 of the <u>Directive 2001/83/EC</u> which states: "The inclusion in the packaging of all medicinal products of a package leaflet shall be obligatory unless all the information required by Articles 59 and 62 is directly conveyed on the outer packaging or on the immediate packaging." <sup>2</sup> The content of the SmPC, labelling and PL is described in Articles 11, 54, 55 and 59 of <u>Directive 2001/83/EC</u>.

#### 76 **Draft key principles on ePI in the EU**

- 77 The following key principles are intended, following a period of public consultation, to be agreed by
- 78 EMA, HMA, EC and representatives of patients, consumers, healthcare professionals and the
- pharmaceutical industry. Future work on ePI will progress in alignment with these principles.

#### 80 **1. Definitions**

81 Definitions of 'ePI' and 'common electronic standard' are intended to explain the meaning of these 82 terms as they are used in this initiative.

#### 83 **1.1. ePI**

#### 84 Statement

- 85 The following definition of ePI is proposed:
- 86 ePI is authorised, statutory product information for medicines (i.e. SmPC, PL and labelling<sup>3</sup>) in an
- 87 organised format created using the common EU electronic standard.<sup>4</sup> ePI is adapted for electronic
- 88 handling and allows dissemination via the world wide web, e-platforms and print.

#### 89 Rationale

- 90 There are many different interpretations of 'electronic product information.' Therefore, it is important
- 91 to clarify that for the purposes of this collaboration, ePI refers to a semi-structured format suitable for
- 92 electronic handling. Semi-structured means that ePI contains some structured elements (e.g. fixed
- 93 headings and vocabularies), and some unstructured elements (i.e. free text). Unstructured formats
- such as PDF, Word or other unstructured text are not considered to be ePI because these do not
- 95 deliver the benefits to stakeholders outlined in these principles.
- 96 ePI refers to the structure of the PI and not its content.

#### 97 Implication

- 98 By agreeing on an EU definition of ePI, there will be a harmonised understanding across the EU, which 99 will guide collaborative work to create ePI that meets the definition.
- 100 Implementation of the use of ePI, as described in the definition, will allow delivery of the benefits to
- stakeholders as explained in the key principles 2.1 and 2.2. Such implementation will be carried out in
- accordance with applicable European legislation. The development of ePI will not create new
- requirements with regard to the content of the PI or a new legal obligation to use ePI. In addition, this
- 104 initiative should not be understood to change the interpretation of European legislation.

<sup>&</sup>lt;sup>3</sup> In certain procedures, Annex II of the marketing authorisation (manufacturer(s) responsible for batch release, conditions and requirements of the marketing authorisation, other conditions or restrictions as applicable) is provided electronically together with ePI.

<sup>&</sup>lt;sup>4</sup> See '1.2. Common EU electronic standard.'

#### 105 **1.2.** Common EU electronic standard

#### 106 Statement

- 107 ePI in the EU for all human medicines, including both centrally and nationally authorised medicines, will
- be created using a common electronic standard. The following definition of a common EU electronicstandard for ePI is proposed:
- A common standard for ePI in the EU refers to the technical features (including mark-up language,
- 111 controlled vocabularies and interoperability specifications) agreed by regulators and stakeholders. The
- standard will be used to generate ePI that fulfils the agreed key principles.

#### 113 Rationale

- 114 A common standard is necessary to provide consistent functionality of ePI for all medicines throughout
- the EU. This will reflect the reality of interlinked medicines' regulatory systems among the European
- 116 medicines regulatory network as well as meeting the expectations of patients and healthcare
- 117 professionals who travel and work in several EU countries.
- 118 A common standard enables the generation and dissemination of electronic authorised information for
- 119 patients and consumers of medicines in the EU/EEA. It will not lead to a change in the interpretation of
- 120 applicable European legislation nor will it create new requirements with regard to the content of the PI
- as described in EU legislation.
- 122 The aims of the common standard are:
- to create the technical foundation for the dissemination of trusted information in the electronic
   world, which will allow patients/consumers and healthcare professionals an additional and tailored
   approach on information for medicines according to his/her need and/or wish by using suitable
   (electronic) output forms and platforms;
- to offer possibilities to streamline, simplify and speed up the regulatory process in the creation and
   updating process (variation) of PI by using existing data of the SPOR (substance, product,
   organisation and referential) process, both for regulators and the pharmaceutical industry.
- 130 Agreement of a common standard will avoid a situation where multiple different standards are
- developed and used in different parts of the EU, which would generate unnecessary complexity,
- 132 impede access to information and require multiple interfaces between standards, restricting flow of133 data.

#### 134 Implication

- 135 The first step and pre-requisite for ePI implementation is the agreement of a common standard that 136 fulfils the requirements outlined in the key principles and is compatible with use at centralised and
- 137 national (through national competent authorities [NCA]) levels.
- 138 The common standard will be established considering the available technical features, including those 139 from EU Telematics projects. Further features, such as vocabularies and interoperability specifications 140 yet to be developed, may be added in later releases.

### 141 **2. Benefits for public health**

142 Regulators and stakeholders wish to work towards ePI in the EU because of the benefits this format 143 can offer for public health. While acknowledging that many future applications of ePI cannot currently be predicted, the following principles outline the key benefits which constitute the fundamental reasons underpinning this initiative.

# 146 2.1. Expanding access to information on medicines as a public health 147 imperative

#### 148 Statement

- ePI is a public health priority because it will expand the dissemination of unbiased, up-to-date,regulator-approved PI for all medicines in the EU. ePI will support, among other functions:
- provision of the latest information on a medicine's safety, benefits and its conditions of use;
- better delivery of information so that the right information is available to the right
   patient/consumer at the point of need;
- informed decision-making by patients/consumers and healthcare professionals.

#### 155 Rationale

- 156 Unlike paper PLs contained in medicine packages, which are updated gradually as stocks of medicines
- 157 turn over, it will be possible to rapidly update ePI with the latest authorised information.
- 158 Patients/consumers and healthcare professionals using ePI can be fully confident that they hold the
- 159 latest information about benefits, risks and use.
- 160 In contrast to current PDF and unstructured text formats, ePI will enable wider availability on a range
- 161 of platforms. ePI is thereby expected to increase support to patients/consumers in informed decision-
- 162 making about their treatment and help them to adhere to their medication regimes, ultimately
- 163 contributing to optimal outcomes. ePI should also facilitate patient/consumer-healthcare professional
- 164 interactions and discussions about medicines.
- 165 The structured nature of ePI will offer new opportunities to better tailor product information to the
- 166 needs of individual patients/consumers. Also, because ePI can be handled electronically and read by
- 167 machines, ePI information can flow to other systems, such as electronic health records and
- 168 e-prescribing systems, facilitating targeted delivery of the right information to the right patient/
- 169 consumer at the point of need.
- 170 Availability of regulator-validated ePI will counterbalance unreliable and spurious claims about
- medicines, often widely spread through online and other forums, by giving EU citizens an authoritative
- 172 source of scientific and evidence-based information on medicines.

#### 173 Implication

- 174 EMA and NCAs should work towards ePI to fulfil their mission to protect public health. Implementation 175 will have as a goal the creation of ePI for all authorised human medicines in the EU/EEA.
- ePI will be rapidly and continually updated as soon as changes to the SmPC and PL are authorised bythe regulatory authorities. The most up-to-date ePI version should be always easily available.
- 178 To achieve this principle, ePI should be made available through various technologies and applications,
- including mobile scanning technology (such as a 2D barcode) on the medicine package.<sup>5</sup> Correct ePI
- 180 depends on the medicine batch: some parts of the ePI may be applicable to all batches and some only

<sup>&</sup>lt;sup>5</sup> EMA and CMDh guidance on use of barcodes is available at: <u>https://www.ema.europa.eu/en/human-</u> regulatory/marketing-authorisation/product-information/product-information-reference-documents-guidelines and <u>http://www.hma.eu/90.html</u>

to specific batches (e.g. when excipients change). Therefore the need for the correct ePI to be suppliedfor the medicine batch should be taken into consideration.

#### 183 **2.2.** Accessibility to patients/consumers with diverse abilities

#### 184 Statement

- 185 ePI will facilitate creation of PI that is accessible to everyone, including patients/consumers with print
- 186 impairments such as blind and partially sighted people (e.g. use of large font size) and those with low
- 187 literacy levels (e.g. audible formats). ePI on the web will be accessible to screen readers, convertible to
- 188 large font and amenable to other accessible formats.

#### 189 Rationale

- 190 Current PDF and print copy formats of PI do not well serve all citizens equally, given the wide range ofabilities throughout society.
- 192 In contrast with current PDF and print copy formats of the PI, the availability of ePI will allow third-
- 193 parties, such as companies, not-for-profit organisations or patient/consumer groups, to convert the PI
- 194 into accessible formats.

#### 195 Implication

196 ePI will be accessible by design.

#### **3. Existing legislative framework**

198 Implementation and use of ePI must comply with the legislation in force. These principles underline199 some of the legislation relevant to ePI.

#### 200 **3.1. Complementing paper package leaflet**

#### 201 Statement

- 202 ePI will not supersede or negate the requirement of the pharmaceutical legislation (Article 58 of
- 203 <u>Directive 2001/83/EC<sup>1</sup></u>) to include a PL in the packaging of all medicines or directly convey all
- information required (by Articles 59 and 62 of the Directive) on the outer or immediate packaging.
- Since the current legislation does not require the use of an electronic version of PI, the use of ePI willnot constitute a new legal obligation.

#### 207 Rationale

- 208 The ePI is intended to expand the formats in which PL is available and not to remove or substitute the
- 209 currently available paper format. PLs are a valuable tool presented directly in the medicines package 210 and therefore provided to all patients/consumers when they open their medicine. The paper PL is
- and therefore provided to all patients/consumers when they open their medicine. The paper PL is
- 211 particularly important for patients/consumers with low digital literacy (low ability to use digital devices
- 212 effectively) or limited internet access.

#### 213 Implication

- 214 Generation of ePI does not involve any change to the content of the PI. ePI generation will be
- 215 performed in addition to the current inclusion of the PL in the medicine package. The use of ePI will be
- a recommended innovation; however it is not mandatory.
- 217 The paper PL should include a statement directing to the ePI as the most up-to-date version of the PL.

#### 218 **3.2.** Open access to regulator-approved information only

#### 219 Statement

- 220 ePI is intended for the delivery of regulator-approved medicine PI only. The content of ePI should be
- identical to the latest version of the PI approved by regulatory authorities. ePI will not be used for
- 222 delivery of promotional information.
- 223 ePI should always be published as open data, freely accessible for use and reuse.

#### 224 Rationale

- 225 The development and implementation of ePI will be carried out in accordance with applicable EU
- 226 legislation; therefore the content of ePI will be approved as a result of regulatory procedures currently
- 227 prescribed in the legislation (or as will be amended by any future legislation). Accordingly, no
- additional information either for promotional or other purposes can be included in the ePI.
- 229 The European Interoperability Framework (underlying principle 2: openness) describes the principle of
- 230 openness as the idea that all public data should be freely available for use and reuse by others, unless
- 231 restrictions apply.

#### 232 Implication

- 233 Since, by use of ePI, stakeholders must comply with the applicable EU legislation, which strictly
- regulates the content of PI and excludes any element of a promotional nature, the rights of patients
- and consumers to have access to validated, non-promotional information will be maintained.

#### 236 **3.3. Data protection**

#### 237 Statement

- 238 ePI itself will not include any personal data.
- 239 In any event where processing (e.g. collecting or handling) of personal data may occur in relation to
- 240 the implementation and use of ePI, for example in the context of a mobile application developed for
- 241 the use of patients to access ePI, personal data processing must be in accordance with applicable
- European data protection legislation. This includes, in particular <u>Regulation (EU) 2016/679 (GDPR)</u> and
- 243 <u>Regulation (EU) 2018/1725</u> applicable to EU institutions.

#### 244 **Rationale**

- 245 All parties involved in the development and use of ePI including the members of the European
- 246 medicines regulatory network, MAHs, other companies and healthcare professionals are reminded of
- 247 their obligation to comply with applicable European data protection legislation, which includes
- 248 Regulation (EU) 2016/679 (GDPR) and Regulation (EU) 2018/1725.

#### 249 Implication

- 250 All stakeholders processing personal data in relation to ePI must ensure full compliance with the
- 251 applicable European data protection legislation.

#### 252 **4. Processes**

The following principles relate to the implementation of ePI, including processes, roles and responsibilities.

#### 255 **4.1. Governance**

#### 256 Statement

- It is envisaged that, eventually, ePI format will be used for the PI of all human medicines authorised inthe EU by all EU authorities from the point of submission and throughout the evaluation process.
- However, in the short and medium term, regulatory authorities may decide to implement ePI using a
- 260 step-wise approach: ePI may either be used throughout the assessment, or alternatively, assessment
- 261 may be performed as is done currently, and the PI converted to ePI once the regulatory procedure is 262 complete.
- 263 ePI will be made available to users (patients/consumers and healthcare professionals) through
- 264 websites at EMA level and if available, Member State level.
- 265 ePI data will be made available for use in other e-health systems, such as electronic health records and266 e-prescribing systems.
- 267 ePI will also be available for use by third-parties, who can reproduce ePI and make it available to
- 268 patients and healthcare professionals.

269 Figure 1. Proposed model for ePI process (subject to change following feasibility analysis once ePI 270 project is started). Following regulatory evaluation, if final PI is not already in ePI format, it is 271 converted to ePI by the MAH using a conversion tool. As currently done for the final PI in PDF, the 272 final ePI will be accompanied by a declaration from the MAH confirming that the converted version 273 is identical in content to the one approved (in Word or other format). ePI for both nationally and centrally authorised products (NAPs and CAPs) can be accessed from the European medicines web 274 275 portal (EMWP) and NCA public websites. ePI can be used with systems for e-prescribing (e-Rx) and electronic health records (EHR). Data can be accessed by third-party providers for example, 276 277 for use in patient/consumer apps.



#### 278

#### 279 Rationale

- Currently, the responsibility for creating the final PI files after the content is approved by the regulatorlies with the MAH, and this will also be the case for ePI.
- 282 Where authorities are not using ePI throughout the assessment, conversion to ePI may take place once 283 the evaluation is completed.
- 284 The regulator should hold ePI data, as a trusted source for reliable medicines information. The NCA in
- each country will store and handle ePI in their jurisdiction. In addition, it is envisaged that a pan-
- 286 European medicines web portal could provide a central point for access of ePI for all centrally and
- 287 nationally authorised medicines.

#### 288 Implication

- 289 During implementation, it is anticipated that several scenarios will co-exist in the EU in the short to 290 medium term.
- No ePI: authorisation is performed as is done today and ePI format is not yet generated for the
   authorised medicine;
- Conversion to ePI: authorisation is performed as is done today and once the procedure is
   complete, PI is converted to ePI;
- Submission of ePI: PI is submitted to the authorities in electronic format, evaluated in this format,
   and is therefore already in ePI format once the evaluation procedure is complete.

#### 297 4.2. Flexibility in implementation

#### 298 Statement

All stakeholders, including pharmaceutical companies and regulators, will commit to implementation of

300 the common electronic standard for creation of ePI for all EU medicines. However, it is recognised that

- 301 timelines and processes for implementation should be flexible to allow for variations in resources and
- 302 priorities. A roadmap will be proposed by HMA and EMA to guide implementation.

#### 303 Rationale

The size and complexity of the task of creating ePI for European medicines is such that it is unrealistic to envisage implementation throughout the EU simultaneously.

In addition, handling ePI may be a significant burden for some Member States as well as certain
 companies such as micro, small or medium-sized enterprises (SMEs) and companies producing generic
 medicines.

#### 309 Implication

310 Once a common standard and governance process are established, stakeholders must plan for their

- 311 implementation in their jurisdictions according to a roadmap, including timelines, determined at HMA312 and EMA level.
- 313 Some early-adopter Member States may begin using ePI for their authorised medicines as soon as
- possible, whereas other Member States may have different priorities for implementation. Also, some
- 315 Member States may wish to implement ePI throughout the medicines authorisation process and use it
- 316 as a vehicle for exchanges on the PI with the applicant during the assessment, whereas other Member
- 317 States may wish to have the SmPC, labelling and PL converted to ePI format only once the evaluation
- 318 process has been finalised.
- 319 Support and flexibility for pharmaceutical companies in implementation will also be considered.
- 320 Flexible implementation should also include planning for conversion of existing PIs of authorised
- 321 medicines to the new ePI format. This could be incorporated into post-authorisation procedures.
- 322 Flexibility will allow for divergent mechanisms and timelines for implementation, as these will still
- 323 ultimately allow a harmonised approach for ePI across the EU.

#### 324 **5. EU context**

These principles describe how ePI fits into the multilingual EU environment and interacts with other ongoing initiatives.

#### 327 **5.1. Multilingual ePI**

#### 328 Statement

ePI should support all official EU languages and Icelandic and Norwegian so that EU citizens will beable to read ePI in their preferred language when authorised ePI in that language is available.

#### 331 Rationale

- 332 The PI for a centrally authorised medicine is available in all official EU languages (plus Norwegian and
- 333 Icelandic) and the PI for a nationally authorised medicine is available in one or more official
- language(s) of the Member State where the medicine is placed on the market.
- National authorities decide in which official language(s) PI will be provided in their countries for nationally authorised products.
- ePI should also be possible in these languages, as applicable. Availability of ePI in patients'/consumers'
  and healthcare professionals' own language, where available, facilitates full understanding.
- PI may be needed in non-EU languages in some Member States. National authorities are responsiblefor additional non-EU languages and these are not currently in the scope of the ePI initiative.

#### 341 Implication

ePI design and implementation must, from the start, ensure capability to provide PI in all official EUlanguages as well as Icelandic and Norwegian.

#### 344 **5.2.** Interoperability with EU and global initiatives

#### 345 Statement

- ePI will interface and interact with many ongoing and foreseen eHealth initiatives. eHealth and related
   services should work together, within and across organisations or domains. ePI interoperability with
- 348 cross-border prescription, electronic health records, the future European medicines web portal,
- pharmacovigilance systems, SPOR data management services, a future European common data model
- and national ePI systems must be considered in the design of EU ePI. Use of ePI in both an EU and
- 351 global context should also be taken into account.

#### 352 Rationale

- 353 This collaboration takes place in the context of today's ongoing digital transformation of healthcare.
- Digital tools and services such as electronic health records, e-prescribing, mobile platforms and
- 355 wearables gather data and disseminate knowledge, yet maximising the benefits of digital technologies
- to public health will depend on ensuring the flow of data through interconnected health systems to
- deliver point-of-need access to the information that matters to patients/consumers and healthcareprofessionals.
- 359 The EC eHealth policy anticipates that 'person-centred approaches' can ensure improved patient well-360 being and quality of care and contribute to sustainable health systems. Patients/consumers and
- being and quality of care and contribute to sustainable health systems. Patients/consumers and healthcare professionals need information from the PI at various points in the treatment journey,
- 362 including information on use and administration of the medicine, how to recognise possible side effects
- 363 and how to act in the light of new safety data. Interoperability will ensure that this information can be
- delivered to patients/consumers at the point of need through interaction of the ePI with electronic
- 365 health records and e-prescriptions.
- 366 The European Interoperability Framework recommends (recommendation 9) ensuring data portability,
- 367 namely that data is easily transferable between systems and applications supporting the
- 368 implementation and evolution of European public services without unjustified restrictions, in
- accordance with the legal framework.

#### 370 Implication

- ePI will be interoperable by design with eHealth initiatives and EU Telematics projects, and will
- 372 consider national infrastructures and global health standards.

Appendix 2: Report from an EMA–HMA–EC workshop held on 28 November 2018 -Electronic product information for medicines in the EU







# Electronic product information for medicines in the EU

Report from an EMA–HMA–EC workshop held on 28 November 2018



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# ePI chronology

This initiative explores the generation of electronic product information (ePI) for European Union (EU) human medicines. A medicine's product information provides regulator-verified, science-based information to patients and healthcare professionals (HCPs). Provision of this information in an electronic, machine-readable format would be expected to facilitate its dissemination and use. The chronology of events to date is provided below.

#### March 2017

 The European Commission (EC) publishes its <u>report</u> on current shortcomings in the summary of product characteristics (SmPC) and the package leaflet (PL) and how they could be improved in order to better meet the needs of patients and HCPs.

#### July 2018

 The Heads of Medicines Agencies (HMA) and representatives from national competent authorities (NCAs), the pharmaceutical industry, and patient and HCP organisations meet in Madrid to gather key stakeholders' views on ePI.

#### October 2018

 Virtual group discussions are held by representatives from the pharmaceutical industry's Inter-Association Task Force (IATF) and the NCAs of France, Iceland, the Netherlands, Norway and Spain to draft <u>features and use cases</u> for a common standard for ePI.

#### January 2019

 A report, video and presentations from the workshop are published. The main output of the workshop, the document 'Electronic Product Information for Human Medicines in the EU – Draft Key Principles', is released for a <u>6 month public consultation</u>.

#### November 2017

- The European Medicines Agency (EMA) publishes an <u>action plan</u> detailing the actions needed to meet the objectives set out in the EC report. One of the actions is to explore how ePI could facilitate access of EU citizens to the information in the PL and SmPC.
- EMA launches a <u>survey</u> seeking information from stakeholders in order to map ePI initiatives underway in the EU.

#### September 2018

EMA's Patients' and Consumers' Working Party (PCWP) and Healthcare Professionals' Working Party (HCPWP) are updated on ongoing work and draft key principles for ePI in the EU are discussed at their <u>September meeting</u>.

#### November 2018

- The draft key principles for ePI are discussed at a meeting of the Coordination Group for Mutual Recognition and Decentralised Procedures -Human (CMDh).
- <u>EMA-HMA-EC workshop</u> on ePI takes place at EMA's premises in London on 28 November.
   A diverse group of stakeholders, including patients, HCPs, academics, not-for-profit organisations and pharmaceutical-industry representatives attend the workshop.





# Setting the scene — Why ePI?

The workshop was divided into 3 sessions, the first focusing on the needs of stakeholders and the reasons why ePI should be implemented, the second on the current landscape of ePI projects taking place in the EU and the third on discussion of key principles that will guide implementation of an EU ePI.

The workshop opened with a video message from Vytenis Andriukaitis, European Commissioner for Health and Food Safety. In his message, Commissioner Andriukaitis outlined the tangible benefits offered by ePI in the digital health environment, stating that the ultimate goal was to develop a common, global standard for ePI. This was followed by a talk from Kristina Kurgonaité and Patrizia Tosetti from the EC (DG SANTE) laying out how ePI fits into the wider EU context of digital transformation of healthcare. Digitalisation is a priority in the EU. The 2015 Digital Single Market Strategy and 2018 Communication on Digital Health and Care defined the EU pillars of digital healthcare:

- Secure access by citizens to their health data
- Data sharing for research and better health outcomes
- Empowering citizens with patient-centred care

The importance of empowering patients was also raised by <u>Fakhredin Sayed Tabatabaei</u> from the Dutch NCA (Medicines Evaluation Board, MEB). The current scenario, where PI for medicines is released in an unstructured Portable Data Format (PDF), does not facilitate optimal dissemination to patients, HCPs and other stakeholders. Dr Tabatabaei emphasised the difference between ePI generation and downstream dissemination. He also proposed focusing on creation of an EU common standard for harmonised, structured PI, which could be implemented initially by a pioneer group of Member States followed by full implementation across the EU.

For patients, ePI offers many opportunities for improving the availability, accessibility, portability and presentation of up-to-date PI, according to <u>Kaisa Immonen</u> (European Patients' Forum, EPF). Nevertheless, citizens with limited computer and internet access should have equal access to PI and the content should be available from a trusted, regulator-verified source. In addition to use of digital technologies, Ms Immonen stressed that the content of the PL needs improvement, taking into account knowledge on health literacy and communication of benefits and risks.

Sine Jensen (The European Consumer Organisation, BEUC) expanded on ways to improve the layout and content of patient information. She questioned whether there is sufficient evidence that digital technology improves access to medicines' PI and spoke about the risk of creating health inequalities, whereby some patients may not be able to access electronic information. Ms Jensen emphasised that there should be a focus on the needs of elderly patients. She also underlined the necessity of ensuring ePI is regulator-approved, of high quality, and unbiased.

From the pharmacists' viewpoint, ePI offers opportunities to support patients accessing neutral, objective information at home, complementing the paper PL, and also HCPs accessing information from SmPCs integrated within pharmacy dispensing software. <u>Darragh O'Loughlin</u> (Pharmaceutical Group of the European Union, PGEU) presented real-world examples of ePI, pharmacy dispensing software alerts and relevant linking to risk-minimisation information.

#### Gesine Bejeuhr (IATF), representing the

pharmaceutical industry task force on ePI, said that ePI could lead to better health outcomes by increasing patient knowledge of how to take their medicines and their ability to ask questions and understand their treatment. Current infrastructures, interoperability with other EU telematics projects and technical requirements must be considered to ensure successful implementation of ePI and its sustainability. A multistakeholder approach to development of ePI will harness the strengths of all groups.

#### Highlights

- ePI has the potential to address patient and HCP needs for accessible, relevant information on medicines at the right time during treatment.
- A multi-stakeholder, EU-wide approach and a common EU standard for ePI is envisioned.
- Implementation of ePI should not lead to health inequalities among citizens with limited access to computers or the internet.
- ePI information should be regulator-approved, unbiased and non-promotional.





# Current landscape — How does ePI fit in with other initiatives?

EMA has carried out a mapping exercise of current ePI initiatives in the EU and internationally, and the results were presented by Rosa González-Quevedo (EMA) (see page <u>13</u>). In Spain, the NCA has an established system of ePI. César Hernández García (Spanish Agency for Medicines and Health Products, AEMPS) explained how it began as a pilot involving 3 marketing authorisation holders (MAHs) in 2015 and today ePI is available for 85% of Spain's nationally authorised medicines. An electronic tool is used for interaction on the ePI between the company and AEMPS during the assessment procedure. The output is semi-structured ePI that offers benefits such as easy navigation, personalisation, links to video and images, accessibility and cross referencing. Creation of an easy, common EU standard is the key starting point to implementing such a system at EU level.

In Norway, the NCA collaborates with a third party, the Norwegian Pharmaceutical Compendium (Felleskatalogen), which provides regulator-validated ePI. <u>Vibeke Åbyholm</u> (Norwegian Medicines Agency, NOMA) explained that long, difficult-to-navigate PDF documents are not used by HCPs and that ePI provides the information that patients and HCPs need.

At the Swedish NCA, a multidisciplinary team is currently exploring the use of ePI and is consulting with stakeholders, as described by <u>Kim Sherwood</u> (Swedish Medical Products Agency, MPA). Sweden also has a well-established, third-party provider of ePI called Fass, which collaborates with MPA. MPA is looking into the creation of a tool for using ePI during assessment. In this way, MPA could increase efficiency of regulatory procedures and reduce the risk of errors, as well as improve delivery of information to patients. Its stakeholders have also requested a single source where information on both centrally and nationally authorised medicines can be found. The work of Fass, one of the oldest providers of electronic medicine information in Sweden and Europe, was described in more detail by <u>Gunilla</u> <u>Englund</u> (Swedish Association of the Pharmaceutical Industry, LIF). Fass is provided by the Swedish Association of the Pharmaceutical Industry, which represents over 200 companies. ePI from Fass is used equally by patients and HCPs; its content has evolved from unstructured online content to today's machinereadable data.

Another well-established third-party provider of ePI is the electronic Medicines Compendium (eMC) in the United Kingdom. John Moreland from eMC explained the process for uploading PI by pharmaceutical companies, converting it to an ePI format, and delivering it to the eMC website, health technology companies and other systems. eMC works with the Royal National Institute of Blind People to provide accessible versions of the PI such as audio, Braille and large-font formats, and is looking into versions for `smart' devices for the future.

The next speakers in the session described ongoing ePI pilot studies looking at the use of ePI in reallife settings. The ePIL pilot project underway in Belgium and Luxembourg is being carried out by pharmaceutical industry associations in those countries in collaboration with the NCAs and hospital pharmacists. The project, presented by Nathalie Lambot (Belgian association for pharmaceutical industry, AGIM-AVGI), focuses on medicines used only in hospitals. During the two-year project, which has been running since August 2018, paper PLs are not included in the packages of the medicines in the project, but instead made available on trusted websites (as PDF or Hypertext Markup Language [HTML] formats). The aim is to determine whether the electronic PL is equivalent to the paper PL in providing

the information on medicines needed by patients and HCPs in this setting.

Georg Lang (Gebrauchsinformation 4.0 consortium, Germany) spoke about a pilot in Germany, which is being run as a proof-of-concept project by the IATF in collaboration with multiple stakeholders including the German NCAs (Federal Institute for Drugs and Medical Devices, BfArM and Paul Ehrlich Institute, PEI), patient organisations and a German third-party ePI provider, Rote Liste Service GmbH. Approved PI is converted to electronic format (XML) and provided to patients via an app, website or print-out and to pharmacists via pharmacy software. The project has had a successful evaluation by stakeholders and is now being extended to develop additional functionalities. The final speaker of the session was <u>Giovanna Ferrari</u> (European Federation of Pharmaceutical Industries and Associations, EFPIA) who introduced a research initiative in the field of digitalisation of healthcare being prepared by an industry group. The group is a proposing a public–private partnership to conduct research to understand how the specific application of digital technologies to health and product information can support all patients and citizens in the management of their health and care. The project envisages a digital solution linking health records, personalised treatment guidance and educational materials on medicines and health, including ePI. A proposal is currently being drafted.

#### Highlights

- ePI is already being provided at national level by NCAs and third-party companies. However, work is being done in separate initiatives and there is a lack of EU-level harmonisation.
- ePI delivers benefits including easier access and navigation, personalisation, and efficiencies in regulatory processes.
- Ongoing pilots will provide more evidence about acceptability of ePI to patient and HCPs.
- Future research is planned that will include placing ePI in the wider digital healthcare environment.



# Towards an EU ePI

The third session of the workshop opened with a summary, presented by <u>Elizabeth Scanlan</u> (EMA), of the work of a 'virtual discussion group', which had worked in the months prior to the workshop to develop a list of features and use cases that a future EU common standard for ePI could support (see Annex 1, page <u>8</u>). The virtual discussion group comprised of NCA representative from the HMA working group on Support for Better Use of Medicines from France, Iceland, the Netherlands, Norway, and Spain, and representatives of the IATF industry task force from AESGP (Association of the European Self-Medication Industry), Medicines for Europe and EFPIA.

The remainder of the session included a description by Juan Garcia Burgos (EMA) of the analysis of the data gathered throughout 2018, which was the basis for drafting the key principles on EU ePI. This analysis involved reviewing the ePI mapping (see page <u>13</u>) together with feedback gathered in meetings and stakeholder consultation throughout 2018 (see page <u>2</u>). Key themes emerging from this analysis were the basis for the draft key principles on ePI.

An open discussion took place among the workshop participants, looking at each key principle in turn.

# **Next steps**

The key principles on ePI in the EU, which were updated following discussion during the workshop, have been <u>released for a 6 month public consultation</u>. Stakeholders and members of the public are invited to submit comments via an <u>online form</u> by 31 July 2019. Following the consultation, a final version will be proposed for agreement by EMA, HMA and EC, as well as representatives of patients, consumers and HCPs including PCWP and HCPWP and representatives of the pharmaceutical industry, including IATF.

A roadmap for ePI and next steps will be communicated to EMA stakeholders and via the EMA website.

# Annex 1. Outcome of virtual discussion group

This list of features and use cases was compiled by the virtual discussion group (see page  $\underline{Z}$ ). They have not been ranked in terms of priority, nor are they intended to be exhaustive. The purpose of compiling them was to kick off the process of documenting requirements, which would be the first step in the implementation of ePI.

### **Features**

Features have been divided into 3 categories:

- those relating to ePI data;
- those relating to ePI user experience;
- potential future functionalities that could be added on to ePI once it is established.

Brief descriptions are provided below.

#### ePI data

• **Open data that can be reused in other tools** ePI data should be freely available for use and reuse so that they become a resource for third parties, such as researchers, developers, organisations and businesses, as well as authorities outside the EU.

#### • SPOR (ISO IDMP) terminologies instead of free text where appropriate

SPOR (substance, product, organisation and referential) refers to the EMA programme to implement ISO IDMP (International Organization for Standardization — Identification of Medicinal Products) standards for description of medicines. Standard terminologies from SPOR have started to be required for regulatory submissions, and these requirements will expand to other areas in the future. It is therefore logical to also include those terminologies in ePI where relevant.

#### • ePI throughout assessment

Some NCAs would like to implement a 'digital first' approach where ePI is used throughout the regulatory assessment, thus avoiding conversion between formats. This possibility should be catered for in the design of an ePI standard.

#### • Interoperable with e-health systems

To deliver benefits to patients and HCPs, ePI should be designed to work with other health systems. There are numerous electronic health systems where interoperability with ePI could be beneficial including e-prescribing and dispensing, electronic health records, cross-border healthcare, clinical decision support systems and computerised physician order entry systems.

#### • Linked from medicine package

ePI should be accessible directly from the medicine package, for example by scanning a barcode on the package.

#### • Batch-specific ePI

Some changes to a medicine, such as a change to an excipient, could mean that a different ePI would be valid for different batches of a medicine. For example, older batches of a medicine that are still 'on the shelf' could have a different ePI to newer batches being released from the manufacturer. Therefore, it should be possible to link each medicine package in a particular batch to the correct, batch-specific ePI.

#### • History of PI updates

ePI should support versioning, meaning that it should be possible to access historical versions of the ePI and note the changes that have taken place over time.

#### • Data security

ePI content should be secure and protected against unauthorised changes.

#### • Data privacy

Any use of ePI involving collection of personal data should comply with data protection legislation to ensure that patient privacy is upheld and that this is done legally.

#### **User experience**

#### • Multimedia integration

ePI should be able to incorporate multimedia content, such as videos (e.g. on how to administer a medicine) or photos (e.g. images of tablets or capsules).

#### • Accessibility

ePI should be accessible, meaning that it should be provided in a way that people with limited ability to view or use the content can still access the information. These include, for example, users who have difficulty reading the information they need due to visual or other impairments or those who cannot use a paper format.

#### • Layering and relevant links

ePI should include links to additional relevant information, such as educational material, and allow users to access more technical information (e.g. scientific assessment reports) if they wish.

#### • Multilingual content

ePI should support PI in the official EU languages so that users from the EU can access the ePI in their chosen language, if an authorised PI is available in that language.

#### User-friendly navigation and search

ePI should support use via interfaces that allow easy search and navigation of all EU medicines.

#### • Personalisation

ePI should enable interfaces with functionalities such as setting up of alerts to inform the user about updates or recalls and saving 'my medicines' or previous searches.

#### **Potential future functionalities**

• Regulatory efficiency

ePI could help to increase the efficiency of regulatory processes, for example by simplifying user testing of PLs.

- **Dosing apps and alerts** ePI could be used in apps that help patients manage their own treatment and ensure they follow their dosage regimen correctly.
- **Reporting of adverse effects and real-world data collection** ePI could facilitate collection of real-world data, including direct reporting of side effects by patients and HCPs.

# **Use cases**

Use cases describe scenarios where users interact with ePI. The use cases given as examples below are grouped by the type of user or 'actor'. However, most use cases apply to more than one user group.

Actor	Use case
Patient	Reminder of how to administer medicine
	• Step 1. Patient has ePI for an asthma medicine in her phone app
	• <b>Step 2.</b> She wants a reminder of how to take the medicine
	• <b>Step 3.</b> She goes to 'How to take your medicine' where she can view and download a video showing how to administer the medicine
	Safety alert
	• Step 1. Patient has ePI for a medicine in her phone app
	• <b>Step 2.</b> She receives an alert when there is new safety information in ePI
	Layered information
	• Step 1. Patient goes to ePI of a medicine she is prescribed
	• Step 2. She can link to educational material, lay overviews and more technical material
	Accessing PI abroad
	• Step 1. Patient is prescribed a medicine while travelling/working abroad
	• <b>Step 2.</b> She scans the package barcode with her phone to access ePI
	• <b>Step 3.</b> As the medicine is authorised in several countries, ePI is available in several languages. She is offered the language options for ePI and chooses her preferred language

#### Actor

#### Use case

#### Patient and/or HCP



#### Planning pregnancy

- **Step 1.** Patient is planning pregnancy
- **Step 2.** Patient/HCP searches ePI of all patient medicines for recommendations in pregnancy (4.6 Fertility, pregnancy and lactation)
- Step 3. Patient/HCP plans treatment during pregnancy taking account of ePI

#### Seeking lactose free medicine

- Step 1. Patient is lactose intolerant
- Step 2. Patient/HCP searches ePI of potential medicines that contain lactose
- **Step 3.** Patient/HCP chooses from non-lactose containing treatment options

#### Seeking over-the-counter medicine without a specific side effect

- **Step 1.** Patient seeks over-the-counter hay fever medicine that does not cause drowsiness
- **Step 2.** Patient/HCP searches ePI of all hay fever medicines that do not list side effect drowsiness
- Step 3. Patient chooses treatment that does not cause unwanted side effect

#### Action after forgetting to take medicine

- **Step 1.** Patient taking multiple medicines and managing daily usage with a pill box forgets to take their medicines in the morning
- **Step 2.** Patient/carer searches ePI of the patient's medicines selecting PL section 'If you forget to take...' Patient can also identify each medicine tablet using image in the ePI
- Step 3. Patient follows advice in PL for each medicine

Actor	Use case
НСР	Informing patient of change to PI
	<ul> <li>Step 1. HCP checks renewal of prescription for medicine for patient with chronic condition</li> <li>Step 2. Prescribing system highlights new information in ePI</li> <li>Step 3. HCP renews prescription and makes contact with patient to inform of change to ePI</li> </ul>

#### Actor

#### Use case

#### Regulator and MAH

#### **Changing MAH address**

- Step 1. Address of MAH changes
- **Step 2.** MAH informs regulator and changes ePI data; change is automatically implemented in all affected PI annexes

#### New warning for originator medicine

- **Step 1.** MAH of originator medicine submits variation to 4.4 Special warnings and precautions for use
- **Step 2.** MAH changes ePI data; change is automatically implemented/flagged for updating in all affected PI annexes of originator and generics

#### New side effect for active substance

- **Step 1.** Article 31 referral introduces an "Undesirable effect" for all medicines containing same active substance
- **Step 2.** MAHs change ePI data; change is automatically implemented/flagged for updating in all affected PI annexes of medicines with that active substance

#### **Medicine shortage**

- Step 1. MAH informs regulator about shortage of a medicine
- **Step 2.** Regulator searches ePI of all EU medicines for potential alternatives to prepare a shortage management plan and possible importation from another Member State
- Step 3. Patient is informed of shortage and measures to ensure supply

# Annex 2. ePI mapping

To obtain an overview of ongoing EU initiatives on ePI, EMA carried out a mapping exercise using the results of a survey sent to stakeholders. Results of the mapping exercise informed the organisation of the November 2018 workshop and the development of the key principles on ePI.

# Methodology

In November 2017, EMA informed its stakeholders in the EU that it was seeking information on ePI-related projects that they were involved in or aware of. An online survey, which ran until February 2018, was used to gather this information. Users could also send information on these projects to EMA by e-mail.

EMA then performed a quantitative textual analysis of the responses that described ongoing ePI projects. This was achieved by creating short, standardised summaries of each project, and categorising them according to the following criteria:

- stakeholder group running the project;
- content covered (PL/SmPC/Summaries);
- target audience for the ePI initiative;
- type of electronic platform;
- geographical location;
- sector (public or private);
- project phase (planning/ongoing/pilot/established);
- inclusion of accessibility aspects;
- type of standard used;
- collaboration (yes/no);
- multilingualism (yes/no).

Responses describing projects that aimed to improve the content of the PI were excluded from this analysis. Future work planned in the improvement of the content of the PI is foreseen in the EMA action plan.

To gather information from other parts of the world, EMA also sent surveys to the medicines regulatory authorities in countries outside Europe, including Australia, Canada, Japan, Switzerland, and the United States, as well as to International Conference on Harmonisation (ICH) members and observers.

# **Results from EU survey**

There were 81 responses to the survey. Of these, 38 described ePI-related projects at various stages of development, with 14 being 'established'.

Twenty-three of the projects targeted patients/consumers and HCPs, and involved both the SmPC and PL. The 12 projects targeting patients/consumers focused on the PL.

Most projects used websites to provide ePI, with mobile formats and apps used in 12 projects. Videos were planned for 5 of the projects and 5 projects aimed to use quick response (QR) codes.

Accessibility of ePI for people with impairments or low health literacy was a feature of 14 projects; formats included video, audio, visual images, integrated dictionaries of medical terms, font-size adjustment, Braille and screen-readers.

Electronic standards were not described in detail by any of the respondents: XML was the only mark-up language mentioned.

Although all established projects were located within the EU, none of these projects involved PI in more than one language.

Two collaborative pilot studies involving multiple stakeholder types were described: the Belgium/Luxembourg ePIL project and the Gebrauchsinformation 4.0 project in Germany (see also pages 5 and 6).

#### **Responses from patient/consumer and HCP organisations**

No organisations representing patients/consumers that responded to the survey were running ePI projects, but they did provide comments and opinions on the development and use of ePI.

Among organisations representing HCPs, the General Pharmaceutical Council of Spain described its 'Medicamento Accessible PLUS' app that provides ePI for patients who have difficulty accessing paper PLs. The app provides electronic and audio PLs and was developed in collaboration with the ONCE foundation for blind and visually impaired people and with the Vodafone Spain Foundation. Pharmacist organisations are highly engaged with digital solutions: PGEU, representing EU pharmacists, submitted a statement on eHealth Solutions in European community pharmacies, with recommendations for consideration in development of eHealth solutions; and the Royal Dutch Pharmacists Association (KNMP) described its online resources for pharmacists and patients, including specific groups such as those with low literacy levels and children.

#### **Responses from NCAs**

Nineteen NCAs responded to the survey: Belgium, Bulgaria, Croatia, Denmark, Estonia, France, Germany, Hungary, Iceland, Ireland, Italy, Latvia, Malta, the Netherlands, Norway, Romania, Spain, Sweden and the United Kingdom (UK).

Spain is the only NCA that has implemented ePI for its nationally authorised medicines. ePI is used throughout the assessment process and is easily navigable for patients and HCPs on the CIMA website (see page <u>5</u>). In France, the PI for nationally authorised medicines is presented in HTML format on the ANSM website, although this is not based on a structured ePI template.

In general, NCAs acknowledge the opportunities afforded by digital formats. Projects on ePI are already underway in Belgium, Germany, the Netherlands, Norway and Sweden.

Well-established third-party companies or pharmaceutical industry associations provide ePI, often in collaboration with NCAs, in countries including Denmark (Indlægssedler), Finland (Lääkeinfo), Germany (Rote Liste), Ireland (Irish Pharmaceutical Healthcare Association), Norway (Felleskatalogen), Sweden (Fass) and the UK (eMC).

#### **Responses from the pharmaceutical industry**

A large proportion of the pharmaceutical industry is represented by the IATF, which is a joint task force of the pharmaceutical industry associations Medicines for Europe, EFPIA and AESGP. IATF is involved in the pilot project Gebrauchsinformation 4.0 (page <u>6</u>). A second pilot project being run by pharmaceutical industry associations in Belgium and Luxembourg is also underway (page <u>5</u>).

#### **Responses from other stakeholders**

Survey respondents also included academic researchers involved in projects on PI content, a submission from the medical press (Prescrire), consultants and companies developing e-health solutions.

# **Results from international mapping**

Survey replies received from 14 authorities and analysis of regulators' websites revealed that:

- most countries currently provide PI in PDF format, such as Japan, and acknowledge the need for ePI. Some, such as Canada, are planning transition to electronic formats;
- Switzerland provides PI in HTML format on the Swissmedic website in German, French and Italian;
- the United States implemented ePI in 2005 and use an electronic standard called Structured Product Labeling (SPL). ePI can be accessed on the DailyMed website;
- the Bill and Melinda Gates Foundation is considering a future project to explore the use of electronic PL instead of paper package leaflets in low-income countries.



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