



# eHealth Solutions and Pharmacy

PCNE Policy Recommendations for Implementation

10th PCNE Working Conference  
**Pharm.Care@BLED** 2017

**Workshop |**  
*Exploring the impact of eHealth  
on pharmaceutical care*



# eHealth Solutions and Pharmacy:

## PCNE Policy Recommendations for Implementation



## Introduction

### *eHealth*

eHealth has been defined in several ways<sup>1</sup> and several EU and global Institutions have also provided definitions.

The WHO defines eHealth as “*eHealth is the use of information and communication technologies (ICT) for health. Examples include treating patients, conducting research, educating the health workforce, tracking diseases and monitoring public health*”<sup>2</sup>.

The European Commission defines eHealth as “*eHealth is the use of ICT in health products, services and processes combined with organizational change in healthcare systems and new skills, in order to improve health of citizens, efficiency and productivity in healthcare delivery, and the economic and social value of health. eHealth covers the interaction between patients and health-service providers, institution-to-institution transmission of data, or peer-to-peer communication between patients and/or health professionals*”<sup>3</sup>

<sup>1</sup> Oh H., Rizo C., Enkin M. and Jadad A. What Is eHealth (3):A Systematic Review of Published Definitions. *Med Internet Res* 2005;7(1):e1 doi:10.2196/jmir.7.1.e1

<sup>2</sup> WHO 2012 <http://www.who.int/topics/ehealth/en/>

<sup>3</sup> European Commission 2012 <https://ec.europa.eu/digital-single-market/en/news/ehealth-action-plan-2012-2020-innovative-healthcare-21st-century>

Regarding this report and the workshop activity which produced it, the understanding of eHealth is considered to be broad, encompassing and includes elements of several definitions. In essence, eHealth is understood to include any form of ICT solution which supports pharmacy practice (including pharmaceutical care), health and wellbeing.

### **Pharmaceutical Care**

Pharmaceutical Care has been defined by the PCNE as *“the pharmacist’s contribution to the care of individuals in order to optimize medicines use and improve health outcomes”*<sup>4,5</sup>

### **Methodology**

It was with these two topics in mind that a working group on eHealth and Pharmacy was convened during the 2017 PCNE Working Conference in Bled, Slovenia. Within this working group, a focus group on the topic of “policy recommendations for implementation” was held with the aim of producing recommendations to facilitate the implementation of policies and practices supporting eHealth solutions relevant to pharmacy practice. The focus group met over several days to discuss the barriers and facilitators to policy recommendation implementation based on the model suggested by Fretheim et al (“SUPPORT TOOLS”)<sup>6</sup> for evidence informed policy making.

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<sup>4</sup> PCNE 2013 [http://www.pcne.org/upload/files/3\\_PCNE\\_Definition\\_Position\\_Paper\\_final.pdf](http://www.pcne.org/upload/files/3_PCNE_Definition_Position_Paper_final.pdf)

<sup>5</sup> Allemann, Samuel S., et al. "Pharmaceutical care: the PCNE definition 2013." *International journal of clinical pharmacy* 36.3 (2014): 544-555

<sup>6</sup> Fretheim A., Munabi-Babigumira S., Oxman AD., Lavis JN. Lewin S. SUPPORT Tools for Evidence-informed Policymaking in health 6: Using research evidence to address how an option will be implemented. *Health Research Policy and Systems*. 2009;7(Suppl 1):S6. DOI: 10.1186/1478-4505-7-S1-S6



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## Background

Following initial discussion and brainstorming during the working group, it came to light that the Pharmaceutical Group of the European Union (PGEU)<sup>7</sup> recently published an updated statement on eHealth<sup>8</sup> in the Pharmacy. This paper describes eHealth developments in European community pharmacies and outlines the main benefits that these innovations can provide to patients, pharmacists, other health professionals and health system payers alike, as well as making several recommendations to address the barriers to the implementation and use of eHealth initiatives. An annex provides detailed descriptions of 25 different eHealth solutions pharmacists are currently providing across 14 countries in Europe. The focus group reached consensus that this paper is relevant for the aims and objectives of the workshop. As such, it was agreed to utilise this resource as a basis for further development of the focus group's work and to build on the existing PGEU review of policy, research and practice to identify key recommendations to facilitate implementation in the future.

### *Box 1: PGEU eHealth Statement Recommendations 2016*

PGEU's recommendations are as follows:

1. Policy makers, ICT developers and other healthcare professionals should engage with pharmacists as experienced users to develop eHealth policies and services at local, regional or national levels as appropriate;
2. eHealth should be integrated into health systems complementing and supporting existing practice, with pharmacy potentially as a link between several services, organisations and infrastructures;

<sup>7</sup> PGEU is the association representing 400.000 pharmacists from 32 European countries. [www.pgeu.eu](http://www.pgeu.eu)

<sup>8</sup> PGEU 2016 <http://pgeu.eu/en/policy/9:e-health.html>

3. Electronic health records should be linked with ePrescribing systems, thus allowing healthcare professionals involved in patient care to access necessary patient information from the electronic health record. There also should be a facility to update the electronic health record with relevant information when necessary, in order to increase the capacity to identify and address potential medication and patient safety-related issues;
4. Communication and collaboration between patients, healthcare professionals and ICT developers is crucial to obtain the full potential of eHealth technologies and to build confidence and trust. When developing guidelines for eHealth, policy makers are called upon to meaningfully involve their end users;
5. The community pharmacy profession should be recognised, supported and adequately reimbursed for their continuous investment in eHealth, ICT infrastructure, eSkills of the workforce and contribution to improved health outcomes and reduced healthcare costs.

## Results

The focus group identified 8 key areas / actions to be addressed (see table 2 below) concerning behaviour changes required for (i) healthcare professionals and patients, (ii) organisational matters and (iii) health system matter in line with Fretheim et al 2009's SUPPORT TOOL.

*Table 2: Overview of key actions / areas to be addressed to improve implementation*

1. <i>Records &amp; Best Practice</i>
2. <i>Collaboration &amp; Integration</i>
3. <i>End User Engagement</i>
4. <i>Advocacy</i>
5. <i>National eHealth Action Plans</i>
6. <i>Pharmacist/cy eHealth Innovations</i>
7. <i>Self-care</i>
8. <i>Governance</i>

Following identification of the key areas, the focus group identified the most significant barriers and facilitators to the implementation (please see Annex 1 for full descriptions) and subsequently drafted the key recommendations concerning effective policy implementation (see next Recommendations chapter below) for consideration by the PCNE and other interested parties.

## Recommendations of Focus Group



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### **Records & Best Practice**

PCNE considers eHealth to bring effective solutions for the documentation of patient medication use in order to improve safety, effectiveness, and efficiency. These should allow patients' access and include follow-up, feedback and support from them (e.g. patient-reported outcomes, satisfaction). The development and use of best practices and accreditation processes should guide the implementation of such solutions. Identified facilitators are remuneration for documentation and informing other HCPs, as well as for not dispensing a medicine, and education in health and eHealth literacy.

#### **Recommendations:**

Implementation of suitable algorithms and methods of data extraction
Collaboration between software developers, pharmacies and patients
Access to exhaustive data and seamless communication between HCPs
Standards to detect and evaluate inappropriate medication
Willingness of patients to share data in accordance to privacy legislation
Digitised data will feed easily into research projects



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### **Collaboration & Integration**

Collaboration between HCPs, interprofessional education and interprofessional practice are increasingly being incorporated into the practice of health professionals. Literature suggests that this integration of HCPs together with patient-centred care leads to better patient outcomes, HCPs' increased job satisfaction, better pharmacists' retention rates and increased awareness of HCPs' roles. Barriers include lack of trust and communication, lack of understanding of others' roles and financial (dis)incentives.

Taking this into consideration, the PCNE working group on eHealth and Pharmacy recommends that eHealth solutions should be implemented whilst considering Interprofessional collaboration and integrated care for the benefit of the patient. This recommendation also emphasizes the central role of pharmacies as a key access point in delivery and implementation of eHealth solutions and interventions.

#### **Recommendations:**

Joint HCP educational programs
CPD, further training and education
Collaborative projects & public health activities
Joint remuneration
Institutional support
New legislation and enforcement and accountability
Clearly defined roles and agreement of roles
Sharing best practices on interprofessional collaboration
E-Health coach for pharmacists





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**END USER ENGAGEMENT**

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**End User Engagement**

PCNE supports the dissemination and the use of eHealth solutions by pharmacies and professional organisations in addition to traditional communication channels. Major risks and barriers which need to be overcome are: inadequate digital infrastructure and interoperability, unsustainability of eHealth solutions, insufficient quality of the eHealth solution, poor understanding of future potential of eHealth and pharmacists are often not considered an “end-user” of eHealth solutions.

**Recommendations:**

Consistent use of agreed terminology / nomenclature
Education on improving digital health literacy
Participation in eHealth projects
Collaboration with patients / patients’ organisations / patient movements using eHealth
Pharmacies could consider resource allocation and workflow to incorporate eHealth solutions in providing patient care and maximising efficiencies
Positive feedback (stories) from early adopters



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## Advocacy

Throughout the past century, the role of pharmacists has shifted from a product-centered role to a provider of patient-centered services<sup>9</sup>. Despite the international recognition of the pharmacist as health professional to promote the responsible use of medicines, eHealth initiatives do not routinely consider pharmacists as stakeholders. PCNE supports advocacy for the recognition and consultation of pharmacists during the development of eHealth solutions. Major challenges are; low perceived value of pharmacists' eHealth interventions due to lack of convincing evidence, lack of visibility of pharmacists to key stakeholders and lack of collaboration between patient representatives and health care professionals.

### Recommendations:

Collect, audit, review and publish real-world evidence to support pharmacists' contributions in the provision of care to patients
Active participation and lobbying of pharmacists and professional bodies at relevant fora
Collaborate with patient representatives, physicians and other healthcare providers to promote the use of eHealth solutions during the medication review process and other services provided in the pharmacy

<sup>9</sup> International Pharmaceutical Federation (FIP), World Health Organisation (WHO). Joint FIP/WHO guidelines on good pharmacy practice: standards for quality of pharmacy services. WHO Technical Report Series 2011.





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**National eHealth Action Plans**

Currently, community pharmacists are not necessarily recognised as key stakeholders in eHealth and the community pharmacy may not be mentioned in national eHealth action plans as providers of eHealth. Including the community pharmacy in eHealth care can improve the outcome of patient care.

**Recommendations:**

The national organisations that represent community pharmacy should actively promote community pharmacy as a relevant provider of eHealth and stakeholder in national eHealth Action Plans
The national organisations that represent community pharmacy should have an eHealth strategy for community pharmacy
Initiatives to generate scientific evidence to support the implementation of eHealth initiatives should be conducted by pharmacy practice research groups
Instating an eHealth observatory in order to document current and future eHealth initiatives and to support the common interests of HCPs in eHealth care. The observatory should include relevant stakeholders (community pharmacy, GP, policy makers, other HCPs)
Implementation projects demonstrating the role of the community pharmacist in the provision of eHealth should be conducted and supported



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### **Pharmacist/cy eHealth Innovations**

PCNE supports the development and use of pharmacists'/ies' own eHealth solutions to improve pharmacy practice, optimise workflow, and increase communication with patients and other HCPs.

These eHealth solutions should be built on existing systems and should be interoperable, user-friendly and affordable. The development process should involve an open co-operation with other partners, particularly with patients and other HCPs. Major risks and barriers which need to be overcome are lack of financing and funding and competition (data collection and analysis) from outside the profession

#### **Recommendations:**

Education on digital literacy
Use of business models
Innovation and service development



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## **Self-care**

Responsible self-medication is the practice whereby individuals treat their ailments and conditions with medicines which are approved and available without prescription, and which are safe and effective when used as directed. Responsible self-medication requires that medicines used are of proven safety, quality and efficacy, medicines used are those indicated for conditions that are self-recognisable and for some chronic or recurrent conditions (following initial medical diagnosis). In all cases, these medicines should be specifically designed for the purpose, and will require appropriate dose and dosage forms. (WHO, *The Role of the Pharmacist in Self-Care and Self-Medication*<sup>10</sup>).

In 2011, International Pharmaceutical Federation and the World Health Organisation adopted their joint «*Guidelines on Good Pharmacy Practice: standards for quality of pharmacy services*»<sup>11</sup> which describes the roles and functions of pharmacist, and many of these roles also refer to the responsible use of self-medication.

More recently, the draft report to FIP Council «*Pharmacy : Gateway to care. Pharmacist, supporting self care*» (2016)<sup>12</sup> highlights that appropriate consumer support from pharmacists will assist consumers in better health maintenance, greater health efficiency and greater economic efficiency. This report emphasises that fundamental and increasingly important goal for pharmacists - to provide the right medicine to the right patient at the right time and to support effective self care.

<sup>10</sup> The Role of the Pharmacist in Self-Care and Self-Medication, WHO, 1998.  
<http://apps.who.int/medicinedocs/en/d/Jwhozip32e/>

<sup>11</sup> Guidelines on Good Pharmacy Practice: standards for quality of pharmacy services. FIP - WHO, 2011.  
[https://www.fip.org/www/uploads/database\\_file.php?id=331&table\\_id=](https://www.fip.org/www/uploads/database_file.php?id=331&table_id=)

<sup>12</sup> Reference Paper "Pharmacy: Gateway to Care – Pharmacists supporting self-care". FIP, 2016.

The report proposes the term advised or facilitated self-medication, for when the consumer seeks help in the pharmacy, where pharmacist is in a strong position to facilitate self-care decisions making by consumers. This is added value to rational and responsible self-medication as a WHO term.

New e-technology formats introduced to the growing consumer movement will drive the next generation of self-care by allowing patients to manage their own health conveniently and proficiently. (*Internet-based Patient Self-care: The Next Generation of Health Care Delivery, Forkner-Dunn, 2003.*)

To support and improve the implementation of eHealth solutions for supporting the role of the pharmacist in facilitated self-medication and self-care, PCNE recommends as follows:

**Recommendations:**

Need for confronting and tackle the challenges such as uaccredited, biased, unreliable or inaccurate sources of online information, inaccurate claims and false advertising, including the trivialising of self-care/medication and absence of communication with pharmacist.
There is a great necessity to improve collaborating with patients, patients’ organisations and patient movements using eHealth solutions.
There should be proactive engagement towards co-operation with other partners (including industry, developers and other healthcare professionals)
Pharmacist should be a part of actions and projects supporting their role as digital healthcare coach.
Patients feel more in control of their healthcare



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## **Governance**

The European Commission (notably led by DG SANTE and DG CONNECT), the European Parliament and Council of the European Union, in collaboration with member states and EU civil society stakeholders have developed policies and legislation to support eHealth solutions<sup>13</sup>. The PCNE considers that with the aim of protecting the patient and respecting national legislation and policy on eHealth, all eHealth pharmacy activities should be in accordance with relevant legislation (e.g. privacy, safety as well as other patients' rights).

### **Recommendations:**

Create a European Observatory of eHealth solutions which in collaboration with respective national representatives would be responsible for ongoing monitoring of eHealth initiatives
Explore possibility of certification of compliance (perhaps by observatory) on eHealth solutions
Active public discussion as well as engagement of HCPs and patients in creating new legislation regarding eHealth

<sup>13</sup> In the EU, the organisation and delivery of health services remains a Member State competence





## eHealth Solutions and Pharmacy

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### Annex: Barriers / Facilitators from Focus Group



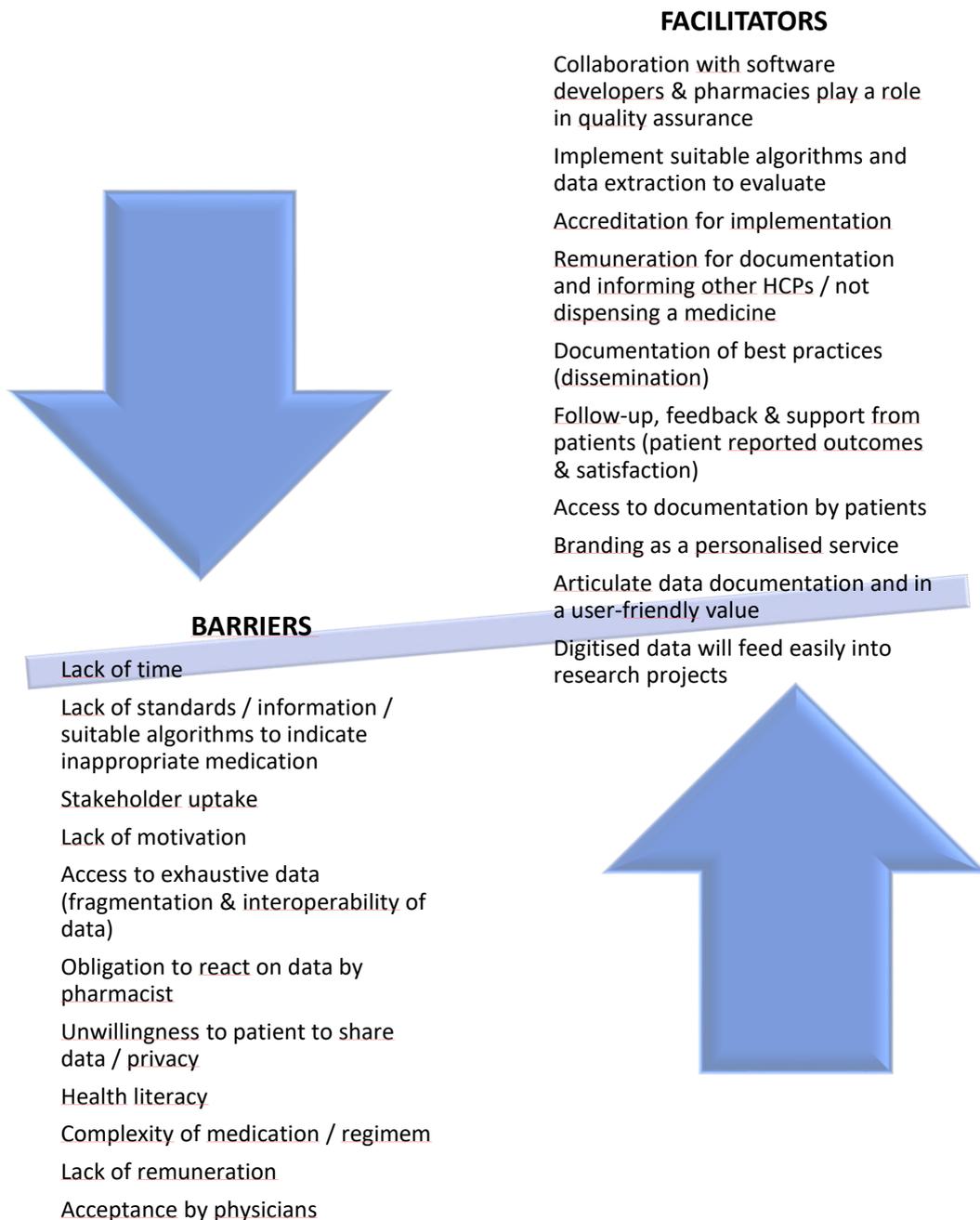
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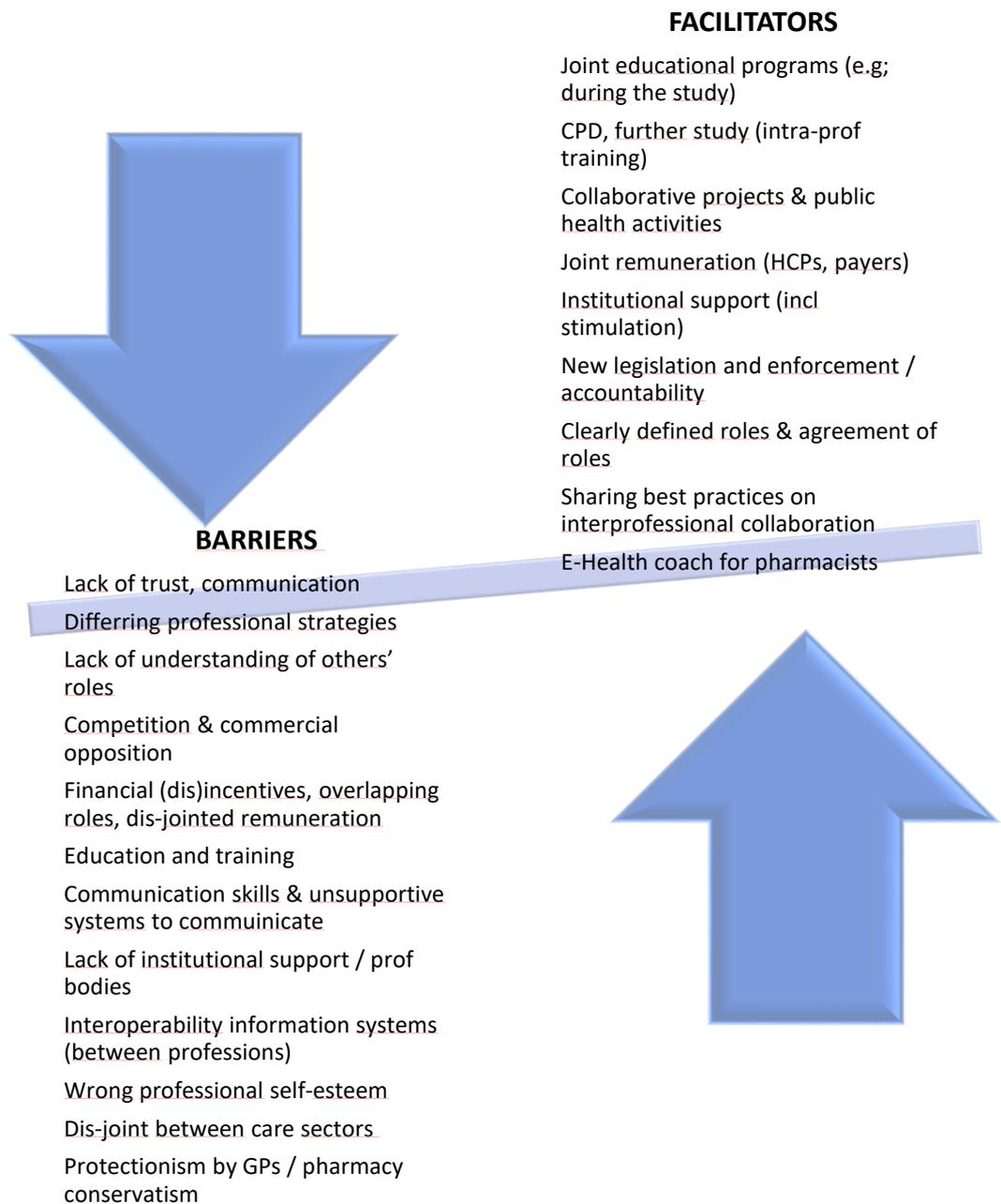
## RECORDS & BEST PRACTICE

Documentation of medication use of patients to improve use (safe, rational effective – check for DRPs) and use of best practice.



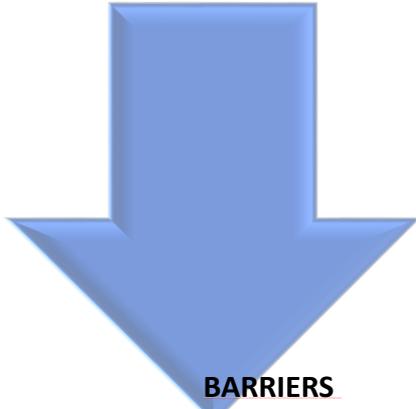
## COLLABORATION & INTEGRATION

Interprofessional collaboration / integrated care for the benefit of the patient (access point via pharmacy).



## **END USER ENGAGEMENT**

Involve end users (patients, pharmacists, other HCPs) and their needs and consider continuous education / training to advance eHealth literacy skills.

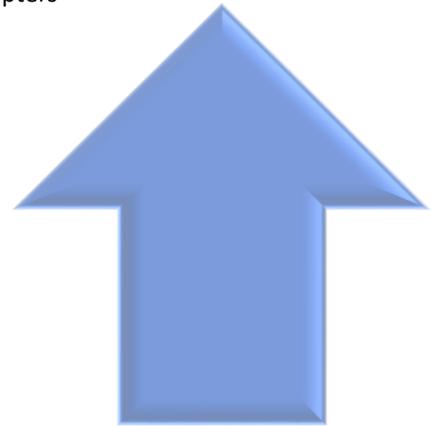


## **BARRIERS**

- Lack of interest from end users
- Language & low (digital) health literacy / lack of knowledge of end users, developers
- Lack of follow-up and monitoring
- Perceived lack of time and/or due to high complexity of solution (implementation & adherence to use)
- Lack of remuneration / incentives
- Lack of privacy
- Inadequate digital infrastructure & interoperability
- Insufficient understanding of future potential of eHealth
- Patient perceptions of pharmacy environment
- Sustainability of eHealth solutions
- Quality of the eHealth solution
- Perception of marketing activities by end users
- Investment costs too high

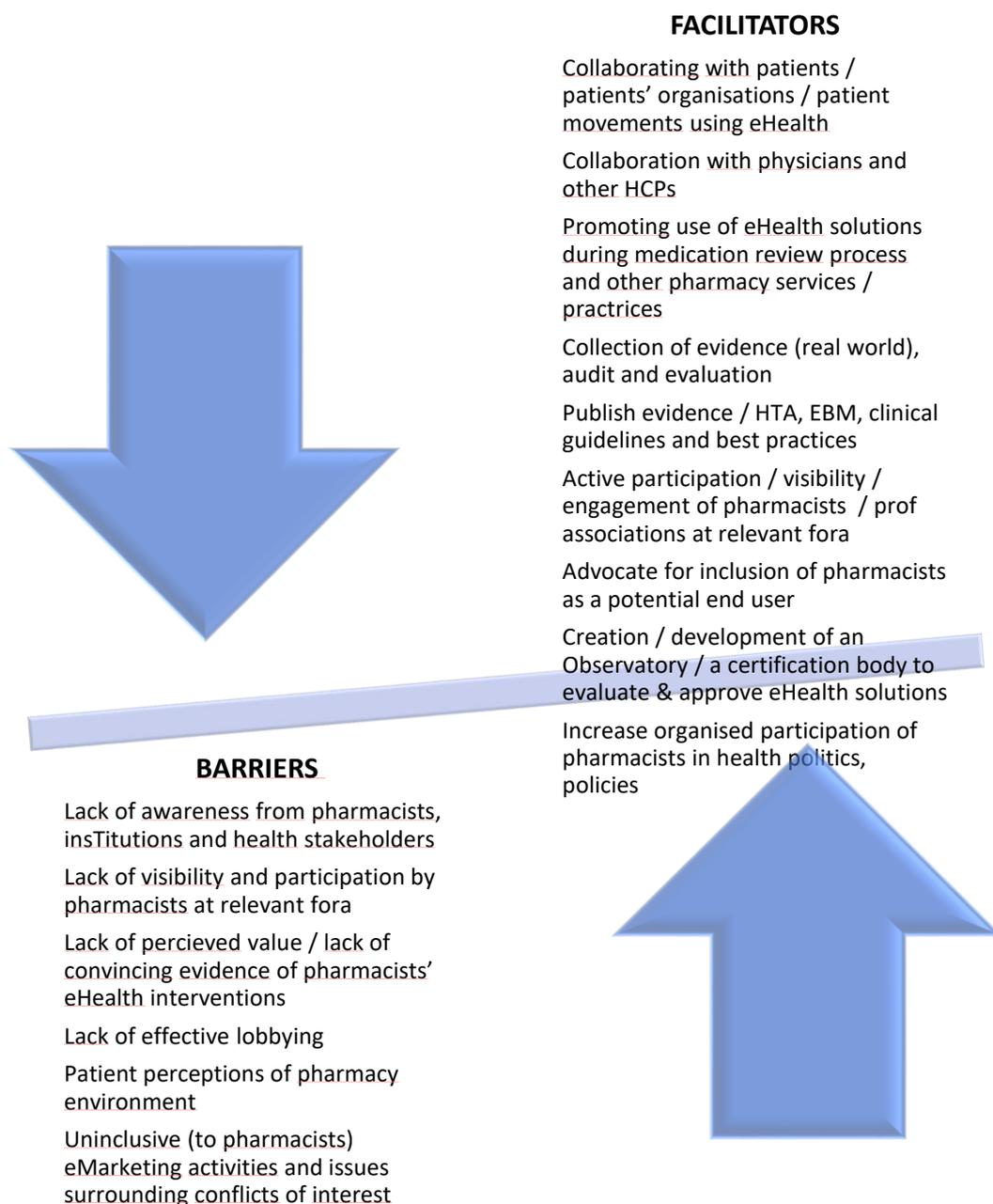
## **FACILITATORS**

- Education on the potential of eHealth solutions to improve knowledge of benefits
- Education on improving digital health literacy / participation in eHealth projects
- Consistent use of agreed terminology/nomenclature
- Collaborating with patients / patients' organisations / patient movements using eHealth
- Adjusting pharmacy resources and workflow to incorporate eHealth solutions in providing patient care and maximising efficiencies
- Marketing, dissemination & use of digital media by pharmacies / prof organisations, in addition to traditional communication channels
- Positive feedback (stories) from early adopters



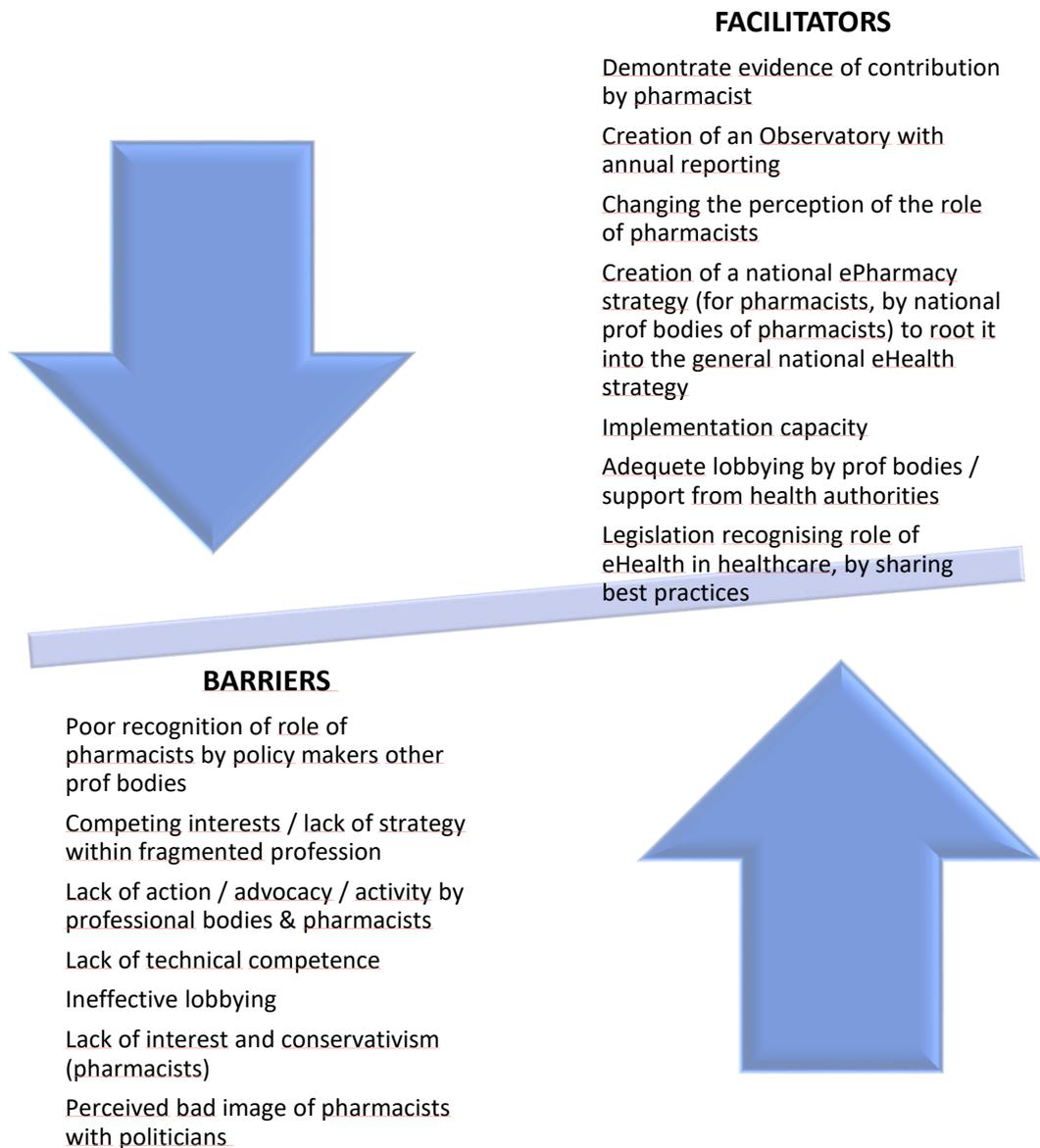
## ADVOCACY

Advocate for the recognition that pharmacists should be consulted in the development of eHealth.



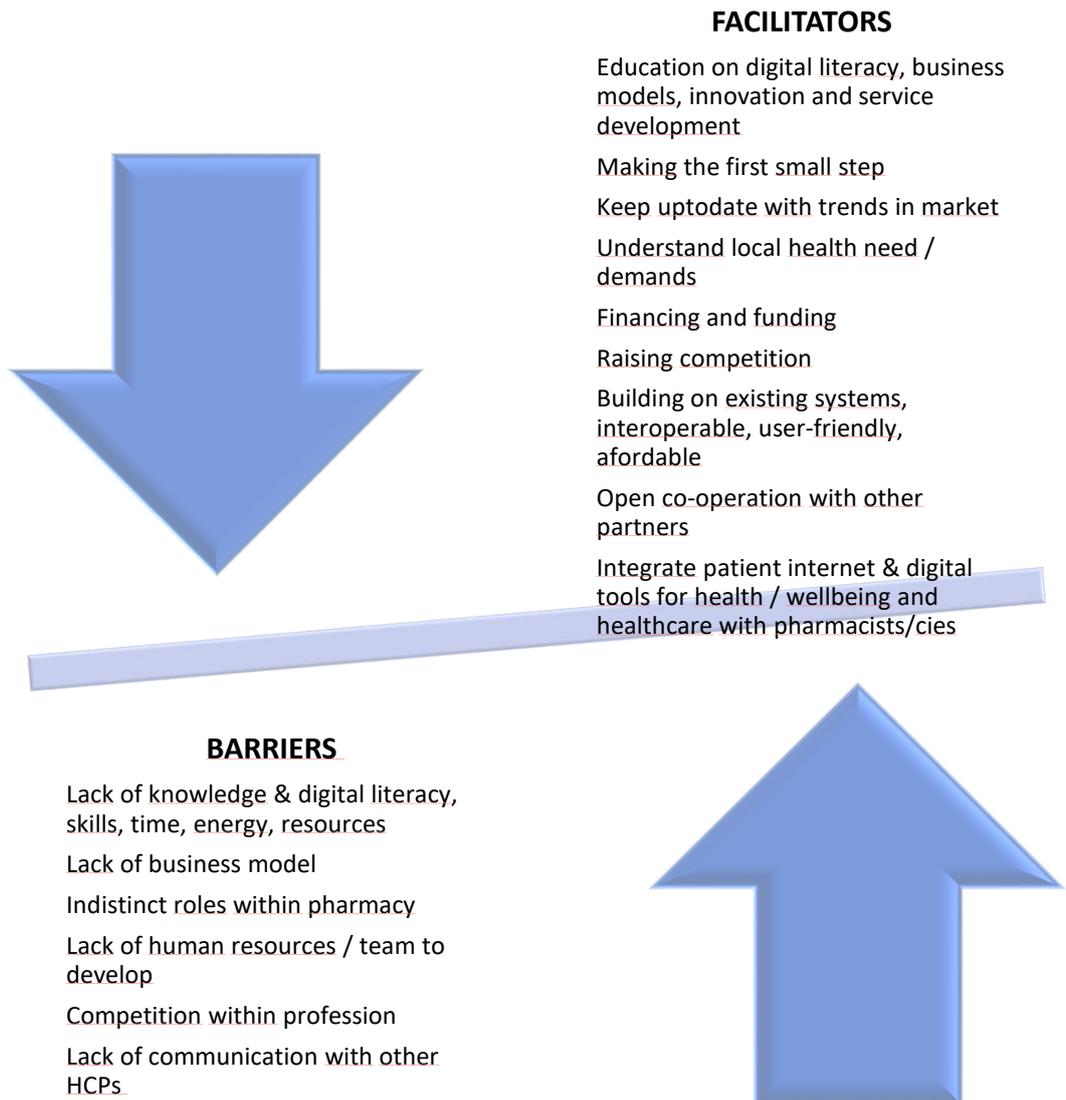
## NATIONAL eHEALTH ACTION PLANS

Involve pharmacists in all national eHealth Action Plans.



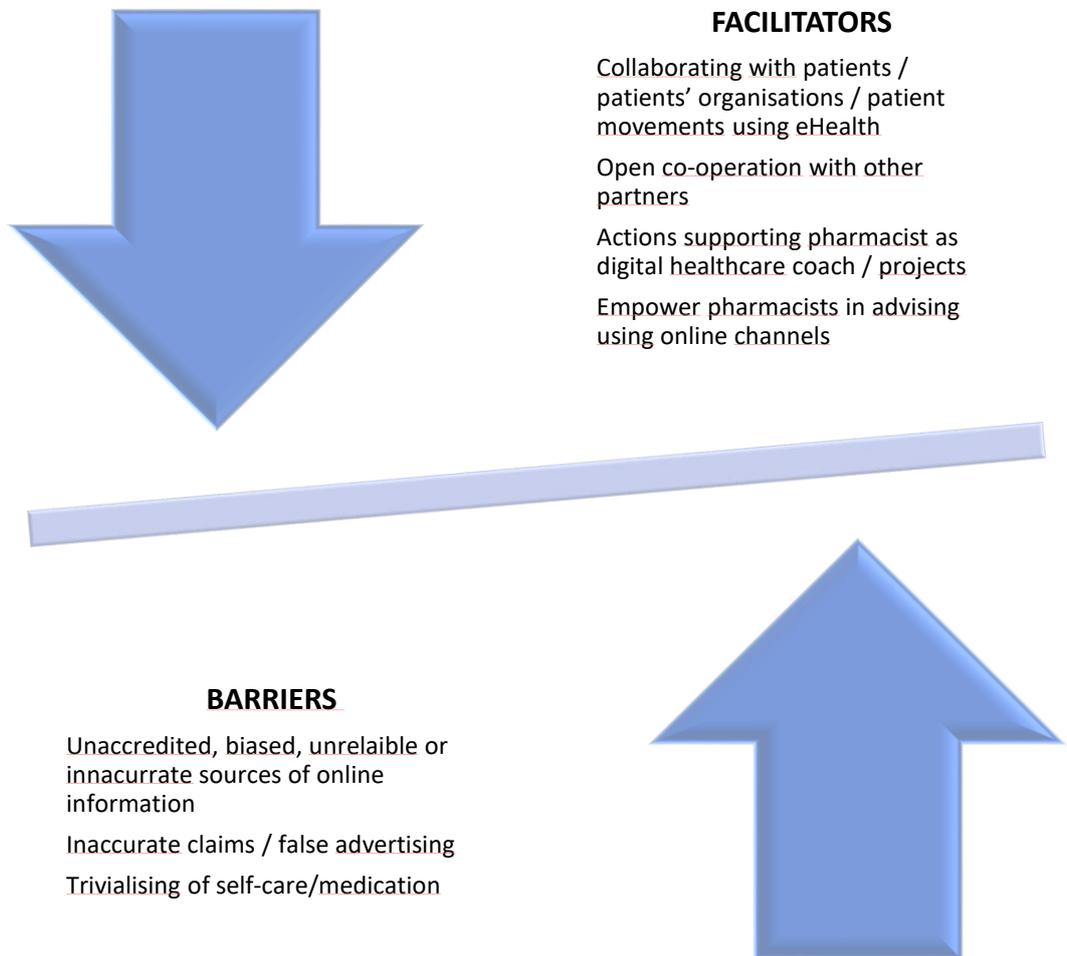
## PHARMACIST / PHARMACY eHEALTH INNOVATIONS

Facilitate pharmacists' own eHealth solutions (to improve practice /optimise workflow/communication with patients and other HCPs).



## SELF-CARE

Evaluate & recommend the implementation of eHealth solutions for supporting the role of the pharmacist in facilitated self-medication and self-care.



## GOVERNANCE

With the aim of protecting the patient, all activities should be in accordance with the relevant EU legislation (e.g. privacy, safety).

