EAHP Position Paper on eHealth and mHealth

Revision of the position paper approved by the EAHP General Assembly, June 2017

The position paper sets out the position of the European Association of Hospital Pharmacists (EAHP) on eHealth and mHealth.

eHealth, or electronic health, refers to healthcare services provided with the support of Information and Communication Technology (ICT) – such as computers, mobile phones, and satellite communications—for health services and information.

mHealth, or mobile health, refers to the use of smart or portable devices for health services and information.

eHealth/mHealth encompasses a vast spectrum of healthcare services ranging from electronic prescribing and medical records to text message prompts to remind patients to take their medicines. eHealth and mHealth are thus becoming prominent components of healthcare. In order for healthcare electronic services to be safe, effective and add genuine value to the system, EAHP believes that these should be developed in close collaboration with healthcare professionals including hospitals pharmacists, and patients.

Consequently, EAHP's member associations call upon national governments and health systems across Europe to work towards:

- systematic and EU-wide achievement of electronic prescribing, administration and use of electronic medical records (EMR);
- ensuring barcoding of medicines to the single units in primary packages to enable more widespread takeup of bedside scanning in European hospitals, thus improving patient safety;
- appropriate regulatory oversight mechanisms for mHealth applications to ensure that they have a positive impact and adequately protect patient data;
- provision of appropriate eHealth/mHealth training opportunities to healthcare professionals and promotion of digital health literacy; and,
- involvement of hospital pharmacists in the design, specification of parameters and evaluation of ICT within the medicines processes.

The need to achieve universal use of electronic prescribing, administration and electronic medical records

A key goal for the eHealth agenda in Europe should be the systematic and EU-wide achievement of electronic prescribing, administration and use of electronic medical records. Both developments offer significant opportunity for improving safety, quality and efficiency in the delivery of patient care, particularly, but not exclusively, in relation to their role in preventing medication errors, and improving interface management of patient care. The importance of the protection of patient data needs to be one of the key considerations, wherefore stringent data protection rules must be adhered to.

The European Commission in its 2012 to 2020 eHealth Action Plan[1] highlights the importance of interoperability of eHealth services. Consequently, in moving towards a digital single market, the European Commission seeks to adopt the new European Interoperability Framework by 2020 which also supports the interoperability of health services. EAHP supports this ambitious goal.

The use of barcode scanning technology to promote patient safety in hospital through bedside scanning

As a key patient safety requirement, EAHP has for years advocated the need to introduce bar coding of medicines to the single unit primary package at manufacturing stage. This public call is made to enable more widespread implementation of bedside scan checks immediately prior to administration of a medicine to a patient in hospital. The scan allows an assurance to take place that the medicine which is to be given is indeed the right medicine for the right patient, being administered by the right route, and being given at the right time. Studies indicate such practice can reduce medication error by over 40%.[2]

Implementing electronic prescribing, together with bedside scanning will complete the patient safety cycle, and also promotes accurate electronic patient record keeping. For these reasons the European Commission, national governments, health system managers, manufacturing, packaging and software industries should understand the link between electronic prescribing, electronic medical records, and bedside scanning, and their importance in improving patient safety.

Positive examples are available in this regard from hospitals in Belgium,[3] Switzerland[4] and the United States[5]. The achievement of bedside scanning of medicines across Europe should be understood as an important eHealth goal of strong patient safety value to be achieved in the years ahead. The use of barcoding at primary package level could not only be beneficial for hospitals, but it also has the potential to also enhance patient safety in care institutions and at home by allowing care patients or care givers to scan medication just prior to administration.

The opportunities from mHealth for improving patient empowerment and self-management

Mobile technologies such as smartphones, tablets, watches, glasses and other wearable devices are increasingly used by patients,[6] also for health-related purposes. Undoubtedly many potential opportunities exist from both current applications and future applications in relation to such areas as improving individual patient understanding and self-management in relation to prescribed treatments. The advances made in the mHealth and eHealth sector could also contribute to the enhancement of the efficiency of health care provision by using data produced outside the direct healthcare system.

However, care and vigilance must also be taken in relation to potential 'rogue' or unregulated applications, that have not received appropriate oversight in their construction and have the potential negative impact of offering contradictory, inaccurate or low quality advise to patients.

---

[1] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, eHealth Action Plan 2012-2020 - Innovative healthcare for the 21st century, COM(2012) 736 final.

[2] Poon, E.G., et al., Effect of Bar-Code Technology on the Safety of Medication Administration. New England Journal of Medicine, 2010. 362(18): p. 1698-1707.

[3] De Rijdt, T., Computerised physician order entry and bedside scanning as a tool to improve patient safety. European Journal of Hospital Pharmacy: Science and Practice, 2012. 19(3): p. 320-321.

[4] Bonnabry, P., Vision from a hospital pharmacist on bar coding of pharmaceuticals, at the GS1 Healthcare Conference. 2011: Prague, Czech Republic.

[5] Helmons, P.J., L.N. Wargel, and C.E. Daniels, Effect of barcode-assisted medication administration on medication administration errors and accuracy in multiple patient care areas. American Journal of Health-System Pharmacy, 2009. 66(13): p. 1202-1210.

[6] Patient Adoption of mHealth – Use, Evidence and Remaining Barriers to Mainstream Acceptance, September 2015, IMS Institute for Healthcare Informatics.

EAHP perceive a level of regulatory oversight may be required in the future development of such applications, potentially through kitemark or national approval schemes in the first instance. Part of the evaluation should address the transparency, safety, reliability and interoperability of applications. A specific focus should be put on application with a high risk. Of particularly importance is the need to protect the privacy of patient data, especially in regard to the commercial use of data, which calls for the identification of ethical solutions for storing and monitoring patient data. Patients need to be informed in case data gathered by an application is accessed and processed and of the purpose of such use.

The appropriate level of regulatory oversight of mHealth applications needs to be determined. Thus, EAHP welcomes the adoption of the Code of Conduct on privacy for mobile health applications[7] which should be adhered to by app developers and the rules contained within the Medical Devices Regulation.[8] The latter provides for an assessment by the notified body of apps embedded or installed in a medical device, or apps used for performing for therapeutic or diagnostic purposes.

Moreover, EAHP calls on the 2014 to 2019 eHealth workstreams of the European Commission which should continue to duly consider the appropriate level of regulatory oversight of mHealth applications.

The unique role of hospital pharmacists in advising on medicines use provides the opportunity to function as a bridge between medicines and technology. Their knowledge and direct access to patients should be utilised in both the development of new mobile applications and educating patients about their use.

Provision of appropriate eHealth/mHealth training opportunities to healthcare professionals

eHealth and mHealth technologies are advancing at a rapid pace, often outpacing both regulatory systems with healthcare systems and health professional education and training programmes. There is therefore a need for governments and health systems to give adequate support to health professionals in keeping both their competencies in the area of eHealth/mHealth up to date. A specific focus should be put on the promotion of digital health literacy. The implementation of new technological innovations and processes within health systems must also be conducted with healthcare professional training needs significantly in scope.

The need to involve hospital pharmacists in hospital ICT design and specification

The European Statements of Hospital Pharmacy[9], include in Section 1.7 a clear call to health system managers that: *"Hospital pharmacists must be involved in the design, specification of parameters and evaluation of ICT within the medicines processes. This will ensure that pharmacy services are integrated within the general Information and Communication Technology (ICT) framework of the hospital including electronic health (eHealth) and mobile health (mHealth) procedures."* This position paper reemphasises that call, and reiterates the support it has received not only from the hospital pharmacy profession, but other health care professionals and patient interest.

[7] Data Protection Working Party (7 June 2016). *Final draft of the Code of Conduct on privacy for mHealth apps.*
[8] Regulation of the European Parliament and of the Council on medical devices, and amending Directive 2001/83/EC, Regulation (EC) No 178/2002 and Regulation (EC) No 1223/2009.
[9] The European Statements of Hospital Pharmacy *Eur J Hosp Pharm* 2014;21:256-258.