

Improving the detection, analysis, and reporting of harms in medicines and devices – Statement from the 2019 4Es Forum (Exploring, Enhancing, and Empowering in Erice)

Serious global challenges exist in recognizing and minimizing harms from medicines and devices

Harms from medicines and devices are increasingly recognized as important causes of morbidity and mortality worldwide. Given the current and future levels of their use in clinical practice, the total burden from harms of medicines and devices is a serious and growing global public health problem.

Examining the benefit-harm profile of medicines and devices is the collective responsibility of multiple stakeholders, including industry, regulators, policymakers, healthcare systems, healthcare professionals, patients, and their carers. However, the current states of development, approval processes, surveillance, and use of medical products limit the abilities of all parties to fulfil their respective responsibilities. The competitive environment of research and development in industry and the shift towards rapid access by regulators have resulted in a growing number of new medicines and devices with marginal effectiveness and unknown harms receiving marketing authorization. Decisions by regulators are based on data of benefits and harms that are chosen by the sponsor and may be incomplete. Furthermore, estimates of benefit-harm at the time of marketing authorization are made using pre-selected populations which may fail to reflect the heterogeneity of users in clinical practice.

Harms caused by medical products not only depend on the intrinsic properties of the product and on the susceptibility of the individual patient, but also on how they are prescribed and used within and outside of healthcare systems. Post-authorization surveillance of the adverse effects of medical products predominately relies on company-sponsored studies, as part of their regulatory commitments, and case reports collected by regulators from industry or directly from health professionals and patients. The results of post-authorization studies contained within risk management plans are often not completed and their results are often not published, while serious harms experienced in clinical practice are often under-reported. Furthermore, case reports are currently under-appreciated in the hierarchies of evidence used for the development of guidelines for clinical practice.

The 4Es Forum on *Improving the detection, analysis, and reporting of harms in medicines and devices* was held in Erice, Italy between 7-9 October 2019. It provided an opportunity to build a foundation for future collaboration between two disciplines – evidence-based medicine and pharmacovigilance – which share common concerns regarding harms from medicines and devices. This statement represents the common ground of agreement established at the conclusion of three days of intensive discussion and debate.

Our recommendations for improving patient safety

To improve the detection, analysis, and reporting of harms in the interests of patient safety, we recommend the following:

1. Raise public and professional awareness of the harms from medicines and devices.
2. Shift the culture within regulatory and health care management systems from one of secrecy to one of transparency.
3. Enforce existing effective regulations, revise ineffective ones, and implement effective regulations in those areas lacking appropriate regulatory infrastructure.
4. Transfer from industry to healthcare systems the responsibility for providing information and support to healthcare providers on the use of medicines and devices.
5. Encourage and enable prescription and use of medicines and devices that are appropriate and tailored to the needs of individual patients.
6. Facilitate access to all relevant data.
7. Recognize case reports, including those written by patients, as a valid and important form of evidence of harms.
8. Improve baseline and continuing education of all stakeholders, including healthcare professionals, policymakers, and the public.
9. Recognize the importance of patients and carers, as well as healthcare professionals, in studying all aspects of therapy.
10. Establish and continuously develop effective communication with patients and other relevant stakeholders about the potential benefits and harms of interventions to improve the basis for shared decision making about treatments.

Mechanisms of change

We believe that patient safety requires constant vigilance of safety systems, structures, organizations, and processes. Therefore, we encourage the formation of open, inclusive, and collaborative efforts to identify challenges and develop practical, implementable solutions that improve patient safety worldwide.

About this statement

This statement was created at the 4Es Forum on *Improving the detection, analysis, and reporting of harms in medicines and devices* in Erice, Italy, 7-9 October 2019.

The 4Es Forum was co-organized by the International School of Pharmacology Giampaolo Velo, Verona, Italy; the Centre for Evidence-Based Medicine, Oxford, UK; and Uppsala Monitoring Centre, Uppsala, Sweden. The Steering Committee included Georgia Richards (Chair), Dr Rebecca Chandler, Professor Carl Heneghan, Dr Marie Lindquist and Ruth Davis. It was hosted by the Ettore Majorana Foundation and Centre for Scientific Culture, Erice, Italy and was attended by health professionals, researchers, academics, journalists, patient advocates, and consumers.

Signatories

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