MedTech Europe
from diagnosis to cure

Risk based approach to Post Market Clinical Follow up (PMCF)

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Table of Contents

1. Introduction

1.1. Post Market Clinical Follow up (PMCF) expectations

MedTech Europe wishes to highlight to the European Commission and the Medical Device Coordination Group (MDCG) its concerns regarding the interpretation of the Medical Devices Regulation (EU) 2017/745 (MDR) PMCF requirements **for low-risk devices with a demonstrated safety profile**, and the resulting impacts on healthcare professionals (HCPs), patients and manufacturers.

Manufacturers have observed a significant tendency among regulatory authorities and Notified Bodies to expect PMCF clinical investigations almost by default for most devices. This approach overlooks the need for PMCF to be proportionate to the device's intended purpose, characteristics, and risk–benefit profile. Additionally, real-world factors such as variability in clinical practice and individual patient characteristics may preclude the collection of PMCF data on all device variants/configurations[1] (e.g., diameter, length, tip configuration), as often requested today. The expectation for collection of clinical data on all device variants/configurations does not consider the likelihood and severity of potential harm or safety signals identified from post-market surveillance data. Instead, PMCF data collection should prioritise specific device variants with higher risk profiles or where safety signals have been detected, ensuring resources (including medical staff) are focused on areas most likely to impact patient safety.

In addition, the perception that every device needs new clinical data from a clinical investigation leads to discontinuation of many legacy devices with a long-standing market history and a proven safety profile. A more pragmatic approach is needed to ensure that PMCF clinical investigations are conducted only when appropriate.

1.2. MDR & Medical Device Coordination Group (MDCG) guidance: PMCF and Risk

The MDR does **foresee a risk-based approach to PMCF**. Per Preamble (33), the clinical evaluation process is closely interlinked with risk management, which aims to mitigate any residual clinical risk.

- Article 61.1 specifically outlines that the manufacturer shall specify and justify the level of clinical evidence to demonstrate conformity with the relevant general safety and performance requirements, and "that level of clinical evidence shall be appropriate in view of the characteristics of the device and its intended purpose."
- Article 61.4 explicitly states that high risk devices shall require clinical investigations for conformity assessment, except in certain circumstances as outlined in the Regulation. Given the focus of the present paper, high risk devices will not be discussed here.
- Annex XIV, Part B outlines the PMCF process and provides examples of both general methods and specific methods to support PMCF, including feedback from users, gathering of clinical experience, screening of literature, suitable registers, PMCF studies, etc.

MDCG 2020-7 highlights various examples of activities related to PMCF, including but not limited to registry data, PMCF studies, real-world evidence (RWE), and surveys. The importance of well-defined and structured PMCF activities, including from sources other than PMCF investigations, is also highlighted in MDCG 2024-10 with regard to clinical evaluation of orphan devices.

[1] MDR Annex II

Nonetheless, neither MDR nor the mentioned MDCG guidance include a definition of a PMCF activity. This creates ambiguity in practice regarding where an activity could be sufficient and where a clinical investigation is necessary.

1.3. PMCF impact on HCPs and patients

In recent years, HCPs have faced an overwhelming number of requests for PMCF clinical data. In many instances, devices that had been on the market for many years, or even decades, were based on the concept of 'equivalence', which was widely used under the medical device directives (MDD and AIMDD)[2]. Clinical investigations were not performed on such devices and having to perform them now, when the device is part of the everyday healthcare practice, is ethically questionable (as outlined in Article 62.4.(e) of the MDR). Such a PMCF clinical investigation in the post market phase does not:

- bring new benefit to the patient that would justify potential risks and inconveniences of the study
- attract scientific interest from HCPs

These data gathering activities require a substantial investment of time and resources, and can distract HCPs from their primary responsibility in patient care. Importantly, the high amount of PMCF clinical investigations consumes available clinical research capacity that might have otherwise been used for advancing medical research (e.g. on new technologies, new indications, improved treatment modalities etc.). As a result, unrestrained demands for PMCF clinical investigations will slow innovation.

In this paper, we present three cases outlining the significant impact of PMCF on HCPs, patients and manufacturers, when applied disproportionately. We also include suggestions for a way forward.

2. Examples

Case 1 Non-surgical invasive device (Class IIa):

- Intended purpose statements: Used to facilitate endotracheal intubation in patients where the visualisation of the glottis is inadequate.
- Clinical benefit: Endotracheal intubation of the patient to facilitate oxygen delivery to the patient until patent airway is secured.
- Current situation: For a legacy device for which a CE mark was first obtained in 1998, the Clinical Evaluation Report (CER) used for conversion from MDD/AIMDD to MDR included published clinical investigation data on approximately 2500 patients. In addition, the Post-Market Surveillance (PMS) data did not identify any unknown issues. The device is for transient use, hence it has a very short lifetime. Despite this, the Notified Body (NB) asked for an observational PMCF clinical investigation. The manufacturer has made several attempts to conduct a PMCF clinical investigation since 2020. The first site has only just signed up 5 years later, and no patients have been included yet.

Case 2 Non-vascular Guidewire (Class IIa)

- Intended purpose statements: Used to facilitate the placement of devices during non-vascular procedures. Indicated for use in patients with disease and/or lesions in the non-vascular anatomy.
- Clinical benefit: The non-vascular guide wire has an indirect clinical benefit as it is part of a minimally invasive system used to assist in the delivery of compatible diagnostic or therapeutic medical devices into the non-vascular anatomy. Once delivery of the device is achieved, the associated device can be utilised to aid in diagnosis and treatment planning.

[2] Directive - 93/42 - EN - medical device directive - EUR-Lex, Directive - 90/385 - EN - EUR-Lex

- Current situation: This submission is currently under review by the NB. The non-vascular guidewire is sold as part of non-vascular access sheath/drainage catheter kits. PMCF data were provided in support of the submission, and safety/performance data for the primary device in the kit (i.e., access sheath/drainage catheter) was used as a surrogate for the lower risk class guidewires and accessories included in the kit. The NB requires a justification for not performing clinical investigations for the non-vascular guidewire alongside an updated PMCF plan to identify safety and performance outcome measures specific to the use of the non-vascular guidewire to facilitate various non-vascular sheaths/drainage catheter placement procedures. Other standard of care devices and accessories face similar challenges.

Case 3 Patient Impact

Accessories (Class I, IIa) used in conjunction with an implantable drainage catheter

- Intended Purpose Statements:
  - Drainage catheter: Long-term access of the pleural/peritoneal cavity in order to relieve symptomatic pleural effusions or malignant ascites.
  - Drainage catheter accessories: Accessory item that is intended to facilitate intermittent drainage of peritoneal/pleural fluid accumulation.
- Clinical benefit: System provides patients with a means to relieve pleural effusion or malignant ascites symptoms at home.
- Current situation: The drainage catheter is implanted in patients with malignant conditions as part of their end-of-life care. The patient uses the accessories to connect collection bags/bottles while performing fluid drainage at home. Because the patient interfaces with the catheter accessories, the NB not only required PMCF data collection from the clinicians but also from the patient users. This presents a challenge, as many patients in this group are terminally ill and receiving palliative care, making it difficult to solicit survey input. The manufacturer was able to collect a limited amount of data from patient users. Despite ethical concerns with this patient population, the NB continues to request additional data and larger sample size of patient users.

3. Conclusion: Alternatives and solutions

Considering the MDR, guidance documents and examples discussed above, MedTech Europe highly encourages the fulfilment of regulatory requirements **with considerations for clinical application of the individual devices, including impacts on HCPs and patients**.
For instance, in cases such as 1 and 2, outlined above, a PMCF user feedback or structured surveys rather than a clinical investigation would have been more suitable. In case 3 it is highly questionable that it is ethical to ask for PMCF data directly from patients in palliative care. It should be deemed sufficient to request feedback from HCPs on the patients' ability to use the device given the regular access of HCPs to the patients.

MedTech Europe proposes to the European Commission and the MDCG the following solutions **for a risk-based approach to PMCF for low-risk devices with a demonstrated safety profile**:

- **A harmonised implementation of the MDCG 2020-6 guidance by all competent authorities and notified bodies to ensure the PMCF requirements are aligned with the device characteristics, intended purpose and any residual risk**. In particular, the suggested hierarchy of clinical evidence (Appendix III) identifies Level 4 clinical data at a minimum for Class III and implantable devices. By extension, this implies that **clinical evidence below Level 4 is appropriate for lower risk class devices**.

- **Extend the application of the MDCG 2020-6 guidance** from legacy devices to include all devices to ensure clarity of clinical evidence requirements for all devices.
- **Include a definition of a PMCF activity** in the MDR legislative revision to appropriately distinguish between PMCF clinical investigations and other PMCF activities; PMCF clinical investigations should be deemed a type of PMCF activity.
- Provide **guidance with more emphasis on existing PMS data, PMCF data, e.g., use of RWE** including data from outside of Europe.
- **When establishing data collection and sample size requirements for device variants, a pragmatic risk-based approach is recommended** that acknowledges similarities in the clinical use case(s) and commonalities in device attributes. This approach should apply as long as safety profile of the device remains unchanged.

In order to achieve a proportionate and **risk-based approach to PMCF data collection for lower risk class devices**, all stakeholders involved in clinical evidence generation processes need clarity and predictability. MedTech Europe remains available to support any work in this direction.

Annex I: Key references

(33) The risk management system should be carefully aligned with and reflected in the clinical evaluation for the device, including the clinical risks to be addressed as part of clinical investigations, clinical evaluation and post-market clinical follow up. The risk management and clinical evaluation processes should be inter-dependent and should be regularly updated.

Art 61(1)
Confirmation of conformity with relevant general safety and performance requirements set out in Annex I under the normal conditions of the ***intended use of the device, and the evaluation of the undesirable side-effects and of the acceptability of the benefit-risk- ratio*** *referred to in Sections 1 and 8 of Annex I, shall be based on clinical data providing sufficient clinical evidence, including where applicable relevant data as referred to in Annex III.*

The manufacturer shall specify and justify the level of clinical evidence necessary to demonstrate conformity with the relevant general safety and performance requirements. ***That level of clinical evidence shall be appropriate in view of the characteristics of the device and its intended purpose****.*

Article 61(4)
(…) In this case, the notified body shall check that the PMCF plan is appropriate and includes post market studies to demonstrate the safety and performance of the device.

ANNEX XIV Part B
PMCF shall be understood to be a continuous process that updates the clinical evaluation referred to in Article 61 and Part A of this Annex and shall be addressed in the manufacturer's post-market surveillance plan. When conducting PMCF, the manufacturer shall proactively collect and evaluate clinical data from the use in or on humans of a device which bears the CE marking and is placed on the market or put into service within its intended purpose as referred to in the relevant conformity assessment procedure, with the aim of confirming the safety and performance throughout the expected lifetime of the device, of ensuring the continued acceptability of identified risks and of detecting emerging risks on the basis of factual evidence.

Other relevant material:
MDCG 2020-6
Team-NB Position Paper

About MedTech Europe

MedTech Europe is the European trade association for the medical technology industry including diagnostics, medical devices and digital health. Our members are national, European and multinational companies as well as a network of national medical technology associations who research, develop, manufacture, distribute and supply health-related technologies, services and solutions.
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