Medical Device Regulation

Post-market surveillance, vigilance and market surveillance

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Post-market surveillance system

- For any device, proportionate to the risk class and appropriate for the type of device, manufacturers
  - shall plan, establish, document, implement, maintain and update a post-market surveillance system
- Integral part of the manufacturer’s quality management system
- Post-market surveillance system shall be suitable to
  - actively and systematically gather, record and analyse relevant data on the quality, performance and safety of a device throughout its entire lifetime,
  - draw the necessary conclusions and to determine, implement and monitor any preventive and corrective actions.

Data gathered by PMS

- Update the benefit risk determination and risk management, the design and manufacturing information, instructions for use and labelling;
- Update clinical evaluation
- Update summary of safety and clinical performance
- Identify needs for preventive, corrective or field safety corrective action
- Identify possibilities to improve the usability, performance and safety of the device;
- Contribute to the post-market surveillance of other devices.
- Detect and report trends
- Update technical documentation accordingly

Post-market surveillance plan

- The post-market surveillance system shall be based on a post-market surveillance plan
  - the requirements of which are set out in Section 1.1 of Annex III.
  - For devices other than custom made-devices, the post-market surveillance plan shall be part of the technical documentation as specified in Annex II.

Post-market surveillance plan information

- Information concerning serious incidents
  - periodic safety update reports
  - field safety corrective actions
- Records referring to non-serious incidents and data on any undesirable side effects,
- Information from trend reporting,
- Relevant specialist or technical literature, databases and/or registers,
- Information, including feedbacks and complaints, provided by users, distributors and importers,
- Publicly available information about similar medical devices.

Post-market surveillance plan include

- Proactive and systematic process to collect any relevant information
  - allow a correct characterization of the performance of the devices
  - compare the device with the similar products available on the market;
- Suitable indicators and threshold values to be used in the continuous reassessment of the risk benefit analysis and of the risk management
- Effective and appropriate methods and tools or protocols
  - investigate complaints or market experiences collected in the field
  - assess the collected data
  - manage the events subject to trend report
  - establish any statistically significant increase in the frequency or severity of incidents as well as the observation period;
  - communicate effectively with CA, NB, economic operators and users
  - fulfil the manufacturers obligations laid down in Articles 60a, 60b and 60c
  - identify and initiate appropriate measures including corrective actions
  - trace and identify devices for which corrective actions might be necessary
- **Post-market clinical follow-up** plan

Post-market clinical follow-up

- Part of the manufacturer's post-market surveillance plan
  - continuous process to update the clinical evaluation
  - manufacturer shall proactively collect and evaluate clinical data
  - confirm safety and performance throughout the expected lifetime of the device
  - Confirm continued acceptability of identified risks
  - detect emerging risks on the basis of factual evidence.
- PMCF shall be performed pursuant to a documented method laid down in a PMCF plan.
- The PMCF plan shall specify the methods and procedures to proactively collect and evaluate clinical data with the aim of
  - confirming the safety and performance of the device throughout its expected lifetime,
  - identifying previously unknown side-effects and monitoring the identified side-effects and contra-indications,
  - identifying and analysing emergent risks on the basis of factual evidence,
  - assuring the continued acceptability of the benefit/risk ratio referred to in Sections 1 and 5 of Annex I
  - identifying possible systematic misuse or off-label use of the device with a view to verify the correctness of its intended purpose.

PMCF plan shall include

- General methods and procedures of the PMCF
  - gathering of clinical experience gained
  - feedback from users, screening of scientific literature and other sources of clinical data
- Specific methods and procedures of PMCF
  - evaluation of suitable registers or PMCF studies
- Rationale for the appropriateness of the methods and procedures
- Reference to the relevant parts of the clinical evaluation report
  - results of the clinical evaluation and the clinical evidence
  - clinical evidence together with non-clinical data generated from non-clinical testing methods and other relevant documentation
  - risk management
- Specific objectives to be addressed by the PMCF
- Evaluation of the clinical data related to equivalent or similar devices
- Reference to relevant Common Specifications, standards and guidance on PMCF
- Detailed and adequately justified time schedule for PMCF activities
  - analysis of PMCF data and reporting

PMCF evaluation report

- Analysis of the findings of the PMCF
- Documentation of the results
- Part of the clinical evaluation report and the technical documentation.
- Conclusions of the PMCF evaluation report shall be taken into account for
  - clinical evaluation
  - risk management
- If through the PMCF the need for preventive and/or corrective measures has been identified, the manufacturer shall implement them

class I device post-market surveillance report

- Summary of results and conclusions of the analyses of the gathered post-market surveillance data
- Rationale and description of any preventive and corrective actions taken
- Updated when necessary and made available to the CA upon request

class IIa, IIb and III MD periodic safety update report

- Periodic safety update report
  - throughout the lifetime of the device
  - summarising the results and conclusions of the analyses of gathered post-market surveillance data
  - rationale and description of any preventive and corrective actions taken
  - conclusion of the benefit risk determination;
  - main findings of Post Market Clinical Follow-up Report
  - volume of sales, estimate of user population and usage frequency of device
  - part of the technical documentation as specified in Annexes II and Iia
- class IIb and III device report shall be updated at least annually
- Class IIa device report shall be updated when necessary and at least every two years
- Custom-made device report shall be part of the documentation referred to in Section 2 of Annex XIII
- class III or implantable device report shall be submitted through electronic system to NB
  - NB shall review the report and add its evaluation to database with details of any action taken.
  - Such reports and NB evaluation shall be available to CA through the electronic system.

Reporting of serious incidents and field safety corrective actions

- Manufacturers shall report:
  - any serious incident, except expected side-effects clearly documented
  - any field safety corrective action
- Time period for reporting shall take account of severity of serious incident
  - any serious incident
    - immediately after it has established the causal relationship with their device or that such causal relationship is reasonably possible
    - not later than 15 days after they have become aware of the serious incident
  - serious public health threat
    - immediately
    - not later than 2 days after awareness by the manufacturer of this threat
  - death or unanticipated serious deterioration in state of health
    - immediately after the manufacturer established or suspected a causal relationship between device and serious incident
    - not later than 10 elapsed days following the date of awareness of serious incident.

Trend reporting

- Manufacturers shall report any statistically significant increase in the frequency or severity of incidents
  - not serious incidents or of expected undesirable side-effects
  - significant impact on the risk-benefit analysis
  - which have led or may lead to unacceptable risks to health or safety of patients, users or other persons.
  - significant increase shall be established in comparison to the foreseeable frequency or severity of such incidents or expected undesirable
- Manufacturer shall define in the post-market surveillance plan
  - how to manage these incidents
  - methodology used for determining any statistically significant increase in the frequency or severity of these incidents
  - the observation period
- The CA may
  - conduct their own assessments on the trend reports
  - require the manufacturer to adopt appropriate measures to ensure protection of public health and patient safety
  - inform the Commission, other CA and NB, of the results of such evaluation and adoption of such measures.

Analysis of serious incidents and field safety corrective actions

- Manufacturer
  - report a serious incident
  - without delay investigate serious incident and the concerned devices.
  - risk assessment of the incident and field safety corrective action
  - co-operate with CA and NB and shall not alter the device or a sample of the batch concerned in a way which may affect any subsequent evaluation of causes of the incident prior to informing CA
  - provide a final report to the CA setting out its findings.
    - conclusions and corrective actions
  - provide all documents necessary for the risk assessment upon request by CA
- MS shall take the necessary steps to ensure that any information regarding a serious incident evaluated
  - centrally by their CA
  - with the manufacturer and NB

Analysis of serious incidents and field safety corrective actions

- CA
  - evaluate the risks arising from reported serious incidents and field safety corrective actions, taking into account protection of public health
    - causality, detectability and probability of recurrence of the problem
    - frequency of use of device, probability of occurrence and severity of harm
    - clinical benefit of device, intended and potential users, and population affected
  - evaluate the adequacy of field safety corrective action envisaged or undertaken by manufacturer and need for any other corrective action
  - monitor the manufacturer's investigation of serious incident.
  - may intervene in a manufacturer's investigation or initiate independent investigation.
  - inform the relevant CA for human tissues and cells that was consulted by NB if the serious incident or field safety corrective action may be related to the tissues or cells of human origin utilised for manufacture of the device
- After carrying out the evaluation, the evaluating CA shall inform other CA of
  - corrective action taken or envisaged by manufacturer or imposed on him to minimise the risk of recurrence of a serious incident
  - outcome of its assessment

Field safety notice

- The manufacturer shall ensure that information about the field safety corrective action taken is brought without delay to the attention of users of the device in question by means of a field safety notice.
- Field safety notice
  - Except in case of urgency, the content of the draft field safety notice shall be submitted to the evaluating CA, the coordinating CA to allow them to make comments
  - shall be edited in an official Union language or languages determined by the MS
  - allow the correct identification of the device, including the UDI, and of the manufacturer, including the SRN, that has undertaken the field safety corrective action
  - explain the reasons for field safety corrective action with reference to the device deficiency or malfunction and associated risks for patient, user or other person
  - indicate clearly all the actions to be taken by users
  - in the electronic system, accessible to the public.

Analysis of vigilance data

- The Commission shall, in collaboration with the MS, put in place systems and processes
  - proactively monitor the data available in the database
  - identify trends, patterns or signals in the data that may identify new risks or safety concerns.
- CA or coordinating CA shall inform the manufacturer or NB to take the necessary corrective actions
  - a previously unknown risk is identified
  - the frequency of an anticipated risk significantly and adversely changes the risk-benefit determination

Electronic system on vigilance and post-market surveillance

- Reports by manufacturers on serious incidents and field safety corrective actions referred to in Article 87(1) and Article 89(5);
- Periodic summary reports by manufacturers referred to in Article 87(9);
- Reports by manufacturers on trends referred to in Article 88;
- PSUR referred to in Article 86;
- Field safety notices by manufacturers referred to in Article 89(8);
- Information to be exchanged between the competent authorities of the Member States and between them and the Commission in accordance with Article 89(7) and (9).

Market surveillance activities by CA

- Perform appropriate checks on conformity characteristics and performance of devices
- Review of documentation and physical or laboratory checks on the basis of adequate samples.
  - According to established principles regarding risk assessment and risk management, vigilance data and complaints.
- Draw up annual surveillance activities plans
- Allocate a sufficient number of competent human and material resources
- Carry out activities taking into account the European market surveillance program developed by MDCG
- May require economic operators to make available documentation and information necessary for surveillance and provide necessary samples of devices or access to device free of charge
- Carry out announced and unannounced inspections of premises of economic operators, suppliers and/or subcontractors, and at the facilities of professional users
- Prepare an annual summary of the results of the surveillance activities and make it accessible to other CA

Procedure for dealing with devices presenting an unacceptable risk to health and safety

- CA without delay
  - require relevant economic operators to take all appropriate and duly justified corrective action to bring the device into compliance with those requirements,
  - to restrict the making available of the device on the market
  - to subject the making available of the device to specific requirements,
  - withdraw the device from the market, or to recall it within a reasonable period that is portionate to the nature of the risk.
  - notify the Commission, the other MS and the NB of the results of the evaluation and of the actions which they have required the economic operators to take, by means of the electronic system
- Economic operators shall without delay ensure that all appropriate corrective action is taken in respect of all the devices concerned
- Where the relevant economic operator does not take adequate corrective action within the period,
  - CA shall take all appropriate measures to prohibit or restrict device's being made available on market, to withdraw the device from market or to recall it
  - CA shall notify the Commission, the other MS and NB, without delay, of those measures, by means of electronic system

Electronic system on market surveillance

- Summaries of the results of the surveillance activities referred to in Article 93(4);
- Final inspection report referred to in Article 93(7)
- Information in relation to devices presenting an unacceptable risk to health and safety referred to in Article 95(2), (4) and (6)
- Information in relation to formal non-compliance of products referred to in Article 97(2);
- Information in relation to preventive health protection measures referred to in Article 98(2);
- Summaries of the results of the reviews and assessments of the surveillance activities of the Member States referred to in 93(8).