# Information to provide in a technical documentation Submission

# Contents

# I. Introduction

To place a medical device on the market, manufacturers shall apply the applicable conformity assessment procedures on their devices.

The guidance of technical documentation submission is aligned to the requirements of (EU) 2017/745 Medical Devices Regulation (MDR) Annex II and Annex III.

# II. Administrative Information

**1) Manufacturer name and address**

- The legal manufacturer who is placing the devices on the market.
- This shall be consistent across the device labels, instruction for use (IFU) and Declarations of conformity
- The Single Registration Number (SRN) shall be identified.

**2) EU Authorised Representative name and address**

- This shall be identified if required
- Only one EU Representative shall be identified, and this shall be consistent across the device labels, IFU and Declarations of conformity
- The Single Registration Number (SRN) shall be identified

**3) File date and issue number**

- The file status and revision history shall be provided
- Individual documents shall also indicate date, revision and status

# II. Administrative Information

**4) Applicable legislations**

- All applied regulations and / or directives for each device shall be identified
- Example: Machinery device → fulfillment of the relevant basic health and safety requirements of directive 2006/42/EC Annex I

**5) Device identification**

- A complete list of product codes shall be provided
- GMDN Code and Device Category / Generic Device Group shall be identified

**6) Device Classification**

- Device classification and rationale per MDR Annex VIII
- The rationale shall address each point of the selected classification rule. If multiple classification rules are applied, all shall be identified.
- If components of the device might be classed differently, the strictest rules resulting in the higher classification shall apply

# II. Administrative Information

**7) Related previous submissions**

- Details of any other submissions relevant to the application, including DQS MED reference number shall be provided

**8) Accessories**

- Information about any accessories (including class I) shall be provided
- Brief description of the accessories and how they are used with the device
- Classification of the accessories and rationale for classification
- Technical documentation references (file name, issue status, date)
- Any evidence shall be provided within the Technical Documentation to demonstrate compatibility of the devices with any applicable accessories

# III. Technical documentation (TD)

**1) Device description**

- To understand the design, packaging, sterilization or other characteristics
- Sufficient information to distinguish different variants of the device
- Sufficient information to distinguish the purpose of different design features
- Providing pictures and schematics wherever possible to understand the device design features and intended purpose
- The basic UDI-DI assigned by the manufacturer shall be provided as soon as device identification becomes based on a UDI system

# III. Technical documentation (TD)

**2) Intended use**

- To explain the disease conditions the device is intended to treat or monitor
- To explain the basic principles of operation (users and environment)
- To explain the intended patient population
- To explain the indications and contraindications of the device
- That include use of the device as a “medical device” as defined by MDR article 2, unless the device is a product without a medical purpose as listed in MDR Annex XVI
- Must be described consistently throughout the file (e.g. in the IFU, risk management documentation, clinical evaluation report, design requirements)
- If the application includes a change to the intended use, all sections of the file shall be reviewed for potential impact

# III. Technical documentation (TD)

**3) Market history**

- That enables an understanding of the context of device development
- Indicates the nature and timing of any changes and that any associated documents (i.e. risk analyses, labelling, clinical evaluation report, verification/ validation data, etc.) account for these changes
- Provide evidence to demonstrate that DQS MED has been notified of all significant changes ( if applicable)
- If the device is new and has never been marketed by the manufacturer anywhere in the world, please state this explicitly

# III. Technical documentation (TD)

**4) Sale, complaints and vigilance**

- Data of the last 5 years of the device shall be provided, if available
- Sales and complaints data shall include sales outside of the EU. A breakdown shall be provided to enable evaluation of sales and complaints by region
- Complaints data shall be evaluated than just listed(e.g. why is the complaint rate is considered to be acceptable?)
- Full details of vigilance issues shall be provided, including the status of any Field Safety Corrective Actions or Notices. This data shall include FSCA or FSN outside the EU, if related to a device which is sold in the EU

**5) Draft declaration of conformity**

- The EU Declaration of conformity shall include all of the information listed in MDR Annex IV

# III. Technical documentation (TD)

**6) Technical standards and Common Specifications**

- All Common Specifications (CS) and relevant standards (harmonized and product specific), both harmonized and product specific shall be considered (list of applicable standards and CS)
- When identifying applicable standards or CS, claimed compliance (full or partial) shall be indicated
- Not applied and full applied key standards or CS shall be justified and provided in the TD
- Gap and Risk Analyses of General Safety & Performance Requirements (SPRs, Annex I), and conclusion of acceptability of any compliance gaps shall be provided
- Indication of any changes to applicable standards or CS since the last review by DQS MED.
- Continually demonstrating that the files meet the state of the art, including consideration of revised or replaced standards or CS.

# III. Technical documentation (TD)

**7) General Safety & Performance Requirements (SPRs)**

- Demonstration of conformity with applicable SPRs of Annex I (required by MDR Annex II Section 4)
- SPRs that apply and do not apply to the device shall be provided and explained
- Methods that demonstrate conformity with each applicable SPR shall be provided
- Harmonized standards, CS or other solutions applied shall be provided
- Precise identity of the controlled documents offering evidence of conformity with harmonized standards, CS or other methods that demonstrated conformity with the SPR shall be provided.
- Precise identity of the controlled documents shall include a cross-reference to the location of that document within the full TD and summary TD
- The more specific the references are to the documents supporting compliance, the faster the review can be conducted ( Checklist against the SPRs)

# III. Technical documentation (TD)

**8) Manufacturing process and subcontractors**

- A detailed overview of the manufacturing processes shall be provided. This shall clearly identify any special or proprietary processes, and any subcontracted processes.
- The name and address of any critical subcontractor or crucial supplier (as per Commission Recommendation 2013/473/EU) shall be identified, along with the service or material supplied by each
- If new critical subcontractors are used, provide copies of their ISO 13485 certificates. If a critical subcontractor does not have an ISO 13485 certificate from a notified Body, additional supplier audits may need to be arranged.
- Validation documents for processes that can affect final product quality shall be provided

# III. Technical documentation (TD)

**9) User information**

- Labels, IFU, patient implant cards (for implantable devices), surgical manuals, brochures, etc. shall be included in the documents
- Versions of all labels shall be provided and shall represent the final form
- Information concerning labelling in only English is sufficient (Any translation plan shall be indicated)
- Drawings with the packaging configuration (labels placement and specifications) shall be provided if possible
- Labels position on the finished product shall be clear
- Labels for sterile package shall be clearly identified
- Printed information on the packaging for the user shall be provided
- It shall be defined how the labelling documents are controlled
- Supporting evidence for any claims (labelling , marketing) shall be provided
- Any specific requirements of relevant harmonized standards or CS are addressed in the labels and IFU (electronic IFU compliance with Regulation 207/2012)

# III. Technical documentation (TD)

**10) Design verification and validation**

- Design specifications for each device shall be documented (key functional characteristic and technical performance specifications), with verification / validation tests
- Design requirements shall be identified in accordance with the intended use, SPRs, risk assessments and relevant harmonized standards or CS
- Source of Design requirements shall be indicated
- Compliance to harmonized standards is expected
- Testing beyond the required standards may be necessary to prove the compliance of the device with SPRs
- Design requirements shall be mapped for the intended use, risks and performance
- Strategy of documentation, summary of the outcomes, results for each design requirements, and appropriate rationale of demonstrated compliance without testing shall be provided

# III. Technical documentation (TD)

- Test reports shall document objectives, acceptance criteria, materials & methods, results, protocol deviations, and conclusions
- Undertaken testing on prototypes, devices that do not represent the finished goods or on representative group of devices shall be justified
- Flow chart or table in case of multiple studies shall be provided ( study that ultimately demonstrate a better compliance shall be highlighted)
- Leverage data from tested existing devices for line extensions of devices is possible. A rationale for the use of existing device shall be provided (equivalence to the comparative device; Table showing the similarities and differences)
- An evaluation of the impact of any differences shall not represent a worst case in terms of testing as compared to the devices tested

# III. Technical documentation (TD)

**11) Risk management**

- Design and Process Risk Management assessment shall be conducted for the entire life-cycle of the device
- The risk management documentation shall indicate whether controls have reduced all risks as low as possible
- Assessment must demonstrate that the benefits outweigh all the residual risks
- The analyses must demonstrate that appropriate controls are applied to all risks
- IFU reduce occurrence of some risk but not the residuals. Appropriate use and quantification of risk control measures shall be assessed
- A copy of Risk Management Procedures that include the definition of any rating system used for risk analysis and risk acceptability shall be provided
- Pre-existing risk management documentation is applicable for line extensions and devices based on existing devices, with a summary to demonstrate that risks associated with small changes have been considered
- Guidance on Risk management process (EN ISO 14971)

# III. Technical documentation (TD)

## 12) Clinical evaluation

- Required for all medical devices
- Pre-market clinical investigation required for devices without suitable equivalence and / or insufficient data in the literature
- Pre-market clinical investigation for Class III and implantable IIb is required unless:
  - Equivalence with another of the manufacture's own devices (sufficient clinical data and conformity with the relevant SPRs)
  - Equivalence to already marketed device of another manufacturer (access to their TD is allowed by a placed contract)
  - For listed device types or to a device lawfully marketed or into service per MDD or AIMDD (clinical evaluation based on sufficient clinical data and is compiled with relevant CS)
- It is useful to provide a copy of the procedure for conducting clinical evaluation
- Representative clinical data must be provided for all indications and variants (that one group of data represents another must be clearly justified)

# III. Technical documentation (TD)

- If a clinical investigation data is not available and the clinical evaluation relies on a justification of equivalent comparative device, the justification must identify and discuss the potential clinical impact (intended use, technical or biological factor (MDR Annex XIV Sec 3.))
- By conducting a clinical investigation ensure that:
  - Appropriate documentation (CIP, evidence of Ethics approval, final report etc.) is provided
  - The final clinical trial protocol agrees with that submitted to the competent Authority, and evidence that any deviations have been agreed with the CA has been provided
  - Final report proves that requirements for all safety and performance endpoints are done
  - No open clinical investigations related to safety or performance claims
- Substantiated qualifications conducting the clinical evaluation must be justified
- Annex XIV and XV describe clinical evaluation and clinical investigations, respectively. Guidance is also available in EN-ISO 14155 clinical investigation of medical devices for human subjects – Good clinical practice

# III. Technical documentation (TD)

**13) Summary of Safety and Clinical Performance (SSCP)**

- For class III and implantable devices other than custom-made or investigational devices, an SSCP per article 32 must be provided in the TD
- Must be clear and understandable for the user and patient
- shall contain all of the elements in MDR article 32, Section 2
- The commission may define a form and presentation of data. Manufacturers shall review requirements at the time of document preparation and submission
- shall be updated annually (article 61) over the lifetime of the device. These updates shall be defined in the post-market surveillance plan

# III. Technical documentation (TD)

**14) Post-market surveillance (PMS) and Post-market clinical follow-up (PMCF)**

- PMS plan commensurate with product risk, life time, and available clinical data shall be provided for each device or device family
- PMS plan shall justify the monitoring of the safety and intended performance
- If PMCF is not part of PMS plan, adequate justification shall be provided, based on the risk and clinical data
- A copy of PMS procedure shall be provided (Procedure is not same as Plan)
- Procedure refers to the manufacturers QS requirements
- Plan refers to the subject device (generated from data of clinical and risk evaluation)
- A periodic review of results from completed PMCF studies could be required from the Notified Body

# III. Technical documentation (TD)

**15) Periodic Safety Update Report (PSUR)**

- For class III, IIb and IIa devices a PSUR must be prepared. Summarizing results and conclusions of PMS data analysis as a result of the PMS plan
- Shall contain the elements outlined in MDR article 86
- For class III and IIb, the PSUR shall be at least updated annually
- For class IIa the PSUR shall be updated when necessary (at least every two years)
- For class III or implantable device, the PSUR shall be submitted to the Notified Body. For other devices, the PSURs shall be made available to the Notified Body or to competent authorities upon request

# III. Technical documentation (TD)

**16) Biological safety**

- Biological safety assessments shall be in accordance with ISO 10993-1
- Evidence of compliance for the finished device shall be included for the biocompatibility assessments
- An assessment which takes into account the impact of manufacturing and sterilization processes, intended use, etc. must be provided
- Nature and duration of body contact for each component shall be categorized in the assessment
- Any test that could be required to prove evidence of compatibility shall be identified
- Qualifications of those involved in planning, executing, and analyzing the biocompatibility assessment shall be justified and provided
- The presence of CMR substances of category 1A or 1B, or endocrine-disrupting properties for any device must be justified. Specific labelling requirements must be met for these substances (SPR 10.4.5)

# III. Technical documentation (TD)

## 17) Sterilisation validation

- Appropriate rationales are required if sterilisation validation is by adoption of an existing family or sterilisation validation
- Devices for End-User-Sterilization also require review of cleaning and sterilisation validation / adoption with respect to parameters recommended in the IFU
- Documents shall describe:
  - Use of “State of the art” process validation methods
  - The bioburden controls and monitoring
  - The product qualification (Dose verification, BI suitability testing, SAL calculations)
  - The process qualification (performance qualification, Dose MAP, BI inactivation)
  - Additional guidance relating to specific documents types shall be provided:
    - Sterilisation Validation – Radiation
    - Sterilisation Validation Ethylene Oxide
    - End User sterilisation Product documentation
- Validation report for the cleaning parameters listed in the IFU

# III. Technical documentation (TD)

**18) Packaging**

- Transit endurance and shelf life stability shall be tested
- Shall be in accordance with relevant standards
- Packaging BoM and diagrams, that illustrate how each device is packaged shall be provided
- If not all packaging configurations / device combinations are tested, a rationale based on worst case shall be provided
- Any change is significant. For class III and IIb implantable devices, these shall be reported to the Notified Body for review and certificate re-issue.

# III. Technical documentation (TD)

## 19) Shelf life and stability testing

- Shelf life is the time the device can be kept in the packaging prior to use
- Shelf life is not the same as “lifetime”
- The device itself shall be subject to shelf life testing
- If shelf life testing is based on accelerated age testing, this shall be accompanied by a plan for real time testing.
- Real time testing is the time until the documentation is submitted for review
- Extensions to shelf life for class III and IIb implantable devices shall be reported for a review and re-issue
- Shelf life validation shall include
  - Protocol and appropriate test references
  - A clear statement of the intended shelf life
  - A clear statement defining the sterilisation status of the test samples (1X, 2X sterlised)
  - A summary of the accelerated aging parameters and how the aging time were calculated
  - A statement covering Real time Aging plans
  - A clear delineation of statistically significant sample quantities
  - Actual physical/ microbiological test date reports supporting the expiration date, or post aging, claim
  - A summary of the testing/ transit simulation testing conducted and applicable test reports

# III. Technical documentation (TD)

**20) Product lifetime**

- The life time shall be defined, and considered relative to other parts of the dossier (risk management, clinical evaluation, PMS)
- Product life is the time from first use until the device ceases to fulfil its intended use

**21) Human,** animal **and Biologically derived substances**

- If the device utilizes, or is used in conjunction with any human or animal based product or other non-viable biological substances, these shall be indicated in the submission
- The use of any such substances shall be requested from manufacturing subcontractors and provided
- Additional European Directives / regulations could be required, if human or animal derived substances are incorporated
- Additional review resources, including external independent reviewers for the Evaluation of medicinal product (EMA) could be required

# III. Technical documentation (TD)

**22) Medicinal substances and substances absorbed or locally dispersed**

- If the device utilizes, or is used in conjunction with, any medicinal substances or substances absorbed by or locally dispersed in the human body, these shall be indicated in the submission
- Additional European Directives / regulations could be required, if devices are incorporating with medicinal substances or substances absorbed or locally dispersed
- Additional review resources, including external independent reviewers for the Evaluation of medicinal product (EMA) could be required

# III. Technical documentation (TD)

**23) Software**

- If the devices are either stand-alone software or rely upon software, appropriate documentation is required
- For stand-alone software, guidance for the qualification and classification can be found in MEDDEV
- A rational shall be provided, to prove that the software is a medical device
- The software could be broken down into modules:
  - Some with medical purpose, that must comply with the requirements of a medical device directive
  - And non-medical devices modules are not subject to the requirements of a medical device

- All relevant harmonised, non-harmonised software standards shall be considered
- The systems/modules and items have been assigned safety classifications based on standards

# III. Technical documentation (TD)

- Documentation of the medical device software life-cycle shall be provided (design, development, maintenance/ change management etc.)
- Software development and maintenance process documentation shall be provided (some documentation may not be required as per some based on standards)
- Software risk assessment documentation shall be provided
- If a software is supposed to be mobile, information on specific features shall be included

# IV. Reference Documents

**1) Change Reporting**

- NBOG´s Best Practice Guide 2014-3, “Guidance for manufacturers and Notified Bodies on reporting of Design Changes and Changes of the Quality of the Quality System”

http://doks.nbog.eu/Doks/NBOG_BPG_2014_3.PDF

http://www.team-nb.org//wp-content/uploads/2015/05/nbmeddocuments/Approved_NB-MED_2_5_2_rec_2_november_2008.pdf

**2) Regulatory Guidance Organisations**

- EC Commission MEDDEV Guidance – various topics

http://ec.europa.eu/growth/sectors/medical-devices/guidance_en

- International Medical Device Regulators Forum (IMDRF) – various topics, access to all GHTF final documents

http://www.imdrf.org/

- NB-MED Guidance – various topics

http://www.team-nb.org/

- GMDN Agency – medical device nomenclature/generic device groups per ISO 15225

www.gmdnagency.com

**3) Specific Topic Guidance**

3.1) Quality management Systems Guidance

- EN-ISO 13485 – Medical devices – Quality management systems – Requirements for regulatory purposes

3.2) Risk Management Guidance

- EN-ISO 14971 – Medical devices – Application of risk management to medical devices

# IV. Reference Documents

3.3) Clinical Evaluation Guidance

- EN-ISO 14155 – Clinical investigation of medical devices for human subjects – Good clinical practice

- Clinical evaluation: Guide for manufacturers and Notified Bodies – MEDDEV 2.7.1

http://ec.Europa.eu/DocsRoom/documents/17522/attachments/1/translations/en/renditions/pdf
http://www.imdrf.org/docs/ghtf/final/sg5/technical-docs/ghtf-sg5-n2r8-2007-clinical-evaluation-070501.pdf

3.4) Biological Safety

- EN-ISO 10993-1 – Biological evaluation of medical devices – Part 1: Evaluation and testing within a risk management process

3.5) PMCF Guidance

- MEDDEV 2.12-2 – Post Market Clinical Follow Up Studies

http://ec.Europa.eu/DocsRoom/documents/10334/attachments/1/translations/en/renditions/pdf

3.6) Standards

- EU Harmonised Standards

http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/medical-devices/

- ISO Online Standards

http://www.iso.org/iso/home/standards.htm

- ASTM Standards

http://www.astm.org/Standards/medical-device-and-implant-standards.html
http://www.astm.org/TRACKER/filtrexx40.cgi?index.frm
https://www.din.de/de

# IV. Reference Documents

3.7) Shelf-Life

- ICH Guidelines Q Series

http://www.ich.org/products/guidelines/quality/article/quality-guidelines.html

3.8) Software Guidance

- MEDDEV 2.1/6 – Guidelines on the Qualification and Classification of Stand Alone Software Used in Healthcare Within the Regulatory Framework of Medical Devices

https://ec.Europa.eu/docsroom/documents/17921/attachments/1/translations/en/renditions/pdf

3.9) Guidance on devices incorporating ancillary medicinal substances or ancillary human blood derivatives

- EMA/CHMP/578661/2010 - EMA recommendation on the procedural aspects and dossier requirements for the consultation to the EMA by a notified body on an ancillary medicinal substance or an ancillary human blood derivate incorporated in a medical device or active implantable medical device

http://www.ema.europa.eu/ema/index.jsp?curl=pages/regulation/general/general_content_000523.jsp&mid=WC0b01ac058800267b9