Designing and Implementing a Regulatory Programme for Medical Devices

Elements of Regulatory Systems

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Global Harmonization Task Force 1

- The Global Harmonization Task Force (GHTF) was established in 1992 to identify common elements of the medical devices regulatory systems operating in Australia, Canada, the European Union, Japan & the USA.
- Objective: to encourage convergence of existing medical device regulations & publish regulatory guidance documents for use by ‘new-entrants’.

Global Harmonization Task Force 2

- Structure: a self-funding organisation with equal participation from regulators and industry of the Founding Member jurisdictions (eventually included Asian Harmonization Working Party).
- Method: appointed 5 Study Groups to undertake the work under the direction of a Steering Committee.
- Outcome: guidance documents archived and maintained at http://www.imdrf.org. Together they specify a regulatory system that may be applied by an experienced and well-resourced Regulatory Authority (RA) with a substantial medical devices industry.

Key Findings 1

- Each GHTF Founding Member has legislation that stipulates requirements for manufacturers of medical devices (including IVD devices). The regulations are updated periodically to implement improvements and to accommodate new technology. Their aims and purpose are broadly similar, thereby allowing the GHTF to identify common features.
- Each regulation seeks to ensure that only medical devices that are safe, designed & manufactured to a high quality, and perform as intended during their lifetime, are authorized to be placed on the market.

GHTF Guidance Documents

- Premarket procedures (primarily prepared by Study Group 1).
  - Clinical safety and performance (Study Group 5).
  - Quality system requirements (Study Group 3).
- Post-marketing procedures (primarily prepared by Study Group 2).
  - Quality system auditing practices (Study Group 4).

Key Findings 2

- All Founding Members have an experienced Regulatory Authority (RA) to provide oversight of their regulation.
- Some regulations (e.g. Europe) include requirements for the RA to appoint independent Conformity Assessment Bodies (CABs) to carry out designated tasks, under its control and oversight.

Common Elements / Pre-Market 1

- The ‘legal manufacturer’ is responsible for ensuring its medical devices meet all relevant requirements of the regulation and, when satisfied, issuing a ‘Declaration of Conformity’.
- All medical devices, including IVD devices, are allocated into a ‘risk category’ using either a set of classification ‘rules’ or the decision of an expert committee. Conformity assessment requirements become more stringent as the risk classification increases.

Common Elements / Pre-Market 2

- Fundamental design, manufacturing and labelling requirements are specified, that, when met, indicate a medical device is safe and performs to its specification.
- Manufacturers are required to hold technical documentation for each medical device type to demonstrate the device conforms to the requirements of the regulation. Such documentation shall include a risk assessment and an evaluation (but not necessarily clinical testing) of performance in a clinical setting. For IVD assay's, studies to establish analytical sensitivity & specificity are required.
- Manufacturers are required to design & manufacture devices under the control of a quality management system (QMS).

Common Elements / IVD Devices

- The manufacturer is required to provide evidence of the device's ability to yield results that are correlated with a particular clinical condition/physiological state in accordance with target population and intended user. In this respect the risks and benefits of IVD devices are related to impact on patient management rather than direct contact between the device and the patient.
- The regulation stipulates how the manufacturer will demonstrate scientific validity and analytical performance of the IVD device, and specifies the structure & procedures that must be followed during clinical performance studies.

Common Elements / Regulatory Auditing

- Those involved in conformity assessment evaluations shall
  - have knowledge of the country's regulatory requirements, of quality management systems and, when undertaking technical document review, experience of the specific device type;
  - be impartial and free from engagements and influences which could affect their objectivity.
- While retaining the responsibilities placed upon it by the country's medical devices regulation, the RA may delegate one or more of its QMS auditing, or technical documentation review, activities to a CAB.
  - the RA shall designate and monitor the performance of any CAB that acts upon its behalf.

Common Elements / QMS

- The regulations of GHTF Founding Member jurisdictions all require medical device manufacturers to apply and maintain an effective quality management system (QMS).
- The actual QMS procedures applied, depend on the complexity of the manufacturer's devices, the manufacturing processes it utilizes, and the size and complexity of its manufacturing sites.
- Auditing requirements are linked to the risk classification of the devices within its control.
- Details of relevant QMS procedures will be provided on Day 2 of this Workshop.

Common Elements / Post-Marketing

- Post-marketing controls complement premarketing procedures and are vital to achieving the objective of safeguarding public health as it relates to medical devices.
- Details of the procedures that may be applied will be provided on Day 3 of this Workshop.

Implication for other Countries 1

- In practice, rather than using country-specific regulations comparable to those adopted in the GHTF Founding Member countries, many countries import a majority of medical devices that comply already with the regulations of one or more of the a GHTF Founding Member countries.
- This approach ‘levers’ the experience and expertise available in the Founding Member RA, thereby simplifying the controls necessary within the importing country.
- The local RA is able to rely on the Founding Member RA providing regulatory oversight of the manufacturer during the pre-marketing phase, thereby helping to ensure medical devices are safe, of high quality and perform as intended during their lifetime.

Implication for other Countries 2

- The importing country needs to plan, implement and maintain a realistic regulatory strategy that will safeguard public health as it has applies to chosen categories of medical device.
- The strategy shall include a vision, a step-by-step timeline, budget and staffing requirements, to be agreed and supported by Ministers.
- Where countries already cooperate with their ‘neighbours’, the possibility of adopting a ‘regional approach’ should be investigated.

Key Decisions for the Importing Country

- To agree that the primary purpose of regulating medical devices is to protect public health.
- Recommend to the country's 'opinion formers' (e.g. Ministers), a medical devices strategy and timeline to achieve this purpose.
- Negotiate a budget sufficient to fund a medical devices RA in the long term.
- Agree the reporting structure of the medical devices RA.
- Establish the extent to which IT systems may be utilised by the RA and other relevant parties.

Devising a Strategy

- Agree definitions.
  - one option is to adopt the definitions used in GHTF guidance documents (see Saudi Arabia regulation).
- Agree the scope of the controls or regulations.
  - will they apply to all medical devices, a selection of medical devices, or only to IVD devices?
  - will they apply to all imported devices or to only those used in public hospitals?
- Plan to introduce regulatory procedures in a ‘step-by-step’ manner as the RA’s experience and resources permit.

Marketing Authorization 1

- Require the manufacturer to declare formally that its device complies with the medical devices regulation of the importing country (i.e. Declaration of Conformity).
- Identify the documentation the manufacturer/ distributor must submit to validate its declaration of conformity. Review as necessary.
- Link marketing authorization controls to device procurement procedures.

Marketing Authorization 2

- Establish a procedure for authorizing medical devices that may be imported into the local market.
  - option 1: authorize only devices that comply already with the medical devices regulation of a GHTF Founding Member country (re. Saudi Arabia regulation).
  - option 2: authorize only devices that comply already with the medical devices regulation of one or more particular countries.
- Decide whether additional national requirements are required (e.g. language of labelling and/or extreme environmental conditions and/or non-standard a/c power requirements).

Post-Marketing Controls 1

- While an overseas RA has established and provided oversight of the manufacturer's pre-marketing procedures, public health in the importing country is safeguarded by the local RA's pre- & post-marketing controls.
- Basic controls include:
  - a method to prevent unsafe medical devices being used by healthcare facilities, and also prevent further examples of such devices being placed on the market.
  - a procedure for the RA to alert healthcare facilities and device users of unsafe medical devices.
  - a procedure for recording, and subsequently monitoring, any adverse incident that has occurred within the country, where a patient or user has died or been seriously injured.

Post-Marketing Controls 2

- Controls requiring more resource and expertise within the local RA include:
  - require organisations in the ‘supply chain’, i.e. authorized representatives/local agents, importers and distributors to be registered with the RA.
  - together with the manufacturer, investigate any adverse incident that has occurred within the country, where a patient or user has died or been seriously injured, or an IVD has produced erroneous results which can pose significant risks to patient or public health (e.g. an unexpected rate of false positive or false negative or erroneous results).
  - require manufacturers to report any Field Safety Corrective Actions that involve medical devices in use within the country to the local RA, and subsequently monitor their implementation.

Post-Marketing Controls 3

- More advanced controls include:
  - require organisations in the ‘supply chain’ to be licensed by the local RA (refer to the procedures established within the Kingdom of Saudi Arabia to better understand the purpose of licensing - http://www.sfda.gov.sa).
  - network with leading overseas RAs for the purpose of identifying adverse incidents that have occurred within overseas countries that have implications for the local RA …. and join the National Competent Authority Report Exchange Programme (http://www.imdrf.org).

Summary

- First introduce simple controls applying specifically to the medical devices that are within the scope of the regulatory strategy. These will establish fundamental principles.
- First concentrate on post-marketing activities, relying upon the RA in the exporting country to oversee the manufacturer's premarketing procedures.
- Provide an adequate number of staff to maintain the necessary procedures. Unless the regulatory controls are 'policed' meticulously, the whole strategy will loose credibility. In particular, do not publish complicated legislation where the RA has neither the experience or resource to apply it.
- When experience of NRA staff improves and resources increase, amend the regulation to extend the controls.
- Network …… network ……. network.

Thank You