

# **Monitoring Device Interfacing Standards, Communication and Integration with Electronic Medical Records**

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This paper considers existing and emerging information technology standards that are of relevance to the collection, storage and use of data from healthcare devices. The following topics are considered:

- Overview of communication between healthcare devices and Anaesthesia Information Management (AIM) systems: issues and potential solutions
- Modelling of the healthcare device domain with specific reference to the ISO 11073 Domain Information Model (DIM)
- Nomenclatures used to describe vital signs and other parameters including the IOTA term set, SNOMED CT and the ISO 11073 nomenclature standard
- Persistent storage and representation of data collected from medical devices using the HL7 V3 Clinical Document Architecture

It is argued that AIM systems represent a valuable source of information that could potentially be used to improve outcomes. However, this requires agreed semantics founded upon appropriate international standards. Although the emphasis is on standards that have direct relevance for the storage and communication of anaesthetic data, the broader standards 'landscape' is also briefly reviewed.