INTERNATIONAL STANDARD

ISO/IEEE 11073-10419

Second edition
2019-03

Health informatics — Personal health device communication —

Part 10419: Device specialization — Insulin pump

Informatique de santé — Communication entre dispositifs de santé personnels —
Partie 10419: Spécialisation des dispositifs — Pompe à insuline

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This second edition cancels and replaces the first edition (ISO 11073-10419:2016), which has been technically revised.

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Abstract: Within the context of the ISO/IEEE 11073 family of standards for device communication, a normative definition of communication between personal telehealth insulin pump devices and compute engines (e.g., cell phones, personal computers, personal health appliances, set top boxes), in a manner that enables plug-and-play interoperability, is established in this standard. It leverages appropriate portions of existing standards including ISO/IEEE 11073 terminology, information models, application profile standards, and transport standards. It specifies the use of specific term codes, formats, and behaviors in telehealth environments restricting optionality in base frameworks in favor of interoperability. The standard defines a common core of communication functionality for personal telehealth insulin pump devices.

Keywords: IEEE 11073-10419™, insulin pump, medical device communication, personal health devices

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Introduction

This introduction is not part of IEEE Std 11073-10419-2017, Health informatics—Personal health device communication—Part 10419: Device Specialization—Insulin Pump.

ISO/IEEE 11073 standards enable communication between medical devices and external computer systems. This document uses the optimized framework created in ISO/IEEE 11073-20601:2016 and describes a specific, interoperable communication approach for insulin pumps.[1] These standards align with, and draw on, the existing clinically focused standards to provide support for communication of data from clinical or personal health devices (PHDs).

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[1]Information on references can be found in Clause 2.

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Health informatics—Personal health device communication

Part 10419: Device Specialization—Insulin Pump

1. Overview

1.1 Scope

This standard establishes a normative definition of communication between personal telehealth insulin pump devices (agents) and managers (e.g., cell phones, personal computers, personal health appliances, set top boxes) in a manner that enables plug-and-play interoperability. It leverages work done in other ISO/IEEE 11073 standards including existing terminology, information profiles, application profile standards, and transport standards. It specifies the use of specific term codes, formats, and behaviors in telehealth environments, restricting optionality in base frameworks in favor of interoperability. This standard defines a common core functionality of personal telehealth insulin pump devices.

In the context of personal health devices (PHDs), an insulin pump is a medical device used for the administration of insulin in the treatment of diabetes mellitus, also known as continuous subcutaneous insulin infusion (CSII) therapy.

This standard provides the data modeling according to ISO/IEEE 11073-20601 and does not specify the measurement method.

1.2 Purpose

This standard addresses the need for an openly defined, independent standard that supports information exchange to and from PHDs and compute engines (e.g., cell phones, personal computers, personal health appliances, set top boxes). Interoperability is key to growing the potential market for these devices and to enabling people to be better informed participants in the management of their health.

1.3 Context

See ISO/IEEE 11073-20601:2016 for an overview of the environment within which this standard is written.[2]

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