ISBT Working Party on IT
Instrument to BECS Interface Task Force Project
Executive Summary

Background

Blood centres use computerised software applications to meet operational requirements for recruiting donors, collecting donations, and the testing, storing, labeling and distributing of blood components. Software used for one or more of these purposes is known as BECS (Blood Establishment Computer Software). Blood establishments also use several specialty instruments that measure, among other things, test results, blood pressure, hemoglobin, weight, height, temperature, and pulse that have digital output capability. However, the absence of a standard protocol for device communications limits the utility of some devices.   In those limited circumstances where interfaces exist, they are highly customized and often the protocol is dictated by the individual instrument manufacturer.   This increases cost, risk and validation effort for both blood establishments and suppliers.

It is not feasible for every BECS or every blood center to develop separate data processing abilities for every conceivable device input. Conversely, the burden for individual device manufacturers precludes the development of interfaces according to unique specifications of each BECS manufacturer or the blood center. Other initiatives to standardise communication protocols tend to focus on core laboratory operations and equipment or the integration of the laboratory in the overall healthcare environment. These initiatives do not account for the unique workflow and devices found in blood centres.

ISBT, through its Working Party on IT, is working to develop a standard protocol that will define how devices shall communicate with BECS.

Objective

The objective of the Instrument-to-BECS working party is to develop and publish an interface protocol that is adaptable to BECS systems and the various instruments which can be interfaced to a BECS system. A universal interface must be simple and flexible, yet concise, and it must provide a way of linking any data from an instrument to the correct donation.

The successful development of a standard interface will:
1. Reduce interface cost, risk, and validation effort for blood establishments
2. Provide suppliers with standard expectations for interface communications

Our Approach

- **Method --** The Interface Task Force has developed a new approach using transfusion specific coding system tables to provide an enhanced level of standardization that can be used within existing standards (HL7 and LIS2). The aim is NOT to redevelop these standards, but instead to standardize a vocabulary within these standards that will ensure critical data fields (mainly instrument identifiers and observations) are transmitted in a tightly defined format that allows a generic interface to correctly receive and interpret this information.

- **Timelines –** The ISBT WPIT hope to have a standardized vocabulary for two groups of instruments as below:
  - ➢ Blood collection mixer/shakers – used during the donation collection process – by the end of June 2014
  - ➢ Viral Testing Analysers – used by blood establishment testing facilities – by the end of December 2014
  - ➢ Timelines for other instrument categories will be published as they become known

- **Transition to The New Standard –** the ISBT WPIT understands that the transition to new interface standard and vocabulary cannot be achieved overnight. Blood establishments would incur significant costs and validation effort if suppliers issued new versions of their software/firmware that required changes to existing interfaces. For this reason, the ISBT WPIT will suggest that suppliers continue to offer their legacy interface format as well as the new interface format for a reasonable period so that a phased transition can take place. The ISBT WPIT is open to any suggestions that will ease the transition for both blood establishments and suppliers.

Adoption of the New Standard

To help encourage the use of this standard interface and take advantage of the benefits it will bring the Interface taskforce have created a form of words, to be inserted in Transfusion Service Tender Requirements documentation, to declare intention and support for the development and use of the standard. The wording shown below is currently being adopted by Transfusion Services involved in instrument managed service contract tender exercises. The Interface Taskforce would like to make this wording (below) available and encourage use by all Transfusion Services.

"The International Society of Blood Transfusion is developing a standard data transfer interface for use in transfusion medicine based on HL7 and LIS2 messaging protocols. Bidders should demonstrate their knowledge of this standard development activity and show how they plan to provide compatibility with this standard once adopted. "

How You Can Help

The Interface Taskforce invites all relevant vendor members to fully engage with the Interface Taskforce throughout the process of preparing the Standard Interface Definition. To register your interest in participation or for further information on this activity contact any of the Taskforce members below:

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