Alberta
HEALTH AND WELLNESS

HEALTH INFORMATION STANDARDS DEVELOPMENT PROCESS

PART I – HISCA PROCESS

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DOCUMENT HISTORY

Revision History

Date of this revision: March 31, 2005	**Date of next revision:**

Revision Number	Revision Date	Summary of Changes
Draft	March 31, 2005	Original Draft Document
Draft	April 7, 2005	Changes incorporated as requested by Heather Cooper.
Draft	April 8, 2005	Final changes incorporated from meeting with Mark Brisson and Heather Cooper.
V4.0	October 12, 2005	Changes incorporated as provided by Information Management. Changes incorporated as provided by HISCA Committee members. Changes incorporated as provided by Health Information Standards group.

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Introduction

Preparing and submitting standards to Health Information Standards Committee for Alberta (HISCA), must follow a prescribed and consistent process. Whether the project submitting data or messaging standards, the requirements and process to submit need to be clearly communicated up front to put as few responsibilities on the project team as possible**,** and allow for a decisive response from HISCA to the standards submitted. This document describes the requirements to prepare a standards *submission* to HISCA as well as the status progression of a *submission*.

There are four different chapters related to the development of Health Information Standards for the Province of Alberta:

Part I – HISCA Process
Part II - Data Standards
Part III – Messaging Standards
Part IV – Vocabulary/Terminology Standards

This document describes the HISCA process only. Words that are italicized are defined in the glossary.

Background

Health Information Standards Committee for Alberta (HISCA)

The Health Information Standards Committee for Alberta (HISCA) oversees and coordinates the development, adoption, and dissemination of approved health data, messaging, vocabulary and IHE profiles standards within Alberta. The committee consists of 11 individuals and one physician representing:

- Health Regions;
- Alberta Association of Registered Nurses;
- Alberta Mental Health Board;
- Health Information Management Association of Alberta;
- Canadian Institute for Health Information;
- College of Physicians and Surgeons of Alberta and
- Alberta Health and Wellness.

The committee ensures that these standards align with approved provincial reporting requirements, as well as with provincial, national and international standards. The committee fulfills these responsibilities through a process of collaboration and consensus building with stakeholders. HISCA recommends standards for approval to the Chief Information Officer of Alberta Health and Wellness.

Audience

This document is intended for use by a project team or other interested stakeholder**s** who will be developing, adopting, or implementing health information and technology standards within Alberta's health system. These may include but are not limited to the Regional Health Authorities, Alberta Health and Wellness employees and affiliates, and systems development projects in Alberta's health system.

Definition of Standards

The term "standard" is used so frequently that the meaning can become obscure, particularly as the term can be used in relation to such diverse topics such as procedures, products, scales of measurement and data formats. The term "standard" is also used to imply quality and content**.** For the purposes of this document **a standard is defined as a commonly agreed-upon manner of collecting, maintaining, or exchanging health information.**

Types of Standards

Standards for the purpose of this document are classified into the following general categories.

Data Standards give clear descriptions of essential data elements and the standardization of field parameters: field length, data type, and content. Data standards promote the consistent recording of information and are fundamental to the efficient exchange of information. They provide the rules for structuring information, so that the data entered into a system can be reliably read, sorted, indexed, retrieved and communicated between systems. The most common type of data standards submitted to HISCA are business specific data sets that define the minimum number of data elements required to provide the greatest functionality to a business area and to facilitate the exchange of information between a maximum number of users.

Some examples of opportunities for data standardization include:

- Development of a new application
- Redevelopment/modification of an existing application
- Collaborative opportunities
- Capture of new data or reporting requirement
- Data quality assessment outcomes
- Development of a data submission guideline and
- Changes to legislation or direction in the health system.

Messaging Standards are standards for the exchange, management and integration of data that support clinical patient care and the management, delivery and evaluation of healthcare services to provide interoperability between healthcare information systems.

Vocabulary/Terminology establishes common definitions for medical coding schemes to encourage consistent descriptions for an individual's medical condition by all health service providers. The use of standard vocabulary terms and codes for the same condition or intervention/procedure will facilitate in reliable and consistent data. HISCA currently endorses vocabulary standards such as the Canadian Classification of Health Interventions (CCI) coding system and the International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10-CA). Vocabulary Standards are not presented to HISCA.

Principle of Reusability

Support is required for the design, sharing and reuse of common standards, and application modules or components across initiatives and projects. The driving force in support of reusability includes:

- Reuse increases leverage of investment;
- Reduced time to deliver IT solutions;
- Flexibility and response is increased by having to make changes only in one area;
- Increase interconnectivity, consistency, share-ability and accessibility of data;
- Allows for global integration.

HISCA Evaluation Criteria

In order for a standard be approved by HISCA, the following evaluation criteria must be met:

- Must be implemented in a production environment
- Standards were developed by the business
- Due diligence has been conducted on the proposed standard
- Stakeholder consensus for approval
- Stable and Sustainable over a period of time
- Demonstrated conformance and compliance to the applicable Standard Organizations (e.g. HISCA, VCUR, HL7, UML, LOINC, ICD-10-CA/CCI) or to their standards

Standards Definition and Approval Process

Standards are accepted by passing through the steps of a four-stage process. The process accepts input from a variety of vested participants at each stage and can take several different paths to acceptance.

The process is illustrated in the process flow diagram below. The first two diagrams depict the HISCA Process. The next diagram is the HISCA Submission Review**,** and finally the HISCA Process for seeking final approval if offered.

Note: The horizontal lines in the diagram define activities for each participant in the process.

Participants:

Information Management Committee (IMC): The Alberta Health and Wellness Information Management Committee is responsible for initiating and approving projects internally. This group informs the Health Information Standards Group of the opportunity for standardization. The IM committee is a senior management committee, chaired by the Director, Information Management, Alberta Health and Wellness. This Committee is advisory to the IM/IT Governance Council and has the mandate for strategic planning and information policy and strategy in support of the strategic plan approved by the IM/IT Governance Council.

Project Team/Working Group (PT/WG): Any stakeholder or group of stakeholders in Alberta's health system that is pursuing a standards development opportunity or is responsible for developing a particular standard. In the past, project teams have formed working groups which are comprised of individuals familiar with the content of the information or technology standards and who are working toward a common goal. The group can include regional health authorities, cross-government participants, business sponsors, operational staff, information analysis staff, etc. The standards are developed by this group with assistance from the Health Information Standards team.

Health Information Standards Group (HISG): The Health Information Standards Group will coordinate, oversee and assist the Project Team/Working Group in the development of the *submission* to the Health Information Standards Committee for Alberta. This group is comprised of a Manager, a Data Standards Analyst and a HL7 Messaging Standards Analyst. The group will also participate with the Project Team/Working Group in the development of the standards.

Health Information Standards Committee for Alberta (HISCA): HISCA accept and recommends standards for approval to the Chief Information Officer of Alberta Health and Wellness. HISCA committee consists of 12 members representing different organizations as identified in the "Background".

Stakeholder Review Group (SRG): This group is responsible for reviewing the standards upon acceptance of the draft standard by HISCA. Duration of the review period is normally 3 months.

Process:

The process is separated into four stages and corresponds to the phases of the Systems Development Lifecycle:

1. Assessment Stage/Requirements
2. Preparatory Stage/Detailed Design
3. Approval Stage/Implementation
4. Sign Off/Publication

Separators (vertical lines) are placed to the right of the various stages in the process to indicate the transition from one stage to another.

Figure 1 - HISCA Process

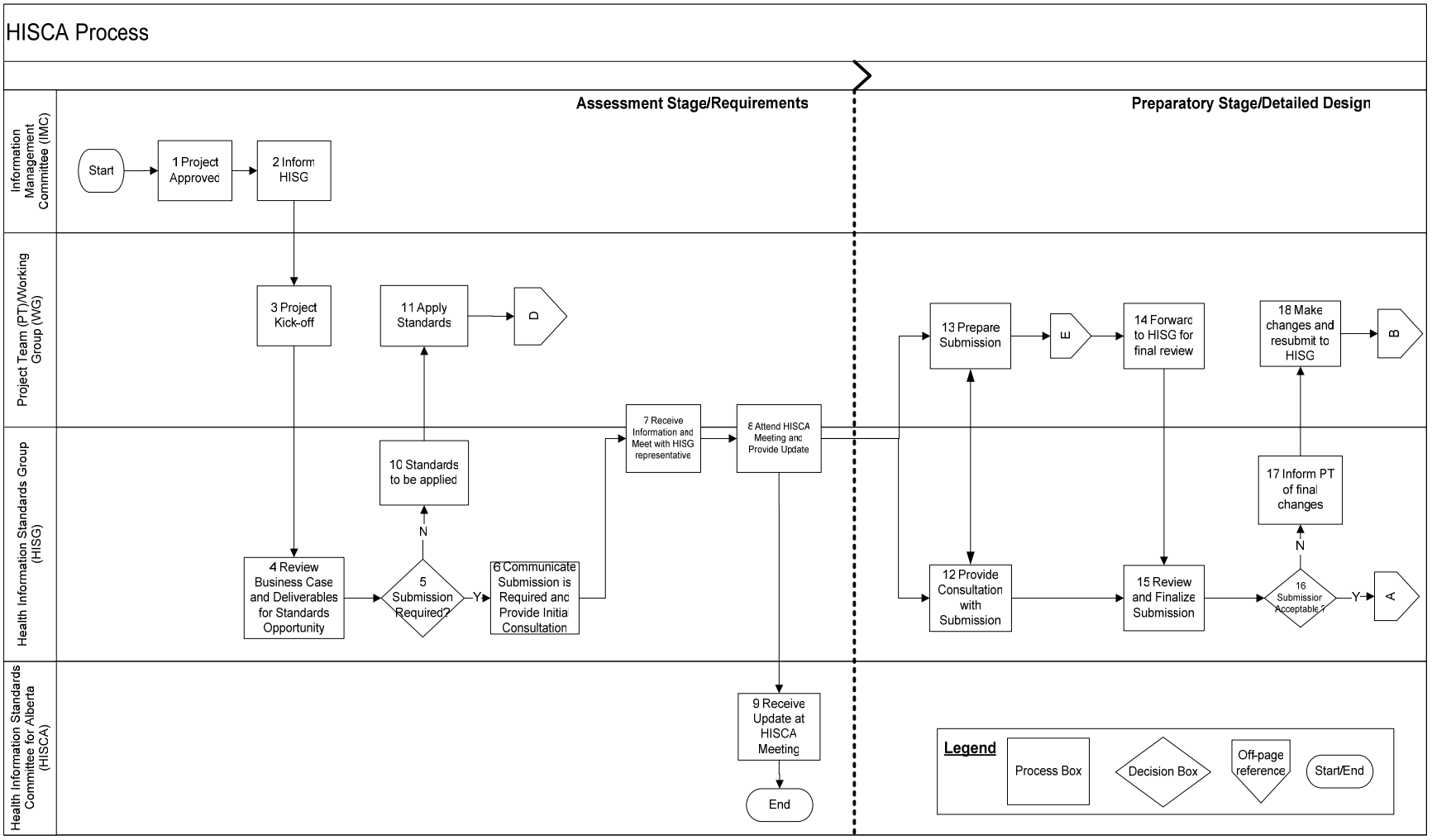
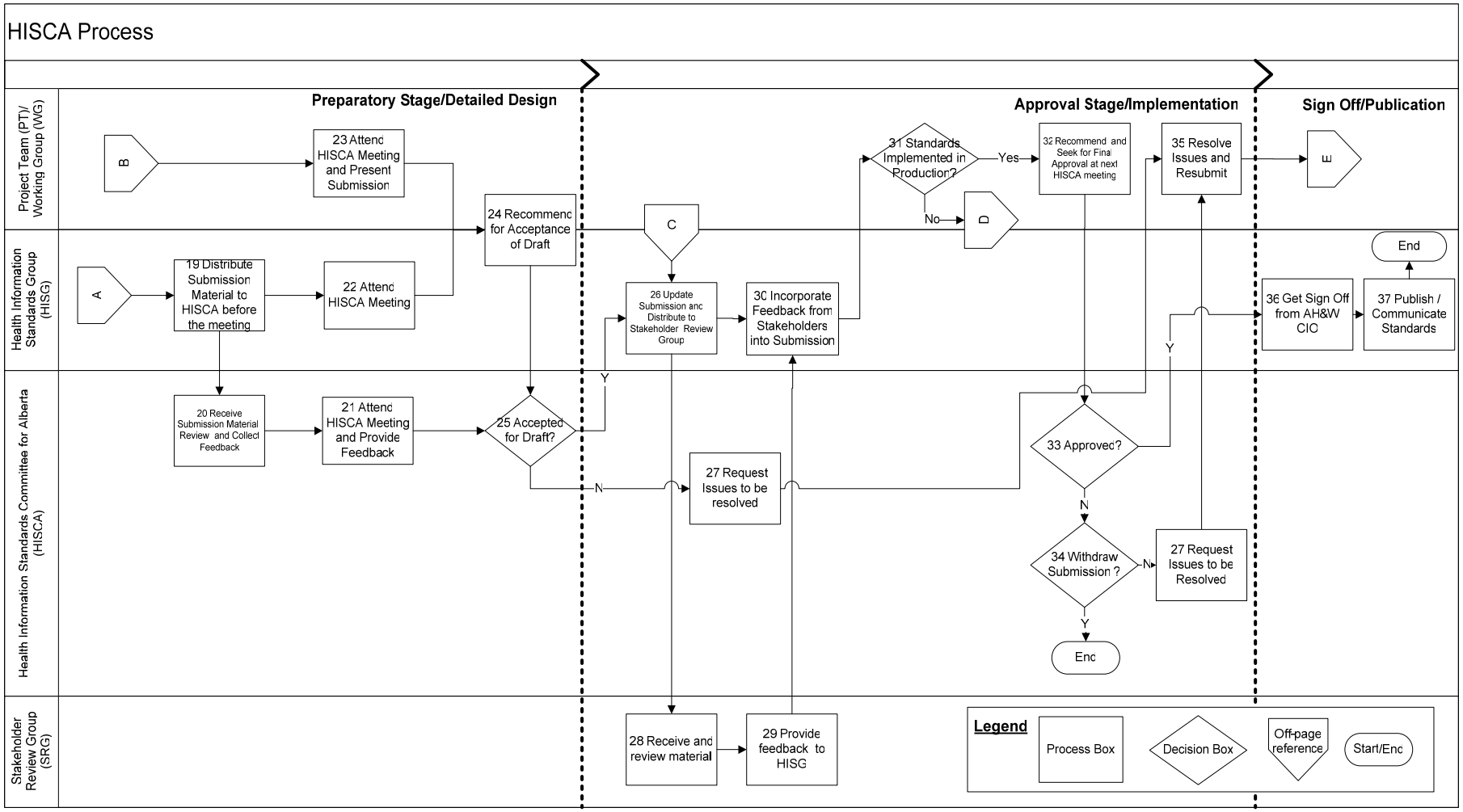


Figure 2 - HISCA Process Continued



Feedback from SRG are documented in an Appendix within the Submission

HISCA Process

Stage: Process Assessment Stage/Requirements		
Step	**Action**	**Description**
1	Project Approved	Information Management Committee (IMC) conducts a standards opportunity review and approves a project. Through an environmental scan, the Health Information Standards Team assists Project Team/Working Groups in engaging standardization opportunities as well as in forecasting future efforts for development, adoption, and dissemination for Health Information Committee for Alberta (HISCA).
2	Inform Health Information Standards Group	IMC informs Health Information Standards Group that there is an opportunity for standardization.
3	Project Kick-Off	Project Team/Working Group initiates a kick off.
4	Review Business Case and Deliverables for Standards Opportunity	Health Information Standards Group reviews the project documentation and determines whether a *submission* is required, and if so, what type of standards s*ubmission* will it be.
5	*Submission* Required?	Health Information Standards Group makes a decision whether a *submission* is required.
6	Communicate *Submission* is Required and Provide Initial Consultation	If a *submission* is required, Health Information Standards Group makes an appointment with Project Team/Working Group and orients the team to the process of completing a *submission*.
7	Receive Information and Meet with Health Information Standards Group representative	Project Team/Working Group meets with Health Information Standards Group and identifies next steps.
8	Attend HISCA Meeting and Provide Update	A dedicated resource from the Project Team/Working Group and Health Information Standards Group will attend the HISCA meeting. The resource will present a project status update to the committee.
9	Receive Update at HISCA Meeting	At the HISCA meeting the committee receives an update of the project status and the date of *submission* to HISCA.
10	Standards to be applied	If a *submission* is not required, HISCA standards must be adopted and used where they are applicable. For example, when defining Last Name, the exchange format and size for “Last Name” in the HISCA Stakeholder Demographics should be used.
11	Apply Standards	Project Team/Working Group will apply HISCA Standards and the *Submission* Review Process will follow this step.

Note: This stage typically coincides with the Requirements phase.

HISCA Process Continued

Stage: Preparatory Stage/Detailed Design		
Step	**Action**	**Description**
12	Provide Consultation with *Submission*	Health Information Standards Group provides the Project Team/Working Group assistance in the development of the *submission*. The template to be used to prepare the *submission* is the AH&W Data Dictionary Template in Excel, referenced in Appendix A – Templates and also available on the Health Information Standards Sharepoint.
13	Prepare *Submission*	The Project Team/Working Group prepares the *submission* using the template. Projects associated with system development should consider privacy and security issues as well as metadata and architectural requirements.
14	Forward to Health Information Standards Group for final review	Upon completion of the spreadsheet, the Project Team/Working Group forwards it to Health Information Standards Group for review and approval. The Project Team/Working Group also forwards a written preamble in a Word format to be included in the final document. The template to use is called Submission Preamble Template, referenced in Appendix A – Templates and also available on the Health Information Standards Sharepoint.
15	Review and Finalize *Submission*	Health Information Standards Group reviews the spreadsheet for completeness, and converts the Excel Spreadsheet into the final Word document.
16	*Submission* Acceptable	The Health Information Standards Group decides whether the *submission* is acceptable. If accepted the next step is step #19.
17	Informs Project Team/Working Group of final changes	Health Information Standards Group requests that the Project Team/Working Group make final changes if required.
18	Make changes and resubmit to Health Information Standards Group	The Project Team/Working Group makes the final changes requested, and resubmits to Health Information Standards Group. The next step is step #23.
19	Distribute *Submission* Material to HISCA before the meeting	Health Information Standards Group distributes the material to the committee, one month at the earliest before the meeting.
20	Receive *Submission* Material, Review and Collect Feedback	HISCA reviews the material before the meeting and prepares feedback.
21	Attend HISCA Meeting and Provide Feedback	HISCA provides feedback at the meeting.
22	Attend HISCA Meeting	The Health Information Standards Group team attends the HISCA meeting.
23	Attend HISCA Meeting and Present *Submission*	Project Team/Working Group presents data standards to HISCA.
24	Recommend for Acceptance of Draft	Project Team/Working Group and Health Information Standards Group recommend standards for “Accepted in Draft”.
25	Accepted for Draft?	HISCA makes a decision whether to approve *submission* and grant “Accepted in Draft” status.

Note: For standards opportunities that are the result of application development or redevelopment, this stage coincides with the definition of data elements, detailed design of the system, and the initiation of the build phase.

HISCA Process Continued

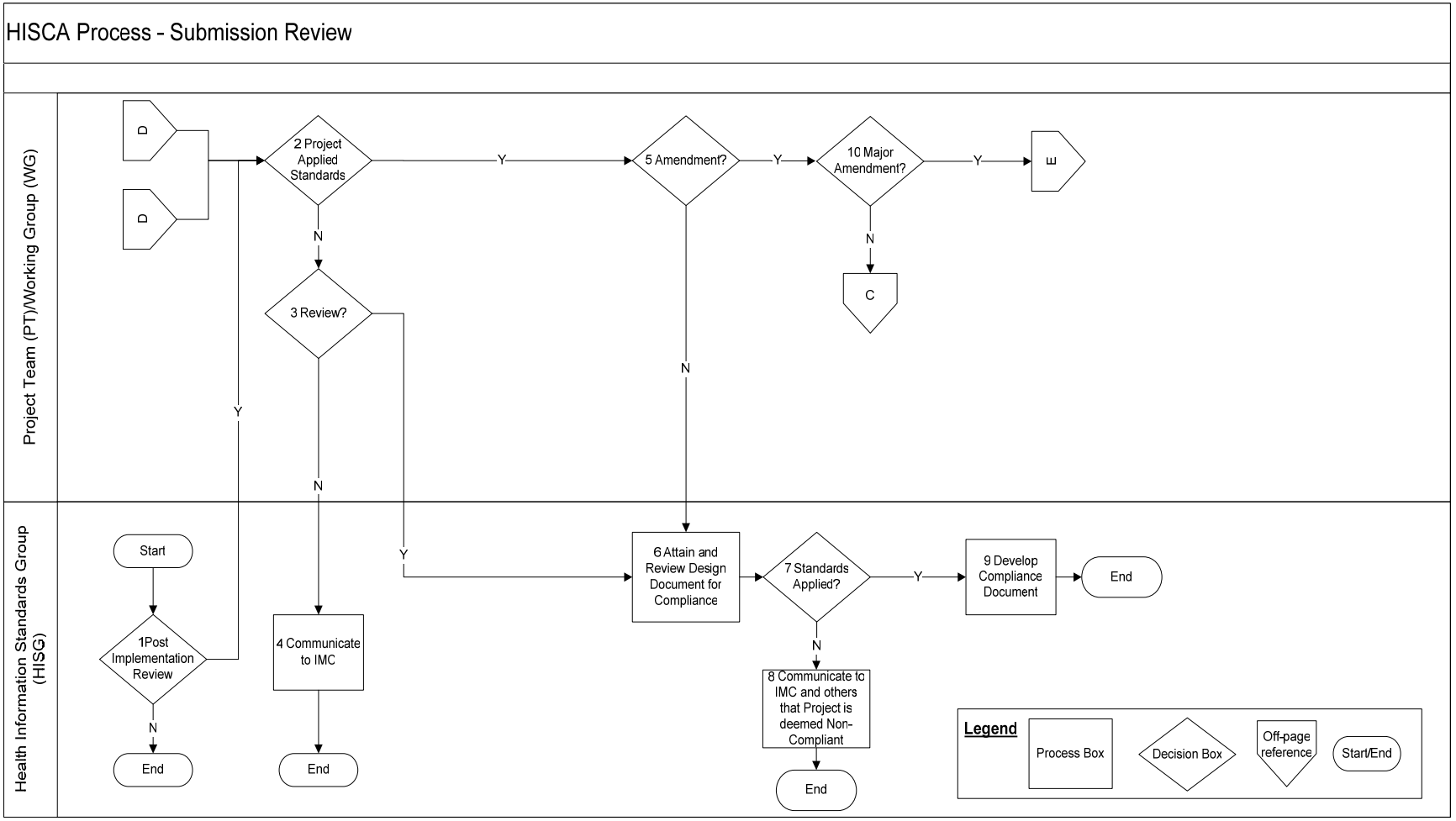
Stage: Approval Stage/Implementation		
Step	**Action**	**Description**
26	Update *Submission* and Distribute to the Stakeholder Review Group	If HISCA accepts the standard as "Accepted in Draft", HISCA is now the custodian of the draft standard and the formal review process begins. Health Information Standards Group team will distribute the standard to the Stakeholder Review Group, a wider stakeholder group. The draft standard is distributed to relevant stakeholders for review and comment within a period of three months. Comments and constructive criticism are collected by the committee and forwarded to the Project Team/Working Group for resolution.
27	Request Issues to be Resolved	HISCA requests the Project Team/Working Group to resolve outstanding issues. If the decision is not to withdraw the *submission*, an additional request is made to resolve outstanding issues. If the *submission* is withdrawn, the process ends.
28	Receive and review material	Stakeholder Review Group reviews material received from Health Information Standards Group.
29	Provide feedback to Health Information Standards Group	Send feedback to Health Information Standards Group within 3 months.
30	Incorporate Feedback from Stakeholder Review Group into *Submission*	The Project Team/Working Group and Health Information Standards Group review the consolidated feedback to determine it's appropriateness for inclusion in the standard. Where appropriate, changes are made in the standard to ensure accuracy of the content from a health system perspective. Feedback that cannot be incorporated at this stage will be considered in future versions of the standard. If the Project Team/Working Group is no longer in place, Health Information Standards Group assumes this role and incorporates appropriate feedback into the standard documentation. All feedback received are consolidated and appended in an appendix to the *submission*. The standard is approved for *submission* as a final draft standard after all issues/concerns have been addressed.
31	Standards Implemented in Production?	Has the standards been implemented in a production environment for at least 3-6 months? HISCA will accept only standards that have been implemented. If the standards are not implemented, the next step is the *Submission* Review.
32	Recommend and Seek for Final Approval at next HISCA meeting	If the standard is in production, the Project Team/Working Group is ready to move the *submission* for "Approval".
33	Approved?	HISCA must decide whether to approve the standards for "Approval".
34	Withdraw *Submission*?	If the *submission* is not "Approved", the decision to withdraw the *submission* is determined. If withdrawn, the process ends. If not, the process returns to step #27.
35	Resolve Issues and Resubmit	The Project Team/Working Group resolves outstanding issues and re-submits the standards for approval. The next step is #14 which is to return to Health Information Standards Group for a final review.

Note: For system development projects, this stage should coincide with the Implementation phase of the project.

HISCA Process Continued

Stage: **Sign Off/Publication**		
Step	**Action**	**Description**
36	Get Sign Off from AH&W CIO	The Health Information Standards Group team then attains the required approvals**.**
37	Publish /Communicate Standards	Once a final draft standard has been Approved, the final text of a provincial standard is published on the HISCA website as an Approved standard. An announcement is sent to key stakeholders in Alberta's health system to inform them of the approved standard and how a copy may be obtained. After an approved standard has been communicated, approximately 6 months to 1 year later or if there is a change in the environment, the standard will be reviewed for its relevance. Where changes are not required the standard is confirmed. Where changes are required, the *Submission* Review process is outlined below.

Figure 3 - HISCA Process - Submission Review

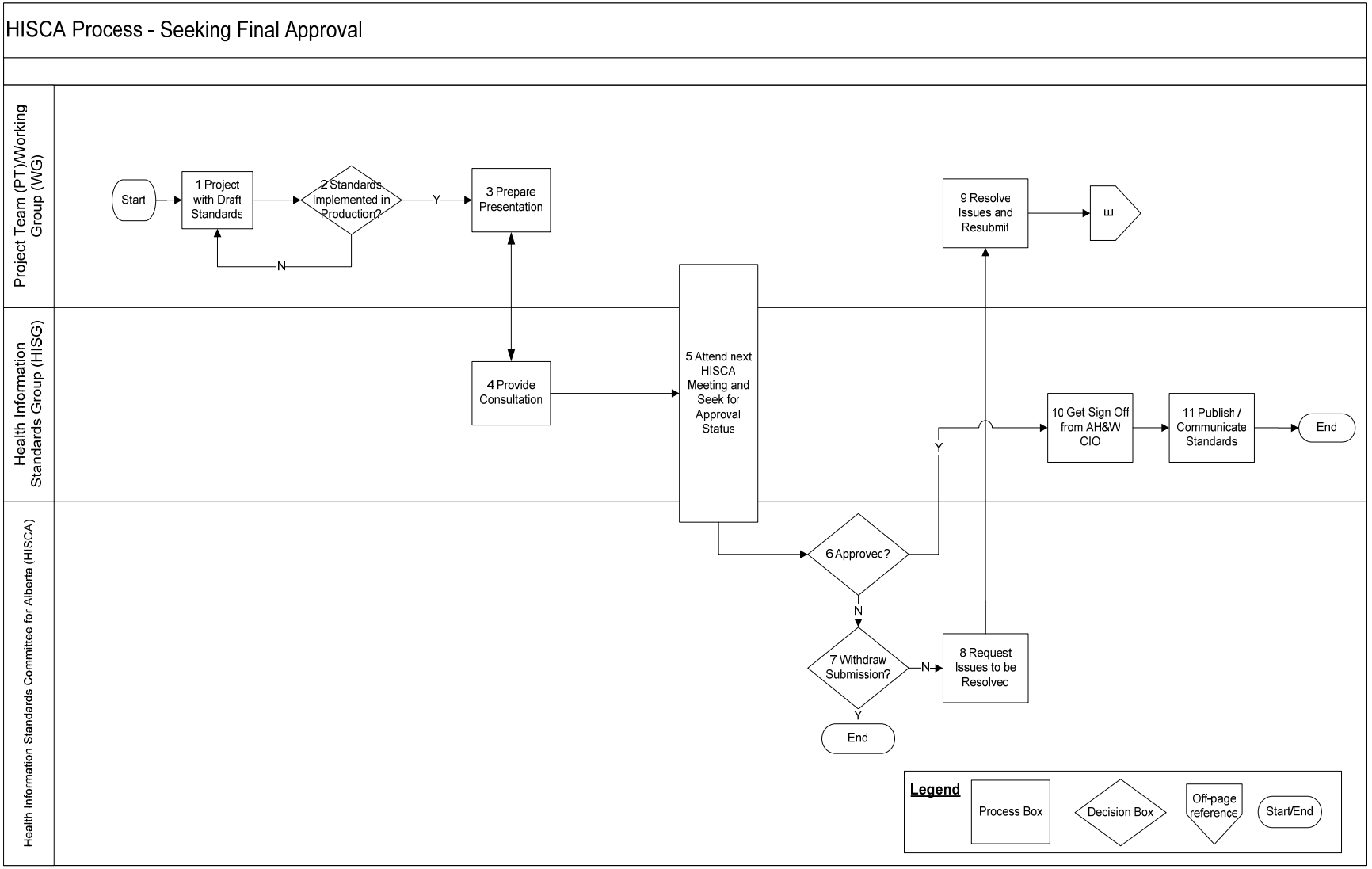


HISCA Process – Submission Review

All approved standards are reviewed on a predetermined schedule (or sooner if industry changes deem it necessary). This review determines whether an approved standard should be confirmed, revised or withdrawn. If revisions are required, the review process steps include:

Stage: **Submission Review**		
Step	**Action**	**Description**
1	Post Implementation Review	Post Implementation Review is conducted by Health Information Standards Group 6 – 12 months after implementation. It can also be initiated if a set of standards has not yet been implemented. If it is not a Post Implementation Review, the process ends.
2	Project Applied Standards	If the Project Team/Working Group has applied standards, is it an *Amendment* to an existing *submission*? If standards were not applied in a project, the process will be a review.
3	Review?	If it is a review, Health Information Standards Group will review Design Document for compliance.
4	Communicate to IMC	If it is not a review, then Health Information Standards Group informs Information Management Committee, that standards are not being applied and the process ends.
5	*Amendment*?	If standards have been applied, is there a requirement for an *Amendment*?
6	Attain and Review Design Document for Compliance	If there is no requirement for an *Amendment*, Health Information Standards Group must review Design Document for compliance.
7	Standards Applied?	Upon review of the Design Document for Compliance, Health Information Standards Group determines if standards are being applied.
8	Communicate to Information Management Committee and others that Project is deemed Non-Compliant	If standards were not applied, Health Information Standards Group informs Information Management Committee and others that the project is deemed Non-Compliant.
9	Develop Compliance Document	If the project has consistently applied standards, a one page document is prepared to state compliancy and the process ends.
10	*Major Amendment*?	If an *Amendment* is required, then Project Team/Working Group must inform Health Information Standards Group whether it is a *major amendment*. If it is a *major amendment*, the next step is # 14 to forward the *amendment* to Health Information Standards Group for final review. If it is not a *major amendment*, the next step is # 26, which is to Update *Submission* and Distribute to Stakeholder Review Group.

Figure 4 - HISCA Process - Seeking Final Approval



HISCA Process – Seeking Final Approval

Stage: **Seeking Final Approval**		
Step	**Action**	**Description**
1	Project with Draft Standards	Once an approved "Approved as Draft" standard has no further issues, the Project Team/Working Group is responsible to seek final approval from HISCA.
2	Standards Implemented in Production?	Project Team/Working Group must inform Health Information Standards Group that the standards have been implemented in production. If not, the process is on hold until it has been implemented.
3	Prepare Presentation	If standards have been implemented, the Project Team/Working Group is responsible for the preparation of a short presentation to seek for final approval from HISCA.
4	Provide Consultation	Health Information Standards Group will provide Project Team/Working Group assistance with presentation.
5	Attend next HISCA Meeting and Seek for Approval Status	Health Information Standards Group and Project Team/Working Group will attend the next HISCA meeting.
6	Approved?	If HISCA approves the *submission* the next step is #10, which is to get Sign Off from AH&W & CIO. If HISCA does not approve the *submission*, the *submission* can be withdrawn.
7	Withdraw *Submission*?	At this point, HISCA can withdraw *submission*, and end the process. HISCA can also request that issues be resolved.
8	Request Issues to be Resolved	HISCA can request that outstanding issues be resolved.
9	Resolve Issues and Resubmit	The Project Team/Working Group resolves issues and then forwards to Health Information Standards Group for final review which is step #14.
10	Get Sign Off from AH&W CIO	Health Information Standards Group coordinates the attaining of appropriate signatures.
11	Publish /Communicate Standards	The *Amendment* is then published and communicated and the process ends.

Version and Status of a Standard

Status

The status of a "standard" denotes its current ranking in terms of the approval process as well as its usage, maintenance, and eventual discontinuation.

Standards are dynamic in nature, in that their definition can change as they move through various stages of standards creation, adoption and revision. In this regard, it is important that STATUS and VERSION be defined.

Following are the valid values for the status of a standard:

Status	Definition
Draft	Standard is developed and is in the hands of the Project Team/Working Group before it it submitted to HISCA.
Accepted In Draft	Standard has been accepted by HISCA and requires a formal review by a wider stakeholder group. The owner of the standard is HISCA, and changes are not allowed.
Accepted for Information Purposes Only	Standard has outstanding issues that require resolution but it can be used for information purposes. Committee may recommend changes or require additional efforts before it is mature to be accepted in draft.
Rejected	Standard did not pass the HISCA approval process, and has been rejected.
Approved	An approved standard which is in use; that is, the prevailing standard.
Superceded	An older version of an approved standard that has been replaced by a revised version. There must be a co-existing standard with a status of "Accepted in Draft" or "Approved".
Obsolete	A previously approved standard has been taken out of use.
Withdrawn	Standard has been withdrawn due to unresolved issues such as a cancellation of project.

Version

This is a number sequentially assigned to a defined standard as it goes from one status to another, except when the standard is being declared "Obsolete", in which case the version number remains the same. Valid versions are any and all numbers (integers) between 0 and 9.

Version 0 is reserved for a standard with a status of "Accepted in Draft". 99 are reserved for rejected submissions. An "Accepted in Draft" standard is a standard accepted by HISCA and ready to be reviewed by a wider stakeholder audience. After the feedback has been collected and resolved, the standard will be presented to HISCA to attain the status "Approved". HISCA will at this point recommend the standard to the Alberta Health and Wellness Chief Information Officer for approval and attain the necessary Sign-Offs.

Version 1 to 9 is for an approved standard that has been assigned status of "Accepted", "Superceded", or "Obsolete".

Submissions, *Compounds* and *Data Elements* are all subject to versioning; versioning and statuses combine to capture the history of documents.

Health Information Standards Repository

HISCA has developed a repository to include all provincially approved data elements by project. The repository currently exists as an Access database, but is targeted to be moved to the internet. The web application will support data element queries and will be a useful tool for project teams with the preparation of a *submission.*

Glossary

Term	Definition
Submission	A submission is a proposal in a Word document that describes a data, technology, and messaging standard to become the provincial standard.
Amendment	An amendment is an alteration proposed or effected by this process.
Major Amendment	A major amendment is an extensive alteration proposed or effected by this process.
Compound	A compound is a grouping formed by a union of data elements or parts. These data elements have component parts for which business requires that they be defined, described, and identified separately.
Data Element	Data element is one of the parts of a compound. Data elements cannot be broken into components and still retain their meaning to a business.

Reference Page

This standard process is based on the ISO 11179 – 1.

Appendix A – Templates and Outlines

- **AH&W Data Dictionary Template v0.4.xls** to prepare submission resides in the Health Information Standards and Guidelines Sharepoint
- **Submission Pre-amble Outline.doc** resides in the Health Information Standards and Guidelines Sharepoint

Access to the site can be requested from the Health Information Standards Group.