eStandards::
Global Use of
Electronic Submissions

Nancy Smerkanich
Vice President, Global Regulatory Affairs,
Octagon Research Solutions

DIA
www.diahome.org

Octagon Research Solutions, Inc.
The views and opinions expressed in the following PowerPoint slides are those of the individual presenter and should not be attributed to Drug Information Association, Inc. (“DIA”), its directors, officers, employees, volunteers, members, chapters, councils, Special Interest Area Communities or affiliates, or any organization with which the presenter is employed or affiliated.

These PowerPoint slides are the intellectual property of the individual presenter and are protected under the copyright laws of the United States of America and other countries. Used by permission. All rights reserved. Drug Information Association, DIA and DIA logo are registered trademarks or trademarks of Drug Information Association Inc. All other trademarks are the property of their respective owners.
Although my presentation is listed in the program as eStandards (ICH/M2), I am not a member of ICH or the M2 Working Group as software vendors and service providers are not allowed membership but we follow closely all activities for the purposes of implementing solutions according to these standards.
Acknowledge statements made during the conference:

“Harmonization is essential for innovation” – Mike Ward/APEC

“Consider the Common Technical Document as the standard format for harmonizing applications” – Lembit Rago/WHO

“We should be leveraging existing guidance and technology” – multiple speakers
AGENDA

1. Submissions – eCTD Standard
   - eCTD:
     • ICH Regions: US (FDA), EU (EMA) and Japan
     • Other Countries
     • Next Major Version (NMV) - RPS
   - NeES

2. Safety Reporting – ICSR Standard
AGENDA

1. Submissions – eCTD Standard
   - CTD/eCTD Topics to be discussed:
     • History@Agencies – FDA, EMA, Japan and Others
     • Metrics
     • Stepping stones to eCTD (NeES)
     • Future versions
What the CTD IS:

- It is a formatting tool
- It is a logical ordering and organization of information
- It is a way of managing information at the document/page level
- It allows for regional differences

What the eCTD is:

- It is a delivery mechanism
Common Technical Document

- The ICH model of dossier organization
- The required format for EU, the only “e” format for US, accepted in Japan
- Provides a “global” technical taxonomy for categorizing information and documentation
- Provides specifications on the content and format of many documents (especially summaries)
- Guidances developed for either paper or electronic

To Do eCTD you must know the CTD!
ICH/FDA CTD Guidance's

ICH Topic M4: Common Technical Document for the Registration of Pharmaceuticals for Human Use

– M4: Organization of the CTD
  • M4: The CTD -- General Questions and Answers
– M4: The CTD -- Quality (Chemistry, Manufacturing & Control)
  • M4: The CTD -- Quality Questions and Answers /Location Issues
– M4: The CTD – Efficacy(Clinical)
  • M4: The CTD -- Efficacy Questions and Answers
– M4: The CTD – Safety(Non clinical)
  • M4: The CTD -- Safety Appendices
  • M4: The CTD -- Safety Questions and Answers
Worldwide Status of eCTD

• US is the only country to use eCTD for both Investigational applications (IND) and marketing applications (NDA/BLA/ANDA)
• EU eCTD is MANDATORY for Centralized Procedure submissions of marketing authorisation applications
  – For Decentralized (DCP)/Mutual Recognition (MRP) it is accepted but not mandatory
  – For National procedures it is country specific
• Japan eCTD is common but paper is also submitted for marketing applications. Lifecycle Management is different
Non ICH Countries

Other countries are in various states of readiness:

• Canada
  – eCTD NDS as eCTD
  – Other formats and submission types are being implemented
  – CTA being strongly considered

• Switzerland
  – Marketing applications only

• Australia
  – CTD but not eCTD (NeES)

• South Africa
  – CTD with additional submissions
US Approach

• Different from EU and Japan because of the nature of how drugs/biologics are regulated during development
  – Large volume(s) of information submitted over time
  – Full dossiers developed during development
• eCTD applies to IND, NDA, ANDA, BLA, DMF and related submissions
  – Therefore only CDER/CBER/OGD using eCTD
  – Other centers use other tools or will implement Next Major Version (NMV)
• Part of US movement towards paperless submissions environment
• Currently 40% of commercial INDs are eCTD and 90% of NDAs
eCTD Status - US

US

- Fully electronic eCTD accepted as both review/desk & archive copy (wet ink signatures submitted in paper unless electronic signatures are in place)
- For eCTDs submitted using the Electronic Submission Gateway (ESG) no wet inks are submitted
- Sponsors may need to submit a pilot submission to eSub office before submitting official submission
- eCTD Viewing System – Global Summit Review
- FDA moving to an all electronic review environment, requiring data standardization to facilitate enhanced safety monitoring
Evolution of US eSubmissions

1997/1999: FDA allows for archive and review copies of submissions to be electronic

- 1997 – initially just used for Case Report Forms and Case Report Tabulations
  - pdf for CRFs
  - sas xpt for CRTs
- 1999 – everything else!
- Referred to as eNDA and eBLA
- Initially both paper and electronic (Hybrid)

*Legalities around archiving was what needed to change in order to allow for electronic submissions! Industry (some) was willing and able!!*
   – A different type of hybrid submissions begin
   – NeES (Non eCTD Electronic Submission)
   – All pdf/Adobe functionality

2003: FDA issues draft Guidance for Industry for submission of electronic common technical document
   – New technology added (xml)
   – Guidance finalized in April 2006
Current Guidance

• Guidance for Industry: Providing Regulatory Submissions in Electronic Format – Human Pharmaceutical Product Applications and Related Submissions in eCTD Format
  – Addresses IND/NDA, Annual Reports and other submissions
  – Refer to Comprehensive Table of Contents; Headings and Hierarchy and electronic Common Technical Document (eCTD) specifications

• Current version is V.2 (June 2008)
• Revised guidance expected this year (2011)
• Next major version of eCTD = Regulated Product Submission (2013)
<table>
<thead>
<tr>
<th>CFR Citation/Source</th>
<th>TITLE</th>
<th>Module</th>
<th>CTD/STP Heading</th>
<th>NUMBER</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDAMA</td>
<td>Fast Track Designation Request</td>
<td>1</td>
<td>1.7.1</td>
<td>Fast Track Designation Request</td>
<td></td>
</tr>
<tr>
<td>FDAMA</td>
<td>Fast Track Designation Withdrawal Request</td>
<td>1</td>
<td>1.7.2</td>
<td>Fast Track Designation Withdrawal Request</td>
<td></td>
</tr>
<tr>
<td>FDAMA</td>
<td>Rolling Review Request</td>
<td>1</td>
<td>1.7.3</td>
<td>Rolling Review Request</td>
<td></td>
</tr>
<tr>
<td>PDUFA agreements</td>
<td>Rolling Review Request</td>
<td>1</td>
<td>1.7.5</td>
<td>Correspondence regarding CMA Pilot 2</td>
<td></td>
</tr>
<tr>
<td>FDAMA</td>
<td>Special protocol assessment request: Clinical study</td>
<td>1</td>
<td>1.8.1</td>
<td>Special protocol assessment request: Clinical study</td>
<td></td>
</tr>
<tr>
<td>PDUFA agreements</td>
<td>Special protocol assessment request: Carcinogenicity Study</td>
<td>1</td>
<td>1.8.1</td>
<td>Special protocol assessment request: Carcinogenicity Study</td>
<td></td>
</tr>
<tr>
<td>PDUFA agreements</td>
<td>Special protocol assessment request: Stability study</td>
<td>1</td>
<td>1.8.1</td>
<td>Special protocol assessment request: Stability study</td>
<td></td>
</tr>
<tr>
<td>PREA</td>
<td>Request for waiver of pediatric studies</td>
<td>1</td>
<td>1.9.1</td>
<td>Request for waiver of pediatric studies</td>
<td></td>
</tr>
<tr>
<td>PREA</td>
<td>Request for deferral of pediatric studies</td>
<td>1</td>
<td>1.9.2</td>
<td>Request for deferral of pediatric studies</td>
<td></td>
</tr>
<tr>
<td>BPCA</td>
<td>Proposed pediatric study request and amendments</td>
<td>1</td>
<td>1.9.4</td>
<td>Proposed pediatric study request and amendments</td>
<td></td>
</tr>
<tr>
<td>BPCA</td>
<td>Proposal for Written Agreement</td>
<td>1</td>
<td>1.9.5</td>
<td>Proposal for Written Agreement</td>
<td></td>
</tr>
</tbody>
</table>
eCTD Specifications

- FDA Module 1 Specification
- FDA Modules 2 to 5 Specification
- Study Tagging File Specification
- Study Data Specification
- Portable Document Format Specifications
- Specification for Transmitting Electronic Submissions using eCTD Specifications
- Specifications for eCTD Validation Criteria

Specifications available on-line:
## eCTD Submissions (as of 6 April 2011)

<table>
<thead>
<tr>
<th>Application</th>
<th>No. of Applications</th>
<th>No. of Sequences</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND</td>
<td>3,511</td>
<td>110,277</td>
</tr>
<tr>
<td>NDA</td>
<td>1,844</td>
<td>42,740</td>
</tr>
<tr>
<td>ANDA</td>
<td>5,042</td>
<td>31,155</td>
</tr>
<tr>
<td>BLA</td>
<td>190</td>
<td>13,078</td>
</tr>
<tr>
<td>MF</td>
<td>781</td>
<td>2,911</td>
</tr>
<tr>
<td>FDA Internal</td>
<td>638</td>
<td>1,134</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,021</strong></td>
<td><strong>201,290</strong></td>
</tr>
</tbody>
</table>
Electronic Submissions - EU

• European Medicines Agency (EMA)
  – Market Authorisation Applications (MAA)
    – All required forms, annexes and labeling information (Module 1)
    – Full summaries/Expert Opinion Reports (Module 2)
    – Chemistry, Manufacturing and Control information (Module 3)
    – Non clinical Pharmacology and Toxicology Reports (Module 4)
    – Clinical Study Reports (Module 5)
  – Average “life span” is for the duration of time on market
• European Medicines Agency (EMA)
  – Market Authorisation Applications (MAA)
    – Metrics not recently made available
    – Module 1 Specification (v1.4)
    – No Gateway/Portal (yet!)
    – Central Repository under construction
    – Submissions made on media
      » Rapporteur/Co-rapporteur
    – Validation criteria available (update planned for 9/2011)
    – eAF (electronic application form) under development
Electronic Submissions - Japan

MLHW/PMDA – more complicated

- Japan-specific CTD M1
  - Using schema
  - Japan specific materials (especially M1.13)
  - Frequent changes in specifications
- Need full instance during lifecycle
- Japan-specific application review system
  - Need to modify CTD during lifecycle
  - eCTD must be modified in short period of time (1 to 2 days)
  - Need both eCTD and pCTD
  - Need to re-create hyper text links during lifecycle
  - Need to handle “pseudo” replace
- Can not use STF (Study Tagging File)
- Can not use Node Extension
- For M5-CSR, only chap. 1-14, PC samples, IC samples, and CRF samples are required.
- Lifecycle is per application (not per compound)
- Need Japanese descriptions for M1 and M2
eCTD Submissions - Japan

The chart shows the number of eCTD submissions from 2004 to 2009, with the count as of 2010.2.28. The bars are color-coded by year and type of submission: blue for '正本' (original), green for '参考' (reference), and yellow for '合計' (total). The maximum count for any year is roughly 45 submissions.
NeES = Non eCTD Electronic Submission

- All pdf based navigation
  - Document and module TOCs required
- No xml files are submitted
- No special software required
- Limited use for lifecycle management
Marketing applications submitted in waves
  – Level of development
  – Economic conditions (ie market/value)
  – Dossier/document reuse
• Wave 1: US, EU, Canada
• Wave 2: eCountries (Developed)
• Wave 3: Paper based (less developed)

Also, many small to mid-size Biopharm companies do not submit outside of 1/2 regions because of lack of accessibility and harmonization. Rely on partner
Technical Foundations of Electronic Submissions

• Portable Document Format (PDF)
  – Format for reports and other documentation
  – Preserves format of source documents
  – Can be viewed using Acrobat Reader/Pro

• Statistical Analysis System (SAS) Transport Files (.xpt) – used for US NDA/BLA submissions only
  – Format for clinical/nonclinical/stability data
  – Similar to spreadsheet
  – Platform independent

• Extensible Markup Language – XML
  – Provides context and organization for submission content
  – Flexible, vendor-neutral technology
  – Also being used for labeling, ICSR, operational data (CRO) and full submissions
Portable Document Format (PDF)

- **Text based pdf**
  - WORD processed documents
  - Preferred source/searchable
  - Required for Phase III CSRs for eCTD (US) and M2 Summaries (EU)

- **Image based pdf***
  - Scanned images
  - Legacy documentation
  - Handwritten documents (batch records, CRFs)
  - Publications

*some countries require Optical Character Recognition (OCR) be applied
SAS Transport Files (.xpt)

• Called Datasets
  – not to be confused with Datasets = sets of data
  – Based on data collected on CRFs and database

• Two Types
  – Raw
  – Analysis

• Two Formats
  – 1999
  – CDISC
    • CDISC Raw = SDTM
    • CDISC Analysis = ADaM

Three components needed: xpt file, data definition table and annotated CRF
Regulatory Agency recommendations for electronic documents/submission include:

- Files will be submitted in Portable Document Format (PDF)
- Text should be Times New Roman 12 point font
- Margins should be a minimum of 1”
- The Table of Contents should only contain 4 levels
- Hyperlinks and bookmarks should be added for navigation
- There should be a bookmark for each item in the TOC
- Hyperlinks should be provided for all cross-references
- Scanned documents should be avoided if at all possible

Many companies have already adopted these as standards as part of authoring
Industry Best Practice for Documents

• Document authoring standards
  – Templates and style guide
  – Definition of “submission-ready”

• Cross-referencing standards
  – How they are used (key words, numbering strands)
  – Frequency (headers, text, repetition)

• All standards must be global to support multiple markets
  – Font styles and sizes
  – Common printable area to support many paper types (e.g. A4 & US Letter)
**Bookmark Basics**

- Bookmarks appear in the navigation pane of the PDF document, mirror the structure of the TOC, and provide an outline of the body of the document.

- Bookmarks are necessary for most documents included in an electronic submission.

- The automatic creation of bookmarks is typically done by the PDF rendering tool.

- Standards should be developed that detail what bookmarks are to be set for various document types, eg, CSR, CRF, etc.
Hyperlinking Basics

• Cross-references in MS Word become hyperlinks in the PDF rendition of a document.
• Hyperlinks provide the ability to jump to other locations within the same document or to other electronic documents.
• Hyperlinks are to be provided for any cross-reference, including annotations, sections, references, publications, appendices, tables and figures.
• Standards should be developed that define what hyperlinks should be set for various document types, eg, CSRs, CRFs, etc.

8.4. Visit Windows Relative to the First Dose of Study Medication

All visit dates are expressed with respect to relative day (unless specified otherwise by the sponsor) or the date of the first dose of study medication. The table below (Table 1) is an example that presents the acceptable visit windows relative to the start of therapy in a three-week active treatment study with post-baseline assessments being performed at weekly intervals. It should be noted that there is a two-week period allocated for screening. Baseline assessments can be obtained during a three-day interval (i.e., Day -2 to Day 0) prior to the first dose of study medication. Acceptable windows for post-baseline clinic visits are ±3 days relative to the targeted visit day. When multiple visits occur within the same window, a rule is established to select one. For example, the latest in the window will be retained for the analyses/presentations or the visit closest to the target day may be selected. When two visits are equidistant from the target day, the one latest in the window may be retained. In the example below, the visit window limits are contiguous, but there are instances where the windows may be disjointed. In general, when dealing with an intent-to-treat situation, the visit windows for evaluation are made as wide as possible and contiguous.

<table>
<thead>
<tr>
<th>Table 1: Visit Windows (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visit</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>Visit 1 (Screening)</td>
</tr>
<tr>
<td>Visit 2 (Baseline)</td>
</tr>
<tr>
<td>Visit 3</td>
</tr>
<tr>
<td>Visit 4</td>
</tr>
<tr>
<td>Visit 5</td>
</tr>
</tbody>
</table>
Types of Document Links

- Hypertext links connect one location of a document (the source) to information in another location (the target).
- The target of the bookmarks and hyperlinks may be within the same document (intra-document) or to a different document (inter-document).
- In eCTD you also have the ability to create cross submission and cross dossier hyperlinks
  - Eliminates the need to submit information more than once!
Tools/Software needed

Health Authorities and Sponsors:

• eCTD Validator – validates presence of required files; validates eCTD Backbone against DTD; validates location, can validate hyperlinks and bookmarks as well

• eCTD Viewer – allows you to view especially across submissions

Sponsors only:

• eCTD Compiler – applies XML Backbone
  – Relies on DTD/Schema and metadata
What FDA does with your eCTD…

• ESG performs checks and is loaded directly
• Media loaded to server manually
• Run validation
• Run directory compare (what they received vs. what was sent)
• Everything ok??
  – If yes, reviewer notified submission is available
  – If no, sponsor notified of deficiencies
• Reviewers are informed that their submission has been successfully loaded
• Submission can be called up via FDA’s viewing system
• Reviewer performs content audit
Screenshot of FDA eCTD Viewer

Sample Cover Letter

This is an example of a cover letter to CDER.
## Variables in Domain

### Variable Summary

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>N</th>
<th>Nulls</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
<th>Type</th>
<th>CodeList</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE</td>
<td>Age in years</td>
<td>195</td>
<td>0</td>
<td>58.313</td>
<td>10.184</td>
<td>25</td>
<td>80</td>
<td>Number</td>
<td></td>
</tr>
<tr>
<td>COUNTRY</td>
<td>Country in which a subject participated in the study</td>
<td>195</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Text</td>
<td></td>
</tr>
<tr>
<td>SBJREFDT</td>
<td>Subject reference date</td>
<td>129</td>
<td>69</td>
<td>69</td>
<td></td>
<td></td>
<td></td>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>SBJREFTM</td>
<td>Subject reference time</td>
<td>128</td>
<td>72</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>RACE</td>
<td>Race of subject</td>
<td>196</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEX</td>
<td>Sex of subject</td>
<td>198</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SITEID</td>
<td>Uniquely identifies a study site within a particular study</td>
<td>198</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STUDYID</td>
<td>Unique identifier for the study</td>
<td>198</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUBJID</td>
<td>Subject identification for the study</td>
<td>198</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRTCID</td>
<td>Treatment code</td>
<td>129</td>
<td>53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRTGRP</td>
<td>Treatment group</td>
<td>129</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USUBJID</td>
<td>Unique identifier for the subject within the application</td>
<td>198</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Summary Data

- **TRTCID**: Treatment code
  - Value: 2
  - Count: 129
  - Distribution:
    - Control: 70
    - Treatment: 59

- **TRTGRP**: Treatment group
  - Value: 2
  - Count: 129
  - Distribution:
    - Control: 70
    - Treatment: 59

### Metadata

- **(NULL)**: (null value)
  - Count: 64
- **SYM23A**: Symptom 23A
  - Value: 68
  - Distribution: 54

### Data

- **Subject List**
  - Viewed in Microsoft Internet Explorer
  - Address: `http://localhost:8080/DelphiApp/subjectList/Drilldown.jsp`
M3 Document Granularity
M5 Clinical Study Report Granularity
The Next Major Version of the eCTD will use the RPS exchange message

- Health Level Seven (HL7) exchange standard
- Regulated Product Submission (RPS) Goal
  - Create one standard (exchange message) that can be used for the submission of any regulated product

- Scope
  - Animal and Human products
  - Including but not limited to food additives, human therapeutics, veterinary products, and medical devices
  - Worldwide use: Same model for all product types to all regulatory authorities

- Out of Scope - Document content
• **RPS Release 1** provides the capability to:
  – Standardize submission format/structure
  – Cross-reference previously submitted material owned by the sponsor
  – Handle Submission/Document Lifecycle (e.g.; append, replace, delete)
  – Handle bundled/global supplements
  – Correct/modify attributes

• **RPS Release 2** provides the capability to:
  – Handle two-way communication
  – Exchange contact information
  – Classify submission content/purpose
    • From Sponsor/Applicant (e.g. Meeting Request, New Protocol, Response to Hold)
    • From Regulator (e.g. Information Request, Response to Meeting Request, Approval)
  – Handle Multi-regulator submissions
  – Capture basic product information

• **RPS Release 3** requirements include:
  – Additional ICH and ICH regional requirements
  – Input/results of RPS Release 2 testing
RPS Hierarchy

- **Application**
  - All submissions that are grouped together for regulatory purposes
  - Original application and supplements/variations

- **Submission**
  - What gets approved

- **Submission Unit**
  - What is being sent to the Agency
  - Can, probably does, contain many documents
  - Equivalent to an eCTD sequence
US FDA Implementation of RPS

• CDER/CBER planning to implement RPS Release 3 for human pharmaceuticals
  – Release 2 implementation based on PDUFA goals and inclusion of the core ICH requirements

• Reasons for Release 3 implementation
  – CDER/CBER implementation of RPS Release 2 would result in a low number of RPS based submissions
  – In alignment with ICH

• Target implementation date – 2012/3
Latin America countries with no legacy systems to deal with can consider any of the available formats for electronic submissions:

1. NeES – no software or infrastructure needed
2. eCTD – commercially available software available but process needed
3. RPS – more flexibility in use (not just drugs or biologics)
Background – need established:

- From identified reporting sources to regulatory authorities and pharmaceutical companies;
- Between regulatory authorities;
- Between pharmaceutical companies and regulatory authorities;
- Within authorities or pharmaceutical companies;
- From clinical investigators, via the sponsor, to ethics committees;
- From authorities to the World Health Organization (WHO) Collaborating Center for International Drug Monitoring.

**Individual Case Safety Reports (ICSR)**
Safety Reporting Standard

Formats:

• Paper-based formats
  – yellow cards,
  – Council for the International Organizations of Medical Sciences (CIOMS) forms,
  – MedWatch forms (FDA 3500A)

• Electronic/media
  – Online access,
  – SGML or XML
  – File transfer
Electronic Formats require common data elements:

A: Administrative and Identification Information
   - A.1 Identification of the case safety report
   - A.2 Primary source(s) of information
   - A.3 Information on sender and receiver of case safety report

B: Information on the Case:
   - B.1 Patient characteristics
   - B.2 Reaction(s) or event(s)
   - B.3 Results of tests and procedures relevant to the investigation of the patient
   - B.4 Drug(s) information
   - B.5 Narrative case summary and further information
ICSR

- **Adverse Event Reporting System (AERS)**
  - In use since 2000
  - Currently using E2B(R) dated May 2005
    - Xml based format
    - Reports submitted directly to FDA (not submitted through manufacturers)
    - Reports submitted on 3500A (or CIOMS) forms by manufacturers that are categorized as:
      - 15-day reports
      - Serious Periodic reports, or
      - Non serious Periodic reports for new molecular entity (NME) products within the first 3 years following FDA approval
    - Reports submitted electronically by manufacturers regardless of category.

- **Vaccine Event Reporting System (VERS)**
• ICSR
  – EUDRA Vigilance:
    • Early detection of possible safety signals from marketed drugs for human use.
    • Continuous monitoring and evaluation of potential safety issues in relation to reported adverse reactions.
    • Decision making process, based on a broader knowledge of the adverse reaction profile of drugs.
    • Electronic exchange of Individual Case Safety Reports (ICSR, based on the ICH E2BM specifications)
      – EudraVigilance Clinical Trial Module (EVCTM) for reporting Suspected Unexpected Serious Adverse Reactions (SUSARs).
      – EudraVigilance Post-Authorisation Module (EVPM) for post-authorisation ICSRs.
**Safety Reporting Standard Update**

**HL7 ICSR Update**

**Data exchange standard status:**
- Completed ballot reconciliation January 2010
- Substantial revisions resulted in the need to post a second Draft International Standard (DIS) ballot for review
- Updated ballot package sent to ISO April 2010 and awaiting date for ballot release
- Need to address EU schema implementation concerns

**Regional pilot testing status:**
- Drugs and Biologics
  - Japanese tool ready for release
  - EU tools available for conversion
  - FDA tools delayed
- Vaccines
  - FDA XFORM released March 2010
  - Working through setup issues with industry and SRA
Gracias!

Questions:
nsmerkanich@octagonresearch.com