

Enterprise Master Patient Index (EMPI) Business Process for the EMPI Lead at HSP

Integrated Assessment Record (IAR)

Version 1.1
August, 2011

Table of Contents

| | |
|--|----|
| Glossary of Terms & Acronyms | 3 |
| Scenario 1 – Potential Linkage..... | 6 |
| Scenario 2 – Potential Duplicate | 7 |
| Scenario 3 – Potential Overlay..... | 8 |
| Appendix A – Potential Linkage Notification | 9 |
| Appendix B – Potential Duplicate Notification..... | 10 |
| Appendix C – Potential Overlay – Critical Alert..... | 11 |

Glossary of Terms & Acronyms

1. **EMPI** – An Enterprise Master Patient Index (EMPI) provides a master index that may be used to obtain a unified view of a client across the continuum of care provided by multiple organizations.
2. **IAR** – Integrated Assessment Record is an initiative within CCIM that allows assessment information to move with the client as they go from one HSP to another. HSPs can use the IAR to view timely client assessment information electronically, securely and accurately, The IAR facilitates collaborative client/patient care planning in the community and more efficient and effective delivery of care.
3. **EMPI Lead** – The EMPI Lead is the person at the participating organizations who will receive notices from the EMPI Data Steward that there is a potential issue within client data. The EMPI Lead will need to identify and resolve the issue within their system and then ensure a corrected assessment is uploaded into the IAR.
4. **EMPI Data Steward (EDS)** – The EMPI Data Steward is the role that receives notification from the EMPI that there may be a data quality issue. The EDS also has a responsibility to contact the affected Health Service Provider (HSP) when data needs to be added or amended in their assessment and source system.
5. **Health Information Network Provider (HINP)** – Under the *Personal Health Information and Protection Act, 2004* (PHIPA) a HINP is “a person [or organization] who provides services to two or more health information custodians [HICs] where the services are provided primarily to custodians to enable the custodians to use electronic means to disclose personal health information to one another.” O. Reg. 329/04, s. 6 (2). A health information custodian is also defined under PHIPA as “an individual or organization that has custody and control of personal health information generally for the purposes of providing health care or services.”
6. **Local Client Identifier** – This is a number used by organizations to track their client (person). This is not a number for a visit or for an assessment. It is a single number used to identify that person whenever they attend one particular health service provider (HSP).
7. **Enterprise Identifier (EID)** – The EMPI creates a single, unique enterprise identifier for each person; as well as a mapping, or link, between the EID and any local client identifiers used for that person. This link provides the ability to search and find a client represented as a single entity. Then the authorized user can access multiple health data records without the need to know the local client identifier(s) or the point of origin of those records.
8. **Demographics** – In the EMPI, this data relates to an individual and includes name, gender, address, phone, date of birth and healthcard number.
9. **Value of Match** – The EMPI evaluates the demographic data in a just received record (person) by comparing it to records (persons) already contained in the EMPI. Each match has a value. For example, a match on healthcard number is weighted with a higher value than a match on phone number. A match on date of birth is weighted with a higher value than a match on a commonly occurring last name.
10. **Score** – The EMPI evaluation adds together the value of all matches to create a score. For example, the score would be higher for a record matched based on a person’s name, date of birth and healthcard number than the score for a record matched with only a person’s name and phone number.

11. **Inspector Task** – This is how the EMPI communicates that there is an issue or a potential issue with data. The EMPI creates a task for the EMPI Data Steward (EDS) which directs the EDS on what record needs to be investigated. Below are described two potential Inspector tasks.
12. **Potential Duplicate** – The EMPI thinks it is possible two records (two persons) from a single HSP source are actually the same person. Two local client identifiers for the same person within the same HSP system is called a duplicate. A potential duplicate requires a review by the EMPI Data Steward (EDS). If the EDS agrees that it might be a duplicate, the EMPI Lead Organization (ELO) will be contacted to evaluate with the potential to resolve the duplication in the HSP system.

Potential Overlay – The EMPI suspects the local client identifier has been inadvertently used for a person different from who used it previously. The EMPI has compared the incoming record (person) to what the HSP sent earlier for this same person. If the demographic changes are too extensive – for example male changed to female, entire date of birth changed, name entirely changed – it alerts the EMPI Data Steward (EDS). The EDS will contact the EMPI Lead at the HSP to evaluate. Due to the client risk associated with an overlay, all the person's records in IAR will be restricted from view, regardless of contributing organization. Viewing will be restored after the HSP solution is determined and completed.

Introduction

An Enterprise Master Patient Index (EMPI) provides a master index that may be used to obtain a unified view of a client across the continuum of care provided by multiple organizations. For any single client, the EMPI creates a single, unique enterprise identifier (EID). The EMPI can establish and maintain a mapping between the EID and the client's identifiers used inside each of the organizations who contribute health data records. This association between the EID and the source systems' identifiers provides the ability to search the index and find a client represented as a single entity, thus allowing the authorized user access to multiple health data records regardless of the point of origin of those records.

The Integrated Assessment Record (IAR) EMPI Business Process for the HSPs deals with IAR-related client records from multiple regions, organizations and sectors. Both the organization hosting the EMPI as well as each participating organization in the IAR will be involved in the EMPI process.

The IAR EMPI system is implemented with matching algorithms. The EMPI compares demographic data in an incoming IAR record to information already existing in the master index. The following is a sample of data elements assessed by the EMPI:

- Name
- Date of Birth
- Gender
- Healthcard Number

Each matching data element is assigned a score that is weighted according to the estimated value of the match. When the total matching score is high, the EMPI has been configured to *automatically link* an existing EID with the incoming IAR record and its local client identifier. When the total score is low, a new EID is created and associated to the incoming client and their local client identifier. Scores between these two thresholds are flagged for manual review. Therefore, even a well tuned EMPI typically requires establishment of a data stewardship role to guide resolution of the following tasks:

1. Potential linkage
2. Potential duplicate
3. Potential overlay

This document describes a defined process and steps to the three above scenarios as they relate to the IAR; as well as identifies roles and responsibilities of the EMPI Lead at the participating organizations when these scenarios occur.

Process

Scenario 1 – Potential Linkage

Examples:

- Different demographic data collected (use of nickname)
- Missing or invalid attributes

- The EMPI system has compared an incoming record to existing data in its index of clients
- The matching algorithms assigned a score too low for auto-linking
- The score is sufficiently high for the EMPI to flag the record for review by a EMPI Data Steward (EDS)
- The EDS lacks sufficient data for resolution
- The EDS notifies the EMPI Lead at the contributing organization for evaluation and resolution
- The EDS communicates to the EMPI Lead using template form (refer to Appendix A)
- The request may include one or more of the following:
 - a. confirmation of one or more demographic data elements
 - b. amendment of one or more demographic data elements
 - c. addition of one or more missing demographic data elements
 - d. action to resubmit the IAR submission which triggered the EMPI flag
- The HSP EMPI Lead receives the notification
- The EMPI Lead facilitates evaluation and resolution internally among stakeholders such as the clinicians, case managers, health record team, or the privacy officer
- The EMPI Lead follows up with stakeholders to ensure issue is resolved
- If necessary, the last assessment which triggered the EMPI flag is resubmitted/uploaded
- The EMPI Lead notifies the EDS that the data issues have been resolved

Scenario 2 – Potential Duplicate

Example:

- The person is given a new local client identifier in his/her return visit to the organization
- The EMPI system has compared an incoming record to existing data in its index of clients
- Another record from the same contributing organization appears to be a match
- The EMPI system suspects the contributing organization may have assigned a second, different local identifier to the same client
- The EMPI flags the two client records as needing review by an EMPI Data Steward
- The EDS does not have sufficient data for resolution
- The EDS notifies the contributing organization to resolve the duplicate
- The EDS requests the EMPI Lead to do one or more of the following:
 - a. Confirm the 2 Local Client Identifier numbers reference the same client and resolve the duplicate identifiers into a single ID
 - b. Confirm the two Local Client Identifiers reference two different patients
 - c. Amend data elements where appropriate
 - d. Resubmit assessment where applicable
- The HSP EMPI Lead receives the notification
- The EMPI Lead facilitates evaluation and resolution internally among stakeholders such as the clinicians, case managers, health record team, or the privacy officer
- The EMPI Lead follow s up with stakeholders to ensure issue is resolved (i.e. true duplicate or not)
- If necessary, the last assessment which triggered the EMPI flag is resubmitted/uploaded
- The EMPI Lead notifies EDS that data issues have been resolved

Scenario 3 – Potential Overlay

Example:

- Registration errors where a person record is accidentally used for a different person (e.g. Jane was using id 123, then id 123 was inadvertently used for Tom)
 - The EMPI system has compared an incoming record to an IAR record previously received where both IAR records used the same Local Client Identifier from the same contributing organization
 - The EMPI finds the demographic data element differences between a previous submission and the current submission to be large and significant
 - The EMPI flags a potential “overlay”
 - The EMPI suspects a second, different client may have been inadvertently attached to the local identifier
 - Assessments using this client’s EID will be made unavailable for viewing from the IAR repository until the potential overlay issue is resolved
 - The EMPI flags the two sets of client demographics for review by the EMPI Data Steward (EDS)
 - The EDS notifies the contributing organization immediately
 - The EDS requests the EMPI Lead to do one or more of the followings:
 - a) Confirm the Local Client Identifier does reference the same client
 - b) Confirm the Local Client identifier has had a different client’s demographic data overwritten into it. Cause the second patient to have their own Local Client Identifier. For the original client, restore the demographics associated to the original Local Client Identifier.
 - c) Resubmit assessment where applicable
 - The HSP EMPI Lead receives the notification
 - The EMPI Lead facilitates evaluation and resolution internally among stakeholders such as the clinicians, case managers, health record team, or the privacy officer
 - The EMPI Lead follows up with stakeholders to ensure issue is resolved
 - If necessary, the last assessment which triggered the EMPI flag is resubmitted/uploaded
 - The EMPI Lead notifies the EMPI Data Steward that data issues have been resolved
 - The EMPI Data Steward may contact the IAR technical team if the resolution requires the support at the IAR technical level. The IAR technical team will work with the EMPI Data Steward and the HSP to resolve the data quality issue.

Appendix A – Potential Linkage Notification

| IAR System Data Quality Inquiry Potential Linkage | | | |
|---|------------------------|-----------------------------------|------------------------|
| 1. Contact Information | | | |
| Name of EMPI Lead: | Organization Number: | Date of Notification (dd/mm/yyyy) | |
| 2. Client/Patient Information: | | | |
| Local Client Identifier: | | | |
| Date Identified (dd/mm/yyyy) | | Date Reviewed by EDS (dd/mm/yyyy) | |
| 3. Requested Action – Description of actions required by the EMPI Lead | | | |
| <i>To the EMPI Lead: Please review the client/patient demographic information mentioned below and confirm, add or amend the data according to the action required and re-submit the assessment to IAR.</i> | | | |
| Data Element | Action Required | Data Element | Action Required |
| Last Name | Confirm/Amend | Date of Birth | Confirm/Amend |
| First name | | Gender | |
| Middle Name | | Phone Number | |
| Healthcard Number | | Address | |
| | | | |
| Please DO NOT reply to the EDS team with any Personal Health Information. The indicated information above is for you to review, confirm and/or amend at your organization. You are not to communicate this information back to the EDS team. | | | |
| 4. Recommended Best Practices | | | |
| Refer to the IAR EMPI business process document for more information (provided by CCIM) | | | |
| 5. Resolution – EMPI Lead, please provide a brief description of how the above has been resolved or the plan to be resolved | | | |
| <i>Please DO NOT include any actual client data or personal health information in your resolution description.</i> | | | |
| Date Resolved (dd/mm/yyyy) | | Date Sent to EDS (dd/mm/yyyy) | |

**If you have any questions, please contact the IAR Support Desk at
1-866-909-5600 or 416-432-1562**

Appendix B – Potential Duplicate Notification

| IAR System Data Quality Inquiry Potential Duplicate | | |
|--|-----------------------------------|-----------------------------------|
| 1. Contact Information | | |
| Name of EMPI Lead: | Organization Number: | Date of Notification (dd/mm/yyyy) |
| 2. Client/Patient Information: | | |
| Local Client Identifier: | | |
| Date Identified (dd/mm/yyyy) | Date Reviewed by EDS (dd/mm/yyyy) | |
| 3. Requested Action – Description of actions required by the EMPI Lead | | |
| Potential duplication is found for the following two (2) Local Client Identification numbers. | | |
| <i>Please compare these two Local Client Identification numbers:</i> | | |
| <ul style="list-style-type: none"> ▪ _____ ▪ _____ | | |
| <p><i>If the two records refer to the same client, please resolve the duplication. It is recommended the client be referenced by a single Local Identifier (eg. Chart Number or Medical Record Number - MRN)</i></p> | | |
| 4. Recommended Best Practices | | |
| Refer to the IAR EMPI business process document for more information (provided by CCIM) | | |
| 5. Resolution– EMPI Lead, please provide a brief description of how the above have been resolved or plan to be resolved | | |
| <i>Please DO NOT include any actual client data or personal health information in your resolution description.</i> | | |
| Date Resolved (dd/mm/yyyy) | Date Sent to EDS (dd/mm/yyyy) | |

***If you have any questions, please contact the IAR Support Desk at
1-866-909-5600 or 416-432-1562***

Appendix C – Potential Overlay – Critical Alert

| IAR System Data Quality Inquiry Potential Overlay – Critical Alert | | | |
|---|-----------------------------|-----------------------------------|-----------------------------|
| 1. Contact Information | | | |
| Name of EMPI Lead: | Organization Number: | Date of Notification (dd/mm/yyyy) | |
| 2. Client/Patient Information: | | | |
| Local Client Identifier: | | | |
| Date Identified (dd/mm/yyyy) | | Date Reviewed by EDS (dd/mm/yyyy) | |
| 3. Requested Action – Description of actions required by the EMPI Lead | | | |
| There is a potential overlay with the above mentioned client, please review the following: <ul style="list-style-type: none"> • Significant changes have been made to the following data marked with an X -- • Please confirm a second, different patient has not been inadvertently attached to the Local Client Identifier referenced above. • The EDS resource may be contacted via telephone in order to obtain the “before” and “after” demographic data elements. • Please phone <insert EDS name> at 519-____ - _____ | | | |
| Data Element | Review Marked Data Elements | Data Element | Review Marked Data Elements |
| Last Name | | Date of Birth | |
| First name | | Gender | |
| Middle Name | | Phone Number | |
| Healthcard Number | | Address | |
| | | | |
| <i>Please DO NOT reply to the EDS team with any Personal Health Information. The indicated information above is for you to review, confirm and/or amend at your organization. You are not to communicate this information back to the EDS team.</i> | | | |
| 4. Recommended Best Practices | | | |
| Refer to the IAR EMPI business process document for more information (provided by CCIM) | | | |
| 5. Resolution – EMPI Lead, please provide a brief description of how the above has been resolved or the plan to be resolved | | | |
| <i>Please DO NOT include any actual client data or personal health information in your resolution description.</i> | | | |
| Date Resolved (dd/mm/yyyy) | | Date Sent to EDS (dd/mm/yyyy) | |

***If you have any questions, please contact the IAR Support Desk at
1-866-909-5600 or 416-432-1562***