TITLE: Data Integrity	
Policy #: HEN-011	Effective Date: July 17, 2013
Program: Hawai'i HIE	Revision Date: August 17, 2016
Approved By: Hawai'i HIE Board of Directors	

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1. **Purpose**

   This policy describes the practices necessary for maintaining data integrity within the Hawai'i HIE Health eNet System. Of particular importance are the practices for entering patient identifying data necessary to match patient records in the Health eNet Community Health Record (CHR) while minimizing, to the extent possible, incorrect information, false-negatives, false-positives and unintended disclosures of protected health information (PHI). This policy also provides notification and mitigation requirements in the event incorrect or mismatched information is identified in the System.

2. **Scope**

   This policy applies to: 1) the Hawai'i HIE and all of its workforce members, 2) all Health eNet Authorized Users, 3) all Hawai'i HIE business associates, subcontractors, and 4) all Health eNet Participants.

3. **Definitions**

   False Negatives. Failure to match two records that represent the same individual.

False Positives. Creating a link between two records that do not represent the same individual.

Master Patient Index (MPI). An electronic medical database that holds information about every patient for whom information is stored in the HIE System.

Opt-Out. The process whereby access to an individual's information in the Health eNet Community Health Record (CHR) is blocked/stopped.

Record Locator Service (RLS). A service within a health information exchange query system that utilizes a Master Patient Index to identify the various records associated with a given individual and make aggregated information about the individual available for access.

4. **Policy**

The Hawai'i HIE and Health eNet Participants will develop and maintain appropriate procedures to maintain the integrity of data contributed to, stored within and accessed via the Health eNet CHR.

4.1. **Accuracy and Integrity of Information Exchanged via the Health eNet.** Each Participant will understand that the accuracy and integrity of information accessed, received or disclosed via the Health eNet relies on efforts by other participants who contribute the information to Health eNet to ensure the accuracy and integrity of the information. Therefore, the Hawai'i HIE does not warrant that information accessed, received or disclosed via the Health eNet is fully accurate, or free of duplication.

4.2. **Accuracy and Integrity of Data Contributed to the Health eNet Community Health Record.** Participants will be responsible for ensuring their workforce members accurately record patient demographics and other identifying data elements into their electronic health record (EHR) systems, or other systems that contribute data to the Health eNet CHR. Appendix A provides an example of guidelines that Participants may use.

Procedures
1. A. Participants will implement and maintain documentation of procedures regarding how to record patient demographics and other identifying data elements into their EHR systems, or other systems that contribute data to the Health eNet CHR.   B. Participants may refer to Appendix A for an example of appropriate guidelines for use.
2. Participants will ensure that their workforce members receive appropriate training on how to accurately record patient demographics, and other identifying data elements into their EHR systems, or other systems that contribute data to the Health eNet CHR.
3. Participants will notify the Hawai'i HIE of any system changes that may impact the accuracy or integrity of data contributed to the Health eNet, and cooperate with the Hawai'i HIE to test and certify the accuracy of the performance of the interface and contributed data in production.

4.3. **Health eNet Community Health Record Data Integrity Technical Safeguards.** The Hawai'i HIE will implement technical safeguards to help ensure data integrity within the Health eNet.

Procedures
1. The Hawaiʻi HIE, and its subcontractors, will implement the following features and safeguards: • Prevention of modification of transmitted information and unauthorized modification of data at rest within the System, including but not limited to: unique user identification, encryption and decryption, firewalls and data-authentication controls (e.g. check sum verification, digital signatures) • Establish a master patient index (MPI) of specific demographic data to facilitate access to patient records contributed by Participants. • Safeguard the patient health information (PHI) stored in the Health eNet in accordance with the Hawaiʻi HIE's operational policies and applicable laws, e.g. as specified in the Hawaiʻi HIE HEN-*013 System Security* Operational Policy and Procedures. • Use a computer-based configurable algorithm to assist in linking records in the MPI that pertain to the same patient in the event the Health eNet has received information about the patient from multiple Participants.
2. The Hawaiʻi HIE will notify Participants of any changes to the Health eNet that may impact the accuracy or integrity of data contributed to the Health eNet, and cooperate with the Participants to test and certify the accuracy of the performance of the interface and contributed data in production.

4.3.1. Controls to Prevent Duplicate Records Within the Health eNet Community Health Record.

The Hawaiʻi HIE will build, maintain, and, as appropriate, share with Participants reports of ambiguous or potentially duplicate records.

Procedures
1. The Hawaiʻi HIE shall periodically run a report that captures any ambiguous or potentially duplicative records occurring within the Health eNet.
2. The Hawaiʻi HIE shall provide aforementioned report containing ambiguous or potentially duplicative data to the Participant(s) who contributed the data.
3. Participants are responsible for researching ambiguous or potentially duplicative data they contributed to the Health eNet and respond to the Hawaiʻi HIE with the results of its analysis within ten (10) business days.
4. Participants agree to act on their analysis and conduct quality improvement efforts to minimize subsequent ambiguous or potentially duplicative data contributed to the Health eNet CHR going forward.

4.4. Actions Required for Incorrect Match or Inaccurate Information. Participants shall report possible incorrect matches or inaccurate information in the Health eNet CHR to the Hawaiʻi HIE as soon as possible following discovery. The Hawaiʻi HIE will review the mismatch or error in question, identify and contact the Participant(s) that contributed the data, then work with the Participant(s) to correct the data. In the event the data cannot be corrected, the Hawaiʻi HIE will make the erroneous portion of the patient's record, or the entire patient's record contributed by a Participant, unavailable for query in the CHR.

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Procedures
1. Participant(s) identifies a Health eNet CHR result that indicates an incorrect patient match or information received that does not apply to the individual for whom a query was made.

2. A. Participant(s) notifies the Hawaiʻi HIE of the potential incorrect patient match. The notification shall include at a minimum the following information in the notification:
    1) Full name of individual, as used to query the Health eNet
    2) Individual's demographic information, according to the records of the notifying Participant, including: date of birth, gender
    3) A detailed description of the incorrect patient match (e.g. date(s) of encounters that may be in question pertaining to the individual
    4) Full name(s) of the contributing Participant(s)
    5) Name and contact information of the notifying Participant

3. Hawaiʻi HIE will review the notification of mismatch or error in question, and will contact the Participant(s) responsible for contributing the data to request correction.
4. A. The contributing Participant(s) will, in cooperation with the Hawaiʻi HIE, make reasonable efforts to correct the mismatch or error in the CHR. B. Upon notification of a mismatch or error in the CHR, the Hawaiʻi HIE will make the individual's record containing the error unavailable for query by CHR Authorized Users, without unreasonable delay utilizing the CHR's "opt-out" function. C. Once a mismatch or error is corrected, the participant making the correction will notify the Hawaiʻi HIE, then the Hawaiʻi HIE will opt-back-in the patient's record.
5. The contributing Participant(s) will, in cooperation with the Hawaiʻi HIE, make reasonable efforts to identify and notify other Participants that accessed or received such information via the Health eNet CHR.
6. Participant(s) will follow their own respective policies and procedures to correct, mark or label any paper or electronic copies of the incorrect/inaccurate information received via the Health eNet CHR.

4.5. **Actions Required for Inadvertent Disclosures of PHI to a Requesting Individual That Is Not a HIPAA Covered Entity.** In the event an individual, upon receiving demographic and encounter information from the Hawaiʻi HIE notifies the Hawaiʻi HIE that there is an error in the information, the Hawaiʻi HIE, in cooperation with Health eNet Participants, shall determine if the error includes demographic and encounter information for another individual.

Procedures
1. If such an error is substantiated, the Hawaiʻi HIE will ask the individual who requested the information to return the demographic and encounter information.
2. The Hawaiʻi HIE will then determine if the error can be addressed by requesting corrections to the individual's information from one or more Participants that contributed information about the individual to the System, and if so contact the Participant(s) that contributed the information to make corrections.
3. The Hawaiʻi HIE will conduct an analysis to determine if the inadvertent disclosure qualifies as an incidental disclosure of PHI, or, based on the criteria specified in 45 CFR §164.402, qualifies as a breach of unsecured PHI. If necessary, the Hawaiʻi HIE will take

additional actions, as specified in its HEN-012 *Incident Response and Mitigation.* Operational Policy and Procedures.

4.6. **Adjustments to the Health eNet Community Health Record RLS.** The Hawaiʻi HIE will periodically review historical incidents of incorrect matches and disclosure errors to determine if adjustments to the RLS may improve accuracy of queries and disclosures going forward, then make such adjustments if warranted.

Procedures
1. The Hawaiʻi HIE shall conduct a review of RLS-related incidents of incorrect matches periodically or as needed.
2. Upon review of incidents of incorrect matches and disclosure errors, the Hawaiʻi HIE shall determine if adjustments to the RLS are needed. Further adjustments may be made based on trend analysis.
3. If any such adjustments to the RLS are needed, the Hawaiʻi HIE shall work with subcontractor system administrators as needed to make the adjustments and perform any necessary testing to further ensure the improved accuracy of queries and disclosures going forward.
4. The Hawaiʻi HIE will maintain documentation related to a given identified incorrect match, disclosure error, or adjustment to the RLS for at least six (6) years.

4.7. **Accountings of Disclosures.** The Hawaiʻi HIE shall maintain records, as required by HIPAA, to provide information if necessary for Participants that are HIPAA covered entities to fulfill individuals' requests for accountings of disclosures. See the Hawaiʻi HIE's HEN-008 *Individual Rights* Operational Policy and Procedures for additional information regarding accountings of disclosures.

Procedure
1. The Hawaiʻi HIE shall refer to its HEN-008 *Individual Rights* Operational Procedure regarding any requests for additional information or accountings of disclosures.

5. **Revision History**

Revision Date	Revision Type*	Author(s)	Revision Rationale, Description	Approved by
July 17, 2013	New	Legal/Policy Committee (policy sub-committee)	Initial version of policy	Hawaiʻi HIE Board of Directors
August 17, 2016	Amendment	Legal/Policy Committee	Table of contents, section numbering and procedures added; existing definitions and policy sections edited to reflect current Health eNet services and operations	Hawaiʻi HIE Board of Directors

* Revision Type options = New, Amendment, Minor Amendment, Consolidation (i.e. merging of multiple policies)

Appendix A

(Revised July 17, 2013)

Guidelines for Helping Ensure Data Integrity of PHI Contributed to the Health eNet

EHR Data Elements
Participant's EHR allows for the collection of the identifying data elements as listed below.
- First Name
- Last Name
- Middle Initial
- Date of Birth
- Social Security Number
- Gender
- Phone
- Street Address
- Zip Code

Data Entry and Validation Rules
Participant establishes the following rules:

1. Name – The patient must produce at least one form of identification, preferably a Hawaiʻi driver's license or a Hawaiʻi State ID card. Otherwise a passport, birth certificate, driver's license or ID card issued by the state, territory or country where the patient resides is acceptable. A health insurance card is acceptable if the patient can provide at least one other ID with the exact same name. Parents should be able to provide identification for their children such as a birth certificate, a referral from another physician, a hospital discharge report, etc. Do not accept a verbal spelling.

   Ensure you do not use nicknames for the first name. Use either the entire middle name when having a common last name, otherwise a middle initial is sufficient. For some patients, it may be difficult to ascertain which name is first, middle, or last. It is important you rely on an official government ID for such names.

2. Date of Birth (DOB) – DOB is a critical identifier yet it often has one of the higher error rates. Digits tend to get transposed as well as the month, day, or year. Some sites require staff to enter the date with the month spelled out (e.g. January 6, 2013, vs. 6Jan13). Another common practice is to always enter the four-digit year.

   Like the name, an identification card is the most desirable way to get the information. Be very careful when verbally asking for DOBs, since people often just respond without carefully thinking about the information they provide. A DOB with the year off by a year or two is a common error.

3. Social Security Number (SSN) – SSN is an excellent identifier when collected, even if only the last four digits are provided or your system only allows you to collect the last four digits.

4. Gender – Gender can be an important differentiator of identities with unisex names. Unfortunately, it is not uncommon to see sloppy data entry with gender. One site reportedly had over 30% of its duplicate records caused by incorrect gender entry. Verify your entry.

5. Street Address – Although street address has a relatively low value in determining matches, it is the most used field for raising the match probability over a threshold for a positive match. However, its usefulness is heavily diminished when extra data is added (e.g. "1234 Green St. right across from Taco Bell"). Users should enter address as it is on the identification card if it is current.

6. Phone – Like street address, phone numbers can also be important. Cell phones have become very important identifiers over the last decade. Users should be consistent regarding which primary phone number they collect, and take care to enter the correct phone number in a given phone number field if the system allows (e.g. make sure you enter a cell phone number in the "mobile phone" vs. "home phone" field, if the patient has both types of phone numbers).

7. Zip Code – Transposing digits is the most common error regarding zip codes. Verify your entry.