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Familial, Associational, & Incidental Relationships (FAIR)

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Et al.

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Familial, Associational, & Incidental Relationships (FAIR)

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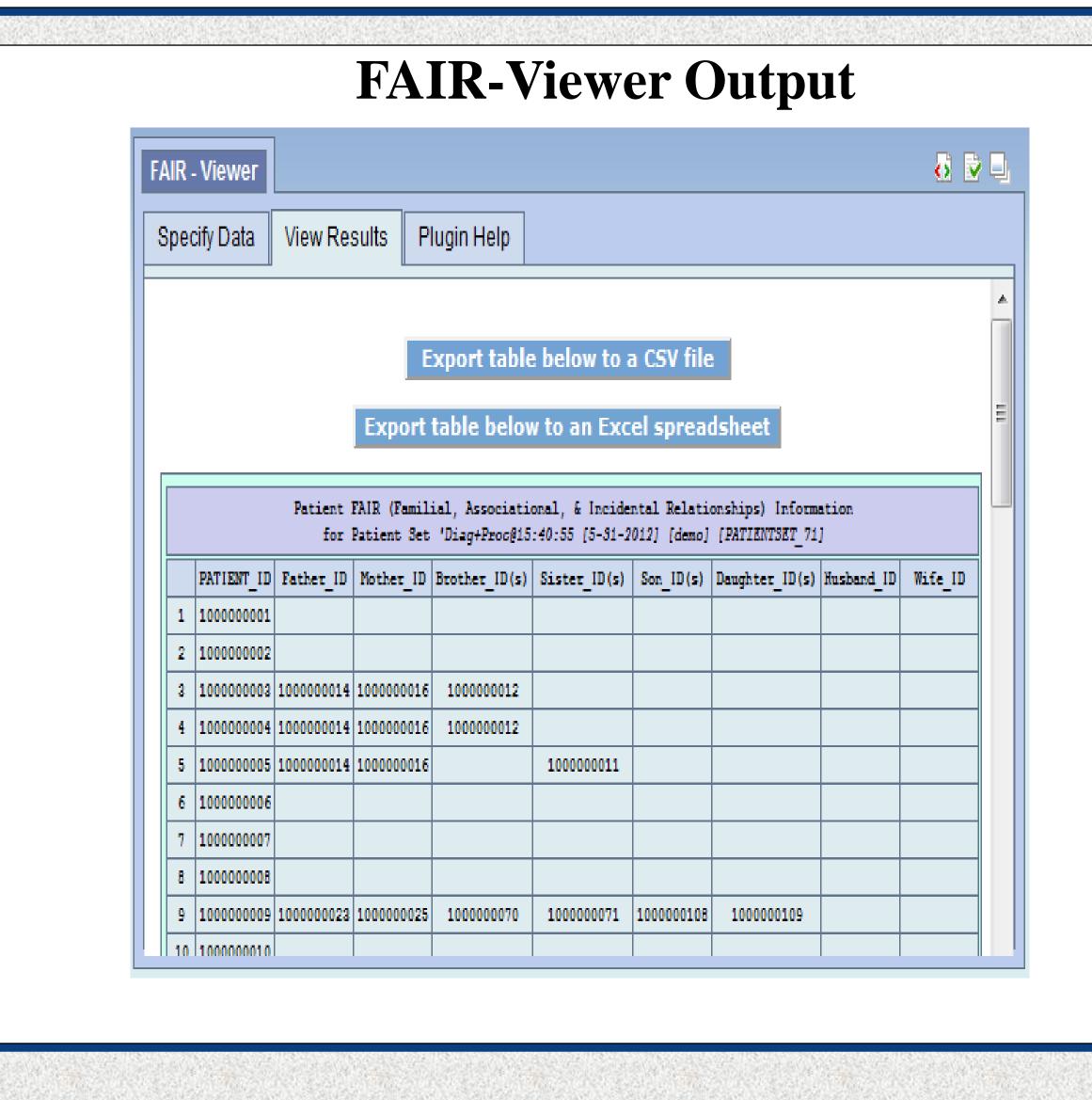
The University of Massachusetts Medical School, Worcester, MA

Background

- Familial history may increase risk for certain disorders and diagnosis in patients
- Identification of these risks is the first step of action to keeping patients healthy
- Linking patients could serve as a surveillance tool that help to identify outbreaks
- Clinical Data Warehouse (CDW) which utilizes the i2b2 (Informatics for integrating biology to bedside)

Methods

 Using a test set of 500 children, we measured the sensitivity and specificity of several linkage algorithms (e.g. insurance id and phone numbers) and validated this tool/algorithm through a manual chart audit.



Phone or Insurance Algorithm True+ True-PPV: 97% Test+ 110 93 NPV: 46% Test-Sensitivity: Specificity: 92%

Applications

72%

- The identification of family and/or caregivers who smoke cigarettes in a pediatric study of asthma.
- Occurrence of Autism has been linked to demographics of parents as well as genetic characteristics of parents
- Epidemiological surveillance; utilizing patients' zip codes or region could assist in the identification of outbreaks

Algorithm to find Mothers

- Find patients with matching phone number or insurance number as a patient in the initial cohort.
- Eliminate all Male matches
- System select the oldest matching female that is 15-50 years older than the member of the initial cohort.

Demographics

Average Age: 52% Male 52% White

FAIR-Concept TracerOutput in Excel

