KIDSNET: Rhode Island’s Integrated Child Health Information System

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Rhode Island Department of Health

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What is KIDSNET?

⭐⭐⭐A Public Health Program – not an electronic medical record
⭐⭐⭐Integrated Child Health Information System
⭐⭐⭐Facilitates the collection and appropriate sharing of health data by authorized users for the provision of timely and appropriate preventive health services and follow up
Historical Overview

- Push for Immunization registry development
- RI already had high immunization rates
- Many categorical programs wanted to develop information systems
- Families and health care providers did not like getting information on the same child from multiple programs
- Limited resources could be pooled
### KIDSNET Partner Programs

<table>
<thead>
<tr>
<th>6 Universal:</th>
<th>5 Targeted:</th>
</tr>
</thead>
<tbody>
<tr>
<td>🌟🌟🌟 Newborn Developmental Risk</td>
<td>🌟🌟🌟 WIC</td>
</tr>
<tr>
<td>🌟🌟🌟 Newborn Bloodspot Screening</td>
<td>🌟🌟🌟 Early Intervention</td>
</tr>
<tr>
<td>🌟🌟🌟 Newborn Hearing Assessment</td>
<td>🌟🌟🌟 First Connections (Home Visiting)</td>
</tr>
<tr>
<td>🌟🌟🌟 Immunization</td>
<td>🌟🌟🌟 Birth Defects*</td>
</tr>
<tr>
<td>🌟🌟🌟 Childhood Lead Poisoning</td>
<td>🌟🌟🌟 Foster Care*</td>
</tr>
<tr>
<td>🌟🌟🌟 Vital Records</td>
<td>* No Web access</td>
</tr>
</tbody>
</table>

* No Web access
Public Health Databases
- Electronic Files – existing databases
- Data Entry – no separate database

Medical Providers (Immunization & Audiology)
- Electronic files (Billing and EMR)
  - HL7 & flat files
- Paper submission for data entry
- On-line data entry
System Users

- Medical Care Providers
- Maternal & Child Health Programs
- Head Start Agencies and Daycare
- School Nurses
- First Connections Home Visitors
- Certified Lead Centers
- Audiologists
- Managed Care Organizations
# Child Health Profile

## Demographics

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child ID</td>
<td>16271</td>
</tr>
<tr>
<td>Medical Record</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>9y 11m</td>
</tr>
<tr>
<td>Patient</td>
<td>JEAN M AMORE</td>
</tr>
<tr>
<td>Race</td>
<td>WHITE</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>UNKNOWN</td>
</tr>
<tr>
<td>DOB</td>
<td>02/20/1998 - 01:23 PM</td>
</tr>
<tr>
<td>Gender</td>
<td>FEMALE</td>
</tr>
<tr>
<td>Hospital</td>
<td>WOMEN &amp; INFANTS</td>
</tr>
<tr>
<td>Status</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>State of Birth</td>
<td>RI</td>
</tr>
<tr>
<td>Insurance</td>
<td>UNITEDHEALTH CARE</td>
</tr>
<tr>
<td>Provider</td>
<td>UNKNOWN</td>
</tr>
<tr>
<td>Previous Provider</td>
<td></td>
</tr>
<tr>
<td>Alias</td>
<td>JEAN AMORE</td>
</tr>
<tr>
<td>Medicaid Id</td>
<td></td>
</tr>
<tr>
<td>Imm Labels</td>
<td>N</td>
</tr>
</tbody>
</table>

## Parent/Guardian Information

**MOTHER:** (1 of 1)

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship</td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td></td>
</tr>
<tr>
<td>Reminders</td>
<td></td>
</tr>
<tr>
<td>Phone</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td></td>
</tr>
</tbody>
</table>
# Hearing Assessment Screen

## Child Information

**Name:** KAREN SMITH  
**KIDSNET ID:** 450433

**Date Of Birth:** 11/01/2004  
**Age:** 4y 9m  
**Gender:** FEMALE

**KIDSNET Status:** ACTIVE  
**PCP:** DOH TEST PRACTICE

**Parent/Guardian:** JANET SMITH  
**Date of birth:** 02/11/1980

## Newborn Hearing Screening Results

<table>
<thead>
<tr>
<th>Date Tested</th>
<th>Screen Type</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/04/2004</td>
<td>OAE RIGHT EAR</td>
<td>PASS</td>
</tr>
<tr>
<td>12/04/2004</td>
<td>OAE LEFT EAR</td>
<td>PASS</td>
</tr>
</tbody>
</table>

**Screening Result:** Pass  
**Audiological Recommendation:** DISCHARGE FROM RIHAP, NO FURTHER ACTION

## Detailed Audiological Diagnostic Information

**Date Tested:** 06/25/2009

**Diagnosis Left:** CONDUCTIVE-PERMANENT  
**Degree Left:** MILD

**Tests performed:** Tympanometry, DPOAE, Bone Conduction

**Diagnosis Right:** NORMAL  
**Degree Right:** N/A

**ICD9:** Conductive hearing loss unilateral (389.05)

**Secondary ICD9:**

**Risk Factors:**

**Comments:** retest in 6 months
Birth Weight: 2985 Grams, 6 Pounds, 9 Ounces

**Immunization Information**

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Date Administered</th>
<th>Lot #</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEPB CHILD</td>
<td>10/17/2003</td>
<td>0218 N</td>
</tr>
</tbody>
</table>

Hepatitis B Condition of Mother: HBsAG NEGATIVE

**Hearing Assessment Information**

<table>
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<tr>
<th>Date Tested</th>
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<tr>
<td>10/17/2003</td>
<td>OAE RIGHT EAR</td>
<td>PASS</td>
</tr>
<tr>
<td>10/17/2003</td>
<td>OAE LEFT EAR</td>
<td>PASS</td>
</tr>
</tbody>
</table>

Screening Result:
Audiological Recommendation:

Risk Factors:

**Newborn Developmental Risk Assessment**

Risk Disposition: NEGATIVE  Risk Summary: NEGATIVE
Known Established Conditions: NONE

**Home Visit**

Agency:  
Agency Phone:  
Fax:  

**Newborn Heelstick**

Guthrie #: YF1021030338  Blood Drawn Date: 10/18/2003  
Results: ALL CONDITIONS NORMAL  
Specimen Received Date: 10/21/2003
Benefits of Integration

- Population based data
- Knowing denominator – who hasn’t had a service as well as who has
- Shared resources can do what individual programs cannot
- Shared demographic data
- Single access for multiple data sources
- Support for Medical Homes and Maternal Child Health Programs
Challenges of Integration

⭐⭐⭐ Resources
⭐⭐⭐ The Business Case
⭐⭐⭐ Acquiring Expertise
⭐⭐⭐ Funding Streams
⭐⭐⭐ Provider Relations and Participation
⭐⭐⭐ Training
⭐⭐⭐ Encouraging Use of Technology
Challenges cont.’d

★★★★ Data Quality
  ★★★ Matching and de-duplication
  ★★★ Timeliness and Completeness
  ★★★ Data Accuracy

★★★★ Data Standards
  ★★★ Interoperability and data exchange
  ★★★ Working with EMRs

★★★★ Magical Thinking
Uses of integrated data

- Quality Assurance
- Program Evaluation/Performance Measures
- School Entry Requirements
- Point of Service Access
- Medical home assuring services
American Academy of Pediatrics defines a medical home as primary care that is:

- Accessible
- Continuous
- Comprehensive
- Family Centered
- Coordinated
- Compassionate
- Culturally Effective
Medical Home – How are we doing as a state?

- 11,380 linked to a PCP in KIDSNET
- 10,581 immunized by 3 months of age
- 8,058 screened for lead by 18 months
- 6,445 had 4 DTaP by 24 months
- 4,421 had 2nd lead test by 36 months

2003 births linked to a primary care provider in KIDSNET (n=11,380)
Immunized by 3 months and recorded in KIDSNET (n=10,581)
Received a lead test by 18 months (n=8,058)
Received 4 DTaP by 24 months (n=6,445)
Received 2nd lead test by 36 months (n=4,421)

2003 births occurring among Rhode Island residents in Rhode Island hospitals = 12,606
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