

# Kansas IIS (KSWebIZ) Data Quality Pilot Project



# Project Goals

- Improve overall KSWebIZ data quality.
- Identify problematic data quality issues for individual clinics.
- Educate clinics on use of KSWebIZ data quality reports.
- Correct erroneous or identify missing data.
- Advise clinical process flow to improve data quality (i.e. data entry, etc.)

# Specific Patient DQ Target Areas

- Patient Data Completeness
  - Patient Date of Birth
  - Patient Name (last, first)
  - Gender
  - Race/Ethnicity
  - Mother's Name (first, last, maiden)
  - Patient Address
  - VFC Eligibility (patient level)

# Specific Vaccination DQ Target Areas

- Vaccination Completeness
  - Missing/incorrect data for non-historical vaccinations
    - MFG
    - Lot Number
    - Expiration Date
    - Funding Source
    - Body Site/Route
    - Unspecified Formulation (UF)

# Specific Vaccination DQ Target Areas (cont'd)

- Vaccination Accuracy
  - Vaccinations given at Invalid Age
    - Looked at specific vaccines that were administered outside the ACIP recommendation (age).
  - Vaccinations Count Inconsistent with Age
    - Looked at total counts of vaccinations given at specific ages (i.e. too many for that specific age).
- Vaccination Timeliness
  - Vaccinations given >7 days of administration date.

# Timeline

- May 2013
  - Deployed New IZ Data Quality report to production
- June 2013
  - Sent out Call for pilot users (survey)
- July 2013
  - Ran baseline reports for clinics
  - Educated clinics on reports and how to 'clean' data
- August – Sept 2013
  - Ran monthly status reports to review progress
  - Surveyed participants (end of Sept) for feedback

# Data Quality Tool Design

- Idea for Data Quality Tool
  - September 2008: As a result of working on the MIROW DQ Chapter
  - Reviewed chapter and pulled out specific measurements that would be useful to check Data Quality in the system
- Design
  - September - December 2008
    - Input from VFC and KSWebIZ staff to expand and refine parameters

# Data Quality Tool Development

- December 2008
  - Measurements transcribed into data queries generated by KSWebIZ Vendor
- December 2008-January 2009
  - Tool generated in PDF format (statistics portion only)
- January 2009-present
  - Tested tool; added patient level exceptions report
- Late 2012
  - Released to the KSWebIZ Test Site
- May 2013
  - Released to the KSWebIZ Production Site

# IZ Data Quality Tools

- Three types of reports are available:
  - Data Quality, Statistics – Scheduled
    - A scheduled report that presents a static view of clinic data based on the date it is generated. Snapshot of entire history for a clinic.
    - Full assessment of all data.
    - Ran monthly so clinic could review progress in changes of data.

# Data Quality, Statistics – Scheduled

### Search Criteria

**Provider**  
KDHE IMMUNIZATION PROGRAM

**Clinic**  
KDHE IMMUNIZATION PROGRAM-C1

**Statistics Generated Date Range**  
From:  Through:

### Search Results - 1 record(s)

**Output Type:**  PDF  EXTRACT - Delimiter:

|                       | Provider                  | Clinic                       | Date Generated      |
|-----------------------|---------------------------|------------------------------|---------------------|
| <input type="radio"/> | KDHE IMMUNIZATION PROGRAM | KDHE IMMUNIZATION PROGRAM-C1 | Apr 11 2013 7:01 pm |

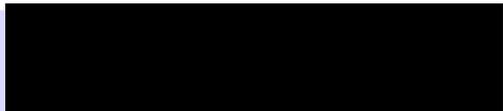
# Data Quality, Statistics – Scheduled



## Kansas Immunization Registry Data Quality, Statistics - Scheduled (Beta Test)

September 12, 2013

Provider:  
Clinic:



Go Live Date: 01/20/2012  
Legacy Data Import Date:  
Legacy Data System:

Date Generated: Apr 12 2013 10:01 am

Inventory Type: 3 HL7 Facility Code(s): NONE  
Jurisdiction: KANSAS

### PATIENT COUNTS

This section calculates the number and percentage of patients associated to the clinic according to their patient program status.

|   | Patients  | Percentage     | Percentage of Total Patients |
|---|-----------|----------------|------------------------------|
| Active Patients in Jurisdiction                 | 83        | 100.00%        | 95.40%                       |
| Active Patients not in Jurisdiction             | 0         | 0.00%          | 0.00%                        |
| <b>Total Active Patients</b>                    | <b>83</b> | <b>100.00%</b> | <b>95.40%</b>                |
| Inactive Patients - Moved Out of Area           | 1         | 25.00%         | 1.15%                        |
| Inactive Patients - Other Immunization Provider | 2         | 50.00%         | 2.30%                        |
| Inactive Patients - Unable To Locate            | 1         | 25.00%         | 1.15%                        |
| <b>Total Inactive Patients</b>                  | <b>4</b>  | <b>100.00%</b> | <b>4.60%</b>                 |
| <b>Total Patients</b>                           | <b>87</b> | <b>100.00%</b> | <b>100.00%</b>               |

### PATIENT COMPLETENESS

This section calculates the number and percentage of active patient records that have a value in the following data fields.

|                               | Patients | Percentage of Total Active Patients |
|-------------------------------|----------|-------------------------------------|
| Patients with First Name      | 83       | 100.00%                             |
| Patients with Last Name       | 83       | 100.00%                             |
| Patients with Middle Name     | 74       | 89.16%                              |
| Patients with DOB             | 83       | 100.00%                             |
| Patients with SSN             | 66       | 79.52%                              |
| Patients with Gender          | 83       | 100.00%                             |
| Patients with Birth State     | 64       | 77.11%                              |
| Patients with Birth Country   | 64       | 77.11%                              |
| Patients with Birth Order     | 20       | 24.10%                              |
| Patients with Race            | 71       | 85.54%                              |
| Patients with Ethnicity       | 72       | 86.75%                              |
| Patients with VFC Eligibility | 83       | 100.00%                             |



Provider: XXXXXXXXXX  
 Clinic: XXXXXXXXXX

Date Generated: Apr 12 2013 10:01 am

|   |    |         |
|---|----|---------|
| Patients with Mother's First Name           | 66 | 79.52%  |
| Patients with Mother's Middle Name          | 30 | 38.14%  |
| Patients with Mother's Maiden Name          | 66 | 79.52%  |
| Patients with Mother's Last Name            | 63 | 75.90%  |
| Patients with Street Name or PO Box         | 83 | 100.00% |
| Patients with City                          | 83 | 100.00% |
| Patients with County                        | 80 | 98.39%  |
| Patients with State                         | 83 | 100.00% |
| Patients with Zip Code                      | 83 | 100.00% |
| Patients with Home Phone Number             | 58 | 69.88%  |
| Patients with Cell Phone Number             | 0  | 0.00%   |
| Patients with Email Address                 | 0  | 0.00%   |
| Patients with History of Varicella Disease  | 3  | 3.61%   |
| Patients with Date of Varicella Disease     | 3  | 3.61%   |
| Patients created by Vital Statistics Import | 0  | 0.00%   |

**VACCINATION COMPLETENESS**

This section calculates the number and percentage of vaccination events (for those active patients associated to the selected clinic) that have a value in the following data fields for each category.

|   | All<br>Vaccinations | Percentage of<br>All Vaccinations | All<br>Non-Historical<br>Vaccinations | Percentage of<br>All<br>Non-Historical<br>Vaccinations | Clinic<br>Non-Historical<br>Vaccinations | Percentage of<br>Clinic<br>Non-Historical<br>Vaccinations |
|---|---------------------|-----------------------------------|---------------------------------------|--|--|---|
| Total Vaccinations  | 1,549               | 100.00%                           | 483                                   | 100.00%  | 241                                      | 100.00%   |
| Vaccinations Added but not Administered                         | 0                   | 0.00%                             | 0                                     | 0.00%  | 0  | 0.00%   |
| Vaccinations with Vaccination Date                              | 1,549               | 100.00%                           | 483                                   | 100.00%  | 241                                      | 100.00%   |
| Vaccinations with Manufacturer                                  | 616                 | 39.77%                            | 427                                   | 88.41%   | 241                                      | 100.00%   |
| Vaccinations with Lot Number                                    | 507                 | 32.73%                            | 422                                   | 87.37%   | 241                                      | 100.00%   |
| Vaccinations with Expiration Date                               | 499                 | 32.21%                            | 422                                   | 87.37%   | 241                                      | 100.00%   |
| Vaccinations with NDC   | 158                 | 10.20%                            | 158                                   | 32.71%   | 136                                      | 56.43%  |
| Vaccinations with Funding Source                                | 376                 | 24.27%                            | 374                                   | 77.43%   | 241                                      | 100.00%   |
| Vaccinations with Site  | 361                 | 23.31%                            | 343                                   | 71.01%   | 241                                      | 100.00%   |
| Vaccinations with Route   | 367                 | 23.69%                            | 343                                   | 71.01%   | 241                                      | 100.00%   |
| Vaccinations with Administered By                               | 344                 | 22.21%                            | 343                                   | 71.01%   | 241                                      | 100.00%   |
| Non-Historical Vaccinations with VIS Date Given                 | 297                 | 61.49%                            | 297                                   | 61.49%   | 214                                      | 88.80%  |
| Non-Historical Vaccinations with VIS Effective Date             | 297                 | 61.49%                            | 297                                   | 61.49%   | 214                                      | 88.80%  |
| Unspecified Formulation (UF) entered as Non-Historical Vaccines | 4                   | 0.83%                             | 4                                     | 0.83%  | 0  | 0.00%   |



Provider: [REDACTED]  
 Clinic: [REDACTED]

Date Generated: Apr 12 2013 10:01 am

**ACCURACY, VACCINATION GIVEN AT INVALID AGE**

This section calculates the number and percentage of vaccination events and the patients impacted (for patients associated to the clinic) that were given any single immunization outside of ACIP age recommendations or vaccine label guidelines for each category.

|  | All<br>Vaccinations | Percentage of<br>All<br>Vaccinations | Number of<br>Patients<br>Impacted | Clinic<br>Vaccinations | Percentage of<br>Clinic<br>Vaccinations | Number of<br>Patients<br>Impacted |
|--|---------------------|--------------------------------------|-----------------------------------|------------------------|---|-----------------------------------|
| Total Vaccinations   | 1,549               | 100.00%                              | 83                                | 248                    | 100.00%                                 | 78                                |
| DTaP / TD / TDAP Vaccinations before 6 weeks of age              | 0                   | 0.00%                                | 0                                 | 0                      | 0.00%                                   | 0                                 |
| DT / DTP / DTaP Vaccinations after 7 years (2557 days) of age    | 3                   | 0.19%                                | 3                                 | 0                      | 0.00%                                   | 0                                 |
| Td / Tdap Vaccinations before 7 years (2553 days) of age         | 0                   | 0.00%                                | 0                                 | 0                      | 0.00%                                   | 0                                 |
| Kinrix (DTaP-IPV) Vaccinations before 4 years (1457 days) of age | 1                   | 0.06%                                | 1                                 | 0                      | 0.00%                                   | 0                                 |
| Polio Vaccinations before 6 weeks of age                         | 0                   | 0.00%                                | 0                                 | 0                      | 0.00%                                   | 0                                 |
| MMR Vaccinations before 1 year (361 days) of age                 | 3                   | 0.19%                                | 3                                 | 0                      | 0.00%                                   | 0                                 |
| Hib Vaccinations before 6 weeks of age                           | 1                   | 0.06%                                | 1                                 | 0                      | 0.00%                                   | 0                                 |
| Hib Vaccinations after 6 years (2190 days) of age                | 0                   | 0.00%                                | 0                                 | 0                      | 0.00%                                   | 0                                 |
| Varicella (CPOX) Vaccinations before 1 year (361 days) of age    | 2                   | 0.13%                                | 2                                 | 0                      | 0.00%                                   | 0                                 |
| Pneumococcal Vaccinations before 6 weeks of age                  | 0                   | 0.00%                                | 0                                 | 0                      | 0.00%                                   | 0                                 |
| PPV23 Vaccinations before 2 years (728 days) of age              | 0                   | 0.00%                                | 0                                 | 0                      | 0.00%                                   | 0                                 |
| HPV Vaccinations before 9 years (3283 days) of age               | 0                   | 0.00%                                | 0                                 | 0                      | 0.00%                                   | 0                                 |
| HPV Vaccinations after 28 years (10228 days) of age              | 0                   | 0.00%                                | 0                                 | 0                      | 0.00%                                   | 0                                 |
| Cervarix Vaccinations and a gender of Male                       | 0                   | 0.00%                                | 0                                 | 0                      | 0.00%                                   | 0                                 |
| Hep A Vaccinations before 1 year (361 days) of age               | 1                   | 0.06%                                | 1                                 | 0                      | 0.00%                                   | 0                                 |
| Meningococcal Vaccinations before 11 years of age                | 0                   | 0.00%                                | 0                                 | 0                      | 0.00%                                   | 0                                 |
| Influenza Vaccinations before 6 months of age                    | 0                   | 0.00%                                | 0                                 | 0                      | 0.00%                                   | 0                                 |
| Rotavirus Vaccinations before 6 weeks of age                     | 0                   | 0.00%                                | 0                                 | 0                      | 0.00%                                   | 0                                 |
| First dose of Rotavirus after 12 weeks of age                    | 5                   | 0.32%                                | 5                                 | 1                      | 0.41%                                   | 1                                 |
| Rotavirus Vaccinations after 32 weeks of age                     | 0                   | 0.00%                                | 0                                 | 0                      | 0.00%                                   | 0                                 |
| Non-Hep B Vaccinations before 4 weeks of age                     | 1                   | 0.06%                                | 1                                 | 0                      | 0.00%                                   | 0                                 |
| Zoster Vaccinations before 50 years (18258 days) of age          | 0                   | 0.00%                                | 0                                 | 0                      | 0.00%                                   | 0                                 |
| Vaccinations before their DOB                                    | 0                   | 0.00%                                | 0                                 | 0                      | 0.00%                                   | 0                                 |
| Vaccinations after the Expiration Date                           | 8                   | 0.52%                                | 5                                 | 0                      | 0.00%                                   | 0                                 |
| Vaccinations in the future                                       | 0                   | 0.00%                                | 0                                 | 0                      | 0.00%                                   | 0                                 |

**ACCURACY, VACCINATION COUNTS INCONSISTENT WITH PATIENT'S AGE**

This section calculates the number and percentage of active patient records (associated to the clinic) that have a total number of vaccinations that is more than what is appropriate for their age.

|   | Patients | Percentage of Active Patients |
|---|----------|-------------------------------|
| Patients with more than 2 DTaP Vaccinations before 4 months of age  | 0        | 0.00%                         |
| Patients with more than 3 DTaP Vaccinations before 6 months of age  | 0        | 0.00%                         |
| Patients with more than 4 DTaP Vaccinations before 1 year of age    | 0        | 0.00%                         |
| Patients with more than 6 DTaP Vaccinations before 7 years of age   | 0        | 0.00%                         |
| Patients with more than 2 Polio Vaccinations before 4 months of age | 0        | 0.00%                         |
| Patients with more than 2 HIB Vaccinations before 4 months of age   | 1        | 1.20%                         |
| Patients with more than 3 HIB Vaccinations before 6 months of age   | 0        | 0.00%                         |
| Patients with more than 4 HIB Vaccinations before 1 year of age     | 0        | 0.00%                         |
| Patients with more than 2 PCV Vaccinations before 4 months of age   | 0        | 0.00%                         |
| Patients with more than 3 PCV Vaccinations before 6 months of age   | 0        | 0.00%                         |
| Patients with more than 4 PCV Vaccinations before 1 year of age     | 0        | 0.00%                         |
| Patients with more than 2 HepA Vaccinations                         | 2        | 2.41%                         |
| Patients with more than 4 HepB Vaccinations                         | 2        | 2.41%                         |
| Patients with more than 4 HIB Vaccinations                          | 2        | 2.41%                         |
| Patients with more than 3 HPV Vaccinations                          | 0        | 0.00%                         |
| Patients with more than 3 Meningococcal Vaccinations                | 0        | 0.00%                         |
| Patients with more than 2 MMR Vaccinations                          | 3        | 3.61%                         |
| Patients with more than 4 PCV Vaccinations                          | 2        | 2.41%                         |
| Patients with more than 3 Rotavirus Vaccinations                    | 0        | 0.00%                         |
| Patients with more than 1 Tdap Vaccinations                         | 1        | 1.20%                         |
| Patients with more than 2 Varicella Vaccinations                    | 1        | 1.20%                         |
| Patients with 10 or more Vaccinations on the same date              | 0        | 0.00%                         |
| Patients with 20 or more Vaccinations before 6 months of age        | 0        | 0.00%                         |
| Patients with 30 or more Vaccinations before 2 years of age         | 0        | 0.00%                         |
| Patients with 40 or more Vaccinations before 5 years of age         | 0        | 0.00%                         |
| Patients with 70 or more Vaccinations                               | 0        | 0.00%                         |

**TIMELINESS**

This section calculates the number and percentage of vaccinations events where the amount of time elapsed between the date of vaccination and the date it was created in the IIS is within the indicated timeframes for each category.

|   | All Vaccinations | Percentage of All Vaccinations | Clinic Vaccinations | Percentage of Clinic Vaccinations |
|---|------------------|--------------------------------|---------------------|-----------------------------------|
| Total Vaccinations  | 1,549            | 100.00%                        | 246                 | 100.00%                           |
| Vaccinations entered < 1 day of Administration                          | 317              | 20.46%                         | 165                 | 67.07%                            |
| Vaccinations entered in at least 1 day and < 2 days of Administration   | 49               | 3.16%                          | 39                  | 15.85%                            |
| Vaccinations entered in at least 2 days and < 7 days of Administration  | 59               | 3.81%                          | 19                  | 7.72%                             |
| Vaccinations entered in at least 7 day and < 14 days of Administration  | 19               | 1.23%                          | 9                   | 3.66%                             |
| Vaccinations entered in at least 14 day and < 30 days of Administration | 31               | 2.00%                          | 13                  | 5.28%                             |
| Vaccinations entered in 30 days or more of Administration               | 1,074            | 69.34%                         | 1                   | 0.41%                             |

Provider: [REDACTED]  
Clinic: [REDACTED]

Date Generated: Apr 12 2013 10:01 am

### INVENTORY MANAGEMENT

This section summarizes several key Inventory elements for full Inventory (type 3) providers.

|   | Count |
|---|-------|
| Number of Active Inventory Locations                          | 1     |
| Number of Closed Reconciliations within the last 12 months    | 9     |
| Total Number of Closed Reconciliations                        | 11    |
| Number of Expired Inventory Line Items with Quantity > 0      | 2     |
| Total Number of Doses Wasted or Expired in the last 12 months | 87    |

# IZ Data Quality Tools (cont'd)

- Data Quality, Statistics
  - Run on an as-needed basis (real-time)
  - Limited to a one-month timeframe (either DOB or vaccination date range)
  - Clinic generates and uses data to track results of data cleansing for selected variables.

# Data Quality, Statistics

**Report Selection Criteria**

**Provider**  
KDHE IMMUNIZATION PROGRAM

**Clinic**  
KDHE IMMUNIZATION PROGRAM-C1

**Date of Birth Date Range**  
From:  Through:

**Vaccination Date Range**  
From:  Through:

**Output Type:**  PDF  EXTRACT - Delimiter:

- Same layout as previous report just different data.

# IZ Data Quality Tools (cont'd)

- Data Quality, Patient Exceptions
  - Run on an as-needed basis (real-time)
  - Limited to a one-month timeframe (either DOB or vaccination date range)
  - Clinic generates and uses data to track results of individual patient records with identified data issues.

# Data Quality, Patient Exceptions

**Report Selection Criteria**

**Provider**  
KDHE IMMUNIZATION PROGRAM

**Clinic**  
KDHE IMMUNIZATION PROGRAM-C1

**Report Section**  
ACCURACY, VACCINATION GIVEN AT INVALID AGE

**Report Section Line Item**  
(ALL REPORT SECTION LINE ITEMS)

**Date of Birth Date Range**  
From:   Through:  

**Vaccinations Criteria**

**Vaccination Date Range**  
From:   Through:  

**Vaccinations:**  All  Historical only  Non-Historical only

**Output Type:**  PDF  EXTRACT - Delimiter:

# Data Quality, Patient Exceptions



## Kansas Immunization Registry Data Quality, Patient Exceptions (Beta Test)

September 12, 2013

Report Section = PATIENT COMPLETENESS, Report Section Line Item = All, Date of Birth Date - From = 12/07/2011, Date of Birth Date - Through = 12/07/2011, Vaccinations = Non-Historical

|   |   |                                |                           |
|---|---|--------------------------------|---------------------------|
| <b>Provider:</b> KANSAS WEBIZ TRAINING  | <b>Go Live Date</b>                         | <b>Legacy Data Import Date</b> | <b>Legacy Data System</b> |
| <b>Clinic:</b> KSWEBIZ DATA QUALITY<br>1000 SW JACKSON, UNIT #210<br>TOPEKA, KS 66612 |   |                                |                           |
|   | <b>Data Generated:</b> Sep 12 2013 11:50 am |                                |                           |

**Inventory Type:** 3 **HL7 Facility Code(s):** NONE

**BUSINESS, CHARLENE (2427920) DOB: 12/07/2011**

### PATIENT COMPLETENESS

|                                     |  |
|-------------------------------------|--|
| Patients with Middle Name           |  |
| Patients with SSN                   |  |
| Patients with Birth State           |  |
| Patients with Birth Country         |  |
| Patients with Birth Order           |  |
| Patients with Race                  |  |
| Patients with Ethnicity             |  |
| Patients with VFC Eligibility       |  |
| Patients with Mother's First Name   |  |
| Patients with Mother's Middle Name  |  |
| Patients with Mother's Maiden Name  |  |
| Patients with Mother's Last Name    |  |
| Patients with Street Name or PO Box |  |
| Patients with City                  |  |
| Patients with County                |  |
| Patients with State                 |  |
| Patients with Zip Code              |  |
| Patients with Home Phone Number     |  |
| Patients with Cell Phone Number     |  |
| Patients with Email Address         |  |

|   |    |
|---|----|
| Total Exceptions for Patient Id 2427920 | 20 |
| Total Patients                          | 1  |



# Data Quality, Patient Exceptions



## Kansas Immunization Registry Data Quality, Patient Exceptions (Beta Test)

September 09, 2013

Report Section = ACCURACY, VACCINATION GIVEN AT INVALID AGE, Report Section Line Item = All, Date of Birth Date - From = 12/07/2011, Date of Birth Date - Through = 12/07/2011, Vaccinations = Historical

Provider: KANSAS WEBIZ TRAINING  
Clinic: KSWEBIZ DATA QUALITY  
1000 SW JACKSON, UNIT #210  
TOPEKA, KS 66612

Go Live Date      Legacy Data Import Date      Legacy Data System

Data Generated: Sep 9 2013 3:58 pm

Inventory Type: 3    HL7 Facility Code(s): NONE

**BUSINESS, CHARLENE (2427920) DOB: 12/07/2011**

ACCURACY, VACCINATION GIVEN AT INVALID AGE

DTaP / TD / TDAP Vaccinations before 6 weeks of age

Polio Vaccinations before 6 weeks of age

Pneumococcal Vaccinations before 6 weeks of age

| Clinic Code                             | Historical? | Vaccine               | Vaccination Date |
|---|-------------|-----------------------|------------------|
| PR                                      | Y           | DTaP-HepB-IPV (Pedla) | 01/07/2012       |
| PR                                      | Y           | DTaP-HepB-IPV (Pedla) | 01/07/2012       |
| PR                                      | Y           | PCV-13 (Prevnar)      | 01/07/2012       |
| Total Exceptions for Patient Id 2427920 |             |                       | 3                |
| Total Patients                          |             |                       | 1                |

# Selection of Providers

- Reviewed all provider profiles of respondents of survey.
- Selected 15 providers based on the following criteria:
  - HL7 Interface providers vs. Direct Entry providers
    - NOTE: All interfacing providers currently use the HL7 2.3.1 standard and exchange data bi-directionally with KSWebIZ
  - Small, Medium vs. Large clinics
    - Small: 100-999 patients
    - Medium: 1,000-9,999 patients
    - Large: 10,000+ patients
  - Private provider clinics vs. Public provider clinics

# Selection of Providers

| Public vs. Private | Direct Access vs. Interfaced | Small vs. Medium vs. Large |
|--------------------|------------------------------|----------------------------|
| Public: 8          | Direct Access: 8             | Small: 2                   |
| Private: 7         | Interfaced: 7                | Medium: 8                  |
|                    |                              | Large: 5                   |

# Provider Profiles

| Clinic Name                        | Public vs. Private | # Patients (Approx.) | Type of Access                 |
|------------------------------------|--------------------|----------------------|--------------------------------|
| Konza Prairie                      | Private            | 2,341                | Direct                         |
| Norton CHD                         | Public             | 5,437                | Direct                         |
| St. Francis Fam Med Jewell         | Private            | 1,570                | Direct                         |
| Logan CHD                          | Public             | 3,948                | HL7 2.3.1<br>PHClinic, KIPHS   |
| Mercy Clinic                       | Private            | 4,296                | HL7 2.3.1<br>EPIC              |
| Mercy and Truth                    | Private            | 231                  | Direct                         |
| St. Francis Fam Med Hunter's Ridge | Private            | 126                  | Direct                         |
| Douglas CHD                        | Public             | 40,637               | HL7 2.3.1<br>Netsmart, Insight |

# Provider Profiles (cont'd)

| Clinic Name                       | Public vs. Private | # Patients | Type of Access                 |
|-----------------------------------|--------------------|------------|--------------------------------|
| Meade CHD                         | Public             | 7,880      | HL7 2.3.1<br>PHClinic, KIPHS   |
| Wyandotte CHD                     | Public             | 33,122     | HL7 2.3.1<br>NetSmart, Insight |
| Med Ped Clinic West               | Private            | 1,542      | Direct                         |
| Riley CHD                         | Public             | 33,902     | Direct                         |
| St. Francis Fam Med Mission Woods | Private            | 8,446      | Direct                         |
| McPherson CHD                     | Public             | 16,743     | HL7 2.3.1<br>PHClinic, KIPHS   |
| Sedgwick CHD                      | Public             | 61,348     | HL7 2.3.1<br>PHClinic, KIPHS   |

# Results of Data Quality Pilot

- Identified Issues with Beta DQ Reports
  - Identified bug in calculation of one of the line items (Rotavirus).
  - Total Percentage of Patients was of complete population but want to add additional line to only look at Total Percentage of Patients under 19 years of age.
  - Some line items are based off ACIP recommendation which are subject to change, so report will need to be reviewed often for changes (minimum = annually).

# Results of Data Quality Pilot (cont'd)

- Identified Issues with data coming from HL7 Interfacing Clinics
  - Some clinics not sending lot number, expiration date, body site/route, MFG for administered vaccinations.
    - After working with vendor, these issues were addressed.
  - Administered vaccinations were not timely (> 7 days of administration)
    - After education this improved.
  - Clinics entered Patient VFC Eligibility and VIS Information into EMR system but was not transferred to KSWebIZ
    - Currently working with vendors to resolve this.

# Results of Data Quality Pilot (cont'd)

- Identified Issues with data coming from HL7 Interfacing Clinics (cont'd)
  - Added prompt in EMR system to add Mother's Maiden name and additional demographics.
- Overall data quality improvements
  - Increased percentage of demographics data
    - Race/Ethnicity
    - Mother's first, last, and maiden name
    - Increased number of records with complete address data.

# Results of Data Quality Pilot (cont'd)

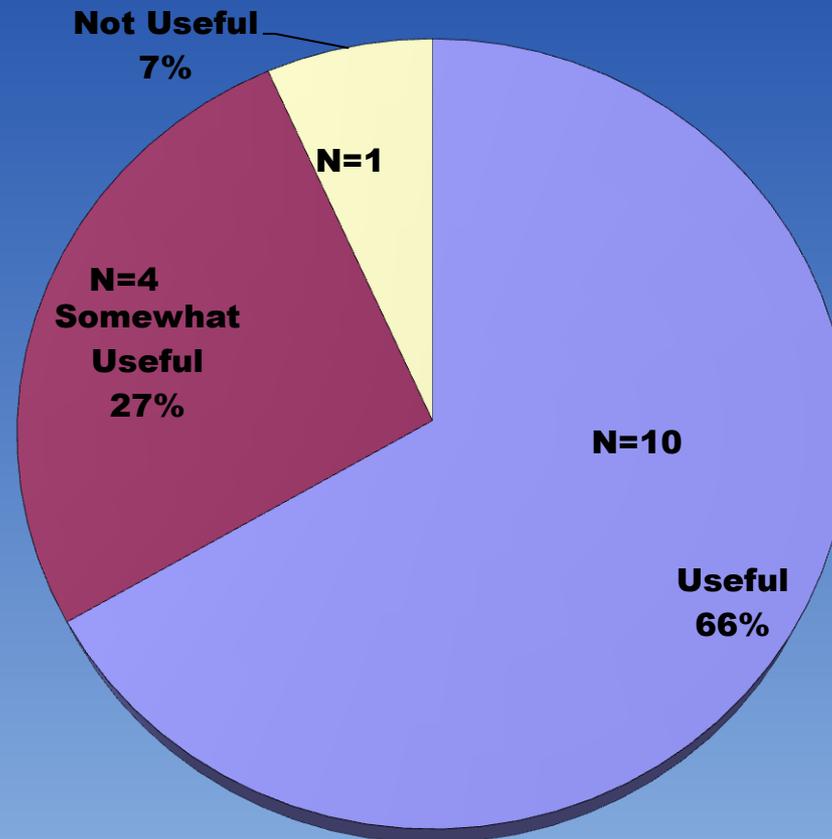
- Improvements on clinic administration process
  - Number of invalid doses decreased administered going forward
    - Decreased number of MMR, Hep A, and Varicella vaccinations given before 1 year.
    - Decreased number of DTaP vaccinations given before 6 weeks of age.
    - Decreased Meningococcal vaccinations before 11 years of age.
- Data Quality Coordinator getting more feedback from clinics with DQ issues.
- For Direct Access Clinics increases in VIS Date Given and VIS Effective Date for administered vaccinations.

# Results of Data Quality Pilot (cont'd)

- Unresolved Issues to be addressed...
  - Documentation of inactive patients (MOGE'd).
    - Most clinics stated this was too time consuming.
    - Immunization Program is working on a resolution for this since this affects over-inflated county saturation coverage statistics.
    - Small increase of inactive patients was noted after study for these clinics.

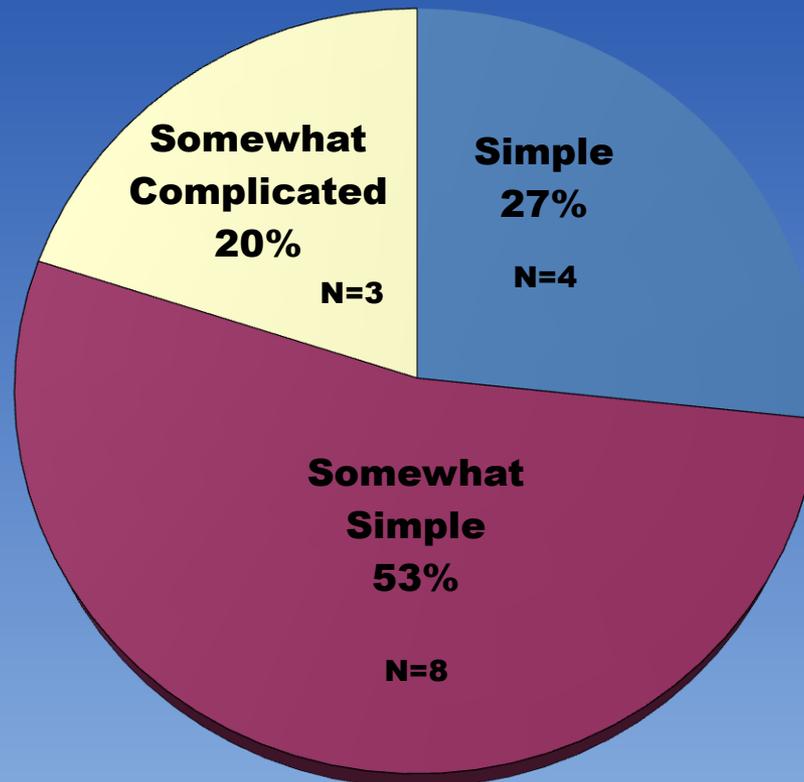
# Results of Provider Survey

- How was the Quality of Training when learning how to use the Data Quality Reports?



# Results of Provider Survey

- With Regard to Generating and Reading the Reports, How would You Rate the Ease of Use?



# Results of Provider Survey

- How well has this Data Quality Project been Accepted?

| Response Category      | Response Percent | Response Count |
|------------------------|------------------|----------------|
| Accepted               | 60.0%            | 9              |
| Somewhat Accepted      | 40.0%            | 6              |
| Somewhat Disapproved   | 6.7%             | 1              |
| Disapproved            | 0.0%             | 0              |
| No Comment             | 0.0%             | 0              |
| Other (please specify) | 6.7%             | 1              |

# Survey Feedback

- Comments from Clinics
  - Increased their awareness and understanding of additional reports available in KSWebIZ.
  - Most liked the new IZ Data Quality reports.
  - Proud of their clinics level of data quality!
  - Indicated that the whole process was helpful.
  - Identified Data Quality excellence was reassuring and motivating.

# Survey Feedback (cont'd)

- Comments (cont'd):
  - Will help me to weed out patients that are no longer seen at our clinic.
  - Will help us determine active patient numbers and if we need to look at MOGE data better.
  - Will help reception staff to take a closer look at completeness of registration information.
  - Shows us what we are not inputting.
  - Will help keep kids up to date.
  - Ensures that we chart in a timely manner.

# Survey Feedback (cont'd)

- Comments (cont'd):
  - Helps us to check on mistakes/missed opportunities.
  - Helps the nurses pay closer attention to which vaccines are given at which ages.
  - Helps us give the right vaccines at the right time.
  - Will help us follow through with documentation.
  - Will help us to make sure that the registry is being updated after giving immunizations.

# Survey Feedback (cont'd)

- Comments (cont'd):
  - Will facilitate gathering more information from patient for demographics.
  - Facilitated the education of staff on required data fields that needed to be input.
  - Helped us to identify bugs in our Patient Management/EHR system.

# Future Plans

- Continue to work with pilot sites for the next six months.
- Continue to Capture Feedback for improvements.
- Make changes to the DQ tool as needed.
- Expand the use of the DQ tool to all KSWebIZ Clinics.
  - Training, Feedback, etc.
- Using the Tool, Monitor Data Quality on an ongoing basis.

# Questions



Our vision is 'healthy Kansans living in safe and sustainable environments'. The state belongs to all of us - "Kansas Don't Spoil It"

# Contact Information

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|--|--|------------------|
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