HealthShare Exchange: Supporting COVID-19 Response in the Delaware Valley

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Connecting People

HSX works collaboratively with the healthcare community to make patient records of different providers, EHRs, and health plans available electronically.
Our Network

- **12 million+ patients** in the HSX Clinical Data Repository
- **16,000+ physicians and other practitioners** in the HSX Provider Directory
- **450+ participating organizations:** hospitals, health plans, and other provider organizations
Population Health Case Studies

Diabetes Prevention Collaboratives: Quality Improvement projects with ADA, Diabetes Prevention Programs with JCPH

Matching Seniors with Benefit Programs: identifying patients eligible for PACE, SNAP, LIHEAP, and others

Delaware Valley COVID-19 Registry: gaining insight into COVID-19 impact, progression, treatment
STAR HIE Program: Leveraging Health IT Strategies for Delaware Valley Public Health Agencies

- Case Finding
- Contact Tracing
- Immunization Status

- Laboratory Feeds
- Electronic Initial Case Reports (eICR)
- County Health Clinics

- National Federated COVID Registry Network
- OMOP Data Model
- Healthcare Activity Volume Dashboard

New Opportunities for Data Exchange

Enhanced Data Use for Public Health

New Data Connections Based on Public Health Priorities

Program Management & Governance

- Oversight & Accountability
- Resources
- Communication & Coordination
- Legal, Compliance

New Opportunities for Data Exchange

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Program Management & Governance
New Data Connections

ELR
- Electronic Lab Results

C-CDAs
- Consolidated Clinical Document Architecture

eCR
- Electronic Case Reports

Others
- County Health Clinics
- State Public Health Labs
- POC Test Results
## New Data Connections

<table>
<thead>
<tr>
<th>Category</th>
<th>Organizations</th>
<th>Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic Lab Results (ELR)</td>
<td>Prospect/Crozer (participating) Trinity/St Mary’s (participating) Abington/Aria (participating) Main Line Health (participating)</td>
<td>Tower Health/St. Chris (agreed) Holy Redeemer Einstein Medical Center Penn Medicine</td>
</tr>
<tr>
<td>Electronic Case Reports (eCR)</td>
<td>Temple (testing) Main Line Health (agreed) Jefferson Health (pending) Penn Medicine (pending)</td>
<td>CHOP Tower Health/St. Chris Einstein Medical Center</td>
</tr>
<tr>
<td>C-CDAs</td>
<td>ManorCare (live) Holy Redeemer (in QA) Tower Health (in QA) Penn Medicine (testing)</td>
<td>Prospect/Crozer (testing) Jefferson Northeast (Feb) ACTS Retirement Communities</td>
</tr>
<tr>
<td>Others</td>
<td>State Immunization Info Sys (SIIS) County Health Clinics POC Tests</td>
<td>State Public Health Labs Nursing Homes Prime Hospitals</td>
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</tbody>
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New Data Senders

2021 State Grant – 153 new sites listed

Nursing Homes/LTC/SNF (41)
  • Manor Care (14)
  • Genesis (5)
  • Other LTC (22)

CVS Minute Clinics (21)
Bayada Home Health (12)
Maxim Home Health (6)
Merakey (11)
Electronic Case Reports (eCR)

Terms
- RCKMS - Reportable Condition Knowledge Management System
- eRSD – Electronic Reporting and Surveillance Distribution System

Possible Policy Agreements
- eHealth Exchange, Carequality, APHL participation agreement

HL7 Standards
- eICR - Electronic Initial Case Report CDA v1.1
- RR - Reportability Response CDA v1.0
Immunization Priorities

• Push vaccination status into provider EHRs
• Priority rosters for public health agencies
• Monitor vaccine-related adverse events
• Data for vaccine effectiveness
• Racial disparities in vaccine administration
Immunization Data in HSX

- **Tdap**: 02/06/2020, 0.5 mL
- **Influenza, ...**: 11/14/2019, 0.5 mL
Surveillance Reports

Unique Cases by Day of First Diagnosis

Cumulative COVID-19 Cases by Day of Initial Diagnosis

Cumulative COVID-19 Cases by Day of Initial Diagnosis (LOG Scale)
Surveillance Reports

Based on 11,785 patients with COVID diagnoses, compared to patients with 0-2 risk factors, patients with 3+ risks:

- 2x risk of hospitalization (60 v 30%)
- 4x risk of mortality (11.9 v 2.7%)
- Higher mean LOS if hospitalized (5.2d v 4.8)
- All (p<0.05)
Surveillance Reports

![Daily IP Admits & Discharges](image)

- Admits > Discharges
- Discharges > Admits

Peak of new cases
Provider Activity Dashboard
Provider Activity Dashboard
Provider Activity Dashboard

Hospital 24-Hour Admission Trends
Trend in all cause admissions using a 24 hour look-back over past 16 days. Use to spot more gradual changes.

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<tr>
<th>Full Name</th>
<th>Source Code</th>
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Challenges

- Properly coded data, reliance on vendors
- Delays in coded diagnoses
- Expanding public health access under HIPAA
- Tracking nursing home and other congregate living residents (USCDI)
- Non-traditional sites for testing, vaccination
- Priority for integration with IISs
- Persisting data from eCR
Contact Us

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Thank You!