The Office of the National Coordinator for Health Information Technology

Southeast Minnesota Beacon Community

Harnessing Health IT From a Community Perspective

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Putting the I in HealthIT℠
www.HealthIT.gov

The Beacon Community Program: Where HITECH Comes to Life

Putting the I in HealthIT
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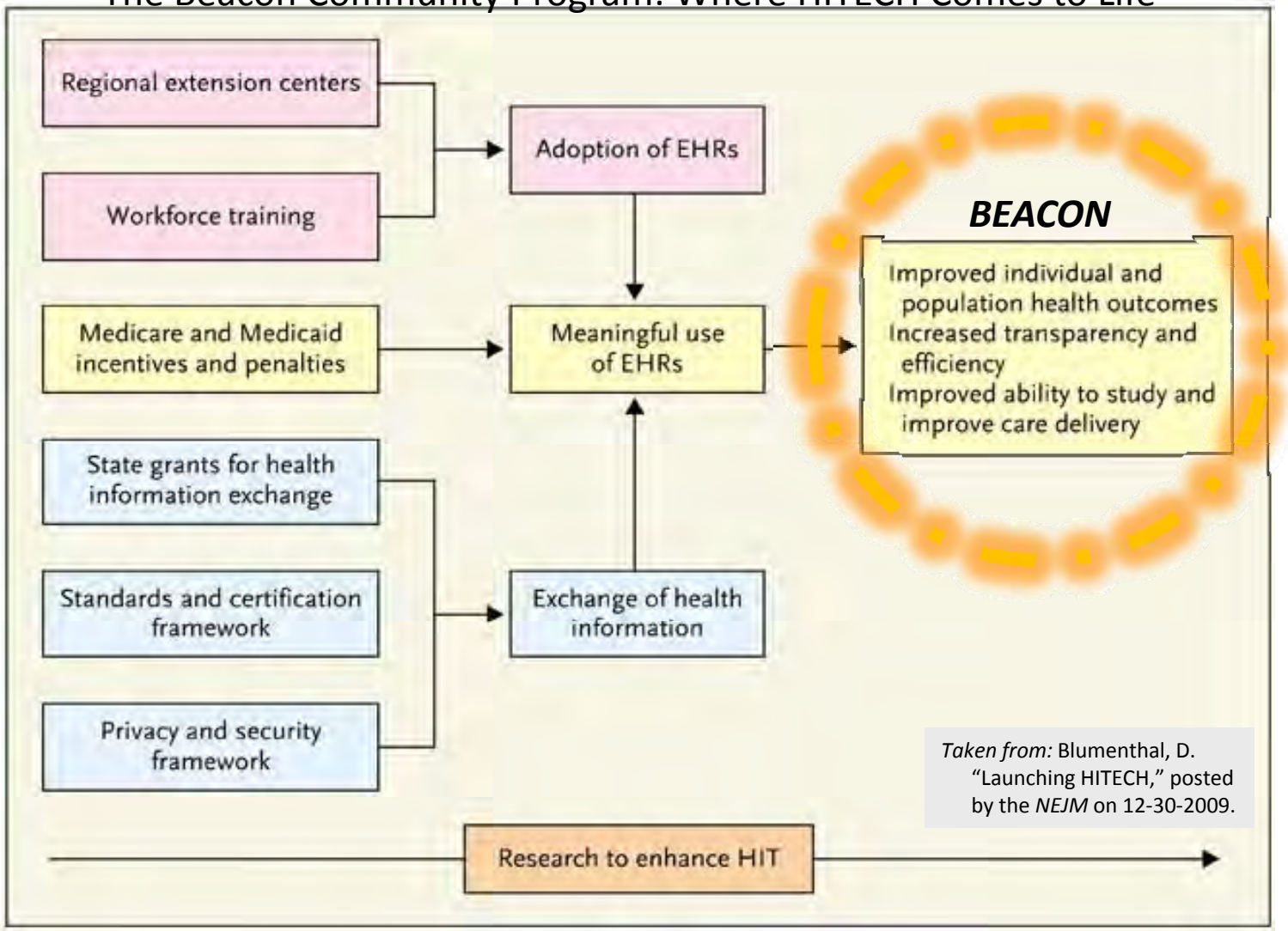
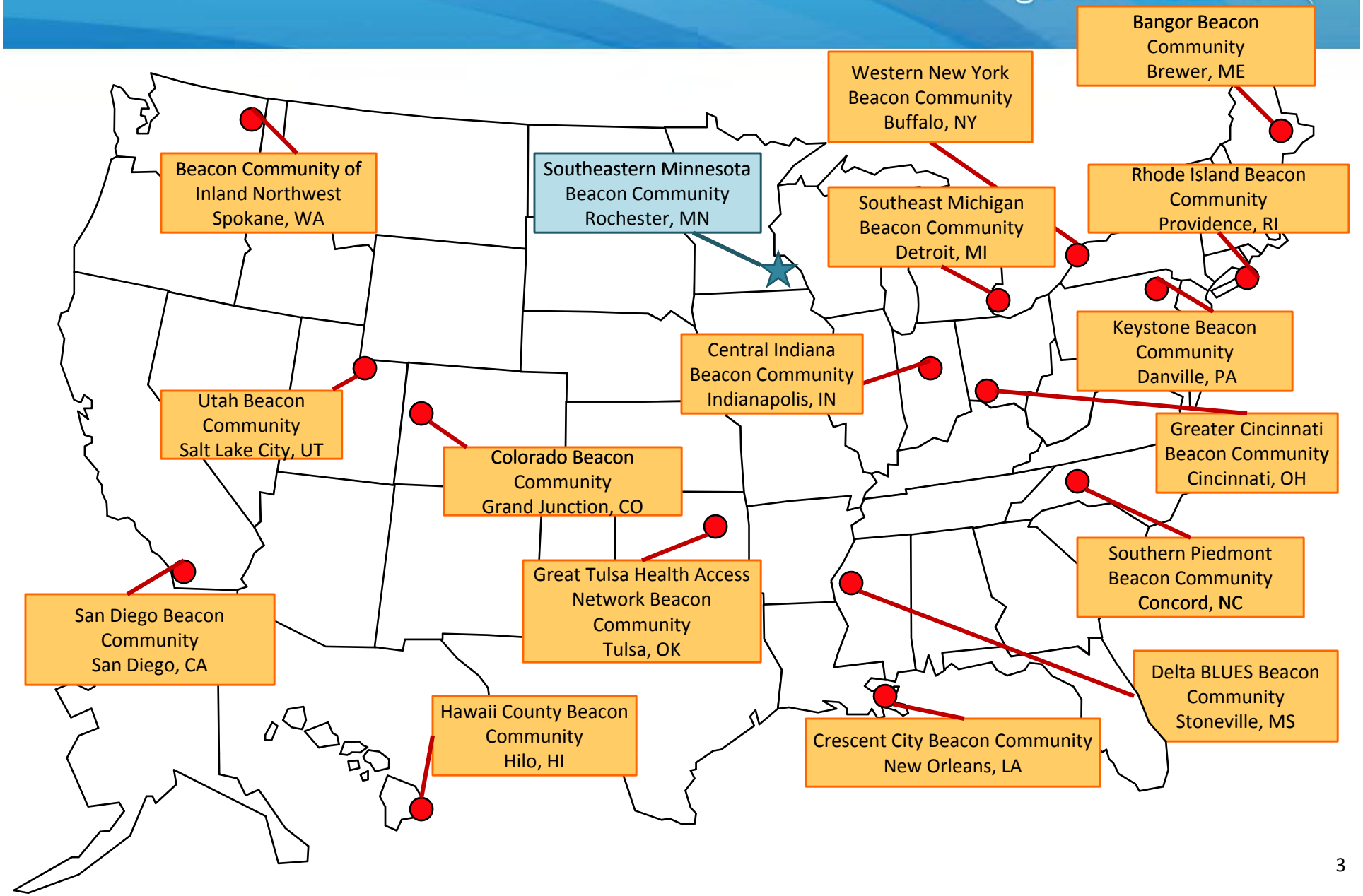
The Beacon Community Program: Where HITECH Comes to Life



Taken from: Blumenthal, D. "Launching HITECH," posted by the *NEJM* on 12-30-2009.

17 Beacon Communities

Putting the I in HealthIT



Beacon Community Aims

Putting the I in HealthIT
www.HealthIT.gov

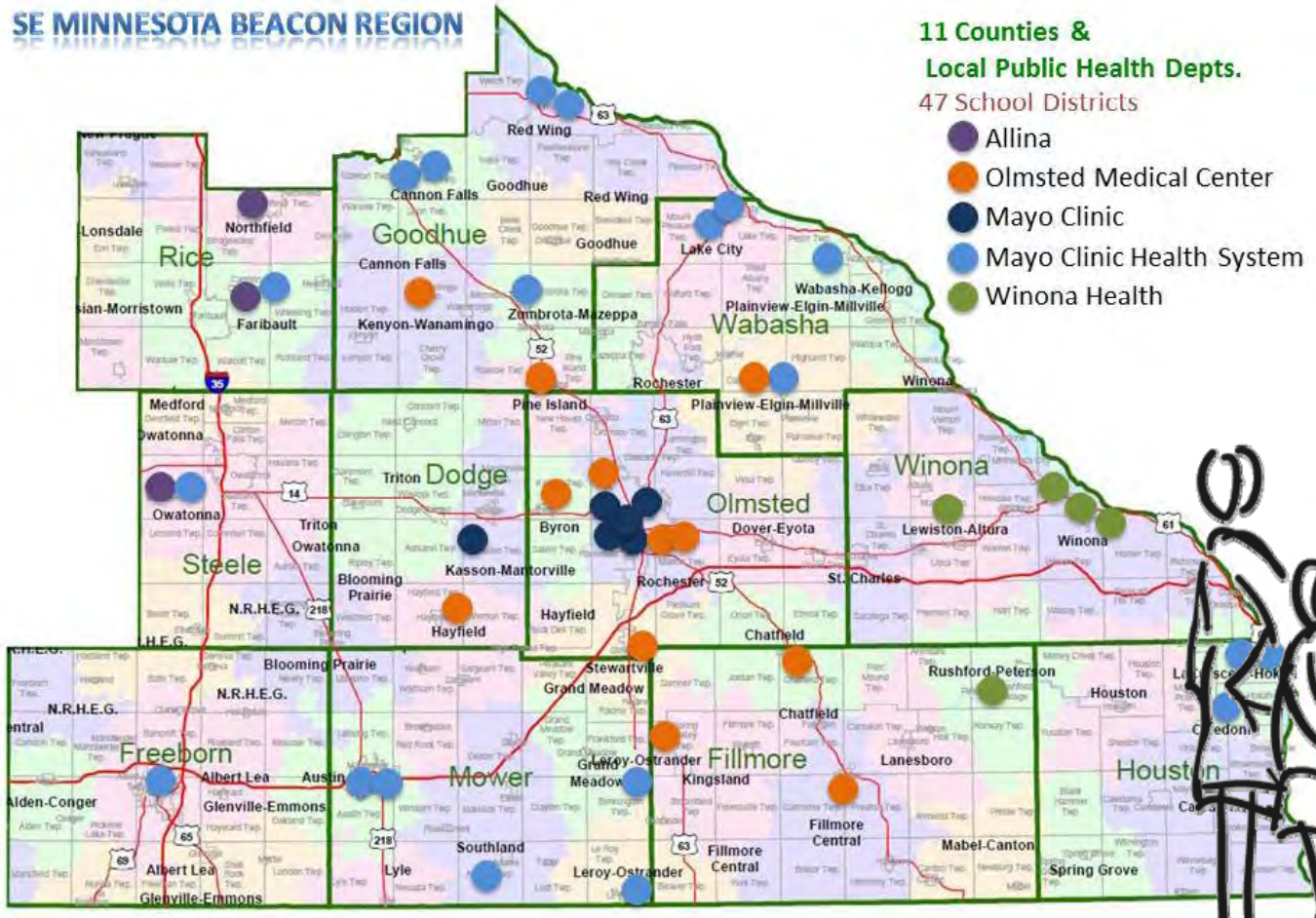
17 grantees each funded ~$12-15M over 3 yrs to:

Build and strengthen health IT infrastructure and exchange capabilities - *positioning each community to pursue a new level of sustainable health care quality and efficiency over the coming years.*

Improve cost, quality, and population health - *translating investments in health IT in the short run to measureable improvements in the 3-part aim.*

Test innovative approaches to performance measurement, technology integration, and care delivery - *accelerating evidence generation for new approaches.*

SE MINNESOTA BEACON REGION



11 Counties &
Local Public Health Depts.
47 School Districts

- Allina
- Olmsted Medical Center
- Mayo Clinic
- Mayo Clinic Health System
- Winona Health

Community of Practice focusing upon delivering High-value community-based care delivery model

Communities of Practice

- Allina Health
- Mayo Clinic Health System
- Mayo Clinic
- Olmsted Medical Center
- Winona Health

11 Public Health Departments

Dodge, Fillmore, Freeborn, Goodhue, Houston, Mower, Olmsted, Rice, Steele, Wabasha, Winona

147 school districts in the 11 counties in SE MN

Home health facilities and nursing homes

3 Levels of Exchange Partners

- Valuable Health Data
- Robust Infrastructure Capacity
- Meaningful Use Funding

- Valuable Health Data
- Limited Infrastructure Capacity
- No Meaningful Use Funding

- Valuable Health Data
- Limited Infrastructure Capacity
- No Meaningful Use Funding

Guiding Values

Ensuring the values and preferences of informed patients are brought into our program through meaningful conversation.

The SE Minnesota Beacon challenges the traditional healthcare models in our nation from provider centric to ***patient-centric and community driven***. This commitment is woven into the very fabric of each project in our program.

Peer – to – Peer HIE

Generate

EMR 1
EMR 2
EMR X
CCD Generating EMR System

Generate a CCD Based on Request From Other EMR

Exchange

Data use Agreements
Secure Exchange
Reliable Network

Nationwide Health Information Network-Compliant Protocols

View

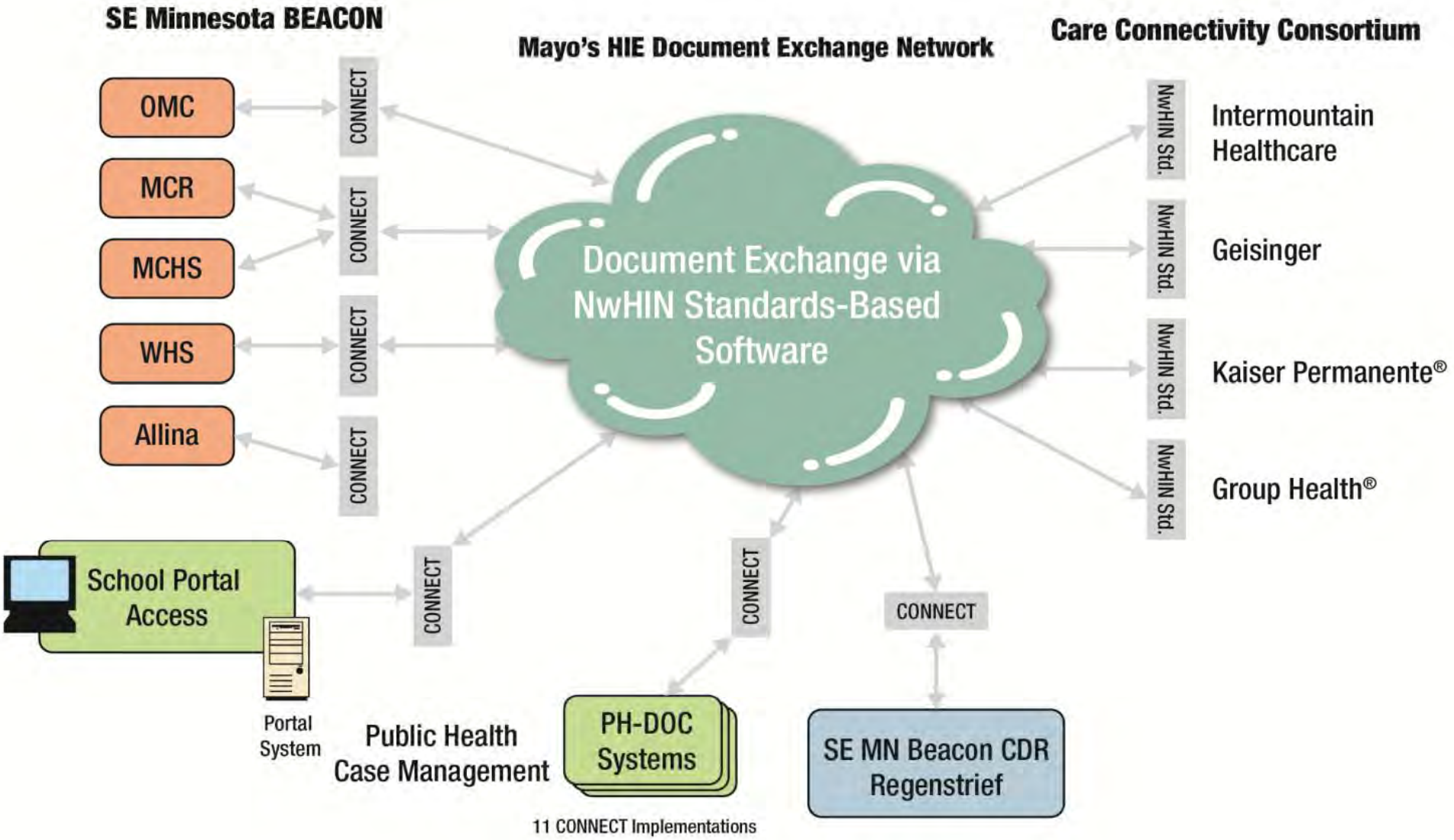
Recipient Views CCD in Own EMR

Parse & Consume

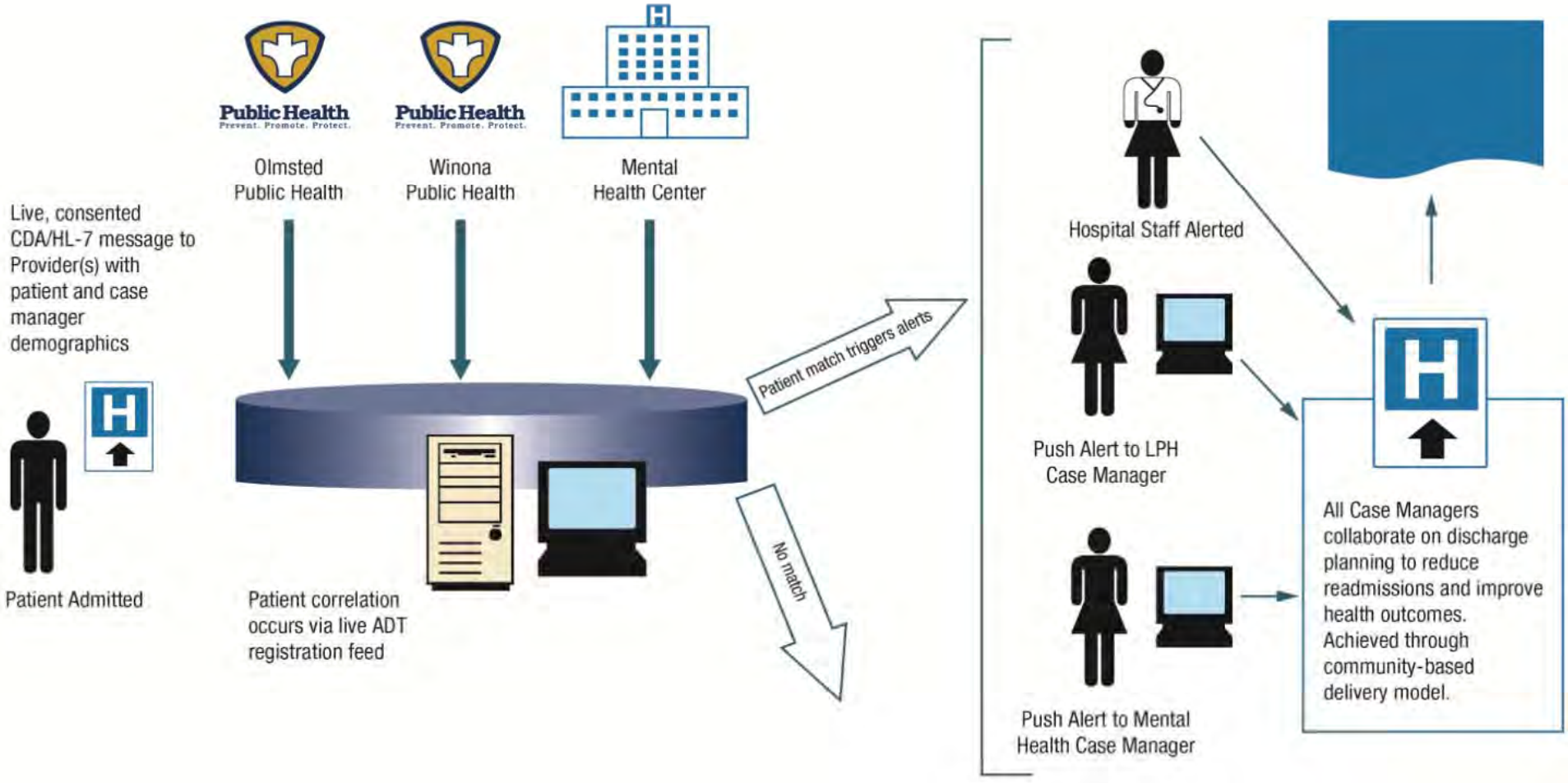
Recipient EMR parses and consumes information from transmitted CCD into discrete data fields – enabling efficient, clinician-friendly transitions, resulting in better care.

Result: Improved Outcomes in Transitions of Care

Network Collaboration

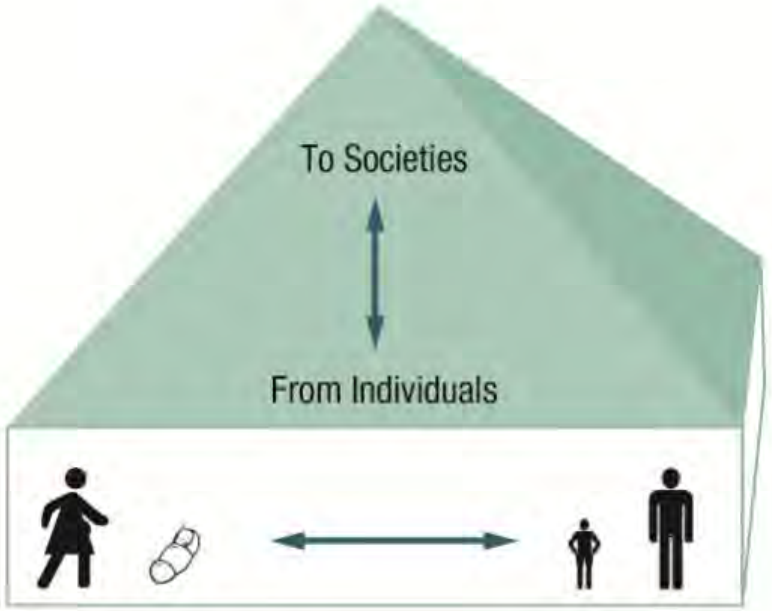


Transitions of Care



Clinical Data Repository
'aka Community Data Repository'

- Hosted at Regenstrief Institute
- Site Clinical Repository
- Population Management
- Quality Measures Reporting
- Point of Care (Future Use)



CDR: Current Approved Use

i2b2 enables powerful search logic, including

Queries database using i2b2 tool

- Quality Measure Reporting
- Population Management
- Research

Simple queries: 64,069 patients in <15 seconds

Complex queries: (A or) and (c) HF or CAD and BP < 130: 21,927 patients in 10 seconds

CDR: Future Cases Transitions of Care CareWeb

EMR 1

EMR 2

EMR X

Data from patient's other providers also accessible to database

Primary Care EMR

CDR Database

EMT queries database

Database delivers record abstract w/key information

Database locates additional records and delivers to hospital EHR

1

Patient

Primary Care Provider

2 Patient is injured and is unconscious. EMT uses CareWeb to query database for patient info from ambulance

EMT

CareWeb quickly locates patient and delivers record abstract with essential:

- Current meds
- Med allergies
- Vitals
- Problem list

PCP sees patient at local clinic.
PCP documents:

- Problem list (current diagnoses)
- Med list
- Med allergies
- Vitals
- Labs
- Demographics
- Etc.

4 Patient receives informed care and recovers quickly

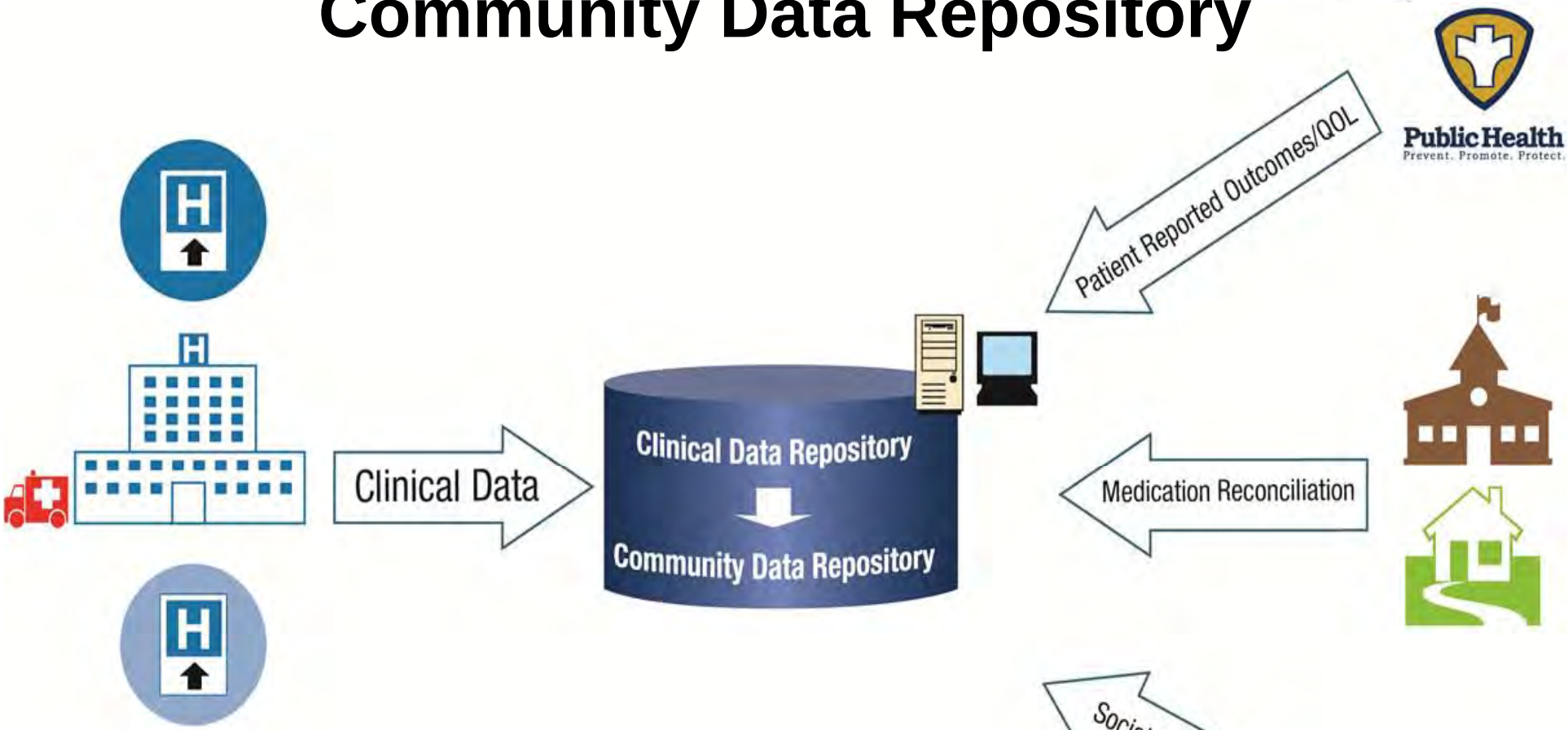
3 ER MD

Provider sees additional information on hospital EHR

In hospital, provider can use CareWeb to query further viewing more record details and additional records from specialists, to get more information about patient

Patient arrives at hospital in stable condition, since CDR provided essential information for proper care during transit

Community Data Repository



Minnesota Research Authorization (MRA)

11 Counties & Local Public Health Depts.
47 School Districts

- Allina
- Olmsted Medical Center
- Mayo Clinic
- Mayo Clinic Health System
- Winona Health

With signed MRA, Beacon Governance approval and IRB approval: Client data combined, de-identified, and presented with minimal necessary for research

Mayo Silo

OCPHS Silo

OMC Silo

Public Health

MRA+

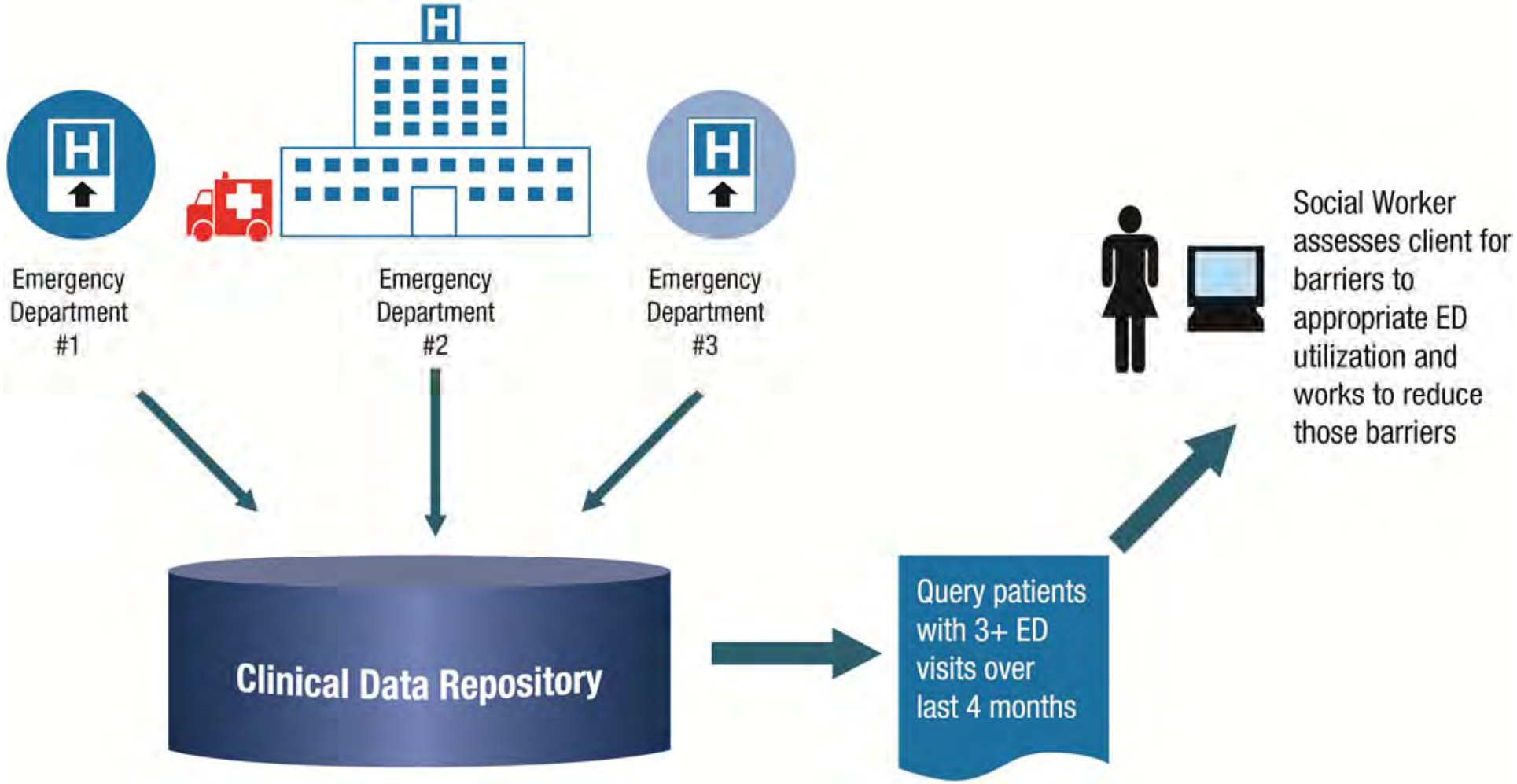
MRA+

MRA-

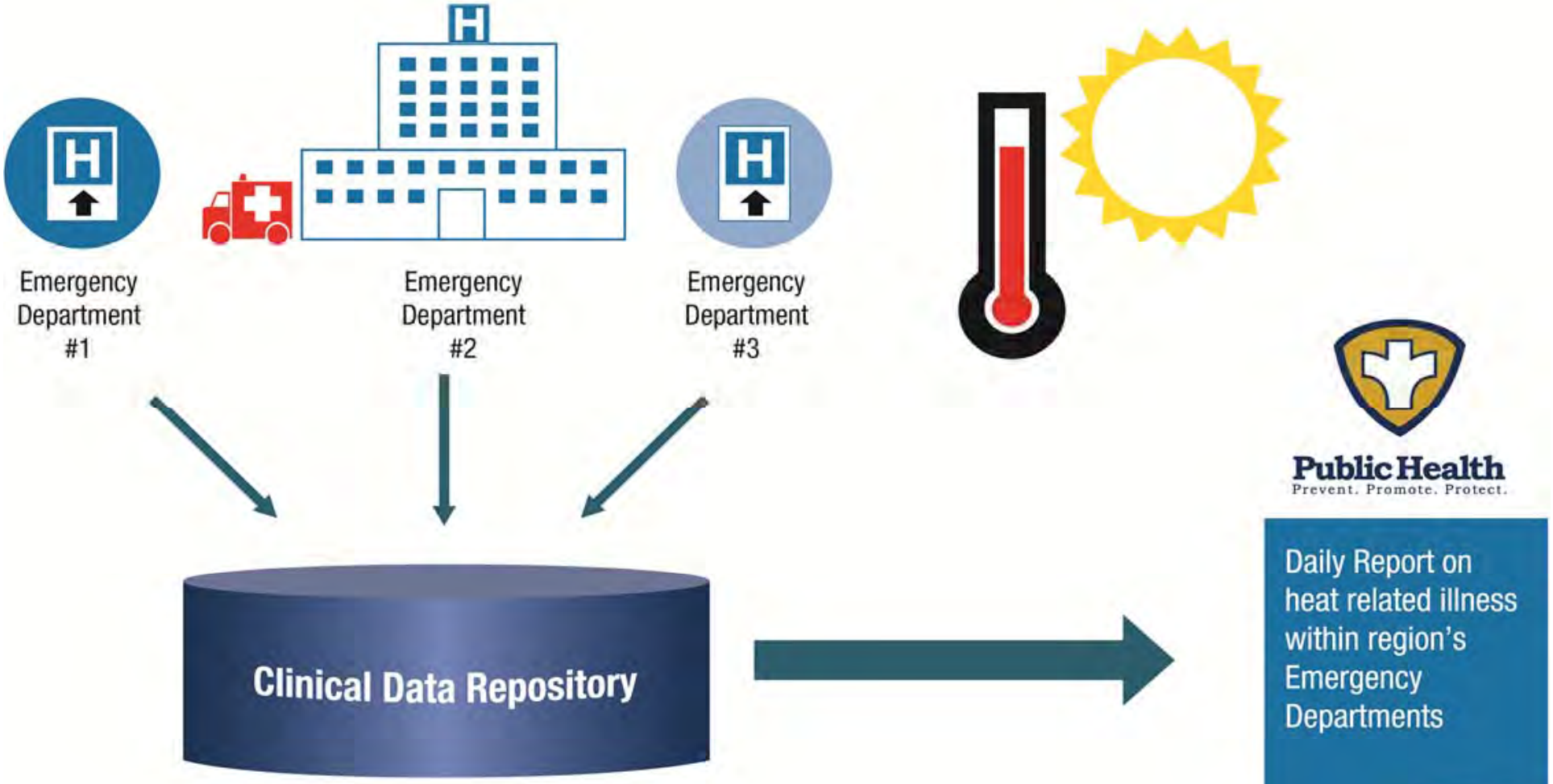
CDR Research Result

With MRA refusal or indecision at OCPHS: Client data sent to OCPHS CDR silo but not used in any research

In-Reach Social Worker



Public Health Surveillance



School Portal

Exchange of Care Plans

CLINIC

DAILY FEED:

Encrypted ZIP files with 1+ Action Plans and PORTAL.CSV

S F T P (Flat file)

Internet

Olmsted County SFTP Server in DMZ

SFTP Server

ZIP files are inspected and cleansed

Olmsted County PH-Doc Server in LAN

ZIP files are processed and Action Plans stored

Incident Reports

Plan expiring

Olmsted County ZIX appliance for encrypting emails

MAILBOX: ATTN acknowledgements

Email (no PHI)

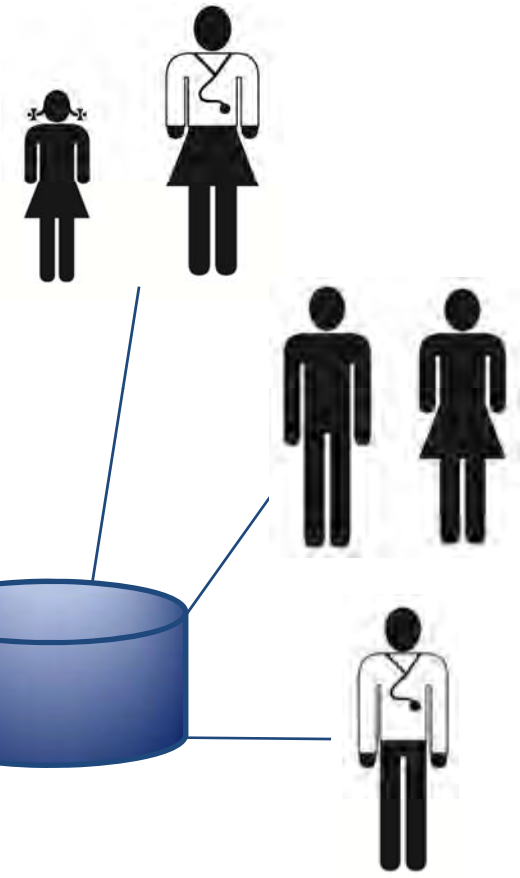
MAILBOX: ATTN portal statistics

Email (no PHI)

MAILBOX: ATTN Physician on Action Plan

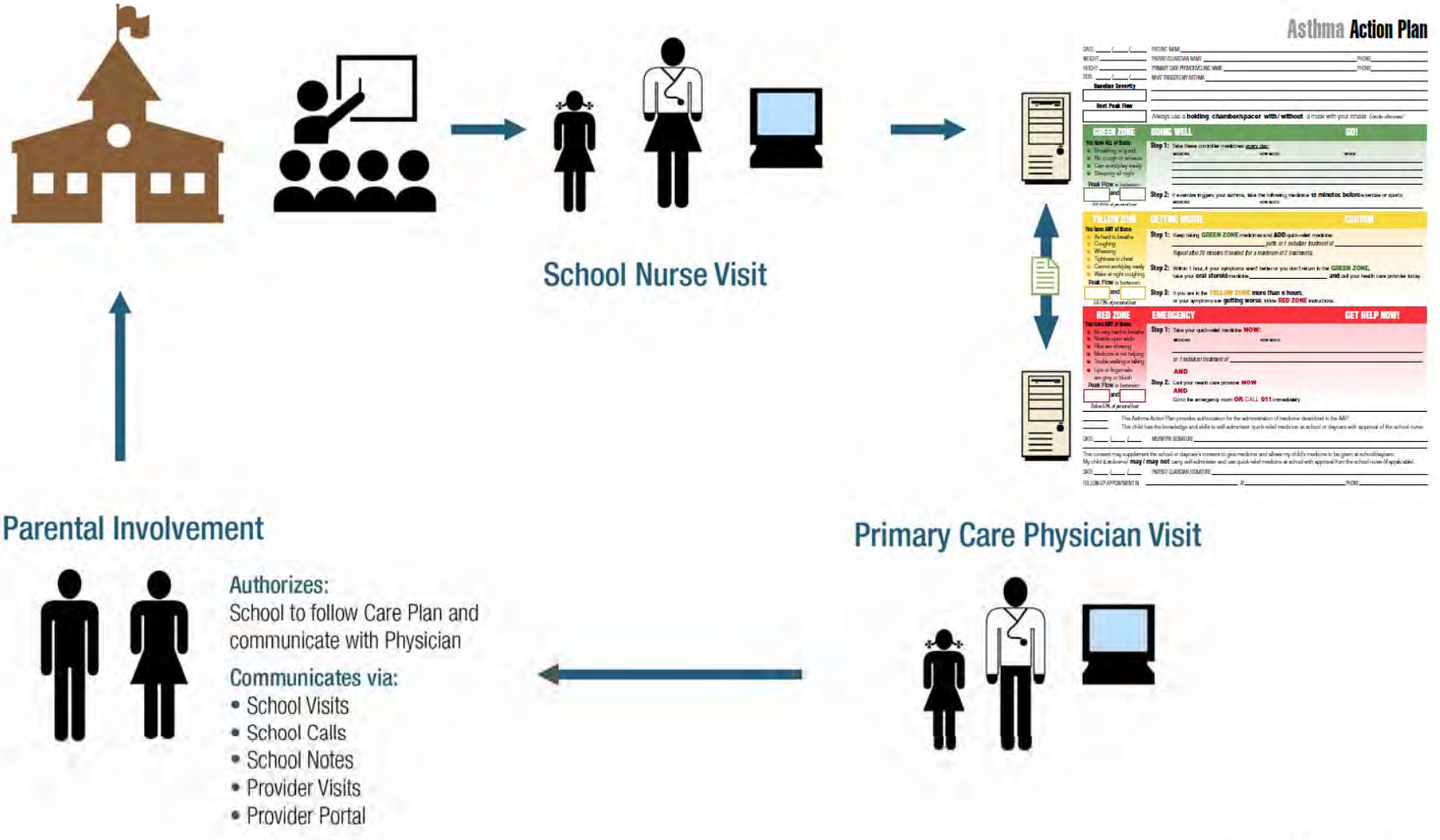
Secure Email (PHI)

Secure Email (PHI)

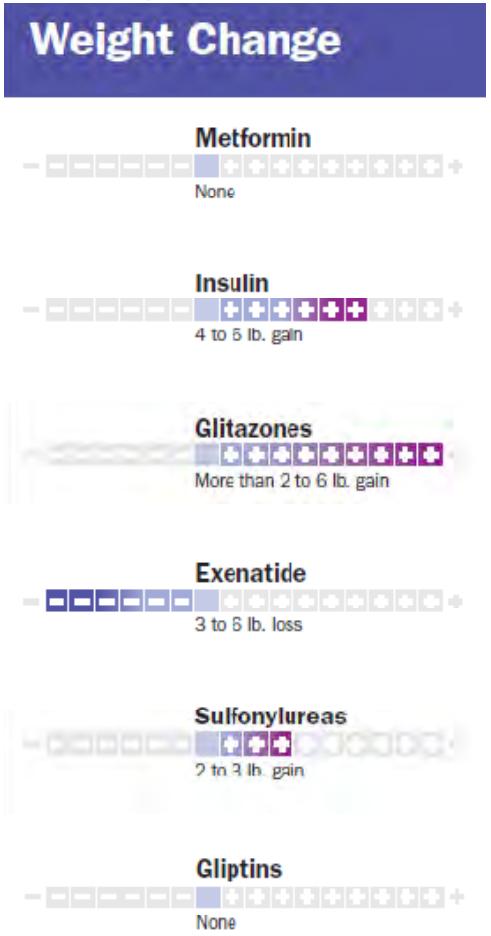


Asthma 'Cocoon of Care'

Care Coordination between parents, providers, public health & schools.



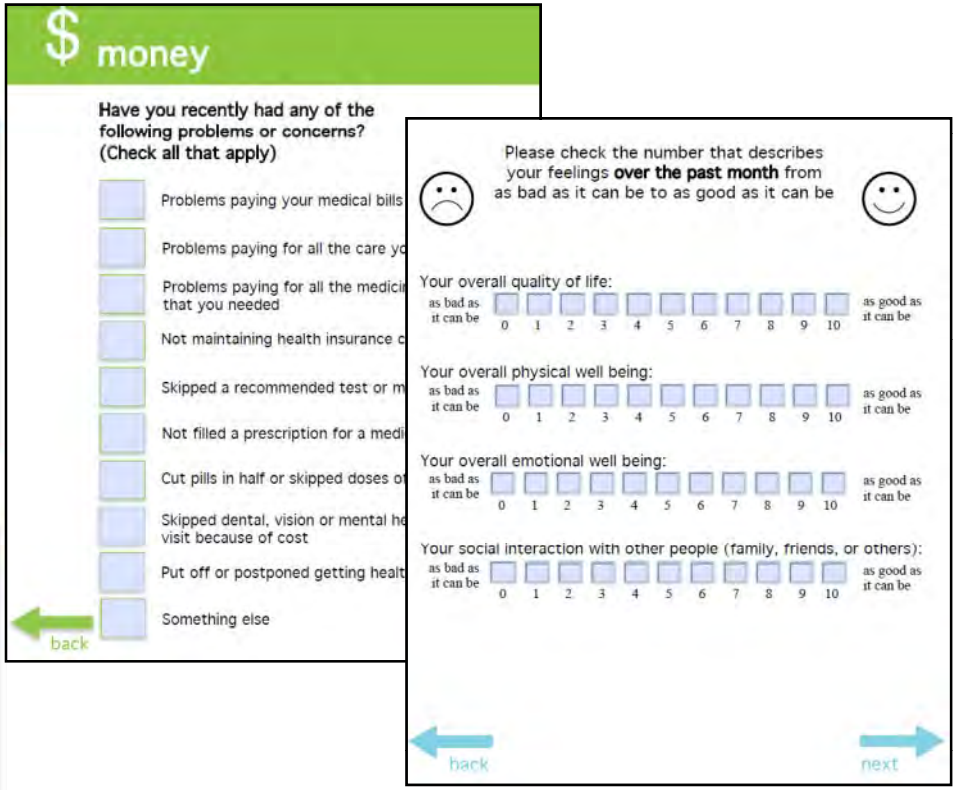
Shared Decision Making



Create a two-way conversation that enables patients to participate in making decisions to the extent they prefer.

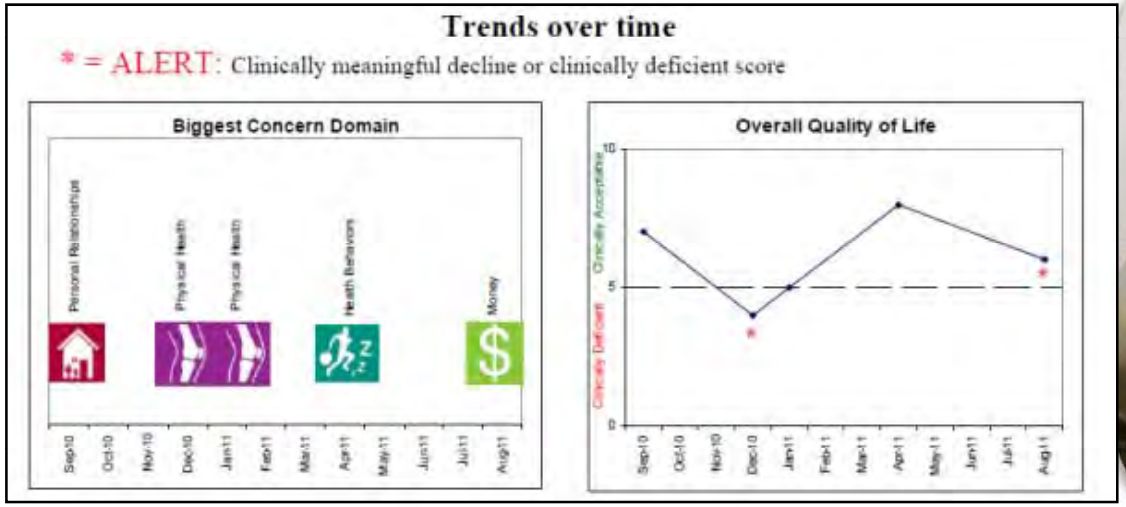
http://webpages.charter.net/vmontori/Wiser_Choices_Program_Aids_Site/Diabetes_Choice_files/diabetes.html

Filling in Data Gaps – Patient Centric Data
PRO QOL WEB TOOL



"It is about time we were asked about these things beyond just glucose & A1C levels."

(Type I diabetes patient for over 30 years)

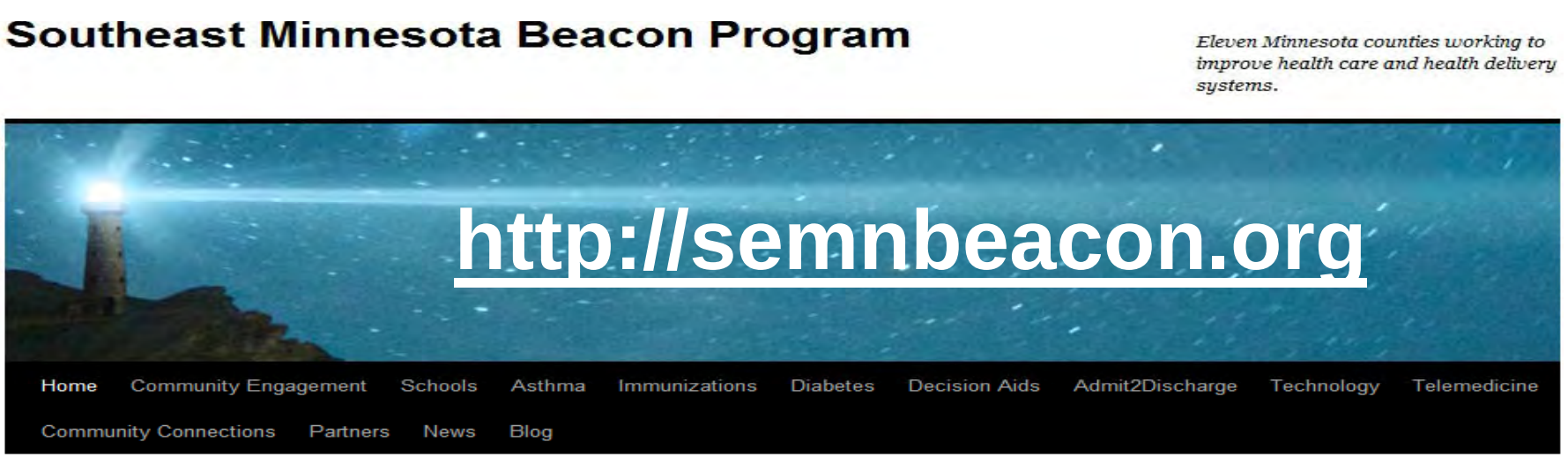


Legal Considerations

- Business Associate Agreements between
  - Between or among Beacon participants
  - Beacon consortium and data repository
- Privacy Compliance:
  - Health Insurance Portability and Accountability Act (HIPAA)
  - Family Educational Rights and Privacy Act (FERPA)
  - Public Health Agency State Data Practices Act (DPA)
- Consent & Authorization Compliance:
  - Minnesota Standard Consent Form to Release Health Information
  - Minnesota Research Authorization statute
  - Federal protection of human subject research regulations
- Regional Exemption Obtained for State Certificate of Authority:
  - Health Information Exchange, Health Data Intermediary, Record locator service

24 JD's

Thank You!



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