SIMergy – State Innovations Model Interactive Learning Environment

Innovation for the States; by the States

Aligning Health IT Implementation with Delivery System Transformation

Clinical Alerting and Event Notifications (ADT Alerting)

Center for Medicare & Medicaid INNOVATION

STATE INNOVATION MODELS

NATIONAL ACADEMY for STATE HEALTH POLICY

RTI INTERNATIONAL

The Office of the National Coordinator for Health Information Technology

Health IT Learning Cluster

January 27, 2015

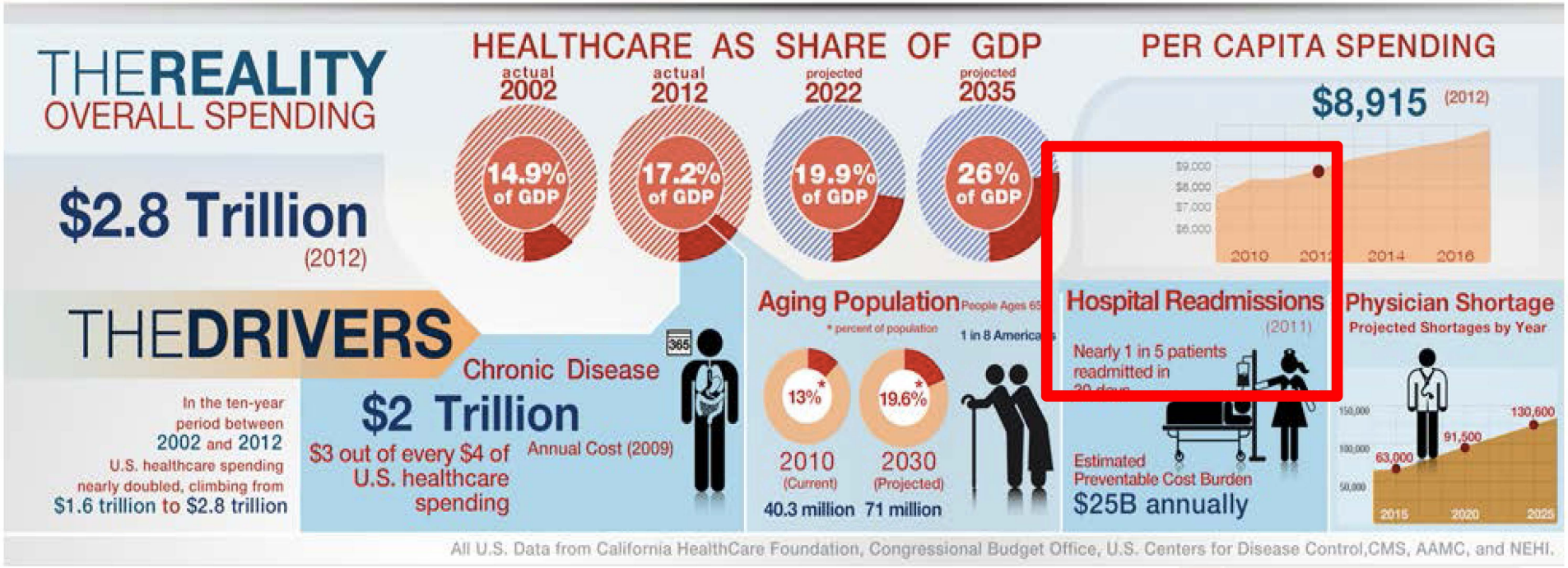
Agenda

1:00–1:10 pm	**Welcome and Introductions** **Carolyn Padovano,** Health IT Learning Cluster Lead, RTI **John Rancourt**, Public Health Analyst, ONC
1:10–1:40 pm	**Clinical Alerting and Event Notifications (ADT Alerting)** **Mark Monterastelli,** Entrepreneur-in-Residence, ONC
1:40–1:55 pm	**Facilitated State Discussion** **Mark Monterastelli,** Entrepreneur-in-Residence, ONC
1:55–2:00 pm	**Wrap Up and Announcements** **Carolyn Padovano**, Health IT Learning Cluster Lead, RTI

CLINICAL ALERTING AND EVENT NOTIFICATIONS (ADT ALERTING)

Mark Monterastelli, Entrepreneur-in-Residence, ONC

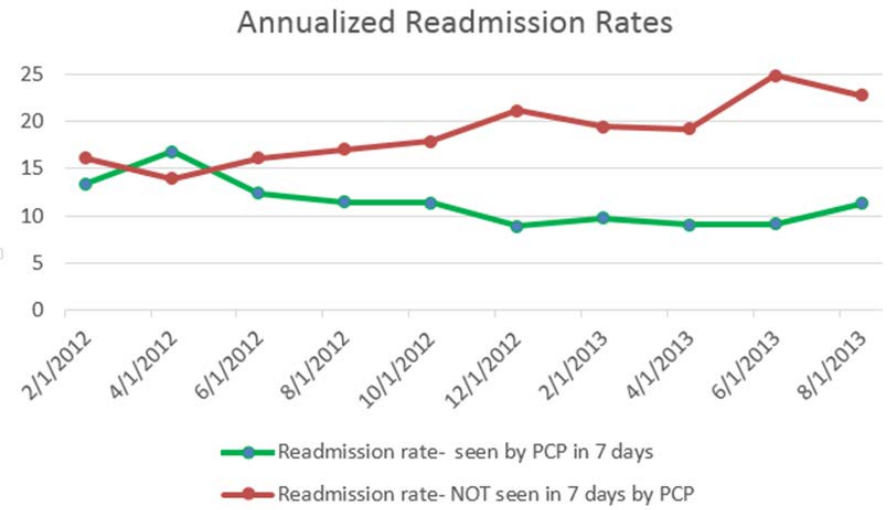
Bad News



Care Coordination

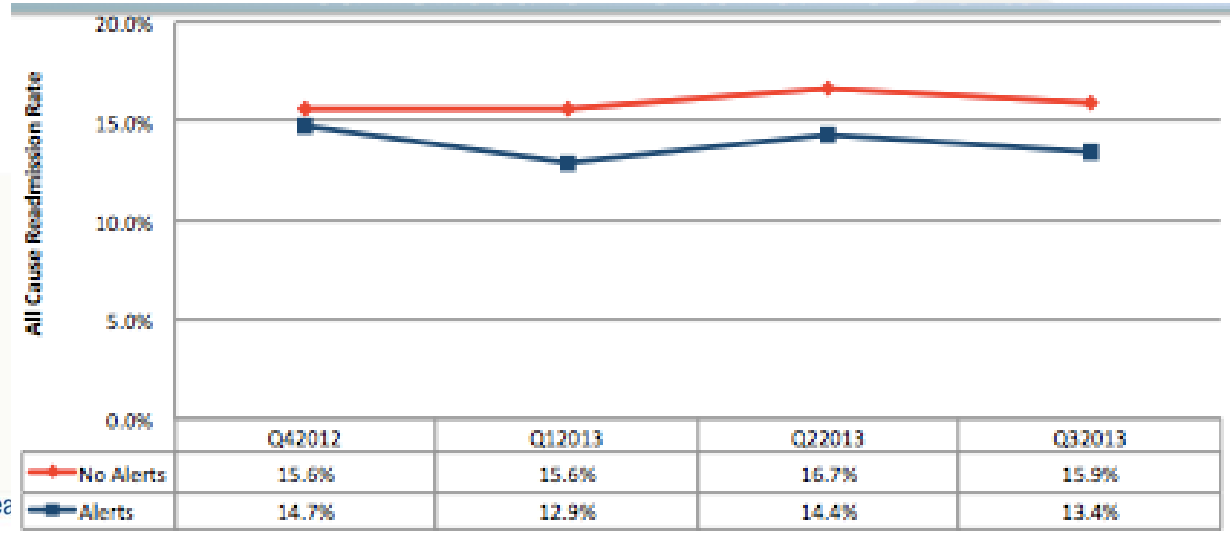
- Care teams are not aware of patient hospitalization or discharge for prompt follow up
- Cumbersome for care teams to exchange the information and monitor conformance
- Care teams span multiple organizations, systems, technical capabilities

Reduction in Avoidable Readmission

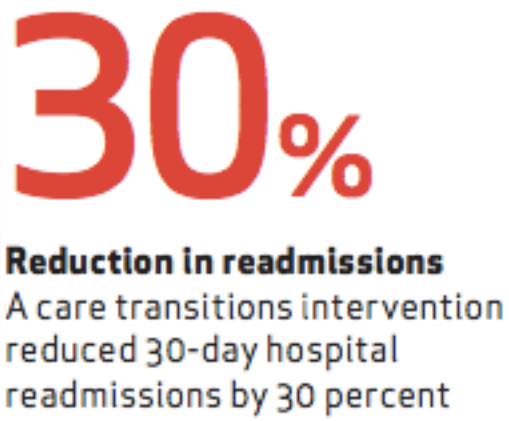


Discharge Alerting

Maryland Health Information Exchange /Johns Hopkins



	Q42012	Q12013	Q22013	Q32013
No Alerts	15.6%	15.6%	16.7%	15.9%
Alerts	14.7%	12.9%	14.4%	13.4%



States Play a Roll

- No Integrated Delivery Network (IDN) encompasses all patient encounter points
- Organizations adopting accountable care need comprehensive data
- Interoperability (or lack) is expensive

Event Notifications Overview

ECA – Event Condition Action

Key Elements

- Data Connections
- Event Detection or Triggers
- Decision Support Rules
  - Triggers are not notifications
  - Alert fatigue
- Interventions

Example Event Triggers

Admission
Transfer
Discharge
Observation
Benefits check
Lab result requested/received
Appointment scheduled
Referral received
Prescription Filled/Unfilled
Missed Appointment
Gap in Care
Final Radiology Result
Discharge Summary Available
Death Notification

ADT Alerting

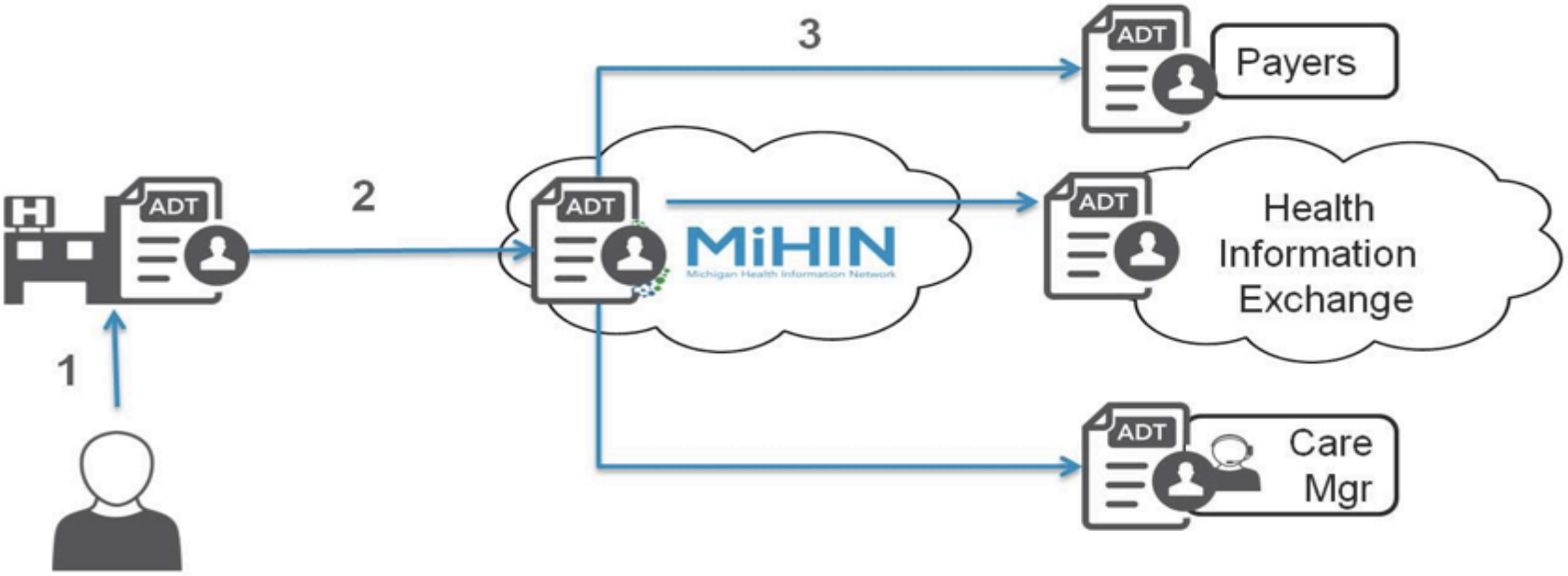
- ADT Messages – Admission Discharge Transfer - format defined by HL7 used widely in to integrate healthcare systems together.
- ADT Messages are not designed for alerting but changes in status and location of patients can be inferred from monitoring the messages.

Sample HL7 message:

```
MSH|^~\&|EPIC|EPICADT|SMS|SMSADT|199912271408|CHARRIS|ADT^A04|1817457|D|2.5|
PID||0493575^^^2^ID 1|454721||DOE^JOHN^^^^|DOE^JOHN^^^^|19480203|M||B|254 MYSTREET
AVE^^MYTOWN^OH^44123^USA||(216)123-4567|||M|NON|400003403~1129086|
NK1||ROE^MARIE^^^^|SPO||(216)123-4567||EC|||||||||||||||||||||||||
PV1||O|168 ~219~C~PMA^^^^^^^^^|||277^ALLEN MYLASTNAME^BONNIE^^^^|||||||||
||2688684|||||||||||||||||||||||199912271408||||||002376853
```

Sample ADT System – MiHIN

ADT Alerting System from
Michigan Health Information Network



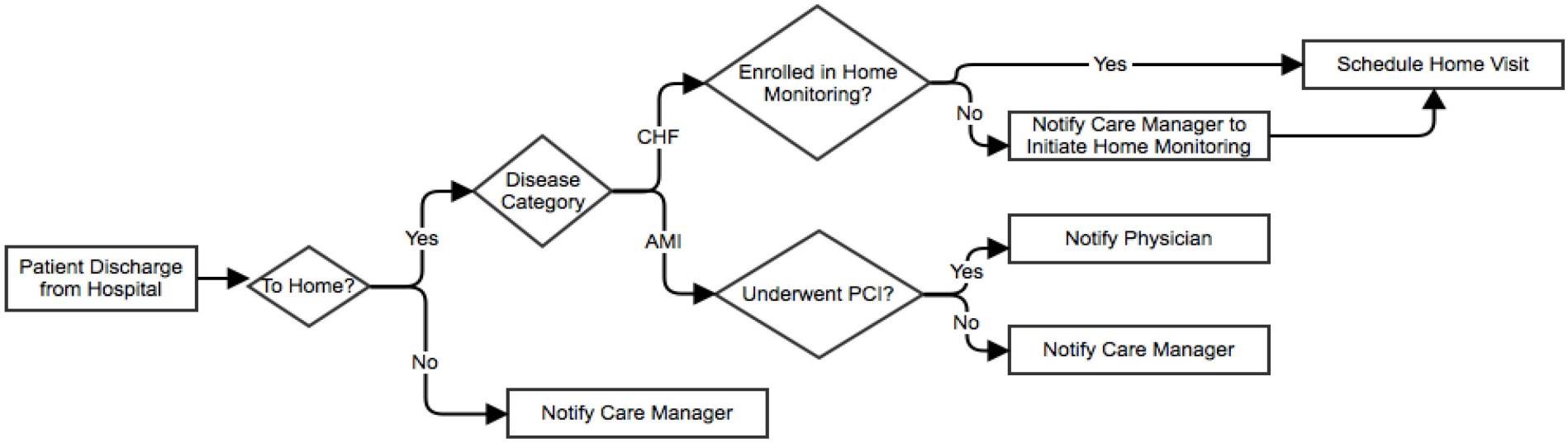
1. Patient event triggers ADT notification at point of care
2. ADT is routed to MiHIN through a Health Information Exchange (HIE)
3. MiHIN routes ADT to organizations with active care relationships to the patient

Intervention Is The Key

Intervention is the key of a successful event notification system.

A mature event notification system is a type of Clinical Decision Support system.

Cardiology Alerting Decision Tree

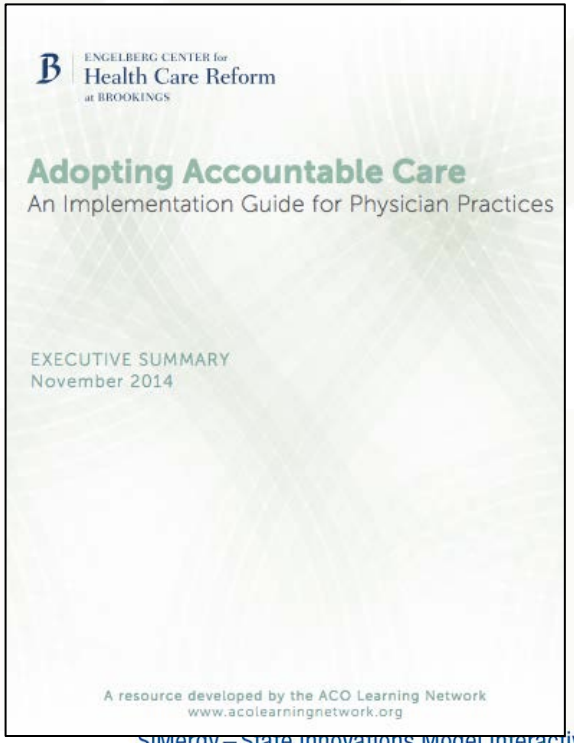


Event Condition Action

Resources

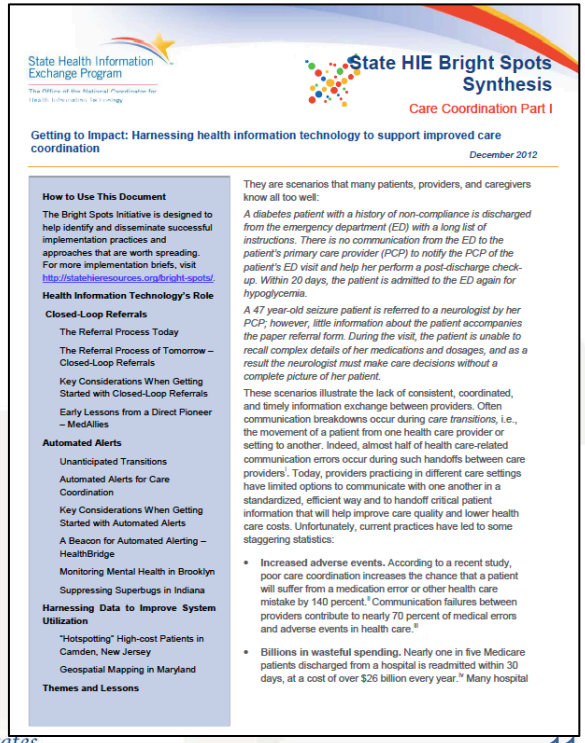
https://collaboration.cms.gov/?q=content/aligning-health-it-learning-cluster-webinar-3-clinical-alerting-and-notifications-adt

Adopting Accountable Care



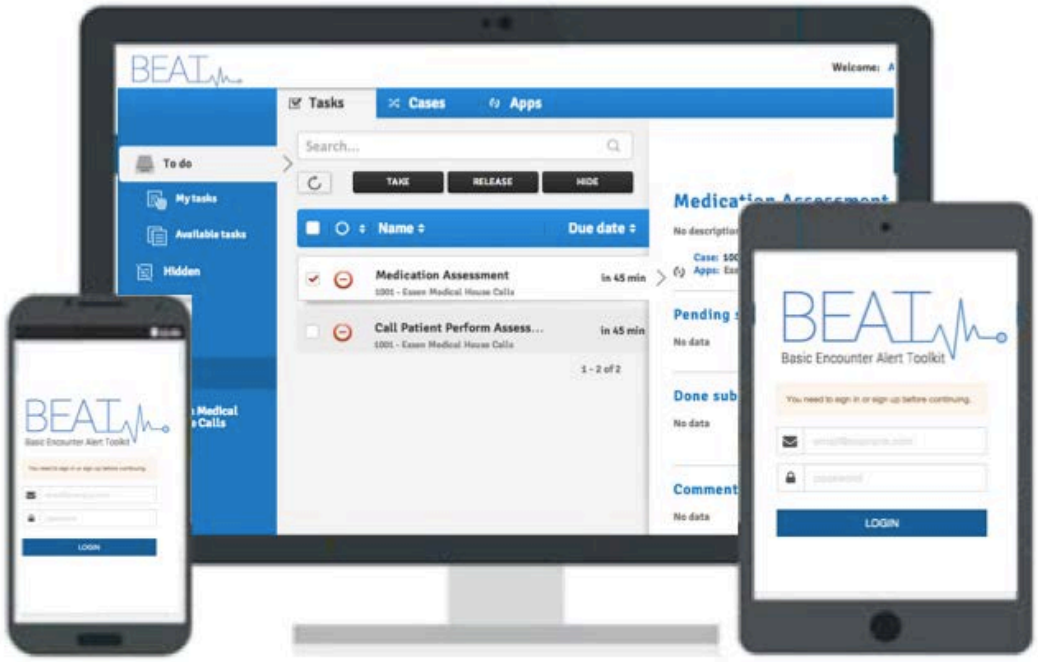
ADT Alerting Learning Guide

State HIE Brightspots



Basic Encounter Alerting Toolkit

- Open source toolkit developed and piloted by ONC
- Provides Decision Support services and creates Integrated Delivery Networks
- Transitioned to commercial partners
- Support Available through HIT Resource Center



BEAT
Basic Encounter Alert Toolkit

States Examples

- Maryland -Encounter Notification Service
  - ✧ Expanding to other regions
- Rhode Island - Current Care
  - ✧ Tracking patient satisfaction changes
- Michigan
  - ✧ Subsidized by BCBS
- Maine
  - ✧ Using as basis for analytics service

http://www.healthcareitnews.com/news/maines-hie-launches-analytics-business

Discussion Points

- Who has currently deployed an ADT alerting system in their region (or is planning to)?
- Who has been asked by Accountable Care Organizations (ACOs) to provide ADT alerts?

Wrap-Up

Let us know if you have any questions!

Health IT Learning System Cluster Team

Carolyn Padovano
Deputy Project Director
cpadovano@rti.org

Christina Miller
Policy Specialist
cmiller@nashp.org

The ONC Team

John Rancourt
Public Health Analyst
John.Rancourt@hhs.gov

Project Leadership

Joe Burton
Project Director
joeburton@rti.org

Anne Gauthier
Project Lead/
Director of Curriculum
agauthier@nashp.org

Mark Monterastelli
Entrepreneur-in-Residence
Mark.Monterastelli@hhs.gov