Interoperability, Opportunity, and the Future of Healthcare Technology

New Jersey Association of Mental Health and Addiction Agencies (NJAMHAA)

2019 Annual Health IT Conference
Adverse Drug Reactions (ADR)

“2,216,000 serious ADRs in hospitalizations.”

“...causing 106,000 deaths annually.”

- Journal of the American Medical Association

“350,000 ADRs occur annually in nursing homes.”

- American Journal of Medicine
ADRs are the 4th Leading Cause of Death in America.
What About the Cost of ADRs?

“$136 BILLION in drug related morbidity and mortality annual cost.”

Greater than total cost of cardiovascular and diabetes care in the US.”

- Journal of the American Medical Association
Opioid Deaths

Opioid deaths since 1999

US Department of Health and Human Services
Opioid Deaths

US Department of Health and Human Services
Opioid Deaths

“The age-adjusted rate of overdose deaths increased by 10% from 1999 to 2006”

“The age-adjusted rate of overdose deaths increased by 3% from 2006 to 2014”

“The age-adjusted rate of overdose deaths increased by 18% from 2014 to 2016”

- US Department of Health and Human Services
Van Ly
Senior Director
New Jersey Innovation Institute (NJII)

NEW JERSEY INNOVATION INSTITUTE

“The New Jersey Innovation Institute is an NJIT corporation focused on helping private enterprises discover what's possible. Let us help you see into the future and what your business will look like five years from today.”

Dr. Donald Sebastian, President, NJII
NJII in Healthcare IT Initiatives

#1 recognized Regional Extension Center in the country
$23 Million — Regional Extension Center, formerly NJ-HITEC, 9,000+
Physician and Specialist Network

CMS Certified Data Registry
300+ measures covering over 40 specialties for over 4,500 providers

$5 Million
State-Designated Entity for Health IT State Portion (Use Case) — Statewide ADT Service and Transitions of care use cases

$1.5 Million — Medicaid IAPD
Onboard and implement ToC for Medicaid Providers onto existing HIEs for the achievement of Meaningful Use

2010 - PRESENT
Health Information Exchange
Highlander Health Data Network (5 hospital healthcare data exchange network)

2011 - PRESENT
Population Health Service Provider
Serving 17 DSRIP Hospitals, 5 ACOs, and 500,000 lives

2015-2017
$50 Million — CMS Practice Transformation Network Awardee
Transform 11,500 providers to achieve performance targets and MIPS/APM scoring preparedness
The Vision of Health Care at the Federal Level
The Office of National Coordinator (ONC) defines interoperability as:

“The ability of a system to exchange electronic health information with and use electronic health information from other systems without special effort on the part of the user.”

ONC Roadmap to Achieving Better Care

94% of non-federal acute care hospitals use a certified EHR to collect electronic data about patients.\(^1\)

78% of office-based physicians use an EHR system to collect electronic patient data.\(^1\)

\(^1\) The Office of the National Coordinator, Health IT Roadmap
ONC Roadmap to Achieving Better Care

62%
In 2013, more than six in ten hospitals electronically exchanged health information with providers outside of their system.³

14%
of office-based providers electronically share patient information with other providers.⁹
The Price of Not Being Interoperable

1 IN 3 INDIVIDUALS

who have seen a health care provider in the last year experienced at least one of the following gaps in information exchange.¹

- Had to bring an X-ray, MRI, or other type of test result with them to the appointment.
- Had to wait for test results longer than they thought reasonable.
- Had to redo a test or procedure because the earlier test results were not available.
- Had to provide their medical history again because their chart could not be found.
- Had to tell a health care provider about their medical history because they had not gotten their records from another health care provider.
Keeping Patients in Mind

In a given year, the average Medicare patient visits...

- 2 Primary Care Physicians
- 4 Different Practices
- 5 Specialists
Value Roadmap

Health Information Exchange (HIE) and Network (HIN)
New Jersey Health Information Network
Statewide Connection

Duplication of effort, waste, & expense
(N*(N-1)/2 connections)

Shared Services
(N connections)
NJHIN Data Highway

In Production
In Development

Trusted Data Sharing Organization (HIEs, Health Systems and Hospitals)

TDSO Members: Clinicians, Health Systems, LTPACs

Health Plans

Pharmacies

Communicable Disease
Syndromic Surveillance
State Node
Immunization Registry
Master Person Index
Specialized Registry
State Labs
What is the NJHIN?

Statewide Infrastructure for Health Data Exchange
- Created by the NJ Department of Health
- Managed by NJII
- Requirement for Charity Care Reimbursement
- Requirement for Delivery System Reform Incentive Payment (DSRIP)

Leverage Technology to Improve Health Outcomes and Lower Costs

Legal Framework Data Sharing
- Data Use and Reciprocal Sharing Agreement (DURSA)

Governance
- Advisory Council
- Participating Members, or Trusted Data Sharing Organizations
- Committees for Compliance and Use Case Development
Participating Organizations of NJHIN:

- Bergen New Bridge Medical Center
- Advocare, LLC
- Camden Coalition*
- Carepoint
- CentraState
- East Orange General Hospital
- Healthy Greater Newark*
- HealthShare Exchange (HSX)*
- Jersey Health Connect*
- NJSHINE*
- OneHealth New Jersey (MSNJ)*
- Prime Health*
- RWJBarnabas Health
- St. Joseph’s Regional Medical Center
- St. Peter’s Healthcare System
- Trenton Health Team*

* Indicates Multiple Organizations are represented by a TDSO
Statewide ADT / Other Use Cases
1) Patient goes to hospital which sends message to TDSO then to NJHIN
2) NJHIN checks patient-provider attribution and identifies providers
3) NJHIN retrieves contact and delivery preference for each provider from Healthcare Provider Directory and Active Care Relationship Service
4) Notifications routed to providers based on electronic address and preferences
ADT Notifications with Master Person Index and Common Key Service

1) Jane admitted to hospital with MRN 19860122 and ADT initiated
2) ACRS enriches ADT message with Jane’s Common Key
3) Jane is accurately and reliably linked to her Care Team
Connecting to NJHIN for Charity Care

"Notwithstanding the provisions of any law or regulation to the contrary, the amount hereinabove appropriated for the Charity Care Subsidy is subject to the condition that participating hospitals shall demonstrate participation in the New Jersey Department of Health’s New Jersey Health Information Network (NJHIN)."

$252 Million in NJ’s Charity Care budget

Nearly 1.1 Million Uninsured in NJ, of which 100,000 are under the age of 18
Connecting to NJHIN for Charity Care

68 out of 70 are actively participating in the NJHIN

44 out of 70 are actively sharing ADTs with NJHIN
Live Today and In Development

**Live Today**
- Master Person Index (MPI)
- Common Key Service (CKS)
- ADT Notifications
- Health Provider Directory (HPD)
- Active Care Relationship Service (ACRS) or Attribution

**In Development**
- Transitions of Care (CCDA Routing)
- Immunization Registry Query
- Immunization Registry Submission
- PMP Query
- Opioid Risk Factors
- CCDA Query/Retrieve
Available Funding for Connection
DMAHS and DOH Programs to Support NJHIN Connection

For Medicaid Providers that seek to connect to NJHIN for Transitions of Care and ADT Receiver:

- Provider - $1,500 / provider ACTIVELY ENROLLING
- Hospitals - $35,000 / hospital OUT OF MILESTONES
- Non-Hospital Facilities (SNF, Long Term Care, Sub-Acute, Urgent Care - $5,000 ACTIVELY ENROLLING
- Program ENDS: September 30, 2019
DMAHS and DOH Programs to Support NJHIN Connection

For Medicaid Meaningful Use Providers that seek to connect to NJHIN for Transitions of Care and ADT Receiver:

- Provider - $1,500 / provider **ACTIVELY ENROLLING**
- Program ENDS: **September 30, 2019** (seeking extension to support 2020 Medicaid PI Attestation)
Promoting Interoperability for New Jersey Substance Use Disorder (SUD) Providers

To address the NJ Opioid epidemic, the Murphy Administration has invested $6 million in the SUD Promoting Interoperability Program (SUD PIP).

• Close the EHR disparity amongst SUD providers
• Connect “siloed” systems of care to enhance coordination efforts and improve quality
• Aid in shorter-term response efforts to this crisis
• Increase bandwidth and capacity for treatment
Promoting Interoperability for New Jersey Substance Use Disorder (SUD) Providers

Joint Initiative (power of many):
- Department of Health
- Department of Human Services (Divisions of Medical Assistance and Health Services & Mental Health and Addiction Services)
- New Jersey Association of Mental Health and Addiction Agencies
- The New Jersey Innovation Institute
- SUD Providers
- SUD Patients
# SUD PIP Funding

<table>
<thead>
<tr>
<th>Milestones</th>
<th>SUD Provider Payment</th>
</tr>
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<tbody>
<tr>
<td>Milestone 1 (Participation)</td>
<td>$5,000</td>
</tr>
<tr>
<td>Milestone 2 (EHR Go-live)</td>
<td>$20,000</td>
</tr>
<tr>
<td>Milestone 2 (EHR Upgrade)</td>
<td>$7,500</td>
</tr>
<tr>
<td>Milestone 3 (HIE Connection)</td>
<td>$7,500</td>
</tr>
<tr>
<td>Milestone 4 (PMP Connection)*</td>
<td>$5,000</td>
</tr>
<tr>
<td>Milestone 5 (NJSAMS Connection)*</td>
<td>$5,000</td>
</tr>
</tbody>
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Health On-the-Go


https://www.wearable.com/apple/uk-apple-watch-ecg-release-date-6569

Credit: Braceworks: https://www.braceworks.ca/2019/02/18/health-tech/apple-to-offer-veterans-access-to-medical-records-on-iphone/

Credit: Apple Healthkit

Credit: https://www.doctorondemand.com/
21st Century Cures Act

21st Century Cures Act (Cures Act) – December 2016

• Prohibits and penalizes the practice of information blocking; seeks to advance patients’ access to their health information

• Requires electronic players in healthcare to provide open Application Programming Interfaces (APIs) that can be used “without special effort on the part of the user”

• Allows application designers and entrepreneurs that can reduce unnecessary tasks (like billing, reporting, and data entry) so that providers can focus on high-quality patient care

Mental Health Applications

1. What’s Up

It's one of the best mental health mobile apps present in the market. The app offers CBT (Cognitive Behavioural Therapy) and ACT (Acceptance Commitment Therapy) which further helps in tackling anxiety, anger, depression, stress, and more.

https://www.mobileappdaily.com/best-mental-health-mobile-apps
Mental Health Applications

2. Moodpath

Moodpath is an app that allows you to judge your mental state. If you have concerns about your mental health, Moodpath is an excellent way to understand your state of mind and help you determine if you need to see a therapist or other professional.

https://www.mobileappdaily.com/best-mental-health-mobile-apps
Mental Health Applications

3. Pacifica

This meditation cum wellness app is designed with anxiety, stress, and depression in mind. Pacifica provides you with audio lessons and activities to teach you how to cope with stress and anxiety.

https://www.mobileappdaily.com/best-mental-health-mobile-apps
Mental Health Applications

4. Happify

If you are dealing with a large amount of stress or suffering from depression, Happify is the app for you. Its activities are based on cognitive behavioral therapy, which is one of the most proven methods of therapy for these conditions.

https://www.mobileappdaily.com/best-mental-health-mobile-apps
Mental Health Applications

5. Mood Kit

The mental health app is designed in such a way that enables the user to effectively apply the strategies of professional psychology to everyday life. Interestingly, the Mood Kit is developed by two clinical psychologists.

https://www.mobileappdaily.com/best-mental-health-mobile-apps
Addiction Applications

reSET is a 90-day Prescription Digital Therapeutic (PDT) for Substance Use Disorder (SUD) intended to provide cognitive behavioral therapy (CBT), as an adjunct to a contingency management system, for patients 18 years of age and older who are currently enrolled in outpatient treatment under the supervision of a clinician.

An associated dashboard for clinicians and other health care providers can be used as part of treatment. The dashboard displays information about patients' use of reSET, including lessons completed, patient-reported substance use, patient-reported cravings and triggers, compliance rewards, and in-clinic data inputs such as urine drug screen results.

40.3 % increased adherence to abstinence of SUD

Compared to 17.6 % increased adherence to abstinence of SUD who did not use this “digital therapy”

Addiction Applications

How to Start Using reSET:

The following steps will help guide your use of reSET and the Clinician Dashboard correctly:

- A licensed clinician prescribes reSET via the enrollment form, which includes an email address for the patient.
- A patient care specialist from reSET Connect™ by Pear Therapeutics, Inc. contacts the patient via telephone with an access code, and guides the patient through downloading the app from the Apple App Store or Google Play Store.
- The patient downloads the application and enters the access code and email address from prescription, then sets a password to use for subsequent login in the case of deleting/reinstalling the app, getting a new phone or tablet.

- The patient begins working and learning with reSET, completes lessons, answers quiz questions (fluency training), and reports substance use, cravings, and triggers. reSET includes a CM system that gives the patient a chance to win rewards for lessons completed and negative drug screens achieved during the 12-week (90-day) treatment period.
- The clinician receives an email sent to the email address provided on the enrollment form. The email contains a link to verify the account and set a password. Once an account is created, the Dashboard can be accessed at any time by visiting www.pear.md.

THANK YOU