

# Rutgers Center for Professional Development

Vignettes on eHealth, mHealth, and  
HRSA Special Projects of National Significance (SPNS)

Jesse Thomas

Project Director

RDE Systems



November 19, 2013

Hello!

# Today's Mission

- Share vignettes across diverse regions and settings that highlight innovative and effective use of HIT, with particular emphasis on hard-to-serve populations
- Show how process, people, and technology intersect to produce measurable outcomes across the cascade
- Provide resources to continue the dialog

# Stories

Creative with Resources

Transform Requirements

Holistic, Humanistic Approach

# Today's Agenda

Background

Hawaii

New Jersey

New York City

Q&A



# HIT Interventions

[illegible]

# HIT Interventions

	Network-Level	Clinic-Level	Patient-Level

National HIV/AIDS Strategy Goals 1, 2, 3

# HIT Interventions

Project	Network-Level	Clinic-Level	Patient-Level
Hawaii	X	X	
Paterson TGA	X	X	X
Minnesota	X		
San Bernadino / Riverside	X		
Wake County, NC	X	X	
North Carolina System Linkages	X	X	
Virginia	X	X	
Boston EMA	X	X	
Massachusetts	X	X	
MyHealthProfile	X		X
Columbia / NYP		X	
NYP Project HOTT			X
NYC THCC Corrections (Rikers)		X	

National HIV/AIDS Strategy Goals 1, 2, 3

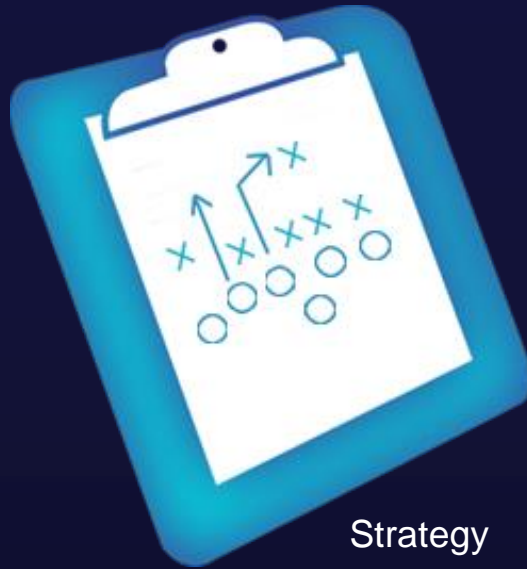


# HIT Interventions

Project	Network-Level	Clinic-Level	Patient-Level
Hawaii	X	X	
Paterson TGA	X	X	
Minnesota	X		
San Bernadino / Riverside	X		
Wake County, NC	X	X	
North Carolina System Linkages	X	X	
Virginia	X	X	
Boston EMA	X	X	
Massachusetts	X	X	
MyHealthProfile			X
Columbia / NYP		X	
NYP Project HOTT			X
NY THG Coordinated Entry			

National HIV/AIDS Strategy Goals 1, 2, 3

## Universal Principles



Strategy



People

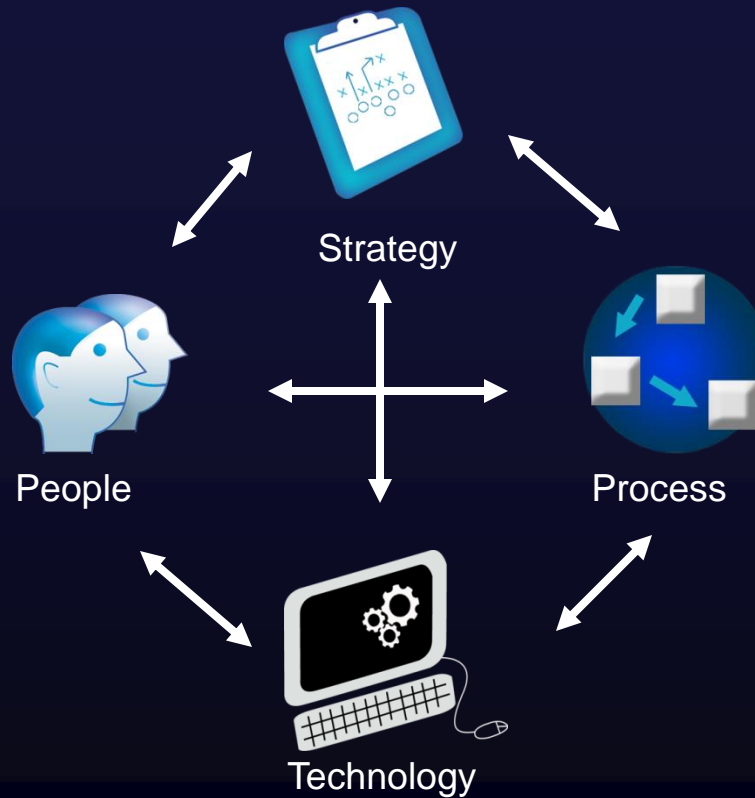


Process



Technology

# What affects what?



Everything affects everything!

What Are the Main Stages of  
the HIT Lifecycle?



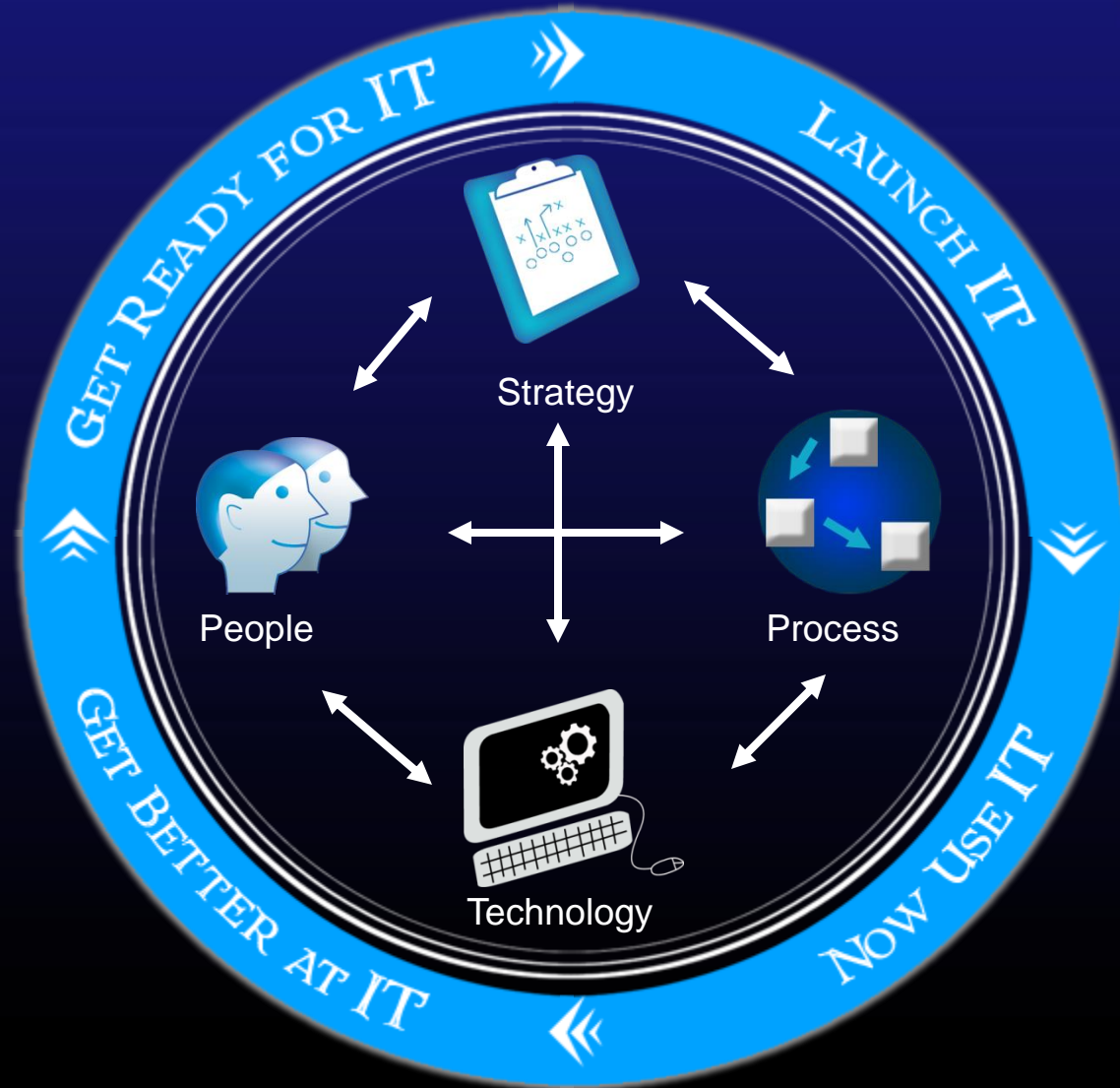








# A Simple, Integrated Framework for HIT Implementation



# Disclaimers & Expectations

Think about...

# Who am I?

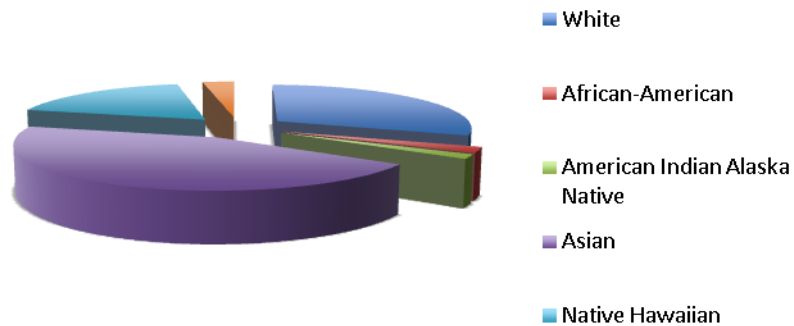
- **Jesse Thomas, Project Director**
- **Serving public health for over 16 years**
- **RDE Systems**
  - **Founded by head technologist teaching at Rutgers University in MPA program**
  - **Cognitive psychologist → Human factors slant**
  - **Based in Clifton, NJ, serving clients nationally**
  - **“A most unique IT company. Mission-driven.”**
- **Technical Manager for over ten SPNS Projects**

Let's take a trip to Hawaii!

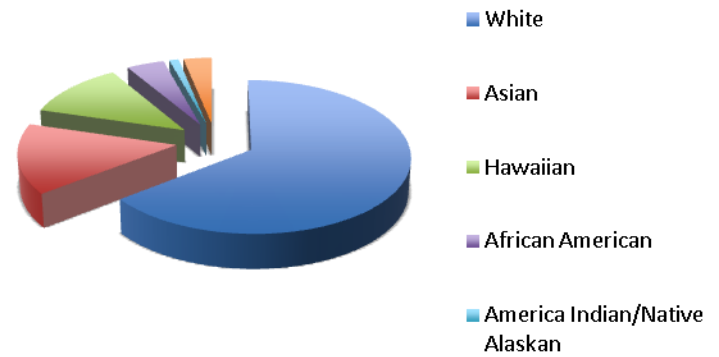
Population 1,288,198



## General Population



## HIV/AIDS Cases by Race



## Intervention:

eCOMPAS as State-Wide Data System (*e2Hawaii*)

Only 6 Months to Customize, Launch, Migrate, and  
Train

SPNS



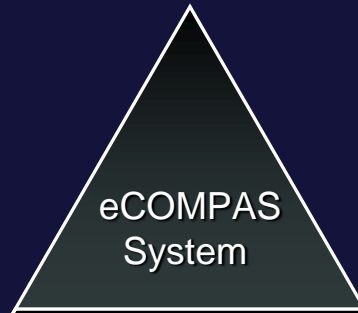
# Special Projects of National Significance (SPNS)



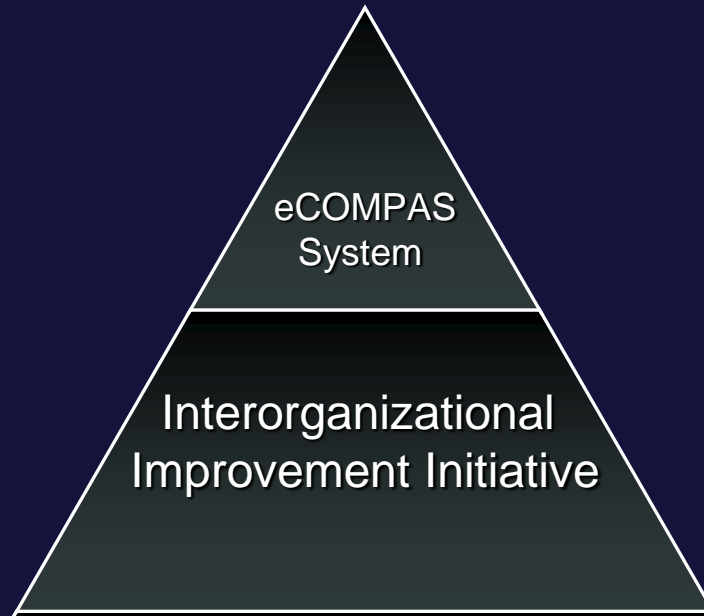
# What is ?

1. eCOMPAS is a ***system and approach*** to managing data for ***accountability and success***
2. eCOMPAS is ***web-based*** – no need for installation or upgrades
3. eCOMPAS is ***user friendly***
4. eCOMPAS is ***real-time*** – no need for upload/download
5. eCOMPAS is ***graphical***
6. eCOMPAS is ***customized***
7. eCOMPAS is ***flexible*** – easily and quickly changeable based on frontline experience and creative ideas from the field

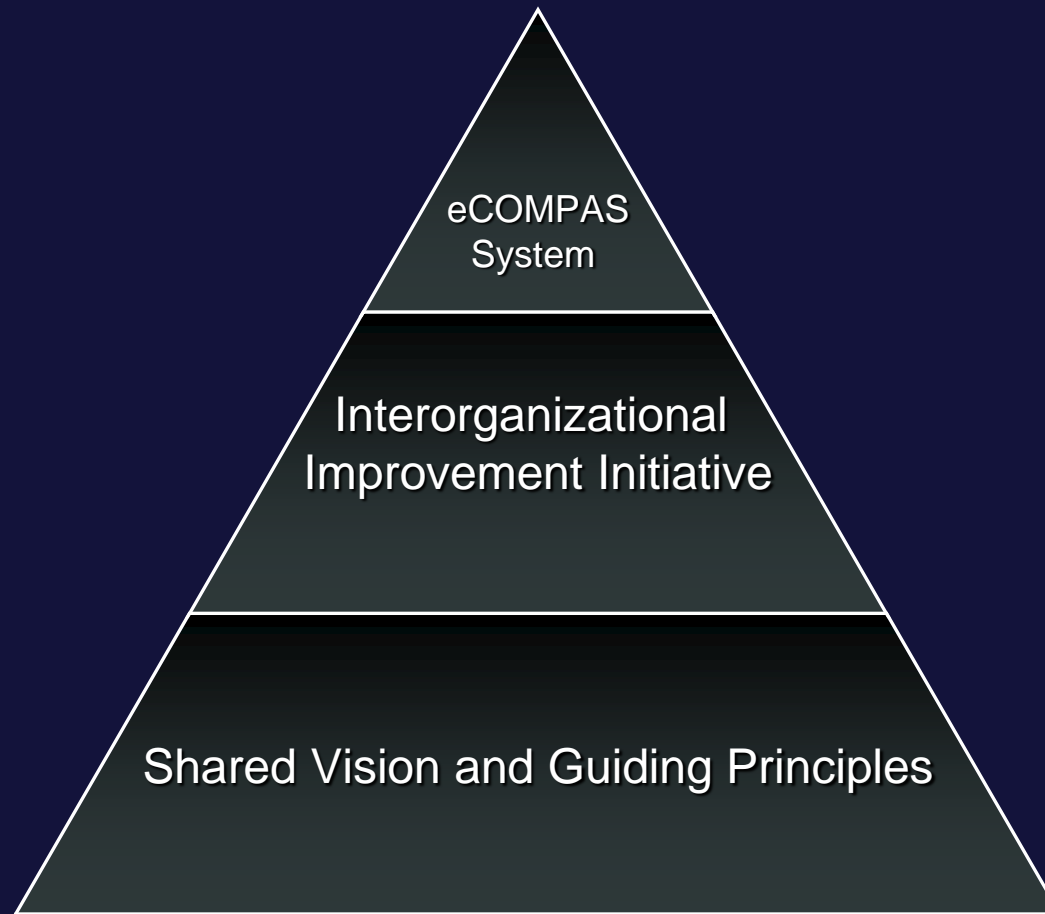
# The eCOMPAS Process



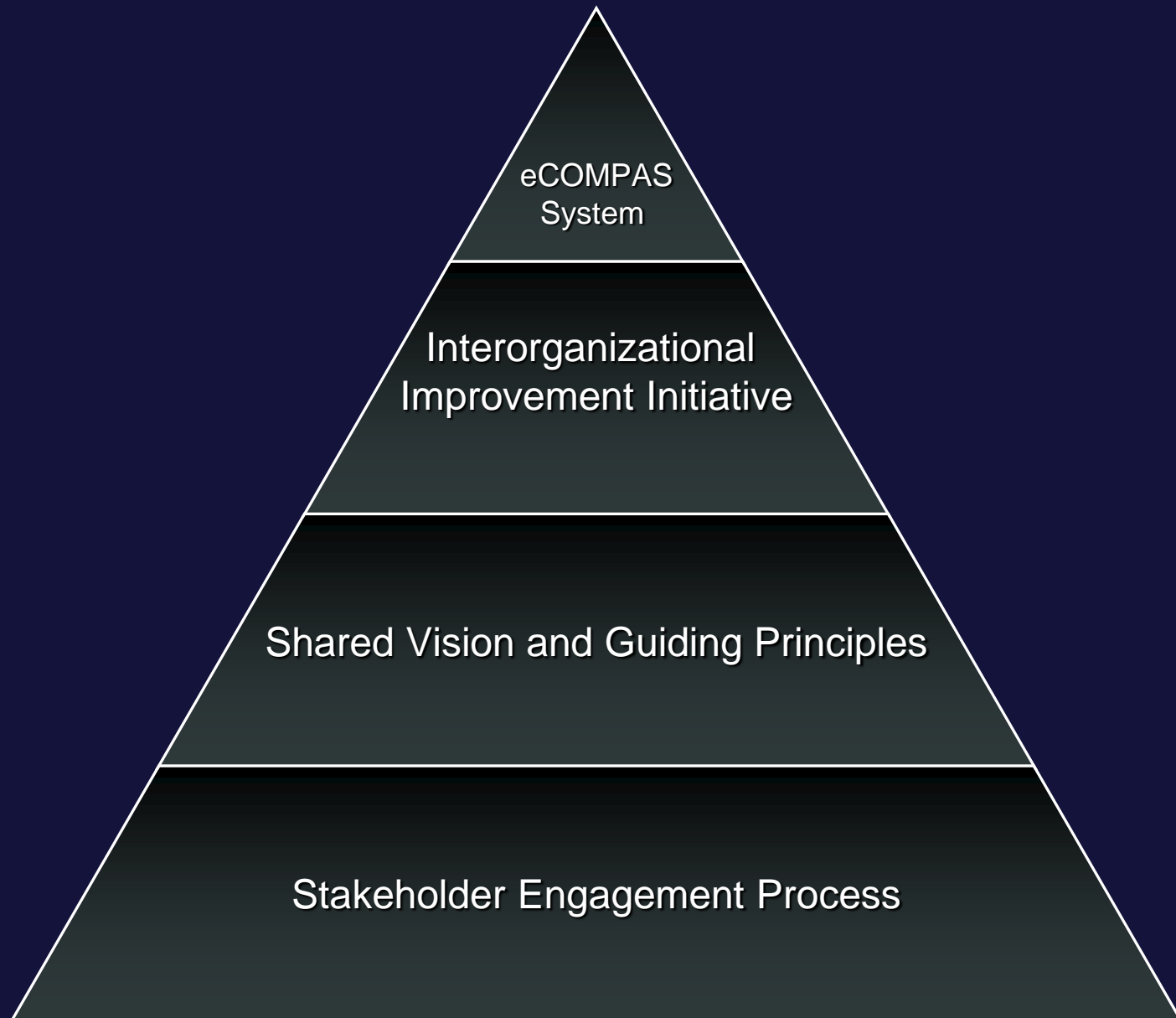
# The eCOMPAS Process



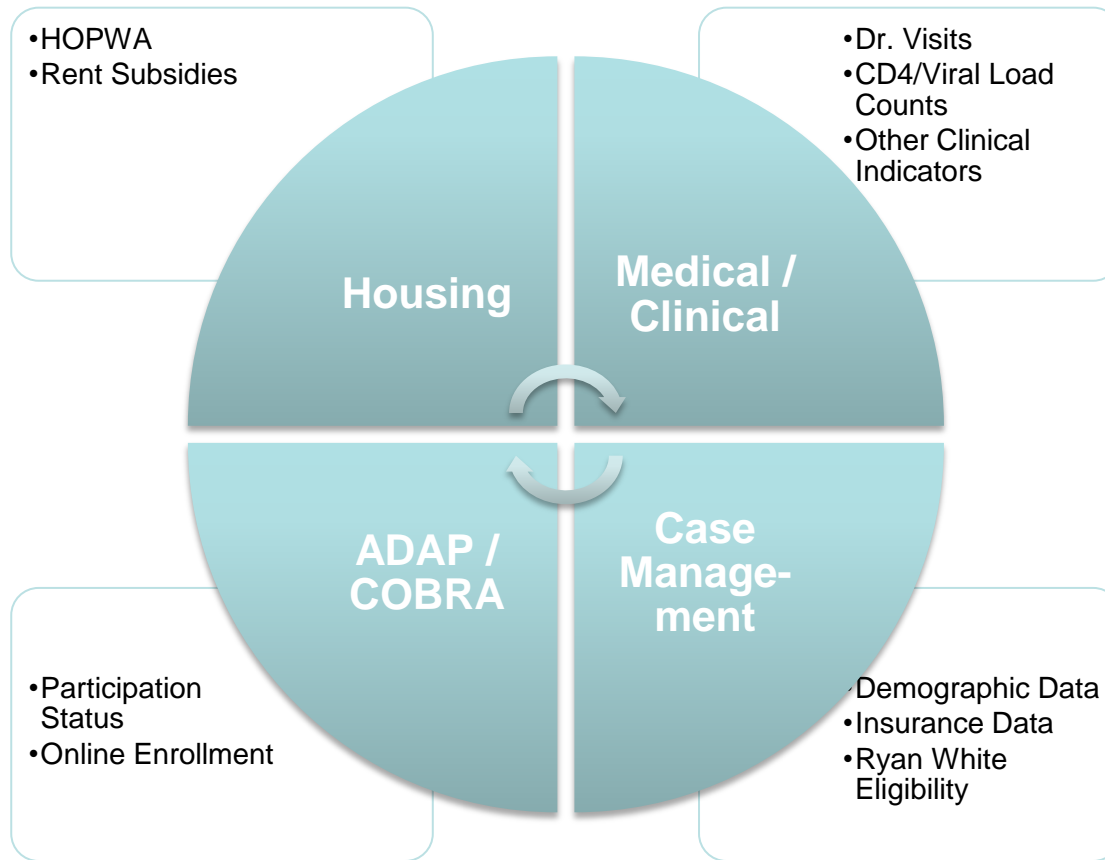
# The eCOMPAS Process



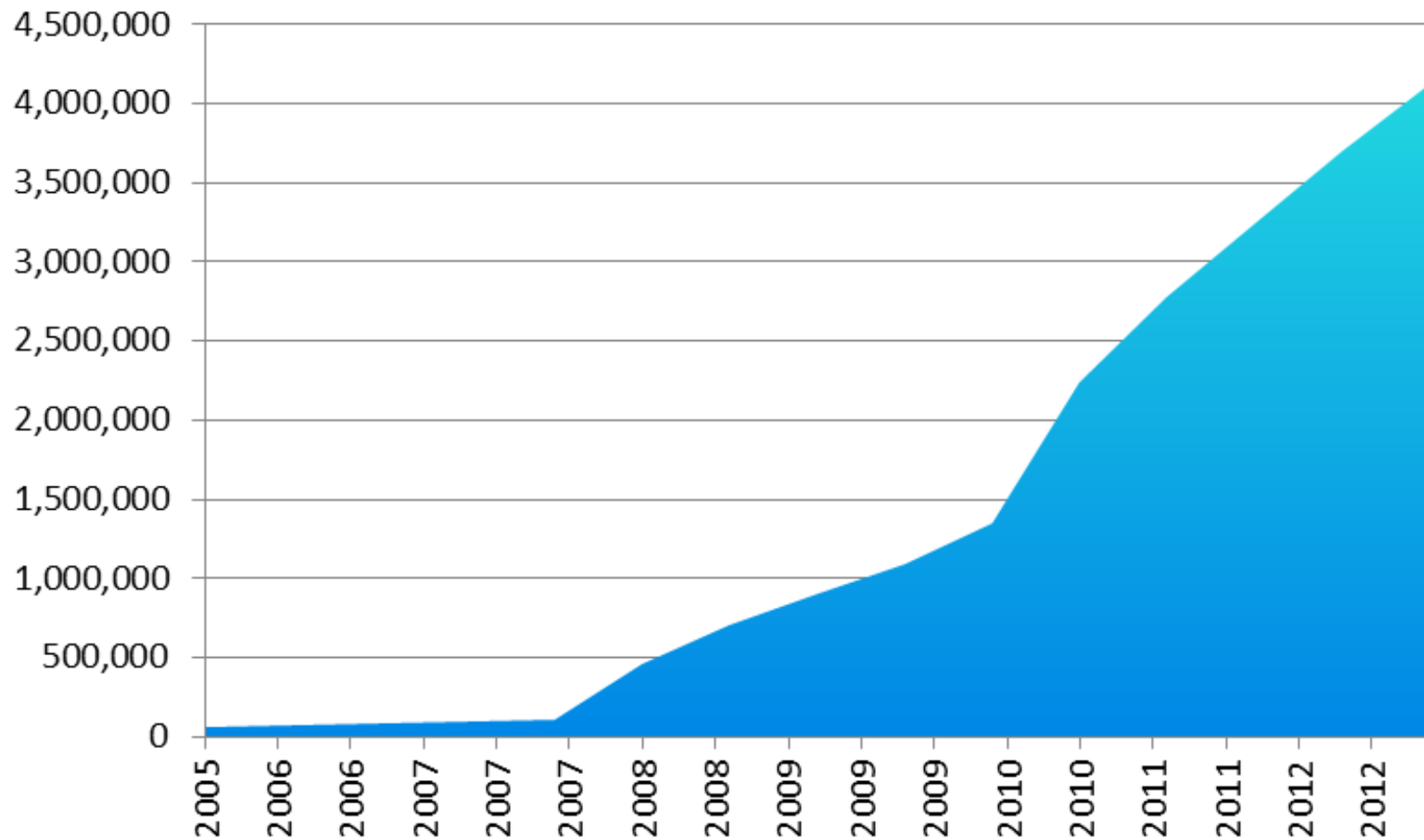
# The eCOMPAS Process



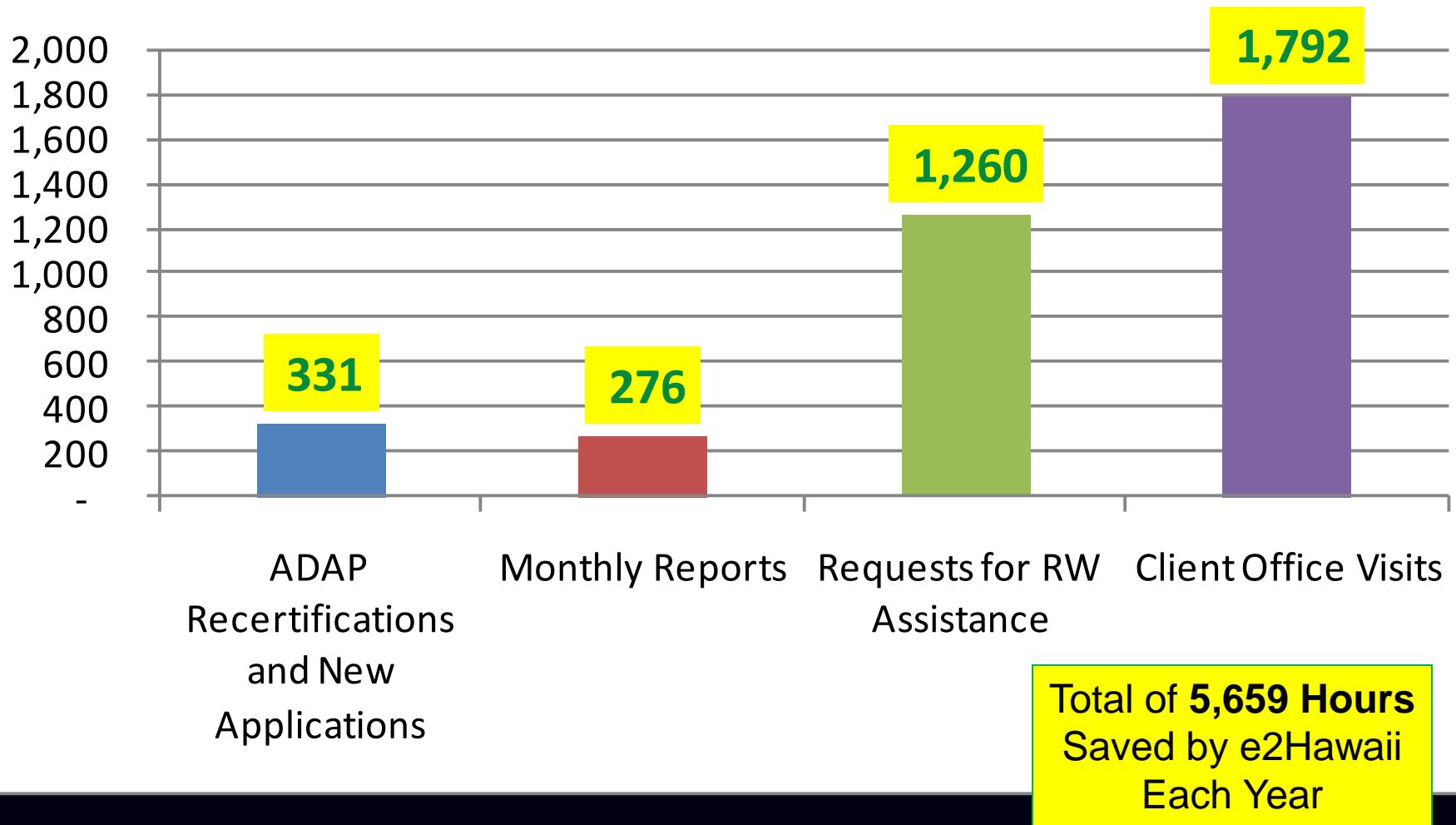
# Client Record in a Networked Sharing Model – e2Hawaii



## Fields Shared



# Hours Saved by eCOMPAS Per Year



An additional 2,000 hours of savings is projected by the Waikiki Health Center based on the *e2Hawaii Electronic Health Record Data Exchange Module* developed by RDE Systems for a **total of 5,659 hours saved per year.**

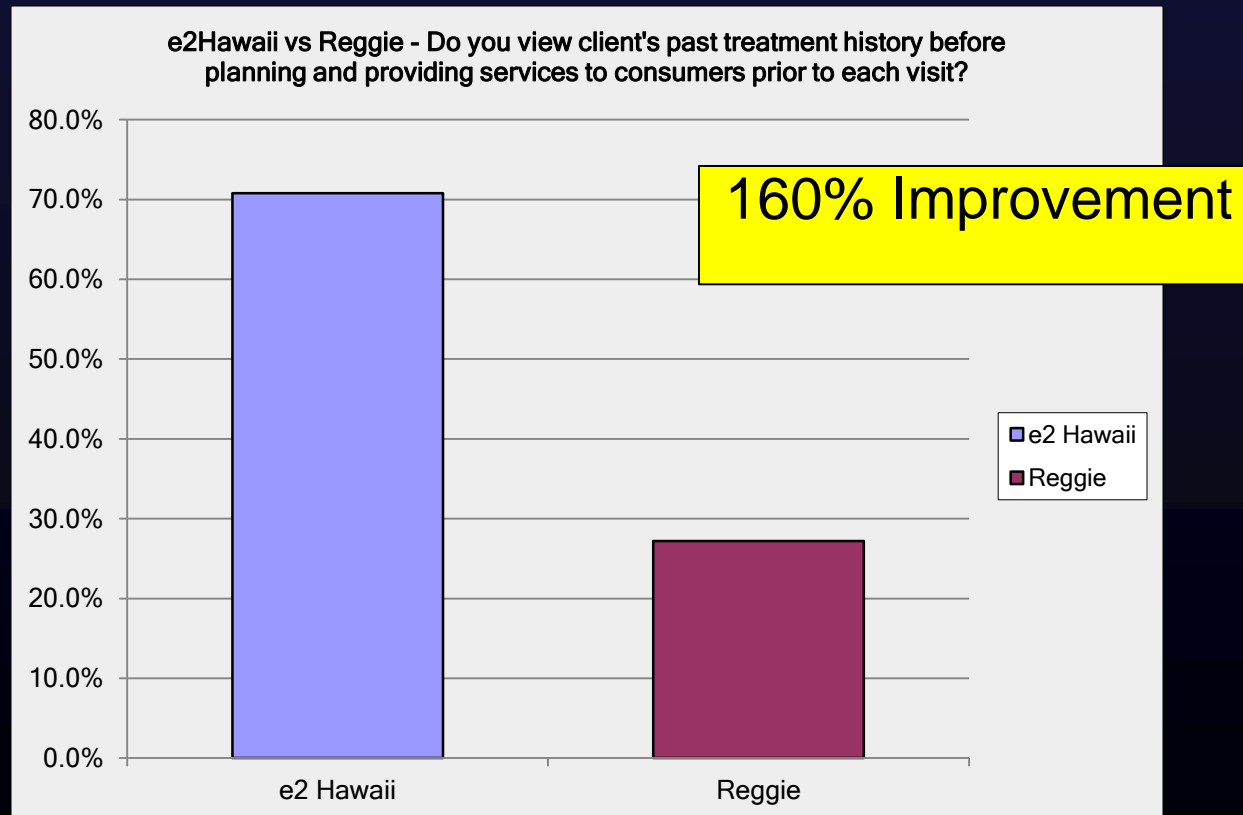


# Takeaway:

Electronically sharing data across agencies, coupled with a user-friendly web-based system, saves providers time.

Time is better spent with clients and quality care!

# Has e2Hawaii helped users view clients' past treatment history before planning and providing services to consumers prior to each visit?



From Hawaii to New Jersey!

# City of Paterson: A Case Study in Innovation

## Intervention:

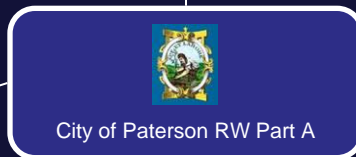
eCOMPAS as Region-Wide Data System (e2)

4-Year SPNS Project

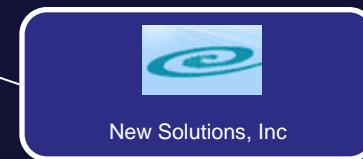
Proactive Alerts and Quality Dashboards



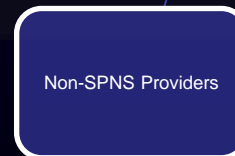
*City of Paterson*



Technology Partner



Principal Investigator







(from left to right) Denise Coba, Pat Virga, Jesse Thomas, Millie Izquierdo, Jimease Green, Maria Cordova, Doug Mendez, Pricilla Moschella, Jerry Dillard, Ellen McNamara, Larry Rodgers, Blanca Roman, Anthony Fazzinga, Sandra Murillo, Maryann Collins, Irene Panagiotis, Serge Virodov, Chantia Douglas, Kathy Lebron

# eCOMPAS Interactive Quality Reporting

**Cross Collaborative Report**

From Date:  To Date:  or Select:

<b>1) % of Ryan White HIV/AIDS clients with 2 CD4 tests in a year</b>		<input type="button" value="List"/>
1. Clients eligible for indicator		142 (List)
2. Clients who are in this indicator		106 (List)
3. Clients who are not in this indicator		36 (List)
<b>Indicator Percentage</b>		<b>74.6%</b>

<b>2) % AIDS clients who are prescribed HAART</b>		<input type="button" value="List"/>
1. Clients eligible for indicator		79 (List)
2. Clients who are in this indicator		65 (List)
3. Clients who are not in this indicator		14 (List)
<b>Indicator Percentage</b>		<b>82.3%</b>

[Close]

RFG85782

TGY765284

HFP234938

WHF845388

UIG734935

GEK857147

PWJ51285

WHY245167

DIY532546

RPH972456

EOK982657

1. User clicks on the number of clients NOT in the numerator.

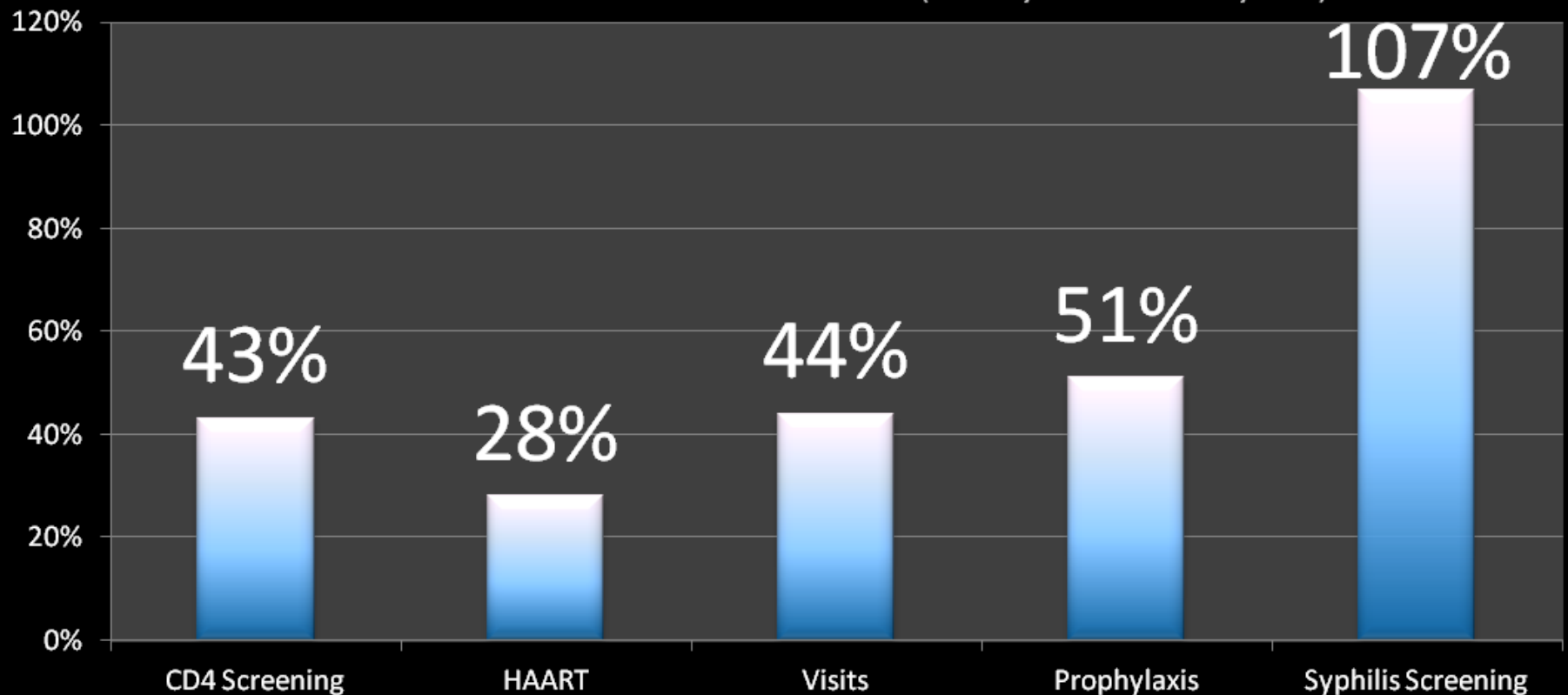
2. A list of clients pops up.

3. Staff drill-down to each client record and use it as a tool for follow-up.

# Outcomes




## Bergen-Passaic Indicators Improvement Cross Part Collaborative (2009 cycle 2 to 2012 cycle 4)



# Comparative Benchmarks Spur Healthy Competition

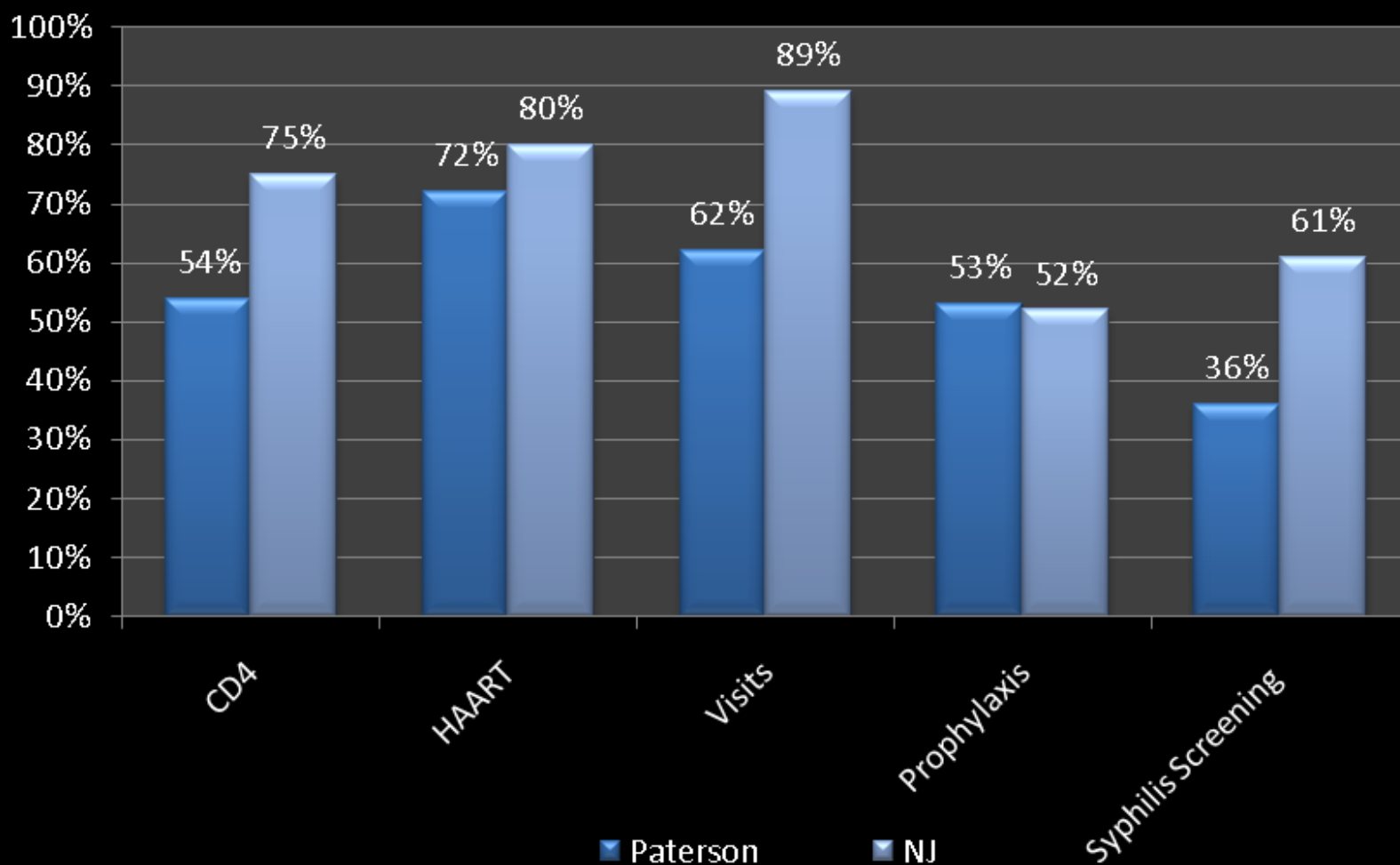
## Cross Collaborative Report

From Date:  To Date:  or Select:  

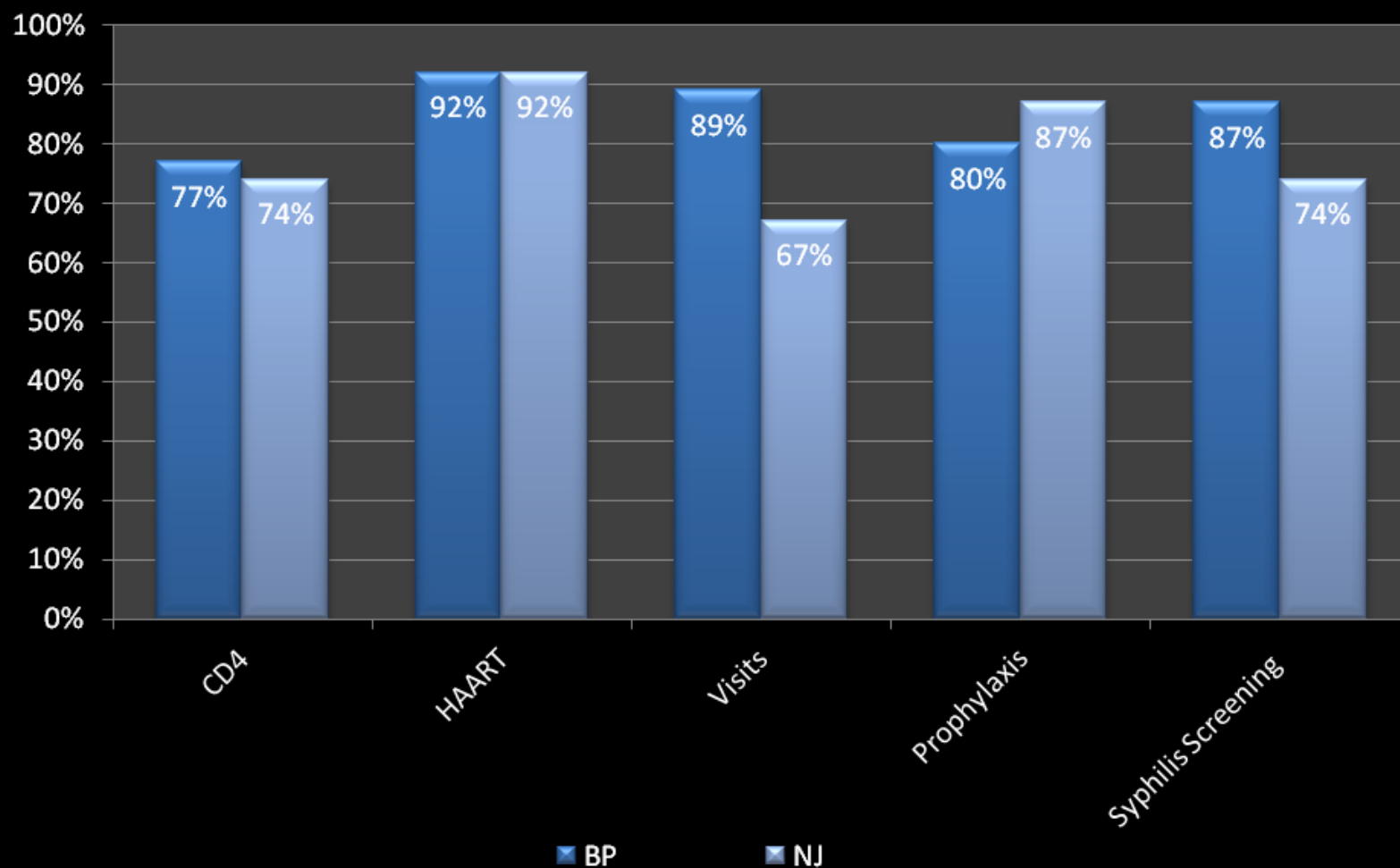
1) % of Ryan White HIV/AIDS clients with 2 CD4 tests in a year		[?]
1.	Clients eligible for indicator	88 <a href="#">(List)</a>
2.	Clients who are in this indicator	64 <a href="#">(List)</a>
3.	Clients who are not in this indicator	24 <a href="#">(List)</a>
Indicator Percentage		72.7%
State of New Jersey Average Indicator Percentage		75.4%

# How did Paterson compare to the State?

(2009 Cycle 2)



## How does Bergen-Passaic compare to the State **now**? (2012 Cycle 4)



# Statewide Recognition of Bergen-Passaic Providers

## Program Update

## New Jersey's success in the In+Care Campaign



### New Jersey's success in the In+Care Campaign

Jane Caruso, M.S., Ryan White Part D Project Director,  
New Jersey Department of Health

The Health Resources and Services Administration together with the National Quality Center have teamed up on a national retention campaign referred to as the In+Care Campaign. The In+Care Campaign aims to keep patients in care — if patients stay in care, they get the services that they need to stay healthy. The In+Care Campaign includes 484 providers nationally who currently manage the care of 421,697 patients.

Forty Ryan White Cross Part Collaborative providers in the state of New Jersey have incorporated the In+Care Campaign into clinical and data collection procedures. Merging the efforts of the Cross Part Collaborative with the In+Care Campaign goals streamlines data collection and provides a statewide picture of our collective ability to respond to patient retention challenges.



New Jersey's In+Care Team, from left to right: Roseanne Marone, Michael Hager, Jean Haspel, and Jane Caruso. The Team is available to provide guidance and support to strengthen local retention activities.

**The In+Care Campaign aims to keep patients in care — if patients stay in care, they get the services they need to stay healthy.**

#### Agencies in the In+Care Campaign are engaged in the following activities:

- Reporting on four uniform campaign-related measures via an already existing Ryan White online database
- Implementing improvement activities to support patient retention
- Routinely sharing updates to highlight improvement strategies and challenges
- Joining when possible, regional/local face-to-face meetings of peer In+Campaign participants

After five rounds of statewide data collection (10 months of data), New Jersey is performing better than the national average in the following measures (see Figure 1).

- Percentage of patients with a medical visit in the first half of the year who did NOT have a medical visit in the second half of that year ("Gap", note that for this variable, the lower the percentage, the better; hence New Jersey's 11% reflects better performance than the national average of 14%).
- The percentage of patients with a medical visit in the first quarter of a given two-year period that also had a medical visit in each of the subsequent three quarters of that two-year period ("Frequency").
- Percentage of patients that were newly enrolled in the first trimester of a given year who had a medical visit in the subsequent two trimesters of that year (new patients "New Pts").

The remaining measure is: The percentage of HIV positive patients with an undetectable viral load, or a viral load less than 200 copies ("VLS").

### New Jersey's In+Care Campaign stars

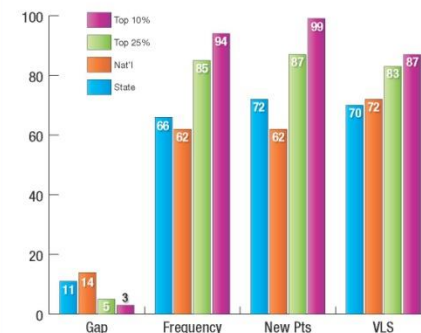
Three agencies have made outstanding progress in their rates of viral load suppression (80% or greater):

- Garden State ID at Kennedy Hospital
- Hackensack University
- St. Mary's Hospital

Seven agencies achieved a "Gap" measure under 5%:

- Jersey Shore University Medical Center Pediatrics
- Plainfield Neighborhood Health Center
- Hackensack University Medical Center
- St. Mary's Hospital
- Eric B. Chandler
- St. Joseph's Hospital and Medical Center
- Henry J. Austin

Figure 1: New Jersey In+Care Cycle 5 Data



Garden State ID at Kennedy Hospital



Hackensack University



St. Mary's Hospital

**3 agencies have made outstanding Progress in their rates!**

Efforts in New Jersey are championed by Jane Caruso from the State Department of Health, who is New Jersey's designated coach, and

- Jean Haspel from Atlanticare in Atlantic City in the south ([Jean.Haspel@atlanticare.org](mailto:Jean.Haspel@atlanticare.org))
- Roseanne Marone from RWJ in New Brunswick in the north ([Roseanne@umdnj.edu](mailto:Roseanne@umdnj.edu))

Michael Hager ([mth02@health.state.nj.us](mailto:mth02@health.state.nj.us)) from the National Quality Center is overseeing the entire national project and is a mentor and support person.

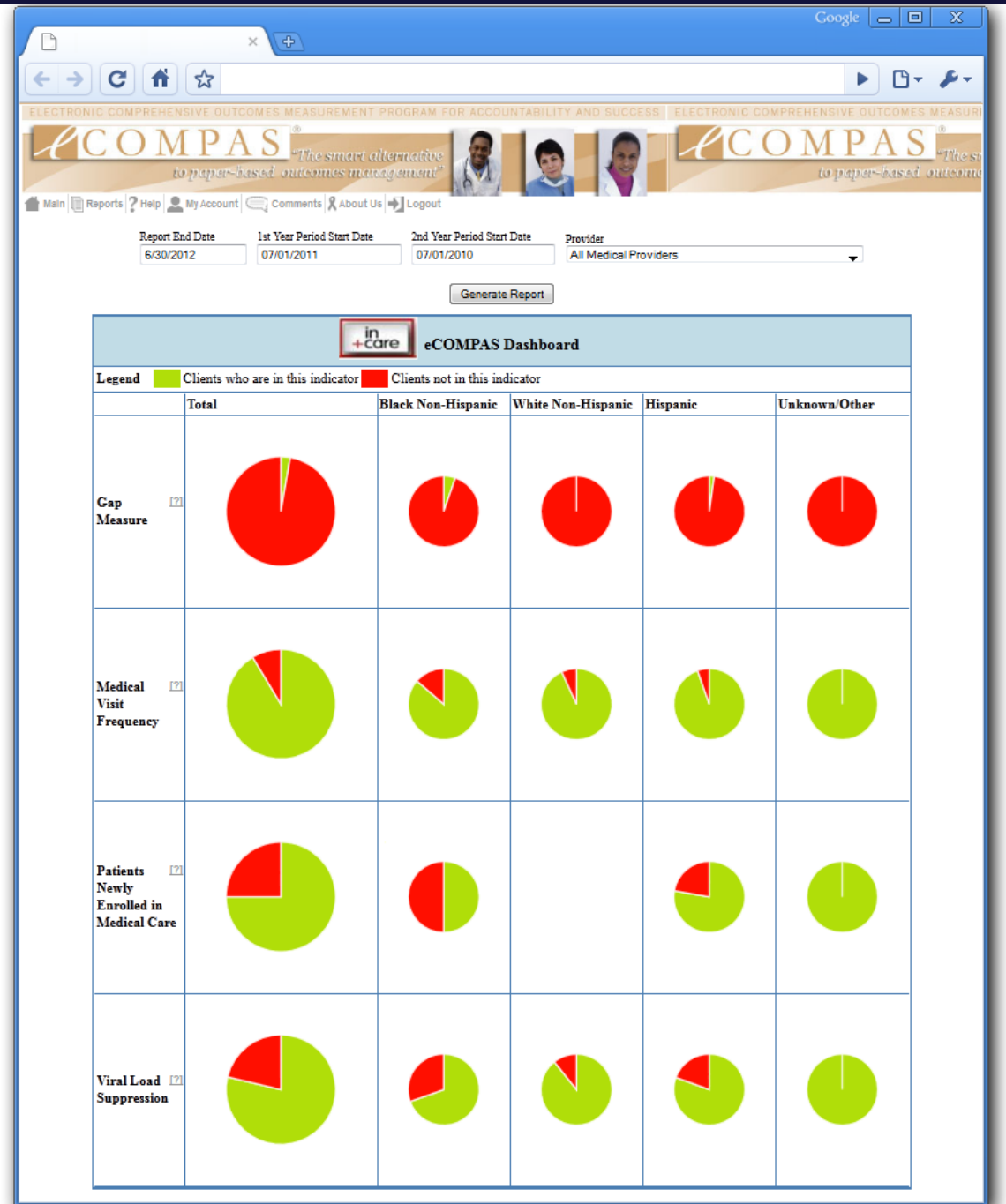
Any agency who wants guidance, support or technical assistance in developing a strategy to improve retention, should contact: Jane Caruso ([jane.caruso@doh.state.nj.us](mailto:jane.caruso@doh.state.nj.us)) or 609-777-7748.

**Bergen-Passaic  
eCOMPAS  
SPNS Agencies**

# Launching Now:

## in+care eCOMPAS Dashboard

- At-a-glance
- Visual
- Red/Green
- Populations
- Region vs.  
Provider
- Drilldown



# Agency Alerts

[Search](#)[Bulk/Group](#)[Referrals](#)[Outreach](#)[Useful Links](#)[Tracker](#)[QM \(799\)](#)[Alerts](#)[Alert Subscriptions](#)[Journaling](#)

## Summary of Current Alerts

Click on each alert for details.

Type	Upcoming Alerts	Past-Due Alerts	Recommendation
CD4 test not performed within past three months [?]	<a href="#">0</a>	<a href="#">160</a>	Consider scheduling or following-up to conduct CD4 test
VL test not performed within past three months [?]	<a href="#">0</a>	<a href="#">164</a>	Consider scheduling or following-up to conduct a VL test
No medical appointment in the past three months [?]	N/A	<a href="#">168</a>	Consider scheduling or following-up to ensure medical appointment
CD4 results less than 200 but status has not changed to AIDS [?]	N/A	<a href="#">7</a>	Review records and ensure the HIV Status is correct. It may need to be changed to AIDS.
No TB/TST conducted within 12 months of the last TB/TST [?]	N/A	<a href="#">122</a>	Consider scheduling or following-up to conduct TB/TST
Active clients who have not received any services in the past 6 months [?]	N/A	<a href="#">178</a>	Review client records and try to reconnect them to services or mark as inactive.

All recommendations assume that you first ensure that the data (e.g., CD4 test date and value) has been entered into eCOMPAS.

If you wish to suggest a new alert click [here](#)

# Agency Alerts Drilldown

Search	Bulk/Group	Referrals	Outreach	Useful Links	Tracker	QM
<a href="#">Alerts</a>   <a href="#">Alert Subscriptions</a>   <a href="#">Journaling</a>						
<h2>Summary of Current Alerts</h2> <p>Click on each alert for details.</p>						
Type	Upcoming Alerts	Past-Due Alerts	Recommendation			
CD4 test not performed within past three months	0	168	Consider scheduling or following-up to conduct CD4 test			
VL test not performed past three months	0	168	Consider scheduling or following-up to conduct a VL test			
No medical appointment the past three months	0	168	Consider scheduling or following-up to ensure medical appointment			
CD4 results less than 350 but status has not changed to AIDS	0	168	Review records and ensure the HIV Status is correct. It may need to be changed to AIDS.			
No TB/TST conducted 12 months of the last	0	168	Consider scheduling or following-up to conduct TB/TST			
Active clients who have not received any services 6 months	0	168	Review client records and try to reconnect them to services or mark as inactive.			



# Linked to Exact Screen

## Basic Information

ID:	[REDACTED]	Status:	Active	First Name:	A*	Last Name:	K*
Gender:	Female	SSN:	6986	Birth Date:	[REDACTED]	Age:	51

Last Medical Visit:

HIV Care Specialist:

Alerts: **CD4**

[more...](#)

**Missed Medical Appointm**

**Viral Load**

**TB / TST Due**

[General Info](#)

[Medical](#)

[Direct Services](#)

[Lookup](#)

[Client Referrals](#)

[Outcomes](#)

[Alerts \(5\)](#)

[Demographics](#) | [HIV and AIDS Info](#) | [Socio-Economic Info](#) | [Income Data](#) | [Income Sources](#) | [Documents on File](#) | [Notes](#)

## Client Information

[top](#)

Current Gender	Female	Gender at Birth	<b>Female</b>
CM (non-medical)			
Medical CM	[REDACTED]		
Zip Code	[REDACTED]	Birth Place	
County	<b>PASSAIC</b>	City	<b>CLIFTON</b>
		State	<b>NJ</b>

## Client Status

[top](#)

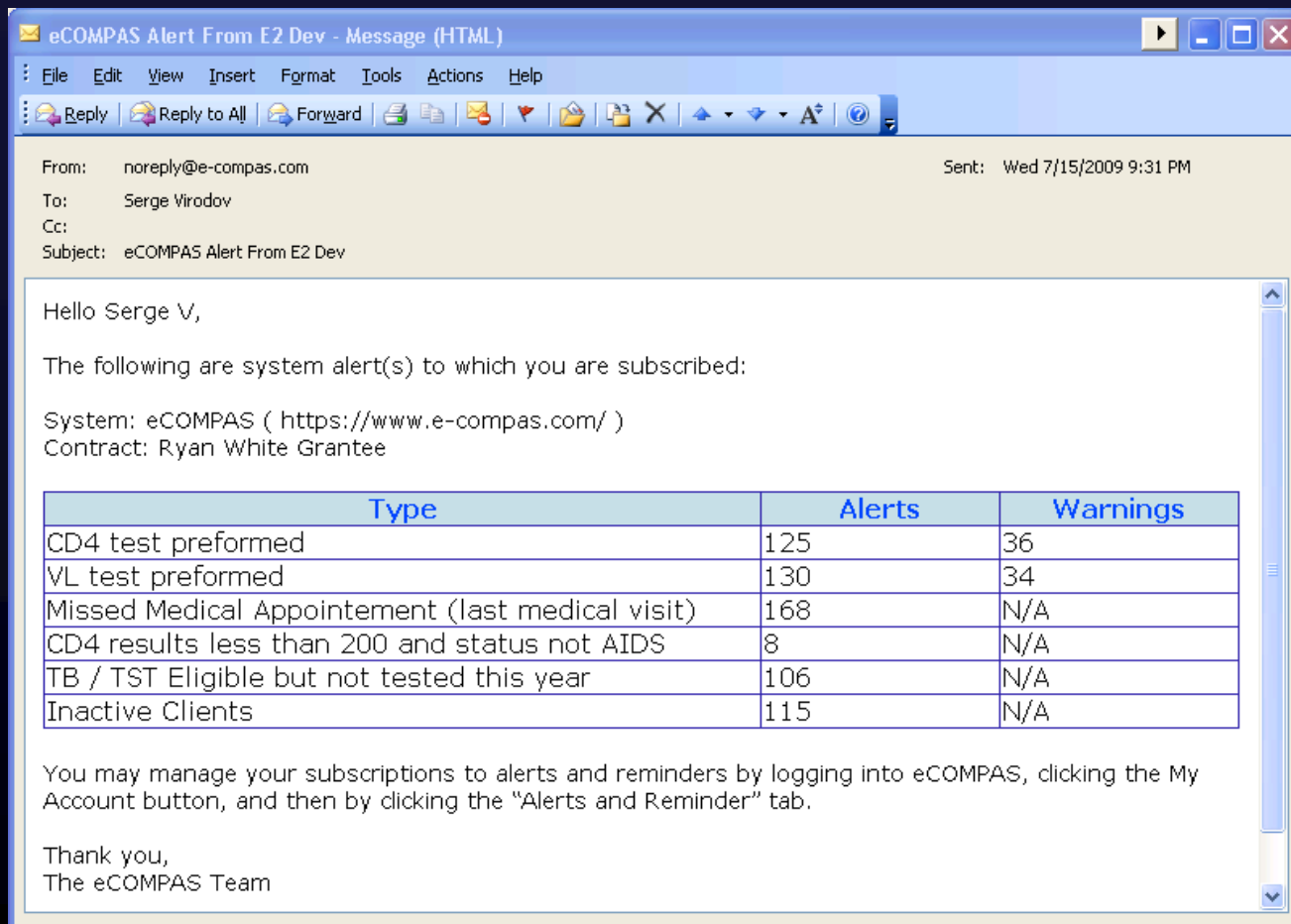
Client Status

Active

Referral Source

# Email Alerts

- Proactive, regular, *push* notification
- Supervisors are more likely to read email



# Outcomes

# Electronic health information technology as a tool for improving quality of care and health outcomes for HIV/AIDS patients

- [Patricia H. Vireg](#)  [Bongseuk Jin](#)  [Jesse Thomas](#)  [Sergey Viradov](#) 

## Highlights

- ▶ Health information technology (HIT) is shown to benefit quality of care for HIV/AIDS patients.
- ▶ An easy-to-use system responsive to users' needs effectively facilitates rigorous application of quality improvement methods.
- ▶ HIT can lead to improved health outcomes for HIV/AIDS patients.

## Abstract

### Purpose

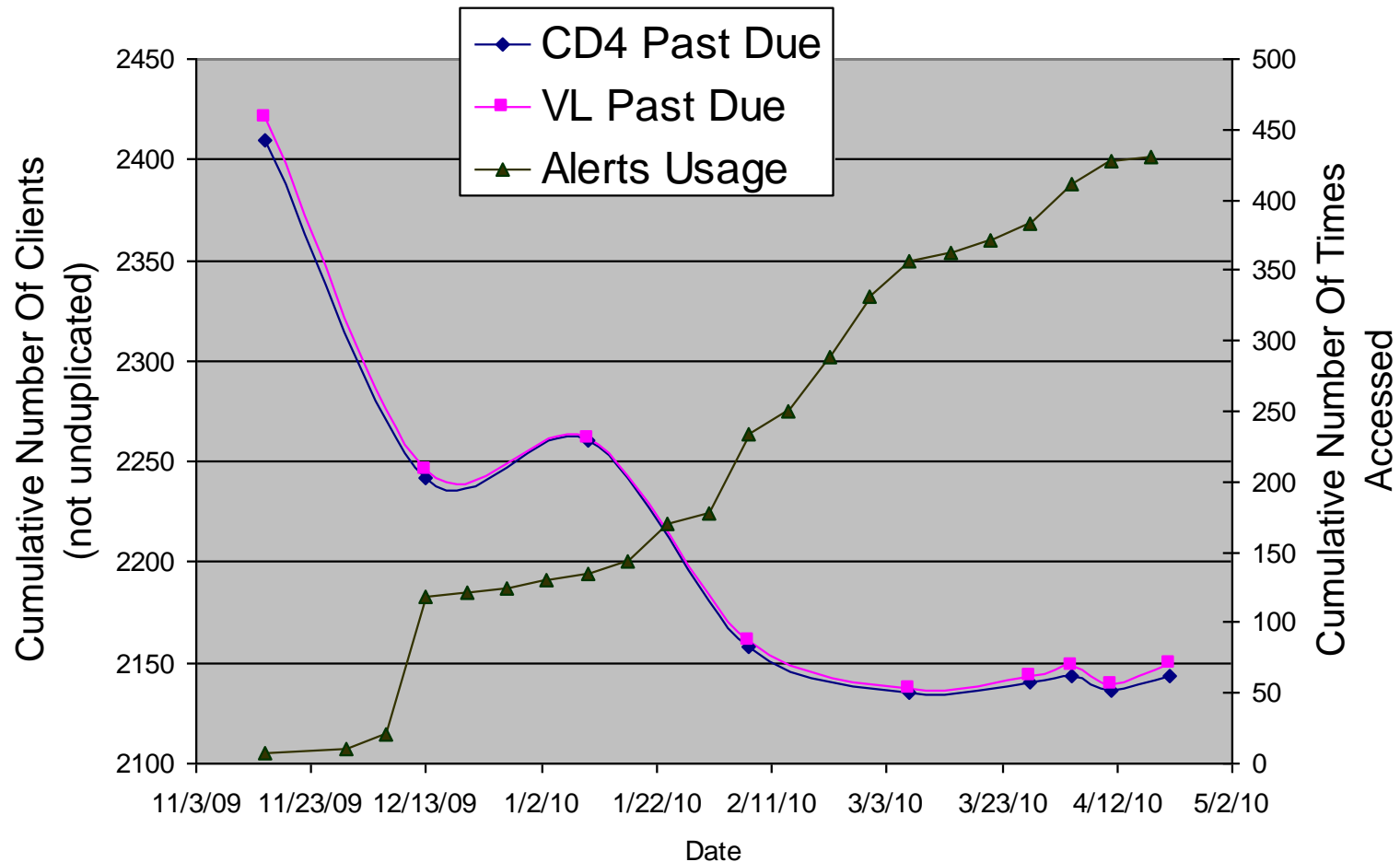
This paper presents research on the interplay of health information technology (HIT), quality improvement and progression of health status. The purpose of the research was to determine whether electronic exchange of health information impacts quality of care and, by extension, health outcomes of patients with HIV/AIDS. The research was supported as a demonstration project under the Information Technology Networks of Care Initiative sponsored by the U.S. Health Resources and Services Administration, HIV/AIDS Bureau, Special Projects of National Significance (SPNS). The City of Paterson, New Jersey, Department of Health and Human Services administered the project as the grant recipient, secured and managed through the City of Paterson's Ryan White Part A Program of Bergen and Passaic Counties.

### Methods

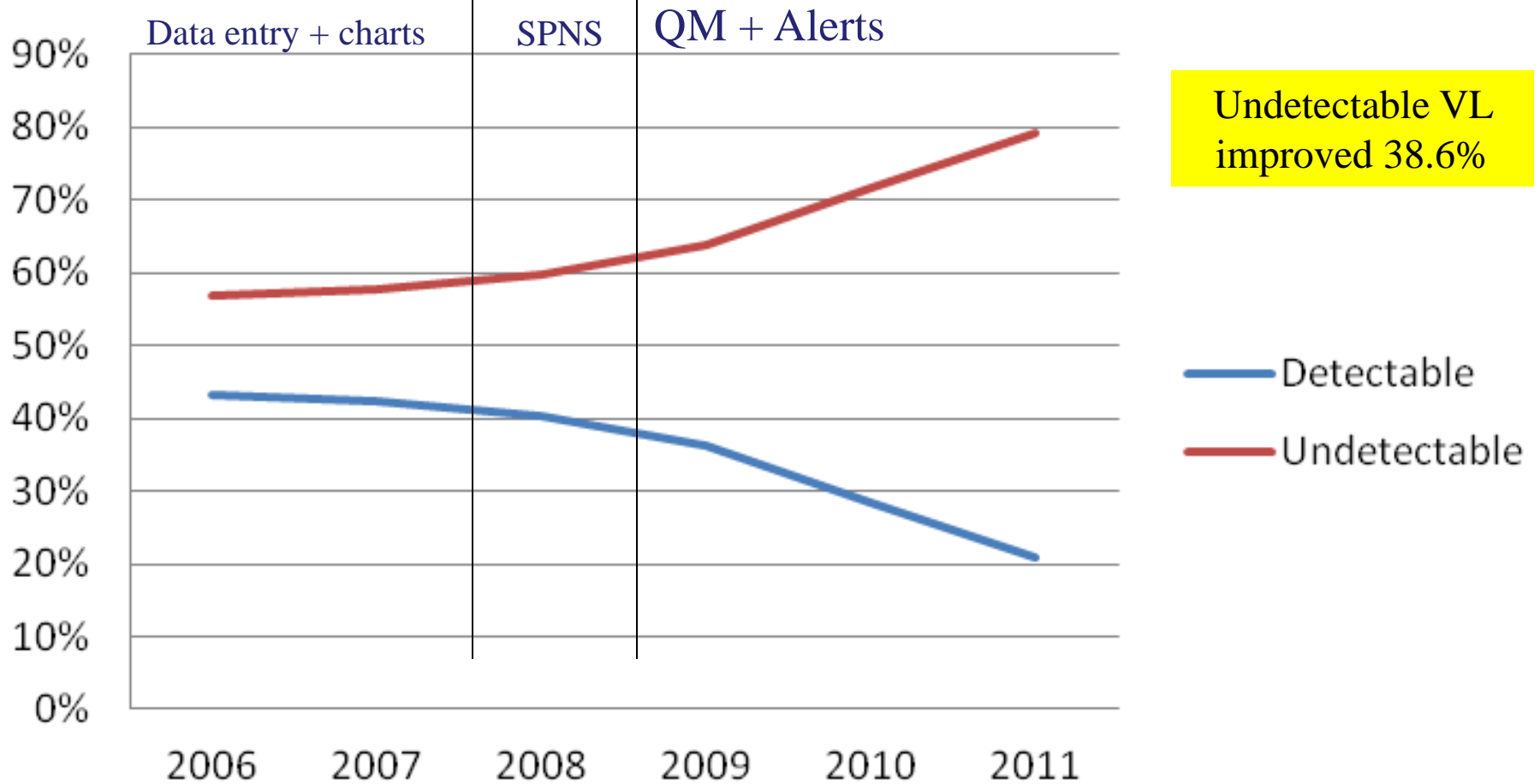
We implemented a web-based health information support system, e2, to facilitate rigorous quality improvement activities associated with care and treatment of HIV/AIDS patients. We used e2 to monitor patient care in the clinic setting. We observed five quality and two health status indicators relating to the care of 263 HIV/AIDS medical patients at three HIV/AIDS medical clinics from 2008 to 2010. The quality indicators conformed to HIV/AIDS Bureau (HAB) Groups 1 and 2 definitions of two or more CD4 T-cell counts performed in the measurement year, AIDS patients prescribed HAART, two or more medical visits in the measurement year, PCP prophylaxis administered to AIDS patients with CD4 T-cell counts <200, and adults screened for syphilis within the measurement year. CD4 T-cell count and viral load suppression indicators were used as health status indicators. Frequency analysis and logistic

# Usage of Alerts Makes a Difference

## Alerts Usage vs. Number of Alerts



# Viral Load 2006-2011



2006-2007 prior to SPNS, all medical patients

# Quotes from SPNS Partners

- ❖ “...e2 has definitely improved the patients’ **response to care.**”
- ❖ “Our patients have shown **enthusiasm** for the program. ... a few have even stated they thought that **‘we care more’** about them...”
- ❖ “It is our belief that since the onset of the SPNS project, many of our clients have become **happier and healthier.**”

# User / Stakeholders Responses

- “eCOMPAS is a no-brainer; it gives us **structure**. The meetings are helpful.” – Nurse
- “I like the system. It gives us a **uniform structure**. I like structure as a supervisor because of **new staff**. We designed the enhancements continuously. Meetings have been invaluable.” – Program Director
- “The system is wonderful. **It is my teacher. It tells me my priorities.** It’s better than looking through charts. It is very helpful to me.” – Nurse
- “Done an incredible amount of work to make eCOMPAS. Easy to use. Very useful when I’m on the phone. I can be more responsive. It is useful for case conferencing. **I can look up information myself instead of calling and interrupting staff.** The reporting is helping us to change and improve the way we do things.” – Nursing Supervisor
- “eCOMPAS helps us to prioritize and organize. It **helps us to follow-up with the doctor.**” – Nurse
- “This system is very important to me. It tells me what to do to get them back in care. **There is always an announcement of something nice that is new.**” – Medical Assistant



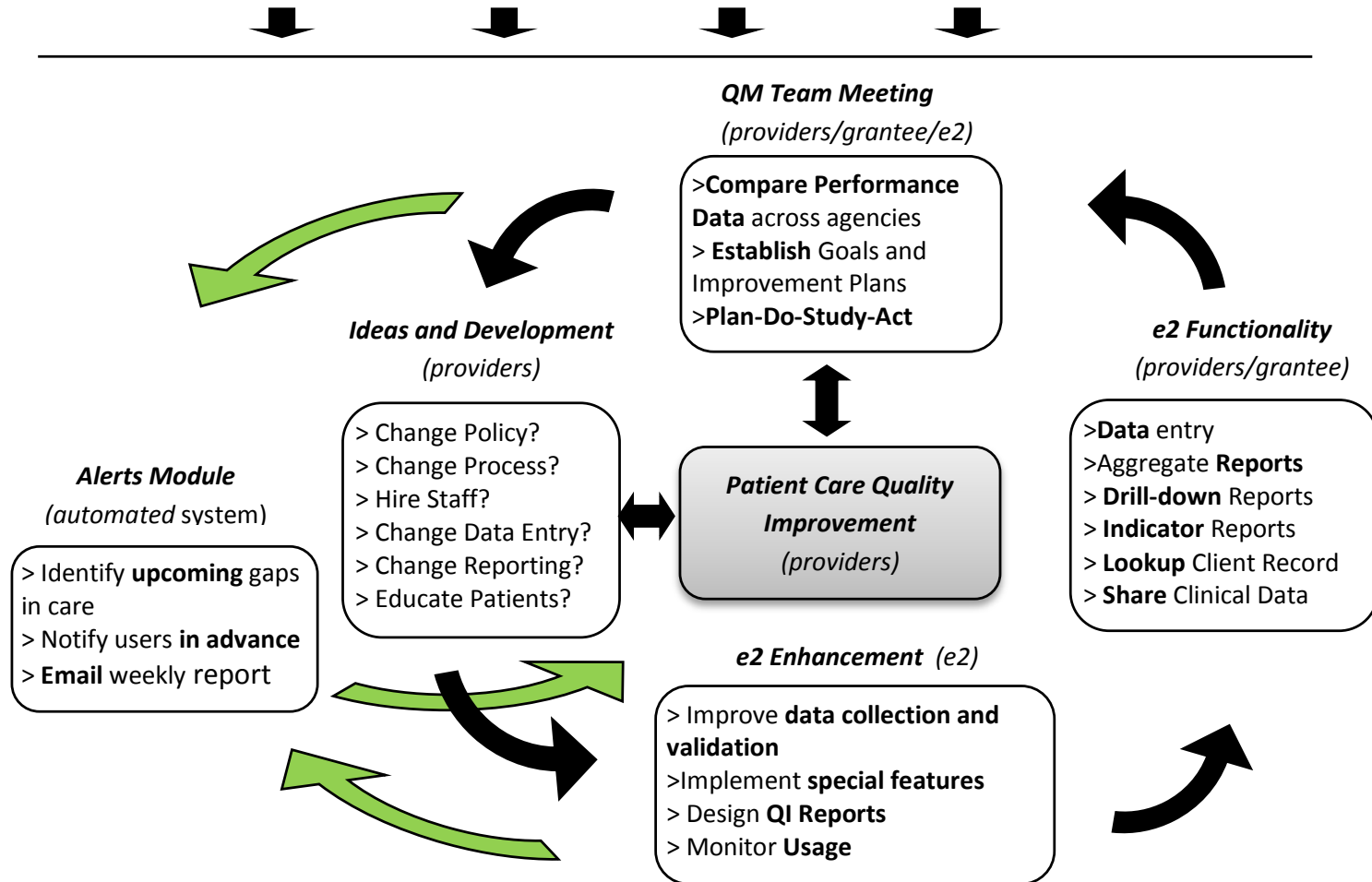
# Methods

Process over Product:  
The eCOMPAS Approach

# A Simple, Integrated Framework for HIT Implementation

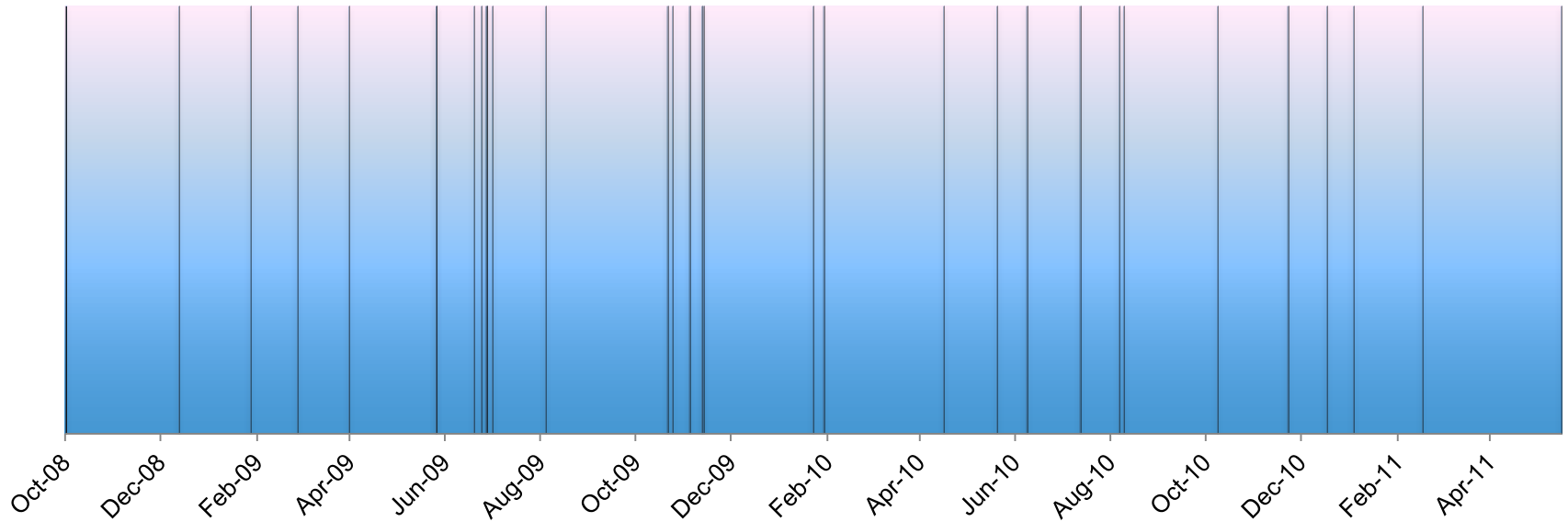


## Collaborative Exchange of Information – An Iterative Logic Model



Continuous system enhancement excites end-users and calibrates how needs are fulfilled.

### System Launches



**One new launch per month**  
On average for 32 months

# Takeaway:

Proactive, actionable reporting is more effective than normal report pulls.

Make it easy. In sight, in mind!

## Takeaway:

Comparative benchmarks combined with a “positive-reinforcement culture” spurs healthy competition.

# Takeaway:

User-friendly quality dashboards with drill-down capabilities like those found in eCOMPAS allow users to perceive the most important issues at hand and take action.

# Takeaway:

An approach like “Process over Product” that emphasizes human-centered design, support, and “high-touch” activities combined with the right tool can support providers in delivering better clinical care and clients getting healthier.



Crossing the Hudson River, we  
reach our final stop today:

New York City

An aerial photograph of New York City, showing the Hudson River, Manhattan, and parts of New Jersey. Numerous yellow location pins are scattered across the city, primarily concentrated in the central and northern parts of Manhattan, indicating the locations of agencies using the NYC eCOMPAS system.

# NYC eCOMPAS

## Statistics

- NYC eCOMPAS Users:  
**Over 925 users**
- BHIV-funded NYC Agencies using eCOMPAS:  
**Over 135 agencies**
- Number of logins per year:  
**75,000+ logins**
- Number of hits per year:  
**10 million+ hits**





 **NewYork-Presbyterian**



**COLUMBIA UNIVERSITY  
MEDICAL CENTER**



 **NewYork-Presbyterian**  
The University Hospital of Columbia and Cornell

**LEADING  
THE WAY**

 **COMPAS**  
The very best for those who care

### ***NYP / CWID Single Sign-On***

Username

Password

You are logging onto: **RDE Demo**

The Information in Clinical Information Systems at New York- Presbyterian is confidential, and use is on the need-to-know basis. All access is logged. Unauthorized or improper use of the system or information in it may result in dismissal and civil or criminal penalties.

Login





**TEST, PATIENT** 444 33 25 / 000090079 726 11y (23-Dec-2000) Male

THY - CHONY PT social work

**Allergies:** beta blockers, 5-hydroxytryptophan, Abilify, amlodipine, cefazolin, ALLYLISO... **Intolerances:**

**Current Weight:** 54.4 kg (26-Oct-) **Height:** 188 cm **BSA:** 1.69 sq. m **Admit Date:** 10-Aug-2010

Patient List Orders Results Patient Info Documents Flowsheets Clin Summary Dz Mgmt Handoff Paper Documents NYPx Quality Checklist Micro-Epi RHIO

Profile Visit History Data Review Summaries (Lab, etc.) Communication About

TEST, PATIENT EMPI:1005054513 NYPWC:007197711 CMC:03377006 NYP/CU:4443325 WMC:102835107

Laboratory	Aug 14	Filter:	Go	Eclipsys Note - Columbia University (2012-11-19,2012-11-16)	Pg#1	Older
Radiology				Ambulatory Special Gynecology Mifepristone I Visit	Mirkovic, Nebojsa	2012-11-16 14:41 P NYP/CU
Pathology				Ambulatory Special Gynecology Bilateral Tubal Ligation (BTL) Pre-Operation Note	Mirkovic, Nebojsa	2012-11-16 14:39 P NYP/CU
Note				Ambulatory Special Gynecology Aspiration Visit Note	Mirkovic, Nebojsa	2012-11-16 14:36 P NYP/CU
Eclipsys Note (NYP/CU)	12:59			Ambulatory FPC Health Education Note	Mirkovic, Nebojsa	2012-11-16 14:34 F NYP/CU
WebCIS Note	2007			Ambulatory Family Planning Clinic Visit	Mirkovic, Nebojsa	2012-11-16 14:31 P NYP/CU
WebCIS Signout	2005			Amb WCCC Adult Note	Mirkovic, Nebojsa	2012-11-16 14:28 P NYP/CU
Admission				Ambulatory Urology Note	Mirkovic, Nebojsa	2012-11-16 14:26 P NYP/CU
Eclipsys Admit (NYP/CU)	Jul 26			Ambulatory HP6 Adult Note	Mirkovic, Nebojsa	2012-11-16 14:24 P NYP/CU
WebCIS Admit	2005			Ambulatory Wound Care Note	Mirkovic, Nebojsa	2012-11-16 14:22 P NYP/CU
Discharge Sum				Ambulatory Surgery Note	Mirkovic, Nebojsa	2012-11-16 14:20 P NYP/CU
Eclipsys DSum (NYP/CU)	2011 May			Ambulatory Project Stay Progress Note	Mirkovic, Nebojsa	2012-11-16 14:19 P NYP/CU
Operative				Ambulatory Project Stay Monitoring Exam Note	Mirkovic, Nebojsa	2012-11-16 14:17 F NYP/CU
Eclipsys OR (NYP/CU)	Nov 16					
Cardiology						
Neurophys						
Ob/Gyn						
GI Endo	2011 Sep					
HEENT						
Pulmonary						
Derm Path						
Endocrinol						
Alerts						
Pharmacy	Feb 17					
Billing Diagnoses	2010					
All Data						
Refresh Dates						

## Ambulatory HP6 Adult Note ■ 2012-11-16 14:24

## Preliminary

Allergies:

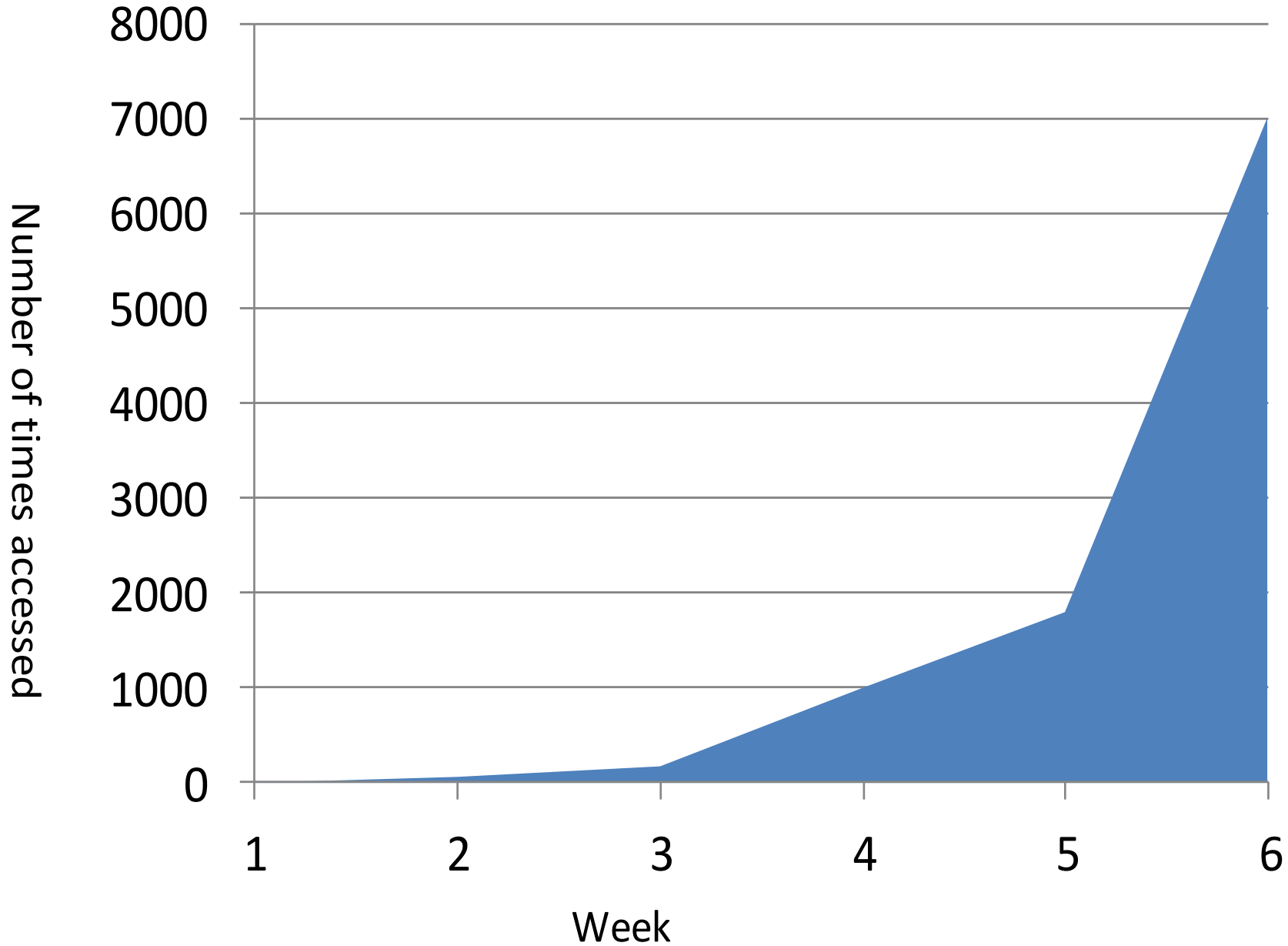
Allergen/Product	Reaction	Description
cefazolin	Anaphylaxis, Congestion	
SHELLFISH (FOOD)	Anaphylaxis	
5-hydroxytryptophan	Cramps	
Abilify	Congestion	
amlodipine	Coughing	
ALLYLSOTHIOCYANATE (FOOD)	Hives, Edema, Coughing	testing
beta blockers	Dizziness	

Medications:

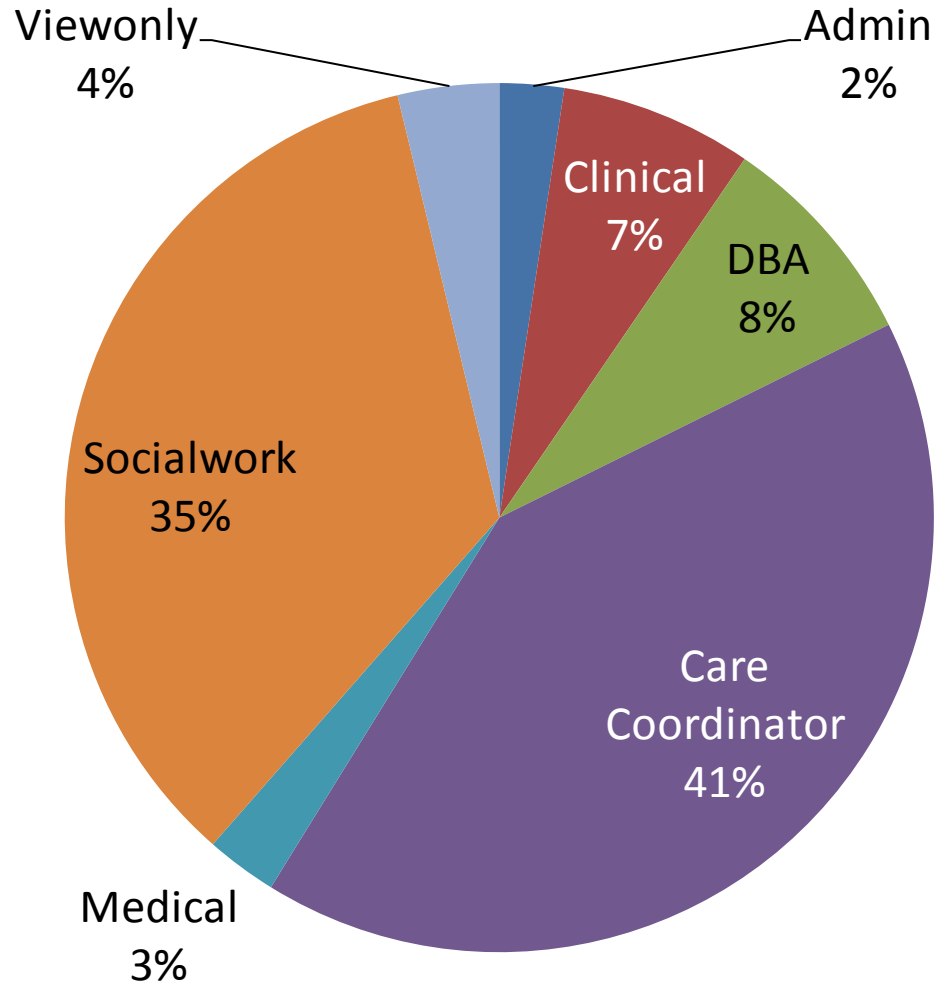
\* No Current Medications as of 17-Oct-2012 09:54 documented in Prescription Writer

New Meds/Refills:Outpatient Medications:

# System Adoption After Launch



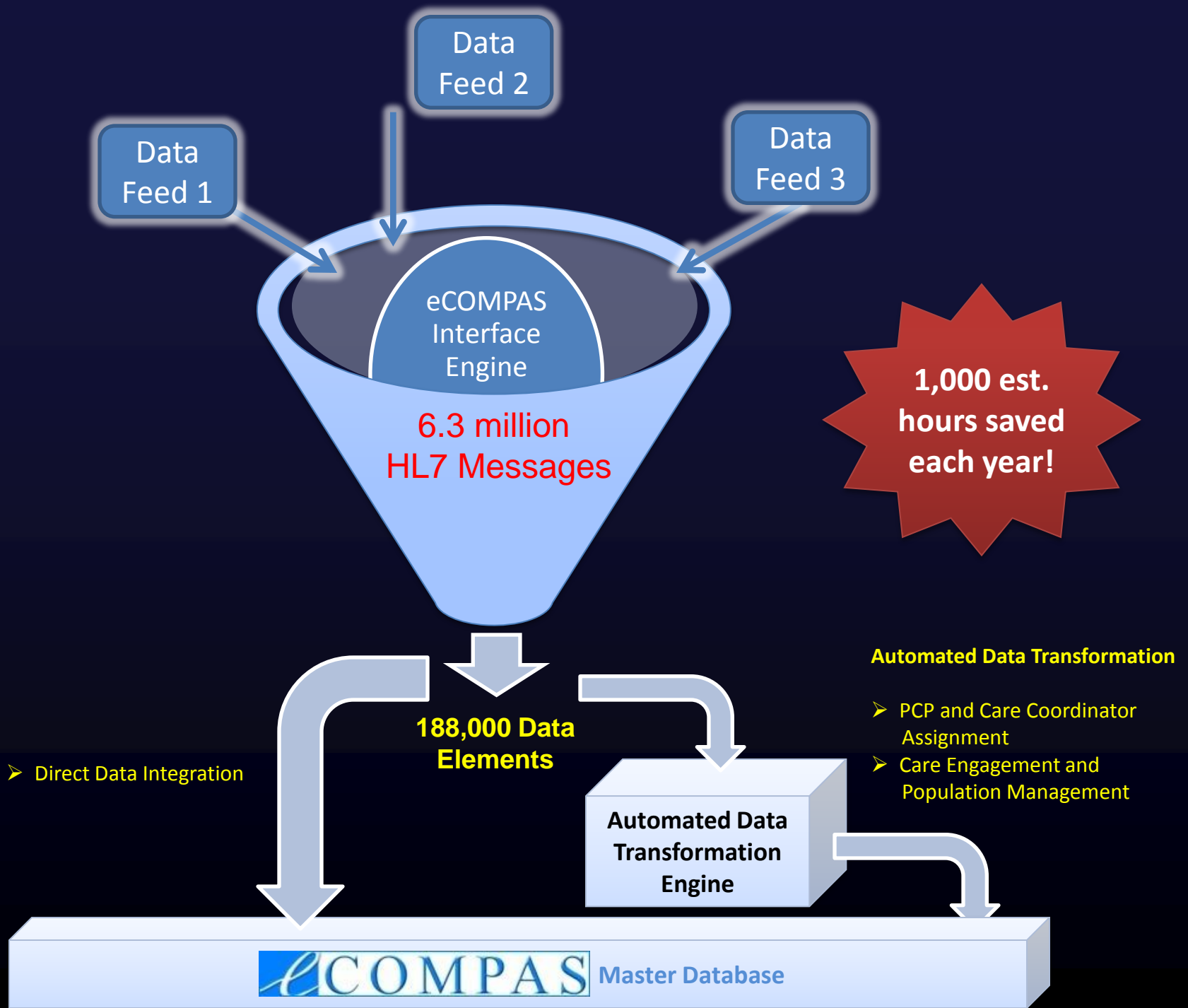
## Who uses NYP eCOMPAS?



## *HIE and eCOMPAS: Once you have the data what can you do with it?*

- Automated data transfer (HIE)
  - **188,000** data elements updated/added via HIE since March 2012 (demographics, visits/services, staff assignment)
- PCP and Care Coordinator Assignment
  - Calculated from HIE visit feeds, highly accurate, no evolutionary divergence
- Care Engagement and Population Management
  - Calculated from HIE visit feeds, FORC and LTFU derived, enables care coordination team to generate population level care engagement work lists

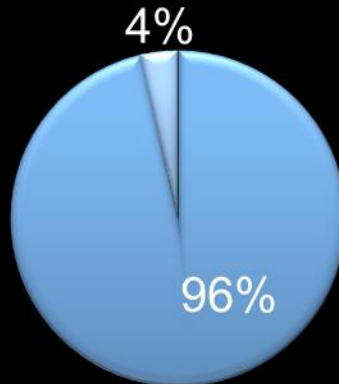




# *How much is automated vs. manual?*

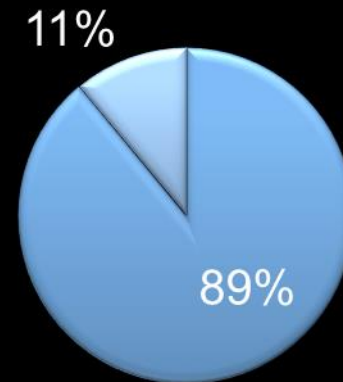
## **Client Records**

■ Automated ■ Manual



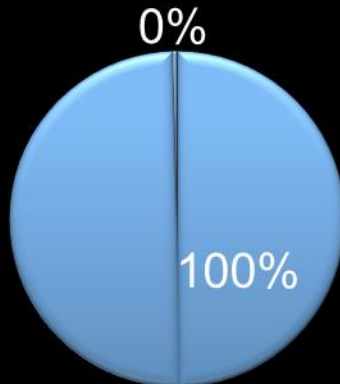
## **Visit Records**

■ Automated ■ Manual



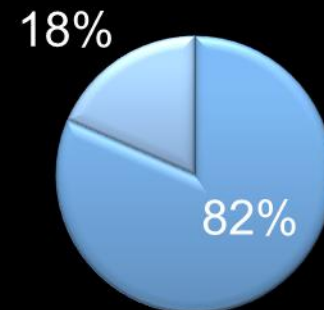
## **CHP Enrollments**

■ Automated ■ Manual



## **Client Demographics updates**

■ Automated ■ Manual



# eCOMPAS Care Coordination (CC)




Client Identifiers	
First Name ⚡	Kylie
Middle Name ⚡	
Last Name ⚡	Alexander
Data feed from ADT (Eagle)	
Date of Birth ⚡	11/04/1952
Date of Death	/ /
Medical Record (MRN) ⚡	8000763
Insurance Gender ⚡	Female
Current Gender	Female
Master Patient Index ⚡	6074371911

*Time is saved as client, services, and labs, are imported in real-time from EMR / local systems. The source of data in different fields is shown in helpful hover-overs and distinguishable by Lightning Bolts.*


# eCOMPAS Care Coordination (CC)

## Program Activity Report


### Report Options

Report Date Range:   To:   or Select:  

### Summary

Show   entries

Search:

Program Name	Client Count 	Active At Beginning	Returning Clients	Newly Enrolled Clients	Became Inactive	Active At End
CHP Clinic	1904	1904	0	0	0	1904
Part D	639	639	0	0	0	639
PATH	190	190	0	0	0	190
MCM	157	156	0	1	0	157
Jump Start	114	114	0	0	0	114
NMTA (Pediatric/ Adolescent Treat. Adherence)	48	48	0	0	0	48
COBRA	23	23	0	0	0	23
CASAC	1	1	0	0	0	1
ACTG	0	0	0	0	0	0
CTS (Counseling testing Services)	0	0	0	0	0	0

*Track multiple federal, state, city, and private programs. One Integrated view of all programs.*

# eCOMPAS Care Coordination (CC)

Days Left Report				
Total Clients: 146				
* Days Left calculated as of today's date				
Show <input type="text" value="10"/> entries			Search: <input type="text"/>	
Client MRN	First Name	Last Name	Track Assignment	Days Left to Schedule Visit ▼
<a href="#">7911610</a>	Jeremiah	Butler	Intervention C2: Weekly	59
<a href="#">4440199</a>	Adam	Stewart	No Track	23
<a href="#">7872118</a>	Hunter	Adams	No Track	-13
<a href="#">0859606</a>	Cole	Kelly	Intervention B: ARV HP - Quarterly	-61

*Find the most urgent patients to follow-up with in the **Days Left to Achieve MCM Compliance Report** to schedule visits to remain in compliance with billing targets and standards of care.*

# MCM Billing & Care Compliance Reports

Compliance Report											
Patient Track	Daily Target for this track	Monthly Service Level target for this Track	Number of Pts. In Track today	Current Service Levels	Grace Period	Patients out of compliance this month	Patient Target Variance	Service level Variance	Track Rate	Grace Period	Current Services Level times Rate = Earnings M-T-D
RW Only											
A	3	93	<u>4</u>	95	29	<u>0</u>	1	31	\$1.17	\$22.98	\$777.57
B	13	403	<u>6</u>	186	22	<u>0</u>	(7)	(195)	\$1.83	\$22.98	\$845.94
C1	17	527	<u>29</u>	846	51	<u>0</u>	12	370	\$16.19	\$22.98	\$14,868.72
C2	83	2573	<u>73</u>	2040	204	<u>6</u>	(10)	(329)	\$25.04	\$22.98	\$55,769.52
D	17	527	<u>13</u>	351	61	<u>0</u>	(4)	(115)	\$25.04	\$22.98	\$10,190.82
No Track	0	0	<u>1</u>	0	0	<u>1</u>	1	0	\$0.00	\$22.98	\$0.00
Total	133	4123	126	3518	367	7	(7)	(238)	\$0.00	\$0.00	\$82,452.57

See billing targets, variances and compliance levels by track. *Identify gaps in care and see billing projections.*

# MCM Billing & Care Compliance Reports

Client List							
Category - <b>RW Only</b> , Track - <b>D</b> , Number of Pts. In Track today							
Total Clients: 13							
MCM Care Coordination Demographics Staff Assignment Staff Assignment Cont. Enrollment							
Show 5 entries				Search:			
Last Name	First Name	MRN	Track Assignment	Enrolled in COBRA	Community Navigator	Days in Compliance	Days out of Compliance
Bennett	Blake	<u>9246523</u>	Intervention D: DOT	No		31	0
Clark	Dylan	<u>7747167</u>	Intervention D: DOT	No		31	0
Cox	Cody	<u>3643485</u>	Intervention D: DOT	No		31	0
Gray	Bryan	<u>2915721</u>	Intervention D: DOT	No		31	0
James	Devin	<u>2226815</u>	Intervention D: DOT	No		31	0
Showing 1 to 5 of 13 entries							
Previous Next							

- Access dozens of relevant client variables by clicking on client counts. Identify data quality issues or gaps in service delivery and schedule services and staff proactively.
- Click on “Days out of Compliance” column to see an even more detailed drilldown report. Care delivery events are listed by date with their compliance calculations explained.

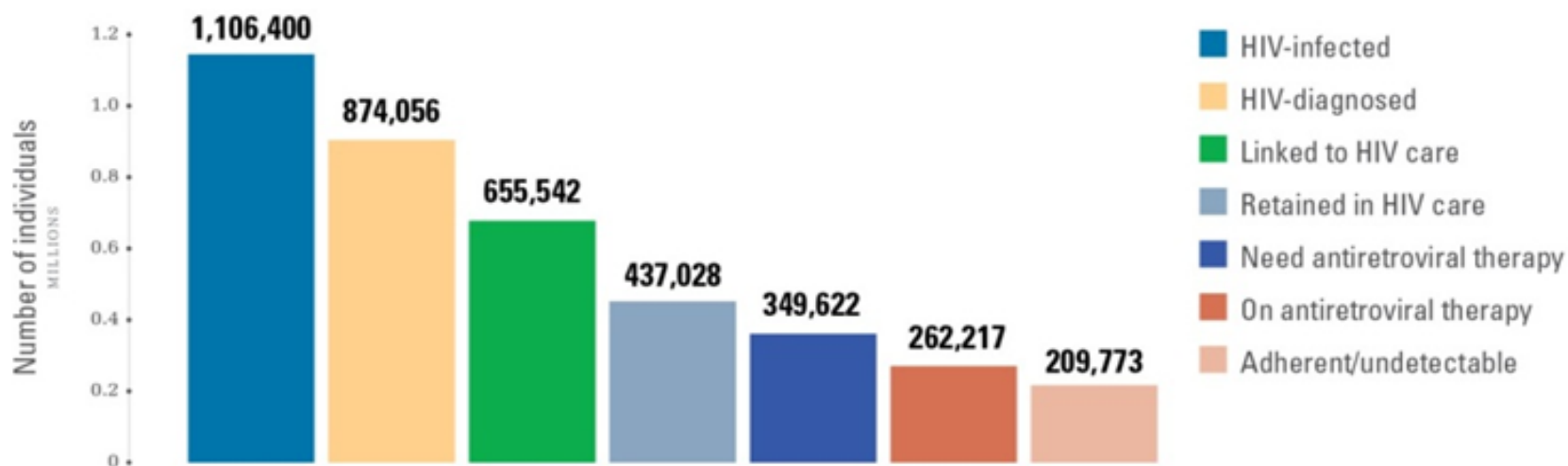
# Patient Portals



# A measure of the challenge...

## Estimated Engagement in the HIV Care Cascade in the US

It is estimated that only 19 percent of HIV-positive people in the US have an undetectable viral load. Similar patterns in the care cascade exist around the world.

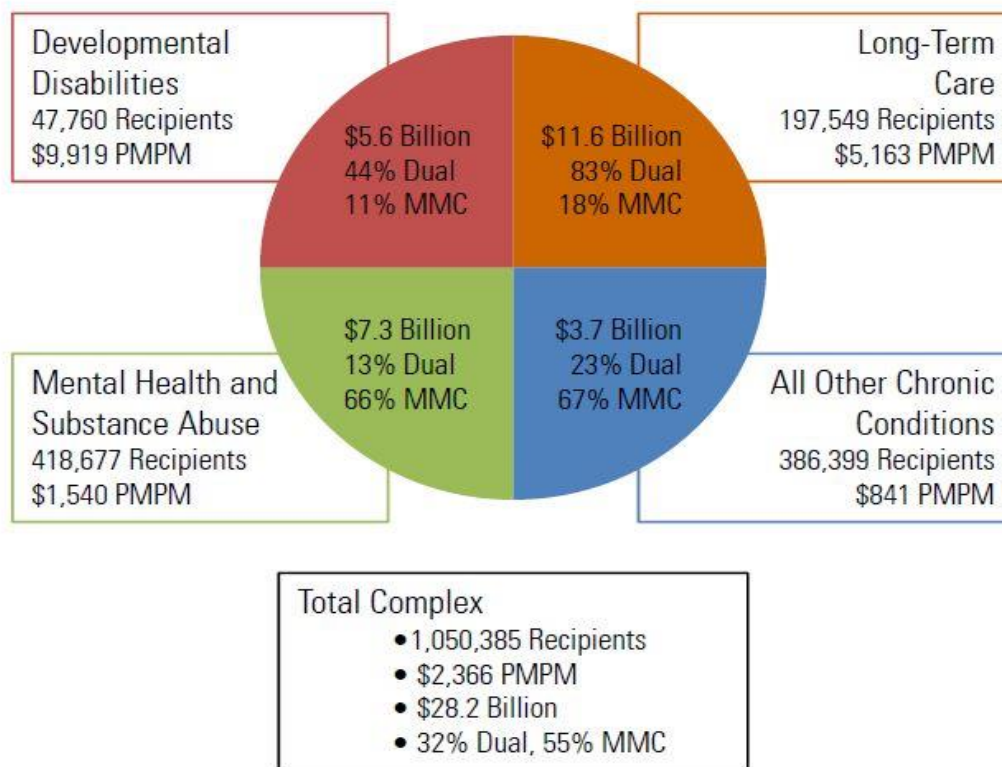


Source: EM Gardner et al. "The Spectrum of Engagement in HIV Care and its Relevance to Test-and-Treat Strategies for Prevention of HIV Infection," Clin Infect Dis. (2011) 52 (6): 793-800.

AVAC Report 2012: Achieving the End – One Year and Counting.  
[www.avac.org/report2012](http://www.avac.org/report2012).

# A New York State perspective...

**Figure 1.**  
**Medicaid Health Home Cohorts**

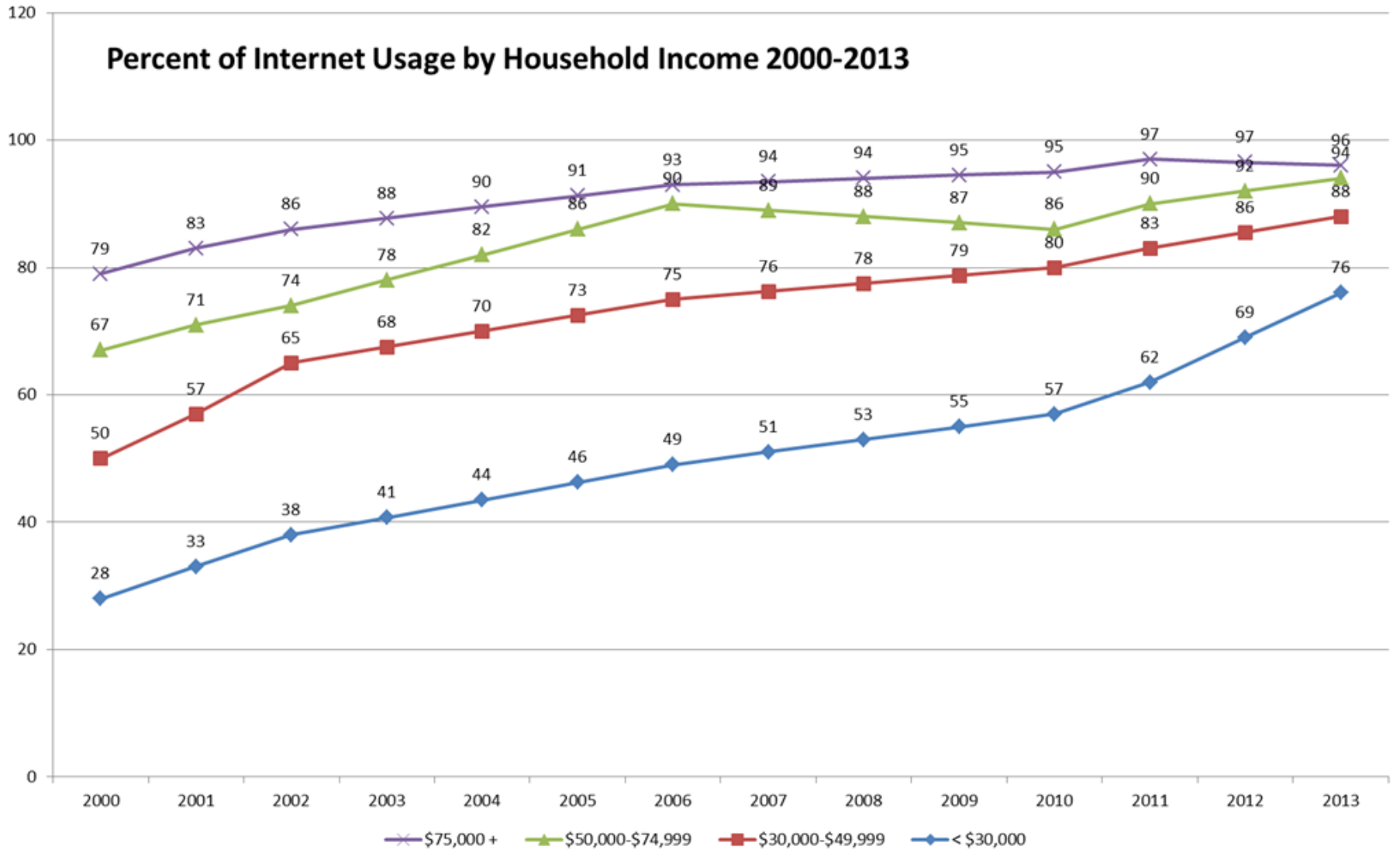


Source: New York State Department of Health. Note: The term "duals" refers to beneficiaries who are dually enrolled in Medicaid and Medicare.

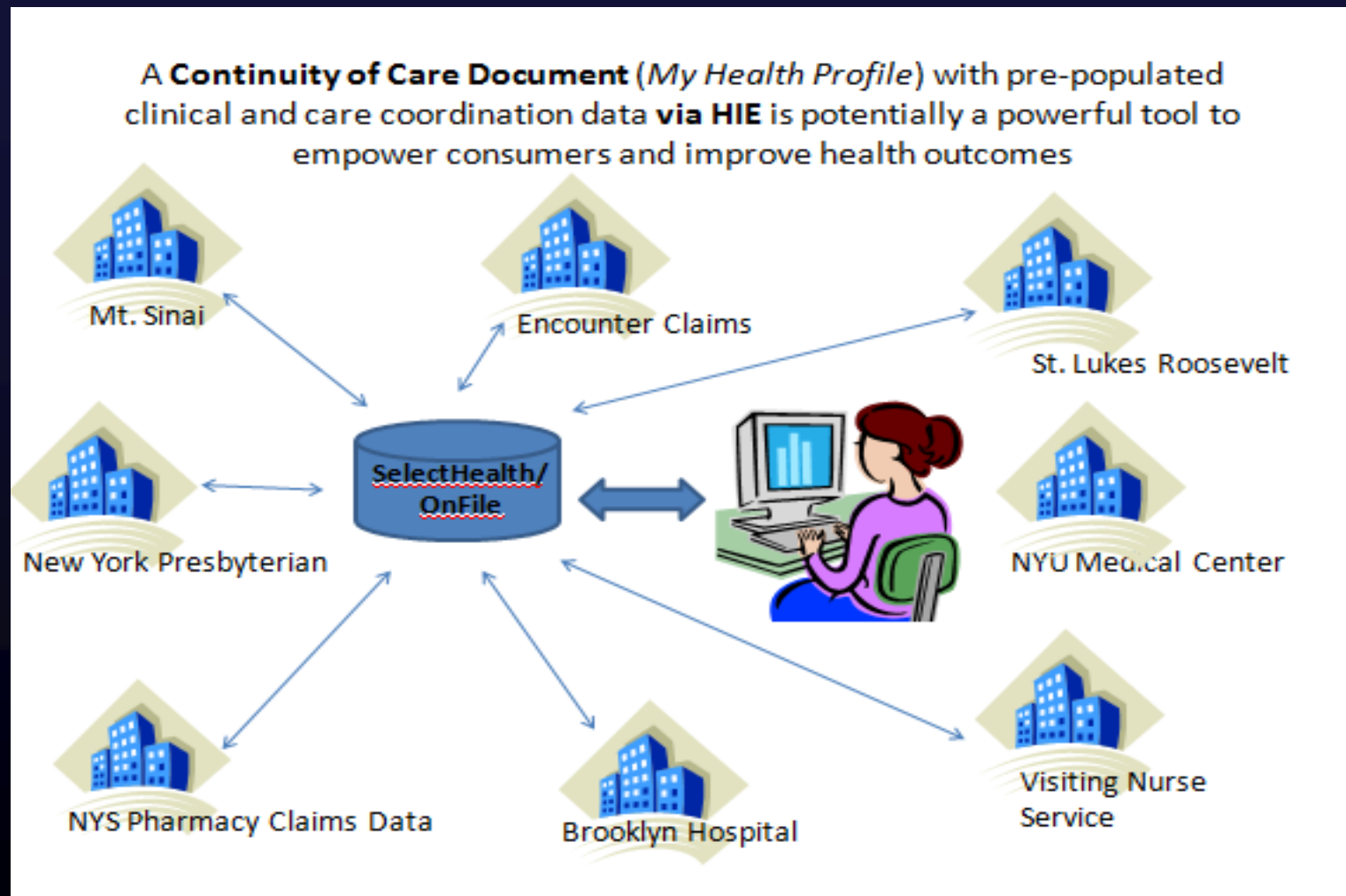
# Patient Portals Add Value

- Patient Engagement
- Patient Empowerment
- Retention
- Care Coordination

**Percent of Internet Usage by Household Income 2000-2013**



# Intervention: Empowering consumers via eCOMPAS patient portal



# Historic Impediments to PHRs and Patient Portals

- Data entry vs HIE
- Technology
  - Interoperability
  - Adoption of standards
- Provider Community
  - Data embargo
- Business Interests
- PHR Adoption
- Consumer Health and IT Literacy



# Original Version

NewYork-Presbyterian - Mozilla Firefox

File Edit View History Bookmarks Tools Help

[American Medical File, Inc. \(US\)](#) <https://selecthealth.onfile.com/Member/Show/100088053>

Most Visited Windows Marketplace

NewYork-Presbyterian

**NewYork-Presbyterian System**  
**SelectHealth**

[LogOut](#) | [Change Password](#)

Login ID: PeterGordon  
[Admin]  
Previous Login: 8/12/2009 11:45:36 AM

**My Health Profile**

Home Members Providers Admin Business Associates

**Member Info (View)**  
12345A  
[Temporary Membership Card](#)  
Active  
**Member Admin**  
[Audit Log](#)  
[Deactivate Member](#)  
[New EPIN](#)  
[New Password](#)  
[Temporary Logins](#)  
[Upload CCD](#)  
[Download CCD](#)  
Last Modified: 4/22/2009

**My Health Profile for Demo Member1**

**Patient Detail**

<b>Name:</b>	Demo Member1	<b>Date of Birth:</b>	01-01-1971
<b>Address:</b>	123 Test St. New York, NY 10036	<b>Gender:</b>	Male

**Health Care Providers**

Role	Name	Organization	Phone
Case Manager	Iris Gutierrez	Columbia Presbyterian HIV Program	(212) 305-3174
PCP	Gordon, Peter	Columbia Presbyterian Program	(212) 305-2985 (After Hours)
COBRA		Dennelisse Corporation	(212) 265-1480

**Problems**

Condition	Effective Dates	Condition Status
HIV/CDC AIDS	2/2003	Active
Diabetes Mellitus	5/2005	Active
Depression	1/2006	Active
Hypertension	8/2006	Active
Acute Myocardial Infarction	8/2006	Resolved

**Allergies, Adverse Reactions, Alerts**

Substance	Reaction	Status
Penicillin	Hives	Active
Codeine	Nausea	Active

**Medications**

Medication	Filled	Quantity	Days Supplied	Order Date	Ordered By
NORVIR 100 MG SOFTGEL CAP	11/8/2008	30	30	7/7/2008	Gordon, Peter
ALBUTEROL 90 MCG INHALER	10/28/2008	17	25	10/6/2008	Gordon, Peter
FLUTICASONE 50 MCG NASAL SPRAY	10/28/2008	16	25	10/6/2008	Gordon, Peter
REYATAZ 150 MG CAPSULE	10/28/2008	60	30	7/7/2008	Gordon, Peter
TRICOR 145 MG TABLET	10/28/2008	30	30	7/7/2008	Gordon, Peter
TRUVADA TABLET	10/28/2008	30	30	7/7/2008	Gordon, Peter
ZETIA 10 MG TABLET	10/28/2008	30	30	7/7/2008	Gordon, Peter
METFORMIN HCL 850 MG TABLET	10/28/2008	90	30	7/7/2008	Gordon, Peter
ACTOS 15 MG TABLET	10/28/2008	30	30	7/7/2008	Gordon, Peter
LISINAPRIL 40 MG TABLET	10/28/2008	30	30	10/6/2008	Sawo, Dorothy
RANITIDINE 150 MG TABLET	10/28/2008	60	30	10/6/2008	Gordon, Peter
TACTINAL 500 MG TABLET	10/28/2008	100	33	9/29/2008	Gordon, Peter
GLIPIZIDE 10 MG TABLET	10/28/2008	120	30	10/28/2008	Gordon, Peter
ACETASOL HC EAR DROPS	10/26/2008	20	10	10/26/2008	Burnett, Michael
NORVIR 100 MG SOFTGEL CAP	10/15/2008	30	30	7/7/2008	Gordon, Peter
CLOTRIMAZOLE 1% SOLUTION	10/6/2008	30	15	5/19/2008	Weitz, Alan
RANITIDINE 150 MG TABLET	10/6/2008	60	30	10/6/2008	Gordon, Peter
LISINAPRIL 40 MG TABLET	10/6/2008	30	30	10/6/2008	Sawo, Dorothy
TRIAMCINOLONE 0.1% CREAM	10/6/2008	15	8	5/19/2008	Weitz, Alan
ACTOS 15 MG TABLET	10/6/2008	30	30	7/7/2008	Gordon, Peter
METFORMIN HCL 850 MG TABLET	10/6/2008	90	30	7/7/2008	Gordon, Peter
ZETIA 10 MG TABLET	10/6/2008	30	30	7/7/2008	Gordon, Peter
TRUVADA TABLET	10/6/2008	30	30	7/7/2008	Gordon, Peter
TRICOR 145 MG TABLET	10/6/2008	30	30	7/7/2008	Gordon, Peter
REYATAZ 150 MG CAPSULE	10/6/2008	60	30	7/7/2008	Gordon, Peter
GLIPIZIDE 10 MG TABLET	10/6/2008	60	15	7/7/2008	Gordon, Peter
FLUTICASONE 50 MCG NASAL SPRAY	10/6/2008	16	25	10/6/2008	Gordon, Peter
ALBUTEROL 90 MCG INHALER	10/6/2008	17	25	10/6/2008	Gordon, Peter
TACTINAL 500 MG TABLET	9/29/2008	100	33	9/29/2008	Gordon, Peter
OFLOXACIN 0.3% EAR DROPS	9/26/2008	10	10	9/26/2008	00246707
GLIPIZIDE 10 MG TABLET	9/23/2008	60	15	7/7/2008	Gordon, Peter
NORVIR 100 MG SOFTGEL CAP	9/17/2008	30	30	7/7/2008	Gordon, Peter
GLIPIZIDE 10 MG TABLET	9/2/2008	60	15	7/7/2008	Gordon, Peter
REYATAZ 150 MG CAPSULE	9/2/2008	60	30	7/7/2008	Gordon, Peter
TRICOR 145 MG TABLET	9/2/2008	30	30	7/7/2008	Gordon, Peter
TRUVADA TABLET	9/2/2008	30	30	7/7/2008	Gordon, Peter
ZETIA 10 MG TABLET	9/2/2008	30	30	7/7/2008	Gordon, Peter
METFORMIN HCL 850 MG TABLET	9/2/2008	90	30	7/7/2008	Gordon, Peter
ACTOS 15 MG TABLET	9/2/2008	30	30	7/7/2008	Gordon, Peter
LISINAPRIL 40 MG TABLET	9/2/2008	30	30	4/11/2008	Sawo, Dorothy
RANITIDINE 150 MG TABLET	9/2/2008	60	30	4/11/2008	Gordon, Peter

Done

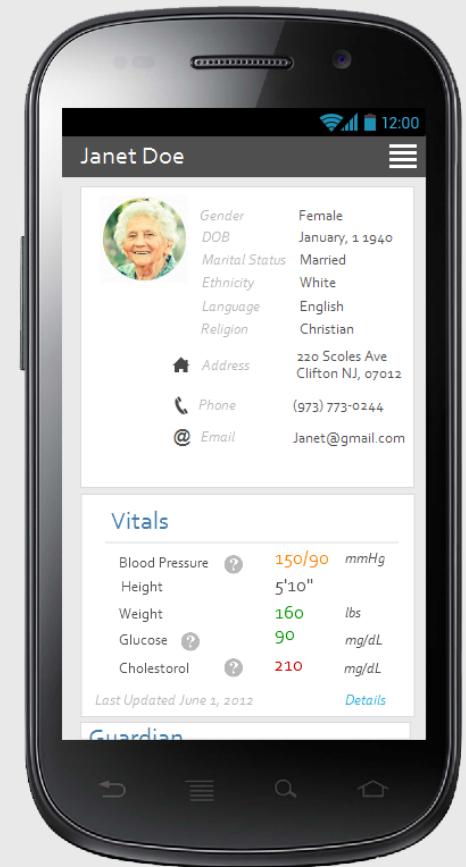
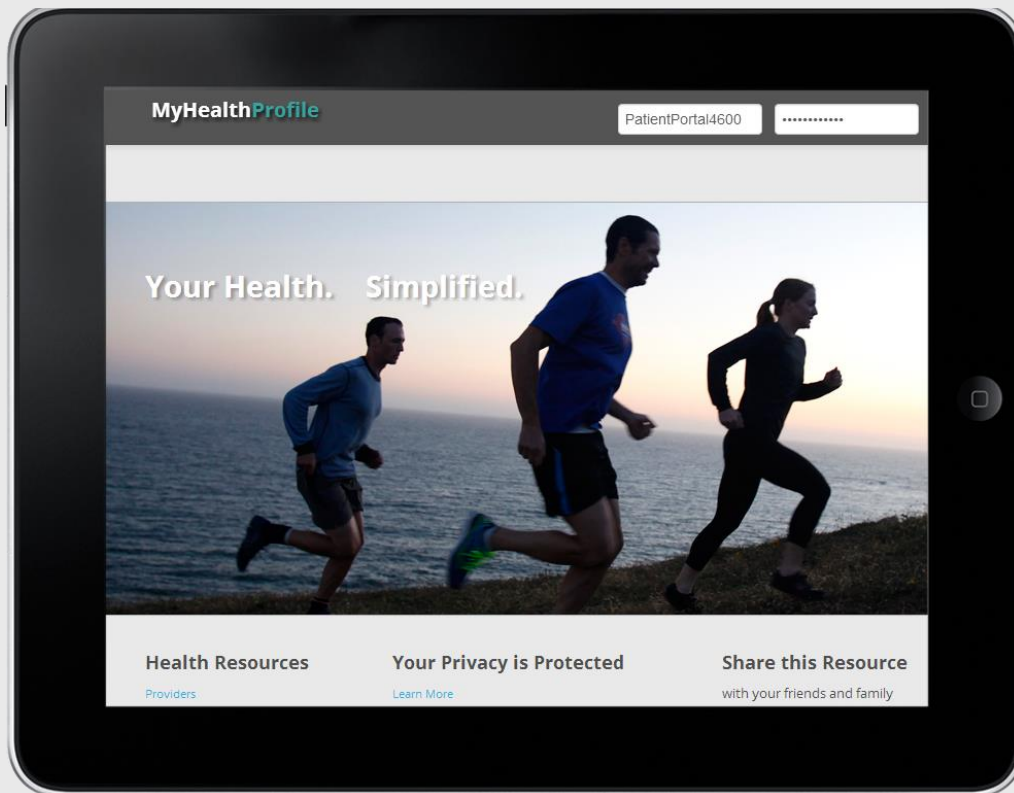
# Mission: Redesign the Patient Portal

Utilizing a decade of experience in web-based systems that safety net and all populations can fully use



# With MyHealthProfile...

...you can securely access your health information *on-the-go*




...on any device, anytime, anywhere.

# Care Information.

*All of your critical medical history is just one click away.*

*The comprehensive summary is designed to help you understand your medical information without feeling overwhelmed.*

**Janet Doe**



Gender

Female

DOB

Jan, 1 1940

Address

51 E 22nd St.  
New York NY, 10012

**My Care Team**

Guardian	John Doe	51 E 22nd St, New York NY, 10012	(973) 555-5555
Physician	Dr. Andrew Bookman	New York Presbyterian Hospital	(973) 555-5555
Cardiologist	Jessica Liu	New York Presbyterian Hospital	(973) 555-5555 (973) 555-5556 ext. 1111

**Allergies**

Allergen	Date Discovered	Classification	Area	Reaction	Severity
Pet Hair	09/05/1997	Environmental	Back, Neck	Itchy	Low
Pollen	09/05/1997	Environmental	Eyes	Burning, red, watery eyes	Low
Seafood	09/05/1997	Food	Face	Swelling	Critical

Showing 1 to 3 of 3 entries

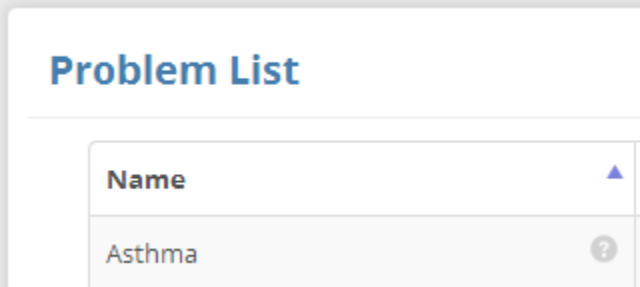
Previous1Next

**Problem List**

Name	Date of Diagnosis	Diagnosed by
Asthma	05/14/1998	Gordon, Peter
Asthma	05/14/1998	Gordon, Peter
COPD	05/14/1998	Gordon, Peter
Diabetes Type II	01/14/2005	Gordon, Peter
Dislocation	05/14/2001	Gordon, Peter

# Info Button.

*Medical terms and concepts can be confusing...*



*...so MyHealthProfile gives you access to millions of definitions, anytime.*

A screenshot of an 'Asthma' information popup window. The title 'Asthma' is in bold. The text describes asthma as a chronic disease affecting the airways. It lists symptoms: Wheezing, Coughing (especially early in the morning or at night), Chest tightness, and Shortness of breath. It also explains that not all people with asthma have these symptoms and that a doctor will diagnose based on lung function tests, medical history, and a physical exam. It mentions that severe asthma attacks may require emergency care. At the bottom, it states that asthma is treated with quick-relief and long-term control medicines. The popup is powered by MedlinePlus, with the logo and tagline 'Trusted Health Information for You'. A 'Close' button is in the bottom right corner.

**Asthma**

Asthma is a chronic disease that affects your airways. Your airways are tubes that carry air in and out of your lungs. If you have asthma, the inside walls of your airways become sore and swollen. That makes them very sensitive, and they may react strongly to things that you are allergic to or find irritating. When your airways react, they get narrower and your lungs get less air.

Symptoms of asthma include

- Wheezing
- Coughing, especially early in the morning or at night
- Chest tightness
- Shortness of breath

Not all people who have asthma have these symptoms. Having these symptoms doesn't always mean that you have asthma. Your doctor will diagnose asthma based on lung function tests, your medical history, and a physical exam. You may also have allergy tests.

When your asthma symptoms become worse than usual, it's called an asthma attack. Severe asthma attacks may require emergency care, and they can be fatal.

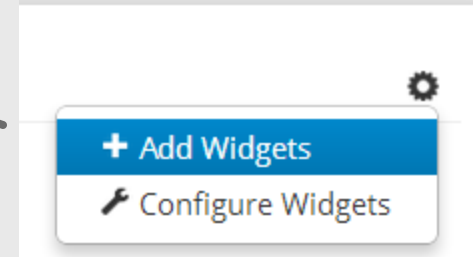
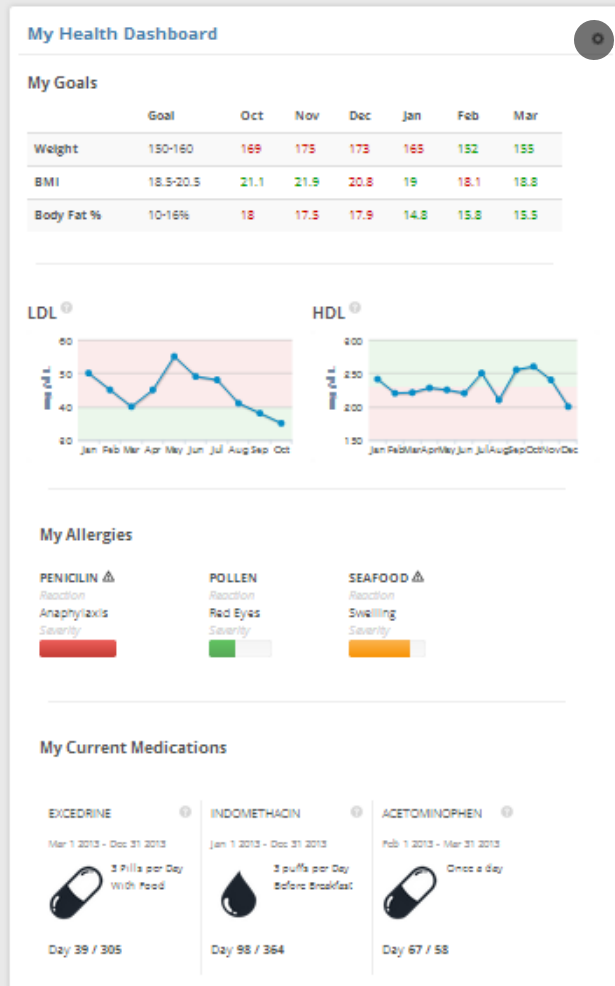
Asthma is treated with two kinds of medicines: quick-relief medicines to stop asthma symptoms, and long-term control medicines to prevent symptoms.

Powered By  **MedlinePlus**  
Trusted Health Information for You

Close

# Health Dashboard.

Take control of your health with  
*My Health Dashboard.*



*Highly Customizable*

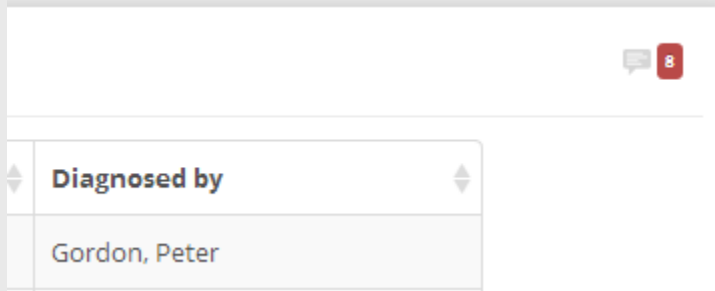
## My Goals

	Goal	Oct	Nov
Weight	150-160	169	175
BMI	18.5-20.5	21.1	21.9
Body Fat %	10-16%	18	17.5

*Set your own goals*

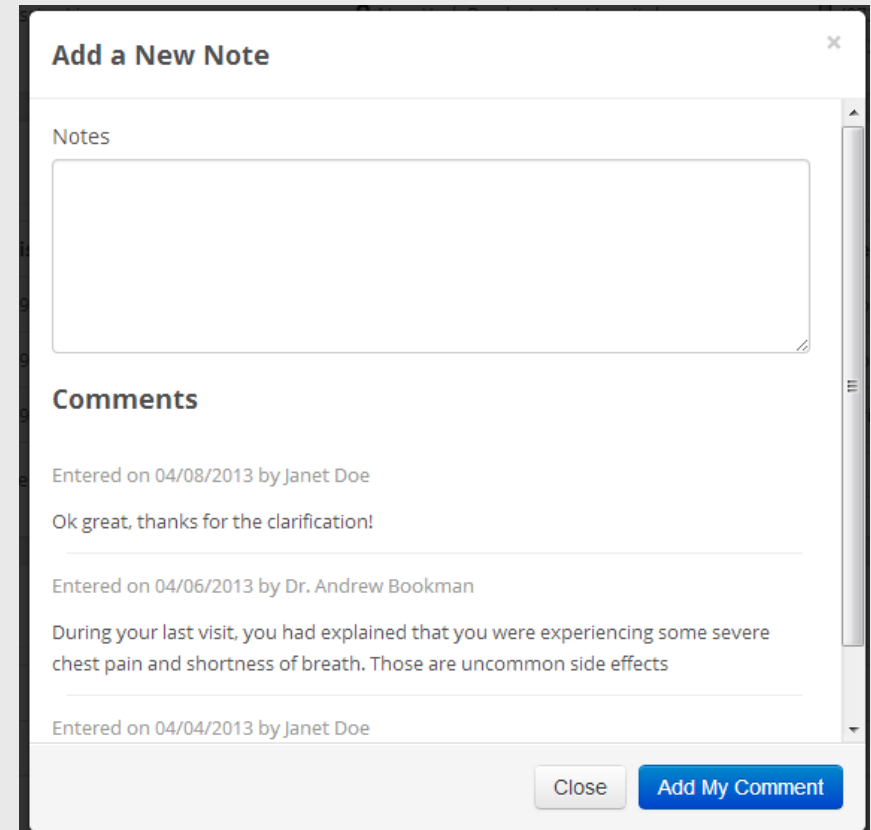
# Custom Annotations.

*Get involved by adding your own comments to your Care Information.*



Diagnosed by
Gordon, Peter

*Your doctor will be notified immediately and can follow up.*



**Add a New Note**

Notes

Comments

Entered on 04/08/2013 by Janet Doe

Ok great, thanks for the clarification!

Entered on 04/06/2013 by Dr. Andrew Bookman

During your last visit, you had explained that you were experiencing some severe chest pain and shortness of breath. Those are uncommon side effects

Entered on 04/04/2013 by Janet Doe

Close Add My Comment


*Questions or Comments?*  
*DesignChallenge@rdesystems.com*

# Alerts & Reminders.


*Never miss an appointment again, with the easy to use To-Do list.*

## Alerts

---


 New Lab Results added  
[View Labs](#)

---


 A Prescription is expiring in 2 days  
[Request Refill](#)

## To Do

---

 See Dr.Bookman  
**Today at 3:00 PM**  
[Get Directions](#) [Details](#)

---

 See Dr.Liu  
**Tomorrow at 4:30 PM**  
[Get Directions](#) [Details](#)

*Alerts help you better manage your health.*

# Emergency Cards.

*With MyHealthProfile, you can easily create and print temporary emergency cards*



*so that your information  
can be accessed when  
you need it the most.*

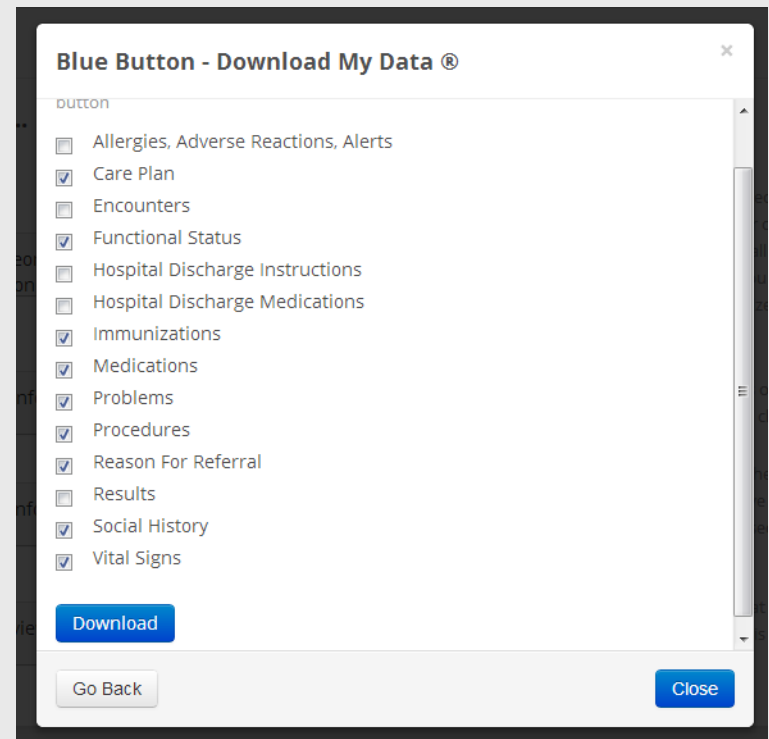
Peter Gordon, MD  
NewYork-Presbyterian / Columbia  
University Medical Center

# Download my Data.

*MyHealthProfile supports the federal **Blue Button initiative** and lets you print and download your information*

*...so you can keep a record of it, hold it in your hands, or share with your care provider.*

## Blue Button<sup>+</sup>





## Takeaway:

Taking into account literacy levels and a user-friendly design is more important than complex bells & whistles.

# Takeaway:

A well-designed, tethered patient portal can help empower safety net populations with their own health information.

Those who engage with their health information are more engaged in their care.

# Collaborators / Acknowledgements

- **RDE Systems**
  - The whole team
- **Hawaii Part B**
  - State of Hawaii  
Department of Health
  - AIDS Community Care  
Team
  - All funded providers
- **Paterson, NJ TGA**
  - Paterson Department  
of Health & Human  
Services
  - New Solutions, Inc.
  - All funded providers
- **Columbia University /  
New York  
Presbyterian Hospital**
  - Dr. Peter Gordon, MD
  - Dr. Suzanne Bakken
- **VNSNY/SelectHealth**
  - Eli Camhi
- **HRSA HAB SPNS**
  - Adan Cajina
- **UCSF HITECH**
  - Dr. Steve Morin &  
Team
- **Rutgers University  
College of Nursing**

**Wrap Up**

**How can you accomplish ambitious goals?**



**One bite at a time.**

## **Slides / Sign Up for Updates:**

<http://StBarnabas.e-COMPAS.com>

## **Contact Information:**

Jesse Thomas

[Jesse@rdesystems.com](mailto:Jesse@rdesystems.com)

(973) 773-0244 x1001

### **Opportunities**

- Sharing more details
- Connection to those in the field
- Free resources
- Web-ACASI
- Apply + adapt
- Grants
- Challenge: how transfer these lessons and technologies to other disease and health management domains?

**Thank you for your time!**