



# The Whoosh: Innovative Data Exchange to Save Time and Improve Care in Hawaii, Boston EMA, and Riker's Island

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Eric Thai, Interim Director, HIV/AIDS Services Division, Boston Public Health Commission

Jesse Thomas, RDE System Support Group, LLC

#### Hello!

**Jesse Thomas, Project Director** 

- Serving public health for over 18 years, HIV/AIDS programs 12+ years (HRSA, CDC, HUD, NIH)
- RDE Systems
  - Founded by head technologist teaching at Rutgers University in MPA program
  - Human factors slant: People First!
  - "A most unique IT company. Mission-driven."
- Technical Manager for over 12 HRSA Special Projects of National Significance





## **Disclosures**

New York Health and Hospitals Corporation, Hawaii Department of Health and Boston Public Health Commission have no financial interest to disclose.

Jesse Thomas works as Project Director for RDE System Support Group, LLC.

This continuing education activity is managed and accredited by Professional Education Services Group in cooperation with HSRA and LRG. PESG, HSRA, LRG and all accrediting organization do not support or endorse any product or service mentioned in this activity.

PESG, HRSA, and LRG staff has no financial interest to disclose.



# **Learning Objectives**

At the conclusion of this activity, the participant will be able to:

- 1. Recognize how a paradigm of health information exchange can free up time which is more constructively spent on client care and quality improvement.
- Describe how to adopt and adapt strategies and tools to implement web-based resources to achieve federal compliance and improved quality management.
- Identify, analyze and evaluate the pitfalls and benefits of implementing health information exchange, including the adoption of federal Office of that National Coordinator (ONC) standards.





# **Obtaining CME/CE Credit**

If you would like to receive continuing education credit for this activity, please visit:

http://ryanwhite.cds.pesgce.com



## Who are you?





#### What is HIE?

Health Information Exchange allows health care professionals and patients to appropriately access and securely share a patient's vital medical information electronically. There are many health care delivery scenarios driving the technology behind the different forms of health information exchange available today.

Read More >

#### **HIE Benefits**

Sharing updated, electronic patient information with other providers enables you to:

- Access and confidentially share patients' vital medical history, no matter where your patients are receiving care—specialists' offices, labs or emergency rooms
- Provide safer, more effective care tailored to your patients' unique medical needs

Read More >



#### **Share it!**

&

Use it!



#### **Three Stories**





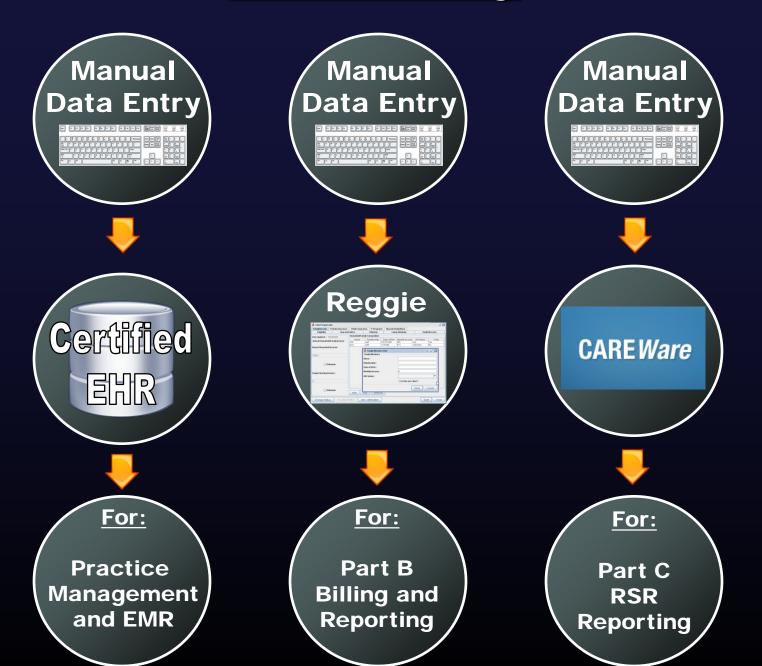




# WAIKIKI HEALTH

MEDICAL & DENTAL • PREVENTIVE CARE • SOCIAL SERVICES

#### **The Old Way**







# eCOMPAS Data Import Engine



- Review Imported Data
- Resolve Data Conflicts
- Import Records





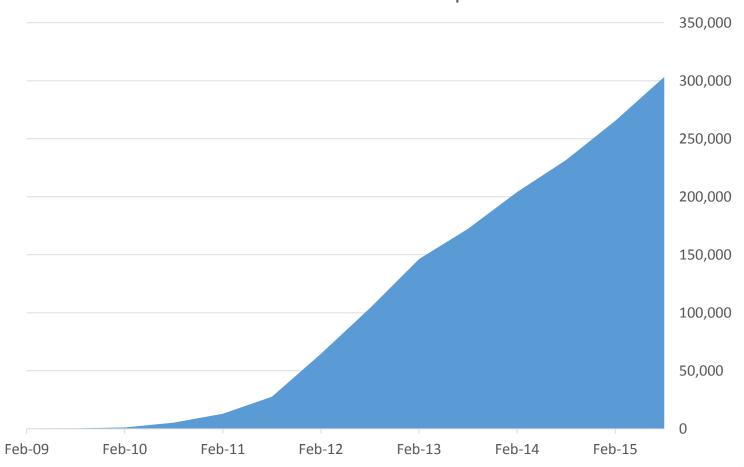


- One Click Visual RSR
- Quality Control Data
- Generate Client Level Data File



# Waikiki Health Data Import

WHC - Data Elements Imported





#### Launch!

- 1. Smooth launch on-time
- 2. Imported 9+ years of Dental Data
- 3. e2Boston is currently used by 42 providers
- 4. RSR-Compliant
- Data Import + Data Converter Module Support for 220 users
- 6. Holds over 13,250+ client records.
- 7. Holds over 281,800+ service records.
- 8. Manages 6+ million pieces of client data.



## Importance of Stakeholder Engagement and Support

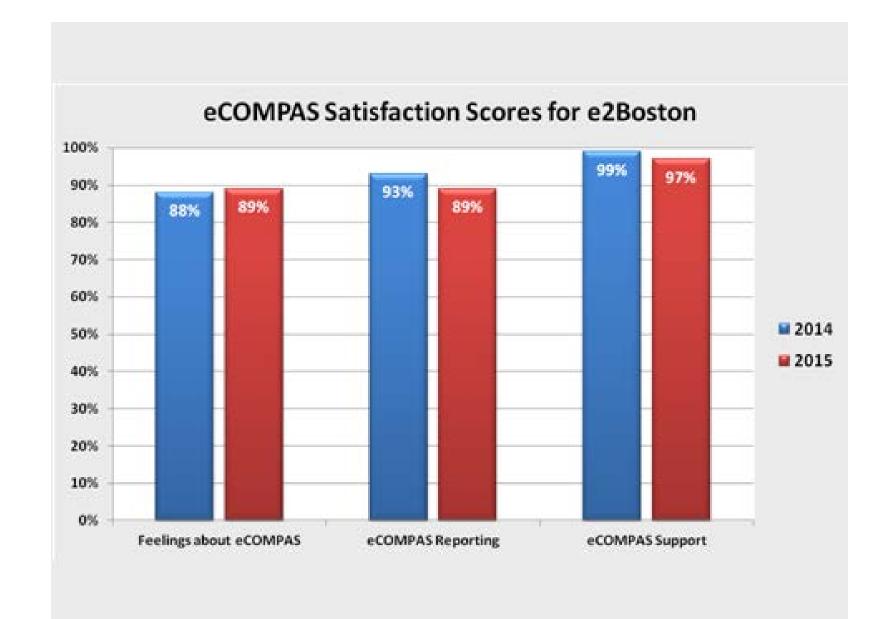


#### Proactive Courtesy Calls and Evaluation

- 1. Any problems or barriers with using the system?
- 2. To what degree is the system saving you time?
- 3. To what degree is the system reporting effective for you?
- 4. How is technical assistance and support for you?
- 5. If not a "10", what can we do to make it a "10"?

"The fact that someone calls me to make sure that all is well and to see if I have any ideas is just great."







- "It's easy to navigate. I like how the client utilization report allows me to make sure data matches before it is submitted."
- "I love it! Overall, it is easy to use."
- "It's a great system. I like that it gives all the information right away."
- Everything is manageable and good. Very useful system."
- The system is excellent. It is easy to access and use it."
- "It's a breeze [to use]."
- "One of the best programs. I love it!"
- "It's been really great! Everything I need is right in front of me."
- "Support for e2Boston has been very helpful and responsive."
- "Overall, I like it much better than the old system. Everything is a click away."
- "We love it! It is really helpful and the reports definitely give me what I need."
- "It's working beautifully. Makes our jobs much easier."
- "I love the reporting and demographics!"
- "Keep up the great work! I love the new system!"







#### Standards, Tools, TA:

RSR+

&

**The Data Converter** 



## Security and Confidentiality

- Advanced Security Module (LKMv2)
- Ethical Hacking / Application Scanning
- Network Vulnerability Scanning
- Point-to-point channel encryption (SSL)
- Strong passwords with 90-day forced expirations
- Role-based security
- Audit Trail
- Access Logging
- IP Address Logging
- Multiple Firewalls (Stateful inspection)
- Encrypted offsite backups
- Continuous Security Updates
- OWASP Security Principles and Code Review
- CISSP with ISSAP and ISSMP concentrations
- Secure Coding Practices and Policies and Procedures
- BAA
- Security Audits







#### Secure GovCloud – FedRAMP

#### AWS Assurance Programs







































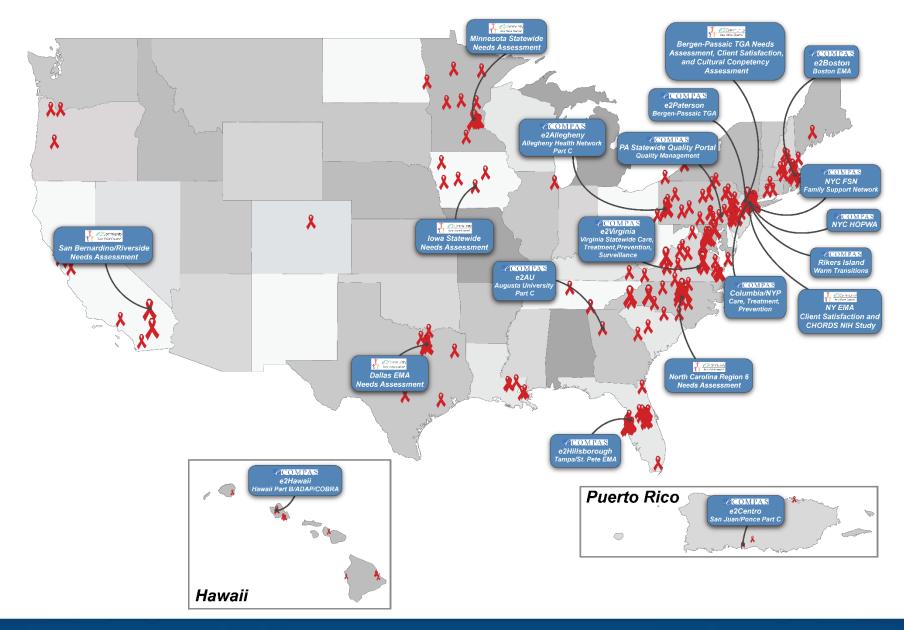
A This is a secured web connection. All data is protected by the highest level of Internet encryption (SSL).

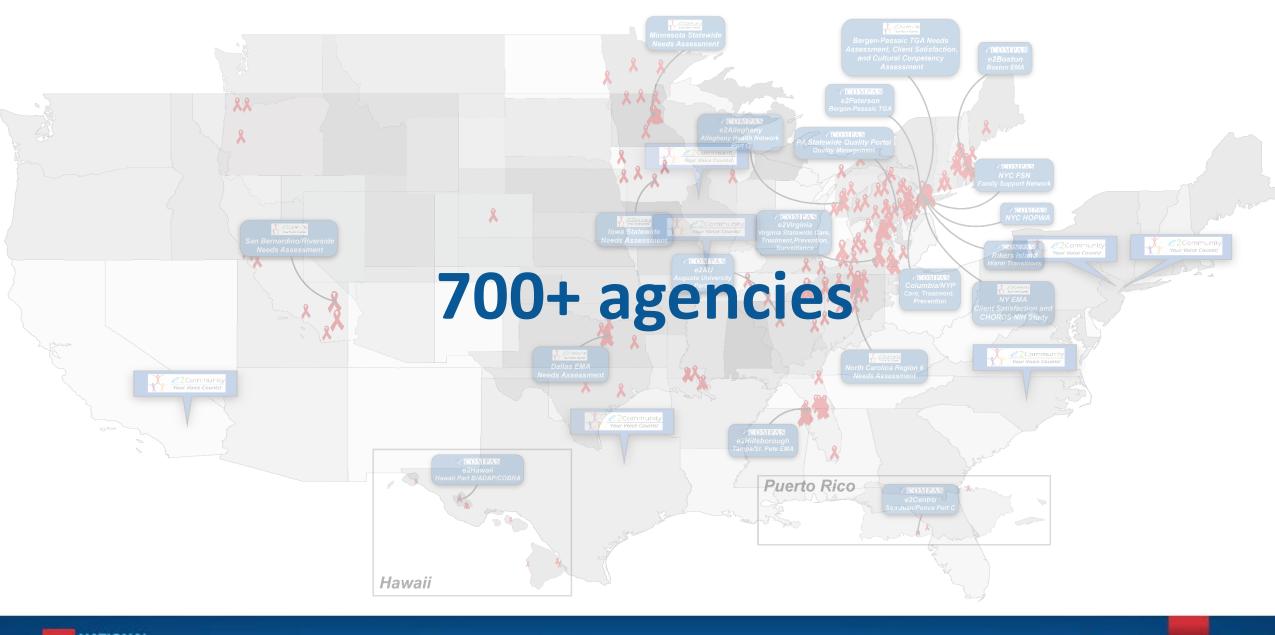
eCOMPAS © 2016 RDE Systems, LLC. All rights reserved





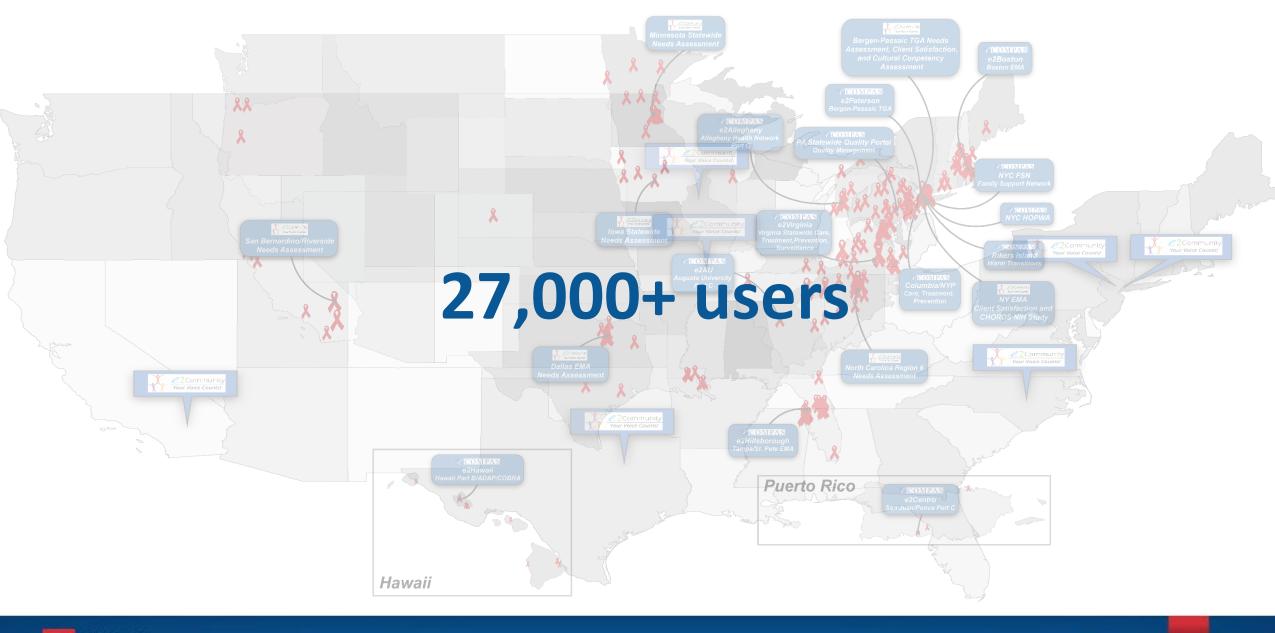




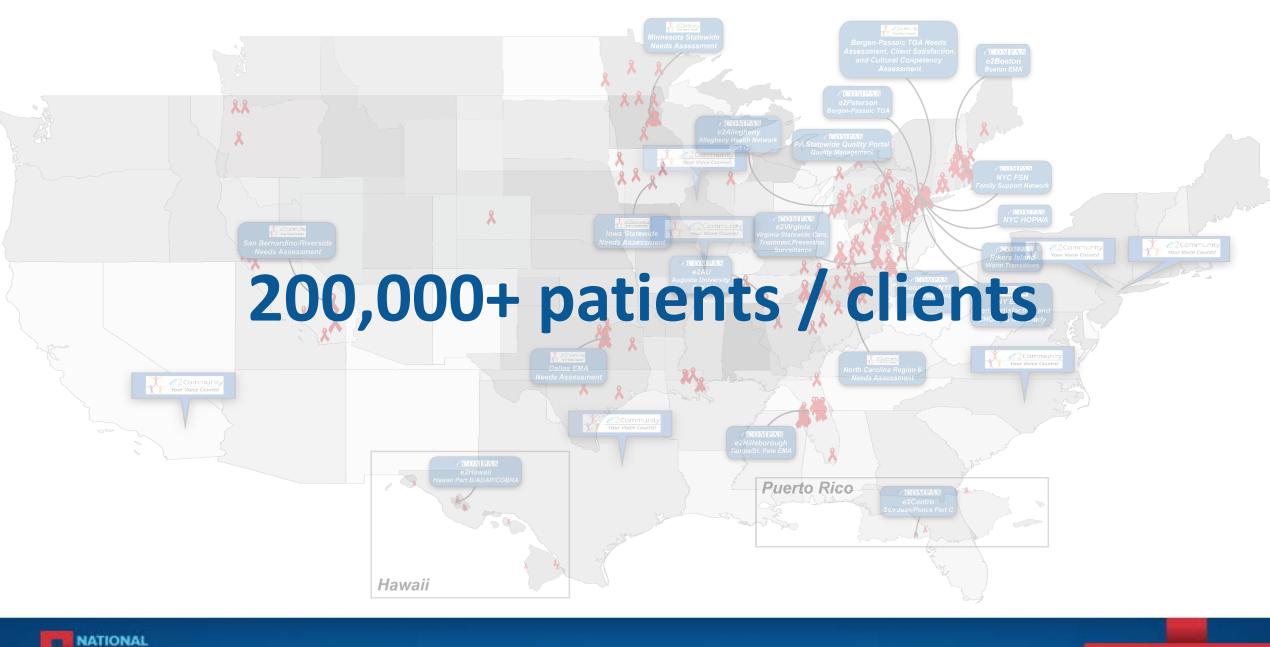




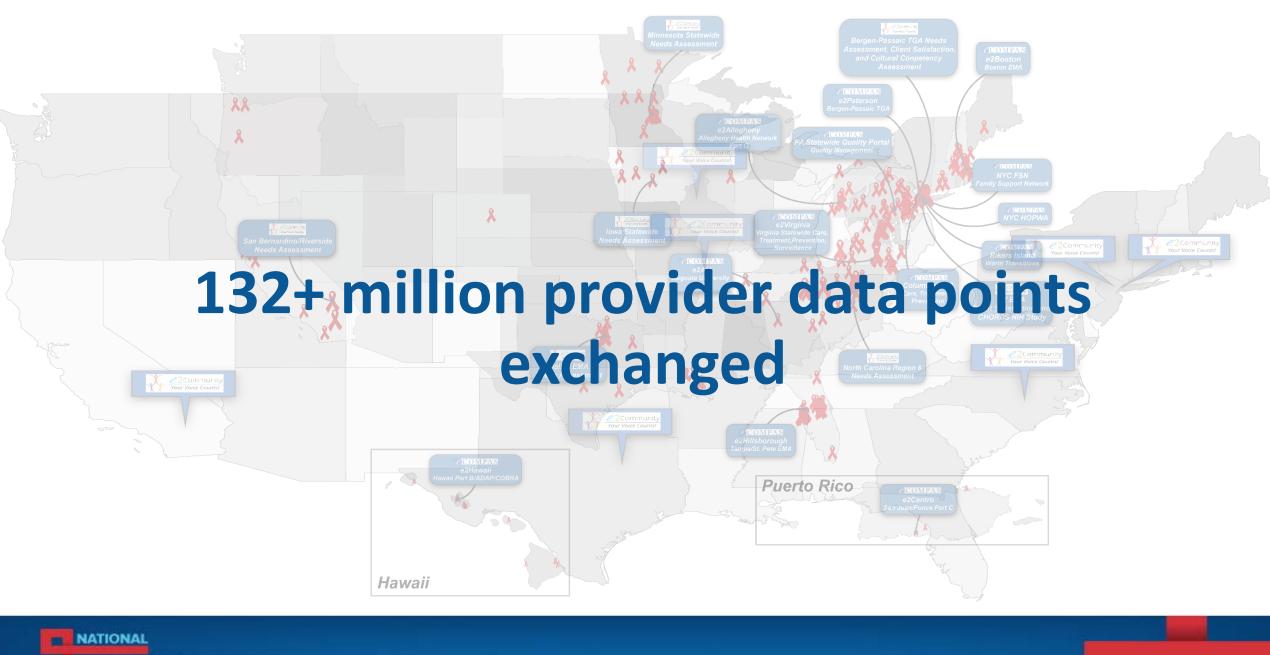




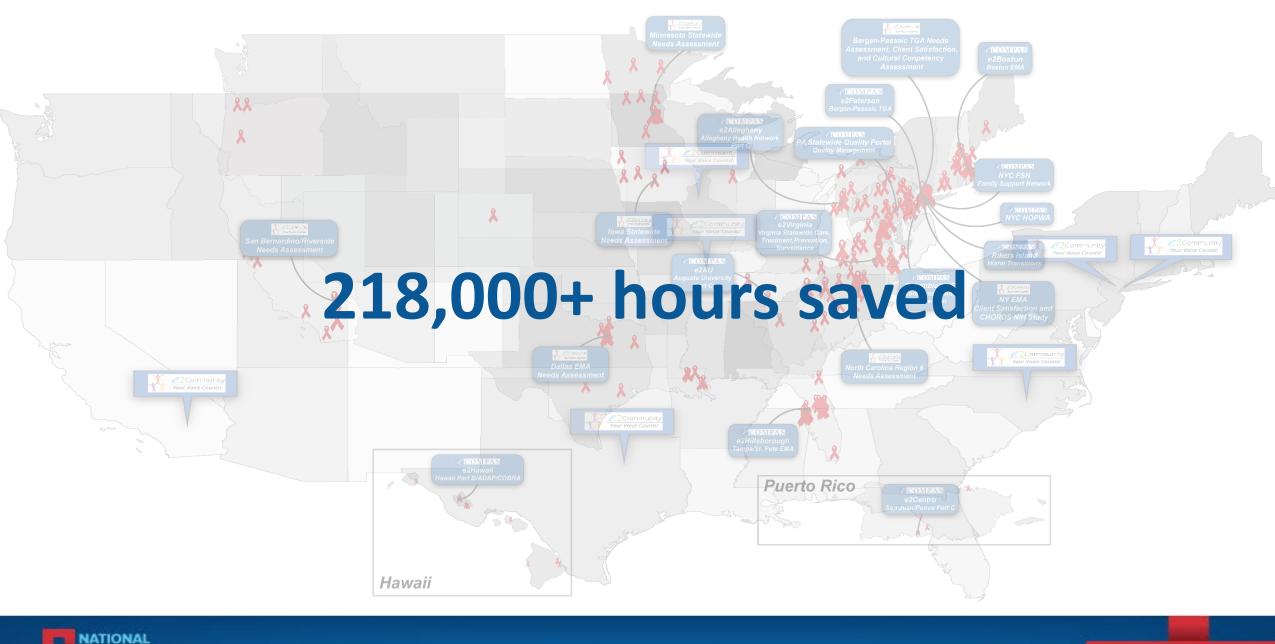










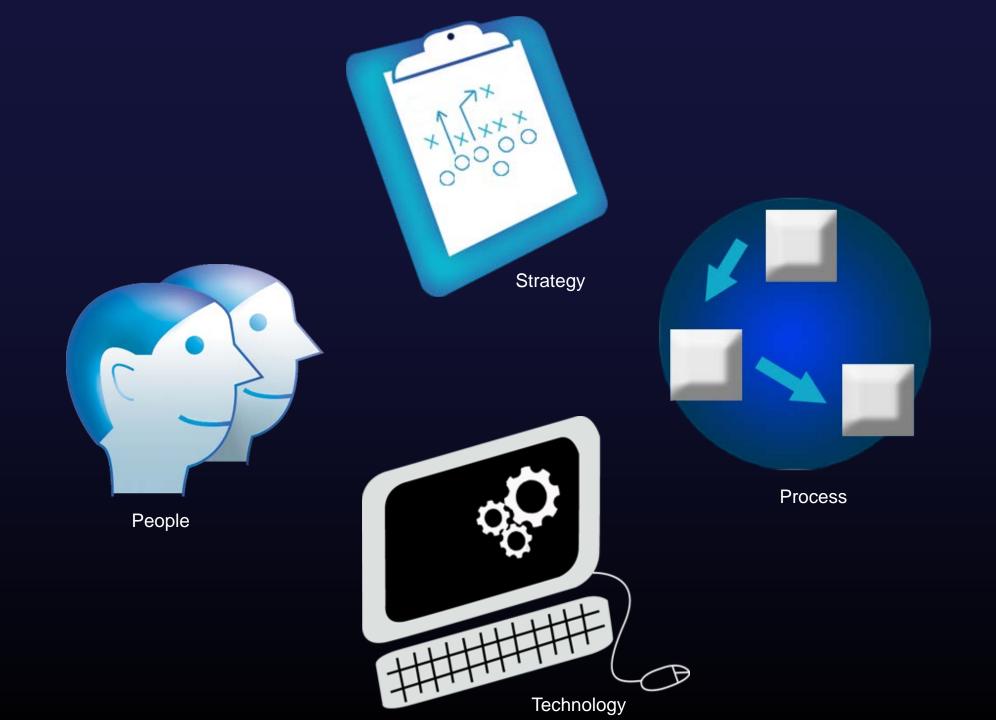




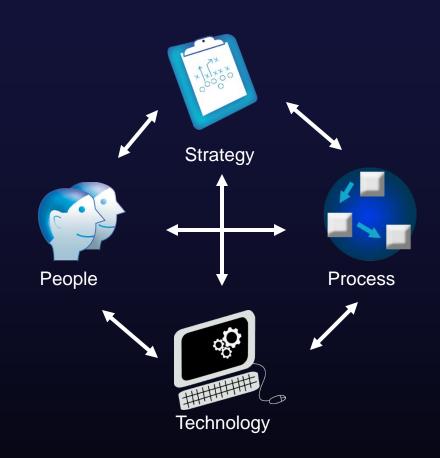




What Broad Components Should We Consider When Implementing Health Information Technology such as HIE?



### What affects what?



Everything affects everything!

# What Are the Main Stages of the HIT Lifecycle?

















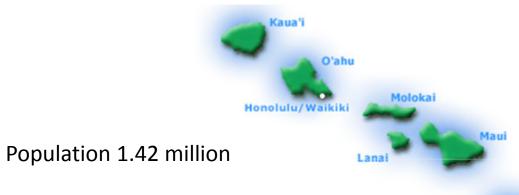
A Simple, Integrated Framework for HIT Implementation



#### Lessons

- 1. Partnership paradigm
- 2. Think win-win-win
- 3. Role of IT Departments and Vendors vs Program
- 4. Seek out or build standards
- 5. Stakeholder engagement, TA, & Support
- 6. Security is paramount
- 7. Whatever it takes attitude. Choose partners wisely

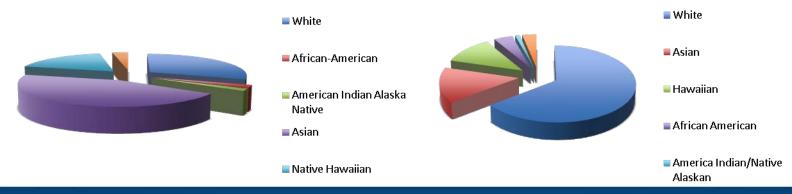






#### **General Population**

#### **HIV/AIDS Cases by Race**





#### **Hawaii HIE and Use of Data**

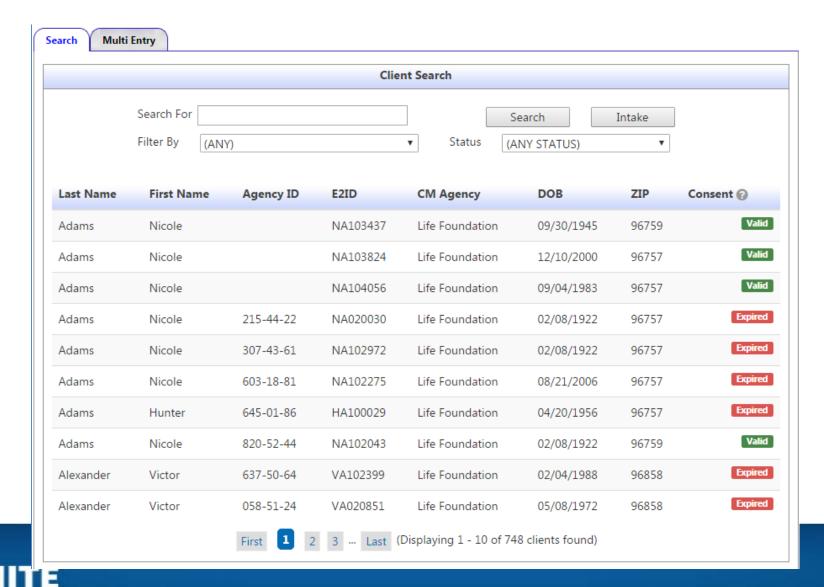
- 1. e2Hawaii Ryan White HIE
- 2. Part C EMR (Waikiki Health)  $\leftarrow \rightarrow$  Part B HIE
- 3. ADAP
- 4. Secure Messaging
- 5. Visual Reporting and Proactive Alerts & Reminders

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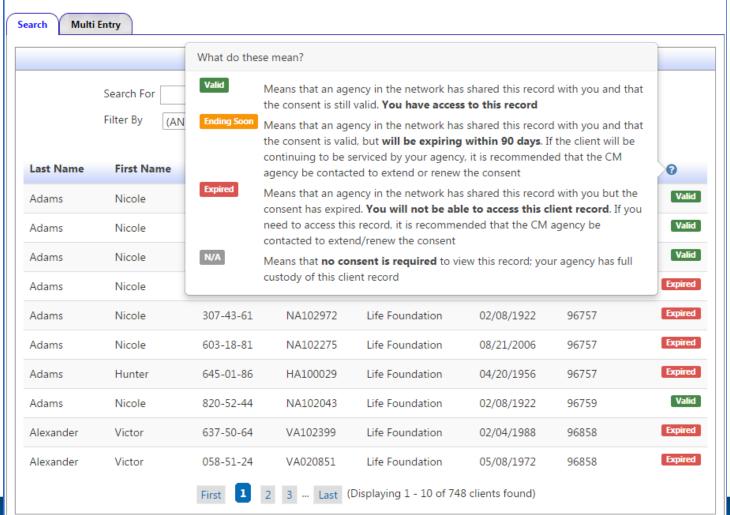
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### **Consent Status on Search Screen**

NATIONAL



### **Consent Status on Search Screen**





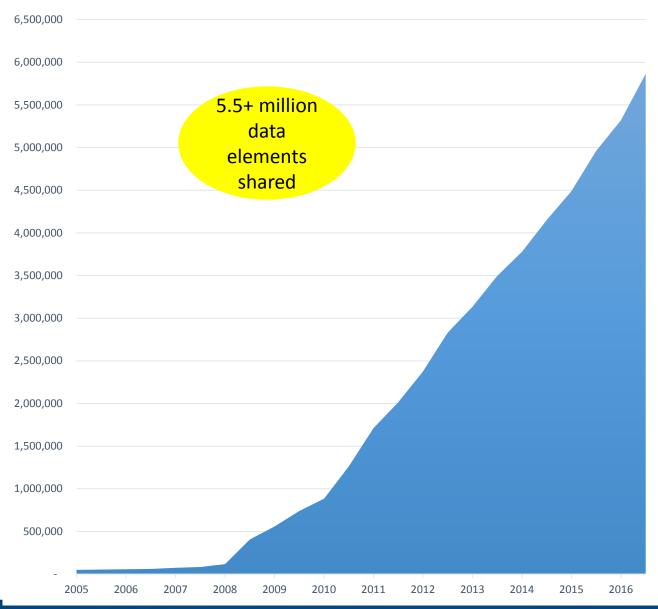
### 402,343 Progress Notes



### 306 million data points

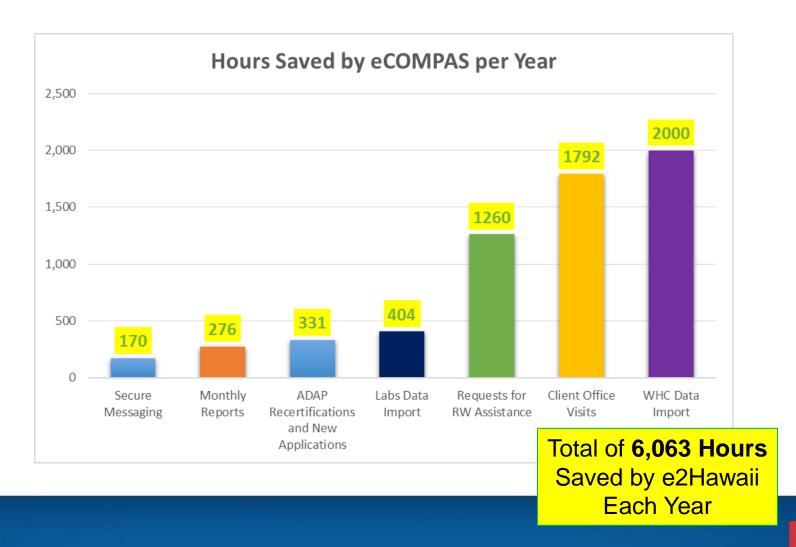


#### **Data Elements Shared**





## e2Hawaii | Time Savings



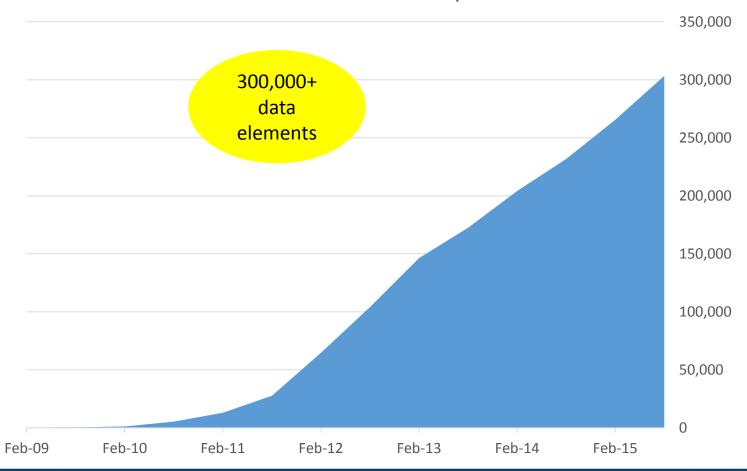


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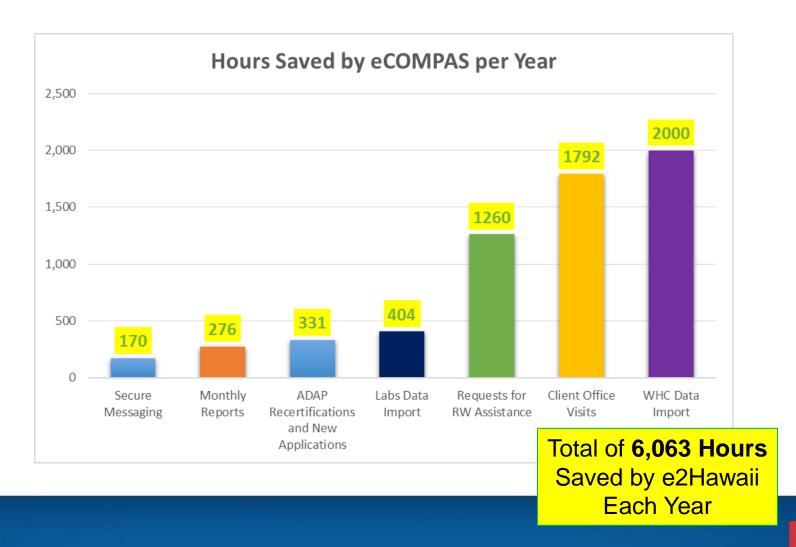
## Waikiki Health Data Import

WHC - Data Elements Imported





## e2Hawaii | Time Savings

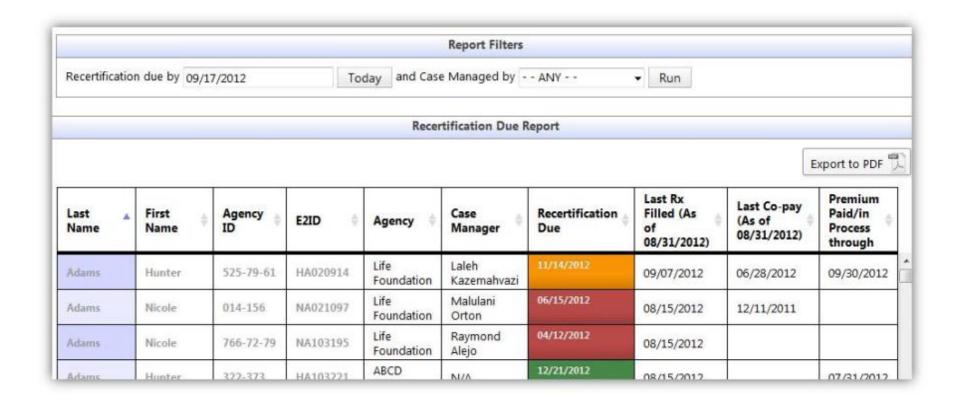




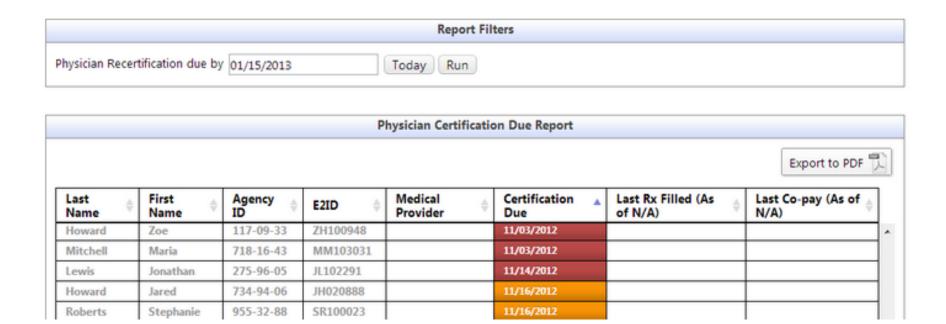
### **Hawaii HIE and Use of Data**

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### **Recertification Due Report**



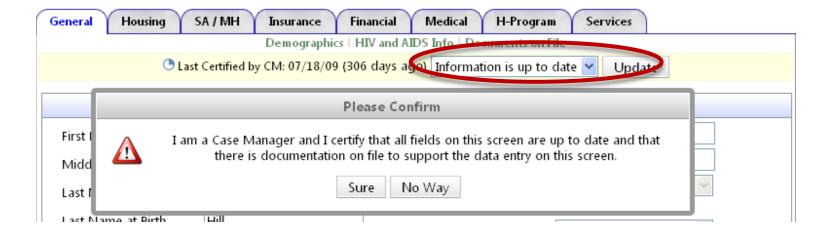
## **Physician Certification Due Report**





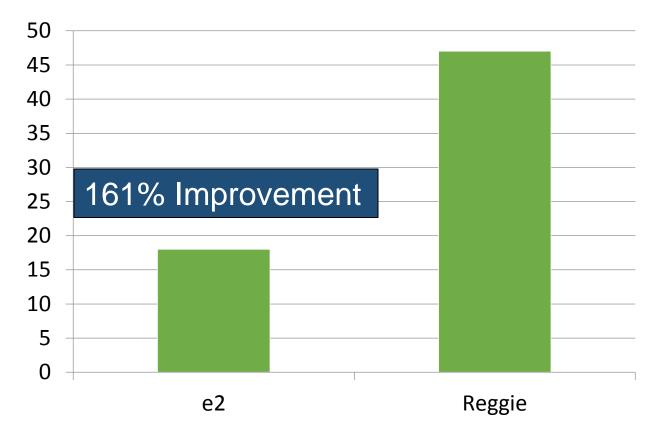
### **Client Recertification Process**

Streamlined H-Program Application





#### **Time to Complete each ADAP Recertification**



Prior System Average: 47 mins

e2 Average: 18 mins

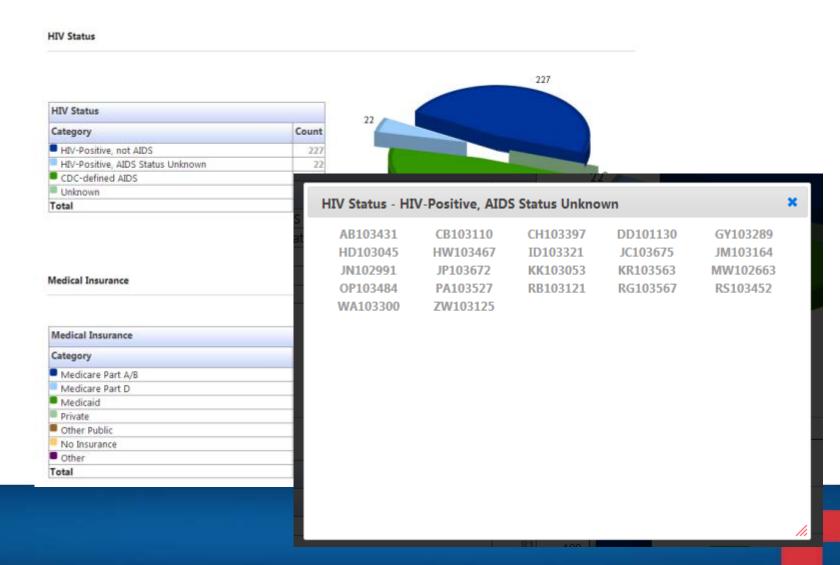
Time Savings: 29 mins



## Visual ADAP Drug Report

**Aggregate Report – Graphical View** 

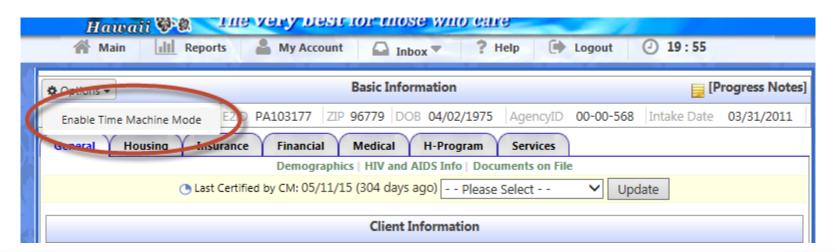
NATIONAL



## Visual ADAP Drug Report

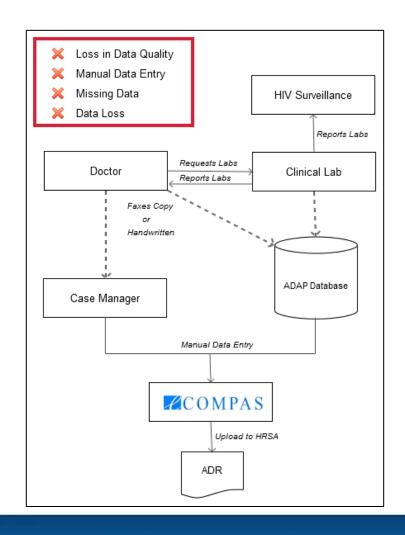
#### "Time Machine" Switch Feature

- Update data for a past reporting period
- Keep past and present data separate
- Helps reporting more accurate data to HRSA



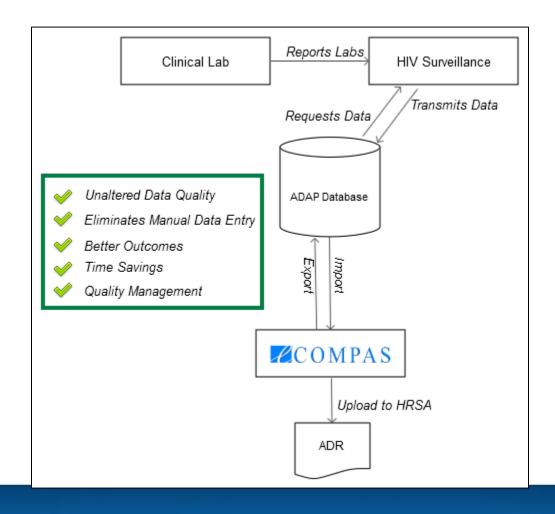


## Labs Data Import – the Old Way





## Labs Data Import – the New Way

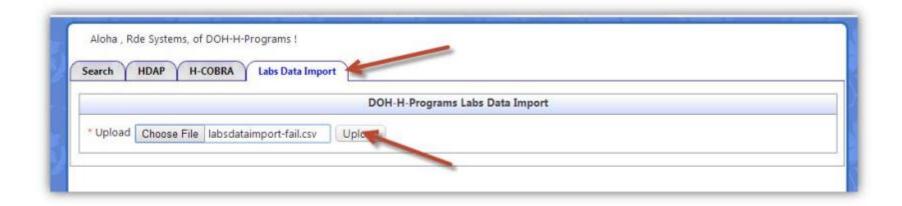




## **Labs Data Import**

# 153,384 Data Elements Imported & Shared







Aloha, Rde Systems, of DOH-H-Programs!

Search

HDAP

H-COBRA

Labs Data Import



Your file contains validation errors. Please correct the following errors and try re-upload your file:

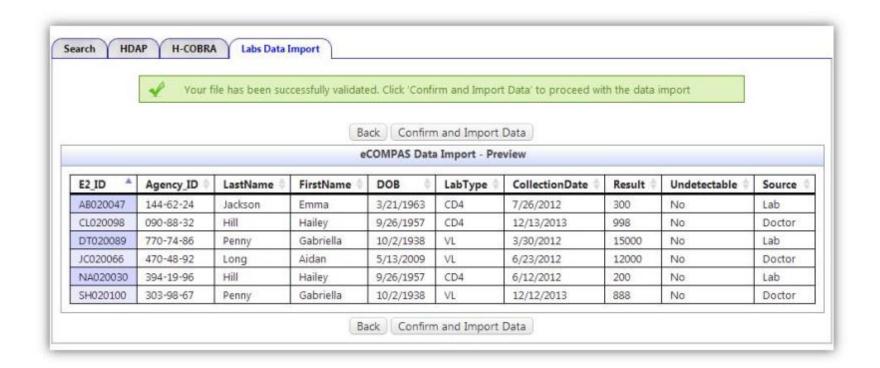
- · Your file has one or several FirstName missing from it.
- Your file has one or several LabType missing from it.
   Your file has one or several CollectionDate missing from it.
- Your file has one or several Source values missing from it.
  Your file has one or several invalid dates.
- · Your file has one or several invalid Result values.

Back

#### eCOMPAS Data Import - Preview

E2_ID A	Agency_ID	LastName 🏺	FirstName 🏺	DOB +	LabType	CollectionDate	Result 0	Undetectable	Source
AB020047	144-62-24	Doe	Jane	1/1/1960	VL	1/1/2013	hhh	No	Lab
CC020129	708-37-34	Frog	Kermit	1/1/1960	VL		40	No	Lab
CL020098	090-88-32	Lambert	Allan	12/1/1970	VL	5/22/2013	333	Yes	Doctor
DT020089	770-74-86	Jones	Emma	1/1/1960	CD4	ууу	666		Lab
JC020066	470-48-92	Doe	John	1/1/1960	VL	12/1/2012	1250	No	Lab
NA020030	394-19-96	Harrington	Harry	1/1/1960	CD4	1/12/2012	1	No	Lab
SH020100	303-98-67	Frog		12/1/1970	VL	5/22/2013	20	Yes	Lab
SP020132	584-23-20	Frog	Kermit	12/1/1970		8/25/2013	150	No	

Back



## **Labs Data Import**

#### **Old Way**

- Manual Data Entry
- Faxed copies of lab work
- Handwritten lab reports

#### **New Way**

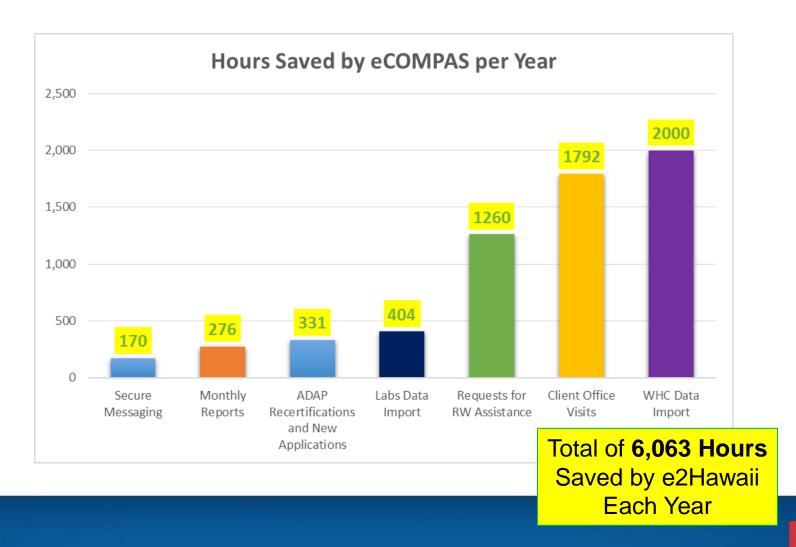
- Data Import of Labs from Surveillance
- No Faxes or handwritten lab reports
- No Data Loss

#### **Impact**

- High Data Quality
- Eliminates Data Entry
- Better Outcomes
- Time Savings
- Quality Management



## e2Hawaii | Time Savings



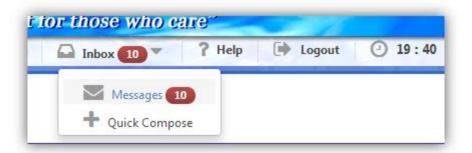


## **Hawaii HIE and Use of Data**

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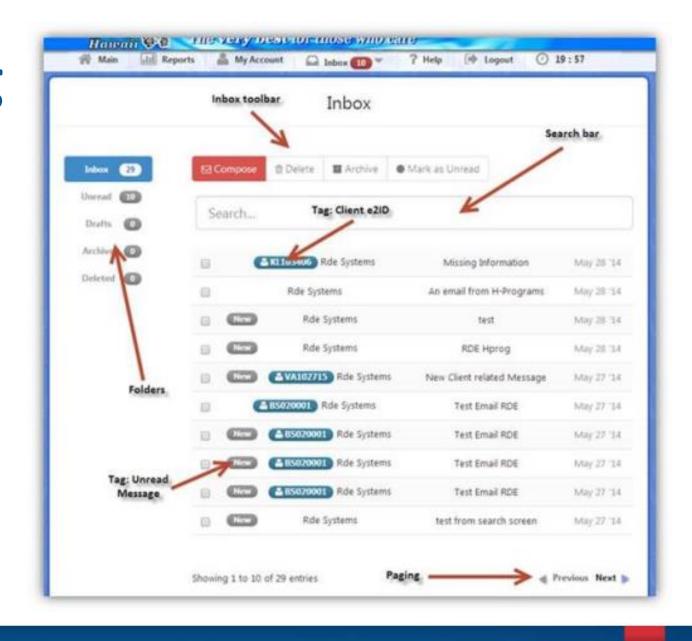
• Feature: Smart Real-time notifications



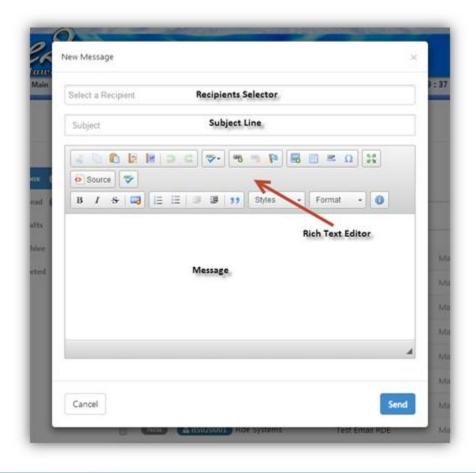


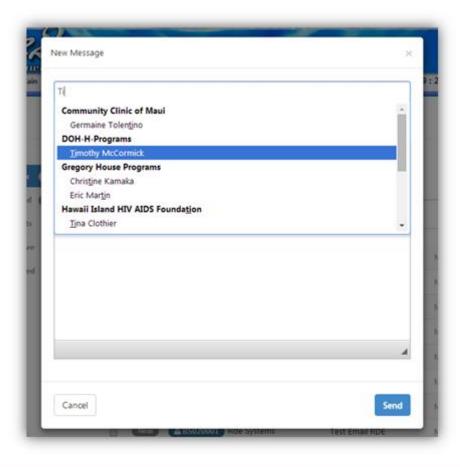


• Feature: User Inbox



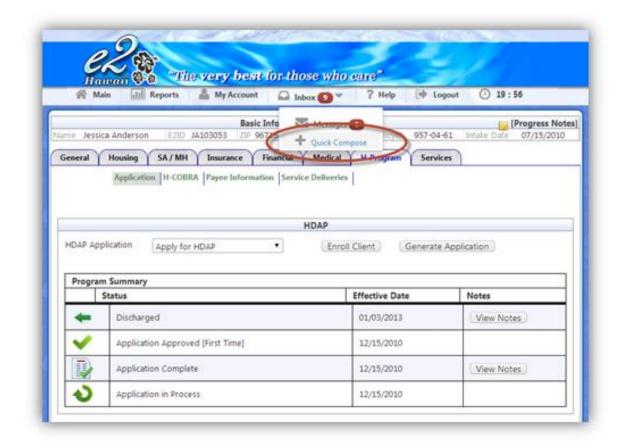
• Feature: Compose New Secure Message with Autocomplete





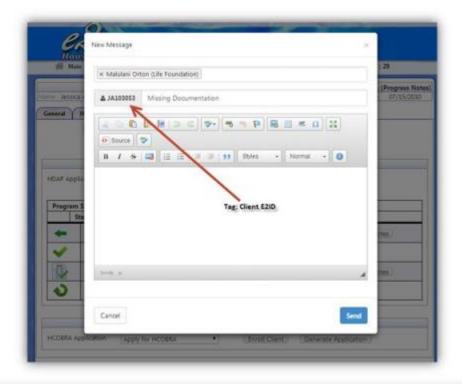


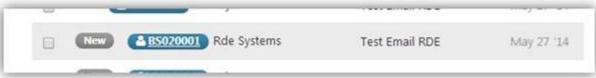
• Feature: Quick Compose





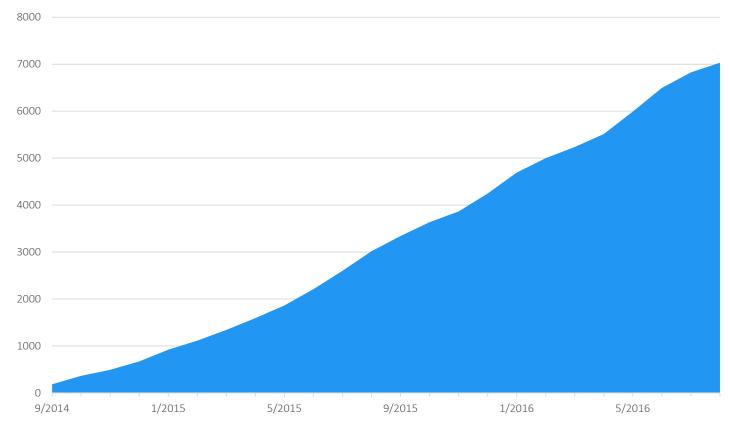
• Feature: Smart Client Tagging







### e2 Secure Messaging Adoption (Nb. Messages Sent)



5,000+ Messages Sent / Year



### **Old Way**

- Phone Calls to Follow-Up
- Faxes
- External, Insecure Email
- Risk of PHI leak
- Informal requests & tracking

### **New Way**

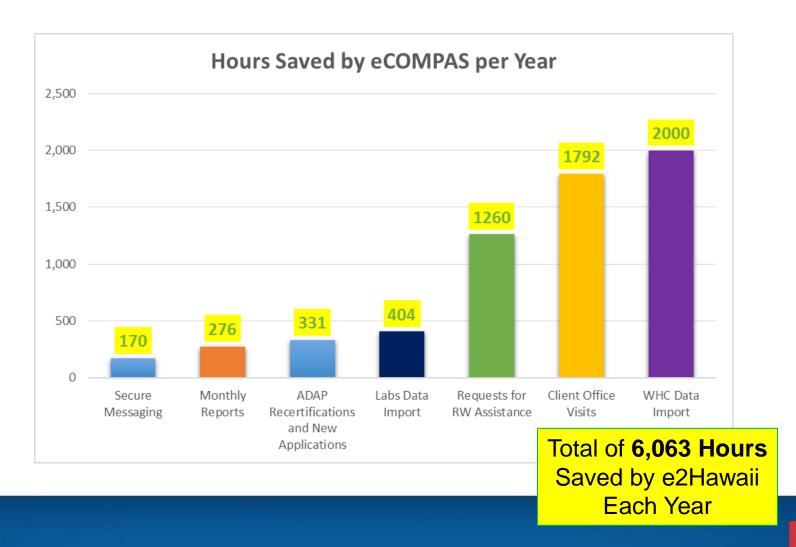
- Send a Secure Message
- No more phone calls & faxes
- Keep Track of requests and follow-ups
- Inter-agency communication

#### **Impact**

- More Streamlined Care Coordination
- More Secure Communications
- Time savings
- Faster response time and care



# e2Hawaii | Time Savings

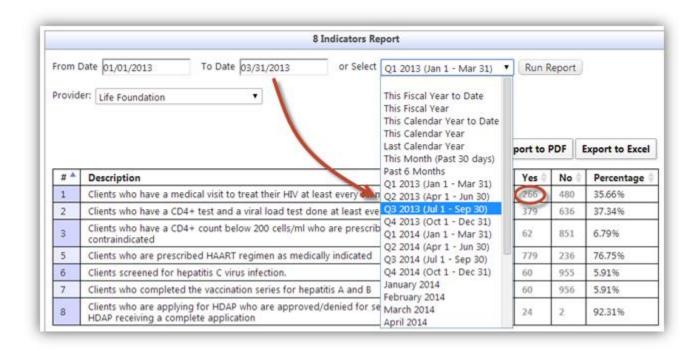




## **Hawaii HIE and Use of Data**

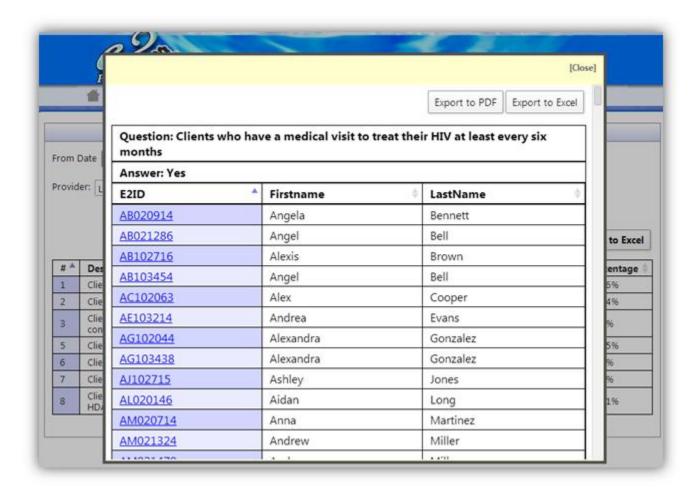
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# **8 Indicators Report**

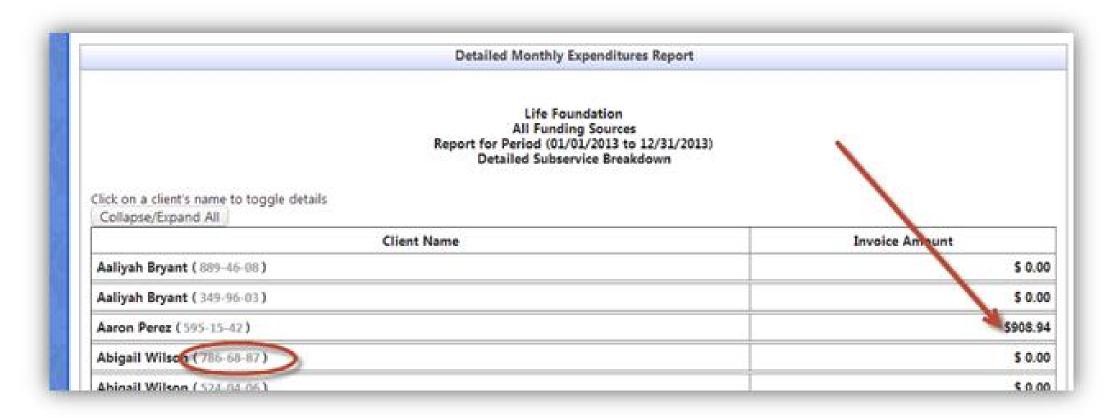




# **8 Indicators Report**

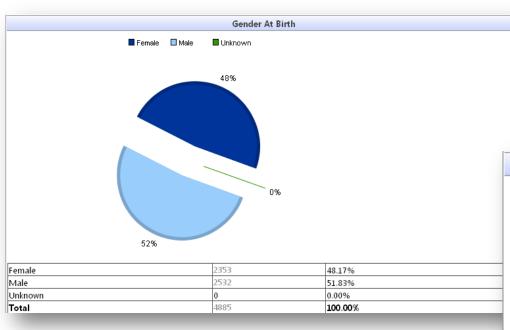


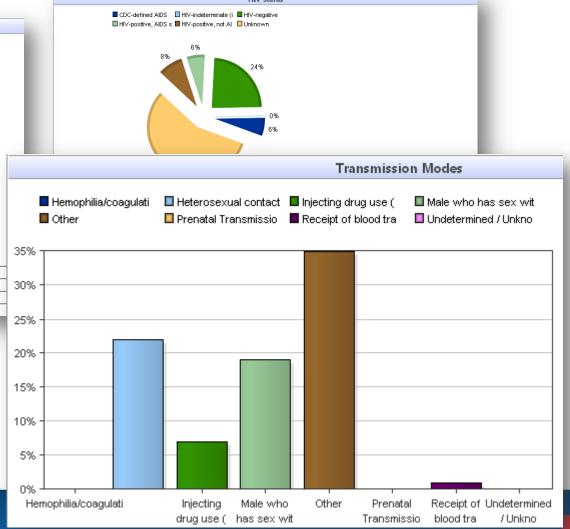
# **Expenditures Report**





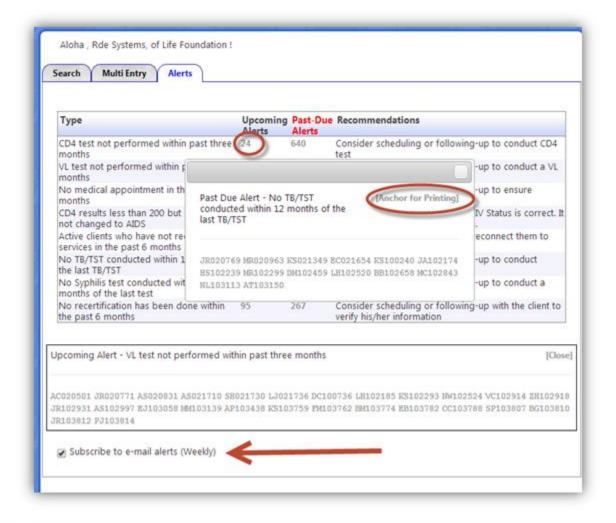
## Visual Analytics: From data to action





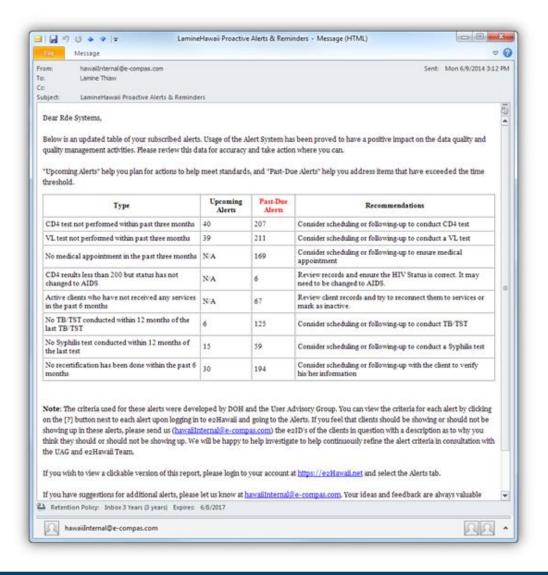


## **Proactive Alerts & Reminders**

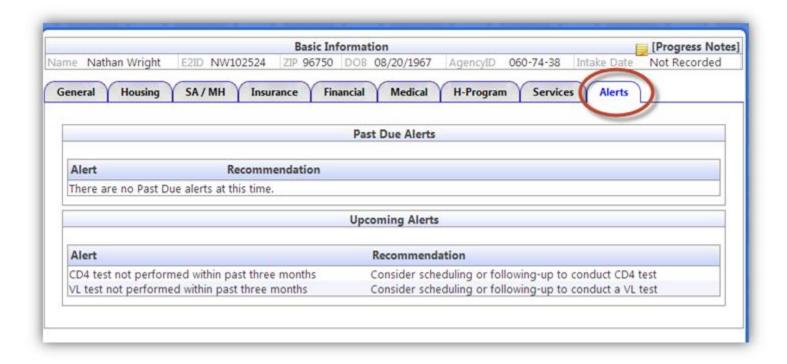




## **Proactive Alerts & Reminders**



## **Proactive Alerts & Reminders**





## Wrap Up: Hawaii HIE and Use of Data

- **1. Share it!** e2Hawaii Ryan White Cross-Part HIE has a profound impact on care coordination, time savings, and data quality.
- 2. The e2Hawaii Waikiki Health story demonstrates key leadership and partnership lessons in being resourceful and dedicated.
- Secure Messaging improves productivity, responsiveness, and reduces staff interruptions
- **4. Use it!** Visual Reporting and Proactive Alerts & Reminders increases data use and reduces the time from data to action.
- ADAP, supported by SPNS, produced innovative recertification, eligibility and data exchange. Perfect learning laboratory.

