

Improving Short- and Long-term Follow-up Efficiency Through Implementation of an Internet Case Management System

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Outline

- ▶ Process to build the system
- ▶ Functionality of the system
- ▶ Implementation and uptake
- ▶ Example use cases

Process to Build iCMS

- ▶ Collaborators
 - ▶ NYS NBS Program
 - ▶ physicians from specialty care centers
 - ▶ software vendor, Natus

Process to Build the System

- ▶ Predicted benefits of the system
 - ▶ Increased ability to interact with providers
 - ▶ More targeted follow-up calls and letters
 - ▶ Reduce paper usage

Functionality of the System

- ▶ Online diagnosis forms for cystic fibrosis and SCID
- ▶ Image upload capability
- ▶ Fillable long-term follow-up forms
- ▶ Remote entry of case notes by stakeholders
- ▶ Viewing whether the case is open or closed
- ▶ New physician information

Functionality of the System

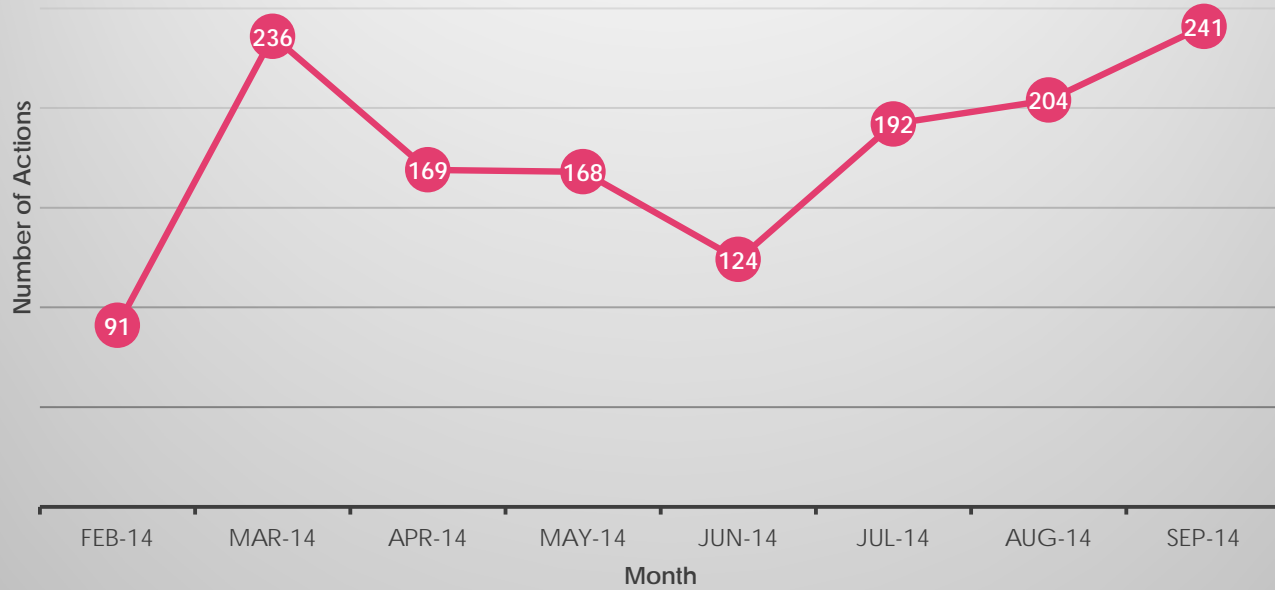
- ▶ Uses infrastructure of existing case management system
- ▶ Actions entered in each case at set times based on newborn screen result
 - ▶ Letters
 - ▶ Calls
 - ▶ Reviews
 - ▶ Emails

Implementation and Uptake

- ▶ Implementation started August 2013
 - ▶ 60 hospital of birth newborn coordinators
 - ▶ 15 local health officers (n=15)
 - ▶ 11 cystic fibrosis specialty care centers

- ▶ From January 2014 to September 2014
- ▶ 1,428 case notes and images were entered

iCMS Notebooks and Images



Implementation and Uptake

- ▶ Each image or notebook entered generates a reminder for newborn screening staff to review the case.
 - ▶ About 1 hour of staff time per day
 - ▶ The use of the system allows the newborn screening program staff to cancel pending follow-up letters and calls



Use Cases

User enters notebook
"Baby Expired"



Review Action Generated



The case is closed
Follow-up actions cancelled

User enters notebook
"A repeat specimen has been
collected"



Review action generated



Cancel follow-up calls and letters.

A case review action is entered for one
week after the specimen was
collected.

The review action automatically
cancels when the repeat sample is
received.

User enters notebook

"The primary care provider was notified of the need for a repeat sample."



Review Action Generated



Delay due date of letter informing the hospital of birth and primary medical doctor that a repeat is required.

User enters notebook

"The baby is scheduled for a sweat test on 10/28/14."



Review Action Generated



Complete call action scheduled for specialty care center.

Cancel appointment confirmation letter.

User enters notebook

"The family was notified of the need for a repeat specimen."

Review Action Generated

Delay due date of scheduled letters informing the parents a repeat sample is needed.

User enters notebook
"The mother cannot be contacted."



Review Action Generated



Check the NYS Immunization Registry.
Check birth certificate records.
Contact the county health officer.

User enters notebook

"The infant is in the NICU on total parenteral nutrition."

Review Action Generated

Delay due date of scheduled calls and letters

User enters image

Image: Diagnosis forms or follow-up lab results

Review Action Generated

The case is typically closed.

User enters image

Image: Letter sent to the mother
of the baby

Review Action Generated

Delay due date of letters to be
sent to the mother

Verify the mother's address and
the baby's name

User enters image

Image: Letters sent to the primary care provider

Review Action Generated

Delay due date of the scheduled letter to the primary medical doctor

Update PMD and demographic information

Next Steps

- ▶ Plans to expand the system
 - ▶ Build additional short- and long-term follow-up forms for all disorders
 - ▶ Engaging the remaining 50 local health officers, 77 birth hospitals and 70 specialty care centers.

Lessons Learned

- ▶ Follow-up efforts are often duplicated by stakeholders and the Program.
- ▶ Once the system is fully implemented, it will allow the NBS Program to focus follow-up efforts on cases that are not being followed by another stakeholder.

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Thank you