

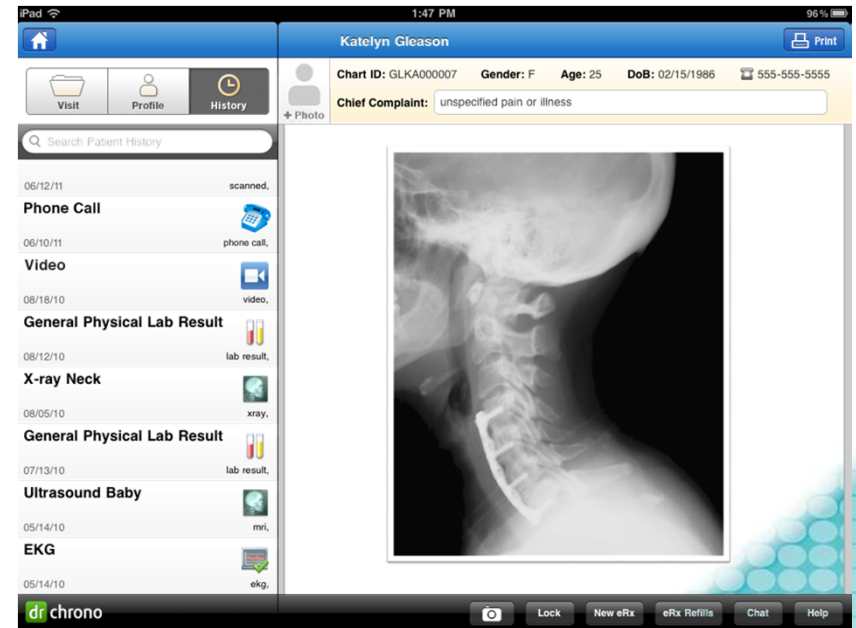
# Electronic Test Orders

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# Benefits to the lab

- Reducing manual entry
- More accurate information
- Can estimate sample load, detect missing samples
- Mandatory if you want to send electronic results
- Hospitals going paperless, scanned documents are shown under different category
- More likely to use your services if they can order and get their result electronically



# Costs for Set Up

- Resources per interface
  - 150-250 FTE hours (h) of HL7 data exchange specialist time
  - 10-30 FTE h of lab staff
  - Validation
    - Requesting order test cases (40-100 h hospital time)
    - Sending corresponding results (40-100 h time)
    - Comparison (10-20 h lab and hospital time)
    - Documentation (80-100 h lab time)



# Costs for Maintenance

- Ongoing

- Staff for checking transmissions
- Resending results (error queue in hospitals)
- System change at Lab or hospital (new system, system upgrade)
- Updated lab tests require re-validation
- Yearly monitoring/revalidation





# Our experience with Hospitals

- Developing your Test Request Form (TRF)
  - Information that already exist
  - Information that can be re-purposed
  - Missing information – Prompt data/Ask on Order Entry (AOE) Question
    - Is it essential?
    - Lot of effort to get it?
- Translating their request to yours
- No duplicate data entry

# Our experience with Hospitals

- Bring in hospital vendor
  - The only ones that can write new interfaces
  - Can tell hospitals how to configure their system to accommodate the interface
  - Cost 20-40K per interface
  - HL7 version makes very little difference
- Implementation guide, test catalog, test algorithms including reflex

# Laboratory Processes

- Order entry
  - Non unique IDs (Medical Record Number)
  - Many unique IDs (Collection Tube Number)
  - Merging electronic and paper orders
- Variability of information
  - E-order might have newer data
  - Not all electronic data is more accurate (sample collection date)



# Laboratory Processes

- E-Order flow policy
  - Post linking (two babies with the same last name, first name “baby boy”, on the same day, same hospital)
  - Verification on partial electronic and paper forms
  - Lab policy for data acceptance might be different for each partner
- Deleting orders

# Laboratory Processes

- Accommodating some idiosyncrasies on lab side
  - Pass through data (their patient id)
  - Billing (1 system multiple clients)
- Validation
  - Should cover various possibilities
  - Is report/information communicated & interpreted the same way on client side

# Benefits to Patients/Clients

- Faster turnaround time – results are delivered 1-2 days faster
- Physician notification
- Resend is instantaneous
- Validation that they got it
- Web portal only works for smaller physician offices not large hospitals



# Take home



- Start interfacing the tests that hospital is interested in – newborn screening is a good start
- Understand your partner's process – it might be different for each hospital
- Order is critical for electronic result
- Complexity of your interface is dependent on the number of partners and not on the volume of orders/results
- Data exchange requires initial and ongoing effort and resources



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