Outsmarting Trisomy 21 Standards of Care with EPIC “Smartphrases”

Improving Adherence to Standards of Care for Pediatric Patients with Trisomy 21

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BACKGROUND

• Clinical Setting
  - Boston Medical Center’s (BMC) Pediatric Comprehensive Care Program (CCP)
  - Outpatient care to medically complex pediatric patients
  - EPIC is the electronic medical record (EMR) utilized
  - EPIC is the EMR of hundreds of hospitals and health systems.

• Reason for the effort
  - Patients with Trisomy 21
    - At risk, medically complex patient population.
    - Can develop many known complications, (Cardiac, vision and hearing loss, GI etc.)
    - Require frequent subjective and objective screening to detect these potential complications early.

• Problem to be addressed
  - Within EPIC, a clinically useful way to monitor if patients with Trisomy 21 are receiving Standards of Care (SOC).
  - Standards of Care for Trisomy 21
    - Based on AAP Guidelines from 2011.
    - Differ by patient age.
    - Include subjective and objective screening.
    - Not easily tracked together over time via EPIC.

• Base Line Data
  - Less than 60% of Trisomy 21 Patients are meeting Standards of Care for TSH and CBC monitoring.

AIM

• To Improve the adherence to Standards of Care (SOC) for patients with Trisomy 21 seen at BMC’s CCP. Our Goal is to have 90% adherence to age appropriate standards of care by January 1st 2016.
• Early efforts will focus on objective measures.
  - CBC, TSH Monitoring
  - These measures can be obtained by primary providers without referrals.

• Outcome Measure
  - Percent of CCP patients with Trisomy 21 who meet CBC monitoring SOC per month.
  - Percent of CCP patients with Trisomy 21 who meet TSH monitoring SOC per month.

• Process Measure
  - Percent of CCP patients with Trisomy 21 who have “Smartphrase” Documented in EPIC.

• Balancing Measure
  - Absolute number of “No shows” among CCP patients with Trisomy 21 per month.

METHODS

• Plan
  - Developed a “Smartphrase” in EPIC that summarizes age appropriate Standards of Care for Trisomy 21 patient to be tracked within the “Problem Based Charting” feature of EPIC.

• Do
  - One CCP provider used the “Smartphrase” to assess the utility and usability.

• Study
  - Smart Phrases optimized and disseminated to all CCP providers.
  - Baseline Data collected for CBC and TSH monitoring as proxies for adherence to SOC.

• Act
  - Examined how our intervention affected the percent of Trisomy 21 patients meeting the SOC for CBC and TSH monitoring.

SOLUTIONS

• AAP Guidelines were broken down by age and objective clinical interventions.
• Age specific Smartphrase tables were created with this data.
• Provider can enter this Smartphrase into the “overview” Section of the Assessment and Plan tab in EPIC.
• Table can be updated to track how standards of care are being met over time.

RESULTS


CONCLUSIONS

• Globally Standards of care are being met, but the intervals of objective testing can be improved.
• Provider’s found our Smartphrase to be a clinically useful means of assessing if patients with Trisomy 21 are meeting Standards of Care.
• We followed 28 CCP patient’s with Trisomy 21, with an average of 8 Trisomy 21 patients seen in clinic per month.
• In 5 months we have been able to deploy our intervention 30% of the Trisomy 21 population who received their care at BMC’s CCP.
• Our intervention is close to causing a modest shift in standard of care adherence.
• We expect that by January 2016, eight months after implementing our intervention, we will see a significant increase in the percent of the Trisomy 21 population meeting the Standards of Care.

NEXT STEPS

• Continue to encourage CCP providers to utilize our Smartphrase to track and assess how Standards of Care are being met for patients with Trisomy 21.
• Continue to optimize the utility and usability of the “Smartphrases”.
• Expand data collection and improvement efforts to address SOC regarding ophthalmology, Sleep Studies and audology.
• Similar Smart phrases can be developed for prematurity, achondroplasia, Autism and other frequently seen complex patients receiving their care at BMC’s CCP.