Illinois Levels of Care Assessment Tool (LOCAtE): Overview of Neonatal Results

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LOCAtE BACKGROUND
What is LOCAtE?

- “Levels Of Care Assessment Tool”
- Hospital survey on obstetric and neonatal practices and services
- Estimates maternal and neonatal levels of care based on responses to survey questions
- CDC-developed survey instrument & field tested during 2014 in two states

What is LOCAtE?

- Tied to established criteria
  - 2015 ACOG/SMFM maternal levels of care
  - 2012 AAP neonatal levels of care
- Meant to be a simple survey to identify minimum criteria for each level of care
  - (Not comprehensive!)
  - 10 neonatal care questions
  - 11 obstetric care questions
LOCAtE Level Classification Process

- Hospitals answer questions about their available services
- A series of logic trees are applied
- Maternal and Neonatal LoC estimated by algorithm based on accumulation of responses

Slide Credit: Dr. Dave Goodman, CDC

IDPH Uses of LOCAtE

- *First, let’s describe what LOCAtE is NOT intended for...*

- **Not for Regulation or Designation!**
- Because LOCAtE is not a comprehensive tool, it is not intended to capture all criteria in the AAP or ACOG guidelines
- LOCAtE is not intended to be a substitute for site visits and the thorough review of hospital practices for designation

Slide Credit: Dr. Dave Goodman, CDC
IDPH Uses of LOCATe

- Understand current IL perinatal system in relation to AAP and ACOG guidelines
  - Better understand the difference between our current state code and national guidelines
  - Describe how hospitals are functioning in relation to national guidelines
  - Analyze regional differences in services
  - Describe geographic access to various levels of care
  - Describe parity between neonatal & maternal LoC

- Analyze outcomes by LoC
  - How do neonatal & maternal LoC impact infant/maternal mortality and morbidity?
  - Does disparity of neonatal & maternal LoC impact outcomes?

- Provide feedback to facilities
  - Follow up with facilities based on unexpected results
  - Show gaps in services by geography
  - Inform hospitals of their results, enhance conversations about levels of care
LOCATE RESULTS

LOCATE Implementation in Illinois

- All 120 Illinois perinatal hospitals completed LOCATE!
  - Including 4 hospitals in St. Louis that are part of Southern Illinois perinatal network

- Illinois is the first large state to implement and analyze LOCATE on a statewide basis
- Illinois is the first state to link LOCATE results to vital records files to analyze infant outcomes
Comparison of Current Illinois Levels and AAP / LOCATe Neonatal Results

Current IDPH Perinatal Designations

- Level III: 23%
- Level II: 49%
- Level II-E: 20%
- Level I: 8%

AAP / LOCATe Neonatal Results

- Level IV: 12%
- Level III: 6%
- Level II: 44%
- Level I: 39%

Summary of Illinois & AAP Differences

- **AAP establishes Level IV**
  - Hospitals in both Chicago and St. Louis areas

- **Some IDPH-Level III hospitals may not meet AAP Level III requirements**
  - Mostly because they did not meet criteria of “Neonatologist onsite”
  - In spite of this, geographic access to Level III would not change

- **AAP does not include Level II-E**

- **Many IDPH-Level II hospitals may not meet AAP Level II requirements**
  - Mostly because they did not meet criteria of “Neonatologist on staff”
  - Level II facilities outside the Chicago area were more likely to receive LOCATe score of Level I
Examining Impact of Neonatal LoC

- We wanted to compare across levels and across specific services to see how they impact deaths among babies
- Linked birth & death certificates with LOCATe results for births occurring during 2014
- Examined outcomes for very low birthweight (VLBW; <1500g) babies and low birthweight (LBW; <2500g) babies (small babies are expected to benefit most from levels of care)
- Neonatal Mortality = death during the first 28 days of life

Impact of Risk Appropriate Care

- Among VLBW infants, neonatal mortality rates were higher for babies born in lower level facilities:
  - By Current Illinois Levels of Care:
    - Level II vs. Level III: ↑ 300% (p = <0.01)
    - Level II-E vs. Level III: ↑ 150% (p = <0.01)
  - By LOCATe / AAP Levels of Care
    - Level I vs. Level IV: ↑ 480% (p = <0.01)
    - Level II vs. Level IV: ↑ 75% (p = 0.03)
    - Level III vs. Level IV: ↑ 35% (p = 0.10 : non-significant)
Impact of Neonatologist

- **Within current Level III facilities:**
  - Neonatal mortality rates for VLBW infants were **60% higher** when the birth facility did not have an onsite neonatologist. (p = 0.08)

- **Within current Level II & II-E facilities:**
  - Neonatal mortality rates for LBW infants were **150% higher** when the birth facility did not have a neonatologist on staff (p < 0.01)

NEXT STEPS FOR LOCATe
Hospital Information Sheets

- Information to be Included:
  - Overview of LOCATE
  - Description of Hospital’s LOCATE results
    - Estimated LOCATE Levels of Care
    - Description of the reasons for the LOCATE level classification
    - Comparison to the levels that the hospital predicted they would be (self-assessment)
  - Resources about AAP and ACOG levels of care

- *Estimated Release Date*: March 15, 2017