

Florida's Early Hearing Detection and Intervention (EHDI) Program: Descriptive and Spatial Analysis of 2015-2016 Data

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Florida Early Hearing Detection & Intervention

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Prevalence of Hearing Loss

- Hearing loss is the most common birth defect.
- In the United States, 1 to 3 babies out of 1000 are born with permanent hearing loss/impairment each year.
- In Florida, an average of 9,000 babies do not pass their initial hearing screening. Out of the 9,000, approximately 300 babies are diagnosed with a permanent hearing loss or impairment yearly.



What is EHDI?

- Early Hearing Detection and Intervention (EHDI) is a national program which was first authorized by Congress in 2000.
- The goal of this program is to enhance language, communication, cognitive, and social skill development, that is needed to be successful in school and other aspects of life.
- EHDI programs include:
 - Screening (the initial test of infants for hearing loss)
 - Audiological Diagnostic Evaluation (to confirm hearing loss)
 - Early Intervention

1-3-6 Goals

Hearing loss can affect a child's ability to develop speech, language, and social skills. The earlier intervention is provided, the better chance a child has at reaching their full potential.

The Joint Committee on Infant Hearing (JCIH) recommends:

- Hearing screening by 1 month of age.
- Hearing loss diagnosed by 3 months of age.
- Enrolling in an Early Intervention (EI) Program by 6 months of age.
 - Research has shown that amplification technologies should be in place before 6 months of age.

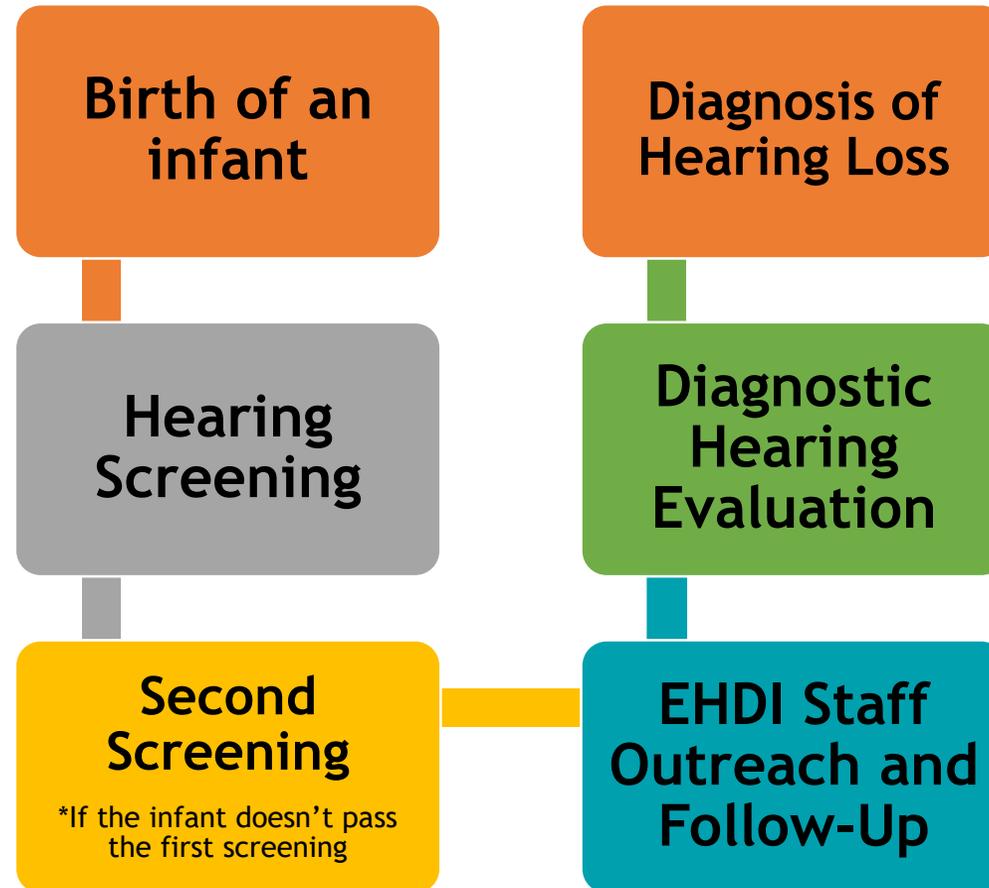


Florida EHDI Follow-up Program Basics

- The Newborn Hearing Screening Follow-up Program attempts to obtain rescreening information on babies and children to 3 years of age who did not pass their initial screening.
- The Program's objective is to encourage early diagnosis of hearing loss to allow for early intervention.



EHDI Process from Birth to Diagnosis



Diagnosis to Early Intervention

Once a diagnosis of hearing loss is reported to EHDI staff results are entered in the EHDI data system, and the baby's record is designated as permanent hearing loss.



EHDI staff assembles a packet of educational materials specific to hearing loss and sends it to the parents or caregivers.



EHDI staff also makes a referral to the Local Early Steps by fax as well as through a secure email system.

Objectives

1. Examine the Florida EHDI Program's outcomes and in accordance with meeting JCIH recommendations.
2. Determine the distribution of Florida's 2015-2016 infant population in relation to the location of Local Early Steps (LES) offices.
3. Assess implications for what areas the Program may be able to focus on to aid in improving outcomes for deaf or hard-of-hearing (D/HH) infants in Florida.

Methodology

- Centers for Disease Control and Prevention's (CDC) Hearing Screening and Follow-up Survey (HSFS) 2015-2016
 - CDC HSFS definitions used for Screening, Diagnosis, and Intervention data
 - 1-3-6 Goals
- Spatial analysis was conducted to determine the distribution of Florida's 2015-2016 infant population in relation to the location of Local Early Steps (LES) offices.
- Software:
 - Microsoft Excel
 - ArcGIS Pro
 - FLHealthCHARTS data query tool

Results

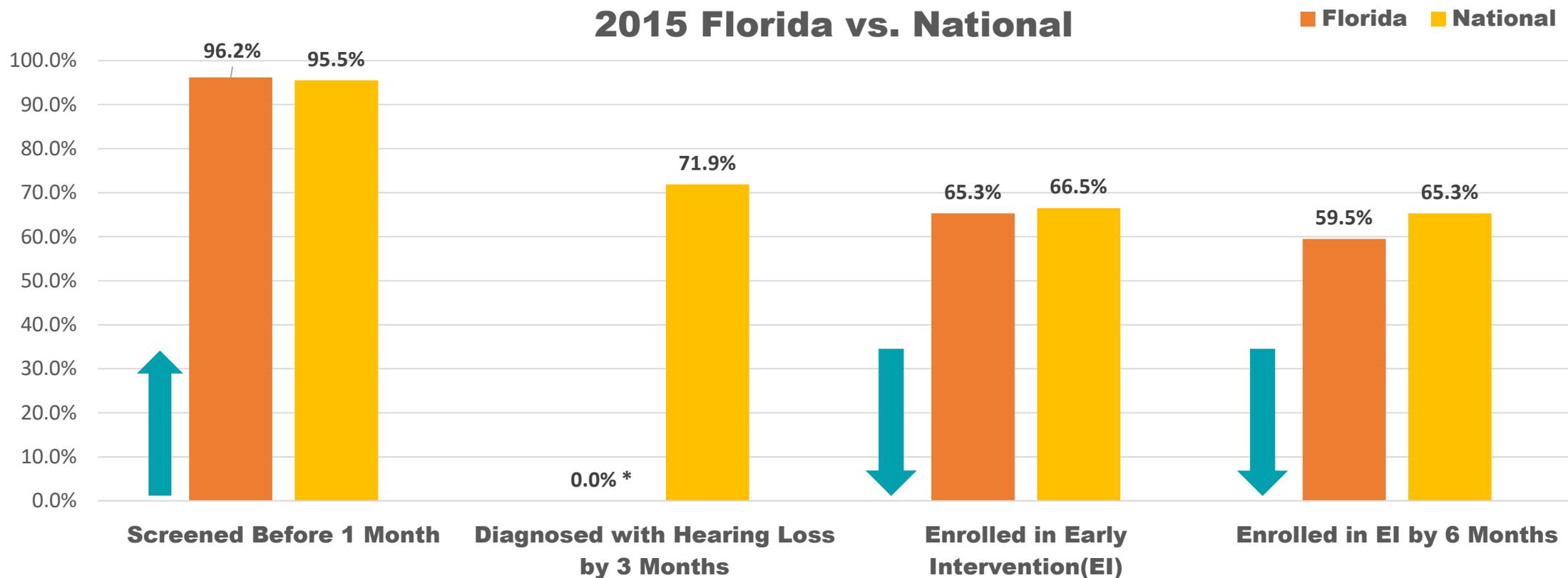


Florida EHDI Program Statistics & 1-3-6 Goal Data Points

Data Year	Florida EHDI Program Statistics & 1-3-6 Goal Data Points											
	Screening Data				Diagnostic Data				Intervention Data			
	Total Births	Total Screened (N/%)	Total Screened By 1 month (N/%)	Total LFU/LTD (N/%)	Total Screen Not Passed (N)	Total Documented Diagnosis (N/%)	Total Diagnosed By 3 months (N/%)	Total LFU/LTD (N/%)	Total Diagnosed Permanent HL (N)	Total Enrolled in EI (N/%)	Total Enrolled in EI By 6 months (N/%)	Total LFU/LTD (N/%)
2015	224,273	217,142/ 96.8%	208,785/ 96.2%	3,378/ 1.5%	8,346	7,449/ 89.3%	*	601/ 7.2%	291	190/ 65.3%	113/ 59.5%	56/ 19.2%
2016	225,018	218,376/ 97%	207,125/ 94.8%	2,603/ 1.2%	9,341	8,335/ 89.2%	7,223/ 86.7%	677/ 7.2%	287	193/ 67.2%	129/ 66.8%	67/ 23.3%

*In 2015, Florida’s EHDI Information System (EHDI-IS) was not capable of calculating the number of infants “Diagnosed with No Hearing Loss before 3 months of Age”. This figure was not reported to the CDC.

2015 National Comparison for 1-3-6

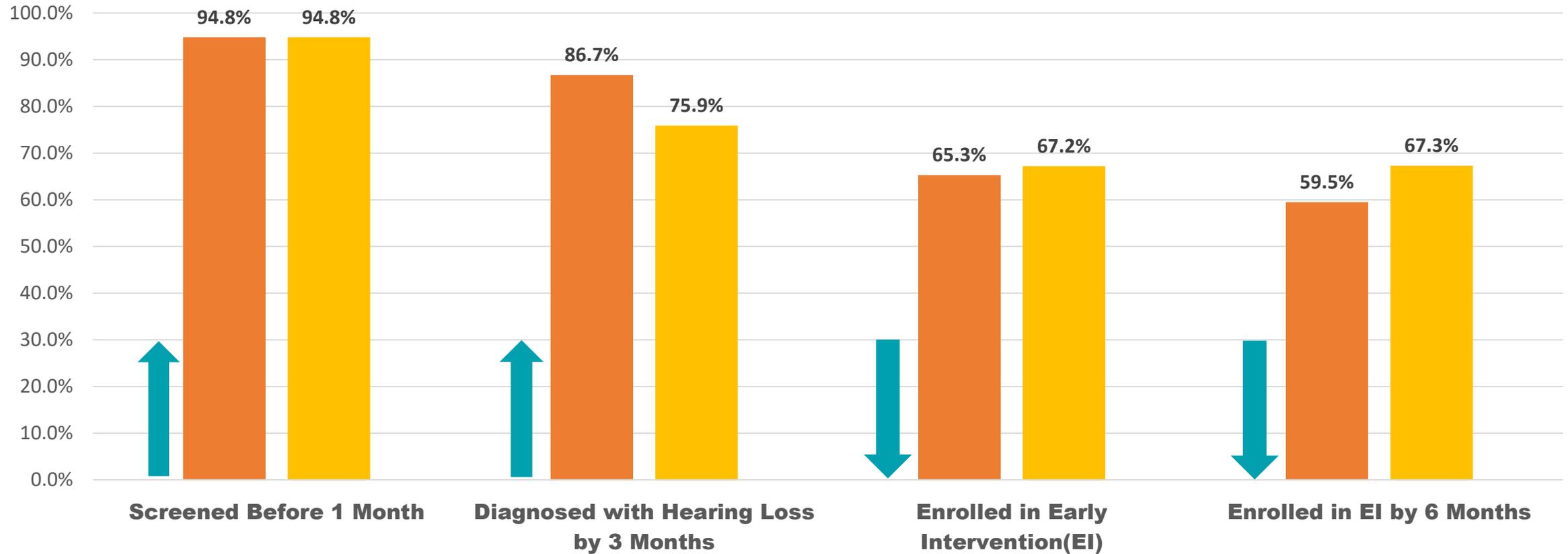


*In 2015, Florida's EHCI Information System (EHDI-IS) was not capable of calculating the number of infants "Diagnosed with No Hearing Loss before 3 months of Age". This figure was not reported to the CDC.

2016 National Comparison for 1-3-6

2016 Florida vs. National

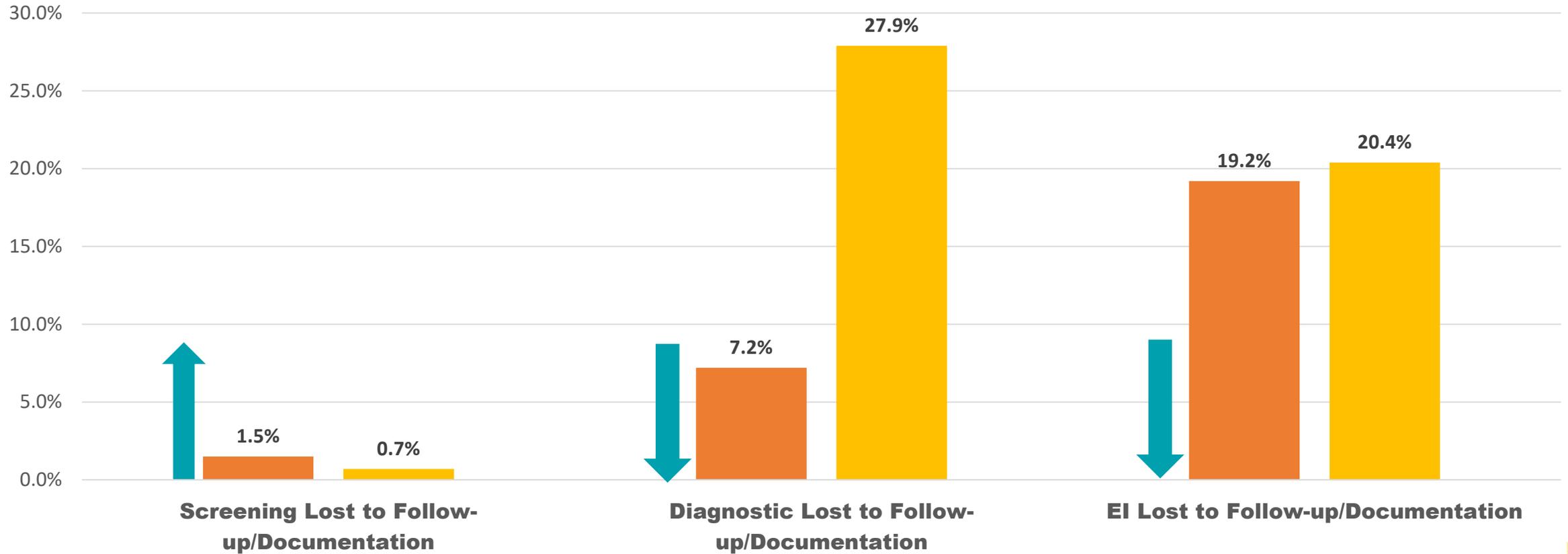
Florida National



2015 National Comparison for Lost to Follow-up/Lost to Documentation (LFU/LTD)

2015 Florida vs. National

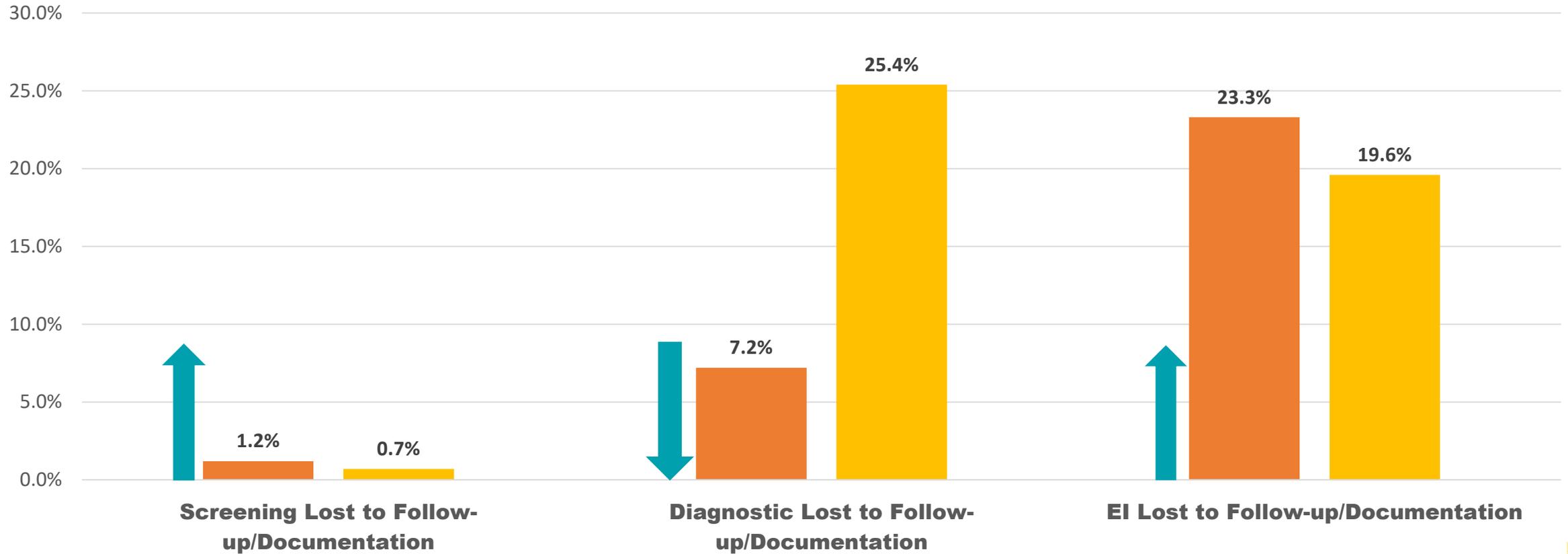
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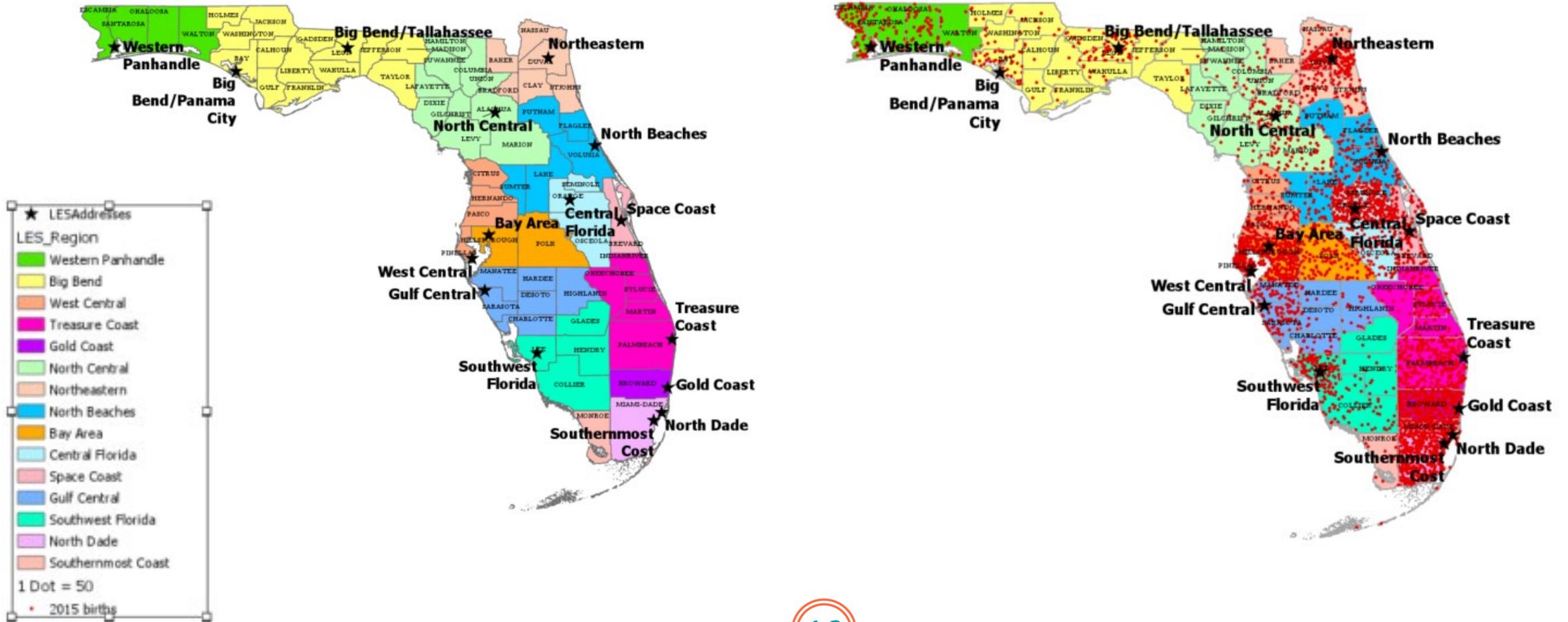
2016 National Comparison for Lost to Follow-up/Lost to Documentation (LFU/LTD)

2016 Florida vs. National

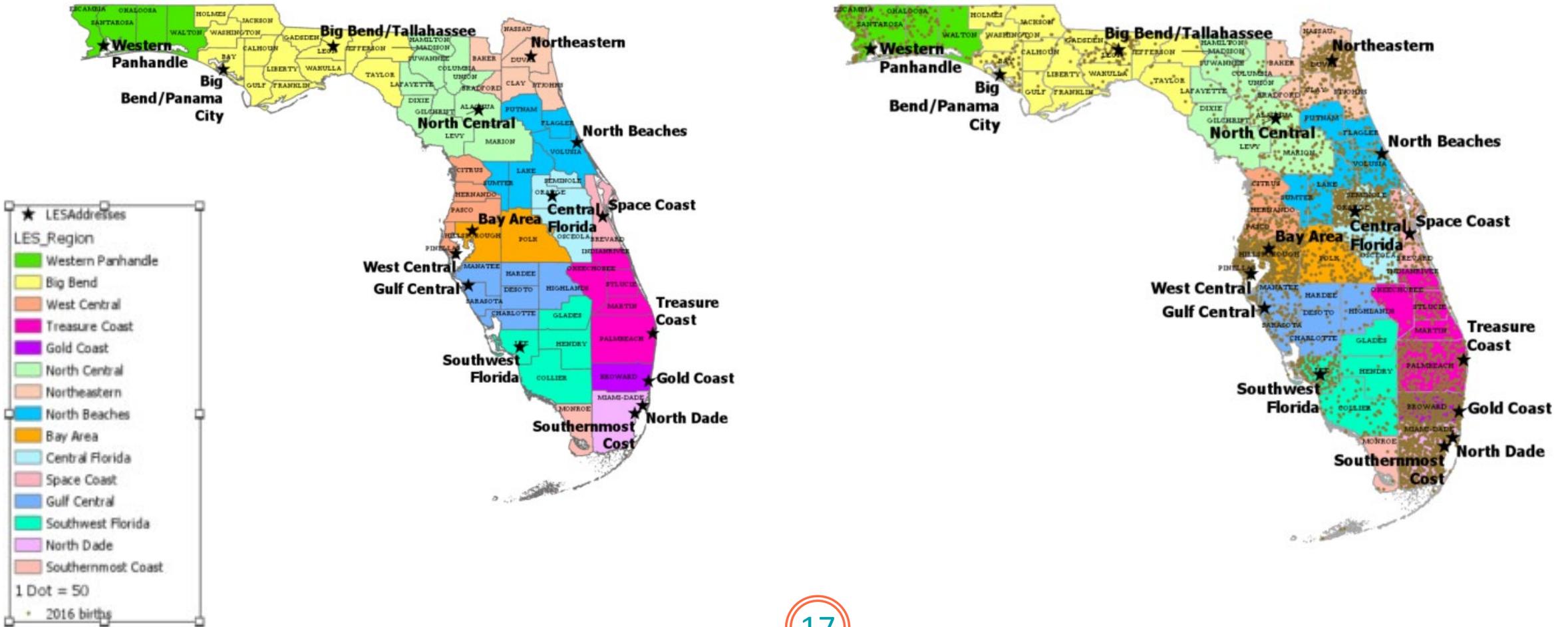
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2015 Spatial Distribution



2016 Spatial Distribution



Discussion

- **Lost to Follow-up/Lost to Documentation (LFU/LTD) Rate**
 - Stakeholders (reporting to EHDI)
- **Early Intervention**
 - Lost to Follow-up/Lost to Documentation
 - Non-integrated data system
 - Varying operational procedures
 - Early Steps Data Workgroup
- **EHDI-IS**
 - Data system fixes
- **Florida's Geography**

Next Steps for Florida EHDI

- Electronic reporting for diagnostic evaluations.
- Hearing loss follow-up.
- Develop materials about the EHDI Program to provide to Audiologists.
- Submit an abstract for a presentation at the Florida Association of Audiology Conference.
- Partner with Au.D. schools.
- Partner with the state licensing board.



Limitations

- In 2015, Florida's EHDI Information System (EHDI-IS) was not capable of calculating the number of infants "Diagnosed with No Hearing Loss before 3 months of Age" due to a software update.
- Early Steps separates Miami-Dade County into two separate service areas for regional service distribution.
- Statistics are specific to Florida so results are not generalizable, however, the methods can be used to duplicate this type of study for other states/territories.

Conclusions

- Importance of stakeholder involvement in the EHDI process.
- Importance of data quality for improvement of program outcomes
- Use of creative methodologies in practice based research
- Further research is necessary to examine statistically significant factors that impact EHDI outcomes and geographical trends in the EHDI outcome data.

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Questions?



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