



# Use of Web-based Reports by Primary Care Providers to Improve EHDI Follow-up

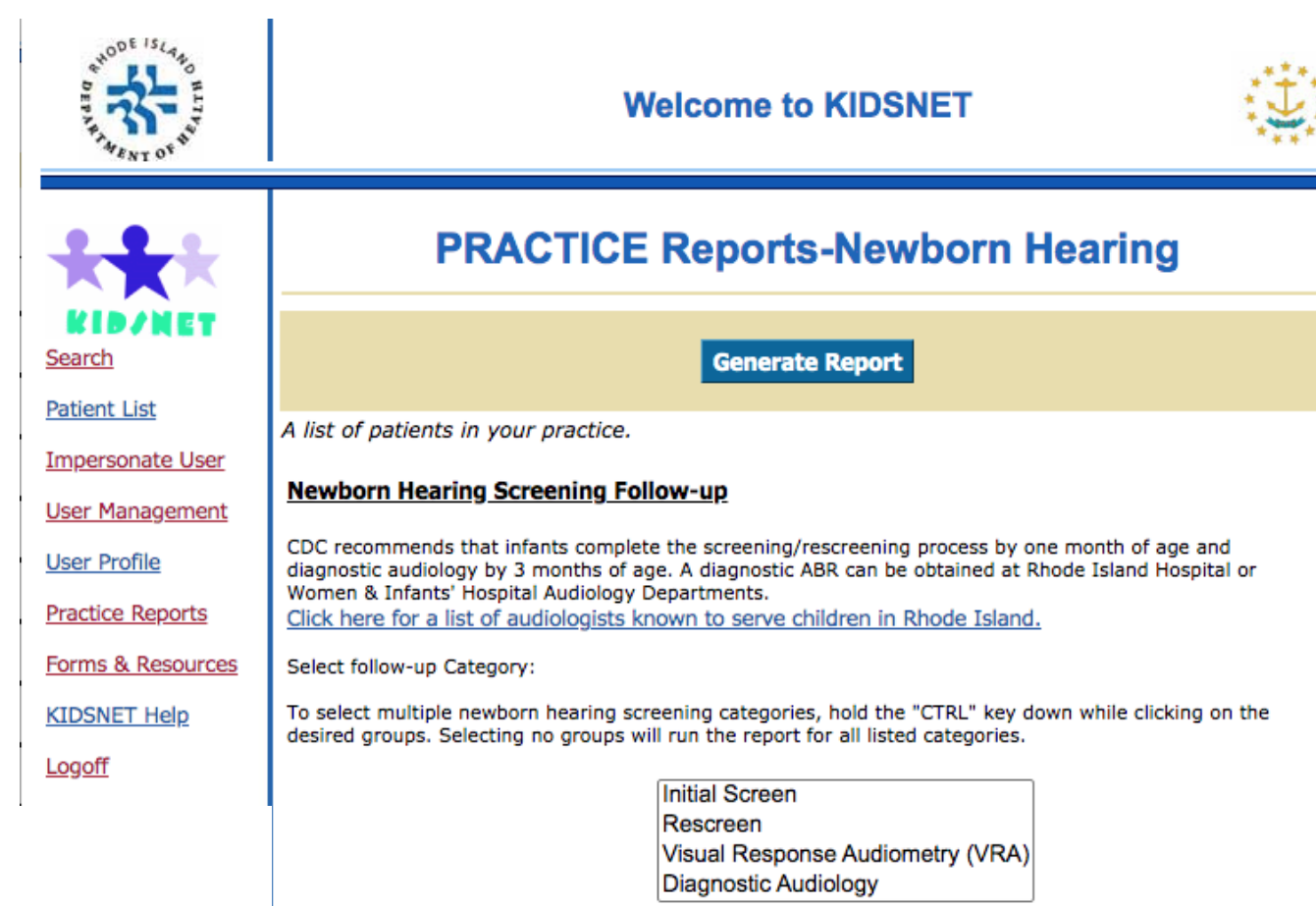
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## Purpose

- Access to Rhode Island Early Hearing Detection and Intervention (EHDI) data is available to primary care providers through KIDSNET, Rhode Island's web-based integrated child health information system. Users can run reports identifying those among their own patients who need EHDI follow-up.
- The purpose of this study was to compare EHDI follow-up completion among patients in primary care practices that ran the KIDSNET EHDI follow-up report to those in practices that never ran a KIDSNET EHDI report during 2017-2019.

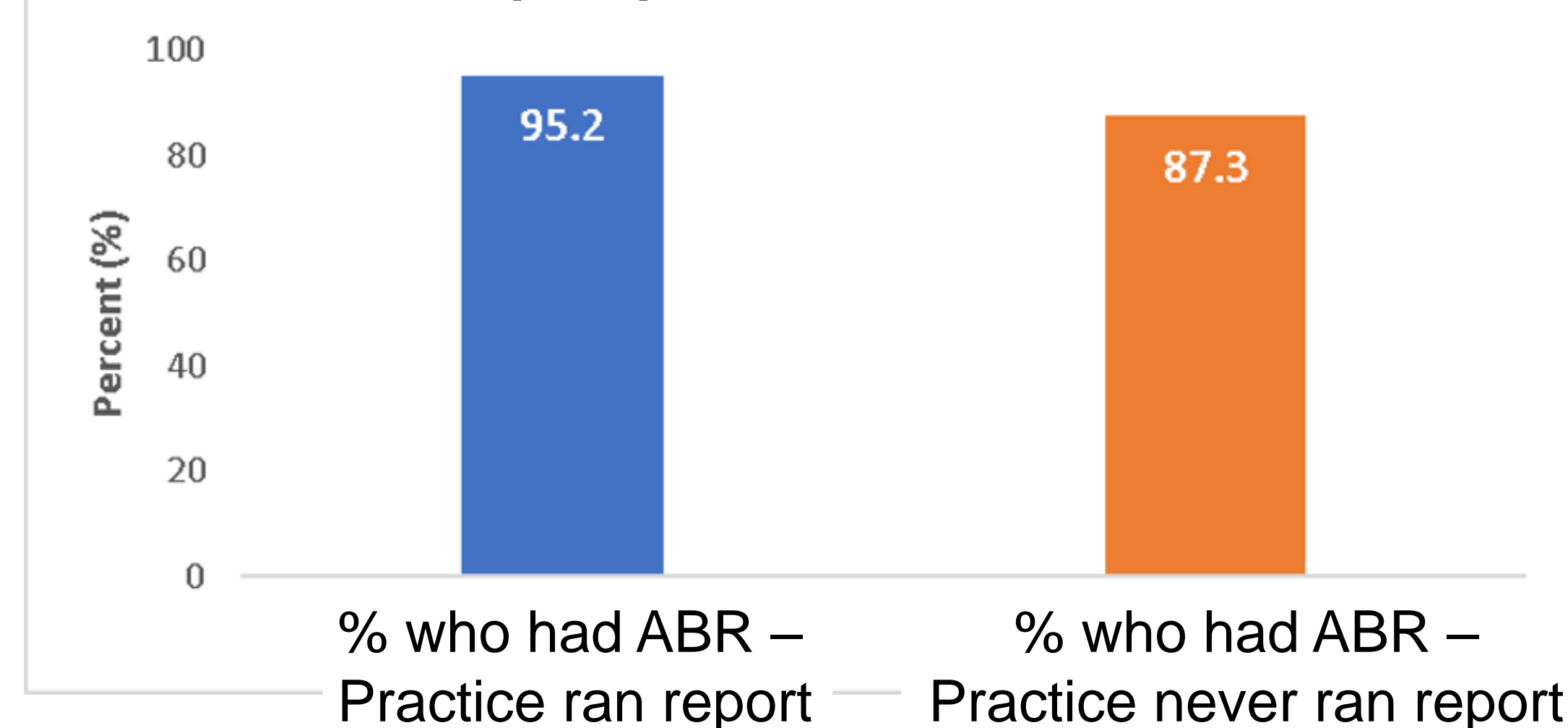


## Methodology

- Two cohorts of infants born from January 2017 to June 2019 were selected for this study:
  - infants referred for diagnostic ABR testing (n = 829)
  - infants who passed the newborn hearing screen but were referred for diagnostic VRA testing due to risk factors for hearing loss (n = 3,342)
- 116 primary care practices with access to EHDI Follow-up reports were divided into two groups
  - Those that ran at least one KIDSNET EHDI follow-up report between January 2017 and December 2019
  - Those that never ran a report
- Separate prevalence comparison analyses were completed for infants who were patients in the PCP practices who were referred directly for auditory brainstem response (ABR) diagnostic testing after newborn hearing screening and for infants who passed the newborn hearing screen but had risk factors for late onset hearing loss and were referred for Visual Response Audiometry (VRA) after they turn six months old.
- Chi-square tests were performed for statistical significance.

## Results

**Figure 1: Percentage of Infants who Received Dx ABR among Primary Care Practices that Ran or Did Not Run an EHDI Follow-up Report, Born in 2017-2019\***

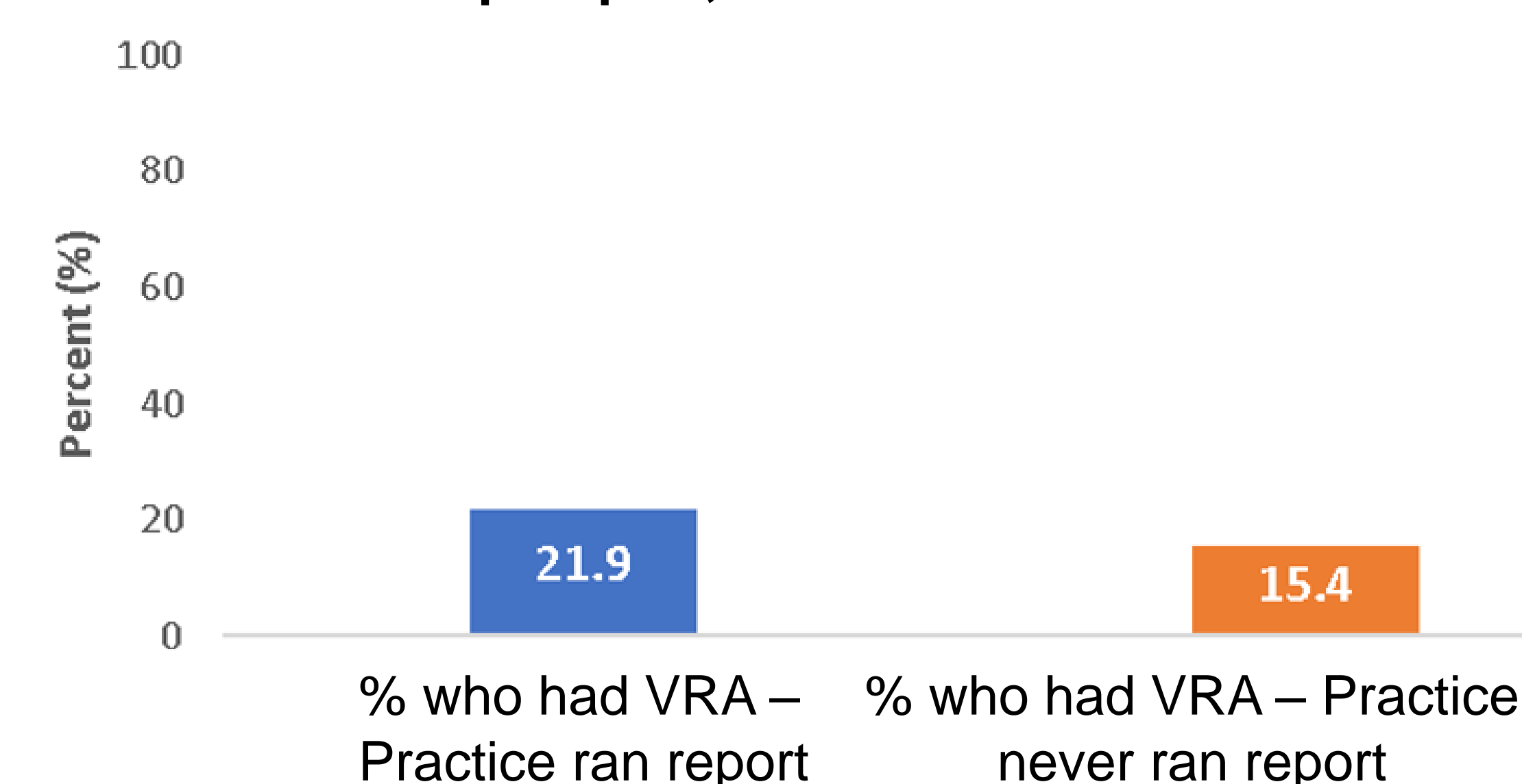


\* p-value : < 0.001

Data source: Center for Health Data and Analysis, Rhode Island Department of Health

Infants who were patients in primary care practices that ran an EHDI Follow-up Report were significantly more likely to receive the recommended diagnostic follow-up than those whose practice did not run a report

**Figure 2: Percentage of Infants who Received Dx VRA among Primary Care Practices that Ran or Did Not Run an EHDI Follow-up Report, Born in 2017-2019\***



\* p-value : < 0.001

Data source: Center for Health Data and Analysis, Rhode Island Department of Health

	# PCP Practices	Ran EHDI Report	# children Needing Diagnostic Follow-up	# Children Recieved Diagnostic Follow-up	% Children Recieved Diagnostic Follow-up
ABR	90	Yes	663	631	95%
		No	166	145	87%
VRA	113	Yes	2561	562	22%
		No	781	120	15%

- Seventy-six of 90 practices (84%) with infants referred for ABR ran the EHDI follow-up Report and 92 of 113 (81%) with patients needing VRA ran the report.
- Practices that ran an EHDI follow-up report had significantly higher percentages of patients receiving diagnostic audiology follow-up for both ABR (95% vs. 87%) and VRA (22% vs. 15%) compared to those not running a report.

## Limitations

- Analyses was limited to cumulative cohort data to make overall, unadjusted comparisons. Future analyses of individual-level cohort data would 1) potentially magnify the relationship between provider reporting practices and follow-up testing, 2) account for temporal issues, and 3) identify potential confounders.
- Many practices ran the report only once, which may have been done as part of their training. Further study is needed to understand whether a dose-response relationship exists with practices running the report more than once.

## Conclusions

- Children who are patients of primary care practices that run web-based EHDI follow-up reports are more likely to get the recommended diagnostic audiology follow-up than those in practices that do not run reports
- Web-based reports may be a useful tool to improve EHDI follow-up.
- Integrated child health data systems can be useful for primary care providers desiring access to EHDI follow-up recommendations for their patients