

**AAP DISTRICT VIII SECTION ON NEONATAL PERINATAL MEDICINE**

**2021 ANNUAL CONFERENCE QUALITY IMPROVEMENT ABSTRACT SUBMISSION FORM**

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**DEADLINE FOR RECEIPT OF ABSTRACT IS FEBRUARY 19, 2021.** Submissions will be accepted for either poster or oral presentation. Authors will be notified of acceptance and format for presentation (poster or poster symposium) by **March 12, 2021.**

**Title:** Improve follow up rates for Newborn Hearing Evaluation: a virtual Quality Improvement Project

**Authors:** Kristine Vo, BS; Lynn Iwamoto, MD

**Institution:** University of Hawaii, John A. Burns School of Medicine

## **Background:**

Hearing loss is one of the most common congenital birth defects. State programs track hearing screening results, provide equipment and training, and foster communication between providers. However, primary care physicians and medical homes play a key role in hearing screening and follow up.

The goals of this project are to improve the follow-up rates for hearing evaluation after a baby refers on newborn hearing screening and to increase physician confidence in discussing the screening process and follow-up with parents. This is a quality improvement project using the continuous improvement process and Plan, Do, Study, Act (PDSA) methodology.

## **Aim/Objective**

- Improve the compliance rate of diagnostic evaluation within 3 months of failed screening by 10% over a 2-year period (statewide rate)
- Improve physician level of confidence with explaining the newborn hearing screening process by at least 20% over 2 years

## **Planning/studying the intervention (PDSA cycles)**

The project is designed to engage community physicians by creating a virtual learning platform that combines educational modules, audits to reinforce learning points, statewide data review, and a collaborative discussion board for exchange of information and resources.

## **Measures (Process and outcomes indicators)**

The Hawaii Newborn Hearing and Screening Program provided monthly data on the rates of failed initial hearing screening, completed screens by 1 month, and diagnostic evaluations by 3 months. This information was posted to a secured, online forum where physicians could comment on data. The intent of this study is to encourage physician collaboration to reveal areas for improvement in hopes of improving the rates of diagnostic evaluation by 3 months. Participants completed entrance and exit surveys, which assessed physicians' confidence levels in counseling families about newborn hearing loss. The authors then compared the confidence levels before and after participation in the project.

## **Analysis/Outcomes/results (run or control charts, changes in delivery process, outcomes, balancing measures)**

This project is in progress. From the start of the COVID-19 pandemic in March 2019 to July 2020, there was a statistically significant increase in the rate of failed newborn hearing screenings as determined by one-way ANOVA [(F(1,19) = 19.84, p < 0.001)]. However, there were no significant changes in either the completed screening by one month or the completed diagnostic evaluation by 3 months. In addition, all physicians reported more confidence in caring for patients with hearing loss when compared to confidence levels before participating in the project.

## **Summary/Discussion**

The virtual platform is a unique way for physicians in rural and busy practices to collaborate for practice improvement as well as to network for sharing data and resources. Although the participation in this project is still building, physicians who participated reported increased confidence in caring for and educating families about hearing loss after completing the project. Of note, the impact of the pandemic on the screening failure rate has not affected the compliance with completing the screening by 1 month or the diagnostic evaluation by 3 months. Though not a direct result of this project, it does suggest that there are more infants who need follow up and a greater need for physicians to understand the follow up process and to be able to counsel families. Expanding the reach of the project by including residents and other trainees can help to drive further improvement in follow-up compliance.