WWW.NEOCIRC.ORG is an Effective Multidisciplinary Resource for Neonatal Circumcision

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Problem

- Approximately 52,000 adverse neonatal circumcision outcomes (ANCOs) follow routine clamp circumcision and involve a surgical repair in the US each year. We believe it is likely that ANCOs are rooted in circumcision knowledge differences across specialties.
- The American Academy of Pediatrics Task Force on Circumcision charged key organizations to collaboratively develop standards of training proficiency in performing circumcision and provide education for the care of circumcised newborn males; however, there has not yet been a systematic effort to standardize training for providers and home-care for parents.

Project Implementation

- **Model Design & Build:**
  The model build was done based upon insights from circumcision providers (n=46): Pediatrics/Neonatology (24). Obstetrics (14), and Pediatric Urology (8). These insights were collected during real time focus groups and by survey data. These insights were then compiled along with the authors' opinions to provide the framework for the content build of the model. The model presents knowledge interactively as a single method which is applicable to diverse clamp types / circumcision experiences . The model encompasses three domains: **before** (i.e., assess anatomy for clearance), **at** (i.e., mark the circumcision site), and **after** (i.e., provide home care instructions) circumcision.
- **Launch:**
  Usefulness . The model was made available online at www.neocirc.org. Usefulness was assessed using an embedded survey tool (Likert scale).
- Increase in Knowledge: Circumcision knowledge of pediatric staff at Advocate Children's Hospital – Park Ridge was assessed before and after access to the model. These Intake /exit test scores were compared.

Results

•Focus groups reviews of the model indicated model content as "very valuable" for domains: **before** (19/19), **at** (22/31), and **after** circumcision (21/27).

•Logins after launch
There were 332 users who logged in from diverse specialties (Figure 1)

• Feedback on model usefulness was provided by 66/332 users (20%) using an embedded survey. 95% of user comments indicated model was useful (Figure 2).

•Samples of "raw" survey responses are shown and indicate (Figure 3):
a) learning was done in <1 hour
b) strong overall agreement on usefulness of model
c) specific aspects of learning such as skin landmarks were regarded as "very valuable".

•Effective to increase knowledge (Figure 4)
- A total of 30 newborn providers completed an intake knowledge test (30 questions) and then accessed the www.neocirc.org model for online education.
- A total of 15 (50%) also completed the same test on exit.
- Comparison of intake/exit test scores showed a significant increase in knowledge after access to www.neocirc.org model from intake correct answers (18/30, 60%) to exit (23/30, 77%), respectively. ($p<0.0001$)

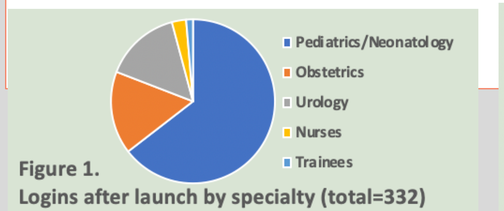

Figure 1.
Logins after launch by specialty (total=332)

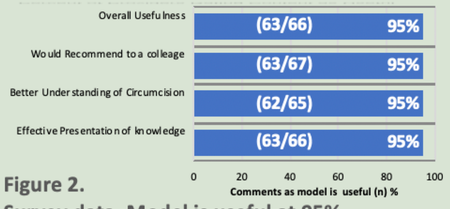

Figure 2.
Survey data. Model is useful at 95%.

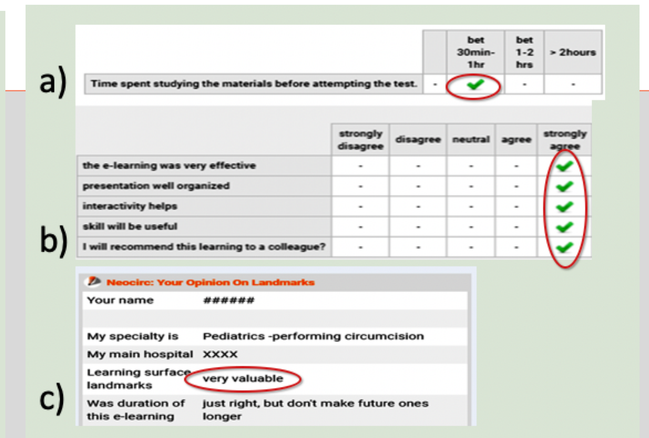

Figure 3. Survey "raw" data showing model is useful.

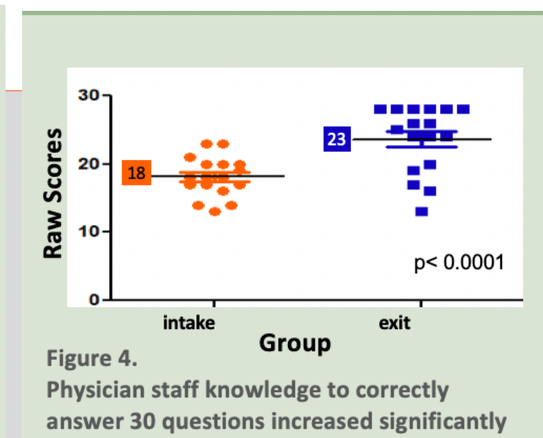

Figure 4.
Physician staff knowledge to correctly answer 30 questions increased significantly after access to www.NeoCirc.org model.

Conclusions

- www.neocirc.org provides a model for standardized knowledge about neonatal circumcision across multiple disciplines. It is rated 95% useful as a learning tool and was successfully used in a teaching hospital to increase neonatal circumcision knowledge.
- We believe this method of training will move our specialties beyond "See One – Do One - Teach One."
- We plan future research to determine if www.neocirc.org education will lead to reduced ANCO incidence.

Acknowledgements/Hospital Team

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