



Web - based learning is an effective method for educating pediatric residents about transition to adult subspecialty congenital heart disease care

Arwa Saidi MB. BCh., John Reiss ,PhD, Petar Breitinger, PA-C, MPAS,

Joseph Paolillo, MD, Erik Black, PhD, Shelley Collins MD

Department of Pediatrics, University of Florida, College of Medicine, Gainesville, FL

Abstract

Background: The incidence of congenital heart disease (CHD) is 1% of the newborn population with over 90% surviving and reaching adulthood. Improved survival requires transition from pediatric-focused to adult-centered cardiac care but this is not routinely performed. Of the many barriers to transition, one of the most fundamental is a lack of physician education and training. There is little data on how to train pediatric residents to properly transition their pediatric patients to adult caregivers.

Method: An interactive web based module was prepared and reviewed by a panel of national experts in transitional care. The module was sent by individual e-mail to Pediatric residents. Residents were asked to complete a pretest, review the module and watch the included videos and then complete a post test. The module and the tests take approximately 60 minutes to view and complete. Although aimed at patients with CHD, similar approaches can be incorporated into the transition of all pediatric patients with other special health care needs.

Objectives for the residents to learn during the module:

- Understand that transition is the purposeful, planned movement of adolescents and young adults with special health care needs from child-centered to adult-oriented health care system.
- Understand that transition of care is not the same as transfer of care.
- Review the American Academy of Pediatrics Guidelines recommendations about the written transition plan.
- Recognize the importance of the patient's chronological age, medical and developmental status when considering timing for transition of care.
- Define appropriate age of transfer.
- Understand the concept of a medical home.

Conclusion: A web based module can be used to educate pediatric residents about the importance of transition and the recommended guidelines regarding transition. Residents will learn how to incorporate these methods into their practice. Although based on transition of CHD patients, this module can easily be adapted to other pediatric sub-specialties.

INTRODUCTION

Background: The incidence of congenital heart disease (CHD) is 1% with over 90% reaching adulthood. Improved survival requires transition from pediatric-focused to adult-centered cardiac care but this is not routinely performed. Of the many barriers to transition, one of the most fundamental is a lack of physician education and training. There is little data on how to train residents to properly transition their pediatric patients to adult caregivers.

Interactive web based programs have been successfully introduced into pediatric residency training curricula for programs such as smoking cessation, motivational interviewing and critical care rotations.

Using an interactive web based module to provide education regarding transition of care is an accessible and logical way to introduce transition related policies, principles and practices into pediatric residency training programs. We developed a web based module to educate our pediatric residents on the basic concepts of transition and the current recommendations by the American Academy of Pediatrics (AAP) and the Society of Adolescent Medicine.

Sample Questions

- According to the American Academy of Pediatrics, at what age should you have a written transition plan with patient and family?
- What is a medical care home?
- Transition is the same as transfer of care: True or false
- Start talking with teenagers about lifelong care needs when they become 16 years: True or False
- Which of the following is a significant barrier to transitioning an adolescent with CHD?
 - Parents inability to let go
 - Unfamiliarity treating adult issues
 - Insurance
 - Pediatric adaptive behaviors
 - All of the above

Sample open-ended comments on how information learned in the module would alter clinical practice included:

- Discuss transition to adult care and start to talk with the patient directly with the parents as the secondary audience.
- Start to meet with them alone
- Encourage them to make decisions about their health care management
- I would talk with the patient primarily and by herself. Parents could have input later in the visit.
- Make sure that they are able to make decisions regarding medications, when to schedule testing, appointments and that they understand the importance of this. Talk to the patient alone for part of the visit
- Involve him in the process of making decisions. Encourage him to take care of his own health by allowing him to maintain his own medical records, making own appointments, ask questions etc.

RESULTS

A total of 30 residents completed the pre-test, viewed the module and completed the post test (response rate of 61%). There were 11 males and 19 females. Experience varied across the participants. There were 7 interns, 11 second year, and 12 third year residents. There were 20 US medical school or DO graduates and 10 International medical graduates. Statistically significant differences were found on the pretest performance based on participant gender (males performed better than females) (p=0.05) and medical school (US graduates performed better than International graduates) (p=0.014). There was no significant difference found on the post test. Analysis found no interaction between independent variables. The average pretest grade was 73% and the average post test grade was 82% (p =0.0012). There was improvement in 22 of the residents who completed the pre and post test.

CONCLUSIONS

A web based module is a successful tool in the education of pediatric residents about the importance of transition and the recommended guidelines regarding transition. Residents will learn how to incorporate these methods into their practice. Although there was a gender and medical background pre test difference, this was not noted in the post test results. Based on transition of CHD patients, this module can easily be adapted to other pediatric sub-specialties.

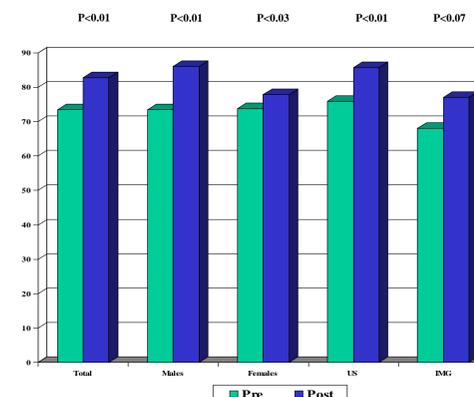
METHODS

Method: An interactive web based module was prepared and reviewed by a panel of national experts in transition. The module was sent to all Pediatric residents (n=49) using Survey Monkey™. Demographics collected included resident's gender, the residency year and the medical school they graduated from. The data was not anonymous and the residents consented to participate in the survey. The residents were asked to complete a pretest, review the module and watch the included videos and then complete a post test. The module and tests take about 60 minutes to complete. Both analysis of variance and paired t-tests were used to analyze the data.

The educational objectives were:

1. Understand that transition of care is not the same as transfer of care.
2. Review the American Academy of Pediatrics Guidelines recommendations about the written transition plan.
3. Recognize the importance of the patient's chronological age, medical, and developmental status when considering timing for transition.
4. Define appropriate age of transfer.
5. Understand the concept of a medical home.

Although this module focused on patients with congenital heart disease, it emphasized that similar approaches should be incorporated into the transition of all pediatric patients with special health care needs.



REFERENCES

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