

# Thrush in the Breastfeeding Dyad

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## Introduction

Per the 2011 Surgeon General's Call to Action to Support Breastfeeding, "inadequate education and training of clinicians has been identified as a major barrier to breastfeeding<sup>1</sup>." Undiagnosed and untreated nipple and neonatal candidiasis can be a major reason for early discontinuation of breastfeeding<sup>2</sup>.

The goal of this project was to identify family physicians' current knowledge base and provide them with the basics of diagnosis and treatment of neonatal thrush and nipple candidiasis in the breastfeeding dyad.

## Methods

- Reviewed current literature to identify efficacy in diagnosing and treating thrush in the breastfeeding dyad.
- Identified family physicians' knowledge base by conducting a written pre-test with 50% of questions about diagnosis and 50% of questions about treatment.
- Provided updated recommendations related to diagnosis and management in a 45 minute teaching session.
- Assessed understanding of key points in diagnosis and treatment through a post-test given immediately after the teaching session.
- Input survey results manually into Qualtrics Survey Software.

## Results

A total of 28 surveys were collected. Most survey participants comprised of PGY II and PGY III residents (Fig. 1). On self report, 57% of participants were comfortable treating neonatal thrush, while only 36% were comfortable treating nipple candidiasis (Fig. 2).

Pretest results showed a stronger knowledge base in diagnosing thrush compared to treating it (66% versus 52%). After receiving a teaching session, knowledge in diagnosis and treatment of thrush increased to 98% for diagnosis and 93% for treatment (Fig. 3).

Figure 1: Level of Training of Participants

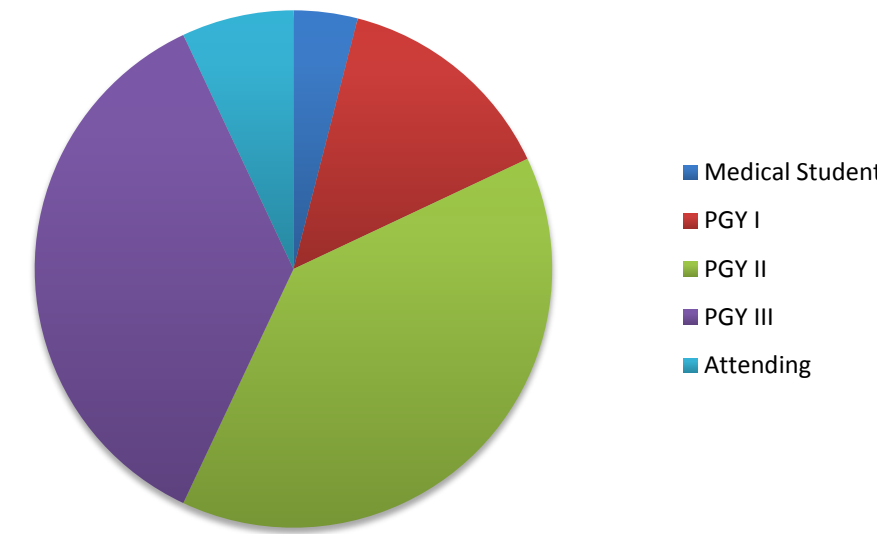


Figure 2: Treatment Comfort Level and Cases Seen Per Year

Are you comfortable treating nipple candidiasis in a breastfeeding mother?				
#	Answer	Response	%	
1	Yes	10	36%	
2	No, I would like more information	18	64%	
Total		28	100%	

Are you comfortable treating oral thrush in a newborn?				
#	Answer	Response	%	
1	Yes	16	57%	
2	No, I would like more information	12	43%	
Total		28	100%	

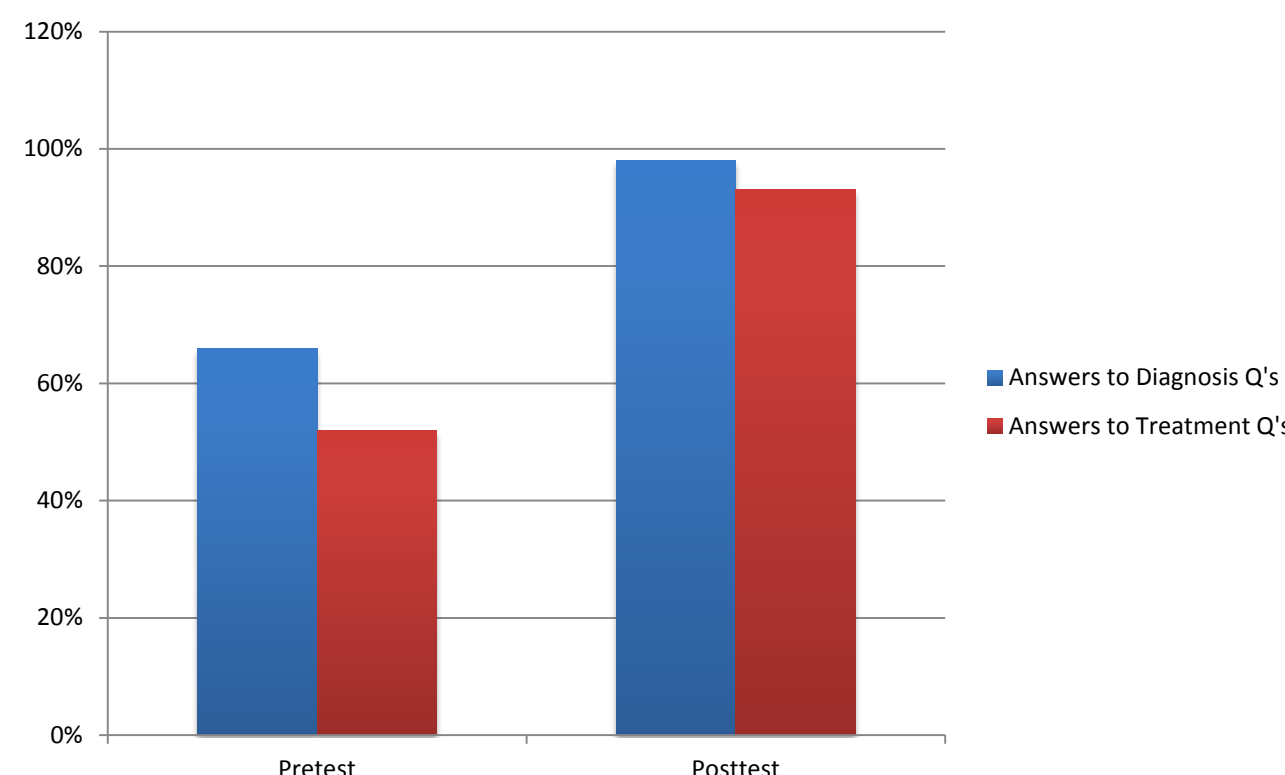
  

How many cases of neonatal oral thrush do you see in your practice on average per year?				
#	Answer	Response	%	
1	0-5	20	71%	
2	5-10	8	29%	
3	>10	0	0%	
Total		28	100%	

How many cases of nipple candidiasis do you see in your practice on average per year?				
#	Answer	Response	%	
1	0-5	25	89%	
2	5-10	3	11%	
3	>10	0	0%	
Total		28	100%	

Figure 3: Comparison of Pretest and Posttest Knowledge



## Conclusions

On review of the literature, there are no consensus guidelines from the AAFP, AAP or ACOG on the treatment of thrush in the breastfeeding dyad, so published expert recommendations were used for the teaching session.

Physicians reported a higher comfort level in treating neonatal thrush compared to nipple candidiasis, possibly due to greater exposure to neonates with thrush versus women with nipple candidiasis. Interestingly, most physicians already knew to encourage continuation of breastfeeding, which according to the literature many physicians may fail to do. This may be attributed to the teaching that residents are already receiving on breastfeeding related issues as part of residency.

Though the small sample size does not allow for meaningful statistical analysis, the study showed that family physicians knew more about diagnosis of thrush rather than treatment on both pre and post testing, but that knowledge base improved after the teaching session, with an average increase of 32% for diagnosis and 41% for treatment (Fig 3).

## Limitations

- Unable to determine statistical significance due to small sample size.
- All physicians were from the same residency training program.
- Not an equal representation of all levels of trainings.
- Teaching was done in a lecture-based format only.
- No time gap in recall of information may have skewed results.

## Acknowledgments

This project was mentored by Dr. Jessie Pettit, whose help is acknowledged with great appreciation.

## References

1. The Surgeon General's Call to Action to Support Breastfeeding. <http://www.ncbi.nlm.nih.gov/books/NBK52682/pdf/TOC.pdf>. U.S. Department of Health and Human Services, 2011.
2. Heller MM, Fullerton-Stone H, Murase JE. Caring for new mothers: diagnosis, management and treatment of nipple dermatitis in breastfeeding mothers. *Int J Dermatol*. 2012 Oct;51(10):1149-61. (Over 30 references were used for the teaching session, which cannot be listed here)