PRIMARY CARE FOR YOUR PEARLY WHITES: A SYSTEMATIC REVIEW OF ORAL HEALTH CURRICULUA FOR PRIMARY CARE CLINICIANS

MARTELL HESKETH BA[1], KATHLEEN DWIEL MSPH[1], JESSICA ALPERT BS[1], KRISTEN GOODELL MD[2], ERIN SULLIVAN PHD[1]

[1] Harvard Medical School Center for Primary Care, Boston, MA; [2] Boston University School of Medicine, Boston, MA

CIPCOH Center for Integration of Primary Care and Oral Health

CENTER FOR PRIMARY CARE HARVARD MEDICAL SCHOOL

INTRODUCTION

The historical separation between oral and medical health care in the United States has had an adverse effect on the health of millions of Americans. About a third of the U.S. population faces barriers to accessing dental care, especially children and racial and ethnic minorities.[1] One possible solution to increase access to oral health care is training primary care clinicians to expand their scope practice to include preventative oral health procedures. But first, training programs need to understand what has been learned about implementing oral health curricula.

Critical questions include:

What kind of curriculum is the most effective at producing meaningful changes in practice?

When should training occur?

How long should training be?

How much will it cost?

Whom should efforts be targeted at?

The purpose of this systematic review is to understand the effects of implementing oral health curricula in primary care training on the delivery of oral health care and screenings at primary care practices.

METHODS

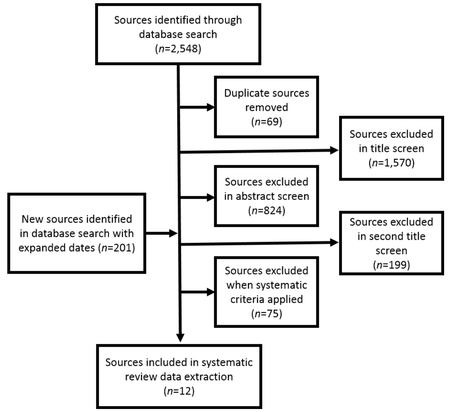
Researchers utilized the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) method for this systematic review.[2] Researchers searched multiple databases for literature related to oral health curricula for primary care clinicians, assessed titles, abstracts, and full texts and abstracted data for the review. Researchers narrowed sources using systematic review criteria based on curricula audience, curricular implementation and outcomes measured.

Inclusion Criteria

(1) Be implemented as part of primary care training (including continuing education)
(2) Feature oral health education in primary care training
(3) Be implemented for individuals that are part of the traditional primary care team or trainees
(4) Outcomes must report a measureable change in practice

RESULTS

Figure 1: Source Selection Process



The literature search identified a total of 2548 sources. After applying all criteria shown in Figure 1, 12 final sources were included.

There was great variety in the sources. Target audiences for training varied from entire interprofessional clinic staffs to one specific student or resident group. The curricular content, mode, and length of training varied from 90 minutes to years long curricula. The final set of sources included curricula taught both online and in person. They often included additional didactic components, skills training, or a mixture of both. Practice change outcomes and the tools used to measure change in them were also highly variable.

Figure 1 uses a selection tree to illustrate the source selection process the researchers undertook using the PRISMA framework. It also indicates the number of sources that were discarded or kept at each stage in the process.

Figure 2: Outcomes and Measurement Tools

		Screenings & Visits			Procedures			Referrals	
Title	Year	Chart Audit	Survey	Billing Claims	Chart Audit	Survey	Billing Claims	Chart Audit	Survey
Anderson, K. L.; Smith, B. S.; Brown, G.	*2013*		X			X			X
Bowser, J.; Sivahop, J.; Glicken, A.	*2013*	X			X			X	
Close, K; Rozier, G. R.; Zeldin, L. P.; Gilbert, A. R.	*2010*		X			X			
Douglass, J. M.; Douglass, A. B.; Silk, H. J.	*2005*	X	X					X	X
Golinveaux, J.; Gerbert, B.; Cheng, J.; et al.	*2013*		X			X			X
Gonsalves, W. C.; Skelton, J.; Smith, T.; et al.	*2004*	X						X	
Graham, E.; Negron, R.; Domoto, P.; et al.	*2003*	X					X		
Schaff-Blass, E.; Rozier, R. G.; et al.	*2006*		X			X			
Slade, G.D.; Rozier, G.R.; Zeldin, L. P.; et al.	*2007*			X					
Wawrzyniak, M. N.; Boulter, S.; et al.	*2006*	X			X				
Grant, J. S.; Roberts, M. W.; Brown, W. D.; et al.	*2007*	X			X			X	
Lopreiato, J. O.; Foulds, D. M.; Littlefield, J. H.	*2000*	X			X				

Figure 2 illustrates the outcomes measured by each of the final 12 included sources along with the measurement tools used to collect the outcome measure. The underlined items across the top of the chart represent the outcome measured (Screenings & Visits: preventative oral health screenings, diagnoses, prescriptions; Procedures: fluoride varnish applications; Referrals: referrals to a dental care provider). Non-underlined items across the top of the chart represent the tool used to gather the preceding outcome measure.

CONCLUSIONS

Current evaluation of oral health curricula for primary care clinicians are too heterogeneous to determine curricula effects on practice level behavior. An evaluation framework is needed to identify best practices that can be implemented in oral health training for primary care clinicians. These best practices can improve access to basic oral health care and close the gap in oral health disparities in the United States.

Future Research

(1) Focus on practice change outcomes
(2) Develop a clear and rigorous evaluation framework
(3) Understand the heterogeneity found in current curricula evaluations

POLICY IMPLICATIONS

A more standardized evaluation of oral health curriculum would identify best practices and could inform policy decisions around reimbursement as well as skill development for primary care clinicians. Identifying best practices could also allow for better advocacy concerning the integration of oral health curriculum into curricula for physicians, nurses and medical assistants to increase patient access to oral health care.

CONTACT INFORMATION

Kathleen Dwiel, *Research Manager*
Center for Primary Care
Harvard Medical School
Kathleen_dwiel@hms.harvard.edu

Erin E. Sullivan, *Research and Curriculum Director*
Center for Primary Care
Harvard Medical School
Erin_sullivan@hms.harvard.edu

REFERENCES

1. Access to Care. *Action for Dental Health* http://www.ada.org/en/public-programs/action-for-dental-health/access-to-care. Accessed April 13, 2017.
2. Shamseer L, Moher D, Clarke M, et al. Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015: elaboration and explanation. Bmj. 2015;349:g7647.

This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number UH1HP29962, titled Academic Unites for Primary Care Training and Enhancement.
This Information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS, or the US Government.