Physician Practice Location Choices After Teaching Health Center (THC) Residency Training

RURAL HEALTH

Denna Wheeler, Ph.D. ◆ Chad Landgraf, M.S., GISP ◆ Indu Bhattarai, M.S. ◆ Krista Schumacher, Ph.D.

OSU Center for Rural Health – Tulsa, Oklahoma

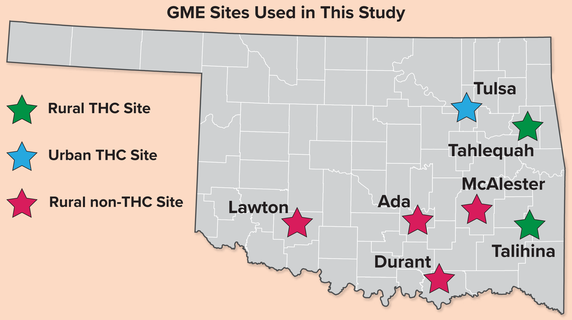
INTRODUCTION

The Teaching Health Center Graduate Medical Education (THCGME) program was designed to increase the number of primary care residents trained in community-based settings, particularly in rural and other underserved areas. The OSU Center for Health Sciences established five THC programs in 2012 and has since expanded to seven programs and increased capacity at four programs. In the current study we explored Oklahoma GME graduates by specialty, GME characteristics including rurality and type, and post-residency practice location.

METHODS

We examined data from graduates of three types (Urban THC, Rural THC, and Rural non-THC) of Oklahoma osteopathic GME programs between 2012 and 2023. We coded specialty and practice location for 248 program graduates and demographic information for 111 OSU College of Osteopathic Medicine (COM) graduates including race, age, and gender. Our main variables of interest were retention in Oklahoma and the rurality of practice location. We used two measures of rurality; the Index of Relative Rurality (IRR), a continuous measure ranging from 0 (urban) to 1 (rural), and the Federal Office of Rural Health Policy (FORHP) designation, a dichotomous measure. We conducted Chi-square tests of independence for pairs of categorical variables and one-way analysis of variance (ANOVA) for pairs of variables with a continuous outcome. We used the National Provider Identifier (NPI) to determine the current practice location of each physician. We used SPSS 28 for all analyses and ESRI's ArcGIS Pro with the ArcGIS World Geocoding Service to geocode the practice locations.

GME Sites Used in This Study

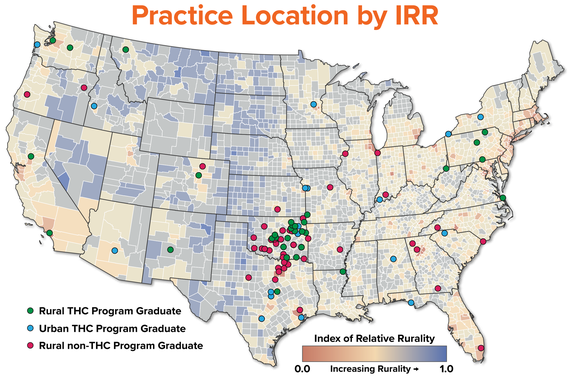


DISCLAIMER

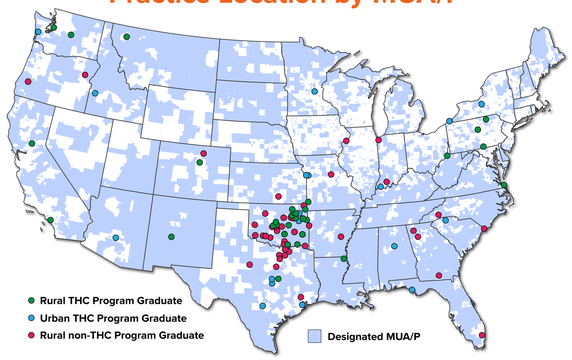
This presentation is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling $19,479,063 with 10% financed with non-governmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government.

RESULTS

Practice Location by IRR

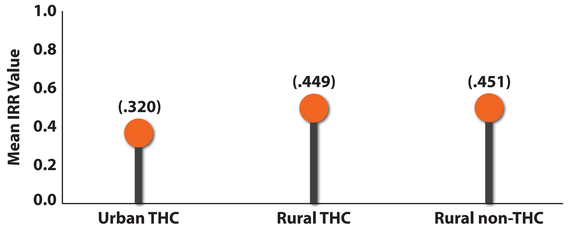


Practice Location by MUA/P



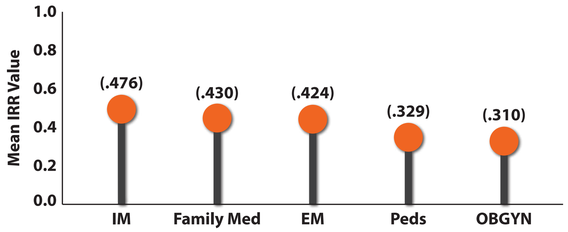
Rural Training = Rural Practice

A one-way ANOVA to examine differences in mean practice rurality by GME training location was significant ($F = 52.21$, $df = 2$, $p < .001$). Post-hoc tests indicated rural program graduates are practicing in places with significantly higher IRR scores than urban GME graduates.



Pediatrics & OBGYN Cluster in Urban

A one-way ANOVA to examine differences in mean practice rurality by specialty was significant ($F = 12.99$, $df = 4$, $p < .001$). Post hoc tests indicated two clusters, with OBGYN and pediatric physicians trending urban and emergency medicine, family medicine, and internal medicine physician graduates trending rural.



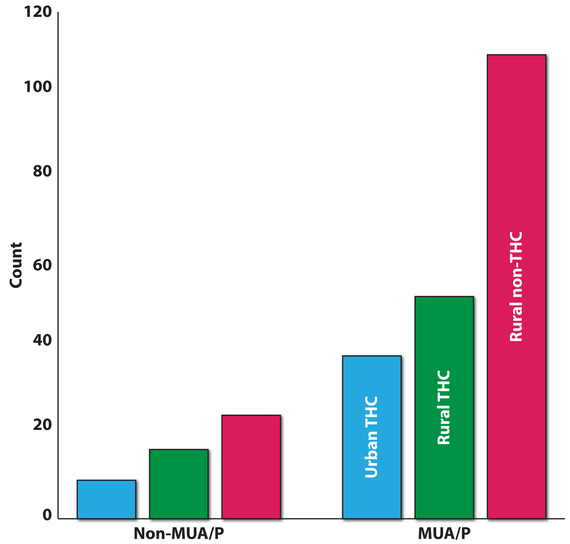
80% of Graduates Practice in a MUA/P

	Non-MUA/P		MUA/P		Total	
	N	%	*N*	%	*N*	%
Family Medicine	38	21.8	136	78.2	174	100.0
Internal Medicine	1	9.1	10	90.9	11	100.0
Emergency Medicine	3	8.6	32	91.4	35	100.0
Pediatrics	7	41.2	10	58.8	17	100.0
OBGYN	0	0.0	11	100.0	11	100.0
Total	49	19.8	199	80.2	248	100.0

$\chi^2 = 11.655$, $df = 4$, $p = .02$

No Difference by MUA/P

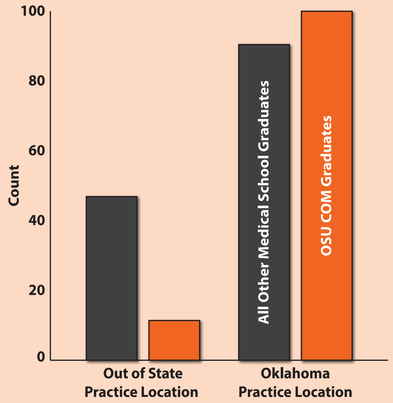
No significant differences between GME type by practice location in an MUA/P or not ($\chi^2 = 0.867$, $df = 2$, $p = .648$).



DISCUSSION & CONCLUSIONS

Published research indicates that THCGME programs are successful in increasing the number of primary care physicians practicing in rural and underserved areas and are cost-effective, with a lower cost per resident compared to traditional residency programs.

The results from the current study indicate that physicians who are training in Oklahoma's THCGME programs and other rural programs are successfully retained in Oklahoma for practice (77% overall) with higher rates for OSU COM graduates (90%) and rural graduates (79%). This study confirmed that students are more likely to stay in a geographic area similar to residency training, regardless of the rurality measure used. Nearly 90% of those who train in urban areas practice in urban areas while just under 75% of rural trainees continue to practice in rural areas.



Overall, our study aligns with THCGME efficacy research. This analysis demonstrated that graduates tend to practice in underserved areas, including rural areas, where physician shortages are most severe.

REFERENCES

Waldorf, B.; Kim, A. (2018). The Index of Relative Rurality (IRR) : US County Data for 2000 and 2010. Purdue University Research Repository. doi:10.4231/R7959FS8

Barclift, S.C., Brown, E.J., Finnegan, S.C., Cohen, E.R., & Klink, K. (2016) Teaching Health Center Graduate Medical Education Locations Predominantly Located in Federally Designated Underserved Areas. J Grad Med Educ (2016) 8 (2): 241–243. doi.org/10.4300/JGME-D-15-00274.1

Bazemore, A., Wingrove, P., Petterson, S., Peterson, L., Raffoul, M., & Phillips, R. L. (2015). Graduates of teaching health centers are more likely to enter practice in the primary care safety net. American Family Physician, 92(10), 868.