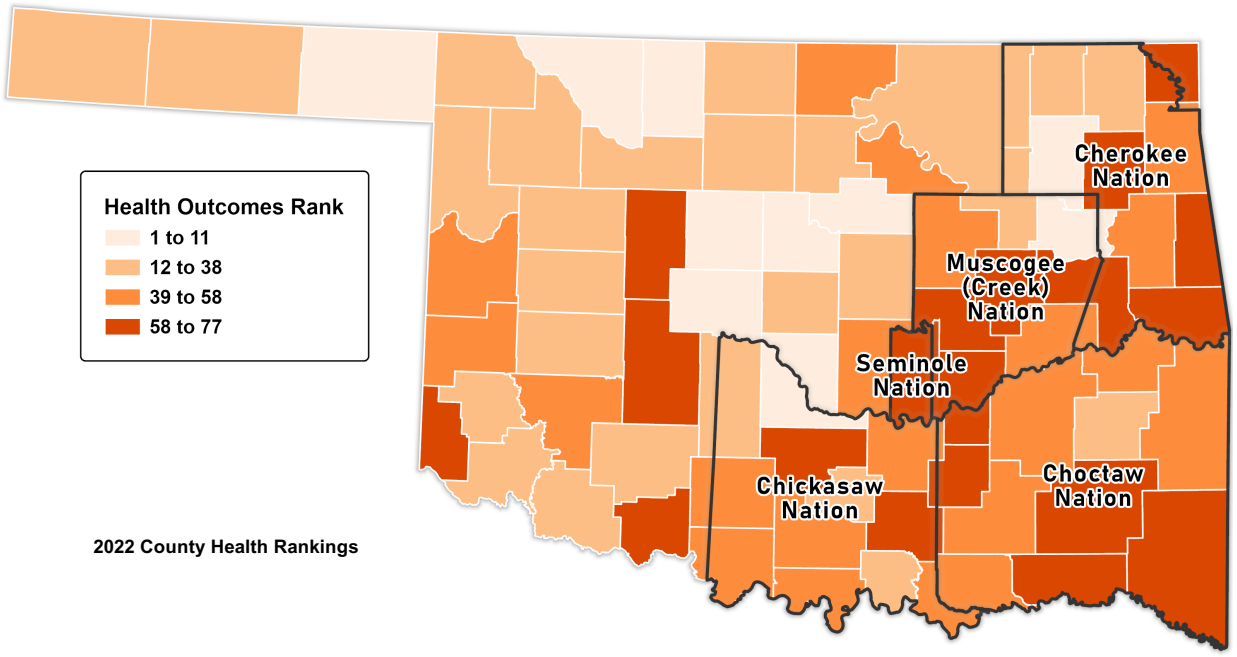
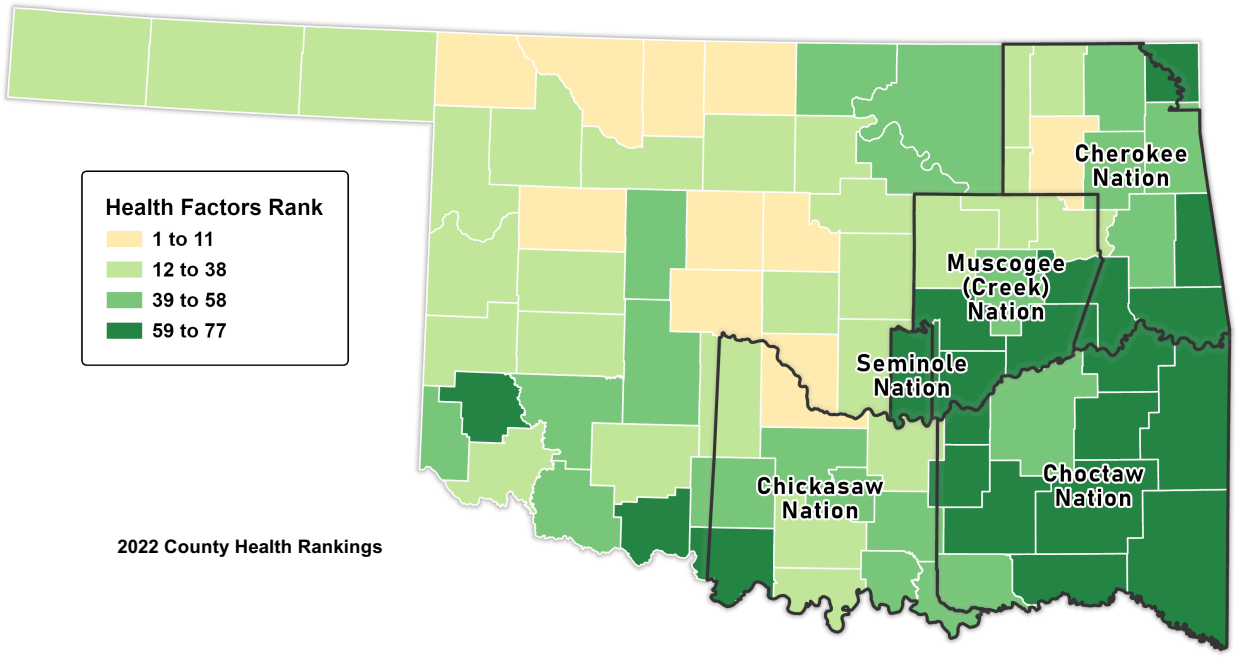

COLLEGE OF
OSTEOPATHIC MEDICINE
at the Cherokee Nation

CHALLENGES OF RURAL & FRONTIER

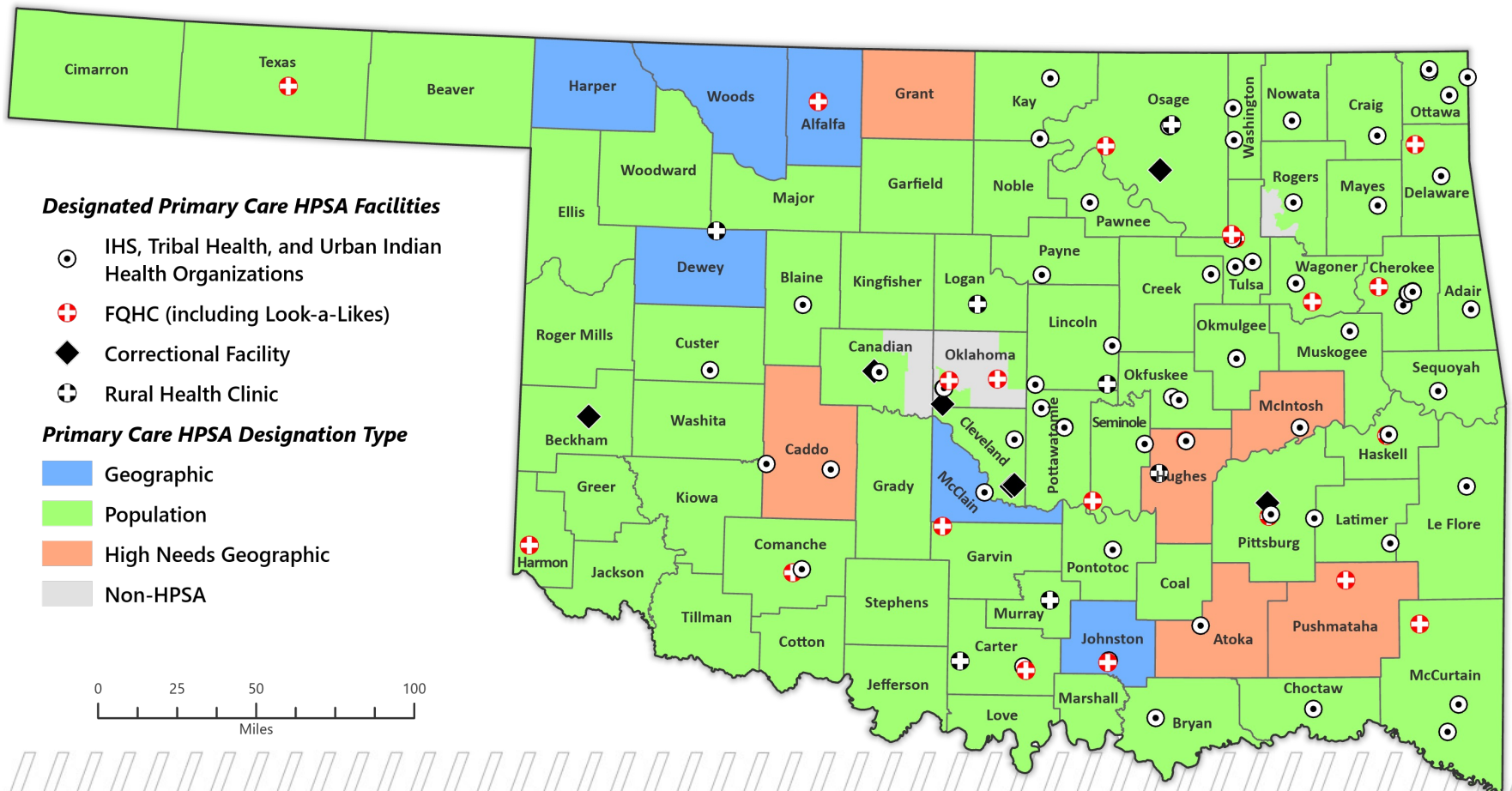
- 20% of the Population / 9% of the Physician Workforce
- Significantly Worse Health
- Health and Healthcare Disparities have Increased
- Some Examples
  - Shorter Life Expectancy
  - Increased Mortality (Heart, Respiratory, Cancer, Stroke, Trauma)
  - Increased Maternal & Infant Mortality
  - Increased Opioid Use Disorder / Overdose
  - Higher Rates of Mental Illness & Death by Suicide

CONCENTRATED POOR HEALTH OUTCOMES/FACTORS





WIDESPREAD PRIMARY CARE SHORTAGES



77 HPSA Counties

3 counties with 1 PCP

6 counties with no PCPs

74.2 active PCPs per 100,000 population

CHALLENGES OF RURAL & FRONTIER

Despite 20% of Americans living in rural and frontier locations

- Only 1% of residents train in rural areas
- Only 4% of family medicine and 5% of internal medicine training sites are in community-based health clinics
- Only 6% of family medicine, 1% of internal medicine, and 2% of general surgery sites are in rural settings

GME EXPOSURE IS A FACTOR

"More than half (57.1%) of the individuals who completed residency training from 2011 through 2020 are practicing in the state where they did their residency training"

AAMC 2021 Report on Residents, Executive Summary

Predictors of Primary Care Physician Practice Location in Underserved Urban or Rural Areas in the United States: A Systematic Literature Review

Goodfellow, Amelia; Ulloa, Jesus G. MD, MBA; Dowling, Patrick T. MD, MPH; Talamantes, Efrain MD, MBA, MSHPM; Chheda, Somil; Bone, Curtis MD, MHS; Moreno, Gerardo MD, MSHS

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A Roadmap to Rural Residency Program Development

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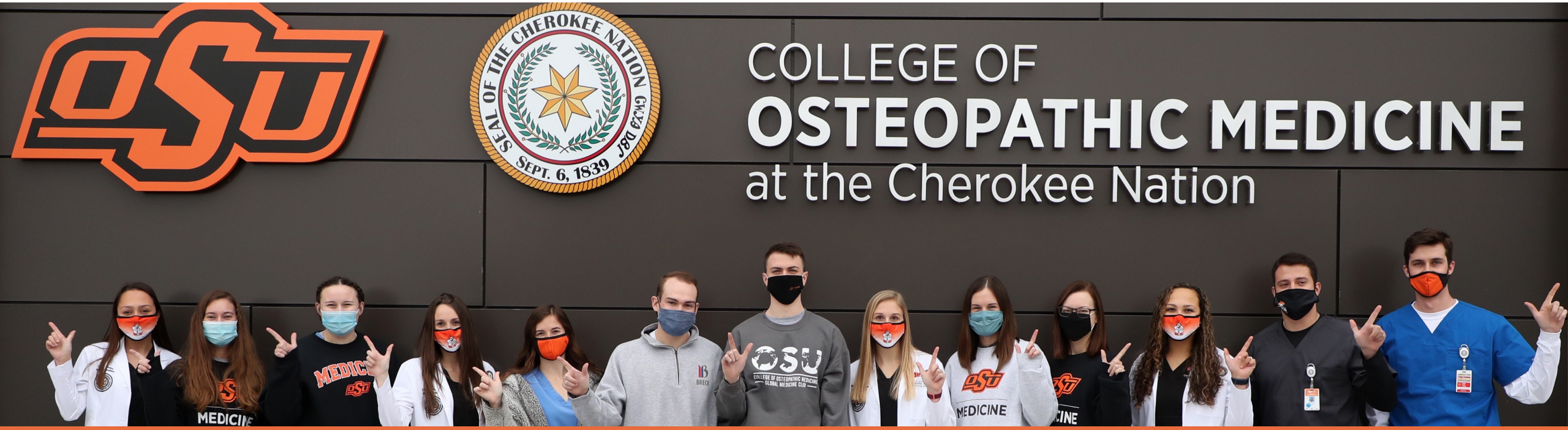
Rural communities face a pressing need for primary care, behavioral health, and obstetrical care services, yet rural hospitals around the country are closing, and the gap between mortality rates in rural and urban areas is widening.[1,2] While there is some debate about whether the nation faces a shortage of physicians, there is general consensus that the workforce is maldistributed.[3] Estimates suggested we face a shortfall of 14 164 practitioners in primary care health professional shortage areas.[4] While efforts to address rural workforce shortages need to be targeted along multiple points in a physician's career trajectory, exposure to rural and underserved settings during training has been shown to increase physicians' sense of preparedness for rural practice and retention in rural communities.[5,6] Despite this evidence, graduate medical education (GME) in rural areas remains very limited, and the US Government Accountability Office estimates that only 1% of residents across all specialties train in rural areas.[7–10] This is due in part

CULMINATION OF RURAL PHYSICIAN PATHWAY STRATEGY



R³ At OSU-COM, we will recruit **RURAL** students, educate them in a **RURAL** environment, and place them in **RURAL**-based residencies.

STORIES OF SUCCESS

Dr. Dustin Beck

- Hometown: Wagoner (population 7,846)
- Undergraduate: Northeastern State University
- Medical School: Oklahoma State University College of Osteopathic Medicine (2011)
  - IHS Scholarship (4 years)
- Residency: OMECO/ NHS - Cherokee Nation Family Medicine (2014)
- Current Job: Program Director – Cherokee Nation Family Medicine (since 2022)

Dr. Ashton Clayborn

- Hometown: Porum (population 607)
- Undergraduate: Northeastern State University
- Medical School: Oklahoma State University College of Osteopathic Medicine (2014)
  - Rural Health Option and Rural Medical Track
- Residency: Choctaw Nation Family Medicine (2017)
- Current Job: Program Director – Choctaw Nation Family Medicine (since 2022)

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

OSU 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

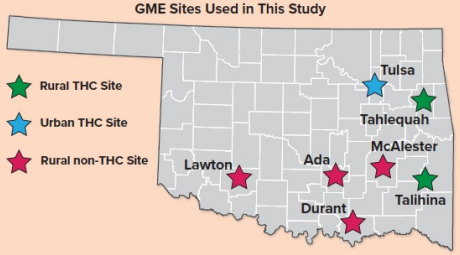
INTRODUCTION

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

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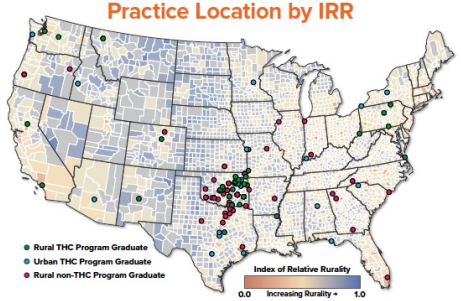
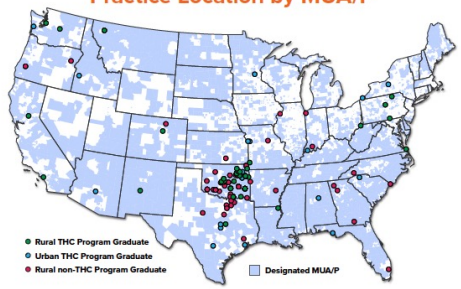
RESULTS

Practice Location by IRR

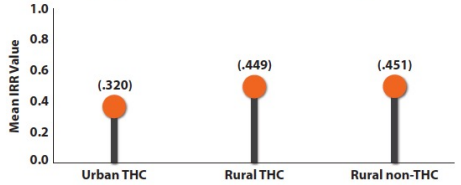


Practice Location by MUA/P



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.



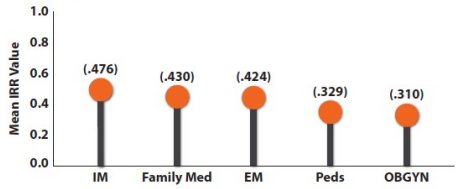
80% of Graduates Practice in a MUA/P

	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

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

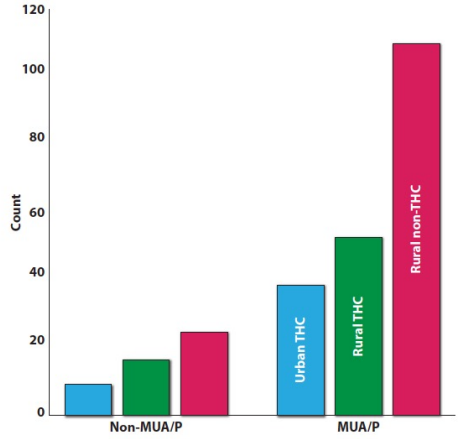
Pediatrics & OBGYN Cluster in Urban

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.



No Difference by MUA/P

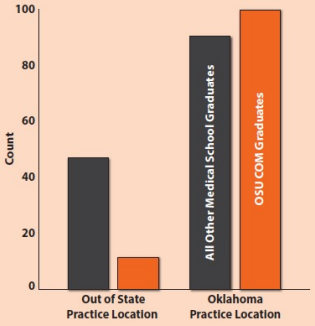
No significant differences between GME type by practice location in an MUA/P or not ($\chi^2 = 0.867$, $df = 2$, $p = .648$).



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.

PHYSICIAN PRACTICE LOCATION CHOICES AFTER TEACHING HEALTH CENTER RESIDENCY TRAINING

Oklahoma's Rural Residency Programs:
77% Retained in Oklahoma

(↑ 90% for OSUCOM Graduates)

	Non-MUA/P		MUA/P		Total	
	N	%	*N*	%	*N*	%
Family Medicine	38	21.8	136	78.2	174	100.0
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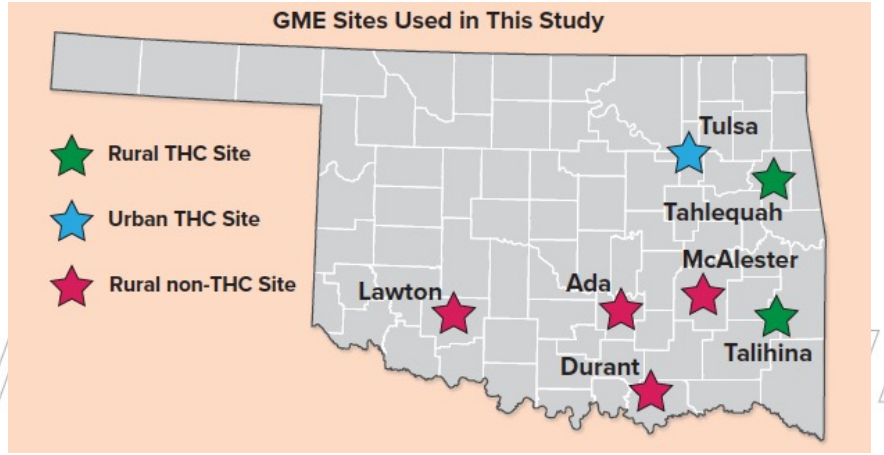
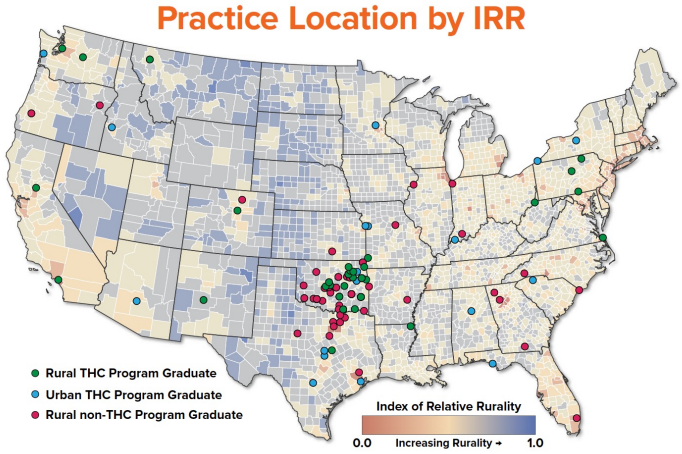
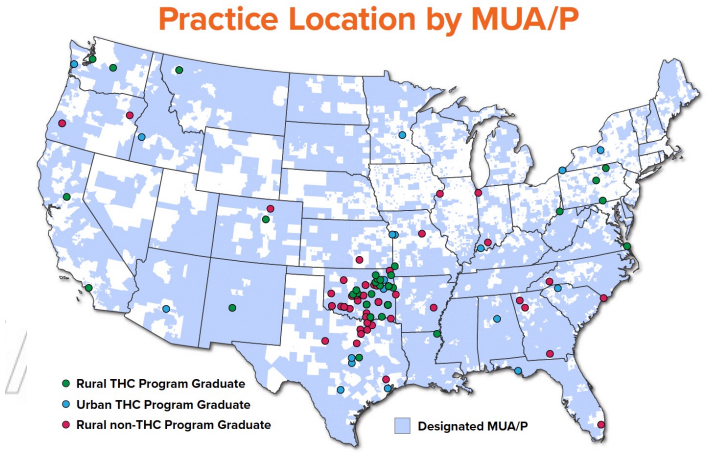






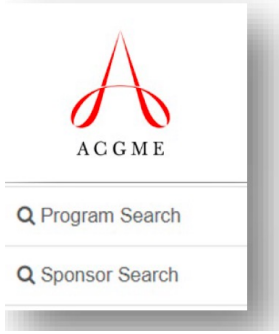
Rural Training = Rural Practice

RURAL RESIDENCY PROGRAMS

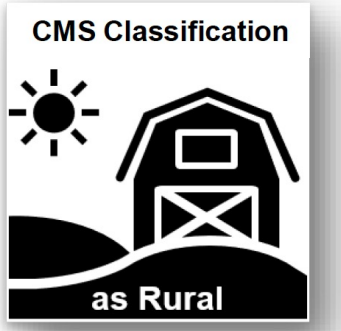
CMS-Defined Rural Track Program

[42 CFR §413.79(k)]

Partnership of urban hospital + rural hospital(s) and/or rural non-hospital site(s)



ACGME-accredited Program			
	Resident Type	Rural Training	Urban Training
Resident A	Non-RTP	0%	100%
Resident B	Non-RTP	0%	100%
Resident C	Non-RTP	0%	100%
Resident D	Non-RTP	0%	100%
Resident E	**RTP**	**51%**	**49%**
Resident F	**RTP**	**60%**	**40%**



Accredited Residency Program

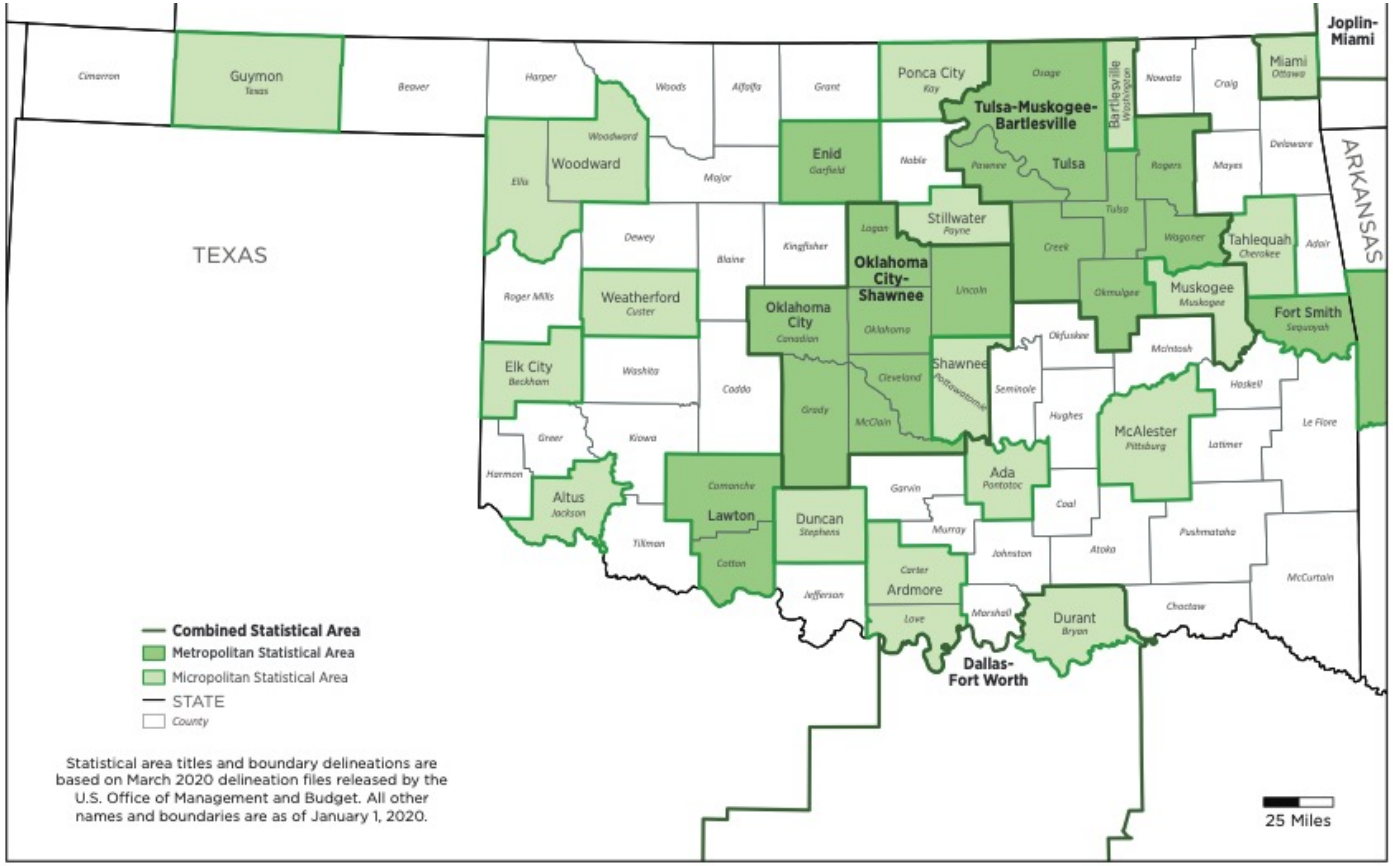
More than 50% of training for each (or some) residents in "Rural" Location

Rural location(s) meet CMS classification of "rural"

ACGME RURAL TRACK PROGRAM (RTP)

- An ACGME-accredited program in which **all or some** residents/fellows gain both urban and rural experience with more than half of the education and training **for the applicable** residents(s)/fellow(s) taking place in a rural area (**any area outside of an urban CORE-Based Statistical Area (CBSA)**).
- A classification provided by the ACGME that identifies Rural Track Programs **either with the approval of a permanent complement increase request and the addition of at least one new rural participating site or** at the time of application for accreditation.

OKLAHOMA CORE-BASED STATISTICAL AREAS



U.S. Census Bureau, Population Division

ACGME TRAINING DURATION THRESHOLD

ACGME RTP Rotation Information Form* and rotation months per year listed in ADS must show:

- More than 50% in rural sites
- Some required GME in non-rural sites

Total Rural	Total Non-Rural	ACGME RTP Designation Criteria?
49%	51%	X
50%	50%	X
51%	49%	✓
75%	25%	✓
100%	0%	X

*An ACGME RTP Rotation Information Form must be uploaded (separate from and in addition to the program's block diagram) for designation consideration. The template can be found on the ACGME Rural Track Program designation web page.

RTP Rotation Information Form:
https://www.acgme.org/link/e0b33937799549ff96edf3a27cdfeb31.aspx

ACGME DESIGNATION PROCESSES SUMMARY

RTP – New Program

- DIO initiates at program application
- Criteria include:
  - Greater than 50% GME in rural PPS hospital and/or non-provider site (s)
  - Rural area = county outside of an urban CBSA
  - Some required non-rural GME
- Required Forms:
  - RTP Rotation Information Form
  - Specialty-specific RTP Questionnaire

RTP – Track within Existing Program

- Program director initiates using sidebar option within ADS
- Criteria include:
  - All of the new program criteria; and,
  - New rural site(s) (not required for current program residents/fellows)
  - Faculty members at the new rural site(s) are not supported by a current rural participating site

Two Approval Steps:

1. ACGME MUA/P and GME review of designation information
2. ACGME Review Committee review* of permanent complement increase request and site changes (track within existing program) or program application (new program)

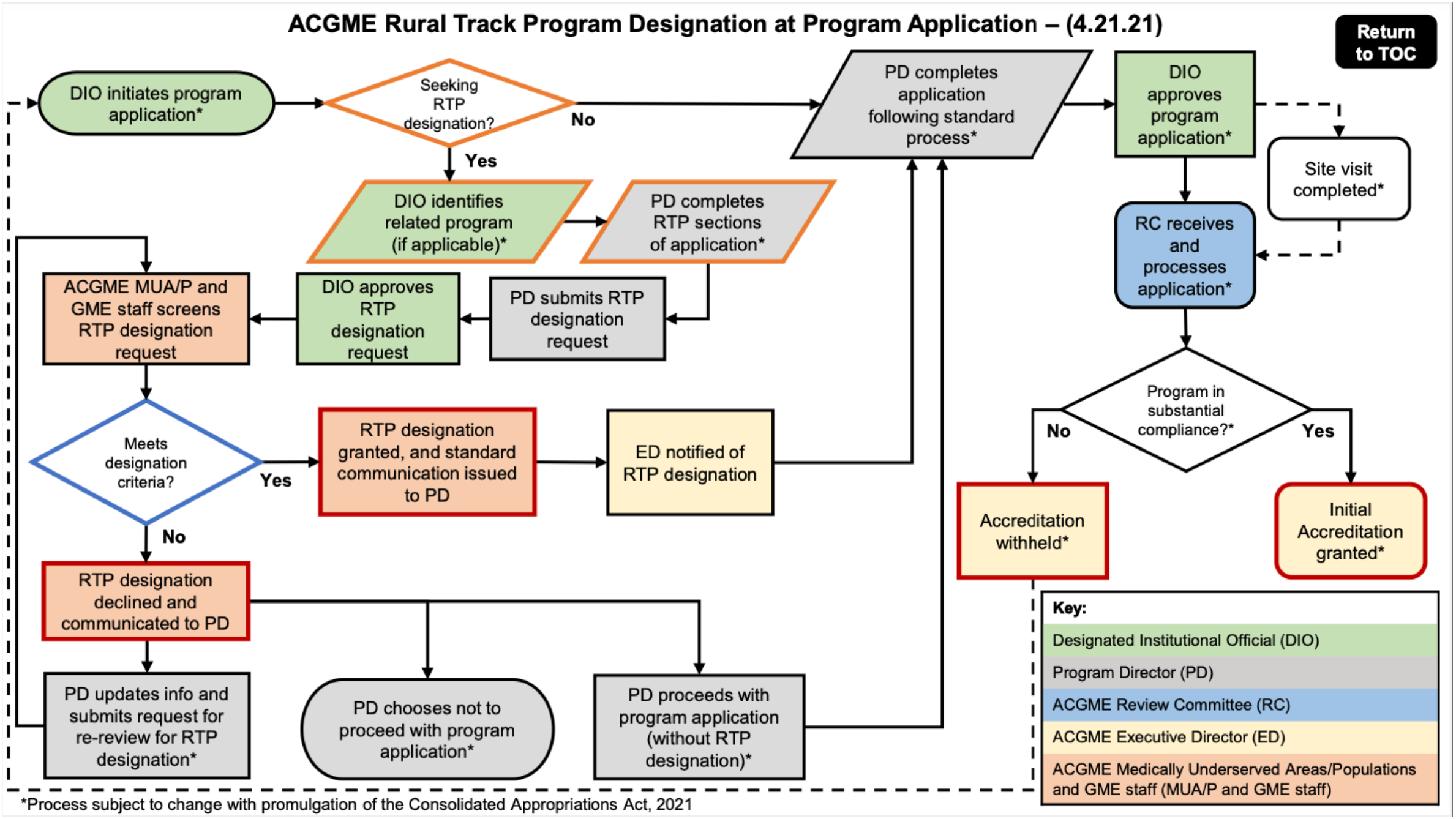
ACGME REVIEW COMMITTEE CONSIDERATIONS

- Distant Sites
  - Resources provided (e.g. travel costs, lodging, etc.)
  - Separate match/resident awareness
  - Residents from other institutions rotating at the site
  - Peer-to-peer interaction
  - Is site director over more than one site?
  - Local support systems

SUMMARY

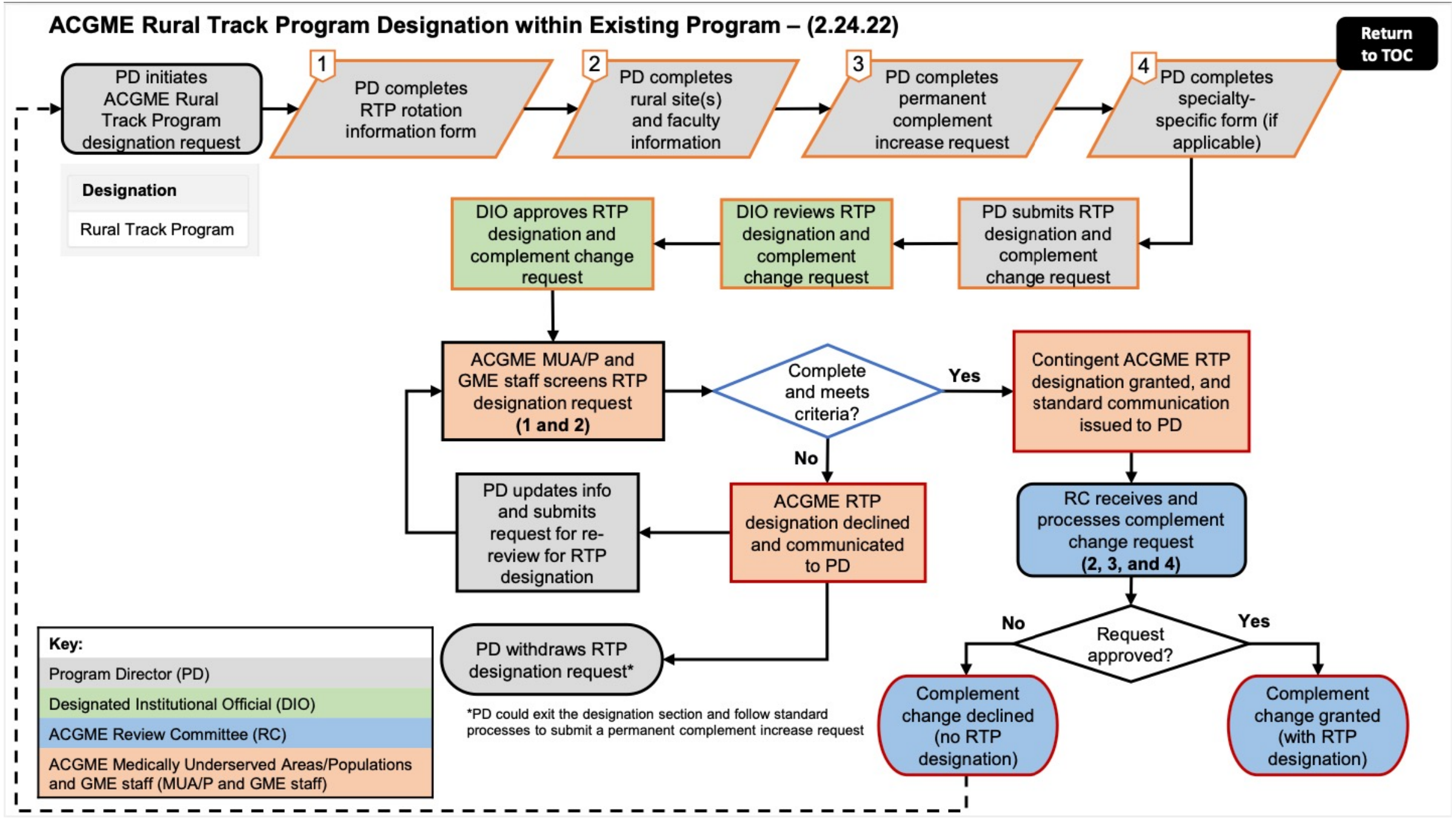
ACGME Rural Track Program Designation at Program Application – (4.21.21)

Return to TOC



*Process subject to change with promulgation of the Consolidated Appropriations Act, 2021

ACGME Rural Track Program Designation within Existing Program – (2.24.22)



THANK YOU
QUESTIONS?

RESOURCES

- ACGME Rural Track Programs
  - MUA/P: https://www.acgme.org/What-We-Do/Accreditation/Medically-Underserved-Areas-and-Populations
  - RTP: https://www.acgme.org/initiatives/medically-underserved-areas-and-populations/rural-tracks/
  - Instruction for Requesting ACGME Rural Track Program (RTP) Designation: https://www.acgme.org/globalassets/pdfs/acgme-rural-track-program-designation-request-instructions_web.pdf
  - ACGME RTP Designation Process Toolkit: https://www.acgme.org/globalassets/pdfs/acgme-rtp-designation-toolkit_web.pdf
  - RTP Rotation Information Form: https://www.acgme.org/link/e0b33937799549ff96edf3a27cdfeb31.aspx
  - Specialty-Specific RTP Questionnaires
    - Family Medicine: https://www.acgme.org/globalassets/pdfs/acgme-rtp-questionnaire_familymedicine_web.docx
    - Internal Medicine: https://www.acgme.org/globalassets/pdfs/acgme-rtp-questionnaire_internalmedicine_web.docx
    - Pediatrics: https://www.acgme.org/globalassets/pfassets/programresources/acgme-rtp-questionnaire_peds_web.docx
    - Physical Medicine & Rehabilitation: https://www.acgme.org/globalassets/pfassets/programresources/acgme-rtp-questionnaire_pmr_web.docx
    - Psychiatry: https://www.acgme.org/globalassets/pdfs/acgme-rtp-questionnaire_psychiatry_web.docx
- Centers for Medicare and Medicaid Services (CMS) Rural Track Designation
  - https://www.ecfr.gov/current/title-42/chapter-IV/subchapter-B/part-413/subpart-F/section-413.79
  - FY2022 IPPS Final Rule: https://www.cms.gov/medicare/acute-inpatient-pps/fy-2022-ipps-final-rule-home-page
  - Acute Inpatient PPS: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS