

Examining the Impact of Closing Family Medicine Residency Programs

Jessica McCann, MA**
Valerie Reese, MD*
Andrew Bazemore, MD, MPH**
Robert Phillips, MD, MSPH**



*Department of Family and Community Medicine,
Univ. of Texas Hlth Sci Ctr-San Antonio
**The Robert Graham Center: Policy Studies in
Family Medicine and Primary Care

Why Closing Programs?

- 8% reduction of programs in five years
- Rural areas and CHC/NHSC pops rely primarily on FPs
- Inadequate physician distribution already problematic
- How do closing programs affect communities or the regional physician workforce



Methodology

- Where are graduates of closing programs practicing?
- Geographic analysis using:
 - *AMA Physician Masterfile, 2004*
 - *AAFP Membership data, 2005*
 - *ACGME program data, 2005*



Methodology (continued)

- Determined programs that have closed since 2000 (22) (ACGME)
- Found 1545 graduates of these programs (AAFP)
- Mapped graduate practice locations (AMA)
- Layered with HPSA and rurality data.
- Determined which counties would become HPSAs without these graduates.



Methodology (cont.)

- Economic analysis
 - Extrapolated results from *Oklahoma Physician Manpower Commission. 25+ Years. 2001. Tulsa, OK, Center for Health Policy Research.*
 - OK study found: 1 rural FP's practice is responsible for 50 jobs and \$1,156,810 annually in economic impact in their community



Data sources

- AMA Physician Masterfile
 - Specialty, practice location of every physician
- AAFP Membership data
 - GME info for all family physicians
- ACGME
 - www.acgme.org – lists all existing and “withdrawn” programs for each specialty.



GIS

- Chose five programs for geographic analysis
- Geocoded these physicians
- Layered with HPSAs and rural areas
- Created maps showing county concentrations of program graduates



Withdrawal HPSAs

- Identified which counties would become HPSAs without closing program graduates
 - Found number of closing program graduates per county
 - Subtracted these from total number of PCPs
 - Divided by total population and multiplied by 3500 to obtain new PCP to population ratio.



Results: Rural and HPSA

	Graduates 00-05	Rural	% Rural	HPSA (whole or partial)	% HPSA (whole or partial)
UND Fargo	98	34	34.7%	49	50%
PinnacleHealth (Harrisburg)	178	22	12.7%	99	57.2%
LSU Baton Rouge	140	34	24.3%	105	75%
Wright State University	243	60	24.7%	157	64.6%
UTMB/Christus St. Elizabeth (Beaumont TX)	74	11	14.9%	65	87.9%
Total including all 22 program grads	1545	337	21.8%	1057	68.4%
Total (in U.S.)	77,239	14,593	19.1%	55,462	73.1%

Data Source: AMA Masterfile, AGCME, AAEP. Prepared by the Robert Graham Center

Results: Practicing In State or Adjacent State

Program	States/Adjacent States	Percentage of Graduates
Univ. of North Dakota-Fargo	ND, MT, MN, SD	82.7%
PinnacleHealth-Harrisburg	PA, VA, MD, NC	65.4%
LSU-Baton Rouge	AL, MS, TX, LA	86.4%
Wright State/St. Elizabeth	OH, KY, IN	75.7%
UTMB/Christus St. Elizabeth	TX	78.4%

Data Source: AMA Masterfile, AGCME, AAEP. Prepared by the Robert Graham Center

Results: Economic Analysis

For five study sites:

- 337 graduates
- approximately 16,850 jobs
- \$389,844,970 in economic impact



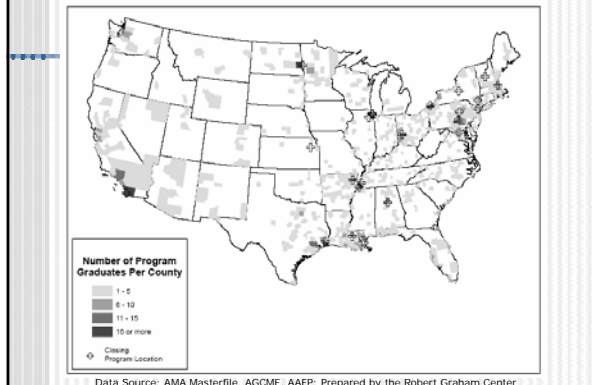
Results: Withdrawal HPSAs

For 22 programs studied:

- withdrawal could produce 150 new full-county HPSAs in 15 states
 - 42 of these previously had no HPSA designation and 108 counties were previously partial-county HPSAs



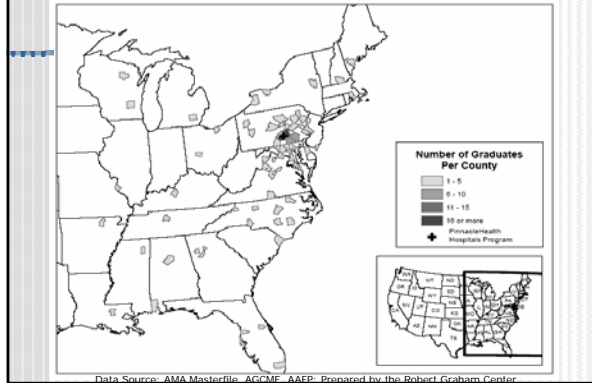
Concentration of All Closing Program Graduates



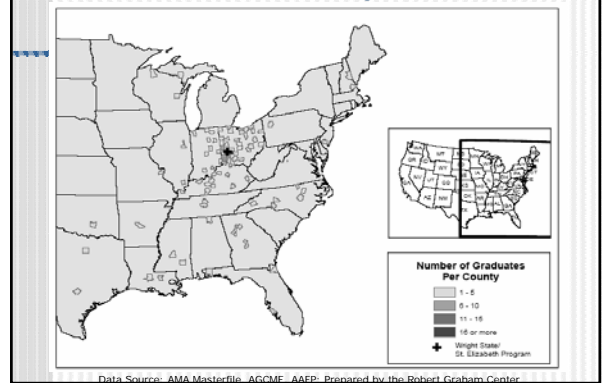
Concentration of Graduates of UND-Fargo



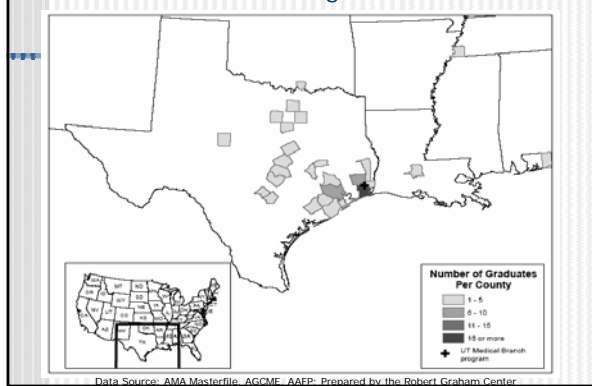
Concentration of Graduates of PinnacleHealth Hospitals Program



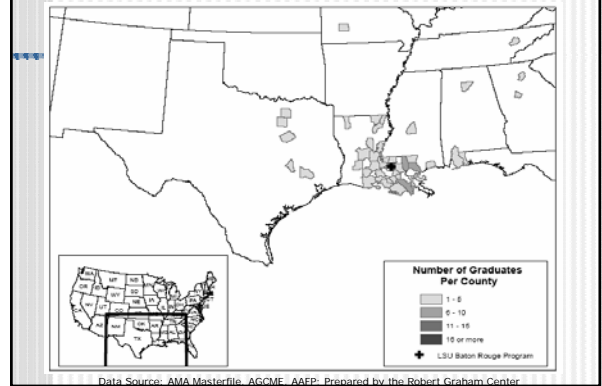
Concentration of Graduates Wright State/St. Elizabeth Program



Concentration of Graduates of UT Medical Branch Program



Concentration of Graduates of LSU Baton Rouge Program



Limitations

- Data time lag
- “Withdrawn” programs occasionally do not close
- Only examined five study sites intensively



Conclusions

- The loss of any one of these programs may have a significant impact on a state/region
- Using demographic, HPSA, and rurality data GIS allows us a spatial understanding of the impact that individual family medicine programs have on communities at the local and regional level.
- Comprehensive evaluations of the implications of program closure for local consumption are needed to complement national workforce studies.



For more information

- Jessica McCann
 - jmccann@aafp.org
- Valerie Reese
 - Valerie.Reese@phs.com

