



**NC IOM Steering Committee on Primary  
Care and Specialty Supply**

**Raleigh, NC**

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## **National Recruitment and Retention of Providers**

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## Objectives

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- **Discuss general principles—backed by data—of the flux of physicians into and out of rural and shortage areas, and successful approaches to recruitment and retention**
  - **focus on primary care physicians**
- **Present some new and promising recruitment and retention approaches**



## Shortage Areas

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**Which dynamic makes physician shortage areas?**

- **Not recruiting enough physicians?**
- **Not retaining physicians long enough?**



## Shortage Areas

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- **Not recruiting enough physicians?**
  - **Langwell KM, Drabek J, Nelson SL, Lenk E. Effects of community characteristics on young physicians' decisions regarding rural practice. *Pub Health Rep.* 1987;102:317-328.**
  - **Frenzen PD. The increasing supply of physicians in urban and rural areas, 1975 to 1988. *Am J Public Health.* 1991;81:1141-1147.**
  - **Newhouse JP. Geographic access to physician services. *Annu Review Public Health.* 1990;11:207-230.**

**Consistently find lower recruitment into shortage areas.**



## Shortage Areas

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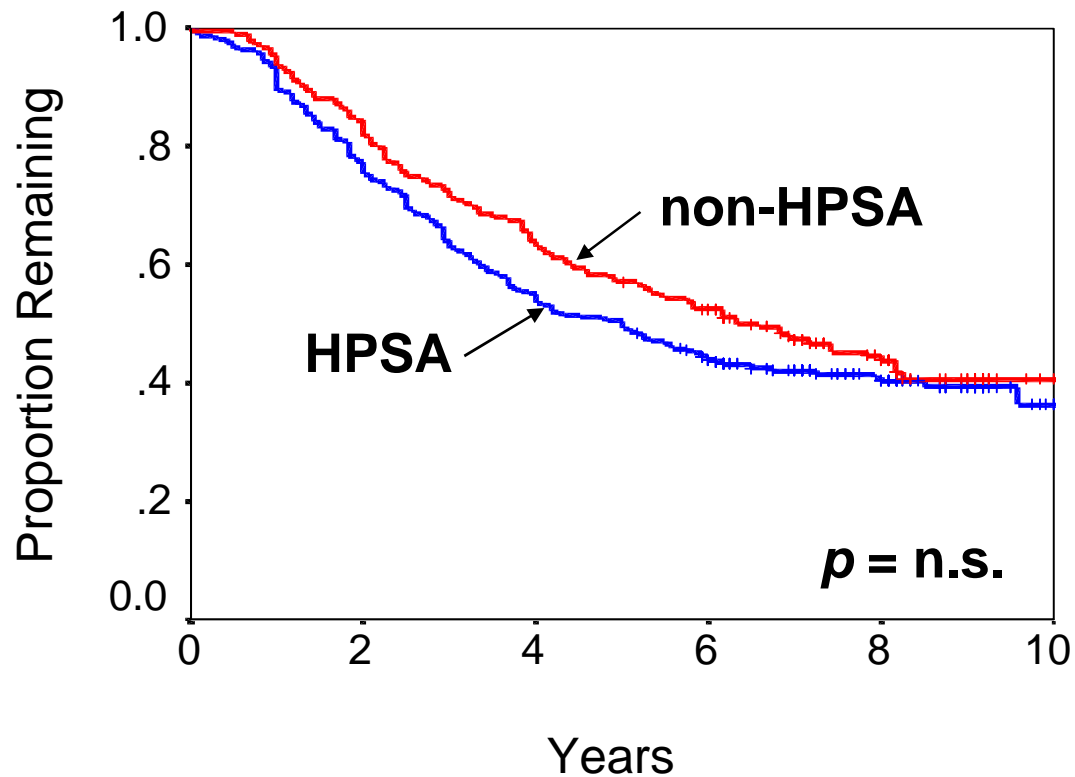
- **Not retaining physicians long enough?**
  - **Li, Hong. *Physician Migration in Non-Metropolitan Counties of the United States from 1987 to 1990* [dissertation]. Chapel Hill, NC: University of North Carolina at Chapel Hill; 1995.**
  - **Kindig DA, Schmelzer JR, Hong W. Age distribution and turnover of physicians in nonmetropolitan counties of the United States. *Health Serv Res.* 1992;27:565-578.**

**Few studies available; these find retention is no briefer in shortage areas.**



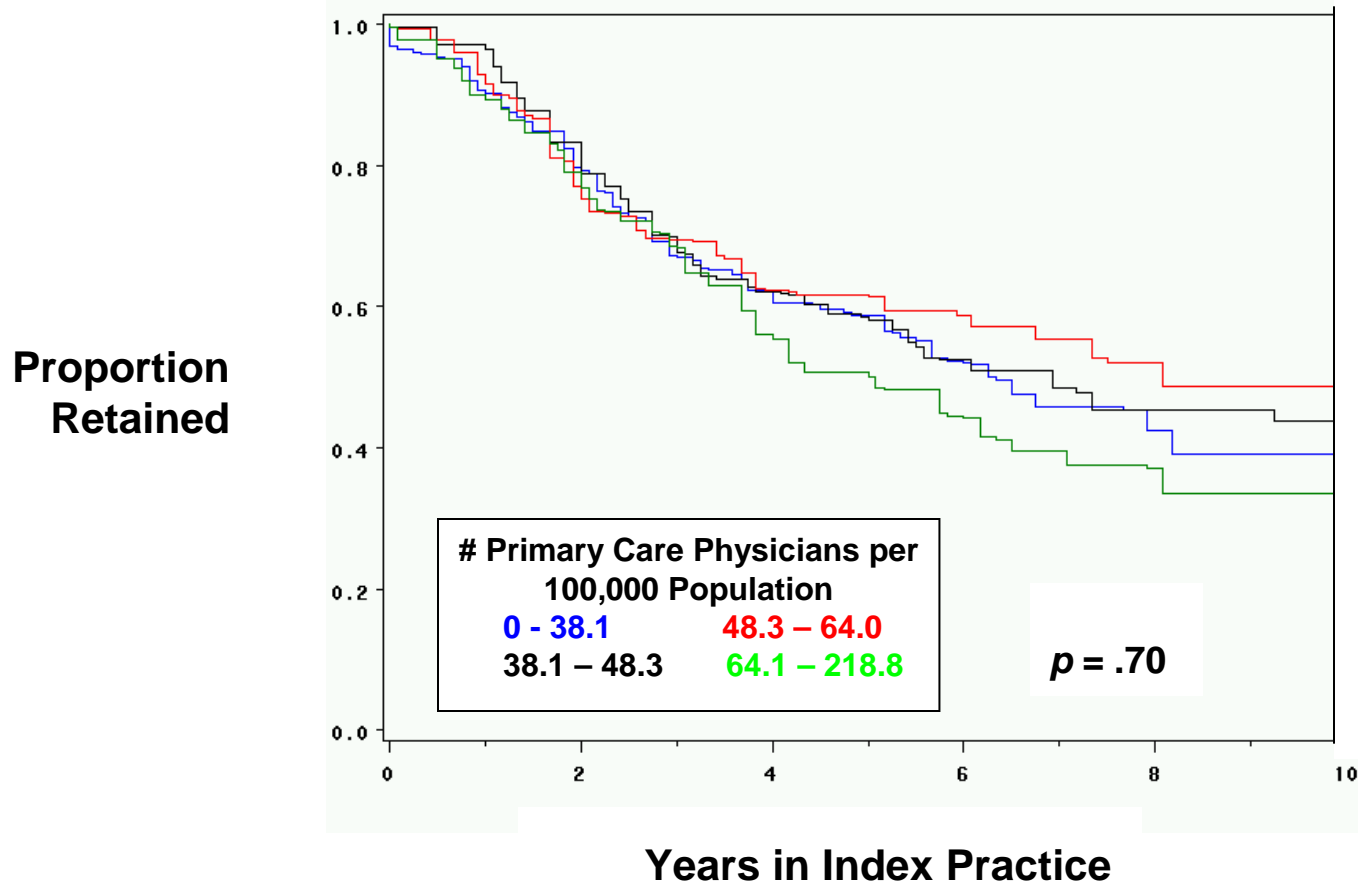
## Retention in HPSA vs. Non-HPSA Rural Areas

587 rural generalists w/o service obligations  
(Pathman, et al. *AJPH*. 2004;94:1723-1729)

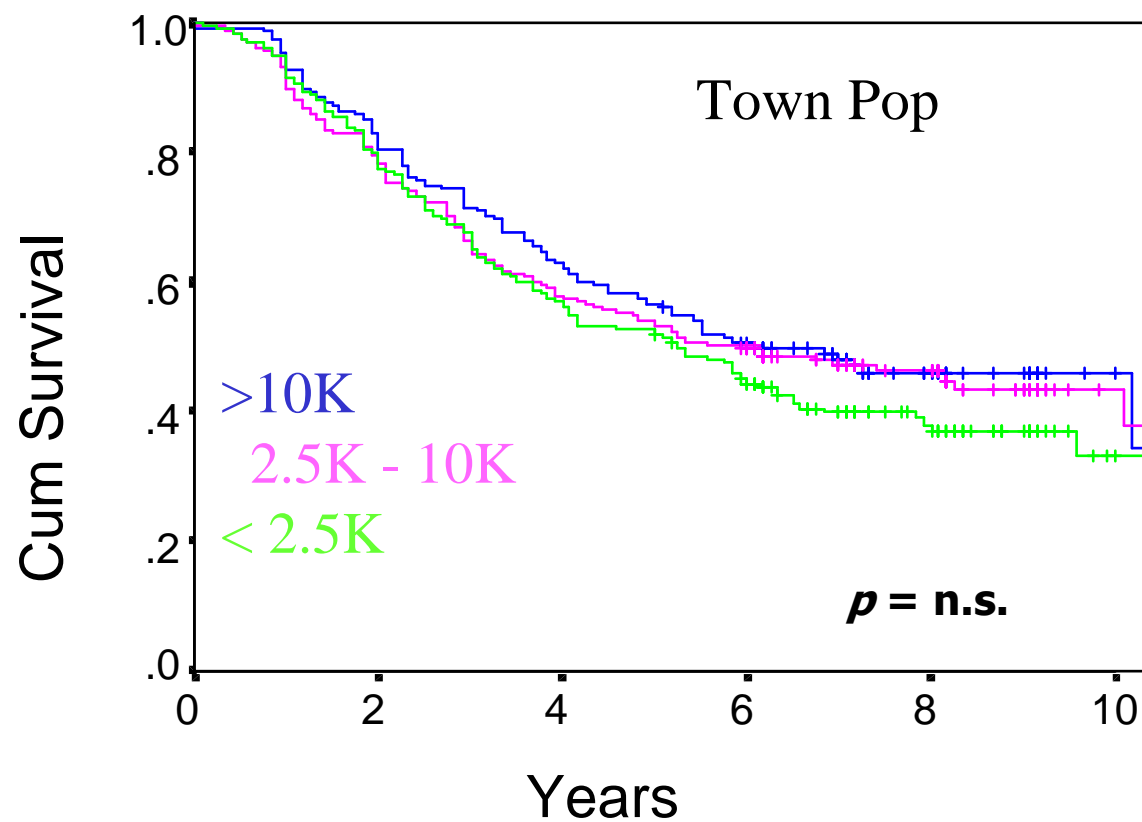


# Retention in Rural Counties with Higher vs. Lower Physician/Pop Ratios

505 rural generalists w/o service obligations

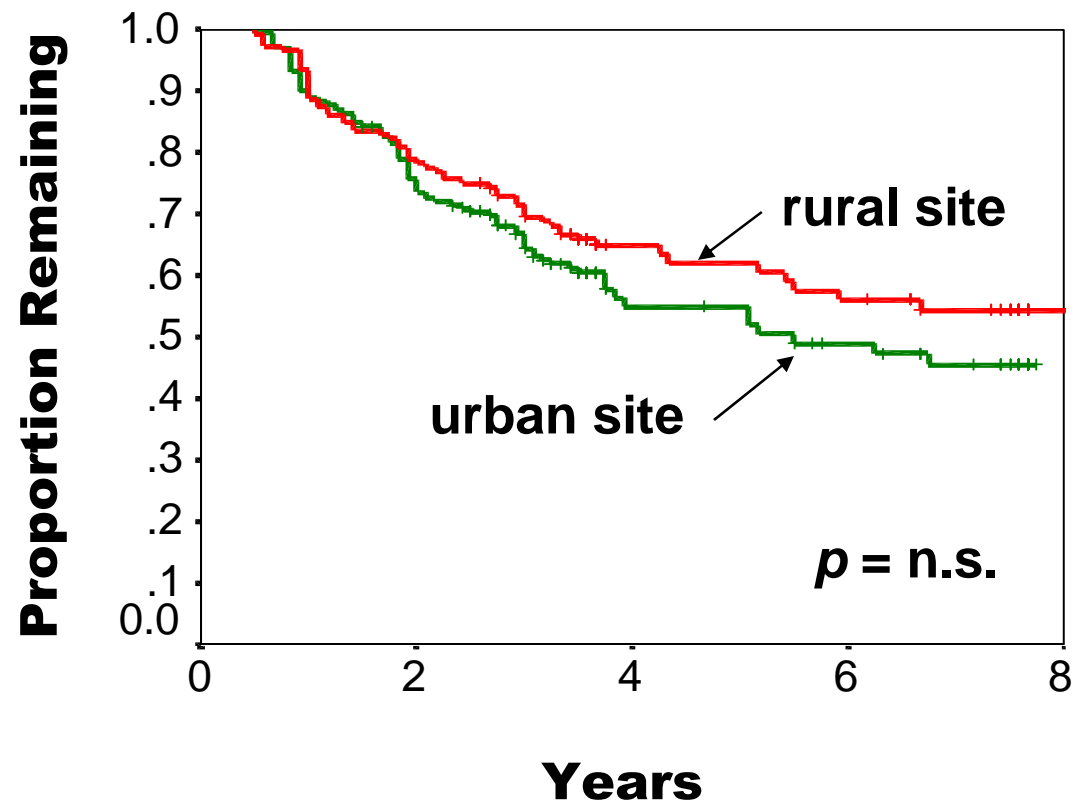


# Retention in Rural Towns of Various Population Sizes



# Retention in Rural vs. Urban Areas

355 rural and urban generalists (1988-92 grads)





## Rural Recruitment and Retention Principles

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- **Poor recruitment is generally responsible for shortage areas; retention is not a special problem.**



## Rural Recruiting

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**A medical school admissions committee wants to select applicants who will more likely select rural practice (rural recruitment).**

**What individual characteristics should they target?**



## Rural Recruiting

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**A medical school admissions committee wants to select applicants who will more likely select rural practice (rural recruitment).**

**What individual characteristics should they target?**

- ✓ **Rural background**
- ✓ **Rural raised spouse**
- ✓ **Male**
- ✓ **White**
- ✓ **Expressed interest in rural practice**



## Rural Retaining

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**A manager of a rural practice wants to select among primary care physician job applicants the one who will remain longest in the practice. (retention)**

**What individual characteristics should s/he target?**



## **Rural Retaining**

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**A manager of a rural practice wants to select among primary care physician job applicants the one who will remain longer in the practice.**

**What individual characteristics should s/he target?**

**Rural background?**

**Rural raised spouse?**

**Male?**

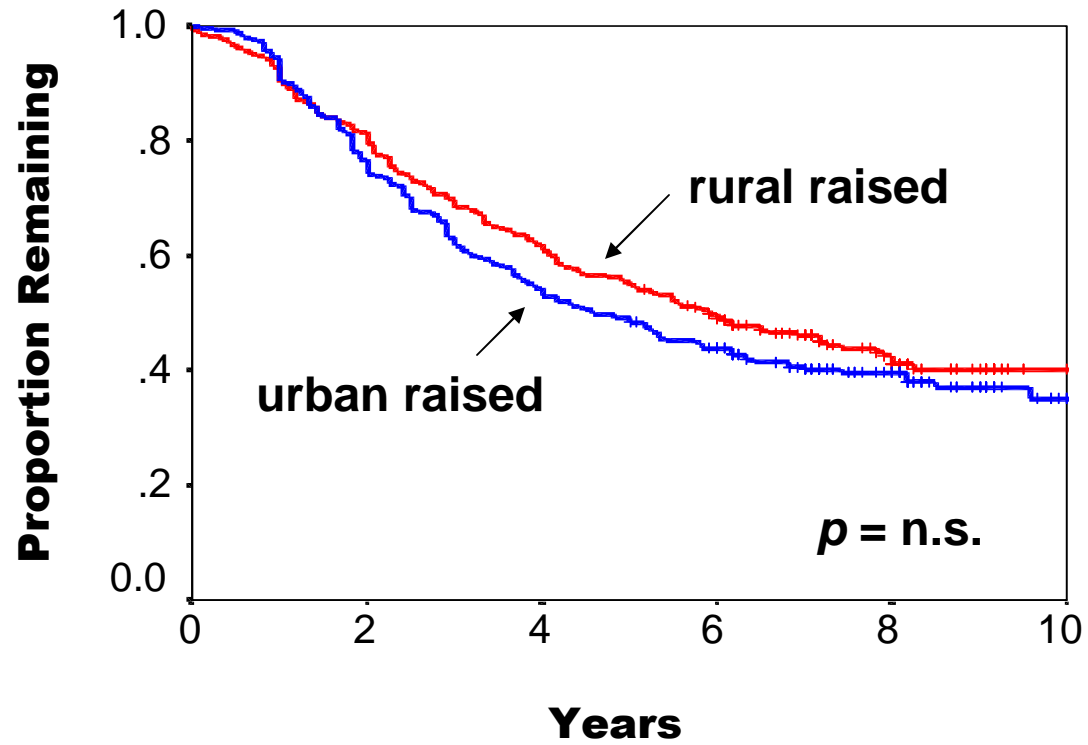
**White?**

**Expressed interest in rural practice?**



# Rural Retaining

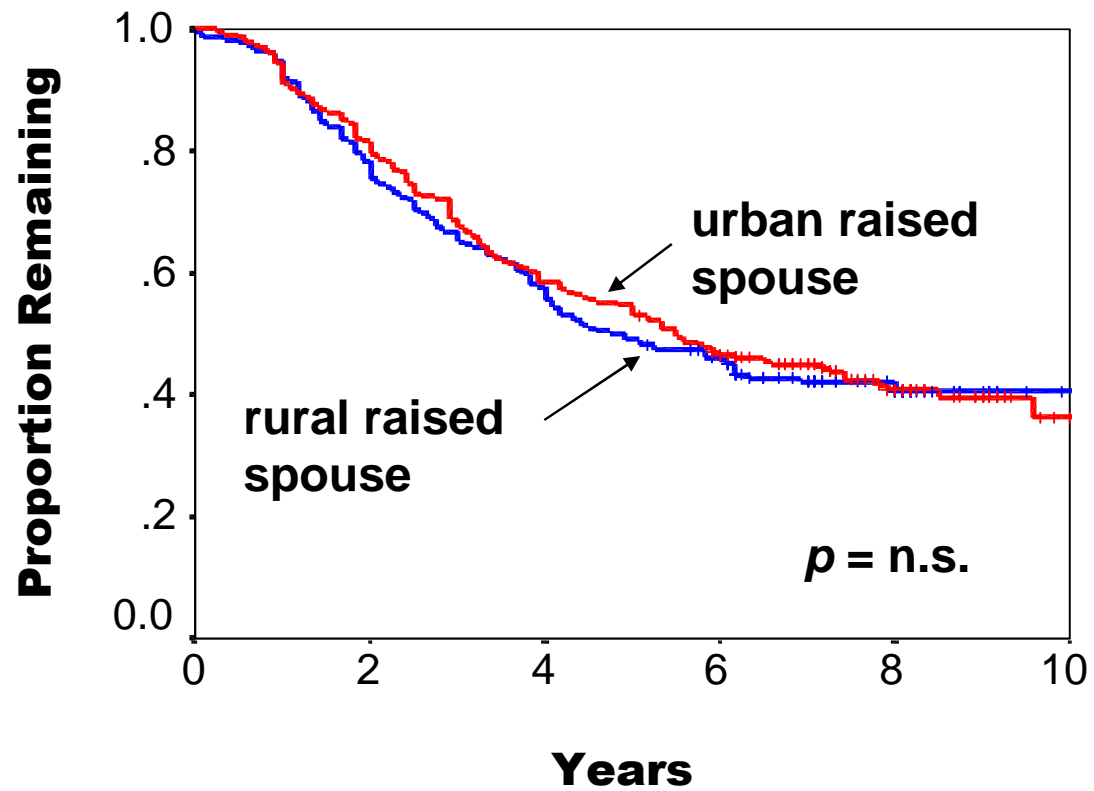
587 rural U.S. generalists





# Rural Retaining

466 married rural generalists





## Rural Retaining

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**Rural retention also *unrelated* to:**

- Gender
- White vs. Black race

**Moral: basic individual demographics predictive of *recruitment* into rural practice but not *retention***



## Rural Retaining

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**So what factors are important to retaining rural physicians?**

- ✓ **A good match between the physician and community.**
- ✓ **Satisfaction, especially with the community and professional fulfillment.**
- ✓ **Ownership; sense of control.**



## Rural Retaining

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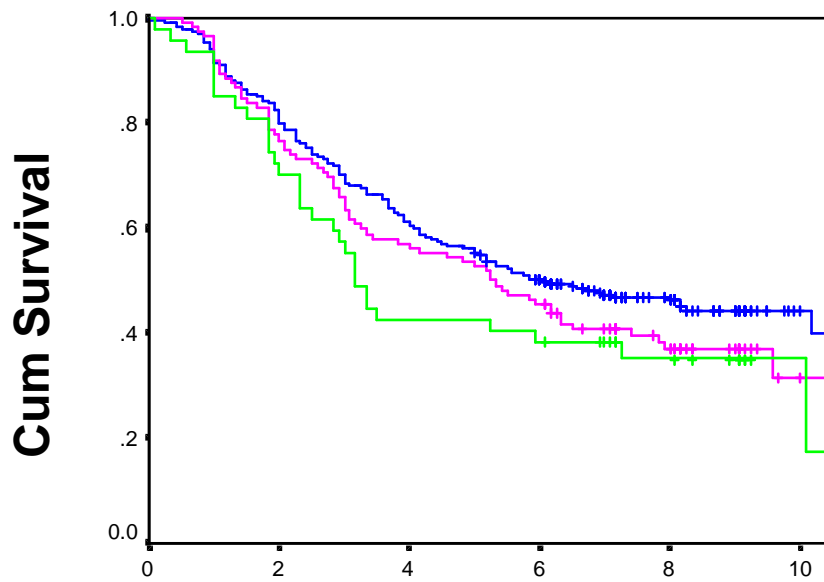
**Relative odds that a NHSC physician will remain in their service site 12 months beyond their obligation:**

- |  |      |            |
|--|------|------------|
| • working in state where they grew up or trained | 2.38 | $p = .01$  |
| • feels well integrated into community           | 4.15 | $p < .001$ |
| • satisfied with the community                   | 4.40 | $p < .001$ |
| • spouse is satisfied with community             | 3.93 | $p < .001$ |

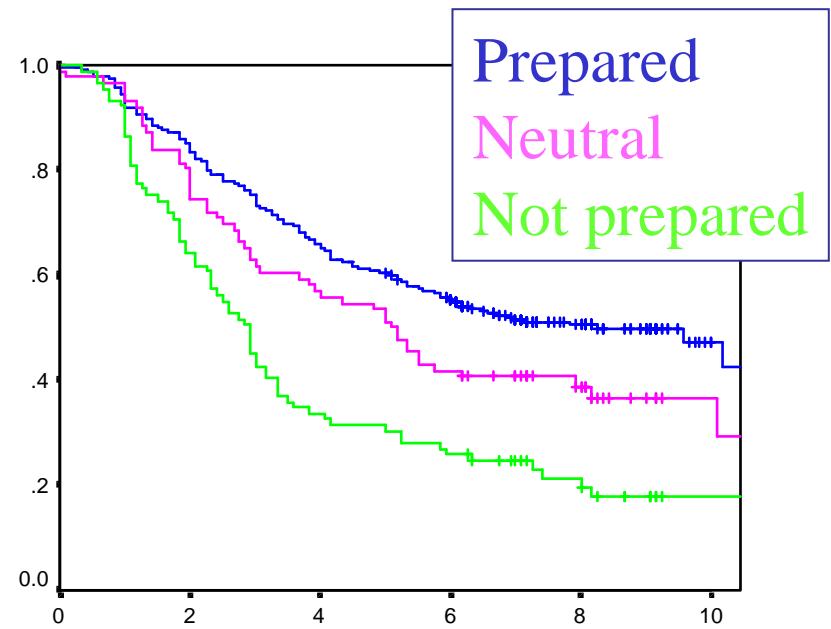
**Pathman, et al. *JAMA*. 1994;272:1341-1348.**

# Prepared for Rural Roles and Retention

## Work

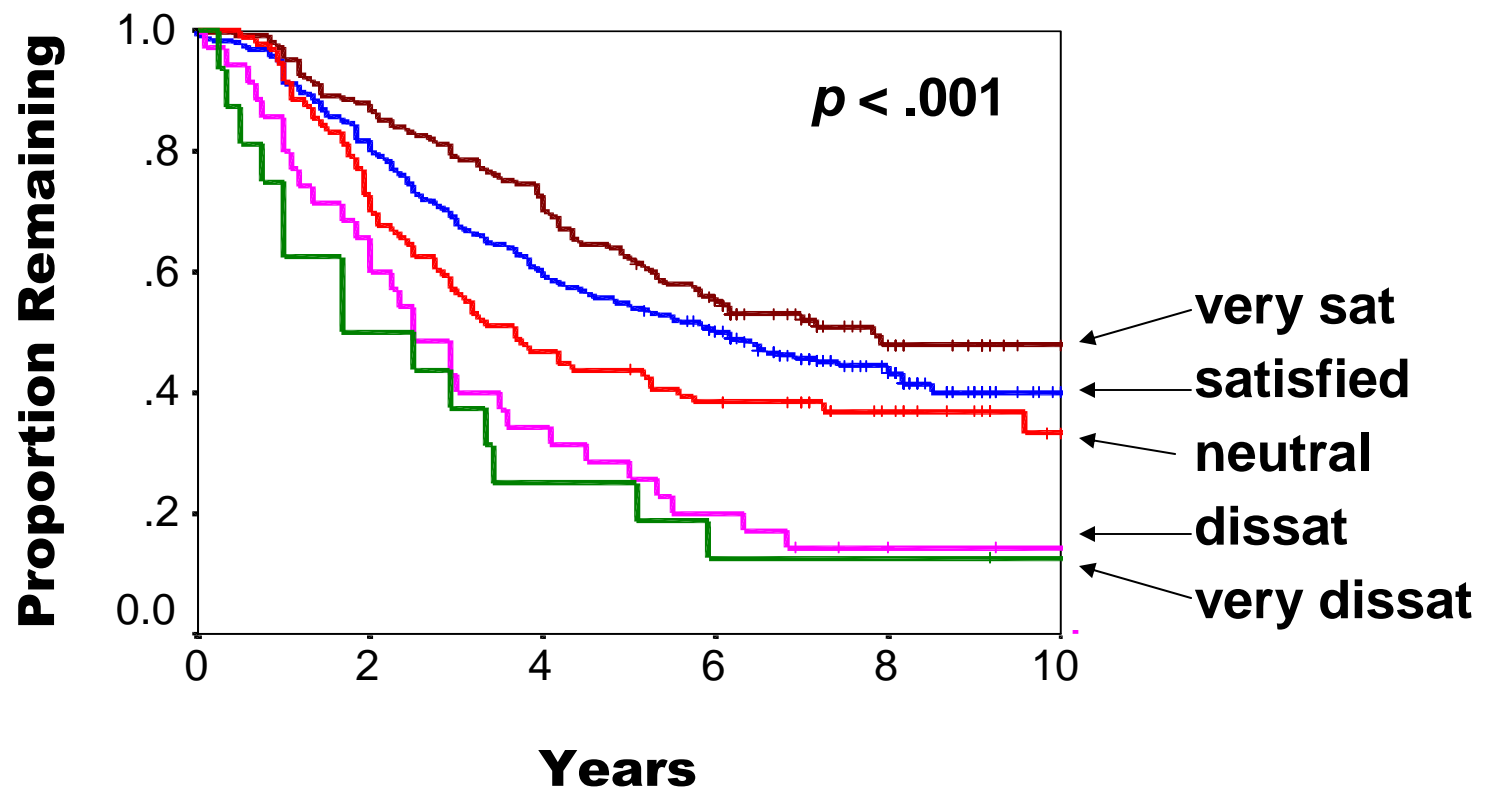


## Community



Years in Index Rural Practice

# Satisfaction with the Community

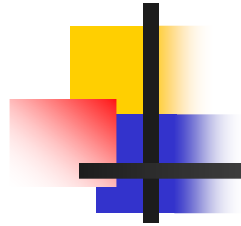




## Rural Recruitment and Retention Principles

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- **Poor recruitment is generally responsible for shortage areas; retention is not a special problem.**
- **Recruiting and retaining primary care physicians often require different interventions**
- **Rural (and shortage area) recruitment is most sensitive to physicians' backgrounds (upbringing, race, gender) and career interests—relatively immutable characteristics.**
- **Although generally not the cause of shortage areas, retention is more amenable to interventions: recruiting physicians well-suited for particular practices and communities, and fostering satisfaction.**



# **Medical Training and Rural *Recruitment***

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## **Medical Training and Rural *Recruitment***

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**Targeted medical school admissions is the key.**

**Poster child: Jefferson's Physician Shortage Area Program**

- **Rabinowitz hand picks ~15 Pennsylvania students each year**
- **Minimal curriculum (rural FM rotation; FM advisor and interest group)**
- **Grads 10 times more likely to become rural family physicians (26% vs. 3%)**



## Medical Training and Rural *Recruitment*

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**What about medical school or residency *curriculum*?**



# Medical Training and Rural *Recruitment*

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## **Brief Curriculum (1-4 months)**

- 1. No proven benefit for rural recruitment or specialty choice**
  - **There is only “weak empirical support . . . for locational effects of medical schools and rural training programs” (Eisenberg and Cantwell, 1976)**
  - **“rural preceptorships . . . are based more on attitudinal evidence and conventional wisdom than they are on evidence from rigorous evaluation studies” (Ernst and Yett, 1985)**
  - **“evidence from the strongest available studies assessing relatively focused educational interventions . . . suggests that these programs do not affect specialty choice” (Pathman, 1996)**



## Medical Training and Rural *Recruitment*

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### **Longitudinal (12-24 months) training in rural setting**

**Does steer more students into primary care (and perhaps rural areas—not studied)**

- **Of med students randomly assigned to a longitudinal FM training track, 46% matched in FM residencies vs. 16% of others (Harris DL, et al. *J Med Educ* 1982;57:609-14)**
- **Of med students randomly assigned to community-based campus for their entire third-year curriculum, 21% matched in FM residencies vs. 11% others (Emey SL, et al. *Acad Med* 1991;66:234-6)**



## Medical Training and Rural *Retention*

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**Medical student rural rotations: no effect on retention**

**Resident rural rotations: does prolong retention  
(hazard ratio of leaving, 0.43,  $p=.003$ )**

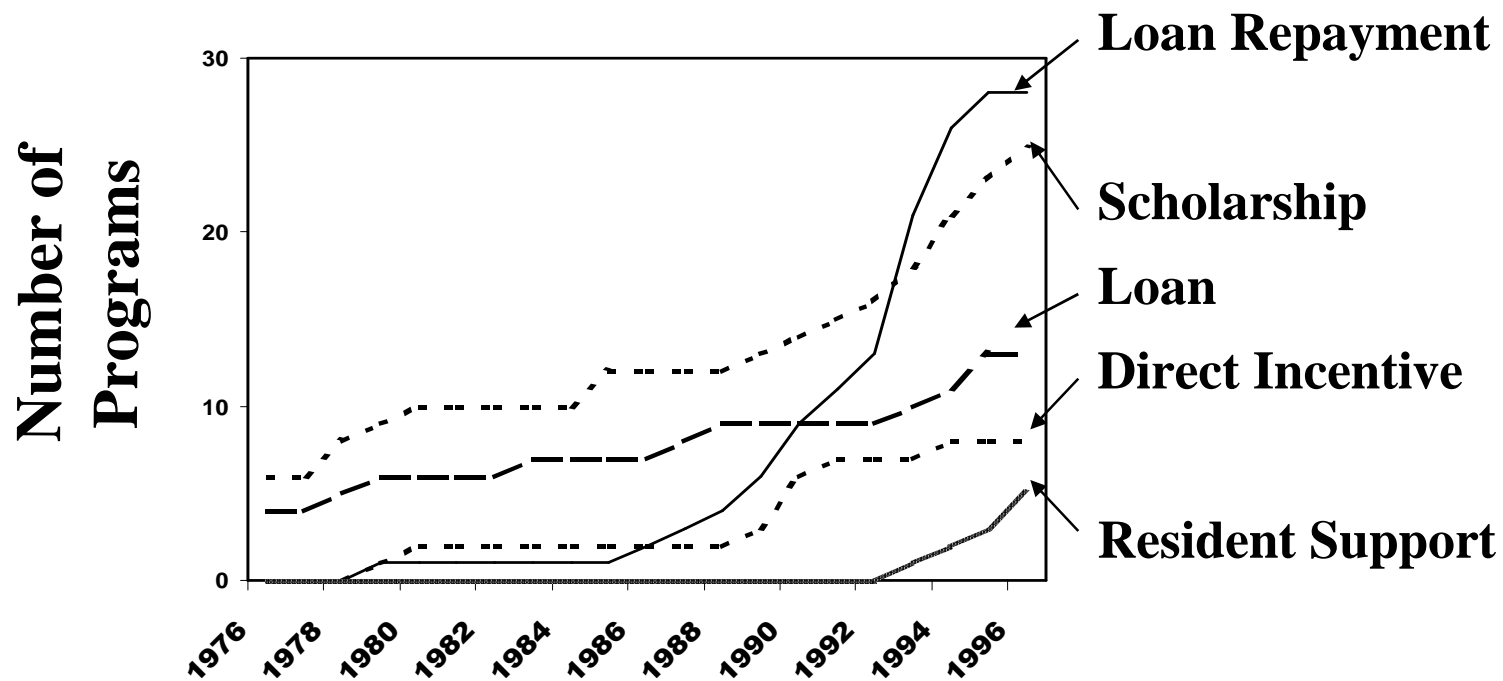


## Physician Support-for-Service Programs

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<b>Program Type</b>	<b>Who?</b>	<b>Service</b>	<b>Use of Funds</b>
<b>Scholarship</b>	<b>Students</b>	<b>Required</b>	<b>Training</b>
<b>Loan</b>	<b>Students</b>	<b>Optional</b>	<b>Training</b>
<b>Loan Repayment</b>	<b>Practicing</b>	<b>Required</b>	<b>Repay loans</b>
<b>Direct Incentive</b>	<b>Practicing</b>	<b>Required</b>	<b>Anything</b>

# Growth in States' Physician Support-for-Service Programs

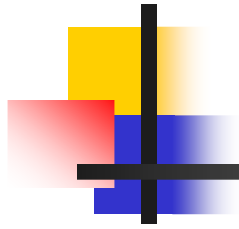


**JAMA. 2000;284:2084-2092**

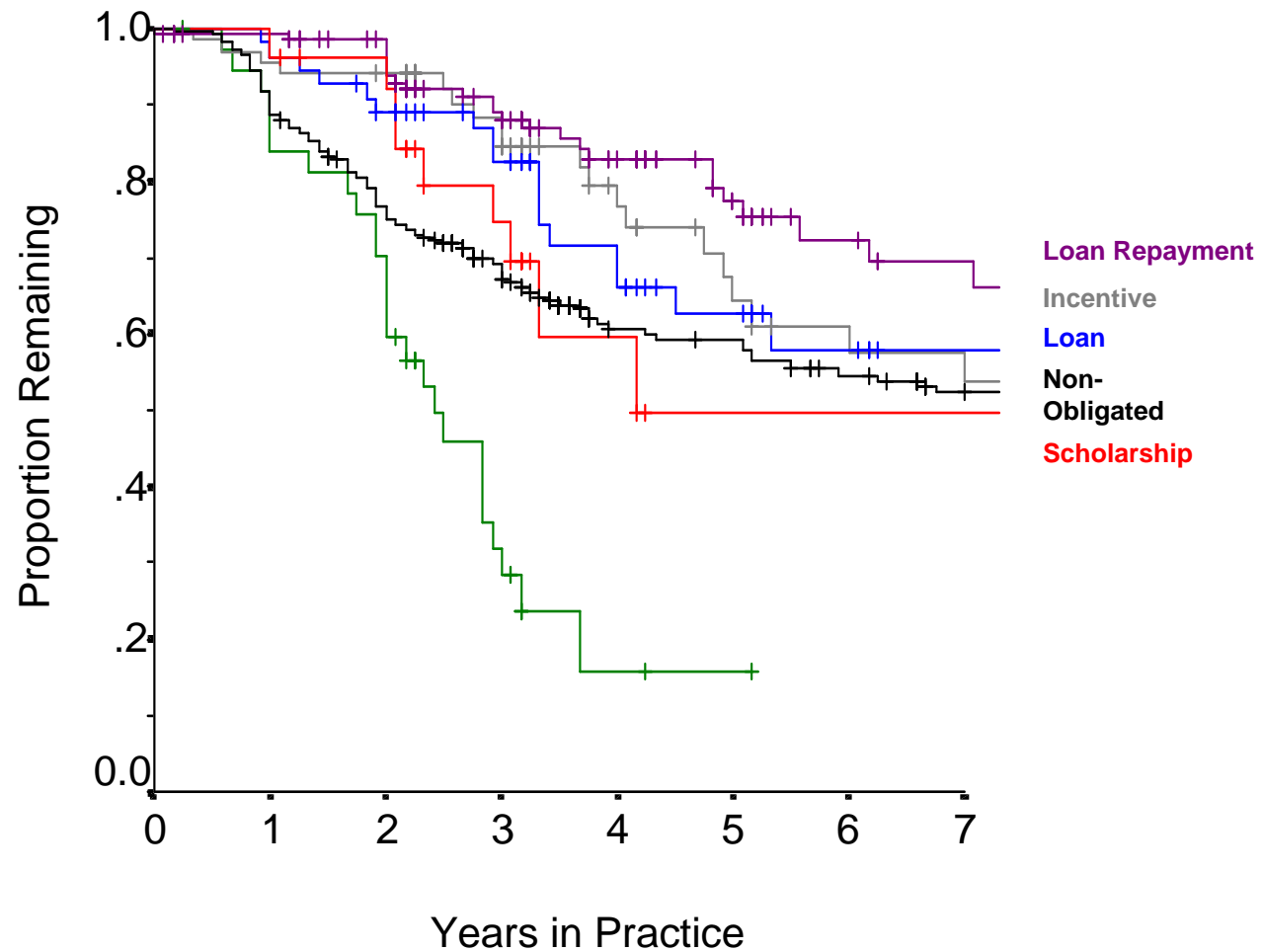


## Outcomes of 69 State Physician Support-for Service Programs

	<b># prog.</b>	<b>% who serve</b>	<b>% very satisfied</b>	<b>% retained 6 yrs</b>
<b>Scholarship</b>	<b>24</b>	<b>63</b>	<b>35</b>	<b>30</b>
<b>Loan</b>	<b>9</b>	<b>41</b>	<b>52</b>	<b>65</b>
<b>Direct Incentive</b>	<b>7</b>	<b>93</b>	<b>39</b>	<b>57</b>
<b>Loan Repayment</b>	<b>24</b>	<b>94</b>	<b>47</b>	<b>69</b>
<b>Non-Oligated</b>	<b>NA</b>	<b>NA</b>	<b>35</b>	<b>55</b>



# Service-Site Retention in States' Support-for-Service Physicians





## **Alabama Rural Medical Pipeline**

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- **Alabama's 3 intertwined programs creating an education pipeline to recruit and prepare physicians for rural AL**
- **Run by the UA College of Community Health Sciences, Tuscaloosa. Funded by the state, U of A, Alabama Farmers Federation, AL Academy of Family Physicians, others**
- **The Rural Health Scholars Program**  
**The Minority Rural Health Pipeline Program**  
**The Rural Medical Scholars Program**



## Alabama Rural Medical Pipeline

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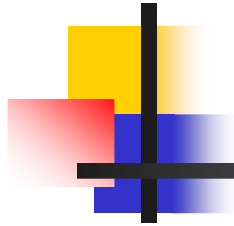
- **The Rural Health Scholars Program**, A summer program for rising high school seniors from rural AL. Includes two courses for college credit (English and Chemistry) and field trips and lectures on rural health careers.
- **The Minority Rural Health Pipeline Program**. A 6-week summer curriculum for AL rural minority college students. Rural health careers-focused seminars, classes and field trips, and academic skills building.
- **The Rural Medical Scholars Program** enrolls 10 college students from rural AL each year. One-year full-time curriculum on rural health for senior college students at UA; successful completion earns spot in UA SOM, with ongoing rural peer support group activities and mentorship from rural practitioners during medical school.  
(First cohorts: 40% of grads match in FM; 64% rural practice)



## **New Twists to *Nursing* Support-for-Service Programs**

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- **Program funding from a license tax on all nurses in FL  
*(FL Nursing Scholarship Program)***
- **Any practice site not on official site list (e.g., a specific hospital or nursing home) pays \$2000 per year per participant towards program costs  
*(FL Nursing Student Loan Forgiveness Program)***
- **Program requires sites (all within HPSAs) that match a nurse to pay 1/2 the \$4,000 amount participants receive per year  
*(KY State Loan Repayment Program)***



## **New Twists to *Nursing* Support-for-Service Programs (cont.)**

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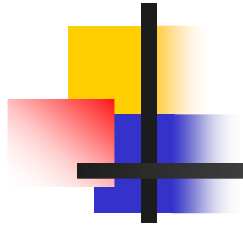
- **Program is for KY residents only but will cover education costs at out-of-state schools, with obligation to return to KY to work (*KY Nursing Incentive Scholarship Fund*)**
- **Unique public-private partnership. Local employers (e.g., hospitals) are linked to specific local nursing schools (hub and spoke). Employers pay training costs at these local schools for specific individuals who then work for them after graduation (*GA Intellectual Capital Partnership Program*)**



## **New Promising Program Options for NC**

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- 1. Create “pipeline” program for rural and minority middle and high school and college students**
- 2. Targeted admissions into NC medical schools**
- 3. Create longitudinal (12-24 months) rural/underserved area curriculum/program in medical schools**
- 4. Create medical service-option-loan program**
- 5. Expand size of loan repayment and direct financial incentive programs, and expand range of available practice sites**
  - Less needy sites could share program costs**



# Q and A