



Holding up the Oral Health Safety Net: The role of NHSC alumni dentists in North Carolina

Thomas R. Konrad, Ph.D. ¹

Neel B. Bhatavadekar, BDS, MS, MPH²

R. Gary Rozier, DDS³

¹Cecil G. Sheps Center for Health Services Research, Chapel Hill

²School of Dentistry, University of Texas Health Science Center- Houston

³School of Public Health, University of North Carolina at Chapel Hill

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National Health Service Corps

The NHSC was established 37 years ago to deploy health care professionals to underserved communities.

Initial Mission

“ To improve the delivery of health services to persons living in communities or areas of the US where health personnel and services are inadequate to meet the health needs of the residents of such communities and areas.”

- *PL 91-263 Emergency Health Personnel of 1970*

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Background: US

- Access to oral health care among low income populations is a growing problem.
- The National Health Service Corps (NHSC) might increase the supply of dentists motivated to provide services for this population.



Background: NC

- Uneven distribution of dentists and low participation the Medicaid program limits access to care in North Carolina (NC).
- The National Health Service Corps (NHSC) deploys dentists to underserved communities, but long-term retention is not well-documented.

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NHSC can improve access

Immediately: in service →

**using obligated dentists to staff
“safety net clinics” in Dental Health
Professional Shortage Areas.**

Long term: NHSC alumni →

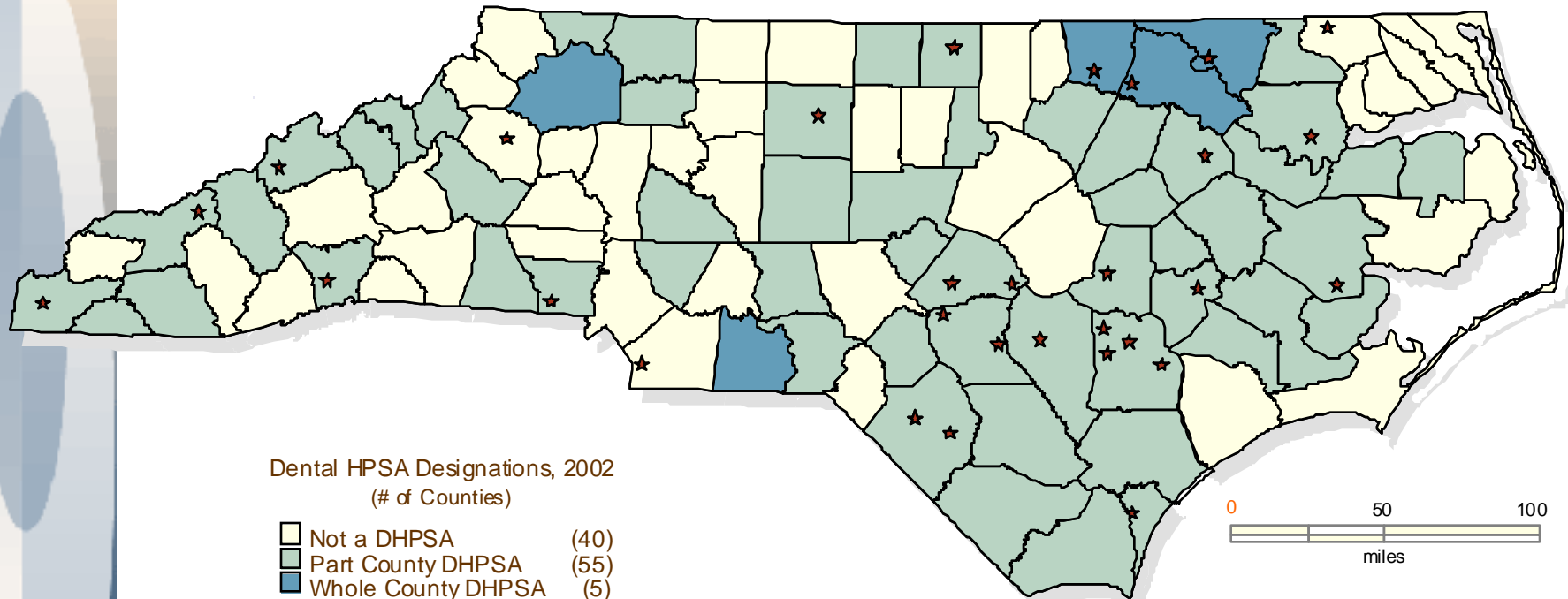
**stimulating dentists to continue
working with these populations in their
post-obligation careers**

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National Health Service Corps Dental Sites & Dental Health Professional Shortage Areas North Carolina, 1974-2007



Dental HPSA Designations, 2002
(# of Counties)

- Not a DHPSA (40)
- Part County DHPSA (55)
- Whole County DHPSA (5)

★ One Dental Site*, Through 2004 (35)

*Site locations (N=35) report locations where 50 periods of service were provided by 45 different dentists serving through scholarship, loan repayment and other NHSC programs (PHS, volunteer), 1974-2004.

Source: Area Resource File, 2003; NHSC person and place files, 1974-2004.
Produced By: North Carolina Rural Health Research Program, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

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Research Questions

- How did NHSC dentists with service obligations between 1990-1999 in NC differ from other dentists starting practice in NC in the same period?
- How likely are NHSC alumni to continue work with underserved populations?
- What other factors affect dentists' career commitments to work in underserved communities

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Methods

- Key outcome: current practice in a “safety net” setting which provides access to traditionally underserved populations:
 - Community Health Center, Health Department or publicly owned site; or
 - Private practice that has 20% or more Medicaid or S-CHIP patients.

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Methods

- Mail survey to all 19 NHSC alumni and 50 comparison (“mainstream”) dentists.
- Non-responding NHSC alumni asked selected items in telephone follow-up.
- The 2 groups compared using difference of means and percentages with t-tests.
- NHSC status and other key variables assessed using multivariate logit and linear regression models.

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Results

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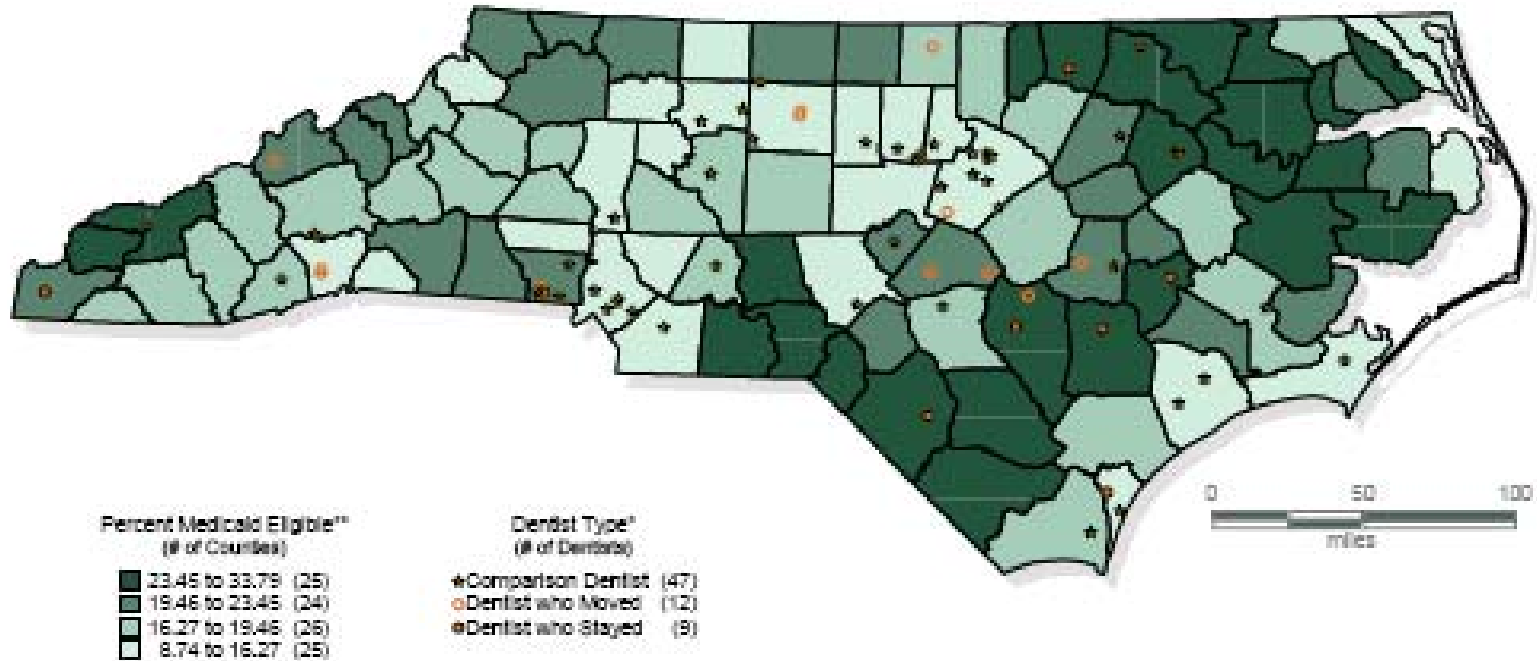


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Results

- NHSC Alumni & comparison dentists were similar by their:
 - age at graduation (29 yrs)
 - years in practice at survey (9yrs)
 - gender (45% female)
- Both groups were widely distributed across the state

Recent National Health Service Corps Dental Alumni and Comparison Dentist Sites & Percent of Population Eligible for Medicaid North Carolina, 1990-2004



Produced By: Southeast Regional Center for Health Workforce Studies, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.
 Source: Area Resource File, 2003; National Health Service Corps, BHP, HRSA, DHHS, March 2004; NC Health Professions Data System, 2004; Division of Medical Assistance, NC DHHS, 2003.

*Comparison dentists include general practice and pediatric dentists practicing in 2004. NHSC service was completed between 1990 and 2003.

**This map does not indicate the number of dentists that accept Medicaid patients.

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Results: selection

- NHSC alumni were more likely than mainstream dentists to be:
 - African-American.....39% vs. 6%
 - Fluent in Spanish.....46% vs. 13%
 - Not from suburbs,
e.g., rural or inner city ...83% vs. 48%
 - Wanted to work in an
underserved area4.7 vs. 2.3*

*on a 5 point “importance” scale

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Results: Subsequent Career

- NHSC alumni now were more likely than “mainstream” dentists to:
 - work in “safety net practices”:
84% vs. 23%
 - see more publicly insured patients:
60% vs. 19%
 - Have lower incomes:
\$121K vs. \$166K

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Results: Subsequent Career

NHSC alumni now were more likely than “mainstream” dentists to have:

- More unscheduled visits..... 13% vs. 6%
- Shorter visits41 vs. 53 mins.
- Longer waits between appointments for patients of record.....42 vs. 15 days

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Results: Subsequent Career

NHSC alumni now were more likely than “mainstream” dentists to have:

- More child pts.(0-14yrs)..... 45% vs. 25%
- More Latino patients..... 22% vs. 9%

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Results: Subsequent Career

NHSC alumni were comparable to “mainstream” dentists in terms of:

- Productivity: 39 hrs/wk
- Work schedules: 44 wks/yr
- Job satisfaction: relatively high
 - including satisfaction with compensation

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Results:

Predictors of Safety Net Practice

<u>Independent Variables</u>	<u><i>B</i></u>	<u><i>t</i></u>	<u><i>sig</i></u>
NHSC Alumni	0.46	2.93	0.007
Altruistic motivation	0.09	1.05	0.302
Avg. Ann. \$10K Incr.	1.15	2.31	0.029
African-American	0.46	2.36	0.026

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Results

- Multivariate analyses suggest that previous NHSC service predicts work in safety net settings.
- Other predictors may include:
 - Dentists' race,
 - Dentist altruistic motivations,
 - Rapid increases in income in current practice setting

Conclusions

- Targeted recruitment of African-Americans and other dentists wanting to work in underserved communities could amplify the effectiveness of the financial incentives of NHSC loan repayment to induce dentists to remain in “safety net” settings.

Conclusions

- Bonuses or salary increases might increase retention of dentists in community based settings.
 - Medicaid rate increases might provide some of the revenue base for retention incentives.
 - Poor dental insurance coverage will continue to challenge the viability of the oral health safety net.

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Implications

- NHSC may play an important role in dental education by:
 - supporting dental students, through loan repayment, face rising tuition costs; and
 - helping diversify the ethnic composition of oral health workforce.

Further Reading

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