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Health

March, 1946



Progress Report No. RS-7

DISTRIBUTION OF DENTISTS IN

NORTH CAROLINA

Ву

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Department of Rural Sociology

North Carolina Agricultural Experiment Station
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Ву

Selz C. Mayo Associate Rural Sociologist

Purpose

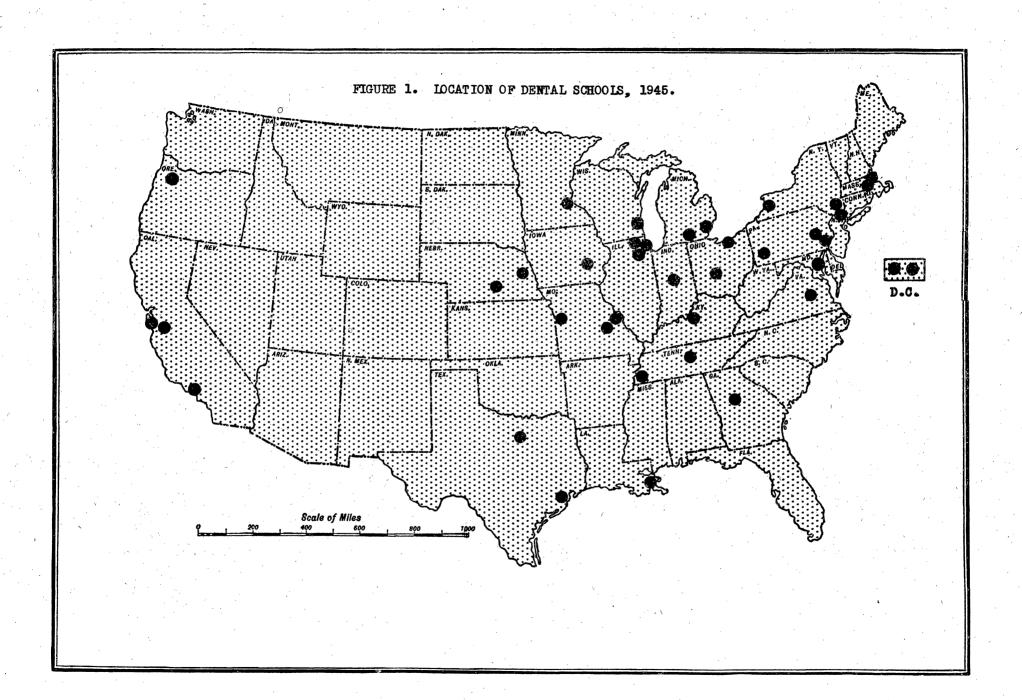
Dental service is perhaps less dramatic but it is, nevertheless, as important as other types of medical care. Dental personnel is, therefore, a significant part of the total medical care personnel trained to serve the health needs of the people. The purposes of this report, accordingly, are to study the dental personnel with respect to: (1) The national scene; (2) the position of North Carolina among the states; (3) the distribution throughout the state; and (4) proposed legislation.

The National Scene

Axiomatically, schools are necessary for the training of dentists but there are no schools in North Carolina equipped to train dentists. There are 39 dental schools in the United States located as shown in Figure 1. The state legislature of Washington has authorized the University to establish a dental school and two other states - both in the South - are now approaching the problem of establishing such training centers. 1/

On October 15, 1944 there were 8,590 students enrolled in the 39 dental schools; but 180 of these were from territories other than

^{1/} Harlan H. Horner, Dental Education and Dental Personnel, Mimeographed October 10, 1945, p. 8.



the States and D. C. During the five years 1940-1944, the average enrollment was 8,505 and the corresponding average for the states and D. C. was 8.319. The following is the number of students enrolled on October 15 of each year 1940-1944: 2/

| Year | Total | States and D. C. |
|------|----------------|------------------|
| 1940 | 7,720 | 7.534 |
| 1941 | 8,355 | 8,144 |
| 1942 | 8,847 | 8,676 |
| 1943 | 9,014 | 8,833 |
| 1944 | 8 , 590 | 8,410 |

More important than the number of students is the number of licenses issued by the state boards. The average number of dentists licensed to practice in the United States during the five years 1939-1943 was 2,361. The following is the number of licenses issued during each year of the period 1939-1943: 3/

| Yoar | 4. | Number |
|------|----|--------|
| 1939 | | 2,173 |
| 1940 | | 2,171 |
| 1941 | | 1,954 |
| 1942 | | 2,283 |
| 1943 | | 3,227 |

The number of dentists practicing is more significant than either the number of students or the number of licenses issued. The following is the number of dentists and the average number of people per dentist: 4/

| Year | Number of dentists | People per dentist |
|------|--------------------|--------------------|
| 1840 | 1,200 | 14.224 |
| 1850 | 2,923 | 7,934 |
| 1860 | 5,606 | 5,609 |
| 1870 | . 7,988 | 4,985 |
| 1880 | 12,314 | 4,073 |
| | • | |

Ibid., pp. 19-20.
Harlan H. Horner, op.cit., p. 23.

| Year | Number of dentists | People per dentist |
|------|--------------------|------------------------|
| 1890 | 17,498 | 3, 59 7 |
| 1900 | 29 , 665 | 2 . 56 2 |
| 1910 | 3 9,997 | 2,299 |
| 1920 | 56,152 | 1,883 |
| 1930 | 71,055 | 1,728 |
| 1940 | 70,601 | 1,865 |
| | | |

During the period 1840-1930 the number of active dentists increased faster than the population, and the average number of persons per dentist steadily decreased. During the decade 1930-1940, however, the population increased 7.2 per cent but the number of dentists decreased 0.6 per cent. The population per dentist increased from 1,728 in 1930 to 1,865 in 1940.

What can be expected in the future? Will the reversal in the trend during the decade 1930-1940 as shown above, itself be reversed? Dr. Harlan H. Horner has studied this situation and has reached the following conclusion:

"Thus it would appear that our population per dentist for the three decades from 1930 to 1960 will show a progressive increase and the provisions for dental care will be less in 1960 than it was in 1930." 5/

North Carolina Among the States

The following is the number of North Carolina residents enrolled in the dental schools in the United States as of October 15 for the years 1940-1944:

| Year | Number |
|------|--------|
| 1940 | 118 |
| 1941 | 131 |
| 1942 | 145 |
| 1943 | 166 |
| 1944 | 152 |
| | |

^{5/} Op.cit., p. 47.

The average for the period of 142 residents of North Carolina in dental schools represents 1.7 per cent of all students enrolled; but in 1940, the state had 2.7 per cent of the population of the nation. In view of the fact that the state has a younger population than the average for the nation, this is not an accurate comparison. The percentages came closer together if the population 21 years of age and over is used in the comparison - the state has only 2.3 per cent of this population group. It is more realistic to assume that a majority of the dental students came from the age group 20-24, and North Carolina has 3.1 per cent of this population. On the basis of either comparison, North Carolina is under-represented by students in the dental schools.

In the above analysis, no attempt is made to stipulate the number of students that should be enrolled to improve, at a given rate, the future dentist-population ratio; and this is an entirely different story.

Since there are no dental schools in the state, the question arises: Where do residents of North Carolina go for training? The following is a distribution of resident North Carolinians enrolled in various dental schools as of October 15, 1944: $\frac{6}{}$

| School | Numbor |
|-----------------------------|--------|
| Emory University | 62 |
| Medical College of Virginia | 53 |
| University of Maryland | 13 |
| Harvard University | 10 |
| University of Louisville | 4 |
| University of Tennessee | 3 |
| Indiana University | 2 |
| University of Pennsylvania | 2 |
| Loyola University | 1 |
| Northwestern University | 1 |
| University of Pittsburgh | 1 |

^{6/} Dental Students' Register, 1944, Council on Dental Education, American Dental Association.

The following is the number of licenses issued on examination by the state board for the years 1939-1943:

| Year | Number |
|------|--------|
| 1939 | 30 |
| 1940 | 32 |
| 1941 | 25 |
| 1942 | 38 |
| 1943 | 41 |

During the period, 166 dentists were licensed to practice (average of 33 per year) in the state. Thus, only 1.4 per cent of 11,808 licenses issued in the United States were granted to persons for practice in North Carolina.

The real crux of the problem, however, is to be found in the number of dentists actively engaged in serving the population. A recent study shows that for the period 1940-1942 there were, on the average, 799 active dentists in the state. This means that North Carolina had only 1.1 per cent of the dentists in the nation. It means, also, that there were 4,470 people per dentist (Based on 1940 enumerated population). Only four states had a higher ratio and the ratio for North Carolina was about three times as high as the average for the nation. For example, California had a ratio of one dentist for each 1,145 people; or 1,017 in the District of Columbia. It should be noted that every state with a dental school had a lower ratio than North Carolina, and this includes Virginia to the North and Georgia to the South.

Distribution In North Carolina

On June 1, 1945 there were 714 active dentists $\frac{7}{2}$ in North Carolina to serve the population. On the basis of the 1940 population, there were 5,002 people for each dentist and there were nine counties without dentists. The lowest ratio of people per dentist is in Montgomery County - 2,326 (Table 1). Excluding the counties with no dentists, Stokes County has the highest ratio - 22,656. There are 15 counties in which the ratio is over 10,000 even after excluding the nine counties with no dentists.

North Carolina as of June 1, 1945 there would have been 926 to serve the population. This would give the state one dentist for each 3,857 people. And, if these dentists had returned to the counties from which they were listed, there still would be eight counties without dentists. There would be an additional nine counties with a ratio of above 10,000. New Hanover County would have the lowest ratio - 1,917 people per dentist; and this would be the only county with a ratio of below 2,000 (this does not take into account the tremendous increase of population in Wilmington). Table 2 and Figure 2 show these data and the men in service have been allocated to the county in which they had prior service.

Table 3 shows a distribution of the white dentists in North

Dr. Wilbert Jackson, Secretary of the North Carolina State Board of Dental Examiners, sent the author a list of active dentists licensed to practice in North Carolina which was compiled as of June 1, 1945. This list contained 951 names. Those with out-of-state addresses and those listed as with the State Board of Health, in or out of service, were eliminated. The remaining 926 dentists (including men in service as of that date) are the basis for this section of the report.

Table 1. Distribution of Dentists in North Carolina, June 1, 1945. (Excluding Men in Service)

| от него противности при при при при при при при при при пр | | | | navania de la companya de la company | ryser of the protect price and complete and place of the protect process of the price of the pri | 7 | | 7 77 .7 |
|--|---|-----------|----------------|--|--|------------|------------------|---------------|
| | | Do1- | People | Number | 0 | D =1= | People | Number |
| County | 1 | Rank | per | of | County | Rank | per | of |
| Processor and Association (Confederation of the Confederation of the Con | | | Dentist* | Dentists | | <u> </u> | Dentist* | Dentists |
| State | | 33 | 5,002 | 714 | | | | |
| | | | | | | | | |
| Alamance | | 24 | 4,786 | 12 | Johnston | 73 | 9,114 | 7 |
| Alexander | | 49 | 6,727 | 2 | Jones | 78 | 10,926 | 1 |
| Alleghany | | 67 | 8,341 | 1 | Lee | 12 | 3,749 | 5 |
| Anson | | 74 | 9,481 | 3 | Lenoir | 11 | 3,434 | 12 |
| Ashe | | 79 | 11,332 | 2 | Lincoln | . 65 | 8,062 | 3 |
| Avery | | | No Dentists | | McDowell | 62 | 7 , 664 | 3 |
| Beaufort | | 54 | 7,286 | 5 | Macon | 14 | 3,970 | 4 |
| Bertie | | 71 | 8 , 734 | 3 2 | Madison | 90 | 22,522 | 1 |
| Bladen | | 83 | 13,578 | 2 | Martin | 70 | 8°, 704 | 3 |
| Brunswick | | 69 | 8 <u>,</u> 563 | 2 | Mecklenburg | 6 | 2 , 977 | 51 |
| Buncombe | | 3 | 2,529 | 43 | Mitchell | 36 | 5,327 | 3 |
| Burke | | 45 | 6,436 | - 6 | Montgomery | 1, | 2,326 | 7 |
| Cabarrus | | 21 . | 4,569 | 13 | Moore | 42 | 6,194 | 5 |
| Caldwell | | 34 | 5 , 114 | 7 | Nash | 51 | 6,951 | 8 |
| Camden | | Þ | To Dentists | | New Hanover | . 2 | 2,523 | 19 |
| Carteret | | 22 | 4,571 | 4 | Northampton | 84 | 14,150 | 2 |
| Caswell | | 88 | 20,032 | 1 | Onslow | 72 | 8 , 970 | 2 |
| Catawba | | 18 | 4,304 | 12 | Orange | 23 | 4,614 | 5 |
| Chatham | | 82 | 12,363 | 2 | Pamlico | 75 | 9,706 | 1 |
| Cherokee | | 43 | 6,271 | 3 | Pasquotank | 5 | 2,938 | 7 |
| Chowan | | 38 | 5,786 | 2 | Pender | 86 | 17,710 | ì |
| Clay | | | To Dentists | | Perquimans | 76 | 9,773 | ī |
| Cleveland | | 46 | 6,451 | 9 | Person | 68 | 8,343 | 3 |
| Columbus | | 60 | 7,611 | 6 | Pitt | 61 | 7,656 | 8 |
| Craven | | 77 | 10,433 | 3 | Polk | 40 | 5,937 | 2 |
| Cumberland | | 30 | 4,943 | 12 | Randolph | 31 | 4,950 | 9 |
| Currituck | | | To Dentists | | Richmond | 41 | 6 , 135 | 6 |
| Dare | | | lo Dentists | | Robeson | 5 2 | 6,987 | 11 |
| Davidson | | 39 | 5,931 | 9 | Rockingham | 25 | 4,825 | 12 |
| Davie | | 57 | 7,455 | 2 | Rowan | 44 | 6,291 | 11 |
| Duplin - | | 64 | 7,948 | 5 5 | Rutherford | 33 | 5: 064 | 9 |
| Durham | | 9 | 3,210 | 25 | Sampson | 50 | 5,064 6,777 | <i>9</i> 7 |
| Edgecombe | | 29 | 4,916 | 10 | Scotland | 63 | 6,777 . 7,744 | 3 |
| Forsyth | | 8 | 3,085 | 41 | Stanly | 48 | - | 5 |
| Franklin | | 59 | 7,596 | 4 | Stokes | 9 1 | 6,567 | 1 |
| Gaston | | 55 | 7,294 | 12 | | 10 | 22,656 | |
| Gates | | | o Dentists | | Su rry Swain | 15 | 3,214 | 13 |
| Graham | | N | | | | 16 | 4,059 | 3 3 |
| Granville | | 2.8 | 4,891 | 6 | Transylvania | | 4,080 | ે |
| Greene | | 87 | • | 1 | Tyrrell | | o Dentists | 0 |
| Guilford | | 7 | 18,548 | 3 | Union | 27 | 4,887 | 8 |
| Halifax | | | 3,078 | 50 | Vance | 32 | 4,994 | 6 |
| | | 66 5.6 | 8°,073 | 7 | Wake | 4 | 2,739 | 40 |
| Harnett | | 56 | 7,373 | 6 | Warren | 80 | 11,573 | 2 |
| Haywood | | 19 | 4,350 | 8 | Washington | 81 | 12,323 | 1 |
| Henderson | | 47 | 6,512 | 4 | Watauga | 20 | 4,529 | 4 |
| Hertford | | 26 | 4,838 | 4 | Wayne | 35 | 5,303 | 11 |
| Hoke | | 58 | 7,469 | 2 | Wilkes | 53 | 7,167 | 6 |
| Hyde | | | o Dontists | | Wilson | 17 | 4,185 | 12 |
| Iredell | | 37 | 5,603 | 9 | Yadkin | 89 | 20,657 | 1 |
| Ja c kson | | 13 | 3,873 | 5 | Yancey | 85 | 17,202 | 1 |

^{*} Population as of 1940.

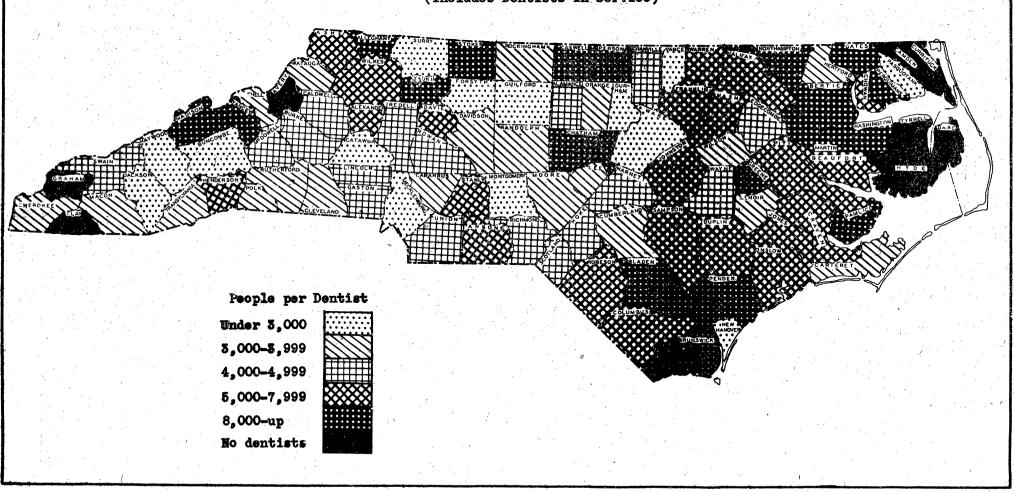
Table 2. Distribution of Dentists in North Carolina, June 1, 1945. (Including Mon in Service)

| | | People | Number | | 1 | People | Number |
|-------------------|-----------------|----------------|----------------|--------------|----------|----------------|---------------|
| County | Rank | per | of Dankinta | County | Rank | per | of Dankisk |
| | | Dentist* | Dontists | | | Dentist* | Dentist |
| State | 30 | 3,857 | 926 | | | | |
| A l amance | 38 | 4,102 | 14 | Johnston | 57 | 5,317 | 12 |
| Alexander | 66 | 6,727 | 2 | Jones | 58 | 5,463 | 2 |
| Alleghany | 75 | 8,341 | 1 | Lee | 26 | 3,749 | 5 |
| Anson | 67 | 7,111 | 4 | Lenoir | 20 | 3, 434 | 12 |
| Ashe | 70 | 7,555 | 3 | Lincoln | 35 | 4,031 | 6 |
| Avery | | To Dentists | v | McDowell | 45 | 4,599 | 5 |
| Beaufort | 54 | 5,205 | 7 | Macon | 34 | 3,970 | 4 |
| Bertie | 79 | 8,734 | 3 | Madison | 85 | | 2 |
| Bladen | 88 | | 2. | Martin | | 11,261 | 3 |
| Brunswick | 77 | 13,578 | 2 | į. | 78 | 8,704 | |
| | | 8,563 | | Mecklenburg | 7 | 2,489 | 61 |
| Buncombe | 3 | 2,091 | 52 | Mitchell | 16 | 3,196 | 5 |
| Burke | 41 | 4,291 | 9 . | Montgomery | 6 | 2,326 | 7 |
| Cabarrus | 21 | 3,494 | 17 | Moore | 31 | 3,871 | 8 |
| Caldwell | 44 | 4,474 | . 8 | Nash | 60 | 5,561 | 10 |
| Camden | | lo Dentists | | New Hanover | 1 | 1,917 | 25 |
| Carteret | 24 | 3,657 | 5 | Northampton | 81 | 9,433 | 3 |
| Caswell | 91 | 20,032 | 1 | Onslow | 64 | 5,980 | 3 , |
| Catawba | 12 | 2,870 | 18 | Orange | 29 | 3,845 | 6 |
| Chatham | 74 | 8,242 | 3 | Pamlico | 82 | 9,706 | 1 |
| herokee | 27 | 3,762 | 5 | Pasquotank | 8 | 2,571 | 8 |
| howan | 63 | 5,786 | 2 | Pender | 90 | 17,710 | ĺ |
| Clay | | o Dentists | ~ | Perquimans | 83 | 9,773 | 1 |
| Cleveland | 19 | 3,415 | 17 | Person | 76 | 8,343 | 3 |
| Columbus | 52 | 5,074 | 9 | Pitt | 61 | 5,568 | 11 |
| Craven | 65 | 6,260 | 5 | Polk | | | |
| Cumberland | 32 | | | | 33 25 | 3,958 | 3 |
| | | 3,955 | 15 | Randolph | 25 | 3,713 | 12 |
| Currituck | | o Dentists | | Richmond | 46 | 4,601 | 8 |
|)are | | o Dentists | | Robeson | 53 | 5,124 | 15 |
| avidson | 28 | 3,813 | 14 | Rockingham | 30 | 3,860 | 15 |
|)avie | _. 69 | 7 , 455 | 2 | Rowan | 50 | 4,943 | 14 |
| uplin | 73 | 7,948 | 5 | Rutherford | 22 | 3, 506 | 13 |
| urham) | 5 | 2,293 | 35 | Sampson | 56 | 5,271 | 9 |
| ldgecombe | 37 | 4,097 | 12 | Scotland | 48 | 4,646 | 5 |
| Forsyth | 9 | 2,581 | 49 | Stanly | 5.9 | 5,472 | 6 |
| ranklin | 71 | 7,596 | 4 | Stokes | 86 | 11,328 | 2 |
| aston | 47 | 4,607 | 19 | Surry | 11 | 2,611 | 16 |
| ates | 84 | 10,060 | 1 | Swain | 36 | 4,059 | 3 |
| raham | И | • | ĺ | Transylvania | 15 | 3,060 | 4 |
| ranville | 39 | 4,192 | 7 | Tyrrell | | o Dentists | |
| reene | 80 | 9,274 | 2 | Union | 42 | 4,344 | 9 |
| uilford | 10 | 2,609 | 59 | Vance | 14 | | 10 |
| alifax | 62 | | | | | 2,996 | |
| arnett | 43 | 5,651 | 10 | Wake | 2 | 2,029 | 54 |
| | | 4,424 | 10 | Warren | 72 | 7,715 | 3 |
| aywood | 13 | 2,900 | 12 | Washington | 87 | 12,323 | 1 |
| enderson | 55 | 5,210 | 5 | Watauga | 23 | 3 , 623 | 5 |
| ertford | 17 | 3,225 | 6 | Wayne | 49 | 4,861 | 12 |
| oke | 51 | 4,979 | 3 | Wilkes | 68 | 7,167 | 6 |
| yde | Ne | Dentists | | Wilson | 18 | 3,348 | 15 |
| redell | 40. | 4,202 | 12 | Yadkin | 92 | 20,657 | 1 |
| ackson | 4 | 2,152 | 9 | Yancey | 89 | 17,202 | ī |

^{*} Population as of 1940.

FIGURE 2. PEOPLE PER DENTIST, JUNE 1, 1945.

(Includes Dentists In Service)



Carolina including the men in service. Assuming the men in service were available, there would be 858 white dentists; and there would be 2,993 white people per dentist. Eight counties would still have no white dentists. On the other hand, there would be 10 counties with a white dentist-white population ratio of 2,000 or less. There would be only five counties with ratios of above 10,000.

On June 1, 1945 there were 67 active Negro dentists in North Carolina and an additional one in service. These 68 Negro dentists represent only 7.3 per cent of the dentists in the state but Negroes comprise 27.5 per cent of the total population. On the basis of 68 dentists, there are 14,431 Negroes for each dentist. All the Negro dentists are located in 29 counties and there is only one Negro dentist in the rural areas of the state. Considering only counties with Negro dentists, Buncombe County has the lowest ratio, 2,692; and Halifax the highest, 32,050 (Table 4).

Assuming that the dentists who left rural areas for service will return, there will be 250 dentists to serve the rural population; and, the remaining 676 will be in urban centers. This means that 27 per cent of the dentists will be in rural areas and 73 per cent in urban; but, this is an almost exact reversal of the proportion of the population in the areas. It should be noted that 67 of the 68 active Nogro dentists are in urban areas and 41.2 per cent are in the five largest urban centers of the state. The following is the number of dentists (including mon in service as of June 1, 1945) in rural areas and urban centers by race:

| Residence | Total | White | Negro |
|-----------|-------|-------|-------|
| Tota1 | 926 | 858 | 68 |
| Rural | 250 | 249 | 1 |
| Urban | 676 | 609 | 67 |

Table 3. Distribution of White Dentists in North Carolina, June 1, 1945. (Including Men in Service)

| DAN TO THE REAL PROPERTY OF THE PROPERTY OF TH | | and the second participation by a second participation of the second participation of | - | ing men in serv | constitute of the Committee of the contract of | o entringuidos procesarios de consecuencios. Por referencios entre entre entre de consecuencio | neville vallet kalender i 1900 in der jaken in der jaken i 1900 in der jaken i 1900 in der jaken i 1900 in der Det jaken treilen vegen er jaken i 1900 in der jake |
|--|----------|---|----------------|-----------------|--|---|---|
| Q | | People | Number | | D. 1. | People | Number |
| County | Rank | per | of Dankiska | County | Rank | per | of |
| Products and analysis analysis and analysis analysis and analysis a | <u> </u> | Dentist* | Dentists | <u> </u> | <u> </u> | *Dentist* | pentists |
| State | 31 | 2,993 | 858 | | | | |
| | | | | | | | |
| Alamance | 52 | 3,602 | 13 | Johnston | 64 | 4,194 | 12 |
| Alexander | 79 | 6,258 | 2 | Jones | . 33 | 3,064 | 2 |
| Alleghany | . 86 | 8,032 | 1 | Lee | 22 | 2 , 679 | 5 |
| Anson | 53 | 3,629 | 4 | Lenoir | 13 | 2,127 | 11 |
| Ashe | 84 | 7 , 396 | 3 | Lincoln | 45 | 3,482 | 6 |
| Avery | | Dentists | | McDowell | 65 | 4,233 | 5 |
| Beaufort | 57 | 3,772 | 6 | Macon | 60 | 3 , 854 | 4 |
| Bertie | 58 | 3,775 | 3 | Madison | 90 | 11,150 | 2 |
| Bladen | 85 | 7,991 | 2 | Martin | 68 | 476 e | 3 |
| Brunswick | 78 | 5,66 3 | 2 | Mecklenburg | 8 | 1,973 | 55 |
| Buncombe | 11 | 2,013 | 46 | Mitchell | 36 | 3,183 | 5 |
| Burke | 61 | 3,938 | 9 | Montgomery | 5 | 1,791 | 7 . |
| Cabarrus | 30 | 2,917 | 17 | Moore | 25 | 2 , 703 | . 8 |
| Caldwell | 63 | 4,140 | 8 | Nash | 50 | 3,584 | 9 |
| Camden | No | Dentists | | New Hanover | 2 | 1,403 | 22 |
| Carteret | . 35 | 3,116 | 5 | Northampton | 51 | 3,589 | 3 |
| Caswell | 89 | 10,918 | 1 | Onslow | 67 | 4,359 | 3 |
| Catawba | 27 | 2,735 | 17 | Orange | 20 | 2,652 | 6 |
| Chatham | 77 | 5,604 | 3 | Pamlico | 80 | 6,328 | 1 |
| Cherokee | 55 | 3 , 720 | 5 | Pasquotank | 7 | 1,967 | 6 |
| Chowan | 34 | 3,069 | 2 | Pender | 87 | 9,491 | 1 |
| Clay | No | Dentists | | Perquimans | 72 | 5,045 | 1 |
| Cleveland | 21 | 2,659 | 17 | Person | 75 | 5,228 | 3 |
| Columbus | 43 | 3,443 | 9 | Pitt | 38 | 3,216 | 10 |
| Craven | 44 | 3,453 | 5 | Polk | 42 | 3,410 | 3 |
| Cumberland | 31 | 2,991 | 13 | Randolph | 54 | 3,657 | 11 |
| Currituck | | Dentists | | Richmond | 46 | 3,505 | 7 |
| Dare | | Dentists | | Robeson | 19 | 2,476 | 14 |
| Davidson | 40. | 3,392 | 14 | Rockingham | 47 | 3,526 | 13 |
| Davie | 81 | 6 , 365 | 2 | Rowan | 69 | 4,686 | 12 |
| Duplin | 74 | 5 ,1 09 | 5 | Rutherford | 32 | 3,034 | 13 |
| Durham | 4 | 1,724 | 30 | Sampson | 59 | 3,806 | 8 |
| Edgecombe | 15 | 2,249 | 10 | Scotland | 24 | 2,697 | 4 |
| Forsyth | 12 | 2,031 | 42 | Stanly | 71 | 4,819 | 6 |
| Franklin | 66 | 4 , 335 | 4 | Stokes | 88 | 10,182 | 2 |
| Gaston | 62 | 3,944 | 19 | Surry | 18 | 2,453 | 16 |
| Gates | 73 | 5,088 | 1 | Swain | 48 | 3,542 | 3 |
| Graham | | Dentists | | Transylvania | 29 | 2,850 | 4 |
| Granville | 17 | 2,396 | . 6 | Tyrrell | | Dentists | |
| Greene | 76 | 5,232 | 2 | Union | 56 | 3,740 | 8 |
| Guilford | 16 | 2,297 | 53 | Vance | 10 | 2,000 | 8 |
| Halifax | 26 | 2,715 | 9 | Wake | 3 | 1,484 | 49 |
| Harnett | 37 | 3,199 | 10 | Warren | 22 | 2,679 | 3 |
| Haywood | 28 | 2,826 | 12 | Washington | 83 | | 1 |
| Henderson | 70 | 4,783 | 5 | Watauga | | 6,857 | 5 |
| Hertford | 1 | | 6 | | 49 | 3,550 | |
| Hoke | 6 | 1,317 | 3 | Wayne | 39 92 | 3,302 | 10 |
| Hyde | | 1,914 | ٥ | Wilkes | 82 | 6,696 | 6 |
| Iredell | | Dentists | 70 | Wilson | 14 | 2,242 | 13 |
| Jackson | 41 | 3,404 | 12 | Yadkin . | 92 | 19,482 | 1 |
| OUCKROII | 9 | 1,996 | 9 | Yancey | 91 | 17,044 | 11 |

^{*} Population as of 1940.

Table 4. Distribution of Negro Dentists In
North Carolina, June 1, 1945.

(Including Men in Service)

| County Rank People per of Dentists Number of Dentists State 23 14,431 68 Alamance 17 10,592 1 Beaufort 22 13,799 1 Buncombe 1 2,692 6 Catawba 4 5,165 1 Cumberland 15 10,109 2 Durham 7 5,705 5 Edgecombe 21 13,332 2 Forsyth 8 5,879 7 Granville 23 14,958 1 Guilford 5 5,357 6 Halifax 29 32,050 1 Lenoir 25 17,812 1 Mecklenburg 12 7,216 6 Nash 26 23,353 1 New Hanover 6 5,686 3 Pasquotank 3 4,382 2 Pitt 28 29,086 | | : | |
|---|--|---|-----------|
| Alamance 17 10,592 1 Beaufort 22 13,799 1 Buncombe 1 2,692 6 Catawba 4 5,165 1 Cumberland 15 10,109 2 Durham 7 5,705 5 Edgecombe 21 13,332 2 Forsyth 8 5,879 7 Granville 23 14,958 1 Guilford 5 5,357 6 Halifax 29 32,050 1 Lemoir 25 17,812 1 Mocklenburg 12 7,216 6 Nash 26 23,353 1 New Hanover 6 5,686 3 Pasquotank 3 4,382 2 Pitt 28 29,086 1 Randolph 2 4,328 1 Richmond 19 12,224 1 Robeson 27 25,573 1 Rockingham 9 6,016 2 Rowan 10 6,483 2 Sampson 24 16,412 1 Scotland 18 11,654 1 Union 14 9,176 1 Vance 11 6,979 2 Wake 13 7,362 5 Wayne | County | Rank | per of |
| Beaufort 22 13,799 1 Buncombe 1 2,692 6 Catawba 4 5,165 1 Cumberland 15 10,109 2 Durham 7 5,705 5 Edgecombe 21 13,332 2 Forsyth 8 5,879 7 Granville 23 14,958 1 Guilford 5 5,357 6 Halifax 29 32,050 1 Lenoir 25 17,812 1 Mecklenburg 12 7,216 6 Nash 26 23,353 1 New Hanover 6 5,686 3 Pasquotank 3 4,382 2 Pitt 28 29,086 1 Randolph 2 4,328 1 Richmond 19 12,224 1 Robeson 27 25,573 1 Rockingham 9 6,016 2 Rowan 10 < | State | 23 | 14,431 68 |
| Wayne 20 12,647 2 | Beaufort Buncombe Catawba Cumberland Durham Edgecombe Forsyth Granville Guilford Halifax Lenoir Mecklenburg Nash New Hanover Pasquotank Pitt Randolph Richmond Robeson Rockingham Rowan Sampson Scotland Union Vance | 22 1 4 15 7 21 8 23 5 29 25 12 26 6 3 28 2 19 27 9 10 24 18 14 11 | 10,592 |
| | Wayne | 20 | 12,647 2 |

All other counties have no Negro dentists.

^{*} Population as of 1940.

The above data are more meaningful as translated into a ratio of people per dentist. The following is the number of people per dentist on the basis of 1940 population:

| Residence | Total | White | Negro |
|----------------|-----------------|----------------|------------------|
| Total | 3,857 | 2,993 | 14,431 |
| Rural Urban | 10,390 1,441 | 7,603 1,108 | 68 1 ,935 |

The data above make very obvious the fact that rural people and especially rural-farm people, do not have easy access to dentists. Of course, rural people use the dentists in urban centers but only as service is absolutely necessary. Propinquity of personnel and population should be given the highest consideration in any plan designed to improve the dental services available to rural people.

on the basis of the preceding analysis, the following question has, perhaps, already arisen: Where did the 212 dentists (22.9 per cent) that were in service as of June 1, 1945 come from? A much larger proportion of the rural than urban dentists went into service. This is even more significant in view of the very high dentist-population ratio in rural areas as compared with urban. Also, if the age distribution of dentists is comparable to that of general physicians, then the proportion in the elder age groups is higher for rural areas than for urban centers. In fact, 29.6 per cent of the rural and only 20.4 per cent of the urban dentists were recruited for the services. In another light, the picture can be summarized as this: Rural areas of North Carolina had 27 per cent of the dentists, but 34.9 per cent of the dentists in service were from rural areas.

There is a very definite tendency for the proportion of dentists in service to decrease as the size of center increases. For

example, 36.4 per cent of the dentists in centers of less than 1,000 population were recruited for the services as compared with only 17 per cent of those dentists in the five cities with 50,000 or more people.

The following question might logically arise at this point:

Will the dentists in service return to the areas and centers from

which they left? Data are not yet available on this important question,

but on the basis of certain known tendencies two assumptions may be

stated. It seems safe to assume, under the present system of dental

care, that practically all the dentists who left urban centers will

return to urban areas, but not necessarily the same center. It is

perhaps equally safe to assume that many of the rural dentists will

not return to rural areas. The disparity between dental services

available to rural and urban people will undoubtedly, therefore,

become even greater.

Some Results of Insufficient Personnel

Public Health Service and general dental practitioners and lay people who have studied the problem agree that only a small proportion of the population is getting the dental care it needs. What, then, are the results of inadequate care?

The best estimates indicate that not more than 20 to 30 per cent of the population is receiving adequate dental service. The Surgeon General of the United States, Thomas Parran, estimates that there are enough accumulated dental needs to require 800,000,000 hours of work, not including laboratory time. This would mean a minimum of 400,000 dentist-years of accumulated needs. Compare this

with the fact that there are only 70,000 to 75,000 dentists in the United States and the magnitude of the problem becomes obvious. On the basis of these data, the picture for North Carolina can be summarized as follows: There are enough accumulated dental needs to require the services of approximately 11,000 dentists for a year, but the state has only 926 dentists to meet both accumulated and current needs. This would be, in fact, a never ending task.

Dental neglect begins very early in life and the accumulated effects of this neglect continues throughout the remainder of life for the vast majority of the population. This point is well illustrated by a statement from the Surgeon General:

"More than 9 of every 10 children, by the time they reach the age of 6, have one or more decayed teeth. That is just the beginning. At about this time, earies begins in the permanent teeth. so that by the time a boy or girl reaches 18, 9 teeth, on the average, have become decayed and several extractions have been made. This continuing loss of teeth upsets the proper arrangement of the others, and predisposes to pyorrhea, a tissue disease which takes a heavy toll of the teeth remaining in adult life. In addition, neglect, untreated, diseased teeth and gums may be the direct cause or indirect cause of many other maladies, including toothache, acute dental abscesses, and focal infections with resulting arthritis, neuritis, neuralgia, valvular heart disease, diseases of the kidneys, and the gastrointestinal tract." 8/

Senator Claude Pepper of Florida made the following pertinent statement:

"...from November 1940 to January 1942 dental defects were the leading cause of rejection for military service. Nine out of every one hundred men who came up for examination during this period were rejected because of dental defects." 9/

9/ Ibid., p. 6.

^{8/} Hearings before a subcommittee of the Committee On Education and Labor, United States Senate, Seventy-Ninth Congress, First Session, on S. 190 and S. 1099, June, 1945, p. 17.

A sample of Selective Service records for the period April-July, 1942, showed that the average registrant had six teeth missing and two teeth decayed. 10/ Dr. Parran adds further evidence to this point by stating that "Among the first 2,000,000 men called for service, 20.9 per cent of the rejections were the results of dental deficiency. This percentage led all other causes of rejection in this group of men." 11/

Evidence could be piled on top of evidence which would show the amount of existing dental neglect and the results of insufficient dental care. This is neither the time nor the place to make such a catalogue, and the aforegoing data should be adequate to indicate the seriousness and the magnitude of the problem. Having recognized the problem, attention is now turned to an analysis of the recommendations that have been made to improve this deplorable condition.

Legislative Proposals

People in high places and low and in all walks of life are apparently in agreement to the effect that accumulated needs and indeed current demands for dental services cannot be met through individual and/or voluntary methods. Attention is rapidly turning toward specific legislation, a type of group technique, designed to ameliorate the condition and which will, it is anticipated, eventually solve the problem.

(1) North Carolina Legislature, 1945: In passing "The North Carolina Hospital and Medical Care Act" the Legislature of 1945 did not recognize the urgency of the dental care problem in the state.

^{10/} Hearings, op.cit., p. 6 11/ Ibid., p. 18.

Neither dentists nor the dental care problem are mentioned in the Bill except that one member of the "North Carolina Medical Care Commission" shall be nominated by the Dental Society.

(2) On May 24, 1945 Senators Wagner and Murray introduced a Bill (S. 1050) "To provide for the national security, health, and public welfare." Simultaneously, the Bill (H. 3293) was introduced in the House by Representative Dingell. This Bill designed as an amendment to and expansion of the Social Security Act and has been popularly labeled the "Wagner-Murray-Dingell Bill."

Title II, Part A, Section 210(b), pages 92-93 of the Bill is concerned with dental care. It provides that after January 1, 1947, the minimum dental benefits to be derived shall include "(1) examination (including X-ray survey) and diagnosis; (2) prophylaxis; (3) extraction of teeth which are considered by the dentist and an attending physician to be or likely to be injurious to the general health of the individual; and (4) treatment of acute diseases of the teeth, their supporting structures, and adjacent parts, including fractures of the teeth or jaws."

Recognizing that these might not allow maximum service for every case, the Bill further provides that all restrictions "shall be reduced or withdrawn as rapidly as the Surgeon General finds practicable."

(3) Dental Research: In 1945 Senator Murray offered in the Senate a Bill (S. 190) which would establish the National Institute of Dental Research. The purpose of the Institute would be (a) to conduct research "relating to the cause, prevention, and methods of diagnosis and treatment of dental diseases." (b) To coordinate

"researches conducted by other agencies." (c) To make available

"fellowships in the Institute." (d) "To secure for the Institute

consultation services and advice of persons who are experts in the

field of dental diseases and conditions." (e) "To cooperate with

State Health Agencies in the prevention and control of dental diseases

and conditions." The Bill provides for a sum of \$1,000,000 for

buildings and equipment and \$730,000 annually for the purpose of

carrying out the provisions of the Act.

(4) Dental Health Programs: Senators Aiken and Pepper have introduced a Bill (S. 1099) which would provide assistance to the states in developing and maintaining dental health programs. The specific previsions of the Bill are (1) to make grants-in-aid to states for the purpose of "establishing and maintaining adequate measures for the prevention, treatment, and control of such diseases, including dental-care programs for children, the training of personnel for state and local dental health work, and the development and maintenance of effective means for the education of the public concerning dental diseases." (2) To make grants to states for "studies, investigations, and demonstrations in dental health care..., and the development of methods of payment for dental services." (3) To obtain information "concerning studies which are being carried on...relating to the prevention, treatment, and control of dental diseases," and to make such data available to the public.

The last two Bills (S. 190 and S. 1099) presented above are so interrelated that simultaneous public hearings were held, in June, 1945. Senator Pepper made the following statement concerning the two proposals: "The purpose of S. 1099 is to get teeth filled; the purpose of S. 190 is to discover the means of preventing teeth from having to be filled."

DENTAL CARE NEEDED FOR MOST CHILDREN

"Only four of 802 children examined in five weeks of dental clinics just concluded in Henderson and Vance county schools by a dentist of the State Board of Health did not need dental attention, Dr. A. D. Gregg, county health officer, said today in announcing results of the inspection. Dr. E. T. Koonce conducted the work.

"Of the 802 children examined, 576 were given some treatment by the dentist, and 798 were referred to a private dentist for further work, the report showed. Dr. Gregg said the report showed great lack of proper food elements in both the mothers of the children and also in the children themselves after birth.

"Dr. Koonce visited two city and three county schools, and conditions discovered were much the same at all the schools."

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