



**North Carolina Department of Health and Human Services**  
**Division of Public Health • Epidemiology Section**  
**General Communicable Disease Control Branch**  
**TB Control Program – Carol Dukes Hamilton, M.D., Medical Director**  
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Michael F. Easley, Governor

Carmen Hooker Odom, Secretary

TO: Local and District Health Directors  
TB Control Nurses

FROM: Carol Dukes Hamilton, M.D.  
Medical Director, North Carolina TB Control Program

DATE: March 20, 2002

RE: 2001 Annual Tuberculosis Statistical Summary

Please find attached the 2001 report of TB cases and rates by North Carolina county. Selected data are represented in tables and graphs. The summary was prepared using the data each county submitted to report TB cases on RVCT forms for calendar year 2001. In some counties with few TB cases and also a small population base, case *rates* may appear high and can change dramatically year to year. These are only notable if a trend indeed shows increases in total cases or there is evidence of ongoing TB case transmission.

In 2001, the number of cases of TB in the state totaled 398, and our case rate fell to 4.8 per 100,000 population, both representing the fewest reported cases in a single year for North Carolina. Comparable statistics for the U.S. are due to be released soon; the U.S. case rate for 2000 was 5.8 cases per 100,000 population. Most county TB programs rely on directly observed therapy to promptly complete TB treatment and prevent spread to others. Many are beginning to use this technique to insure completion of treatment of latent TB infection as well. These efforts are paying off as reflected in the statistics, and you are all to be congratulated.

There are several facets of TB control that will challenge our future success. The first includes the increasing number of cases of disease and latent TB in populations where English is not the primary language and where cultural differences affect interactions with health care providers. We are likely to see cases in the infants and children of these populations as well. A second problem is the population co-infected with TB and HIV. Fortunately, only 10.8% of our current cases of TB test positive for HIV. Unfortunately, we are only testing 70% of those with TB for the presence of HIV. Patients with untreated HIV and TB have a higher mortality rate, and are at risk for developing drug-resistant TB.

We hope this information will be useful in evaluating your own TB prevention and control program. If you have questions, please contact the nurse consultant for your county, or contact me. Please visit our Web site to find this report and more North Carolina TB information: <http://www.schs.state.nc.us/epi/tb/>

Attachments

Cc: Steve Cline, DDS, MPH  
J.N. MacCormack  
TB Medical Advisory Committee  
TB Control Staff



## North Carolina Tuberculosis Report 2001: Number of Cases by County and Year

County	97	98	99	00	01	Ave.*
ALAMANCE	5	3	5	1	2	3
ALEXANDER			1		1	0
ALLEGHANY					1	0
ANSON		1	3	1	1	1
ASHE	1		1		1	1
AVERY			2	1		1
BEAUFORT	4	5	2	2	1	3
BERTIE	3	4	5		3	3
BLADEN	3	5	4	6		4
BRUNSWICK	3	7	5	5	2	4
BUNCOMBE	5	5	5	6	4	5
BURKE	2	1	4	2	2	2
CABARRUS	6	5	2	6	5	5
CALDWELL	1	2	2	3	4	2
CAMDEN						0
CARTERET	1	1		1	1	1
CASWELL				2		0
CATAWBA		8	9	8	5	6
CHATHAM	1	4	3	3	1	2
CHEROKEE			1	1	1	1
CHOWAN	2	2	4			2
CLAY						0
CLEVELAND	2	5	1	1	2	2
COLUMBUS	5	3	7	10	10	7
CRAVEN	3	5	1	6		3
CUMBERLAND	20	21	18	21	21	20
CURRITUCK	1			1		0
DARE	1			2		1
DAVIDSON	6	4	2	4	2	4
DAVIE		1		1		0
DUPLIN	5	5	9	8	5	6
DURHAM	11	22	19	20	19	18
EDGECOMBE	10	8	8	4		6
FORSYTH	19	20	20	13	15	17
FRANKLIN	1			2	2	1
GASTON	3	7	5	11	7	7
GATES	1				1	0
GRAHAM	1	2				1
GRANVILLE	3	1	2	1	2	2
GREENE	3	3	3	6	2	3
GUILFORD	19	34	34	20	27	27
HALIFAX	12	15	4	4	11	9
HARNETT	12	8	3	5	6	7
HAYWOOD	2	1		5		2
HENDERSON	1	3	2	6	1	3
HERTFORD		8	5	2	7	4
HOKE	5	4	2	3	1	3
HYDE						0
IREDELL	1	3	2	2	2	2
JACKSON		1			2	1
JOHNSTON	12	11	20	12	8	13
JONES	2	1	1	2		1
LEE	3	4	6	5	3	4

County	97	98	99	00	01	Ave.*
LENOIR	6	7	12	9	7	8
LINCOLN	2	2	1			1
MACON			1			0
MADISON						0
MARTIN	3	6	4	4	3	4
MCDOWELL		1	1	3	3	2
MECKLENBURG	84	59	79	67	40	66
MITCHELL			1	1		0
MONTGOMERY		2	2	1	1	1
MOORE	4	2	3	1		2
NASH	5	10	6	4	5	6
NEW HANOVER	13	10	3	7	16	10
NORTHAMPTON	2	6	4	3	4	4
ONSLow	6	17	9	3	4	8
ORANGE	3	4	1	8	3	4
PAMLICO						0
PASQUOTANK	1	2	1	3	2	2
PENDER		4	2	3	3	2
PERQUIMANS	1	1	1		1	1
PERSON		2		4		1
PITT	12	16	12	10	14	13
POLK						0
RANDOLPH	3	2	6	1	1	3
RICHMOND	8	4	3	3	3	4
ROBESON	9	3	8	6	4	6
ROCKINGHAM	1	3	1	4	6	3
ROWAN	5	2	2	7	2	4
RUTHERFORD	1	2	2	1	2	2
SAMPSON	7	10	12	6	2	7
SCOTLAND	3	3	4	2	2	3
STANLY	3		2	3		2
STOKES		1			1	0
SURRY			3		2	1
SWAIN	2	2				1
TRANSYLVANIA	1		1		1	1
TYRRELL	1					0
UNION	4	4	6	3	5	4
VANCE	2					0
WAKE	42	41	36	39	41	40
WARREN			3	1	1	1
WASHINGTON	4		1	1	2	2
WATAUGA			3		1	1
WAYNE	6	4	13	7	9	8
WILKES	2	4		2	2	2
WILSON	16	9	8	4	10	9
YADKIN				1	2	1
YANCEY					2	0
<b>Total</b>	<b>463</b>	<b>498</b>	<b>490</b>	<b>447</b>	<b>398</b>	<b>459</b>

\*Annual average for 1997-2001

Revised 4/3/02 CDH

## North Carolina Tuberculosis Report 2001: Case Rate/100,000 Population by County and Year

County	97	98	99	00	01	Ave.*
ALAMANCE	4.2	2.5	4.0	0.8	1.5	3
ALEXANDER	0.0	0.0	3.1	0.0	2.9	1
ALLEGHANY	0.0	0.0	0.0	0.0	9.3	2
ANSON	0.0	4.2	12.5	4.2	3.9	5
ASHE	4.2	0.0	4.2	0.0	4.1	2
AVERY	0.0	0.0	12.8	6.4	0.0	4
BEAUFORT	9.2	11.5	4.6	4.6	2.2	6
BERTIE	14.8	19.9	24.9	0.0	15.2	15
BLADEN	9.9	16.4	13.0	19.4	0.0	12
BRUNSWICK	4.6	10.4	7.2	7.0	2.6	6
BUNCOMBE	2.6	2.6	2.6	3.1	1.9	3
BURKE	2.4	1.2	4.7	2.3	2.2	3
CABARRUS	5.2	4.2	1.6	4.8	3.7	4
CALDWELL	1.3	2.7	2.6	3.9	5.1	3
CAMDEN	0.0	0.0	0.0	0.0	0.0	0
CARTERET	1.7	1.7	0.0	1.6	1.7	1
CASWELL	0.0	0.0	0.0	8.8	0.0	2
CATAWBA	0.0	6.1	6.8	6.0	3.5	4
CHATHAM	2.2	8.7	6.4	6.3	2.0	5
CHEROKEE	0.0	0.0	4.3	4.3	4.0	3
CHOWAN	14.1	14.0	27.8	0.0	0.0	11
CLAY	0.0	0.0	0.0	0.0	0.0	0
CLEVELAND	2.2	5.5	1.1	1.1	2.1	2
COLUMBUS	9.6	5.7	13.3	19.0	18.1	13
CRAVEN	3.4	5.6	1.1	6.6	0.0	3
CUMBERLAND	6.8	7.1	6.0	7.0	6.8	7
CURRITUCK	6.0	0.0	0.0	5.7	0.0	2
DARE	3.7	0.0	0.0	6.7	0.0	2
DAVIDSON	4.3	2.8	1.4	2.7	1.3	3
DAVIE	0.0	3.1	0.0	3.1	0.0	1
DUPLIN	11.3	11.2	19.9	17.6	10.0	14
DURHAM	5.6	11.0	9.4	9.8	8.3	9
EDGECOMBE	18.1	14.6	14.6	7.3	0.0	11
FORSYTH	6.6	6.9	6.8	4.4	4.8	6
FRANKLIN	2.3	0.0	0.0	4.3	4.1	2
GASTON	1.7	3.9	2.8	6.0	3.6	4
GATES	10.1	0.0	0.0	0.0	9.4	4
GRAHAM	13.3	26.5	0.0	0.0	0.0	8
GRANVILLE	7.0	2.3	4.5	2.2	4.0	4
GREENE	17.0	16.6	16.4	32.4	10.3	19
GUILFORD	5.0	8.8	8.6	5.0	6.3	7
HALIFAX	21.5	27.2	7.3	7.3	19.1	16
HARNETT	14.7	9.6	3.5	5.8	6.4	8
HAYWOOD	3.9	1.9	0.0	9.5	0.0	3
HENDERSON	1.3	3.7	2.4	7.2	1.1	3
HERTFORD	0.0	36.9	23.2	9.3	30.9	20
HOKE	17.3	13.5	6.6	9.6	2.9	10
HYDE	0.0	0.0	0.0	0.0	0.0	0
IREDELL	0.9	2.7	1.8	1.7	1.6	2
JACKSON	0.0	3.4	0.0	0.0	5.9	2
JOHNSTON	11.6	10.3	18.2	10.7	6.3	11
JONES	22.3	11.4	11.5	23.1	0.0	14
LEE	6.2	8.1	11.9	9.8	6.0	8

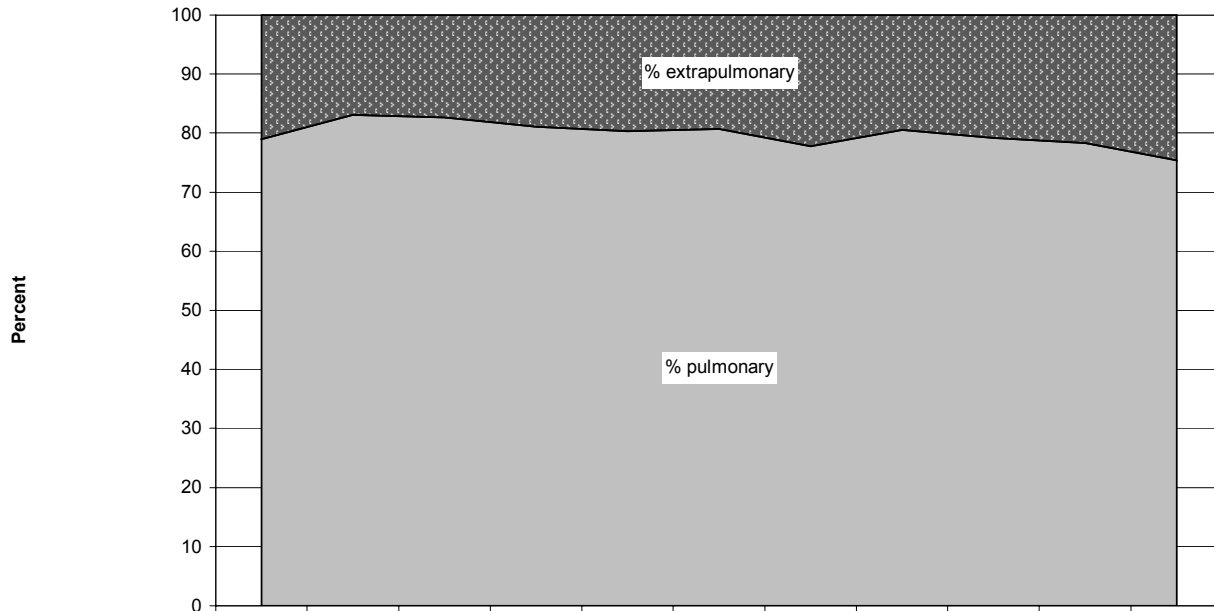
County	97	98	99	00	01	Ave.*
LENOIR	10.2	11.9	20.3	15.2	11.7	14
LINCOLN	3.5	3.4	1.7	0.0	0.0	2
MACON	0.0	0.0	2.4	0.0	0.0	0
MADISON	0.0	0.0	0.0	0.0	0.0	0
MARTIN	16.4	32.3	21.3	21.2	15.0	21
MCDOWELL	0.0	3.9	3.9	11.7	11.7	6
MECKLENBURG	13.8	9.4	12.4	10.3	5.6	10
MITCHELL	0.0	0.0	6.8	6.8	0.0	3
MONTGOMERY	0.0	8.1	8.1	4.0	3.7	5
MOORE	5.8	2.8	4.2	1.4	0.0	3
NASH	5.7	11.3	6.7	4.4	5.6	7
NEW HANOVER	8.9	6.7	2.0	4.5	9.7	6
NORTHAMPTON	9.6	28.8	19.2	14.4	18.0	18
ONSLow	4.1	11.5	6.0	2.0	2.6	5
ORANGE	2.8	3.7	0.9	7.1	2.5	3
PAMLICO	0.0	0.0	0.0	0.0	0.0	0
PASQUOTANK	2.9	5.7	2.8	8.3	5.7	5
PENDER	0.0	10.4	5.1	7.4	7.1	6
PERQUIMANS	9.2	9.1	9.0	0.0	8.7	7
PERSON	0.0	6.0	0.0	11.8	0.0	4
PITT	9.6	13.0	9.3	7.6	10.2	10
POLK	0.0	0.0	0.0	0.0	0.0	0
RANDOLPH	2.5	1.6	4.7	0.8	0.8	2
RICHMOND	17.5	8.7	6.5	6.5	6.4	9
ROBESON	8.0	2.6	7.0	5.2	3.2	5
ROCKINGHAM	1.1	3.4	1.1	4.4	6.5	3
ROWAN	4.1	1.6	1.6	5.5	1.5	3
RUTHERFORD	1.7	3.4	3.3	1.7	3.1	3
SAMPSON	13.3	18.6	22.1	11.0	3.2	14
SCOTLAND	8.6	8.5	11.3	5.6	5.5	8
STANLY	5.4	0.0	3.6	5.3	0.0	3
STOKES	0.0	2.3	0.0	0.0	2.2	1
SURRY	0.0	0.0	4.4	0.0	2.8	1
SWAIN	16.7	16.4	0.0	0.0	0.0	7
TRANSYLVANIA	3.6	0.0	3.5	0.0	3.4	2
TYRRELL	27.2	0.0	0.0	0.0	0.0	5
UNION	3.8	3.6	5.3	2.6	3.9	4
VANCE	4.9	0.0	0.0	0.0	0.0	1
WAKE	7.5	7.1	6.1	6.4	6.3	7
WARREN	0.0	0.0	16.4	5.4	4.9	5
WASHINGTON	30.1	0.0	7.7	7.8	14.6	12
WATAUGA	0.0	0.0	7.2	0.0	2.3	2
WAYNE	5.3	3.5	11.3	6.0	7.9	7
WILKES	3.2	6.3	0.0	3.1	3.0	3
WILSON	23.3	13.0	11.5	5.7	13.4	13
YADKIN	0.0	0.0	0.0	2.7	5.4	2
YANCEY	0.0	0.0	0.0	0.0	11.1	2
<b>Total</b>	<b>6.2</b>	<b>6.6</b>	<b>6.4</b>	<b>5.8</b>	<b>4.8</b>	<b>6</b>

\*Annual average for 1997-2001

# North Carolina TB Statistics, 2001

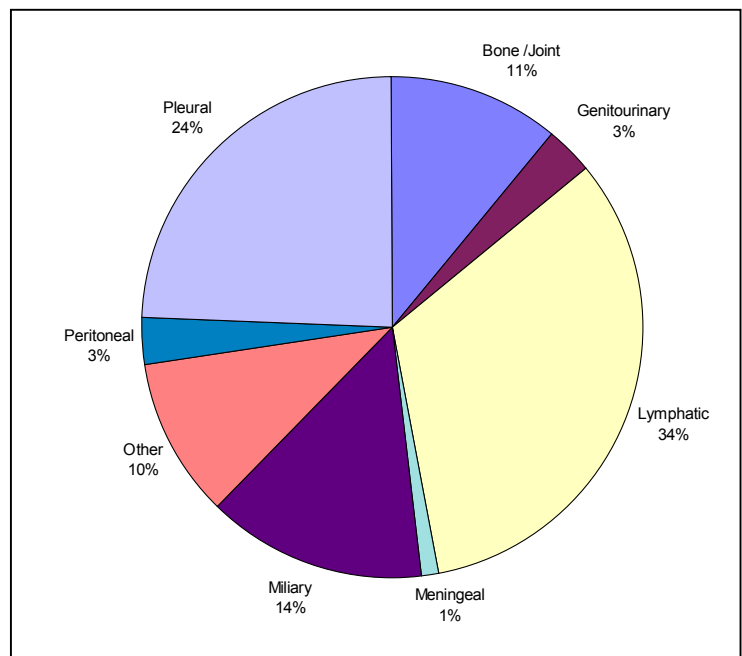
***Pulmonary TB continues to be the most common type of TB (75% of cases).***

**TB Cases 2001: % Pulmonary & Extrapulmonary**



	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
% extrapulmonary	21	17	17	19	20	19	22	19	21	22	25
% pulmonary	79	83	83	81	80	81	78	81	79	78	75

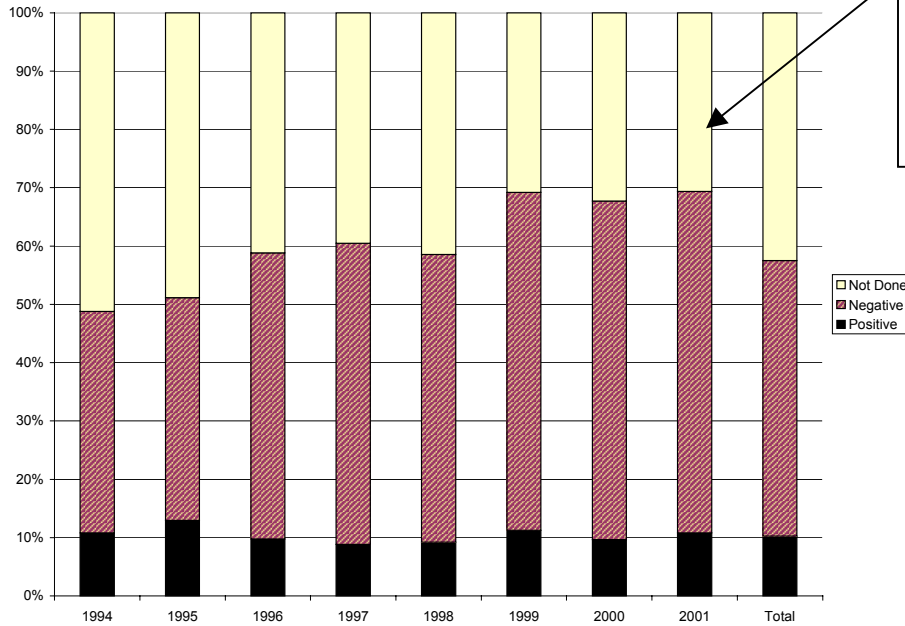
**Sites of Extrapulmonary TB**



***Pleural and lymph node TB are the most common types of extrapulmonary TB.***

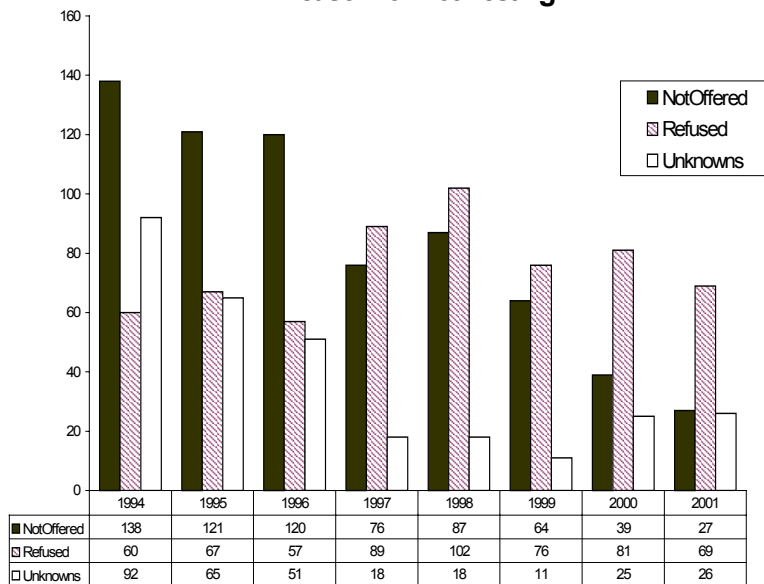
# North Carolina TB Statistics, 2001

**HIV Testing Status, TB Cases**



30% of people with TB are still not being tested for HIV. These are missed life-saving opportunities to prevent spread of HIV and begin treatment of their HIV/AIDS.

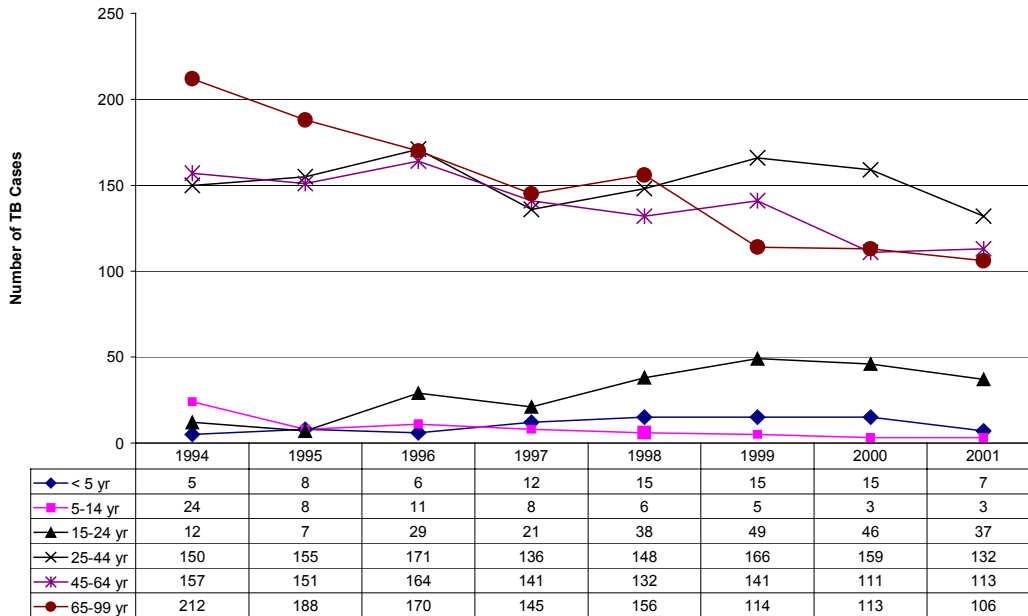
**TB Cases with No HIV Test Result:  
Reason for Not Testing**



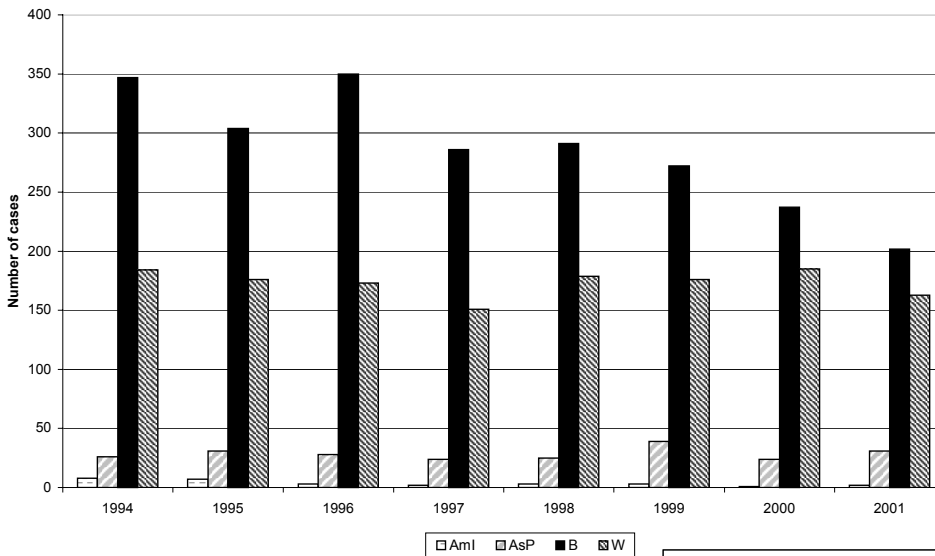
*Each year, more people are being offered HIV testing. Patient and staff education may be needed to optimize acceptance of testing.*

# North Carolina TB Statistics, 2001

## TB Case Trends by Age Group, North Carolina



## TB Cases by Race, North Carolina



***TB cases in the state's Black population continue to outnumber those among Whites, but have decreased by 41.7% since 1994, compared to a decrease of 11.4% in Whites.***

## Gender Distribution in TB Cases, North Carolina

