

Utilization of Preventive Services among Medicaid-Eligible Children

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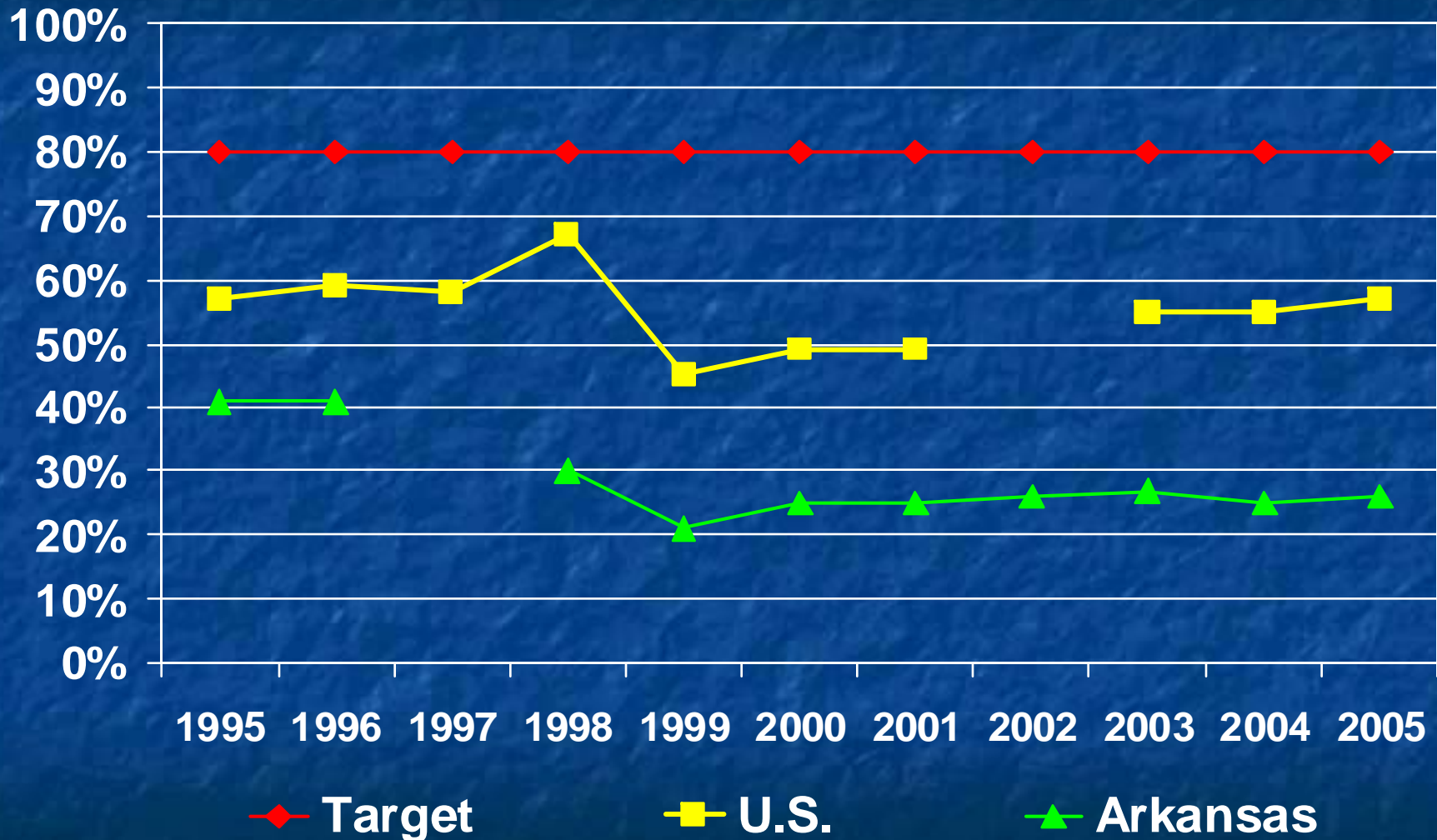
Background

- Federal Medicaid regulations - coverage of preventive services through EPSDT
 - Early & Periodic Screening, Diagnosis & Treatment
- Full coverage for Medicaid-eligible categories
- Screening services:
 - Physical exam & medical history
 - Health education/counseling
 - Laboratory tests
 - Immunizations
 - Hearing screening
 - Vision screening
 - Referral to dentist for dental screening

Background

- EPSDT services shown to be effective for:
 - improving the health status of children
 - lowering health care costs
- National target: 80% participation annually (at least one screen among those eligible)
 - Only handful of states meet target
 - Most states well below
 - Arkansas consistently lowest (25-30% in recent years)

Official EPSDT Participation Rates



Source: Centers for Medicare and Medicaid Services, Form CMS-416 Reports

Background

- A few studies assess completeness of EPSDT services during well-child visits
- Handful of studies compare EPSDT in managed care vs. fee-for-service
- Very little about racial/ethnic or geographic variation, relationship to primary care use, and dental screens
- Very little information about Arkansas
 - Prior to 2006, EPSDT and regular office visit (E/M) could not be billed in same day

Objectives

1. To describe patterns in the utilization of EPSDT preventive services in Arkansas
 - EPSDT visits and dental screens
 - by age, gender, race/ethnicity, and geographic location
2. To examine correlates of EPSDT utilization
 - Age and race/ethnicity
 - Geographic location
 - Previous physician office visits / EPSDT
 - Physician specialty (Pediatrician)

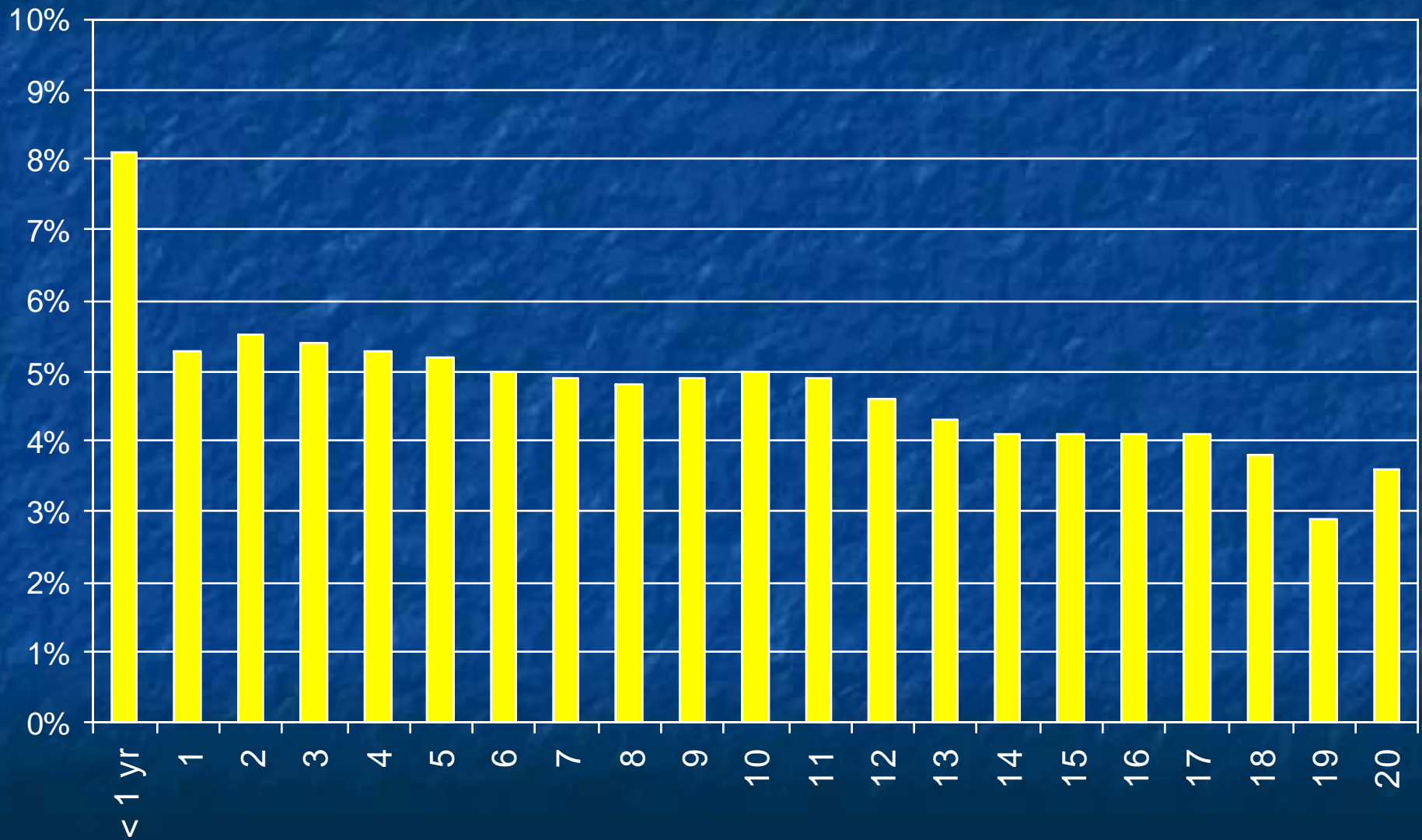
Methods

- Longitudinal observational design
- AR Medicaid Analytic eXtract (MAX) data for 2001 from CMS
 - Person Summary File (enrollment)
 - Other Services File (claims)
- Categorically eligible enrollees under age 21 w/ Full Benefits and 12-months of enrollment
 - \approx 343,000 total enrollees under 21
 - \approx 235,000 with Full Benefits
 - 186,491 with Full Benefits for 12 months

Methods

- State-defined procedure codes for EPSDT
 - Newborn & periodic screens (Z1209/Z0612)
 - Dental screens (10110)
- 1. **EPSDT Participation Rate**
 - Enrollees with 1 or more EPSDT screen
- 2. **EPSDT Screening Rate (under 2 years)**
 - # actual screens ÷ # recommended screens for age
- 3. **EPSDT Dental Participation Rate (age 3+)**
 - Enrollees with 1 or more EPSDT dental screen

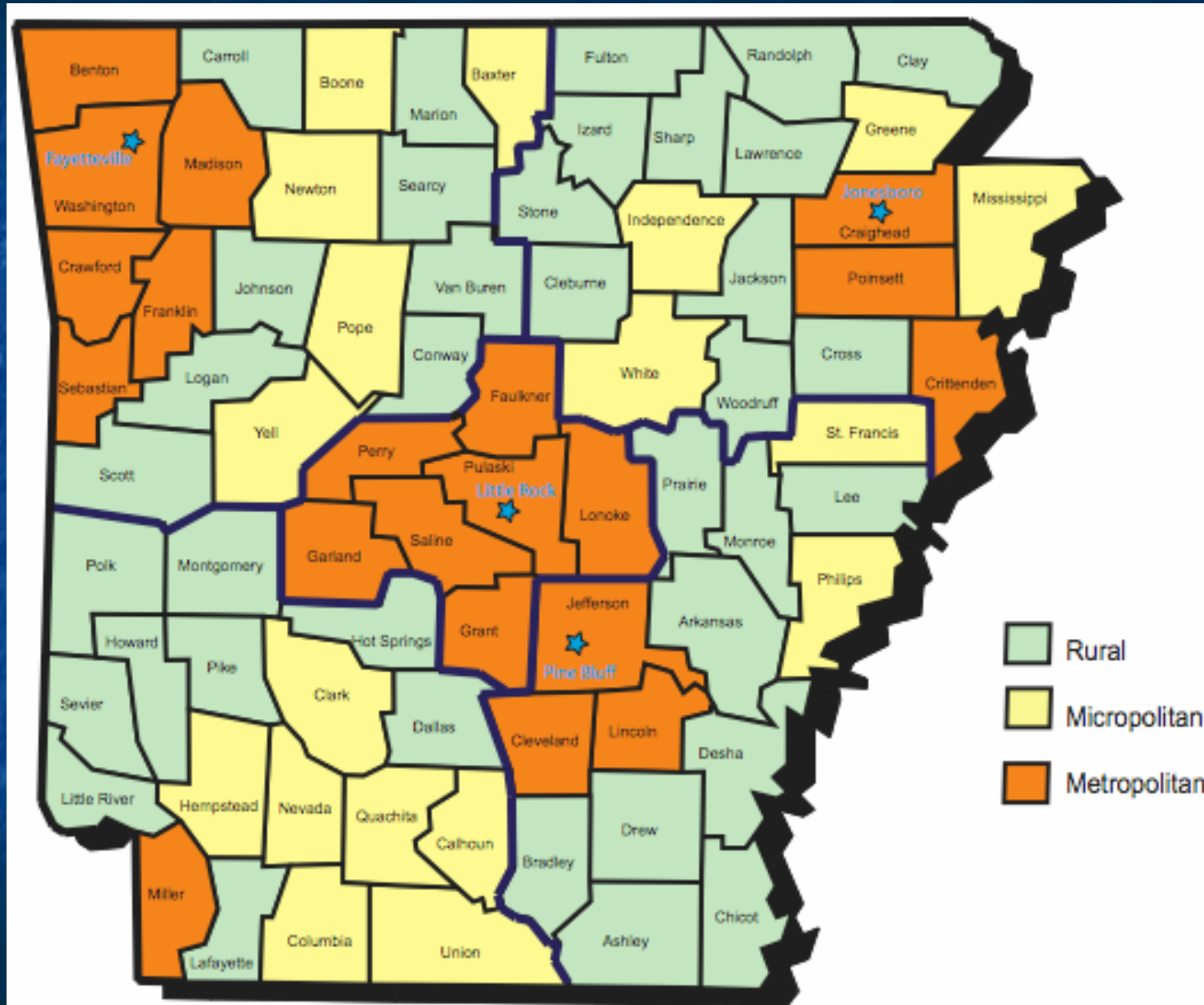
Age Distribution by Age



Demographic Characteristics

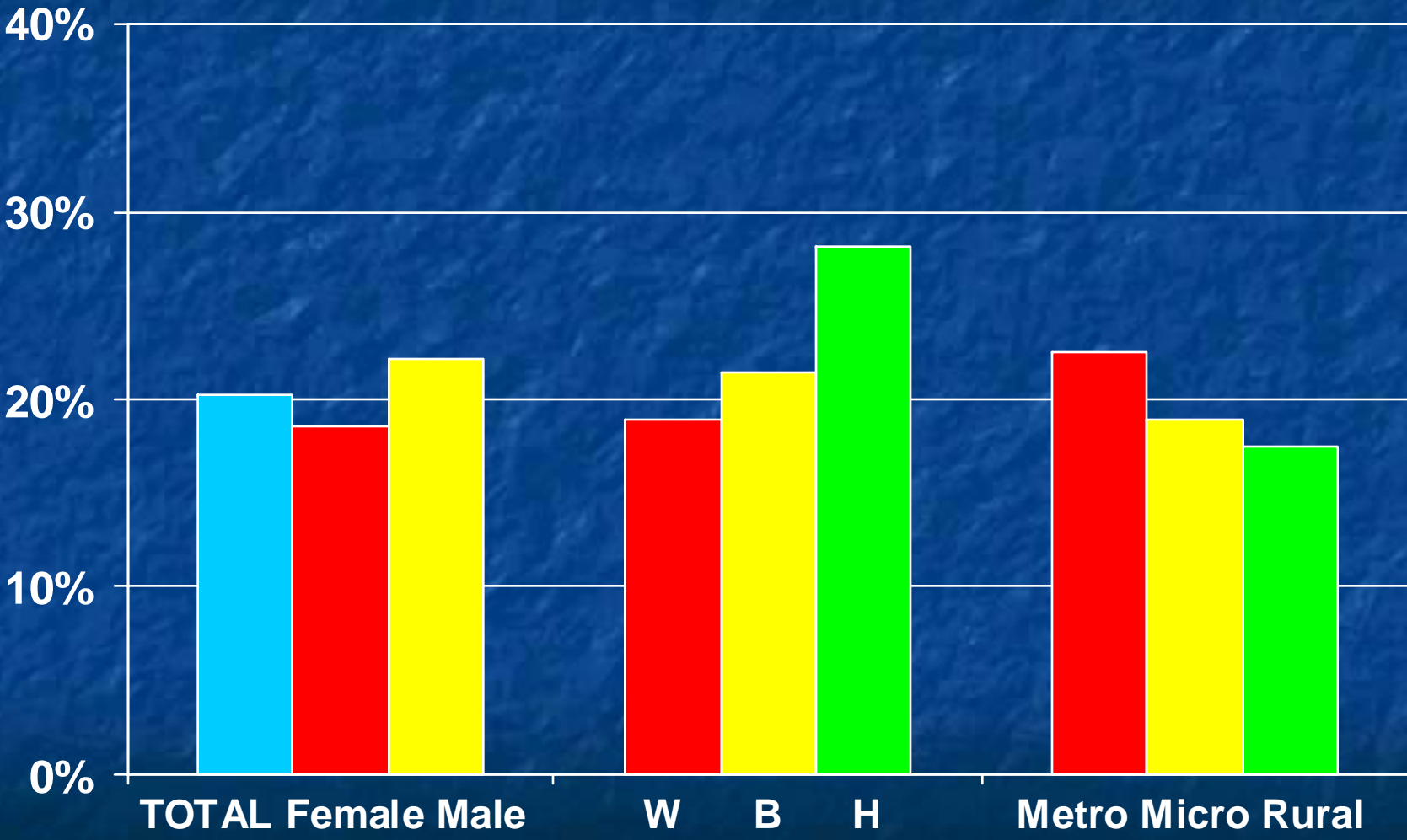
Variable		N	%
Sex	Male	87,876	47.1
	Female	98,582	52.9
Race/Ethnicity	White (non-Hispanic)	111,207	59.6
	Black (non-Hispanic)	64,697	34.7
	Hispanic (any race)	6,602	3.5
	Asian/Pacific Islander	2,537	1.4
	Native American	1,448	0.8
County Type	Metropolitan (50k +)	91,885	49.3
	Micropolitan (10-50k)	37,062	19.9
	Rural (< 10k)	57,544	30.9
TOTAL		186,491	100.0

Arkansas Metropolitan, Micropolitan, & Rural Counties 2000

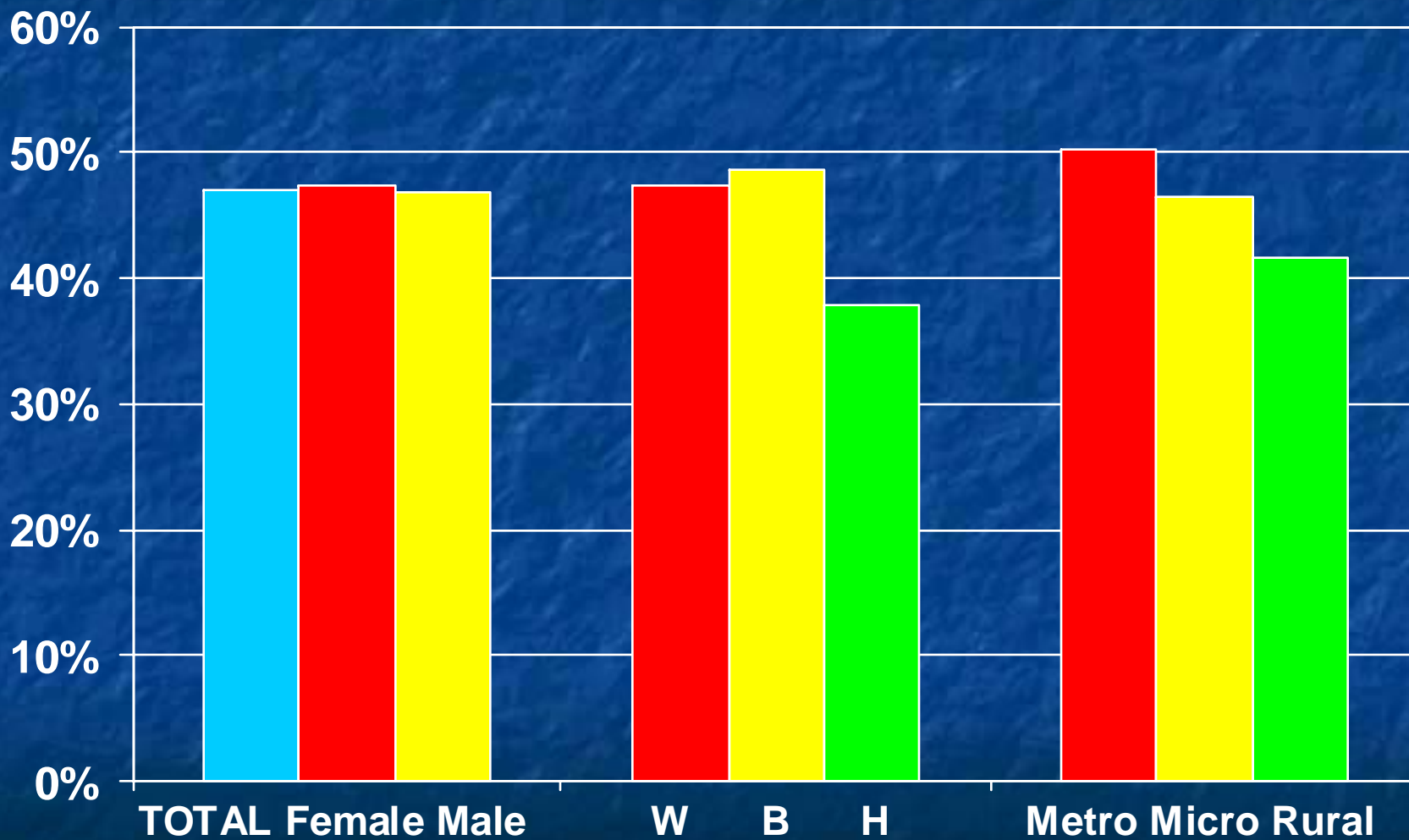


FINDINGS: UTILIZATION PATTERNS

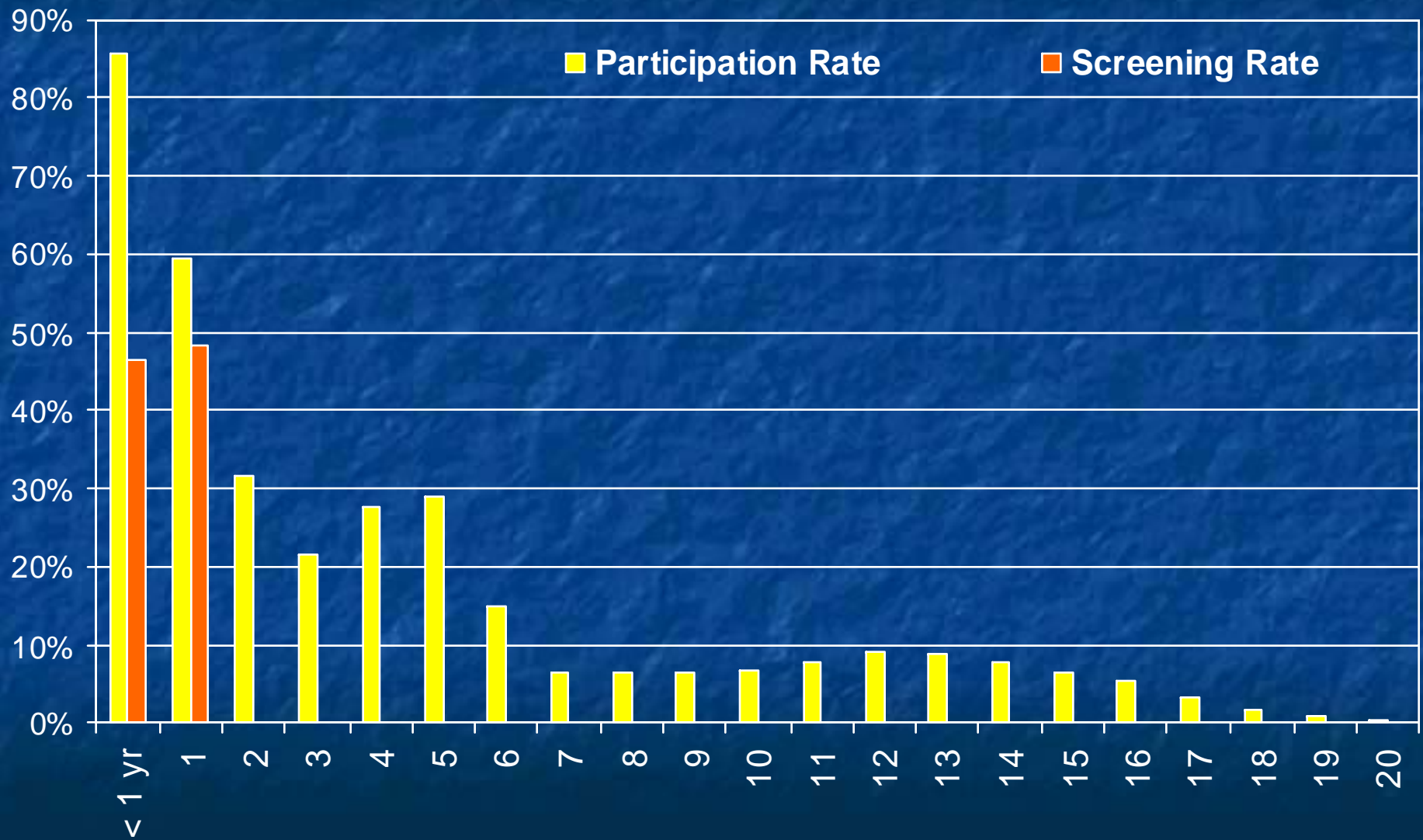
EPSDT Participation Rate by Subgroup



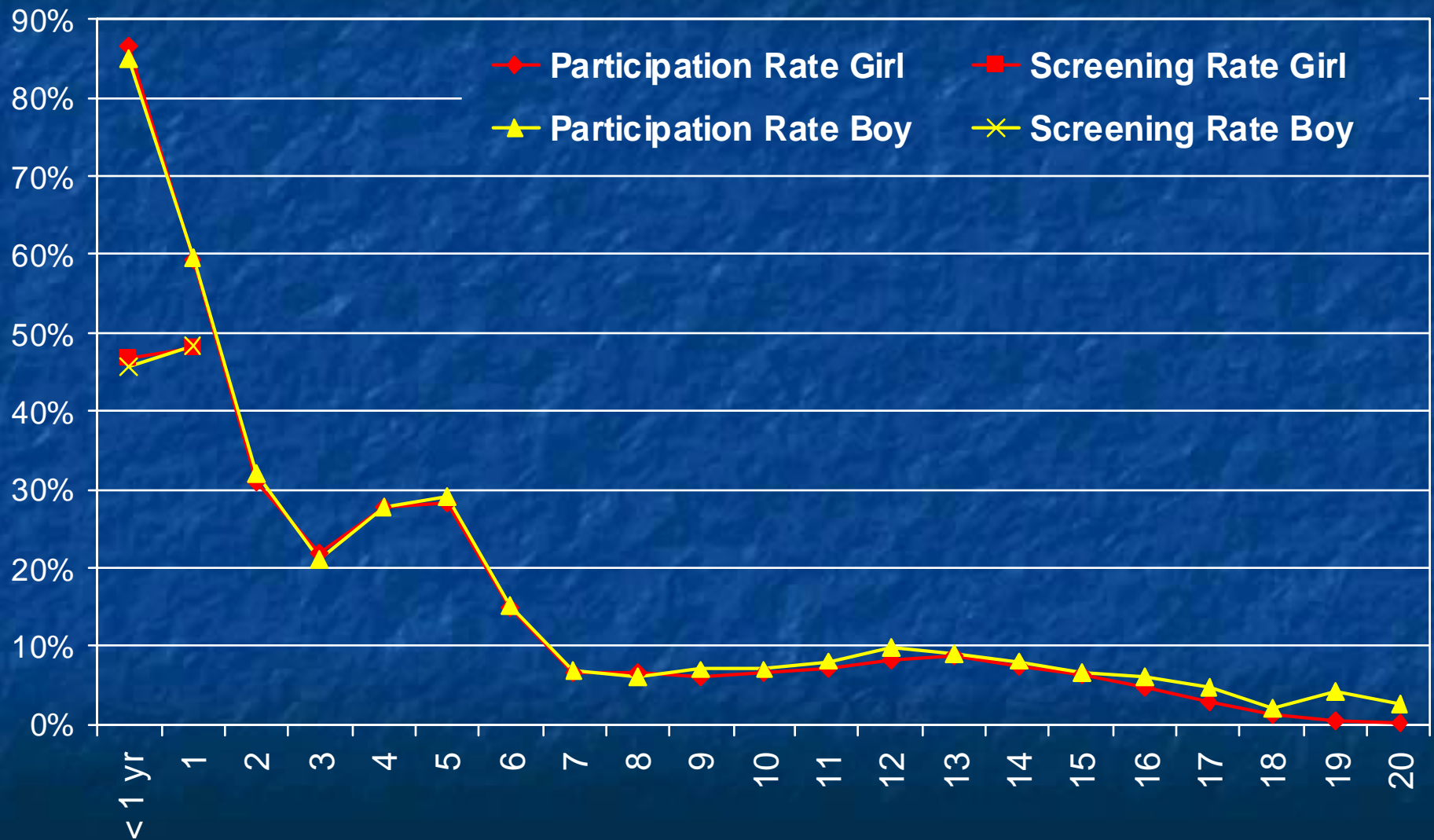
EPSDT Screening Rate (<2 years) by Subgroup



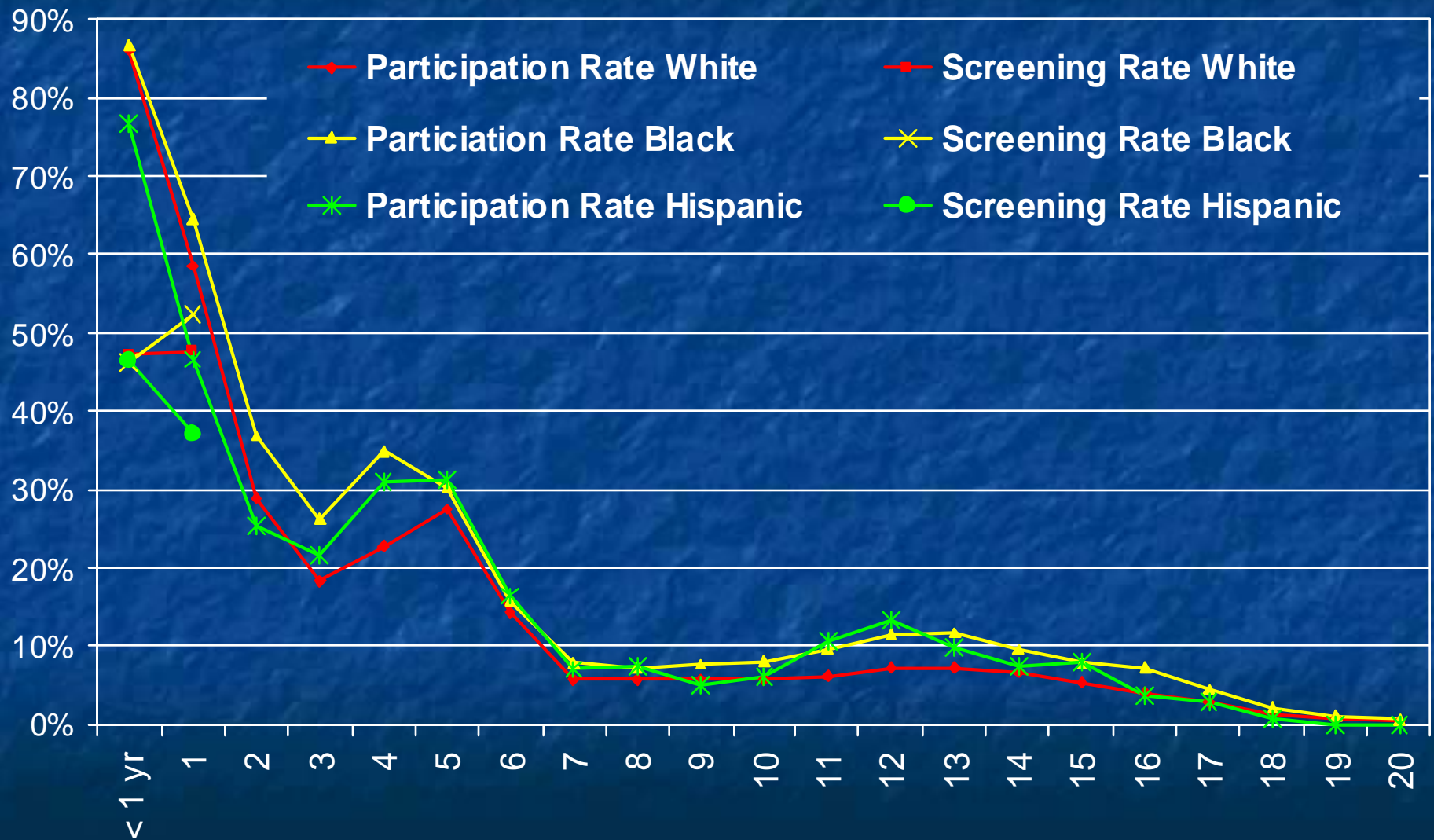
EPSDT Participation & Screening Rates by Age



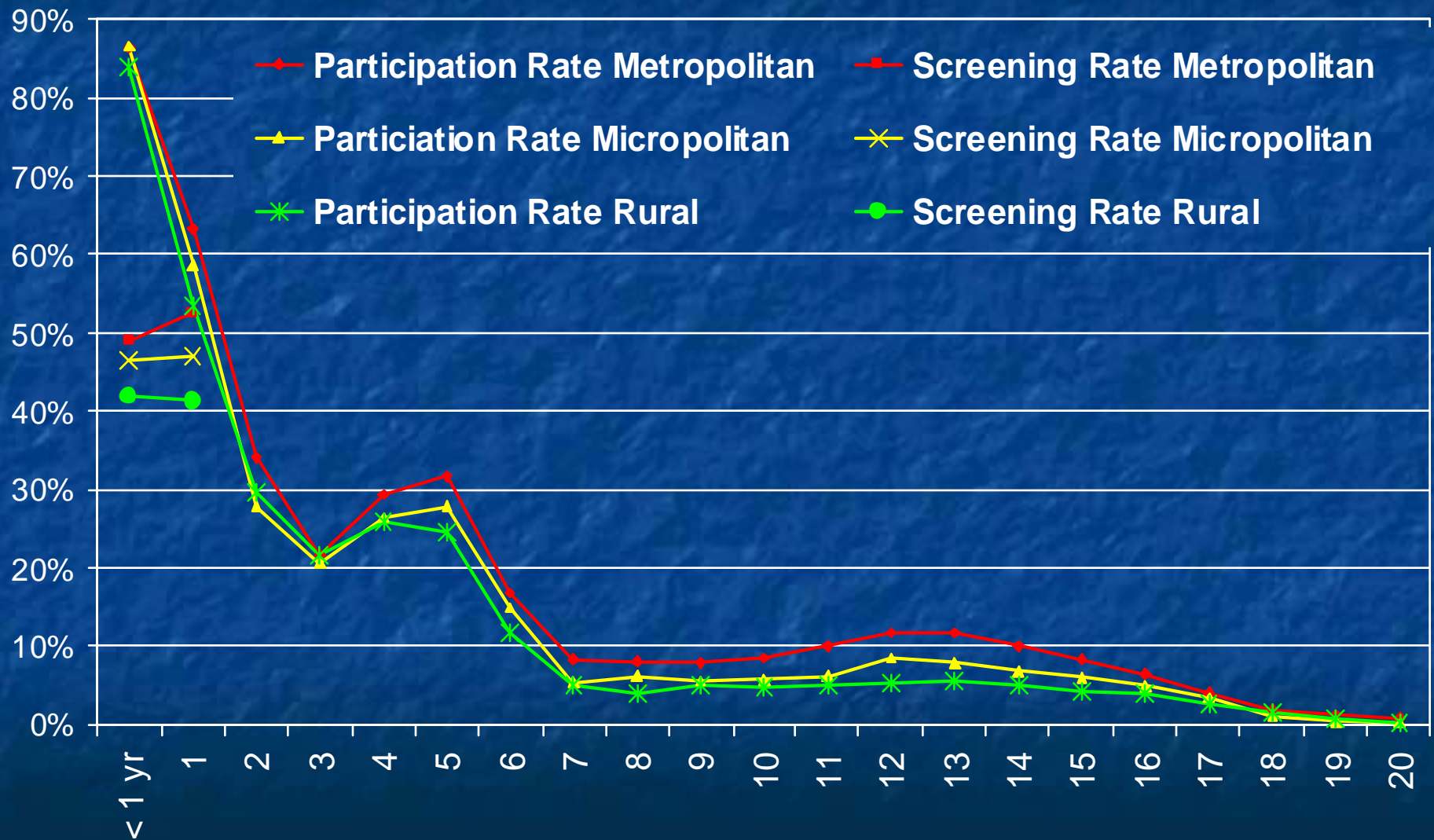
EPSDT Participation & Screening Rates by Gender



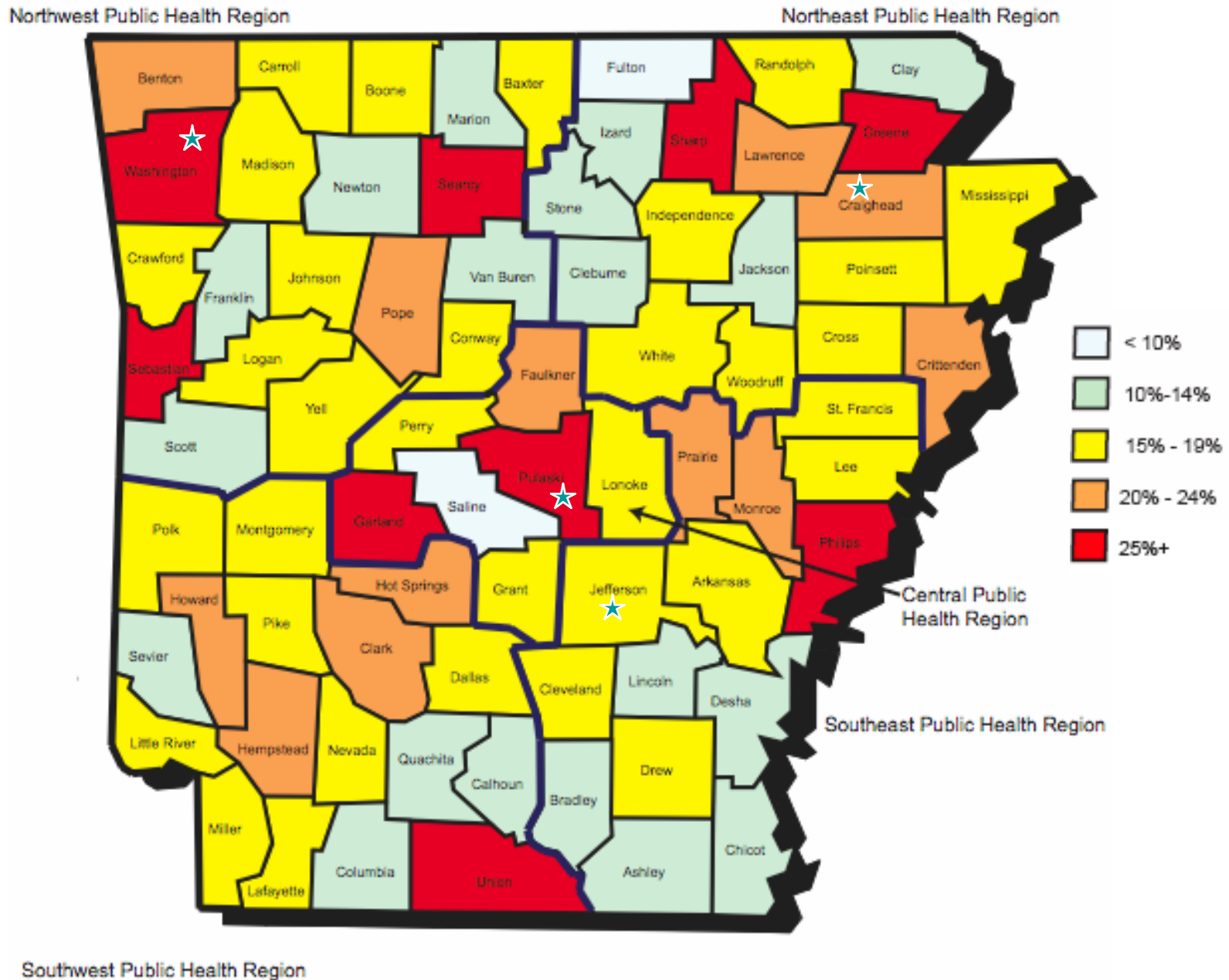
EPSDT Participation & Screening Rates by Race/Ethnicity



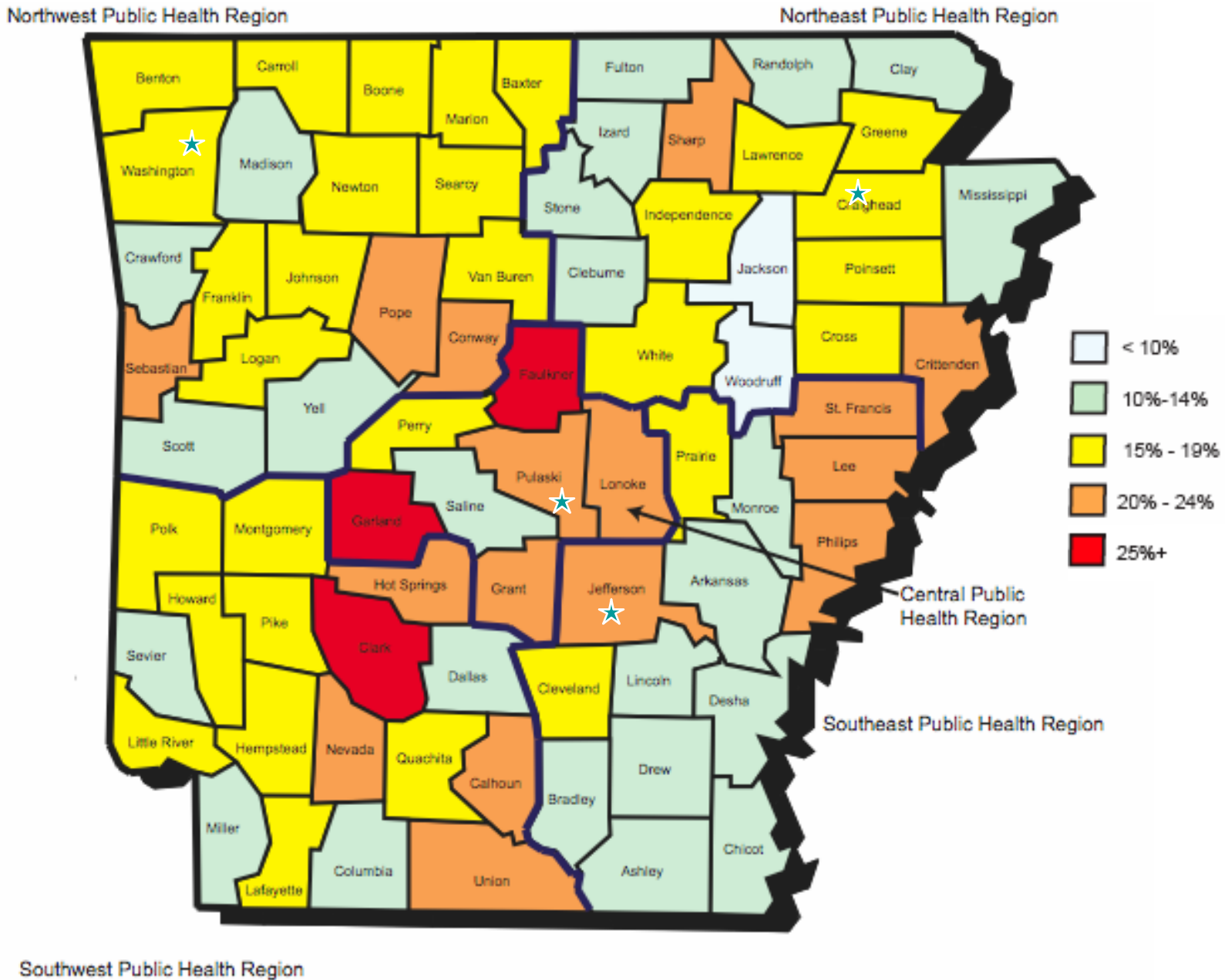
EPSDT Participation & Screening Rates by County Type



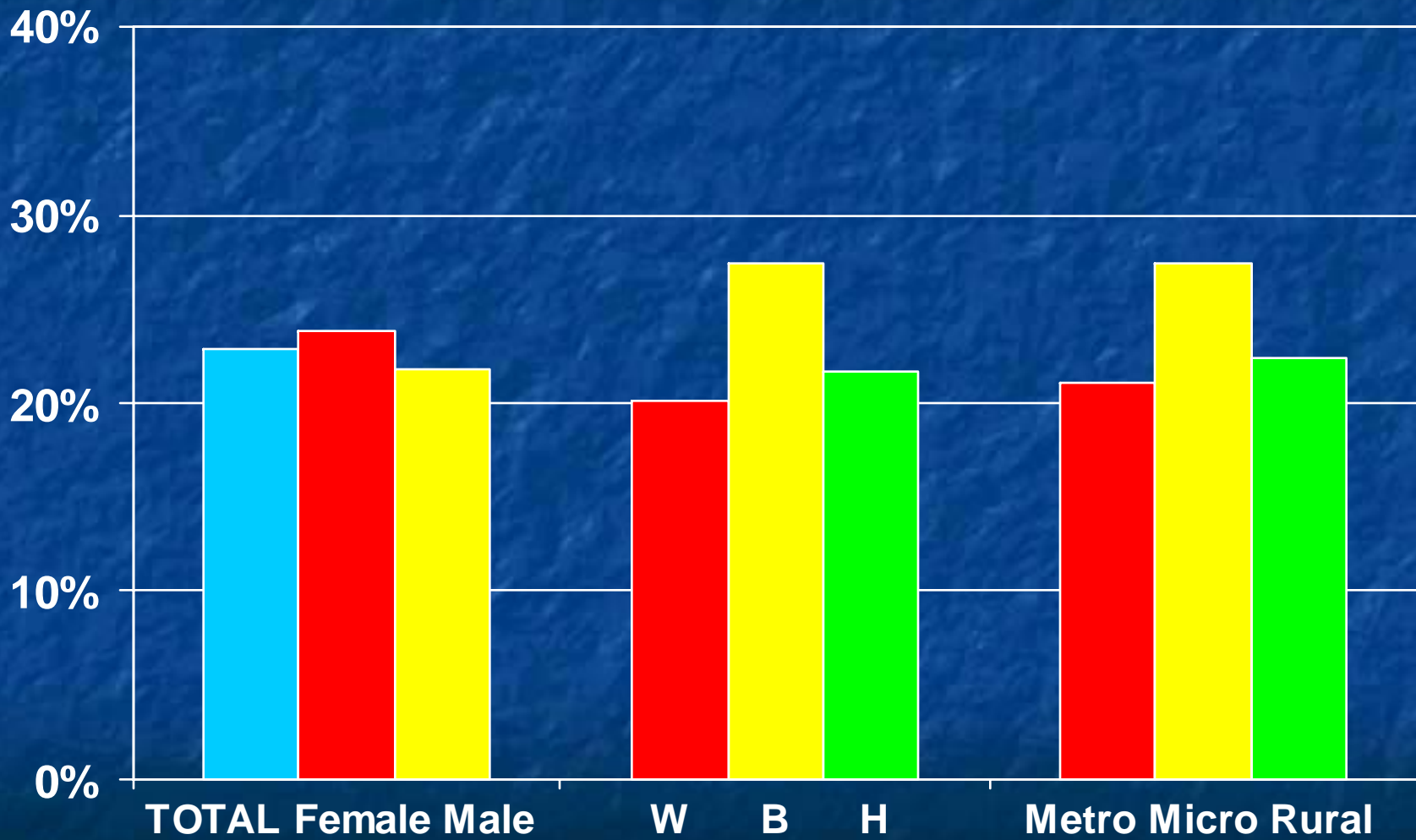
EPSDT Participation Rates by County



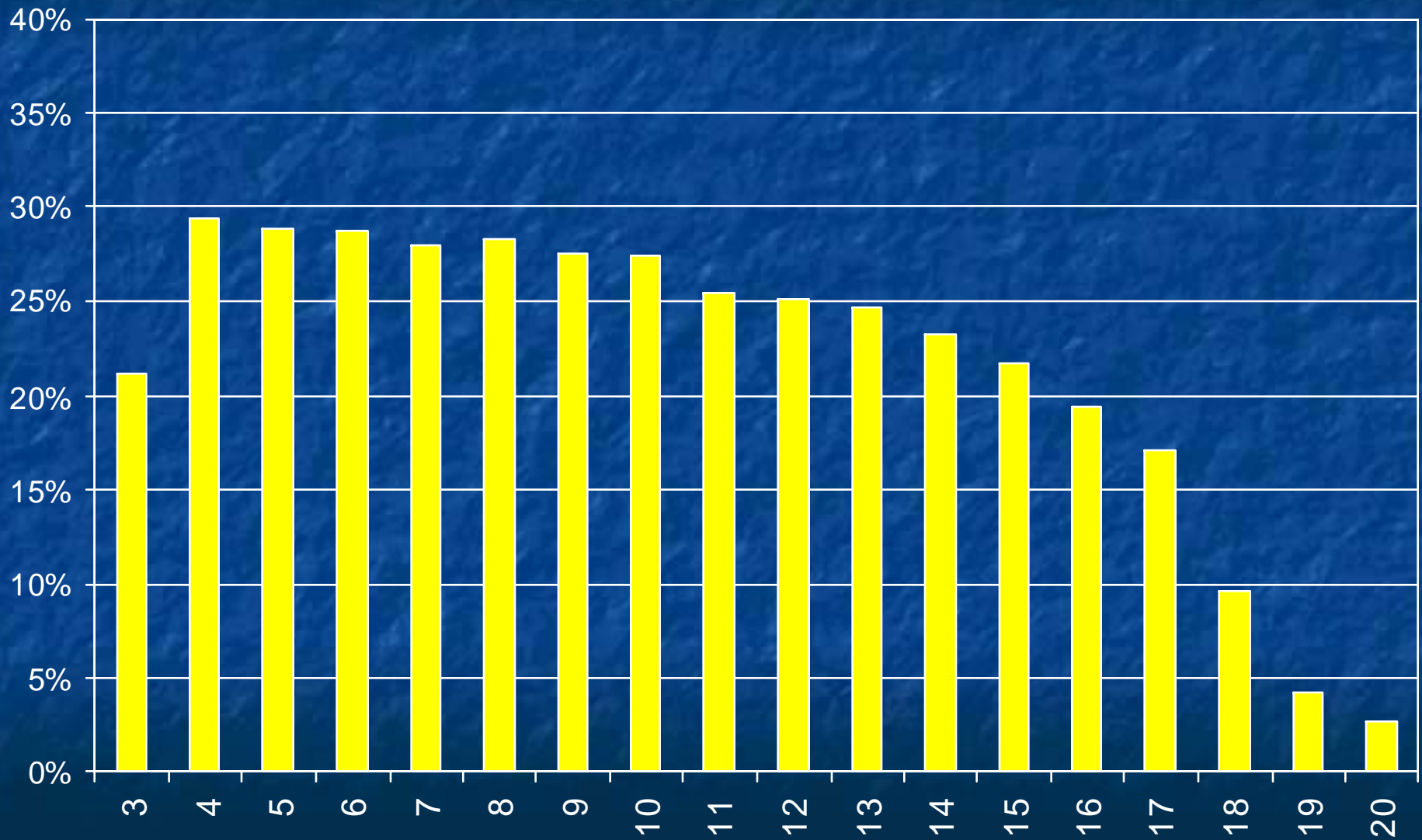
EPSDT Screening Rates (≤ 2 years) by County



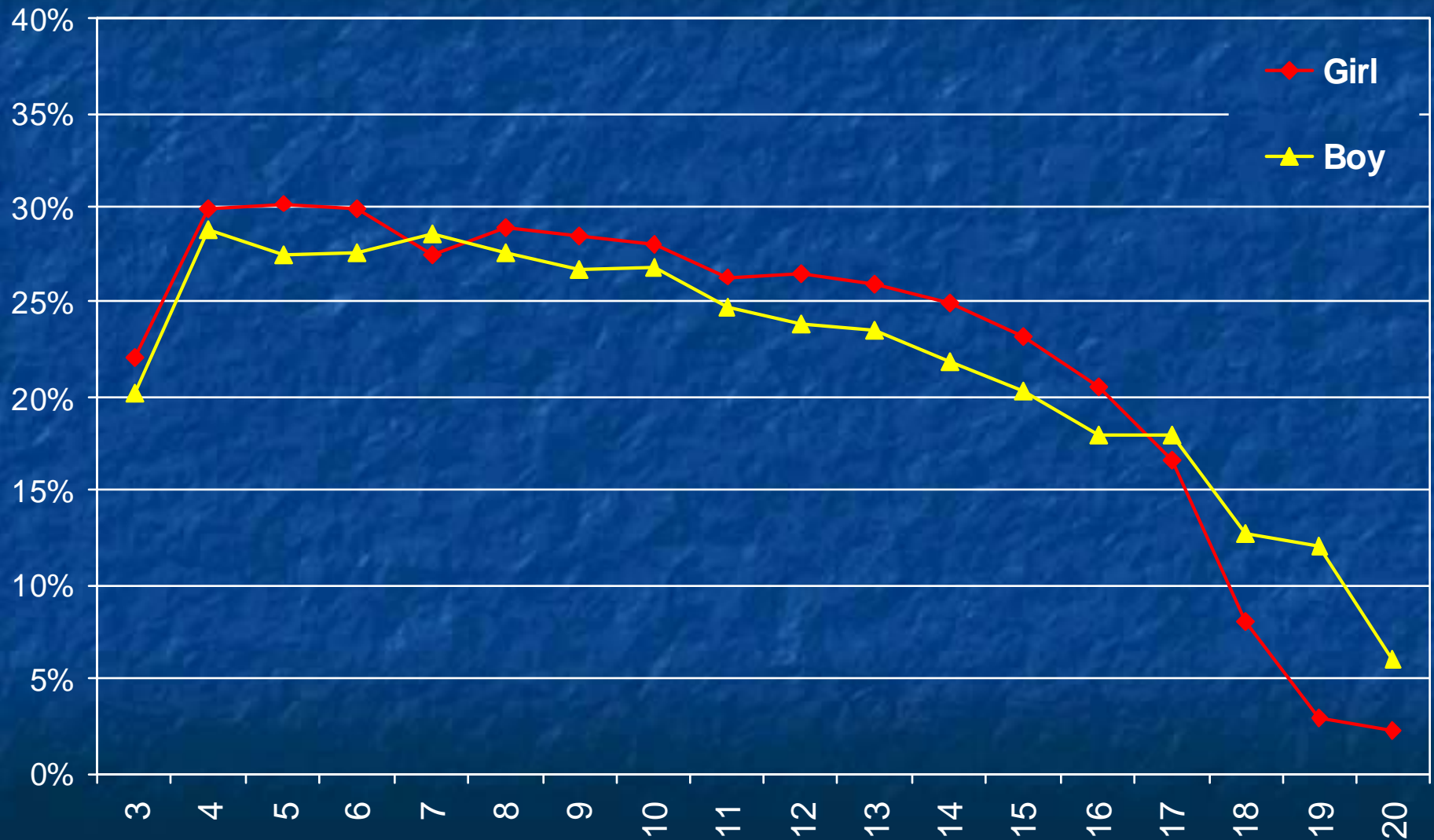
EPSDT Dental Screening Rate (3+ years) by Subgroup



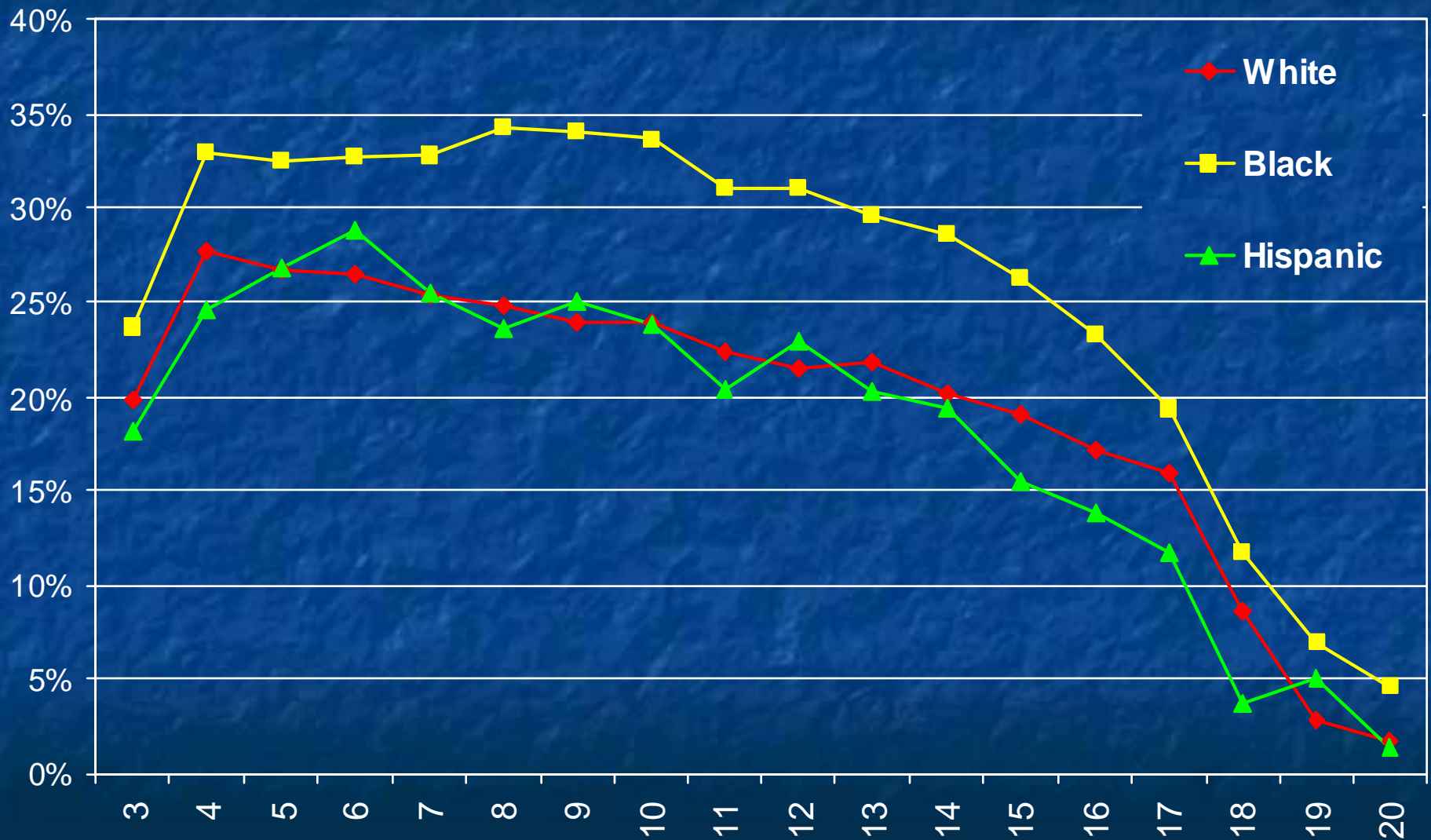
EPSDT Dental Screening Rates by Age



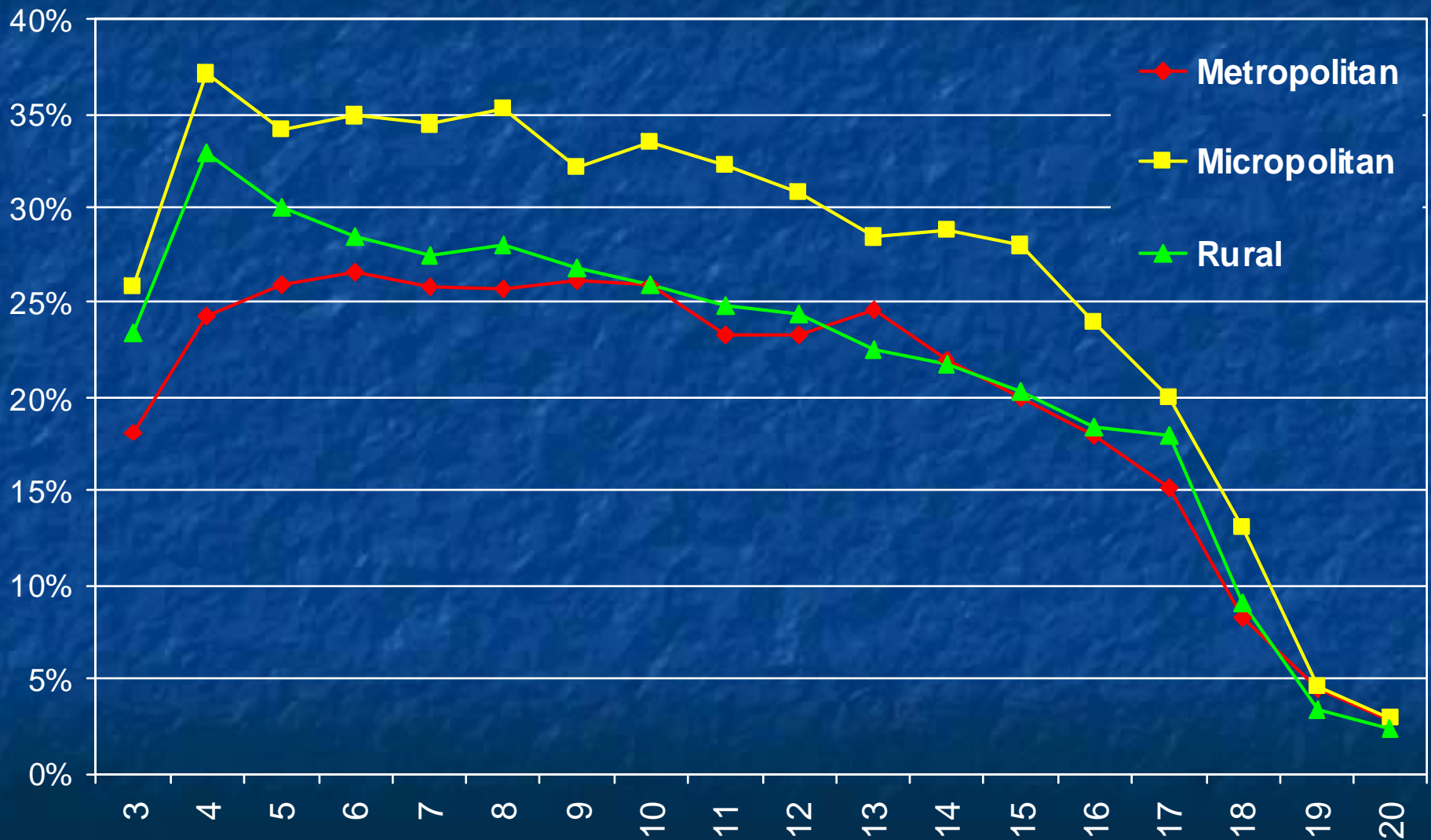
EPSDT Dental Screening Rate by Gender



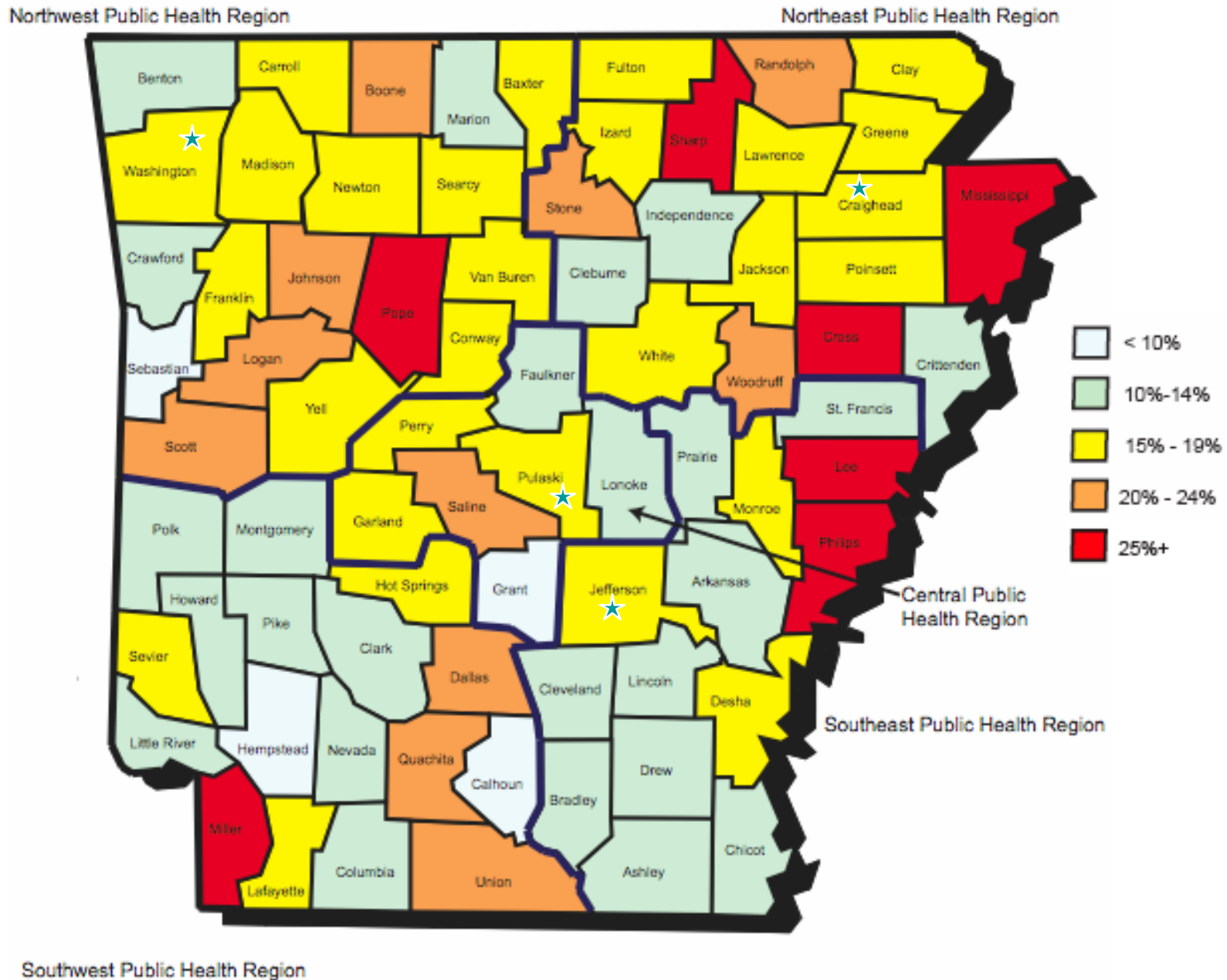
EPSDT Dental Screening Rate by Race/Ethnicity



EPSDT Dental Screening Rate by County Type



EPSDT Dental Screening Rates (3+ years) by County



FINDINGS: CORRELATES OF UTILIZATION

Logistic Regression Models (Odds Ratios)

Variable	EPSDT Visit	Dental Screen
Age <1	928.31	--
Age 1-2	123.27	--
Age 3-5	51.02	9.84
Age 6-9	13.72	10.71
Age 10-14	12.64	9.17
Age 15-18	6.47	5.51
Black	1.32	1.53
Hispanic	0.92	1.01 <i>NS</i>
Micropolitan	1.14	1.33
Metropolitan	1.40	0.84

Odds ratios are significant at $p < 0.05$ unless marked *NS*.

Primary Care Utilization by Race/Ethnicity

	# Office Visits	% of Office Visits by Pediatrician	% of EPSDT By Pediatrician
White	2.27	35.7	45.9
Black	1.44	48.5	60.5
Hispanic	2.38	38.7	40.4
Total	2.00	39.8	51.4

Logistic Regression Models Predicting EPSDT Visit by Race/Ethnicity (Odds Ratios)

Variable	Total	White	Black	Hispanic
Micropolitan	1.06	1.10	1.01 <i>NS</i>	1.00 <i>NS</i>
Metropolitan	0.97 <i>NS</i>	1.13	0.74	0.86 <i>NS</i>
MD Office Visits	1.01	1.03	0.95	1.01 <i>NS</i>
Pediatrician	4.93	3.56	8.90	3.98

Models also include dummy variables for age group (not shown).

Odds ratios are significant at $p < 0.05$ unless marked *NS*.

Logistic Regression Model Predicting EPSDT Dental Screen (Odds Ratios)

Variable	Total
Micropolitan	1.28
Metropolitan	0.80
MD Office Visits	1.07
EPSDT Visit	2.11

Model also includes dummy variables for age group (not shown).

Coefficients did not differ by race/ethnicity.

Odds ratios are significant at $p < 0.05$ unless marked *NS*.

Summary

- Higher EPSDT utilization among:
 - Infants
 - Hispanic & Black children
 - Children in metro counties
 - Children with previous office visits, especially with a pediatrician (esp. Black)
- Lower EPSDT utilization among:
 - Older children (6+ yrs, esp. teenagers)
 - Hispanic infants (adherence to schedule)
 - Children in rural counties

Summary

- Higher EPSDT dental utilization among:
 - Younger children
 - Black children
 - Children in micropolitan counties
 - Children with previous office visits, especially previous EPSDT visit
- Lower EPSDT dental utilization for:
 - Teenagers
 - Children in rural & metro counties

Implications

- Variation in levels of EPSDT utilization, but no racial/ethnic disparities
 - Medicaid equalizes access to care
 - Other factors important, affecting all
- Areas to target outreach & further research
 - Older children and teenagers – school?
 - Infants/preschoolers still too low - childcare?
 - Rural counties – transportation, MD's?
 - Hispanic children – language, culture?
 - Using routine office visits to facilitate EPSDT?
 - Why dental screens lower in metros?