

# The Physiology, Chemistry and Nutritional Science of Pediatric Surveillance

Marion P. Cullen, Ph.D.

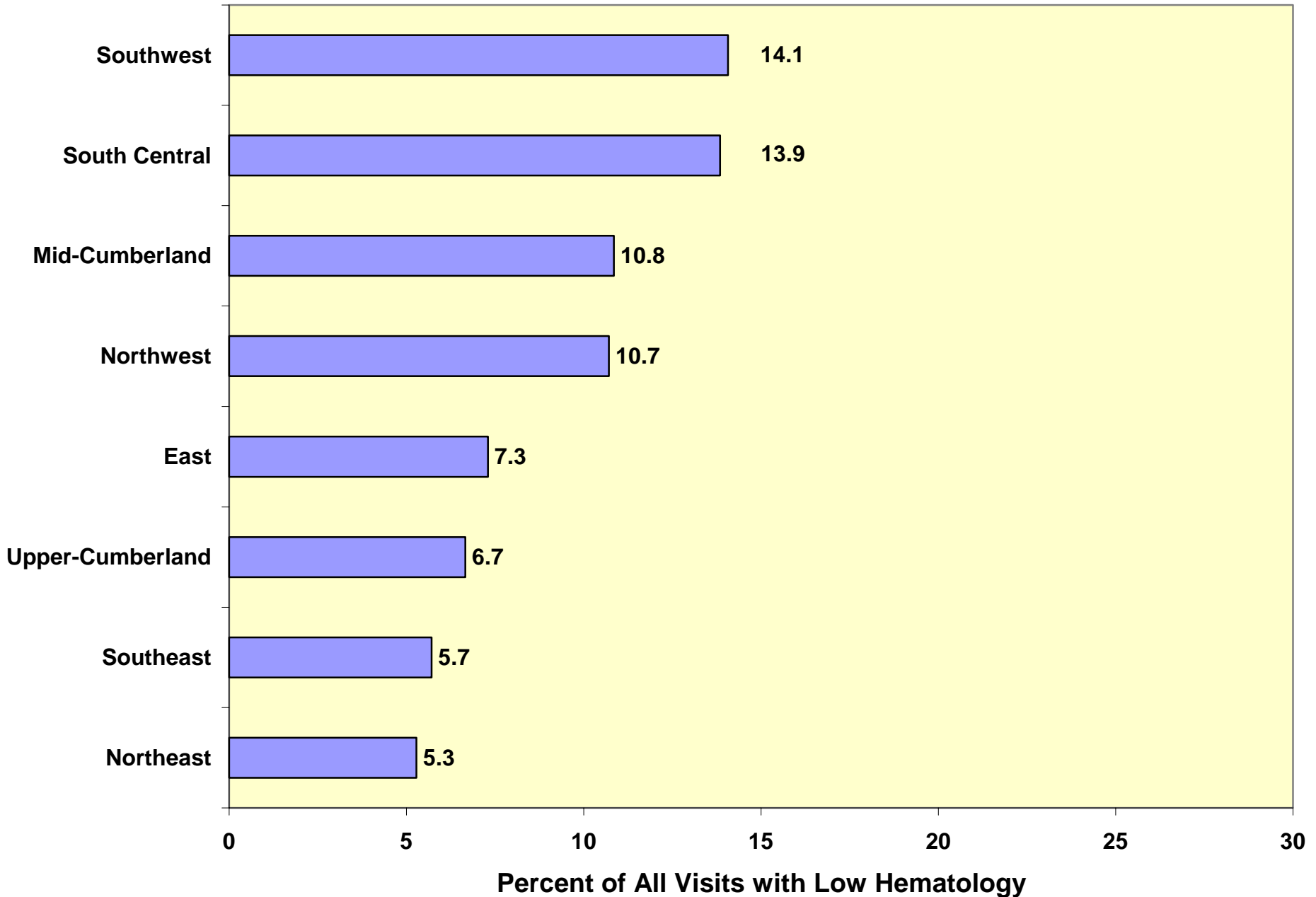
Derek A. Chapman, Ph.D.

Presented at the TN Dept. of Health  
Epi Brown Bag Series

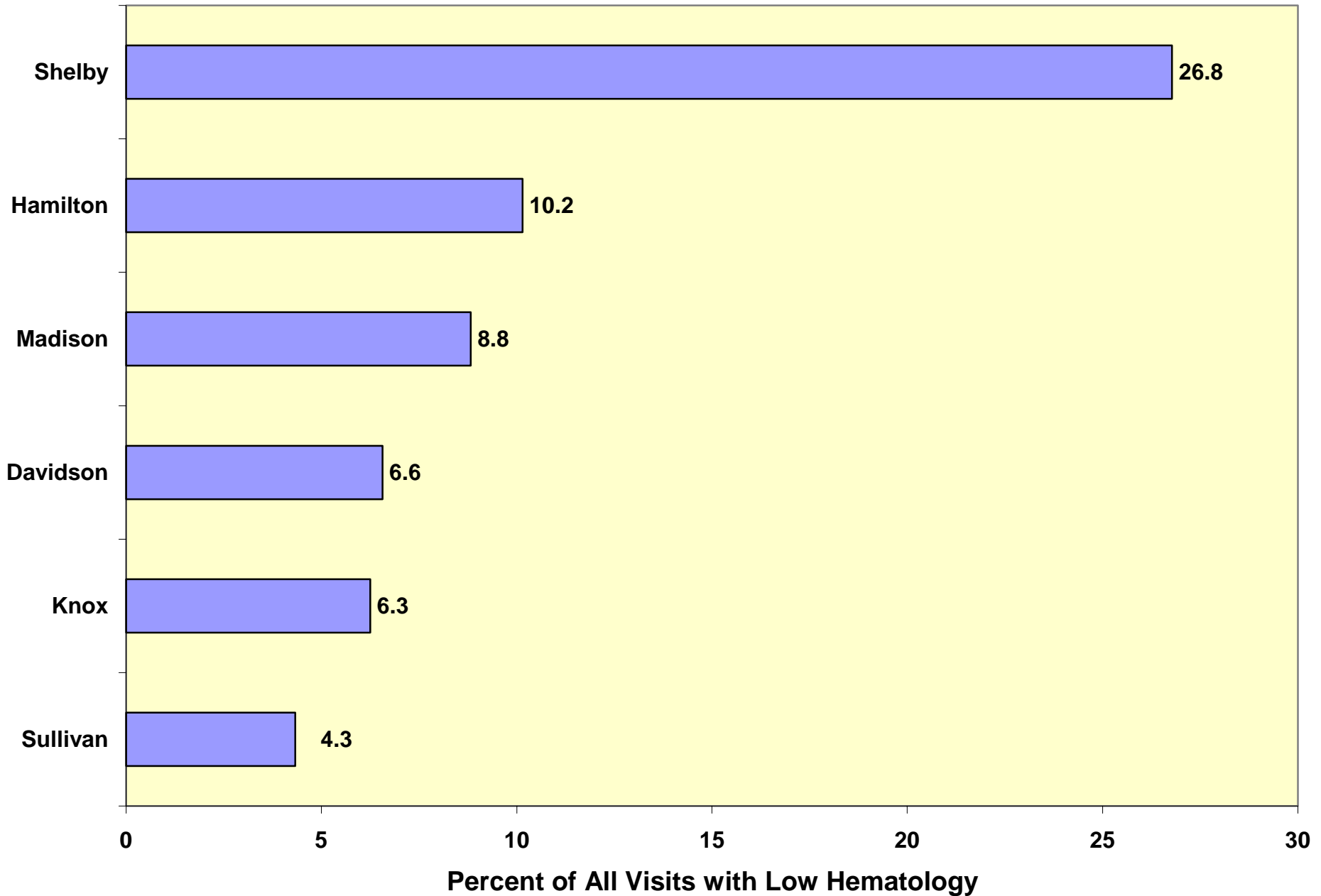
April 23, 2002

# Iron Deficiency

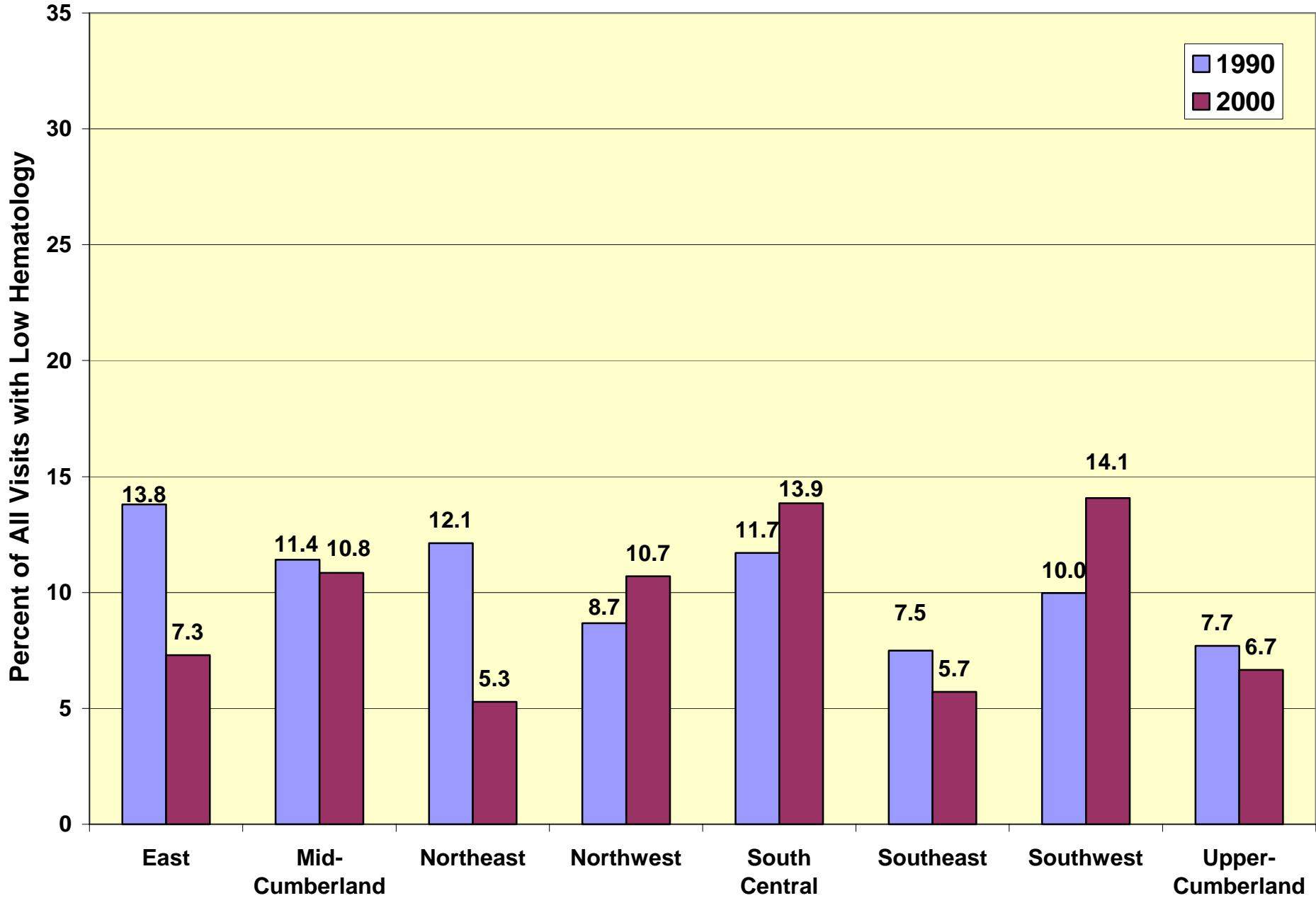
# Low Hematology by TDOH Rural Region, 2000



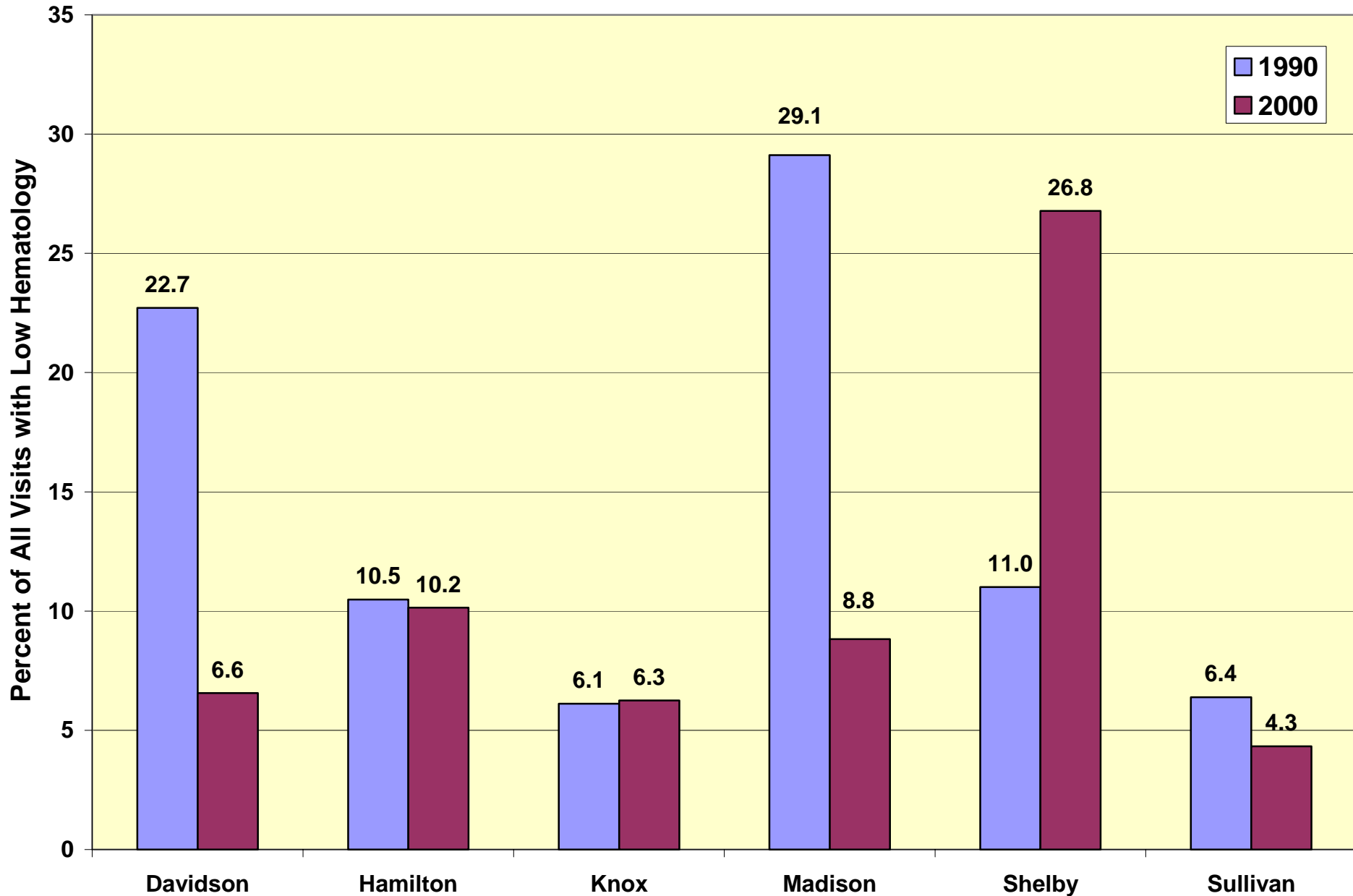
# Low Hematology by TDOH Metro Region, 2000



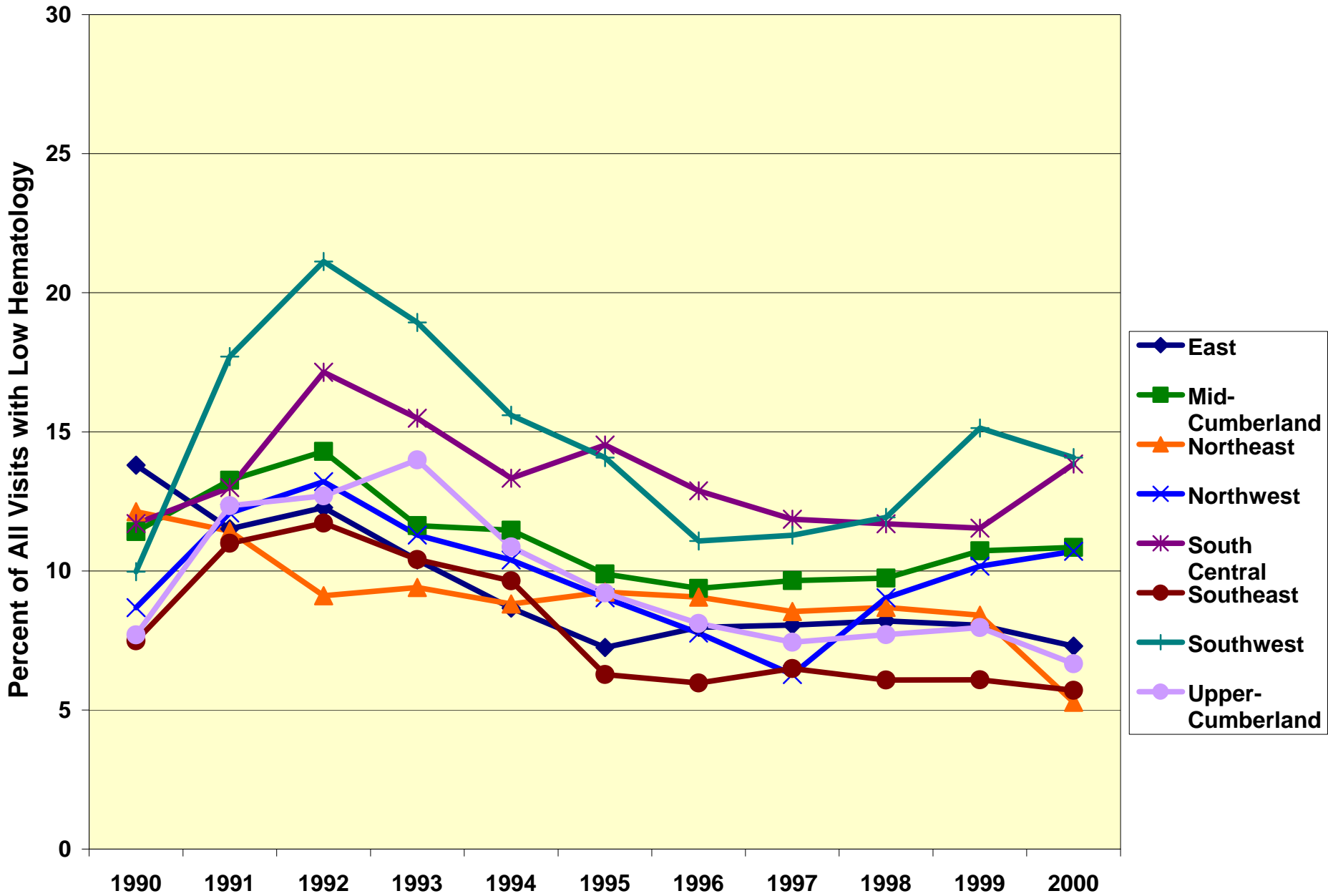
# Low Hematology by TDOH Rural Region, 1990 vs 2000



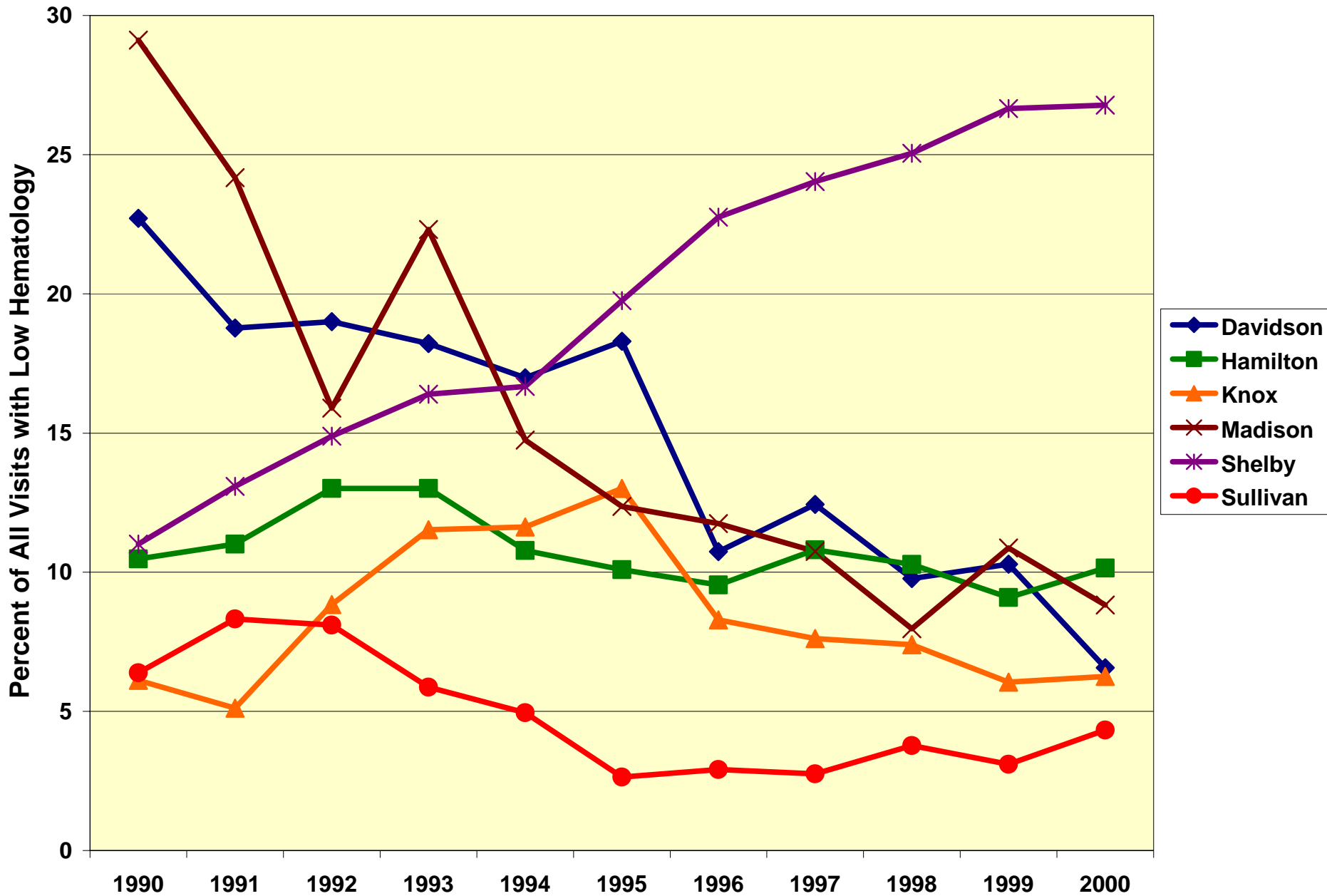
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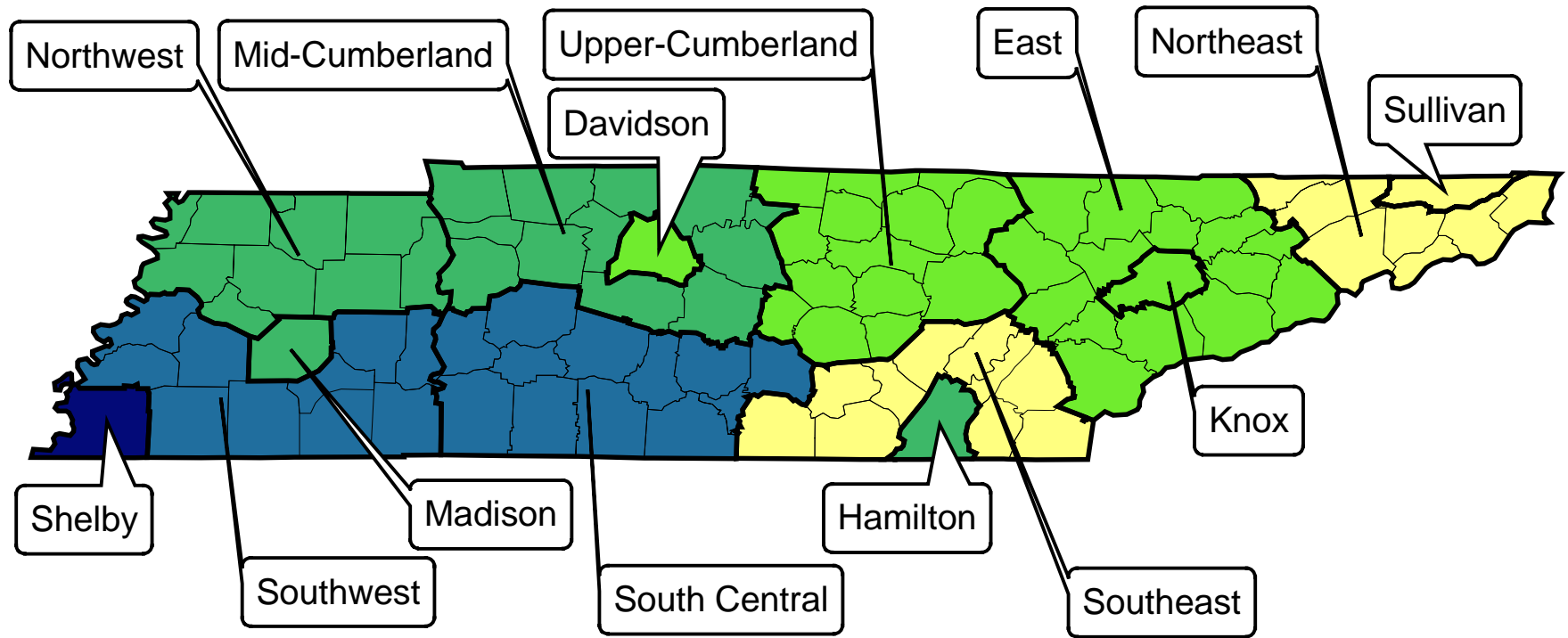
# Low Hematology by TDOH Rural Region, 1990 to 2000



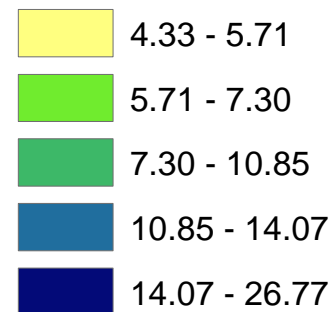
# Low Hematology by TDOH Metro Region, 1990 to 2000



# Percent of All WIC Visits with Low Hematology by TDOH Region, 2000

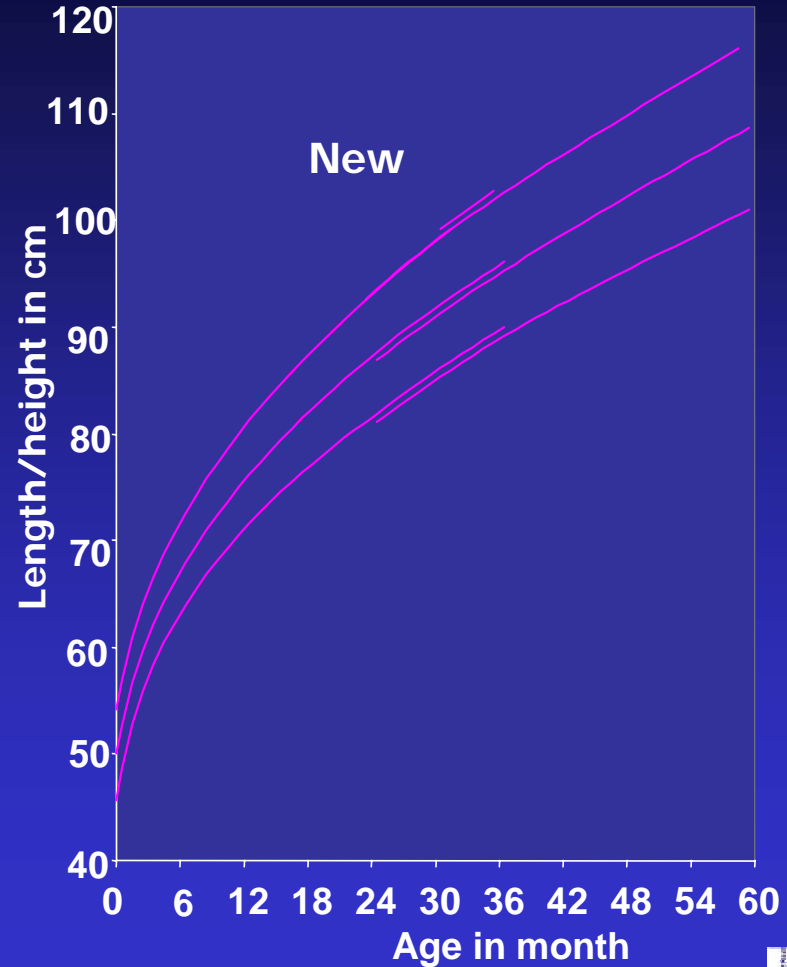
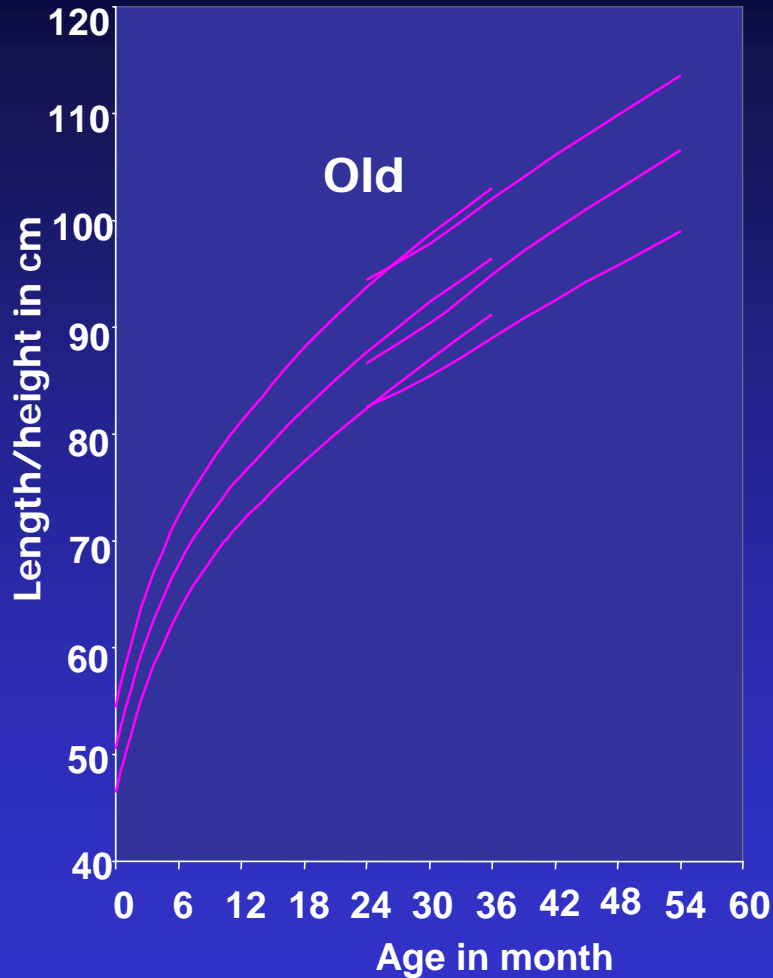


## % of All WIC Visits with Low Hematology



# Overweight

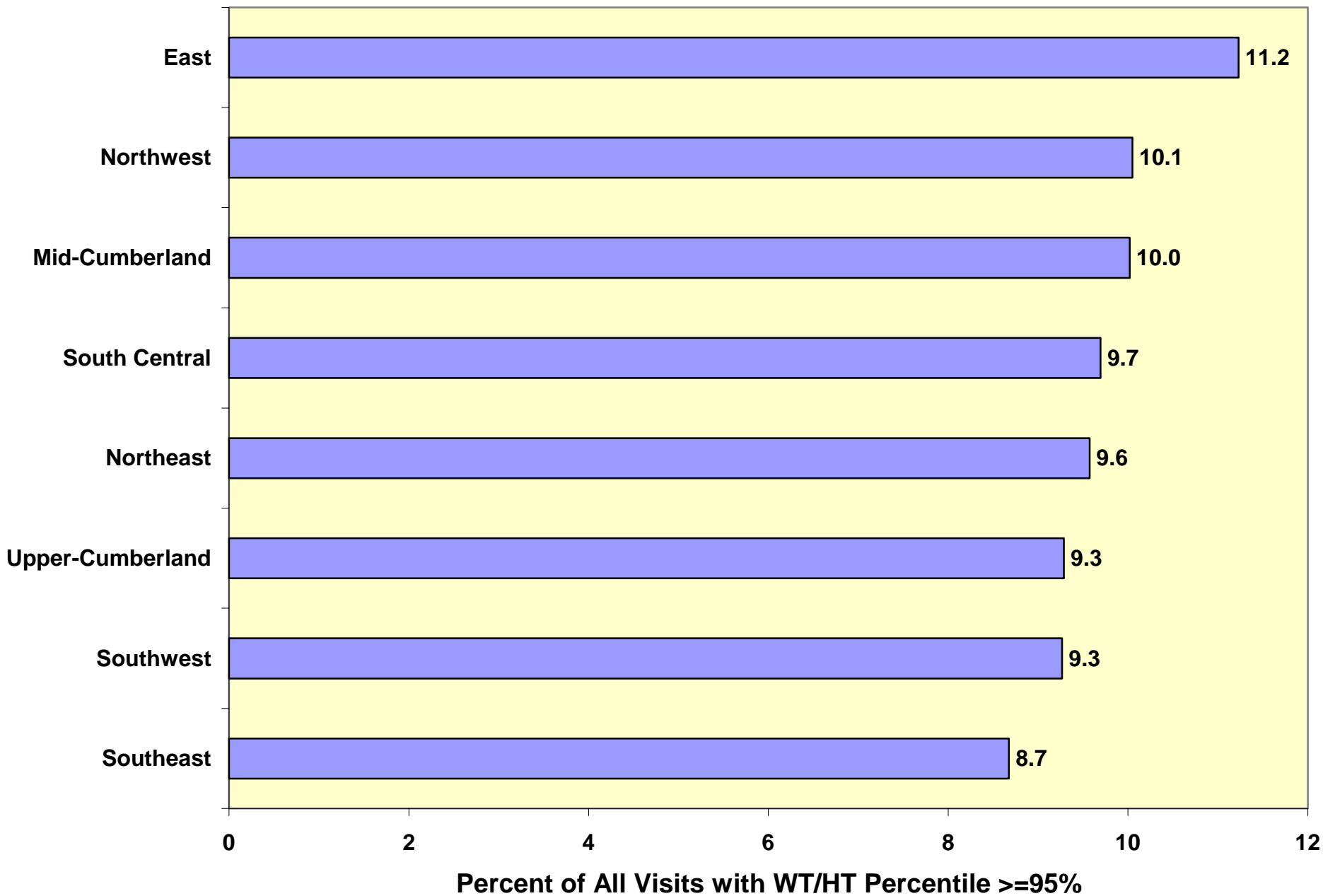
# Disjunction: Smoothed in New Charts



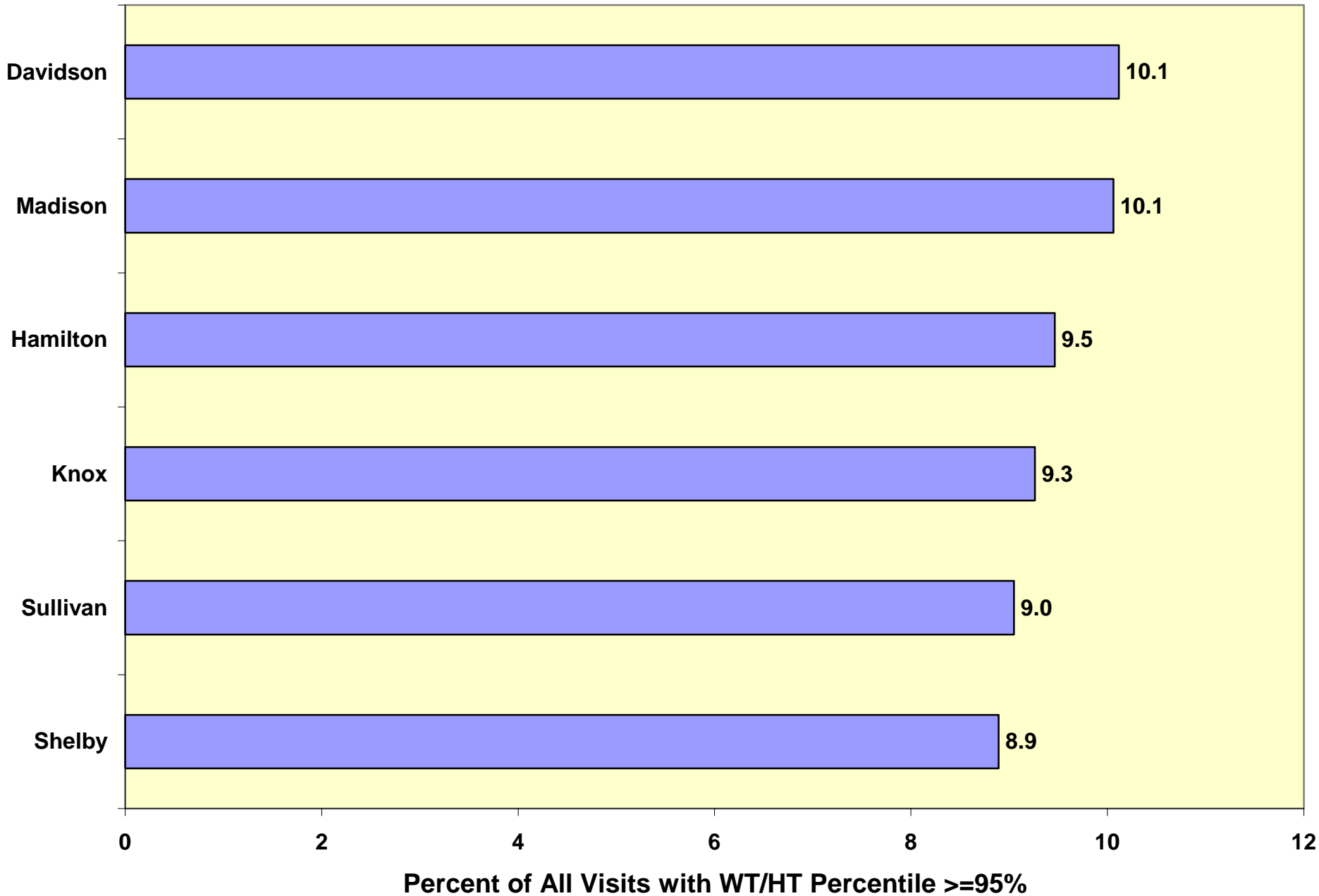
# New in the CDC Growth Charts

- ⇒ **Charts extend to 20 years**
- ⇒ **3rd and 97th percentiles available**
- ⇒ **Lower limits of length (45 vs. 49 cm) and height (77 vs. 90 cm) extended**
- ⇒ **BMI-for-age charts (2-20 years) added**
- ⇒ **85th percentile (at risk of overweight) added**

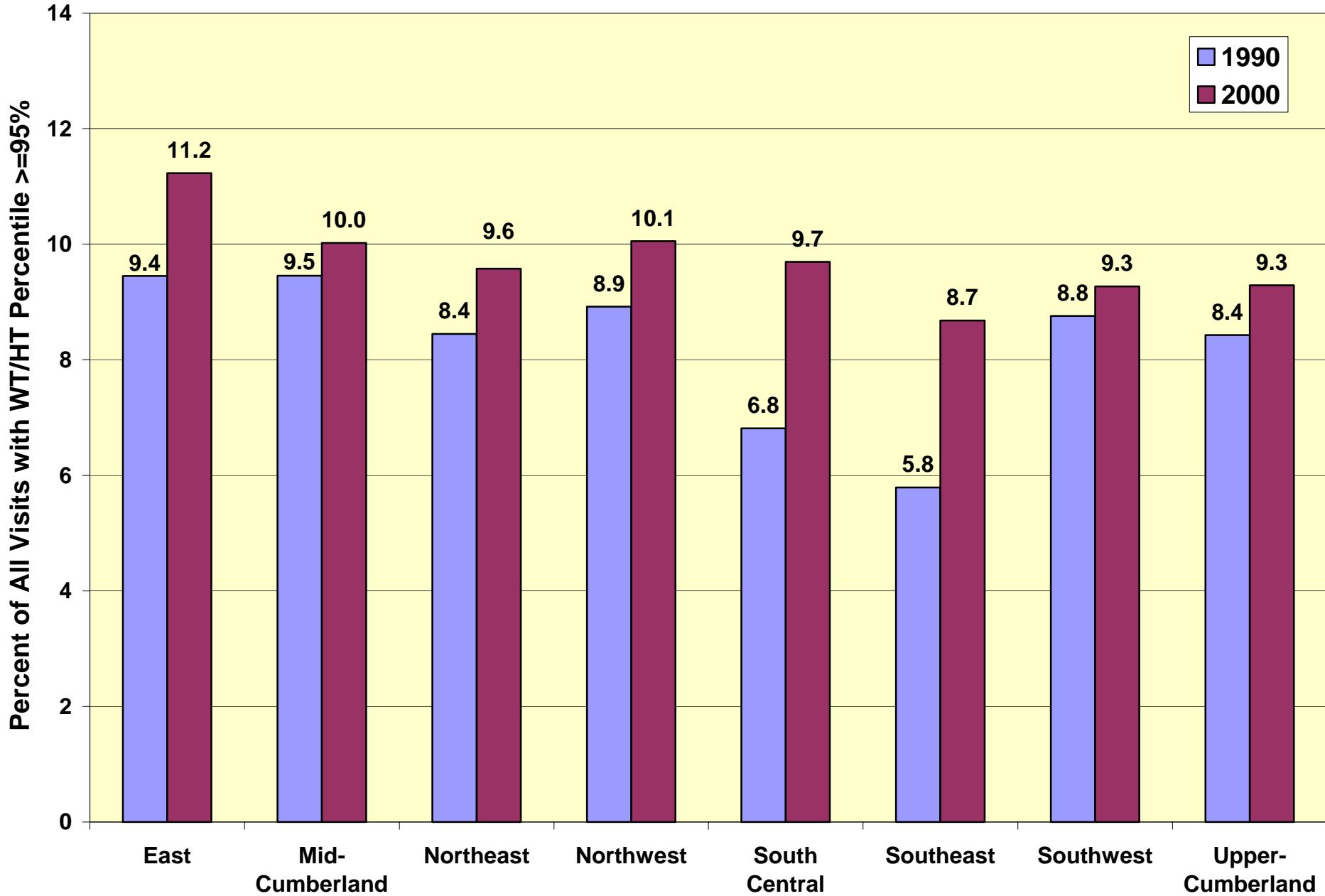
# Overweight by TDOH Rural Region, 2000



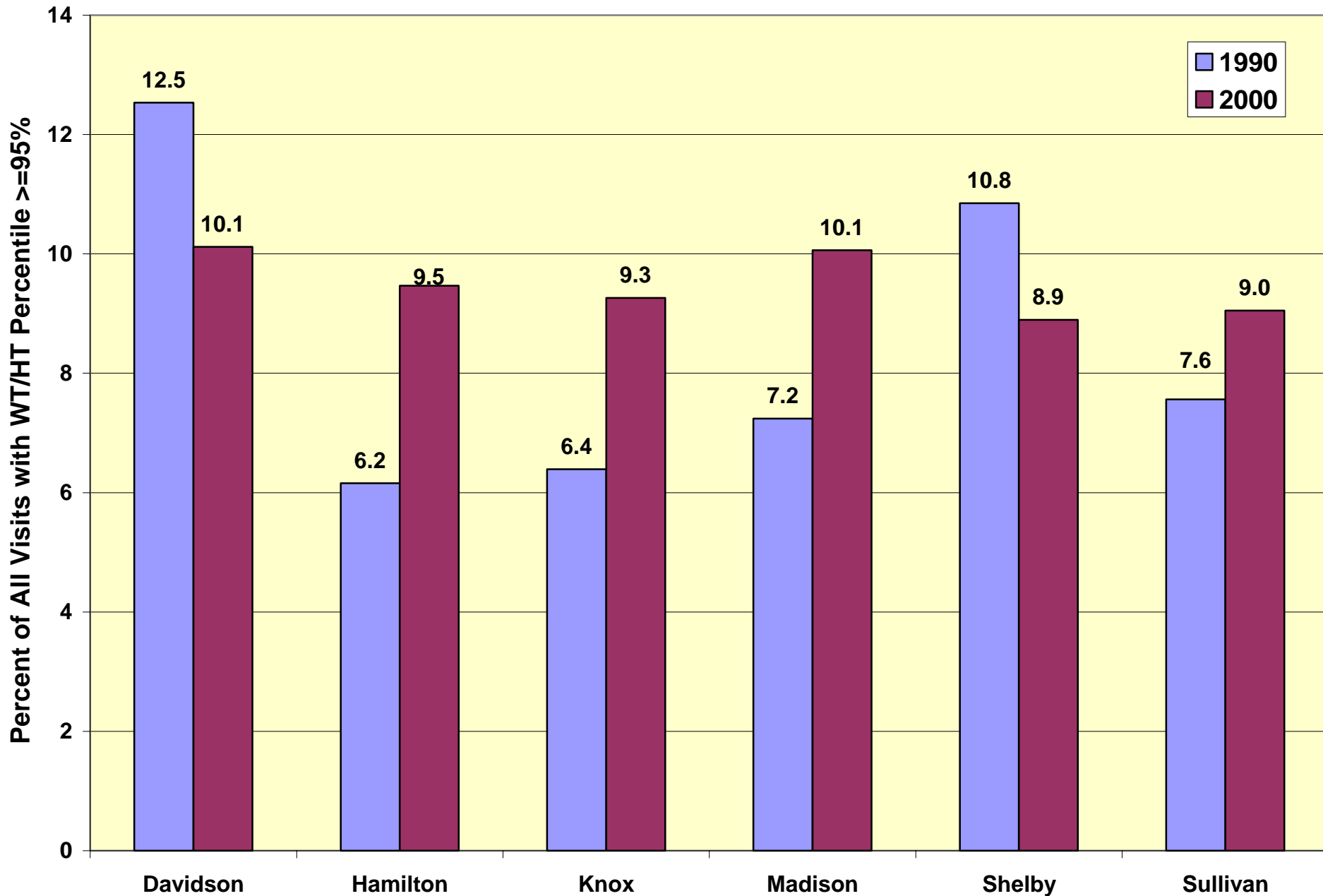
# Overweight by TDOH Metro Region, 2000



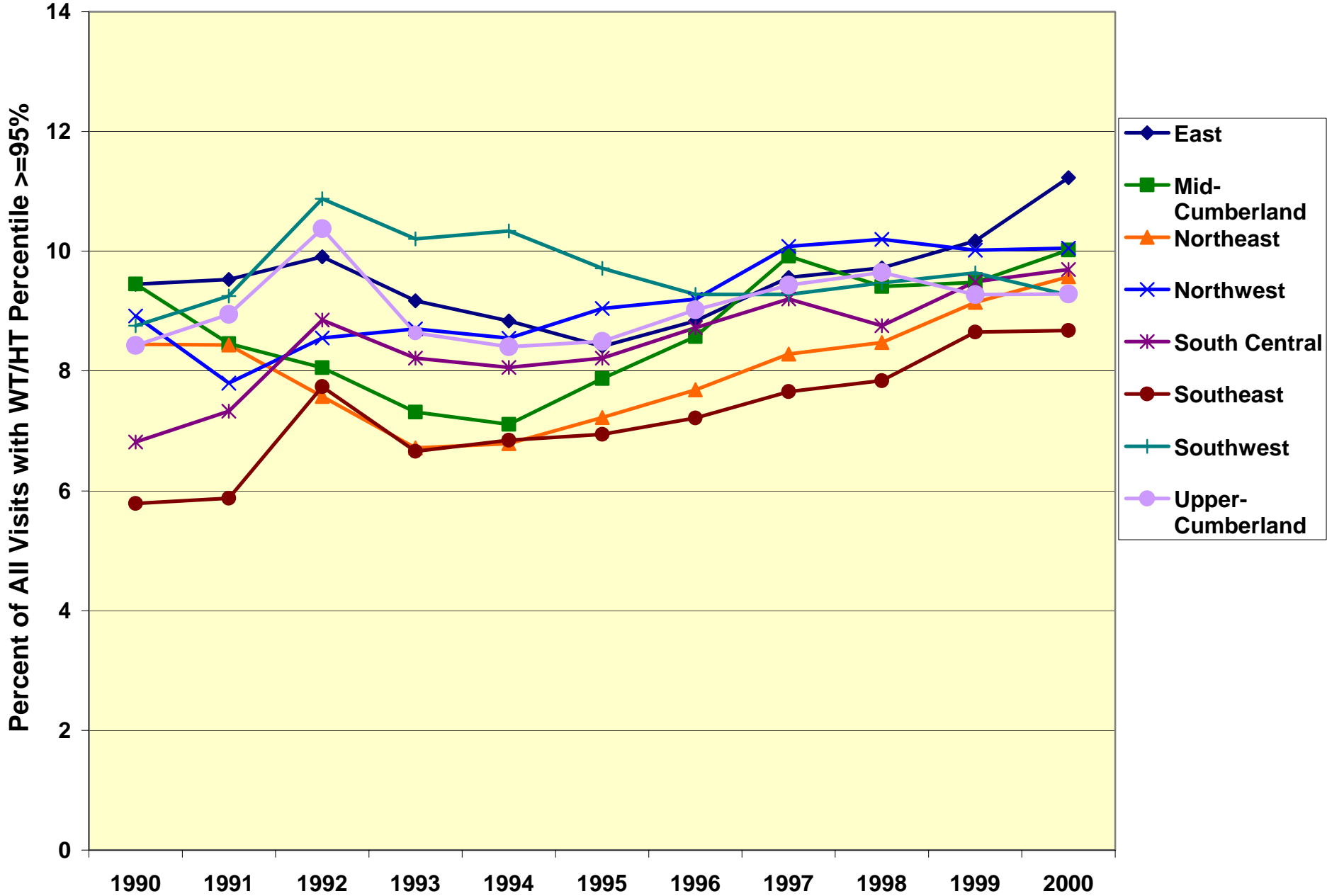
# Overweight by TDOH Rural Region, 1990 vs 2000



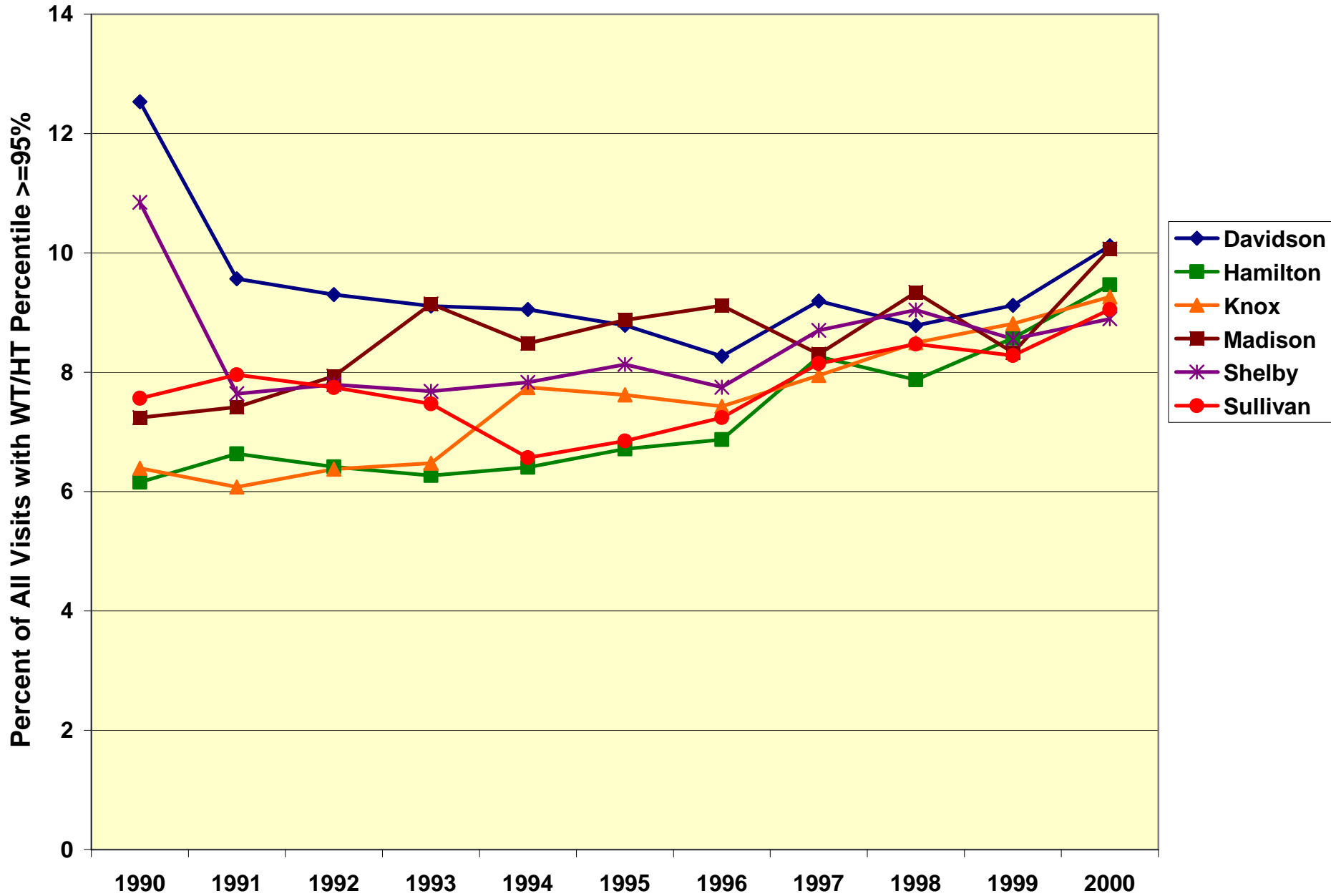
# Overweight by TDOH Metro Region, 1990 vs 2000



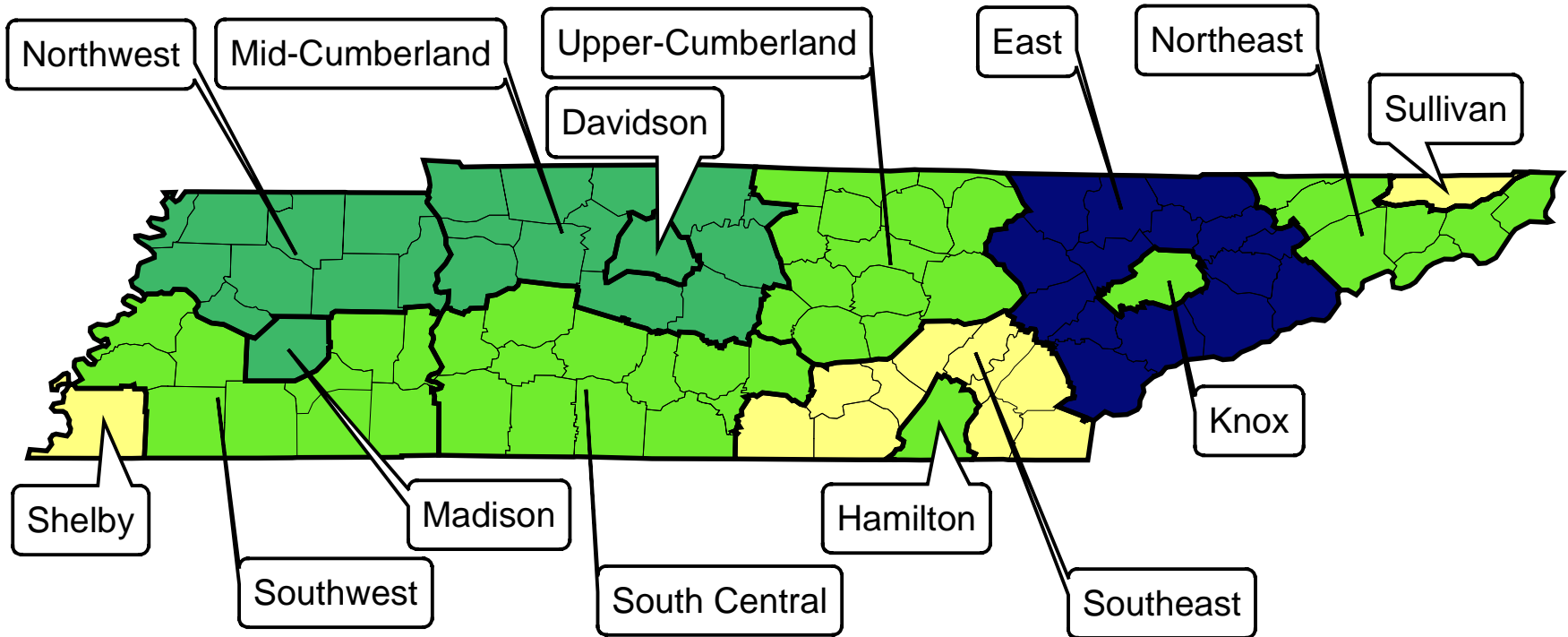
# Overweight by TDOH Rural Region, 1990 to 2000



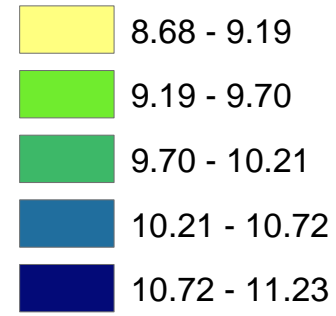
# Overweight by TDOH Metro Region, 1990 to 2000



# Percent of All WIC Visits with WT/HT Percentile $\geq 95\%$ by TDOH Region, 2000



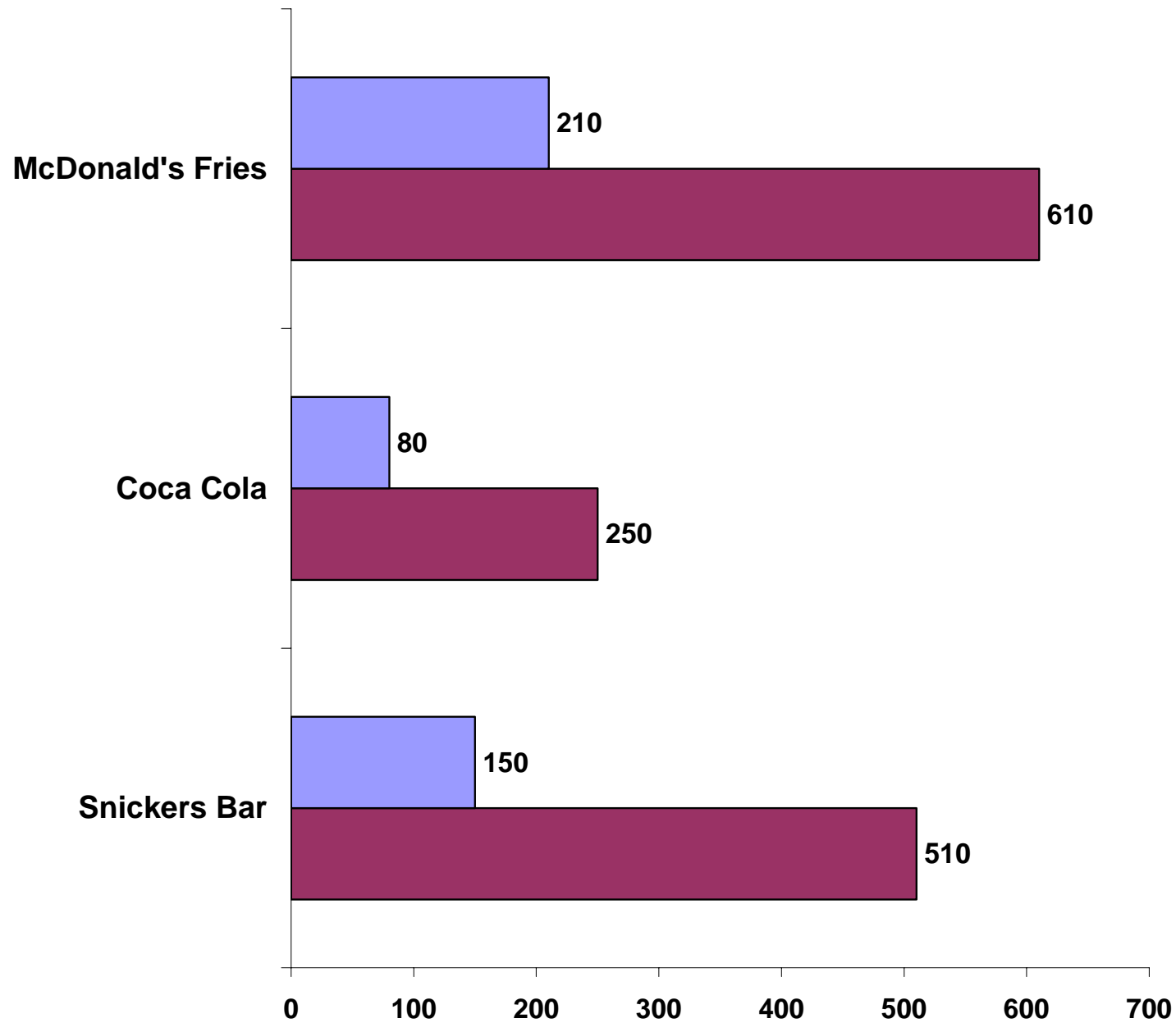
## % of All WIC Visits with Overweight



## Monster Portions

Growth of serving sizes of three products since 1955, by calories. For children aged 7 to 10, nutritionists recommend a daily diet of 1,600 to 2,400 calories.

 **1955 Portion**  
 **2001 Options**



Source: *Center for Science in the Public Interest*

The New York Times

# Un-happy Meals. . .



	Calories	Total Fat (g)	% Fat Calories	Saturated Fat (g)	Cholesterol (mg)	Sodium (mg)
Big Mac	590	34	52%	11	85	1090
Supersize Fries	610	29	42%	5	0	390
Supersize Coke	410	0	0%	0	0	40
<b>Total Big Mac Meal</b>	<b>1610</b>	<b>63</b>		<b>16</b>	<b>85</b>	<b>1520</b>

	Calories	Total Fat (g)	% Fat Calories	Saturated Fat (g)	Cholesterol (mg)	Sodium (mg)
Cheeseburger	330	14	38%	6	45	830
Small Fries	210	10	43%	1.5	0	135
Hi-C Orange Drink	160	0	0%	0	0	30
<b>Total Happy Meal</b>	<b>700</b>	<b>24</b>		<b>7.5</b>	<b>45</b>	<b>995</b>

Source: [www.calorieking.com](http://www.calorieking.com)

# Acknowledgements



This effort was supported in part by project MC00139-03 as a Special Project of Regional and National Significance (SPRANS), Title V, Social Security Act, Administered by the Maternal and Child Health Resources and Services Administration, United States Department of Health and Human Services.