

Appendix D. Changes in Prevalence of Food Insecurity and Hunger by State, 1996-98 (average) to 1999-2001 (average)

To assess changes in prevalence rates of food insecurity and hunger over time, adjustments must be made for year-to-year differences in screening procedures used to reduce respondent burden in the CPS food security surveys.²⁶ The State-level prevalence rates of food insecurity and hunger reported in *Prevalence of Food Insecurity and Hunger, by State, 1996-1998* (Nord et al., 1999) were based on data that had been edited to be comparable across all years.²⁷ Those rates cannot be compared directly with the prevalence rates for 1999-01 presented in section 1, which are based on data collected under screening procedures initiated in 1998. The older, more restrictive, screening procedures depressed prevalence estimates—especially for food insecurity—compared with those in use since 1998 because a small proportion of the households screened out were actually food insecure. The effect of the screening differences at the national level can be seen in figure 1, which presents prevalence rates from 1998 to 2001 based both on the unedited data for each year and on data edited to be comparable across all years.

To provide an appropriate baseline for assessing changes in State prevalence rates of food insecurity and hunger, statistics from the 1996-98 report for each State are adjusted upward to offset the estimated effects of the earlier screening procedures on that State's prevalence rates. The adjustments were calculated as follows:

- For the period 1999-2001, prevalence rates of food insecurity and hunger were calculated for each State under two editing protocols: (a) based on the current screening procedures, as presented in table

7, and (b) based on data edited to be comparable across all years.

- The ratio of the two prevalence rates [(b)/(a)] was calculated as a measure of the effect—during the 1999-2001 period—of editing the data to be comparable across all years. This “screening effect” was calculated separately for each State's prevalence rate of food insecurity, and for each State's prevalence rate of hunger.
- Each prevalence rate for 1996-98 was multiplied by the inverse of the “screening effect” for the corresponding prevalence rate in 1999-2001. This adjusted each 1996-98 prevalence rate to the level it would have been if current screening procedures had been in use, assuming that the screening effect was the same in both time periods.

Table D-1 compares State-level prevalence rates for 1999-2001 (repeated from table 7) with the adjusted 1996-98 rates. The estimated prevalence rates of food insecurity and hunger declined in most States from 1996-98 to 1999-2001. Declines in prevalences of food insecurity were statistically significant in eight States and the District of Columbia. Declines in prevalence rates of food insecurity with hunger were statistically significant in eight States and the District of Columbia. On the other hand, four States registered increases in food insecurity prevalence rates large enough to be statistically significant, and two States registered statistically significant increases in prevalence rates of food insecurity with hunger.²⁸

²⁶Households—especially those with higher incomes—that report no indication of any food access problems on two or three “screener” questions are not asked the questions in the food security module. They are classified as food secure. Screening procedures in the CPS food security surveys were modified from year to year prior to 1998 to achieve an acceptable balance between accuracy and respondent burden. Since 1998, screening procedures have remained unchanged.

²⁷To make prevalence rates comparable across all years, data for each year were edited so that households were classified as food secure if they would have been screened out of the food security module under procedures used in any year's survey.

²⁸Seasonal effects on food security measurement (discussed in section 1) probably bias prevalence rates for 1999-2001 downward somewhat compared with 1996-98. Use of 3-year averages reduces the size of this bias substantially (to one-third the size of the effect on comparisons between two single-year statistics). At the national level, this effect would depress the prevalence rate of food insecurity by about 0.4 percentage points and the prevalence rate of food insecurity with hunger by about 0.2 percentage points. However, seasonal effects may vary from State to State.

Table D-1—Changes in prevalence of food insecurity and hunger by State, 1996-98 (average) to 1999-2001 (average)¹

State	Food insecure (with or without hunger)			Food insecure with hunger		
	Average	Average	Change*	Average	Average	Change*
	1996-98	1999-2001		1996-98	1999-2001	
	<i>Percent</i>	<i>Percent</i>	<i>Percentage points</i>	<i>Percent</i>	<i>Percent</i>	<i>Percentage points</i>
U.S. total	11.3	10.4	-0.9*	3.7	3.1	-0.6*
AK	8.7	11.1	2.4*	3.6	4.3	0.7
AL	12.5	11.9	-0.6	3.3	3.9	0.6
AR	13.7	12.8	-0.9	4.8	3.9	-0.9
AZ	14.6	11.6	-3.0*	4.3	3.6	-0.7
CA	13.3	11.8	-1.5*	4.3	3.3	-1.0*
CO	10.8	8.6	-2.2*	3.8	2.5	-1.3*
CT	11.0	6.8	-4.2*	4.1	2.6	-1.5*
DC	13.7	9.8	-3.9*	4.7	2.9	-1.8*
DE	8.1	7.3	-0.8	2.9	2.1	-0.8
FL	13.2	12.2	-1.0	4.5	4.0	-0.5
GA	10.9	11.6	0.7	3.4	3.9	0.5
HI	12.9	10.8	-2.1	3.1	3.0	-0.1
IA	8.0	7.6	-0.4	2.6	2.2	-0.4
ID	11.3	13.0	1.7	3.3	4.5	1.2*
IL	9.6	9.2	-0.4	3.2	2.7	-0.5
IN	9.0	8.5	-0.5	2.9	2.5	-0.4
KS	11.5	11.3	-0.2	4.2	3.2	-1.0
KY	9.7	10.1	0.4	3.4	3.0	-0.4
LA	14.4	13.2	-1.2	4.4	3.0	-1.4*
MA	7.5	6.7	-0.8	2.1	2.0	-0.1
MD	8.7	8.8	0.1	3.3	3.1	-0.2
ME	9.8	9.4	-0.4	4.0	3.1	-0.9
MI	9.6	8.1	-1.5*	3.1	2.4	-0.7
MN	8.6	7.1	-1.5	3.1	2.0	-1.1
MO	10.1	8.6	-1.5	3.0	2.3	-0.7
MS	14.6	13.1	-1.5	4.2	3.7	-0.5
MT	11.2	13.2	2.0*	3.0	4.0	1.0
NC	9.8	11.1	1.3	2.7	3.3	0.6
ND	5.5	8.5	3.0*	1.6	2.2	0.6
NE	8.7	9.9	1.2	2.5	2.9	0.4
NH	8.6	6.5	-2.1*	3.1	1.9	-1.2*
NJ	8.9	7.8	-1.1	3.1	2.4	-0.7
NM	16.5	14.6	-1.9	4.8	4.2	-0.6
NV	10.4	10.1	-0.3	4.0	3.4	-0.6
NY	11.9	9.6	-2.3*	4.1	3.1	-1.0*
OH	9.7	9.1	-0.6	3.5	2.8	-0.7
OK	13.1	12.9	-0.2	4.2	3.8	-0.4
OR	14.2	13.7	-0.5	6.0	5.8	-0.2
PA	8.3	8.4	0.1	2.6	2.2	-0.4
RI	10.2	8.7	-1.5	2.7	2.5	-0.2
SC	11.0	11.3	0.3	3.5	3.6	0.1
SD	8.2	7.9	-0.3	2.2	1.9	-0.3
TN	11.8	11.8	0.0	4.4	3.4	-1.0
TX	15.2	13.9	-1.3	5.5	3.6	-1.9*
UT	10.3	13.8	3.5*	3.1	4.6	1.5*
VA	10.2	7.6	-2.6*	3.0	1.5	-1.5*
VT	8.8	9.1	0.3	2.7	1.8	-0.9
WA	13.2	12.5	-0.7	4.7	4.6	-0.1
WI	8.5	8.4	-0.1	2.6	2.9	0.3
WV	9.5	10.3	0.8	3.1	3.3	0.2
WY	9.9	9.9	0.0	3.5	3.2	-0.3

*Change was statistically significant with 90 percent confidence ($t > 1.645$).

¹Statistics for 1996-98 were revised to account for changes in survey screening procedures introduced in 1998.

Source: Prepared by ERS based on Current Population Survey Food Security Supplement data.