

The HIMSS logo is displayed in white on a blue background. It features the word "HIMSS" in a stylized, sans-serif font with a dot above the 'i'.

Central & Southern Ohio *Chapter*

A horizontal banner with a blue background. It contains several images: a cyclist in a blue and yellow jersey, a bridge at night with lights reflecting on water, and a classical building with a dome and columns. The text "transforming healthcare through IT™" is written in white at the bottom right of the banner.

transforming healthcare through IT™

CSOHIMSS FALL CONFERENCE

Jason Monroe, Manager of Decision Support



Decision Support at Adena Health System

- Jason Monroe, Director of Applications and Programming
- Jason Monroe, Manager of Decision Support
- Reporting structure change from IT to Finance
- Decision Support Department
 - Responsible for Data Structure, Data Integrity, and Systems Support
 - Development of standardized reporting models
 - Training of end users – Fishing Guide vs. Fisherman
 - Lean/Six Sigma Process improvement/monitoring
 - Clinical Surveillance Systems

“He with the most data wins!”



- Practice A: Discharged from practice due to not visiting for 3 years
- Practice B: Not accepting new patients at this time
- Practice C: Not accepting new patients at this time
- Capacity not the issue
- No Show/Cancellation Rates
- Level Loading Schedules



A Change of Perspective

- Admissions are good - \$\$\$\$\$\$
- If it's not broke, don't fix it
- That's the way we have always done it
- Being unique is a good thing
- Introspective vs. Retrospective
- Reactive vs. Proactive
- Quality = Expense

Business Case for Quality

Inpatient

Encounters	14,267
Net Revenue per Patient	\$3,460
Profit/Loss per Encounter	\$81

Outpatient

Encounters	485,768
Net Revenue per Patient	\$158
Profit/Loss per Encounter	\$101

Endoscopy – 7 FTE's

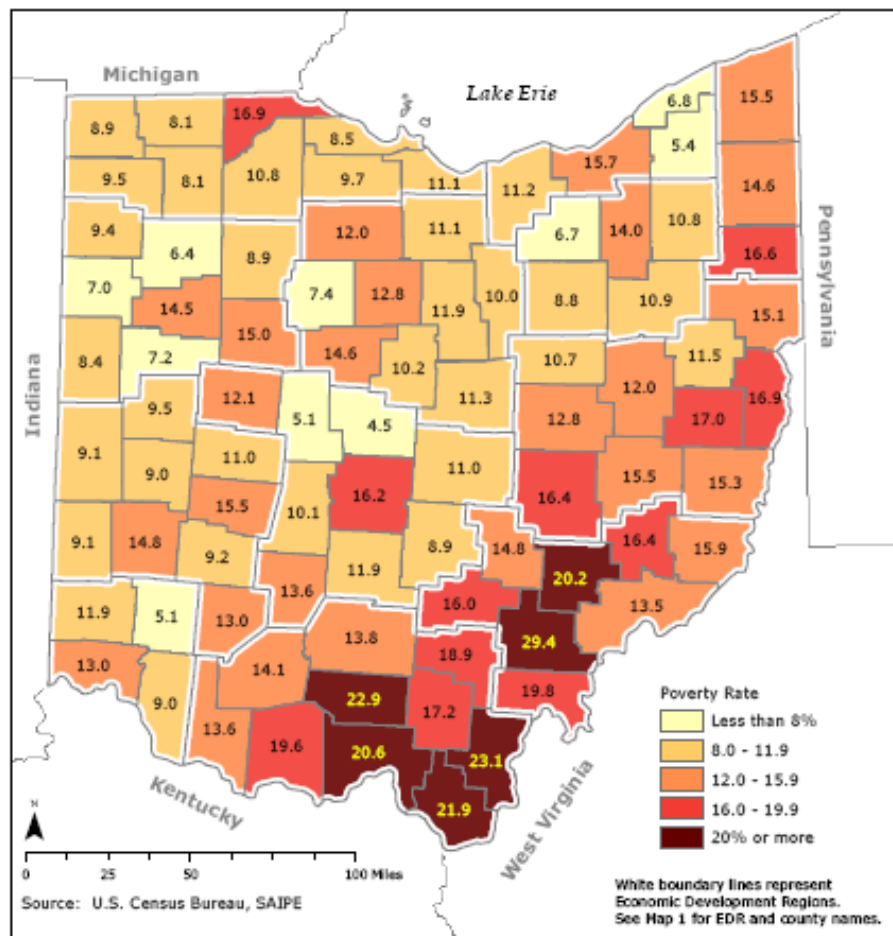
Encounters	2,270
Net Revenue per Encounter	\$1,533
Profit/Loss per Encounter	\$1,085



Preventable Admissions

- In 2006, nearly 4.4 million hospital admissions, totaling \$30.8 billion in costs, could have been potentially preventable with timely and effective [ambulatory care](#) or adequate [patient self-management](#) of the condition, according to a report published last month from the [Agency for Healthcare Research and Quality](#) (AHRQ).
- Eighteen percent of [Medicare](#) admissions were for a potentially preventable condition. Medicare patients contributed to \$20.1 billion (67 percent) of total hospital costs for potentially preventable hospitalizations among adults.
- Hospitalization rates for potentially preventable conditions were highest among residents in poorer communities but lowest among residents from wealthier communities. The report noted that the disparity was particularly evident for [diabetes](#) without complications, where the admission rate in the poorest communities was more than 400 percent higher than the rate in the wealthiest communities.

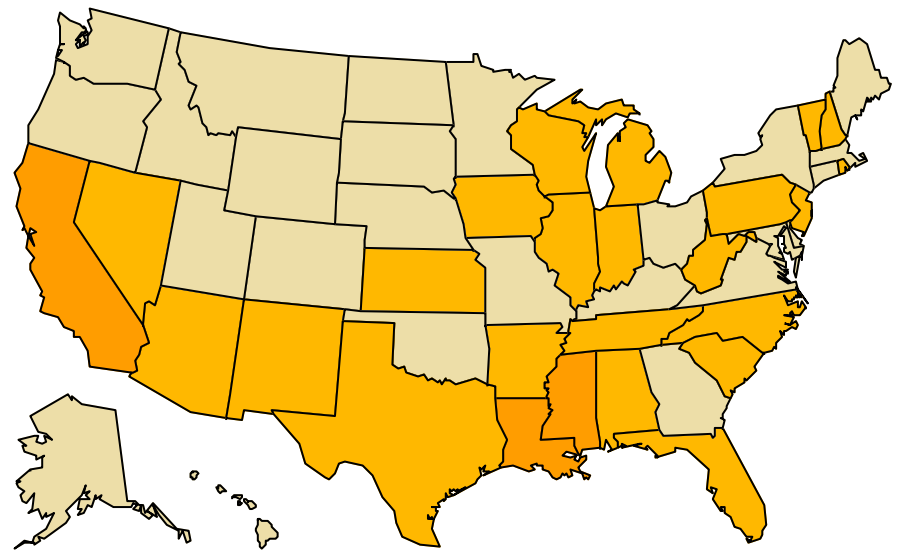
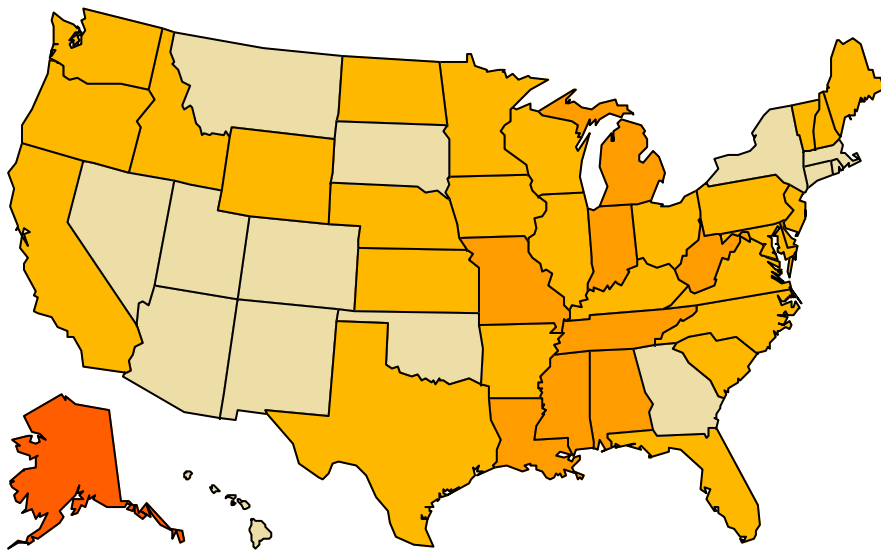
Preventable Admissions



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Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

1995



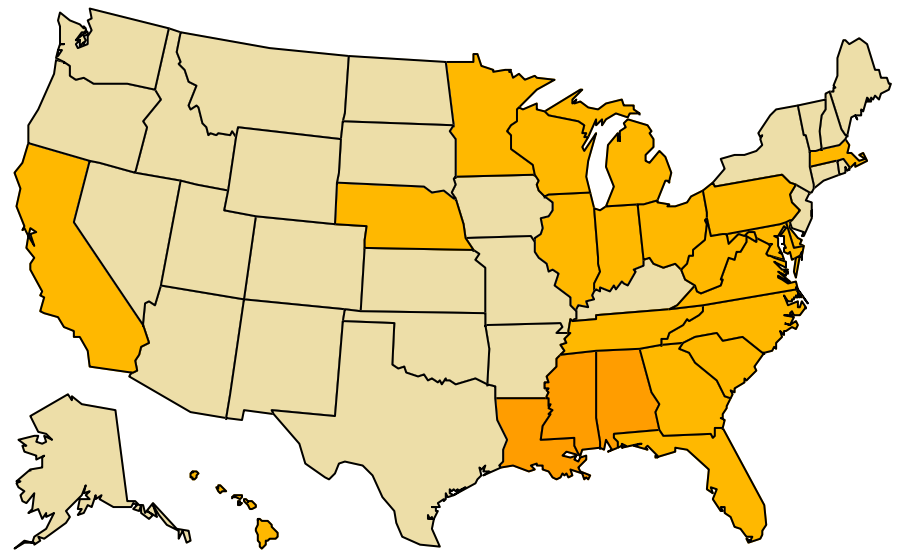
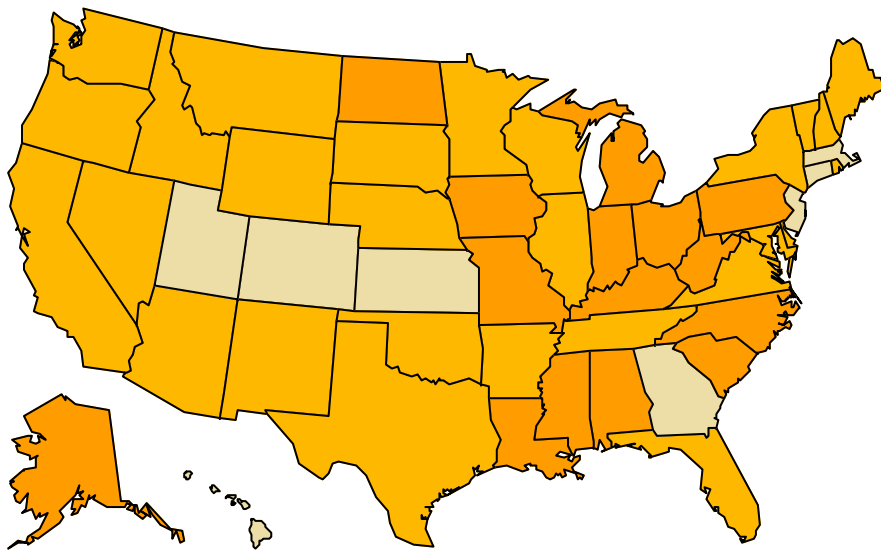
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Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

1996



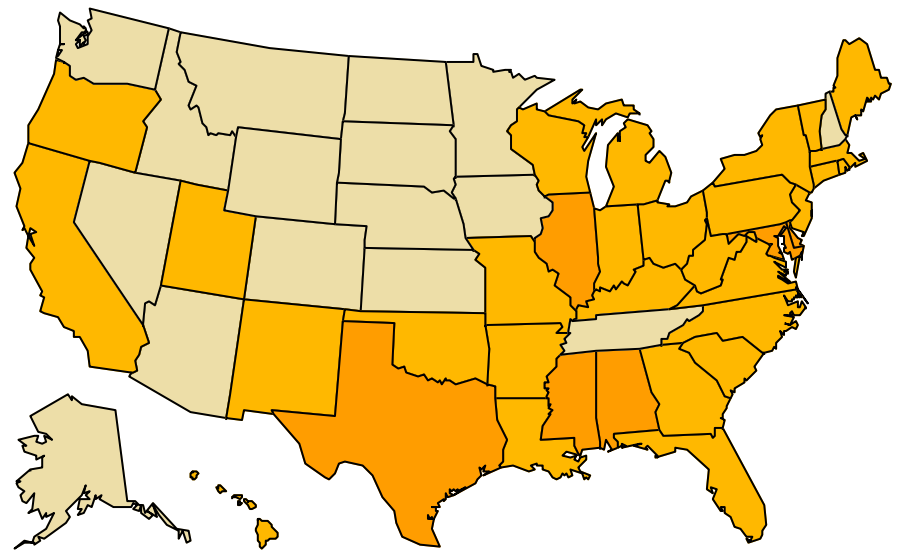
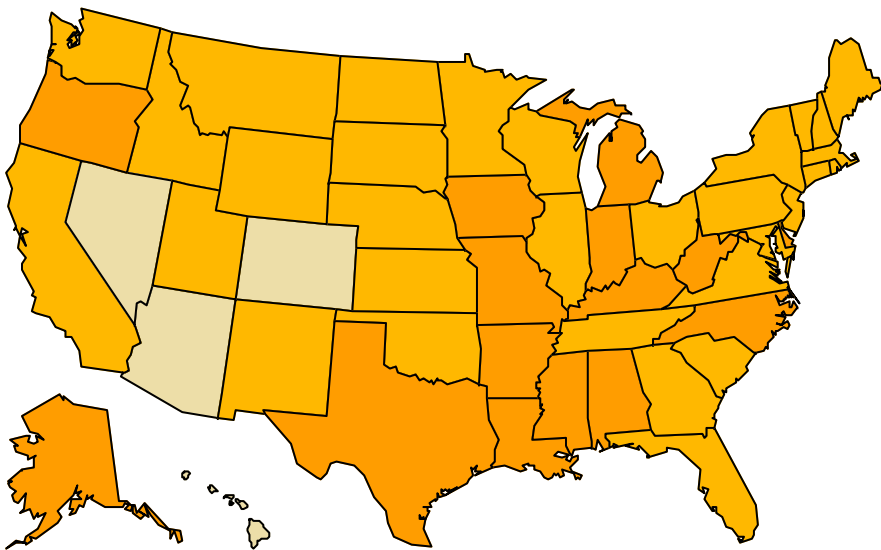
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1997



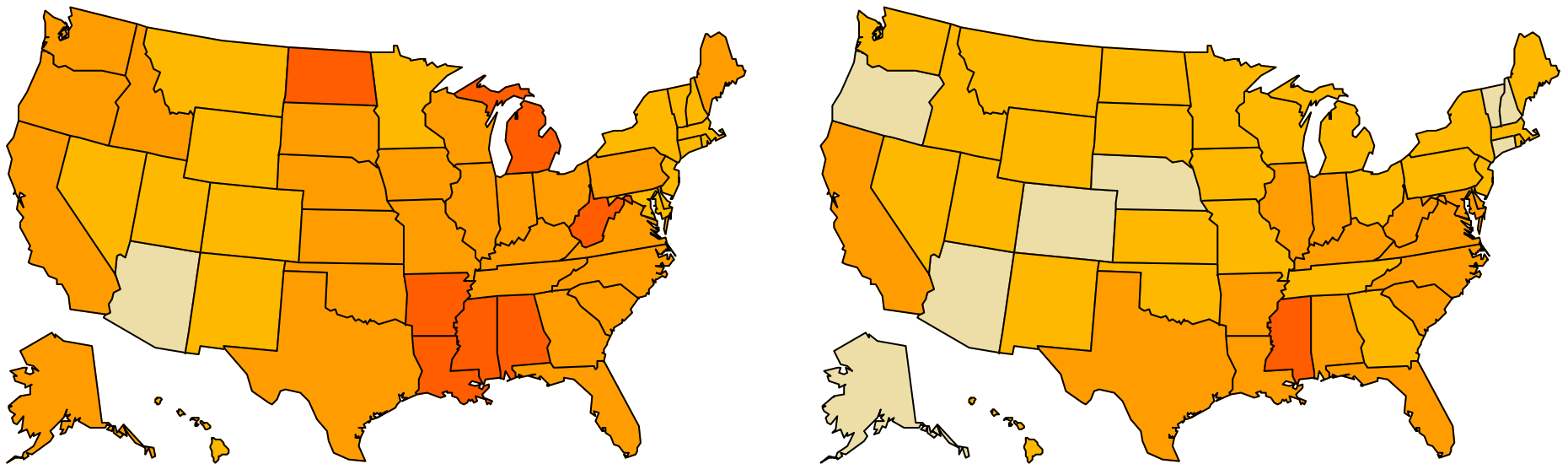
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Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

1999



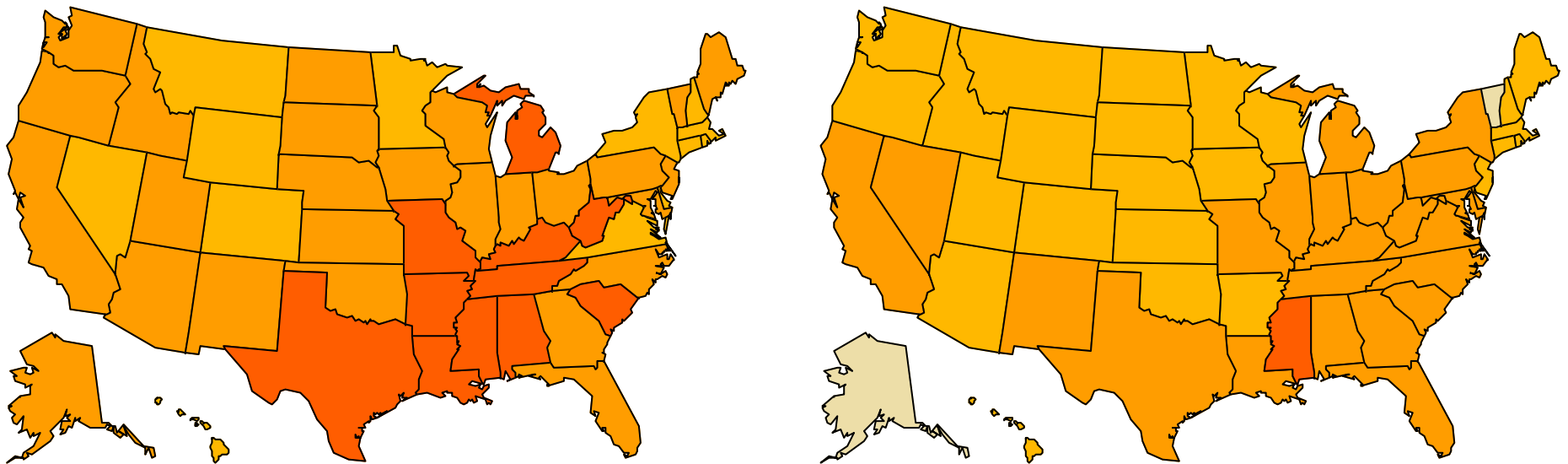
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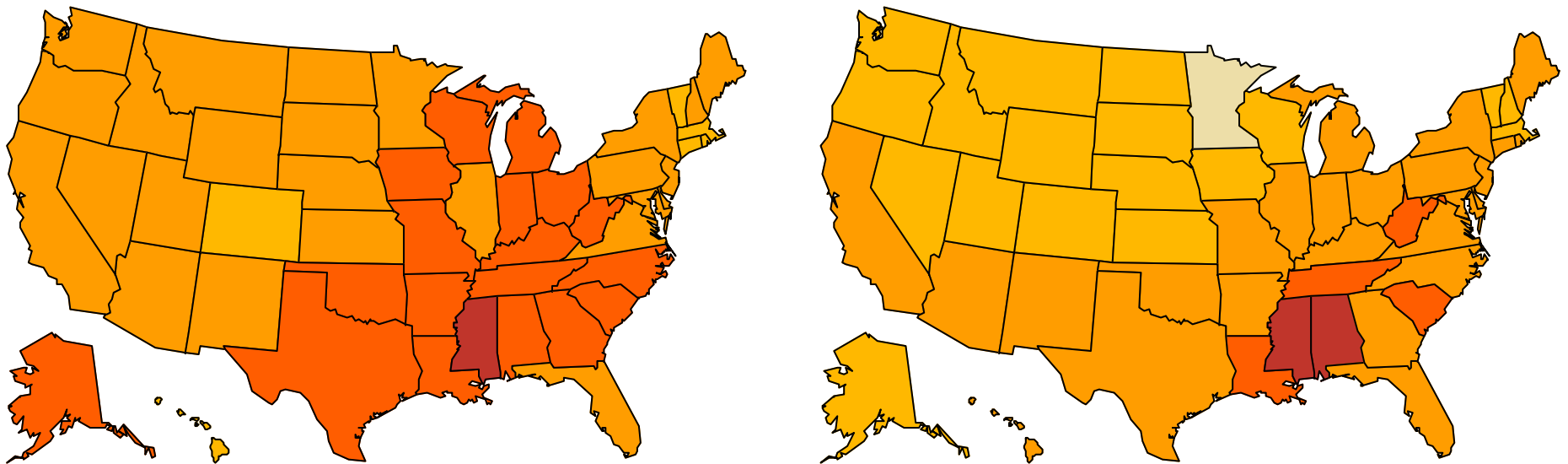
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2001



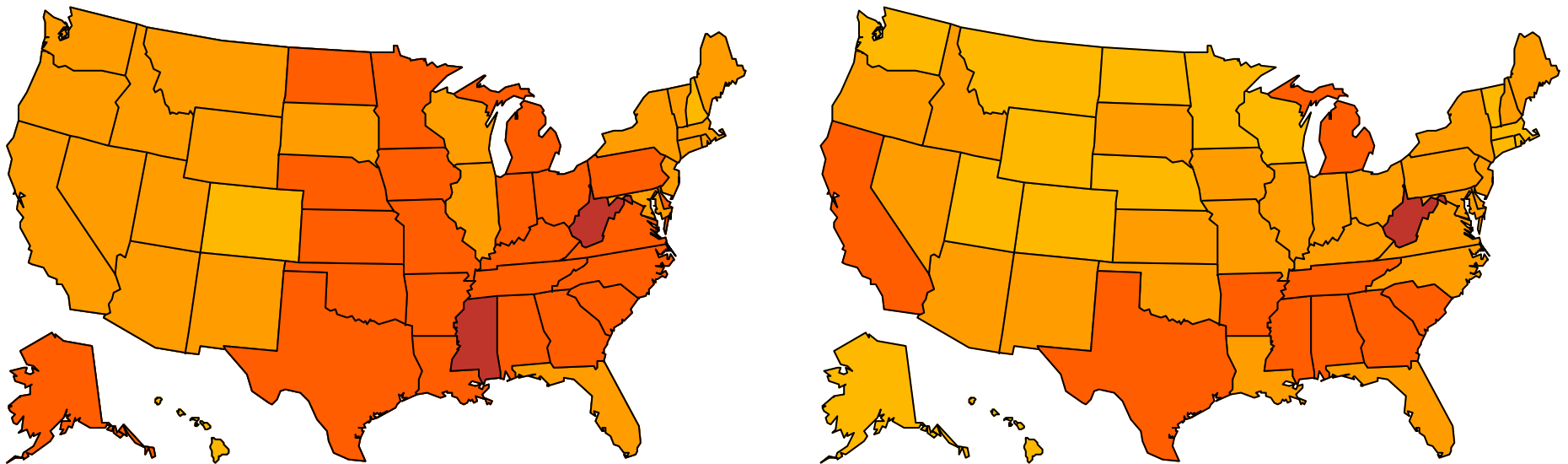
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2002



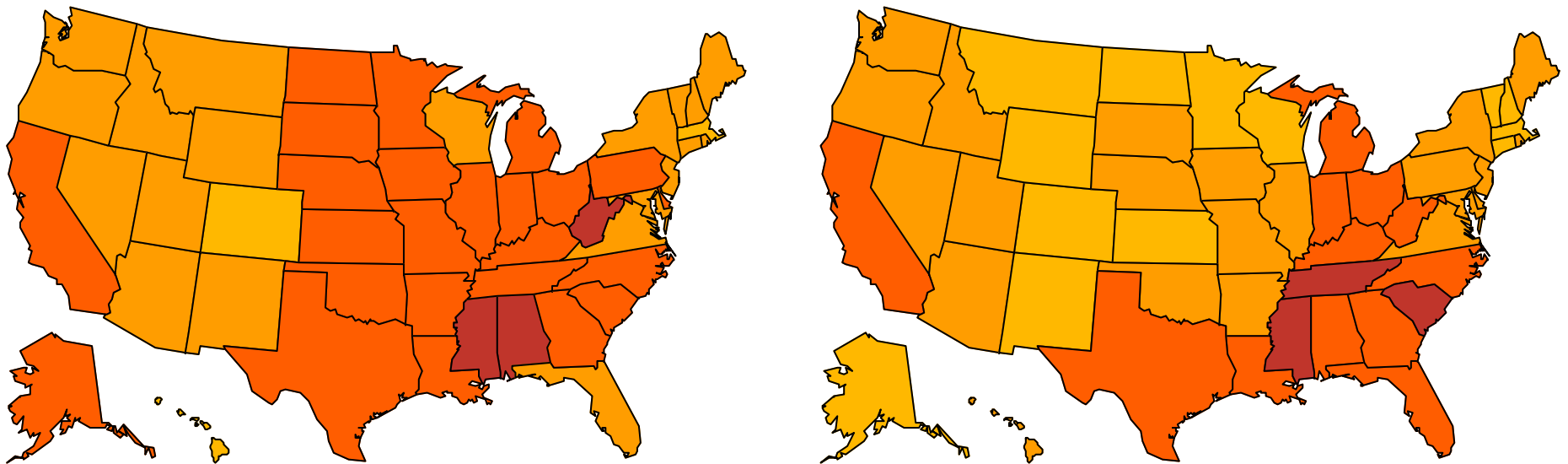
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2003



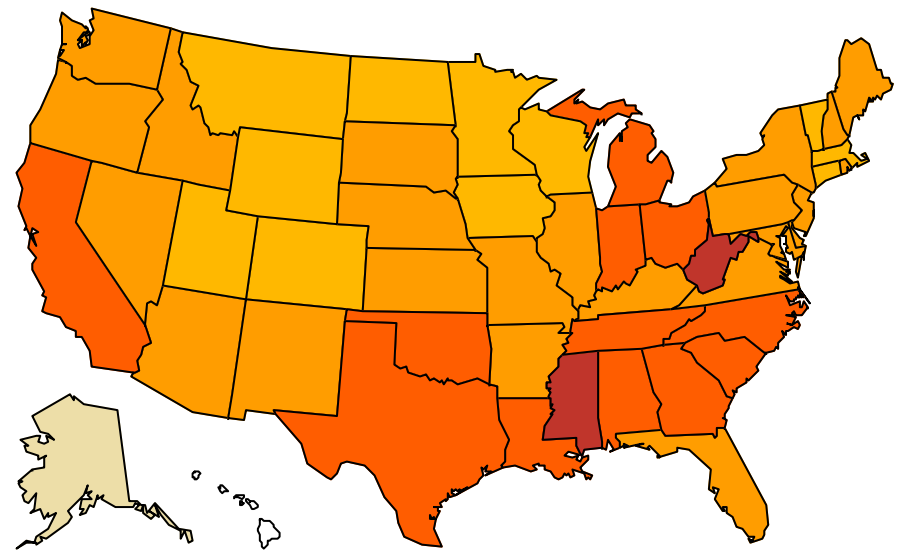
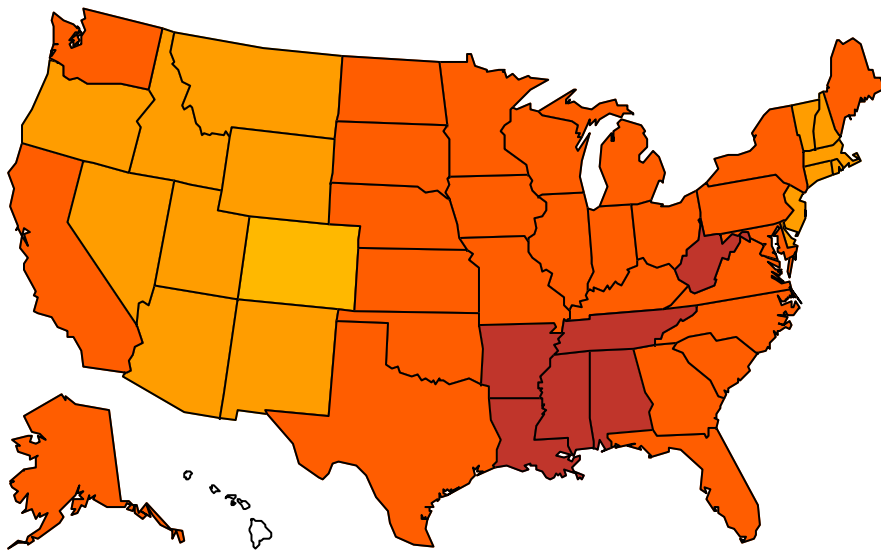
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2004



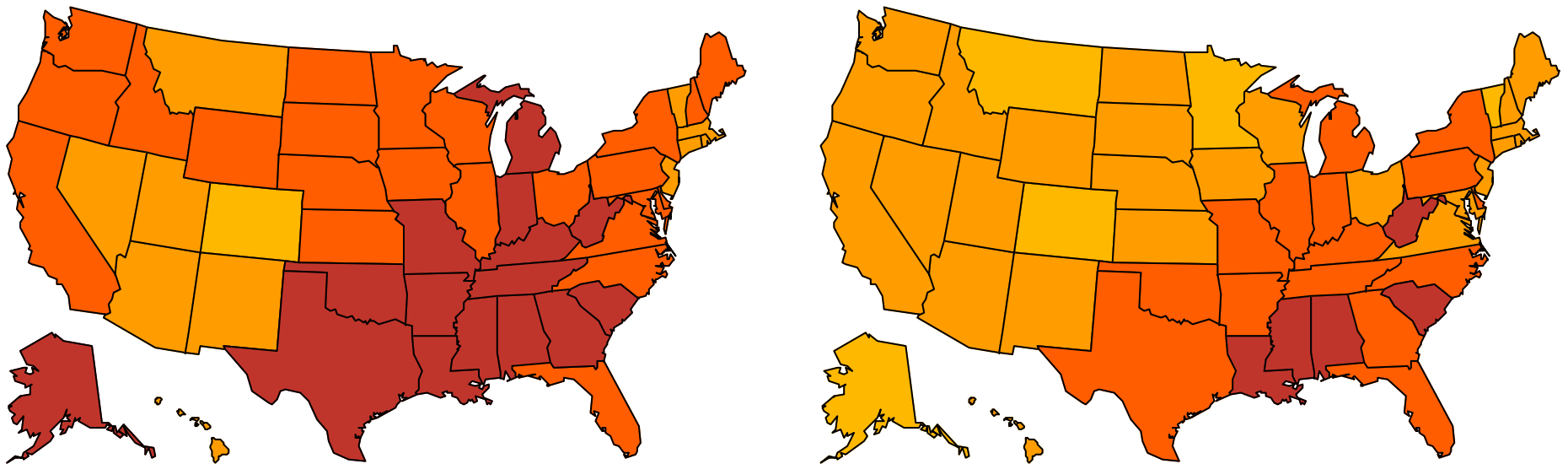
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2005



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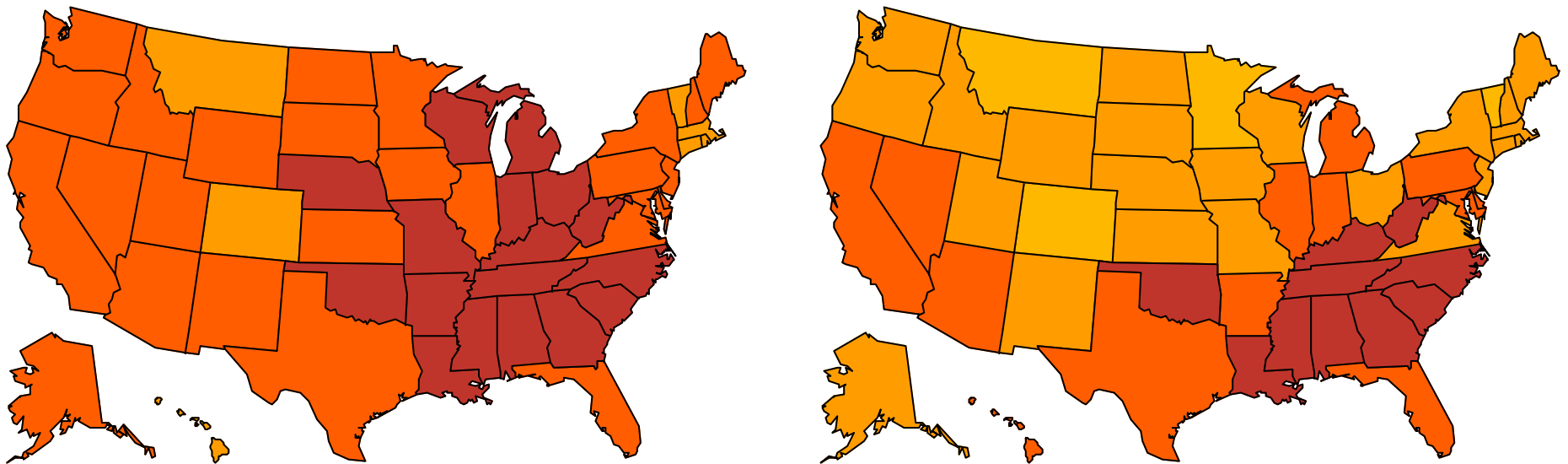
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2006



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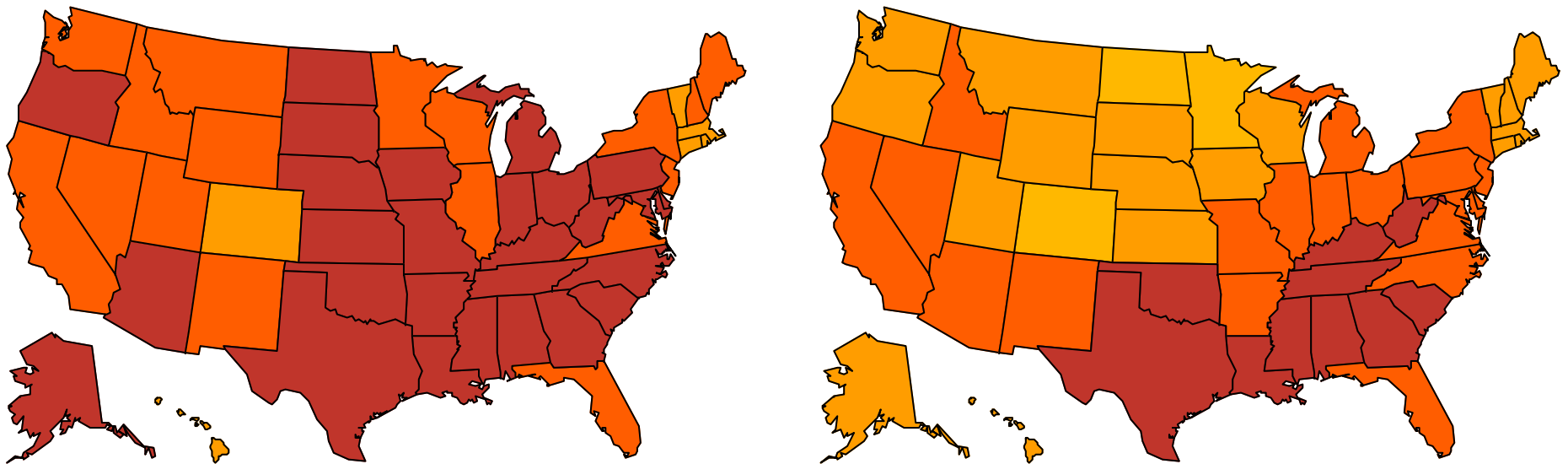
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2007



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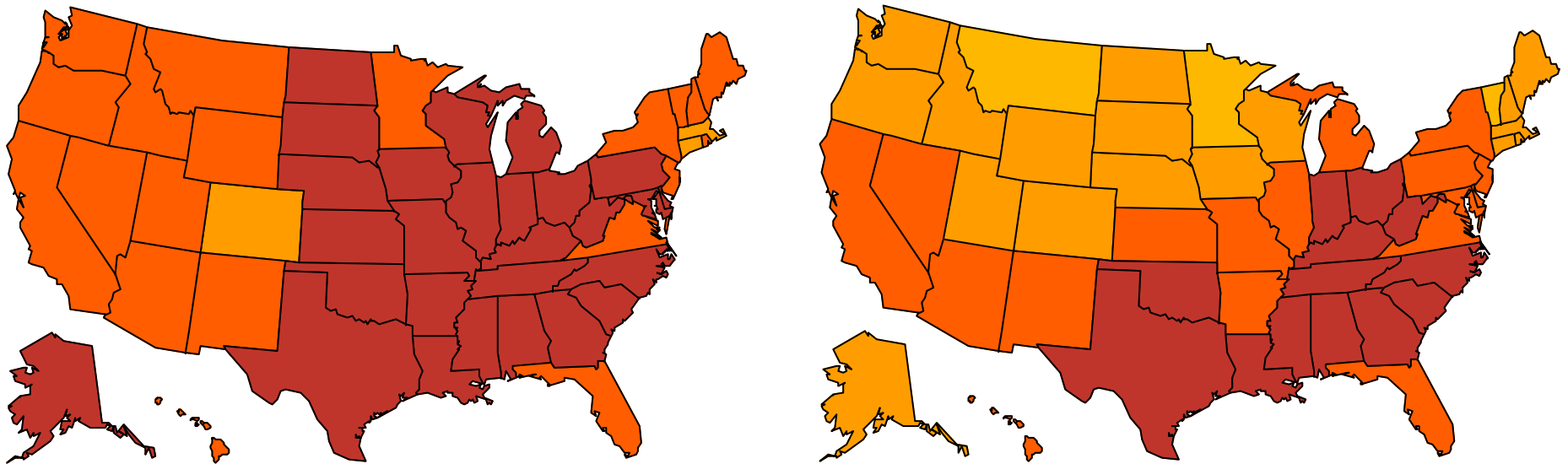
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2008



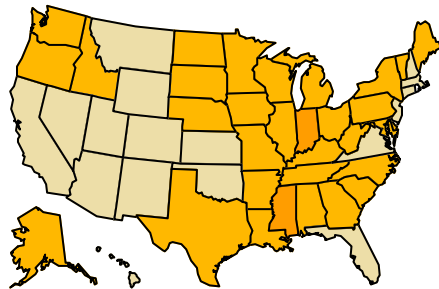
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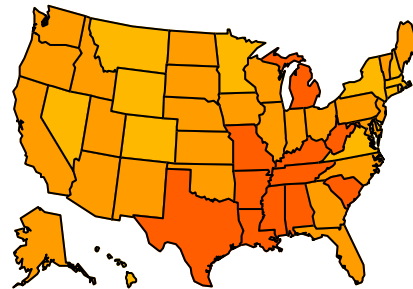


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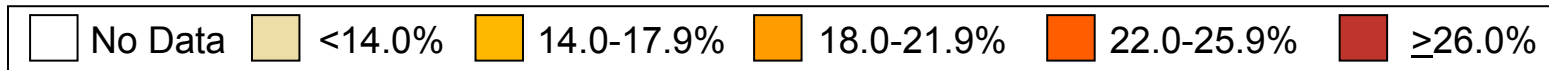
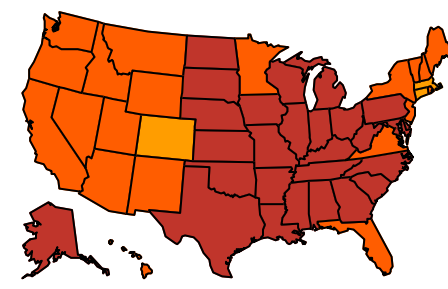
1994



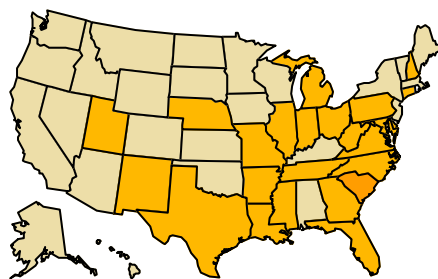
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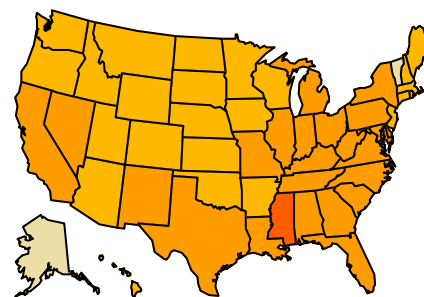
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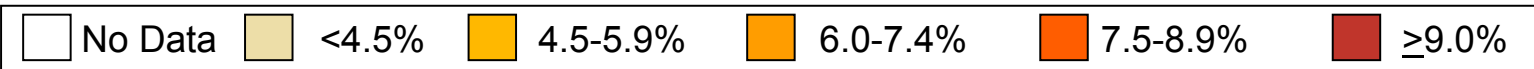
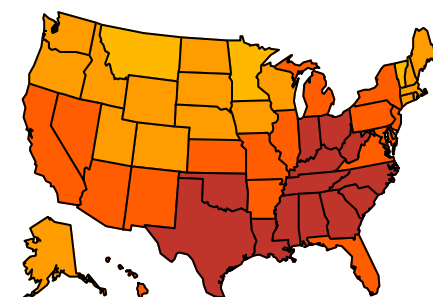
1994



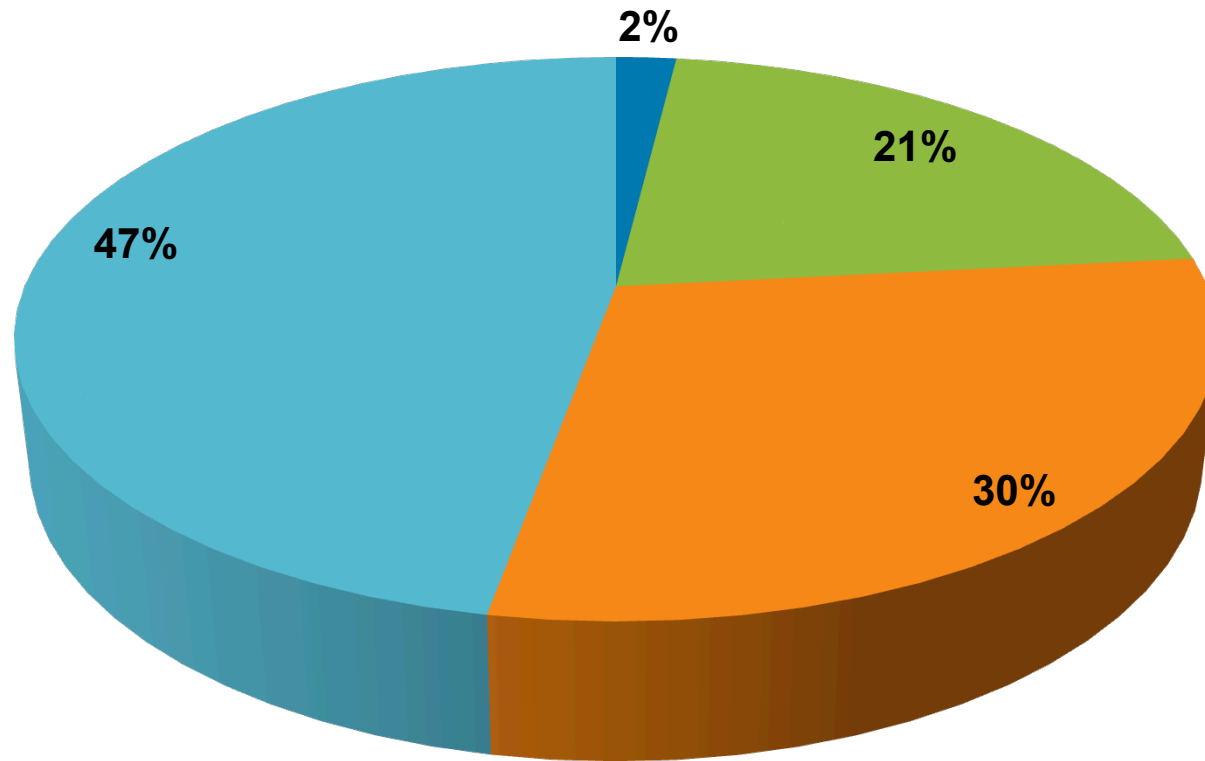
2000



2008



Adena Medical Group Patient Population



■ Underweight ■ Healthy ■ Overweight ■ Obese

Health Consequences of Obesity

- Coronary heart disease
- Type 2 diabetes
- Cancers (endometrial, breast, and colon)
- Hypertension (high blood pressure)
- Stroke
- Liver and Gallbladder disease
- Sleep apnea and respiratory problems
- Osteoarthritis (a degeneration of cartilage and its underlying bone within a joint)
- Gynecological problems (abnormal menses, infertility)

Physician Office



- Health Maintenance
 - Colonoscopy
 - Mammography
 - Hypertension
 - BMI
 - Smoking Cessation
 - Tobacco Screening
 - Pap Smear
 - 188 Unique Data Points
- Disease Management
 - Diabetes
 - CHF
 - AMI



Health Maintenance Tracking



Colonoscopy Tracking

July 2010

Practice/Provider	Visits>Age 50	Health Maintenance Complete	PastDue%
ADENA FAM MEDICINE CIRCLEVILLE			
Physician A	201	79.60%	30.85%
ADENA FAMILY MED GREENFIELD			
Physician B	148	2.03%	97.97%
FAMILY MEDICINE OF CHILLICOTHE			
Physician C	26	38.46%	65.38%
Physician D	44	22.73%	79.55%
Physician E	14	21.43%	78.57%
FRANKLIN CLINIC, THE			
Physician F	512	70.31%	34.57%
Physician G	206	55.83%	46.12%
Physician H	537	81.01%	29.61%
Physician I	376	74.20%	28.46%
Physician J	600	69.83%	33.17%
Grand Total	4423	58.49%	46.71%



Inpatient



- Live tracking of potential CHF and AMI patients
- Tracking of ICU Vent patients
- Checking for previous positive test results in past
- MEWS Scoring
- Identification of patients that have had an abnormal HGB A1C in the past.
- Quality data now being used as a clinical decision making tool instead of a measurement of how you did in the past



CHF Monitoring

Inpatient CHF Tracking

Location	Room	Patient	AdmitDateTime	ResultTime	Test	Normal	Result
2A CARDIAC PROGRESSIVE CARE	2C55	Patient A	1/2/2010 19:26	1/4/2010 6:02	BNP	0-100	786
				1/2/2010 19:26	BNP	0-100	278
2A NURSING UNIT - STEP DOWN	2A11	Patient B	1/4/2010 1:15	1/4/2010 0:33	BNP	0-100	300
				12/27/2009 21:00	1/5/2010 5:39	BNP	0-100
	2A15	Patient C	12/27/2009 21:00	1/3/2010 5:34	BNP	0-100	402
				1/2/2010 4:25	BNP	0-100	696
				1/1/2010 6:39	BNP	0-100	1101
				12/31/2009 4:29	BNP	0-100	889
				12/30/2009 5:12	BNP	0-100	1067
				12/29/2009 6:12	BNP	0-100	1119
				12/27/2009 20:13	BNP	0-100	989
				1/5/2010 16:18	1/7/2010 5:13	BNP	0-100
	2A23	Patient D	1/5/2010 16:18	1/6/2010 1:23	BNP	0-100	146
				1/4/2010 16:49	1/6/2010 4:58	BNP	0-100
	2A32	Patient E	1/4/2010 16:49	1/2/2010 9:23	BNP	0-100	663
				12/27/2009 19:52	12/30/2009 4:54	BNP	0-100
	2A33	Patient F	12/27/2009 19:52	12/27/2009 19:26	BNP	0-100	1117
				1/2/2010 10:15	1/6/2010 4:18	BNP	0-100
1/5/2010 7:29				BNP	0-100	834	
1/4/2010 6:20				BNP	0-100	651	
2A34	Patient G	1/2/2010 10:15	1/3/2010 5:34	BNP	0-100	1012	
			1/2/2010 9:43	BNP	0-100	1205	
			12/30/2009 15:41	1/5/2010 5:39	BNP	0-100	5000
			12/31/2009 2:20	BNP	0-100	5000	
2A36	Patient H	12/30/2009 15:41	1/5/2010 5:39	BNP	0-100	5000	

AMI Monitoring

Inpatient AMI Tracking							
Location	Room	Patient	AdmitDateTime	ResultTime	Test	Normal	Result
2A NURSING UNIT - STEP DOWN	2A13	Patient A	7/9/2010 1:04	7/9/2010 15:36	TROP	0-0.07	2.35
				7/9/2010 9:52	TROP	0-0.07	2.32
				7/9/2010 5:06	TROP	0-0.07	2.22
	2A31	Patient B	7/9/2010 3:07	7/10/2010 5:25	TROP	0-0.07	0.18
				7/9/2010 18:27	TROP	0-0.07	0.25
				7/9/2010 8:55	TROP	0-0.07	0.25
	2A72	Patient C	7/1/2010 12:57	7/9/2010 7:01	TROP	0-0.07	0.20
				7/3/2010 4:08	TROP	0-0.07	2.36
				7/2/2010 20:00	TROP	0-0.07	3.03
				7/1/2010 19:28	TROP	0-0.07	4.17
3A NURSING UNIT	3A31	Patient D	7/11/2010 23:54	7/12/2010 1:50	TROP	0-0.07	0.08
3B MED TELE	3B32	Patient E	7/8/2010 17:31	7/9/2010 4:17	TROP	0-0.07	0.08
				7/8/2010 21:52	TROP	0-0.07	0.08
				7/8/2010 16:27	TROP	0-0.07	0.09
INTENSIVE CARE	IC01	Patient F	7/9/2010 21:57	7/10/2010 8:32	TROP	0-0.07	1.13
				7/10/2010 6:05	TROP	0-0.07	1.42
				7/10/2010 1:38	TROP	0-0.07	1.44
	IC10	Patient G	7/5/2010 16:05	7/9/2010 11:19	TROP	0-0.07	0.21
				7/9/2010 4:27	TROP	0-0.07	0.19
				7/9/2010 0:32	TROP	0-0.07	0.22
IC12	Patient H	7/10/2010 16:29	7/11/2010 11:30	TROP	0-0.07	2.27	
			7/10/2010 23:44	TROP	0-0.07	2.34	

A1C Monitoring

Inpatient A1C Results

Location	Room	Patient Name	Result Date/Time
2A NURSING UNIT - STEP DOWN	2A16	Patient A	11/11/2009 7:34
3A NURSING UNIT	3A16	Patient B	10/27/2009 20:15
	3A14	Patient C	10/29/2009 11:09
	3A42	Patient D	11/9/2009 15:47
3B MED TELE	3B13	Patient E	11/2/2009 7:49
	3B43	Patient F	11/8/2009 8:17
	3B52	Patient G	11/11/2009 14:44
	3B23	Patient H	InProgress
INTENSIVE CARE	IC06	Patient I	11/6/2009 10:49
	IC11	Patient J	11/11/2009 10:04
	IC05	Patient K	11/2/2009 10:38

Dashboards - Medisolv

	Trend	2008	2009	Jun 2008	Jul 2008	Aug 2008	Sep 2008	Oct 2008	Nov 2008	Dec 2008	Jan 2009	Feb 2009	Mar 2009	Apr 2009
Accidental Puncture or Laceration (PSI 15)	→	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Decubitus Ulcer (PSI 3)	↘	40.00	21.98	89.00	0.00	0.00	0.00	0.00	142.86	33.33	32.26	43.48	0.00	0.00
DVT or PE in Hip and Knee Surgery Rate (HAC)	→	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Complications of Anesthesia (PSI 1)	↗	0.00	9.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.45	0.00	0.00	0.00
Congestive Heart Failure Mortality Rate (IQI 16)	→	4.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quality Monitoring at Adena – Future State



Make a Difference



