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## CAH Participation and Quality Measure Results for Hospital Compare 2007 Discharges and 2005-2007 Trends: National and Oklahoma Results

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### Introduction

This report examines state level participation and quality measure results for Critical Access Hospitals (CAHs) in the Centers for Medicare and Medicaid Services (CMS) Hospital Compare public reporting database for 2007 and trends from 2005-2007. Although CAHs do not face the same financial incentives as hospitals paid under the Medicare Prospective Payment System (PPS) to participate, the Hospital Compare initiative provides an important opportunity for CAHs to assess and improve their performance on national standards of care.

Previous reports have analyzed CAH participation and Hospital Compare quality measure results nationally for 2004-2006 and at the state level for 2006.<sup>1-4</sup>

### Approach

This project used data on hospital participation and quality measure results from the Hospital Compare website <http://www.hospitalcompare.hhs.gov/>. The results are based on data abstracted from patient records for hospital discharges in Calendar Years (January through December) 2005, 2006 and 2007. These data were linked with data on all CAHs maintained by the Sheps Center at the University of North Carolina as part of its Flex Monitoring Team activities and data from the American Hospital Association 2006 Annual Survey.

The Hospital Compare measure set for 2007 discharges included 24 process of care measures that reflect recommended treatments for acute myocardial infarction (AMI), heart failure, pneumonia and surgical infection prevention. Because many CAHs had a very small number of patients for several measures, aggregate scores were calculated across all CAHs nationally and by state.

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The percentages of CAH patients that received recommended care were calculated by dividing the total number of patients in all CAHs in the state and nationally who received the recommended care by the total number of eligible patients in all CAHs in the state and nationally for each measure. The percent of CAH patients receiving recommended care was not calculated when the total number of CAH patients in a state, or nationally, with data on a measure was less than 25.

The number of CAHs reporting and the number of patients for whom data are available may differ by measure for several reasons. Hospitals have had a longer time to become familiar with and report on the initial ten measures. Some measures only apply to a portion of patients (e.g., the smoking cessation advice measures only apply to smokers), and several measures exclude patients with contraindications for receiving that type of medication. Small rural hospitals transfer many AMI patients seen in their emergency departments to larger hospitals, rather than admitting them as inpatients. Consequently, CAHs may have few eligible patients for the AMI measures. The surgical infection prevention measures apply to selected surgeries; some (e.g., hysterectomies) are more commonly provided in CAHs than others (e.g., cardiac procedures).

### Participation in Hospital Compare

In Oklahoma, 29 of the 33 Medicare-certified CAHs in 2007 were participating in Hospital Compare (by submitting data on at least one measure for 2007 discharges). The Oklahoma participation rate of 87.9% was higher than the national rate of 69%. The 2007 rate was lower than the Oklahoma rate in 2006.

**Table 1. CAH Participation in Hospital Compare in Oklahoma and Nationally 2005-2007**

	Number of CAHs			Number (%) Participating in Hospital Compare		
	2005	2006	2007	2005	2006	2007
Oklahoma	33	33	33	29(87.9%)	30(90.9%)	29(87.9%)
National	1270	1286	1291	678(53.4%)	812(63.1%)	892(69.1%)

### Quality Measure Results

Table 2 displays the Hospital Compare quality measure results for 2007 discharges for CAHs in Oklahoma and nationally. Data are not reported for Oklahoma for some of the AMI measures, because the total number of CAH patients in the state with data on these measures was less than 25. Caution should be exercised in comparing state and national results on measures with less than 100 CAH patients, since large percentage differences in responses may not reflect meaningful clinical differences.

Figures 1-10 compare the Oklahoma and national data trends for 2005, 2006 and 2007. The percentages for each year are based on all CAH patients for whom data were reported that year. Data are not shown for measures with fewer than 25 patients per year for any of the three years.

## Discussion

Over the past three years, the percent of CAHs participating in Hospital Compare has continued to increase, indicating that many CAHs see the value of taking part in a national effort to collect and publicly report on quality of care measures. However, participation rates continue to vary widely across states.

The Office of Rural Health Policy (ORHP) encourages Flex programs to work with CAHs in their states on quality improvement, measurement and reporting. The current Flex program funding cycle (September 2008 – August 2009) includes a requirement that Flex Programs implement activities designed to increase the number of CAHs reporting to Hospital Compare, and where all CAHs in a state are participating in Hospital Compare, to use reported data to identify areas where CAHs can improve their performance and design activities to assist them.<sup>5</sup> This transition of the Flex program from conversion of hospitals to CAH status to an explicit focus on quality improvement was included in re-authorization of the Flex program in the Medicare Improvement for Patients and Providers Act passed by Congress in July 2008 (H.R. 6331). Many Flex State Programs have been active in this area for the past few years, and activities focused on quality and performance improvement were among those most frequently identified as successful Flex Program activities in a recent survey of State Flex coordinators.<sup>6</sup>

CMS is continuing to add quality measures to the Reporting Hospital Quality Data for Annual Payment Update (RHQDAPU) program for PPS hospitals and to Hospital Compare. For Fiscal Year 2008 and 2009, additional inpatient quality measures included AMI, heart failure and pneumonia 30-day mortality rates, five surgical care improvement measures, and the HCAHPS patient experience of care survey. For FY 2010, CMS is adding 13 new measures, including some that will be calculated using Medicare claims data, and retiring one measure (the pneumonia oxygenation measure). The new measures include nine AHRQ patient safety and inpatient quality indicator measures, and measures addressing beta blocker use for surgical patients, readmissions for heart failure patients, participation in a cardiac surgery database and a nursing sensitive measure.<sup>7</sup>

PPS hospitals are also required to submit data for outpatient quality measures to receive the full annual update to their outpatient prospective payment system (OPPS) Medicare payment rate. CMS adopted 7 measures for OPPS reporting starting April 1, 2008, including 5 measures related to the care of adult patients with AMI in emergency departments and 2 measures related to surgical care improvement for hospital outpatients. For 2010 OPPS payments, CMS plans to calculate four additional OPPS measures related to imaging services using Medicare Part B claims data. For 2011 and beyond, CMS has proposed 18 possible new OPPS measures related to fall risk, medication reconciliation, Emergency Department throughput, diabetes, pneumonia, depression, stroke, osteoporosis, asthma, breast and colon cancer.<sup>8</sup> CMS initially limited outpatient reporting to PPS hospitals, but decided that CAHs could voluntarily report outpatient quality measures for patient encounters beginning in January 2009.<sup>9</sup>

As previously noted, efforts to improve CAH participation in Hospital Compare need to ensure that CAHs find the process useful for internal quality improvement as well as external reporting and benchmarking.<sup>1-3</sup> The quality measures used need to be relevant to the small rural hospital environment and the volume of patients must be large enough for CAHs to have stable measures. Most measures in the current Hospital Compare measure set are generally relevant for small rural hospitals. However, some inpatient measures involve procedures that

are rarely performed in small rural hospitals (e.g., PCI) or are of limited use for evaluating quality because of low volume in small rural hospitals (e.g., 30 day mortality rates). Other measures, such as the inpatient and outpatient surgical care improvement measures, are relevant for small rural hospitals that perform these types of surgeries. The outpatient measures related to the care of adult patients with AMI in emergency departments were initially developed for use in rural hospitals and have been field-tested in rural hospitals in four states.<sup>10-11</sup>

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**Table 2. Hospital Compare Results for 2007 Discharges for CAHs in Oklahoma and Nationally**

		Oklahoma (n=29)			National (n=892)		
		Number of CAHs reporting data for =>1 patient	Total number of CAH patients with data	Percent of CAH patients receiving recommended care	Number of CAHs reporting data for =>1 patient	Total number of CAH patients with data	Percent of CAH patients receiving recommended care
<b>AMI</b>	Aspirin at arrival	*	*	*	513	2,756	89.7%
	Aspirin at discharge	*	*	*	492	2,069	86.9%
	ACEI or ARB for LVSD	*	*	*	236	415	82.9%
	Smoking cessation advice	*	*	*	144	241	75.9%
	Beta blocker at discharge	*	*	*	493	2,152	87.6%
	Beta blocker at arrival	*	*	*	508	2,534	85.3%
	Fibrinolytic w/in 30 minutes of arrival	*	*	*	84	134	40.3%
	PCI at arrival	*	*	*	*	*	*
<b>Heart Failure</b>	Discharge instructions	27	311	39.2%	821	15,683	64.5%
	Assessment of LVS	28	489	59.3%	826	22,730	75.8%
	ACE inhibitor or ARB for LVSD	20	92	66.3%	718	5,062	83.5%
	Smoking cessation advice	19	80	56.3%	651	2,923	78.3%
<b>Pneumonia</b>	Oxygenation assessment	29	1,022	99.2%	886	38,462	99.4%
	Pneumococcal vaccination	29	743	67.7%	886	29,726	78.1%
	Blood culture prior to first antibiotic	24	369	89.4%	820	18,910	90.5%
	Smoking cessation advice	26	229	65.5%	844	8,848	77.5%
	Initial antibiotic(s) within 6 hours	28	544	93.8%	871	20,638	94.2%
	Most appropriate initial antibiotic(s)	29	606	83.8%	873	21,792	86.0%
	Influenza vaccination	24	222	73.4%	820	8,829	74.7%
<b>Surgical Care Improvement</b>	Preventative antibiotic(s) 1 hour before incision	4	43	67.4%	380	15,061	86.3%
	Received appropriate preventative antibiotic(s)	4	43	51.2%	380	15,093	92.6%
	Preventative antibiotic(s) stopped within 24 hours after surgery	4	41	61.0%	378	14,608	82.0%
	Doctors ordered blood clot prevention treatments	5	46	30.4%	365	15,755	82.4%
	Received blood clot prevention treatments 24 hours pre/post surgery	5	46	30.4%	365	15,742	80.9%

\*The total number of CAH patients in the state or nationally with data on this measure is less than 25.

Figure 1. Heart Failure: Discharge Instructions

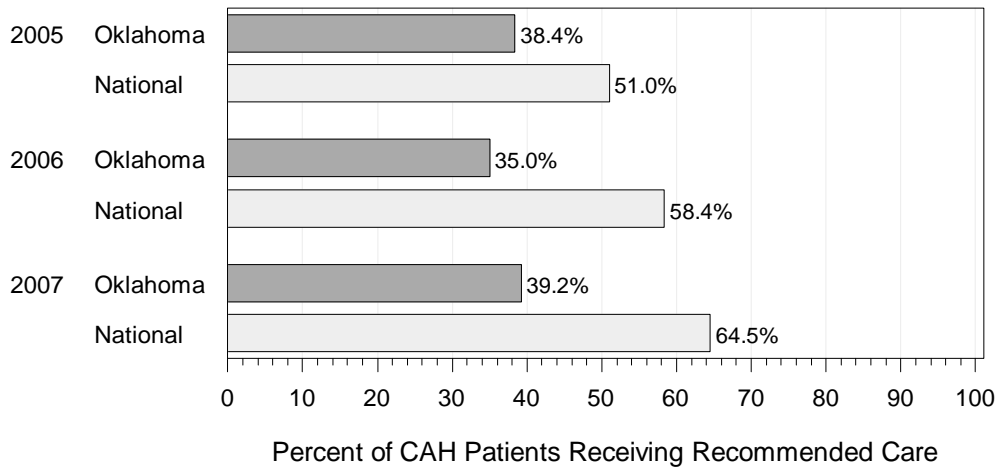


Figure 2. Heart Failure: Assessment of LVS

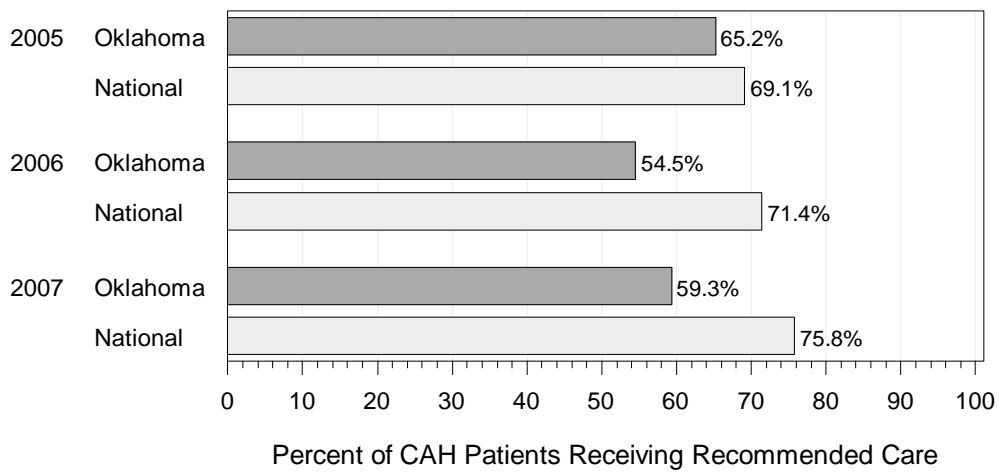


Figure 3. Heart Failure: ACE Inhibitor or ARB for LVSD

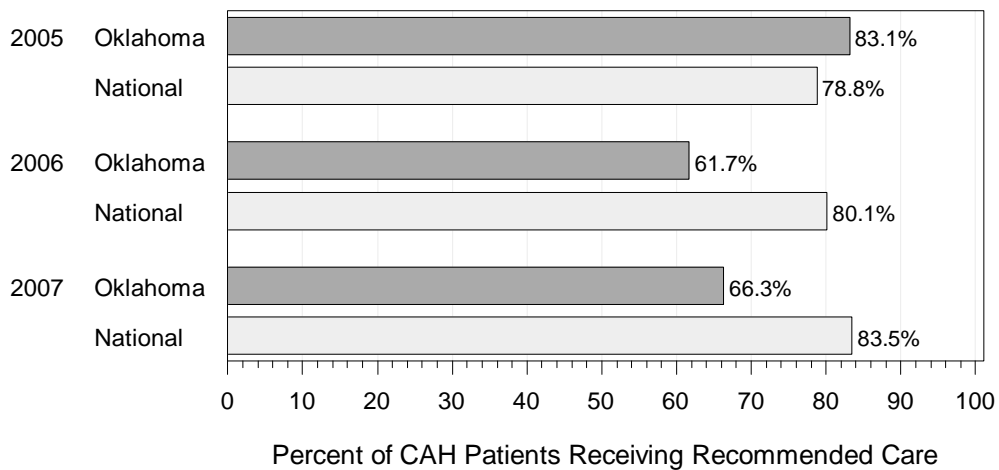


Figure 4. Heart Failure: Smoking Cessation Advice

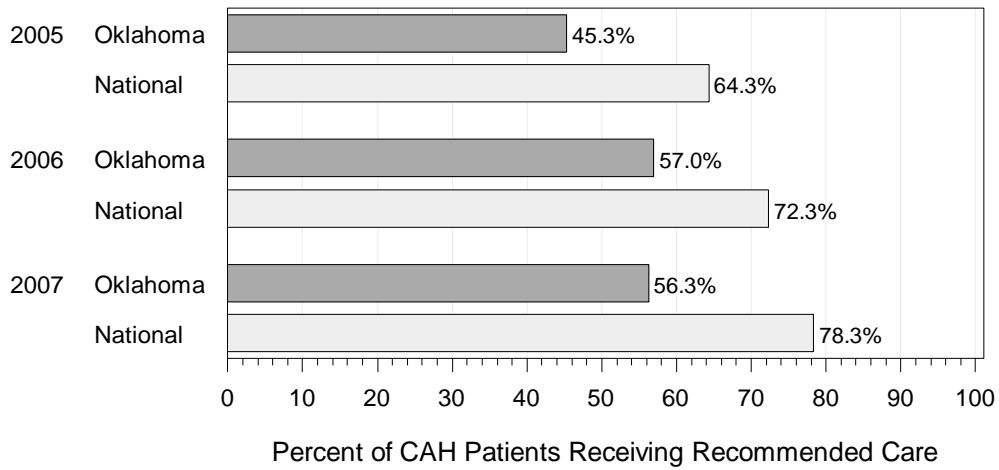


Figure 5. Pneumonia: Oxygenation Assessment

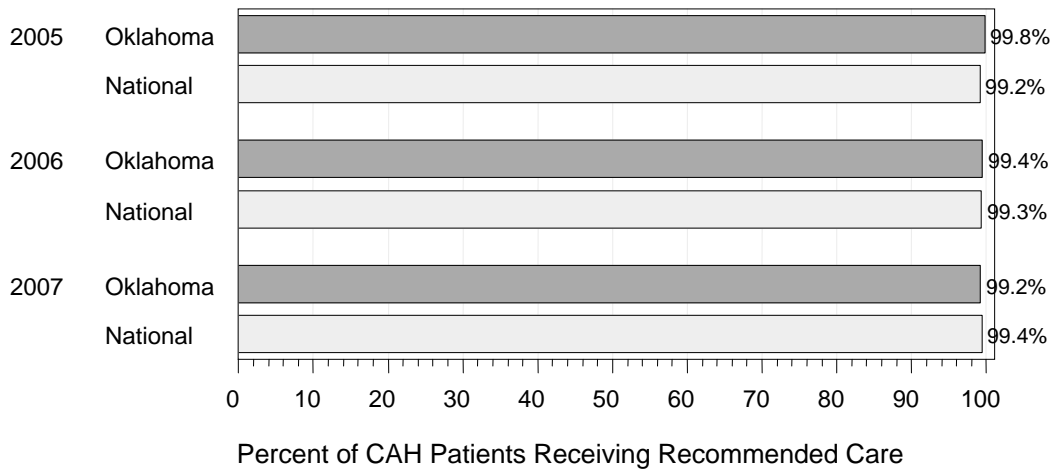


Figure 6. Pneumonia: Pneumoccal Vaccination

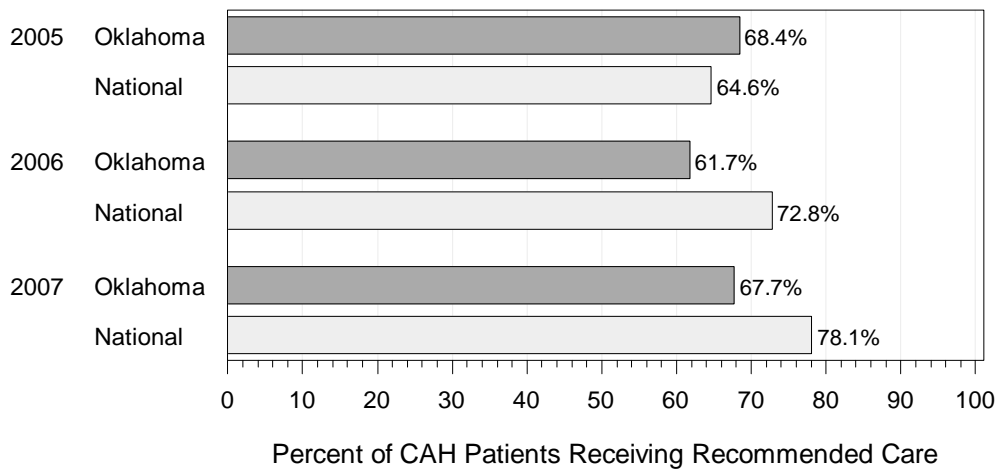


Figure 7. Pneumonia: Blood Culture Prior to First Antibiotic

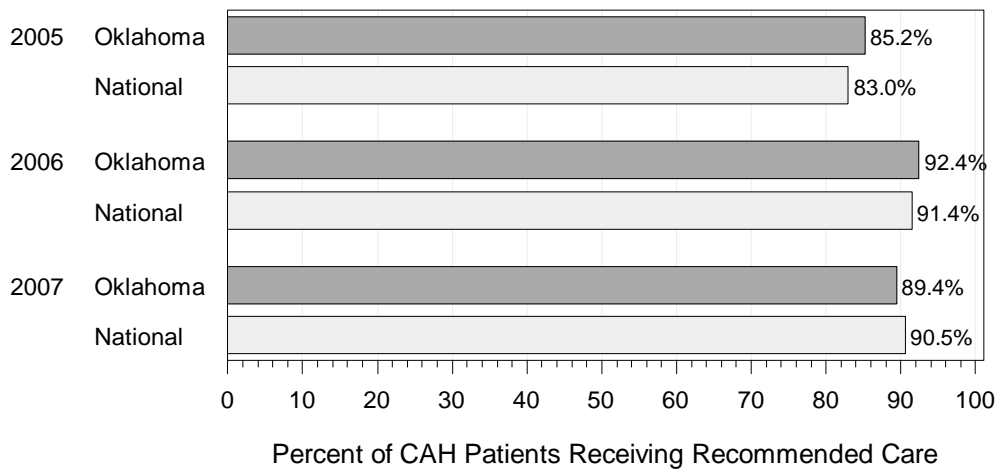


Figure 8. Pneumonia: Smoking Cessation Advice

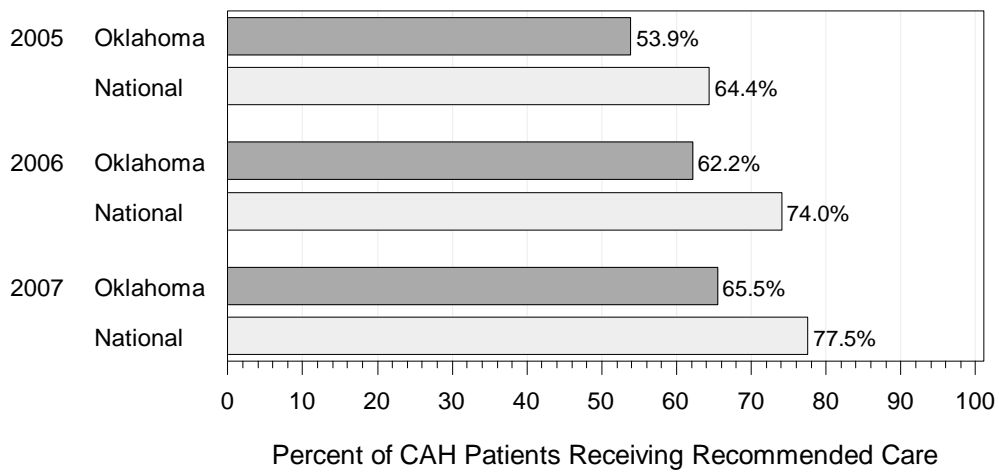
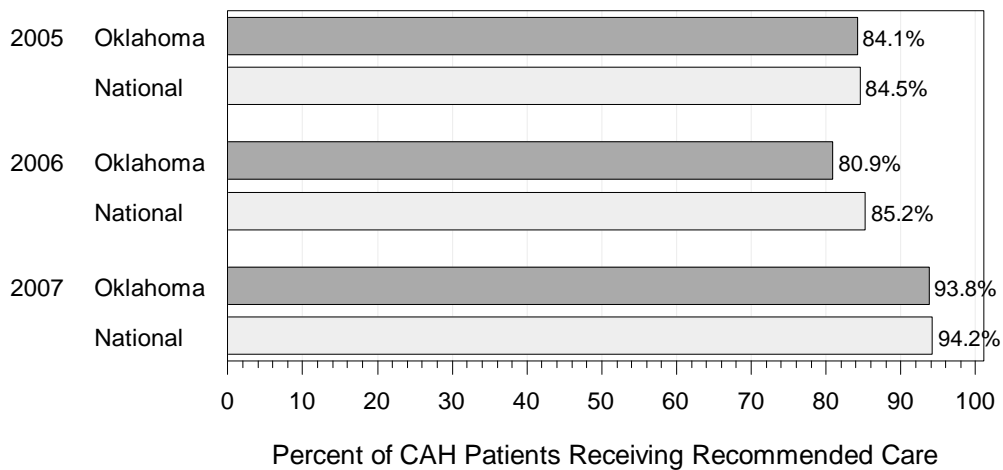


Figure 9. Pneumonia: Initial Antibiotic(s) within 6 Hours\*



\*The initial measure has been revised from 4 hours to 6 hours.

Figure 10. Pneumonia: Most Appropriate Initial Antibiotic(s)

