

# NON-MORTALITY SPECIAL INCIDENTS

Semi-Annual Report Submitted to the  
California Department of Developmental Services

JANUARY – JUNE 2010

Acumen, LLC

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## INTRODUCTION AND BACKGROUND

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**This report summarizes rates of special incidents between January and June 2010 for DDS consumers living in the community. It compares rates across recent years and identifies months in which rates were unusually high.**

**DDS can use this report to track special incident rates over time and monitor the effectiveness of risk management activities.**

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As one element of risk management and quality assurance, the California Department of Developmental Services (DDS) and California's network of regional centers monitor the occurrence of adverse events, captured through Special Incident Reports (SIR), to identify trends and develop strategies to prevent and mitigate risks. As required by Title 17, Section 54327 of the California Code of Regulations, vendors and long-term health care facilities report occurrences of suspected abuse, suspected neglect, injury requiring medical attention, unplanned hospitalization, and missing persons, if they occur when a consumer is receiving services funded by a regional center (under vendored care). In addition, *any occurrence* of consumer mortality or victim of crime must be reported whether or not it occurred while they were under vendored care.

This report, one of a series of semi-annual reports on non-mortality special incidents, summarizes incident rates for DDS consumers between January and June 2010. The report has two main goals:

1. To update time trends in special incident rates from our earlier reports to include data through June 2010.
2. To identify specific incident categories that were higher than their historical trend, and identify specific months in which incident rates were unusually high. DDS can use this report to track special incident rates over time.

The statistics and graphs presented in this report were constructed using data from the SIR System from 2002 through 2010. These data are augmented with three additional data sources maintained by DDS:

- The Client Master File (CMF)
- The Client Development Evaluation Report (CDER)
- The Early Start Report (ESR)

This report presents findings based on statistical analyses that measure a consumer's risk of experiencing a special incident. Further details are found at the bottom of each subsequent page.

The average monthly incident rate for this period was higher than in recent periods.

**Table 1: All Non-Mortality Special Incidents, Compared to Previous Periods  
DDS Consumers, January - June 2010**

	Change From:	
	Jan-Jun 2009 (last year)	Jul-Dec 2009 (last period)
<b>Raw Rate</b>	+2.6%	+1.9%
<b>Case-Mix Adjusted Rate</b>	+4.6%	+2.6%

Arrows indicate statistically significant differences.

*Key Findings:*

- The case-mix adjusted non-mortality incident rate was 0.520% this period, compared to 0.507% last period (Jul-Dec 2009) and 0.496% the same period last year (Jan-Jun 2009). These figures are not shown in the table above.
- Case-mix adjusted incident rates rose 2.6% compared to last period (Jul-Dec 2009) and 4.6% compared to the last year (Jan-Jun 2009). These changes were not statistically significant.

**More About These Data**

This report summarizes incident rates for consumers living in the community. This includes consumers receiving services from a regional center not residing in a developmental center or state-operated facility. Special incidents refer to seven categories of adverse events defined by Title 17, Section 54327 of the California Code of Regulations. They include: missing person, suspected abuse, suspected neglect, serious injury, unplanned hospitalization, victim of crime, and death.

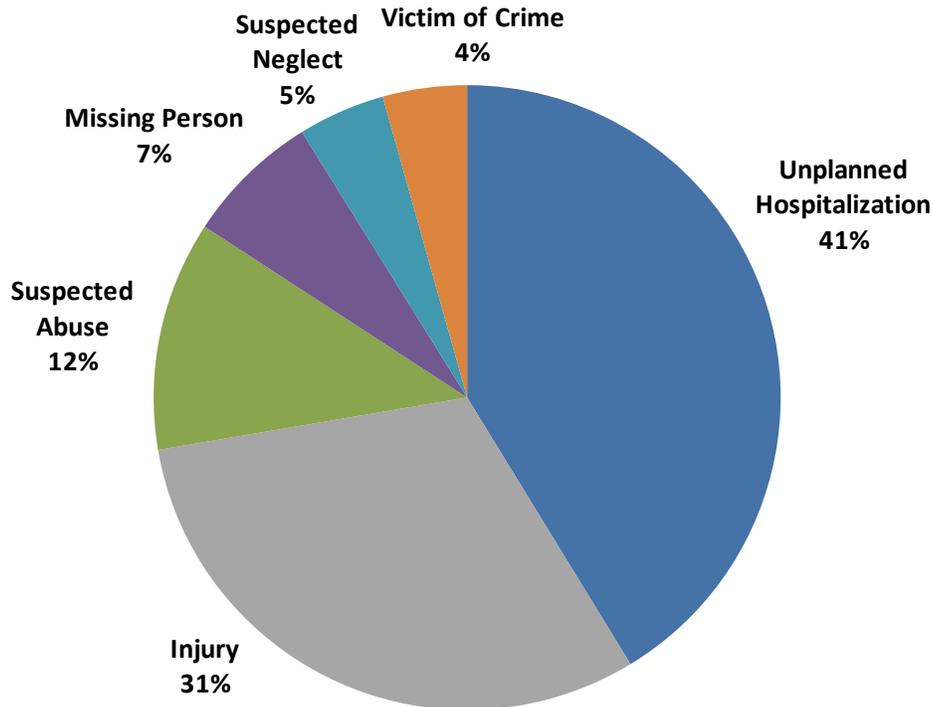
The *Raw Rate* is defined as the percentage of statewide consumers who experience one or more special incidents in an average month. It is calculated by dividing the *total number of consumers with one or more incidents* by the *total consumer population*. Note that this rate does not tell you how many SIRs there were per person in a given month.

The *Case-Mix Adjusted Rate* accounts for differences in the characteristics of the consumer population over time. In comparing statewide SIR rates to those of previous periods, case-mix adjustment permits us to distinguish trends affected by changes in population from trends associated with risk management practices. For example, an influx of medically fragile consumers could increase rates of unplanned hospitalization incidents, even if the effectiveness of risk management practices did not change.

Arrows [in a table](#) indicate that the change is statistically significant at the 95% confidence level, assuming a binomial distribution. These differences are expected to occur by chance less than 5% of the time.

## Unplanned hospitalization and injury incidents account for almost three quarters of reported non-mortality incidents.

Figure 1: Breakdown of Non-Mortality Special Incidents by Type  
DDS Consumers, January - June 2010



### Key Findings:

- Unplanned hospitalizations, at 41%, continue to be the most commonly reported non-mortality special incident type. This share was essentially the same as in the previous six month period.
- Between January and June 2010, injury incidents represented 32% of reported incidents, compared to 31% previously. Neglect incidents represented 4%, compared to 5% previously. (Last period not shown.)

### More About These Data

The percentages shown above are based on raw counts of reported special incidents and are not case-mix adjusted.

## Rates of suspected neglect have fallen compared to earlier periods.

**Table 2: Percent Change in Average Monthly Rates of Non-Mortality Special Incidents  
DDS Consumers, January - June 2010**

	Change From:	
	Jan-Jun 2009 (last year)	Jul-Dec 2009 (last period)
<b>Unplanned Hospitalization</b>	<b>+6%</b>	<b>+3%</b>
<b>Injury</b>	<b>+5%</b>	<b>+6%</b>
<b>Suspected Abuse</b>	<b>+3%</b>	<b>+1%</b>
<b>Suspected Neglect</b>	<b>-23%</b>	<b>-26%</b> ↓
<b>Missing Person</b>	<b>+8%</b>	<b>+7%</b>
<b>Victim of Crime</b>	<b>+7%</b>	<b>+6%</b>

Arrows indicate statistically significant differences.

### Key Findings:

- Reported rates of suspected neglect fell by around 25% compared to both last period and to last year. Alta California Regional Center (ACRC) and Frank D. Lanterman Regional Center (FDRC) experienced the biggest declines, but more than half of regional centers are trending downward on reports of suspected neglect. The decline from last period is statistically significant at the 95% confidence level.
- Rates for all other incident types increased, but these differences are not statistically significant. No statewide follow up activities are planned.

### Follow-Up Activities:

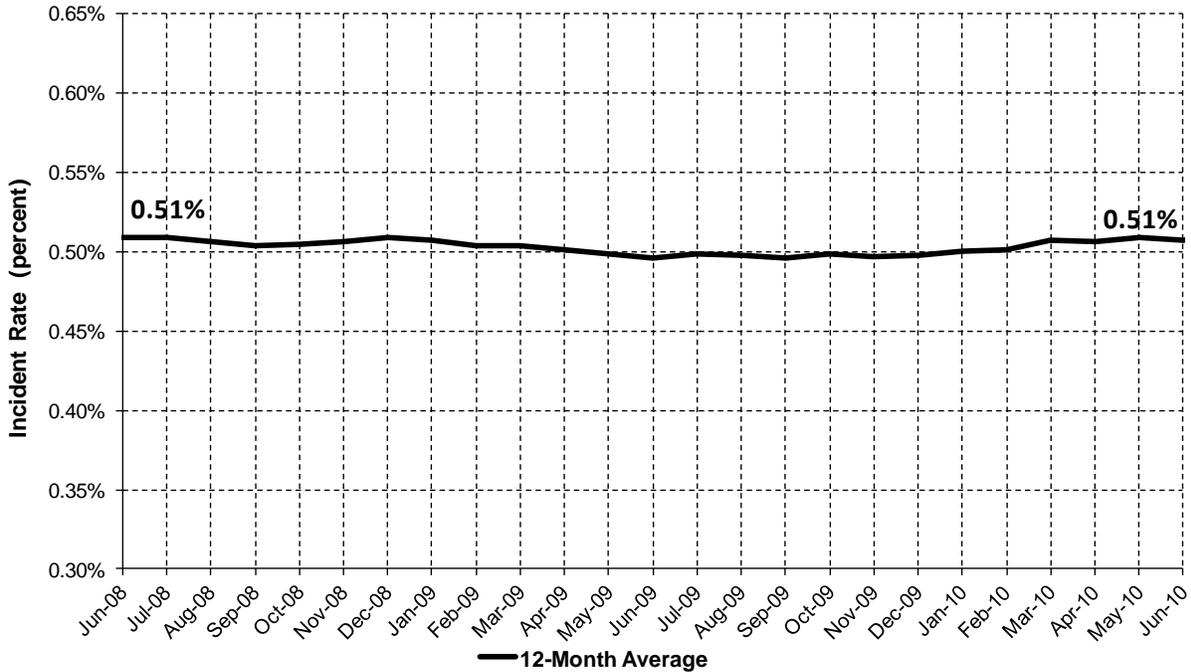
- *Follow-up on Decline in Suspected Neglect* – Acumen conduct additional statistical analysis on the declines in suspected neglect incidents. See Page 12 for further details.

## More About These Data

These figures are calculated using case-mix adjustment, as described on page 2. Arrows indicate that the change is statistically significant at the 95% confidence level, assuming a binomial distribution. These differences are expected to occur by chance less than 5% of the time. Rates for specific incident types are calculated as the share of consumers experiencing an incident of that type in a given month.

**The statewide trend for non-mortality special incidents has remained essentially flat over the past two years.**

**Figure 2: Non-Mortality Special Incidents, Case-Mix Adjusted Statewide Trend  
DDS Consumers, June 2008 – June 2010**



**Key Findings:**



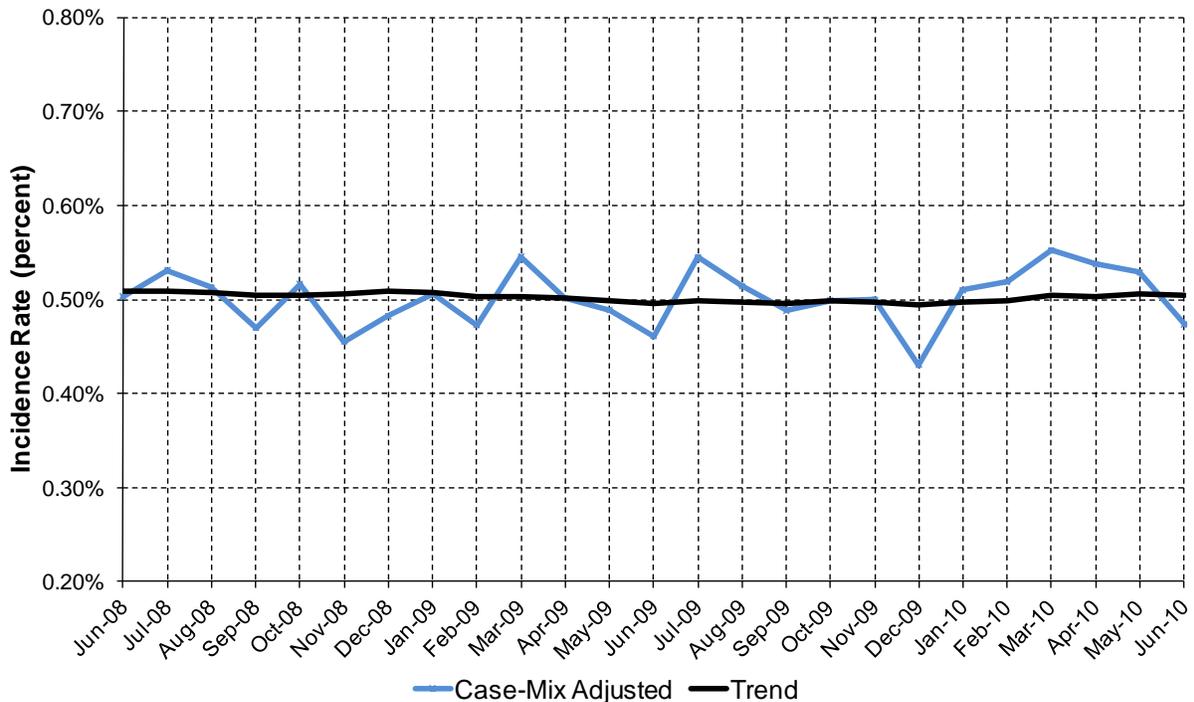
- The trend in statewide non-mortality incident rates has remained fairly constant through the most recent six-month period (Jul-Dec 2009).
- Although the trend in statewide non-mortality incident rates increased slightly compared to last period (see page 2), the average rate over time is essentially the same in June 2010 as it was in June 2008.

**More About These Data**

The monthly incident rate is defined as the share of consumers experiencing one or more non-mortality incidents in a given month. The trend line in Figure 2 represents a 12-month moving average of the monthly incident rate. It is calculated by taking an average of statewide non-mortality special incident rates from the most recent 12-month period. This trend also accounts for the differences in the characteristics of the consumer population over time. This approach, called “case-mix adjustment,” controls for changes in consumer characteristics and removes these effects from the calculated trend.

## From January through May, non-mortality incident rates were above the long-run average.

**Figure 3: Non-Mortality Special Incidents, Case-Mix Adjusted Monthly Rates  
DDS Consumers, June 2008 – June 2010**



### Key Findings:

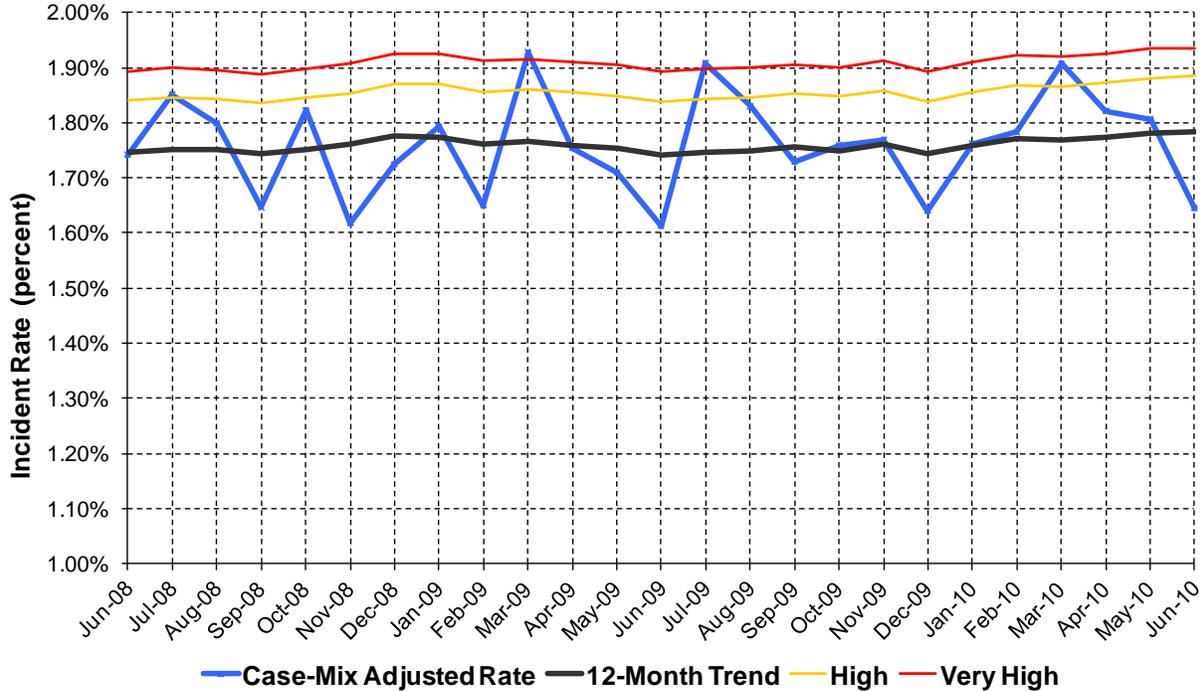
- The monthly non-mortality special incident rate (blue line) was above the 12-month trend for most of the January to June 2010 period, with the highest rate observed in March 2010.
- Explanations regarding the March increase are discussed in the following pages.

### More About These Data

The black line in the graph above is the same line shown in Figure 2, representing the 12-month trend. The blue line represents the percentage of consumers statewide who experience one or more special incidents in a month. Both rates are case-mix adjusted, meaning that the trends account for changes in consumer characteristics over time. See page 2 for more details.

**In March, the statewide non-mortality incident rate for out-of-home consumers crossed the "high" threshold.**

**Figure 4: Non-Mortality Special Incidents, Case-Mix Adjusted Monthly Rates  
DDS Out-of-Home Consumers, June 2008 – June 2010**



**Key Findings:**

- Non-mortality incident rates for the out-of-home population spiked above the “high” threshold in March 2010.
- The March 2010 spike was slightly lower than a similar spike that crossed the “very high” threshold in March 2009, as shown in Figure 4 above.

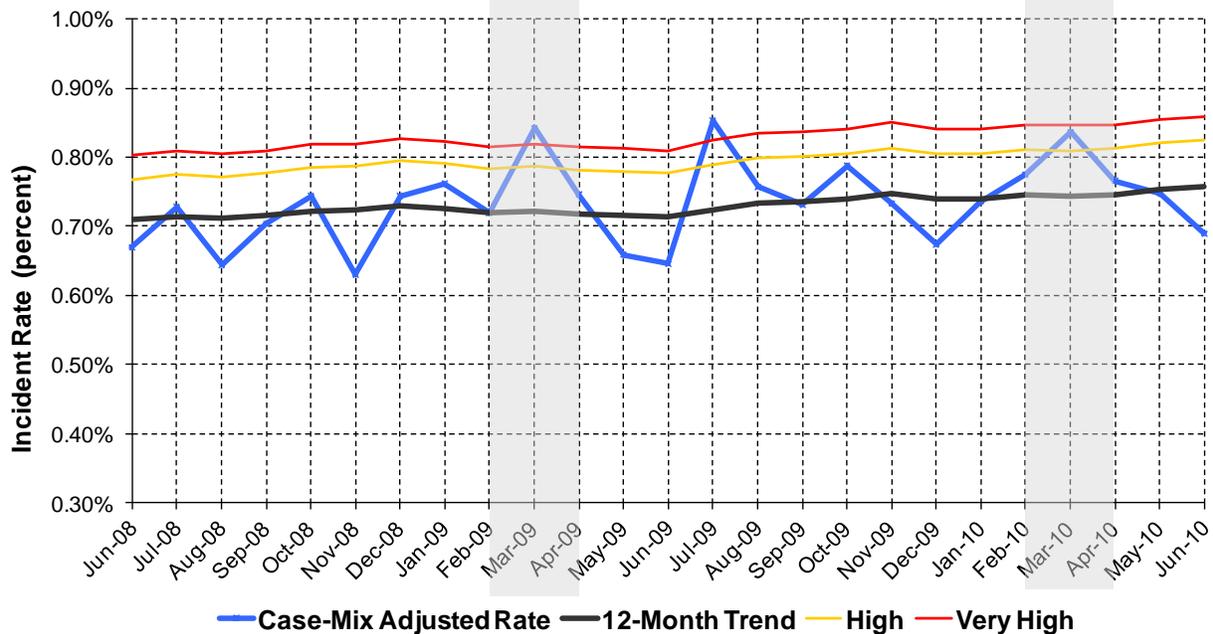
**More About These Data**

*Out-of-home Consumers* are defined as individuals residing in community settings such as licensed residential facilities, Family Home Agency (FHA), Supported Living Services (SLS), or Independent Living Services (ILS).

This graph identifies non-mortality incident rates that are unusually high and, therefore, classified as a “spike.” A rate that rises above the yellow line in a given month will occur randomly in only one month out of twenty (less than 5% of the time) and is considered “High.” A rate that rises above the red line in a given month will occur randomly less than 1% of the time. Rates above the red line, therefore, are very unlikely to be chance events and are classified as “Very High.”

## The March peak in non-mortality incident rates was driven by a spike in unplanned hospitalization incidents.

**Figure 5: Unplanned Hospitalization Incidents, Case-Mix Adjusted Monthly Rates DDS Out-of-Home Consumers, June 2008 – June 2010**



### Key Findings:

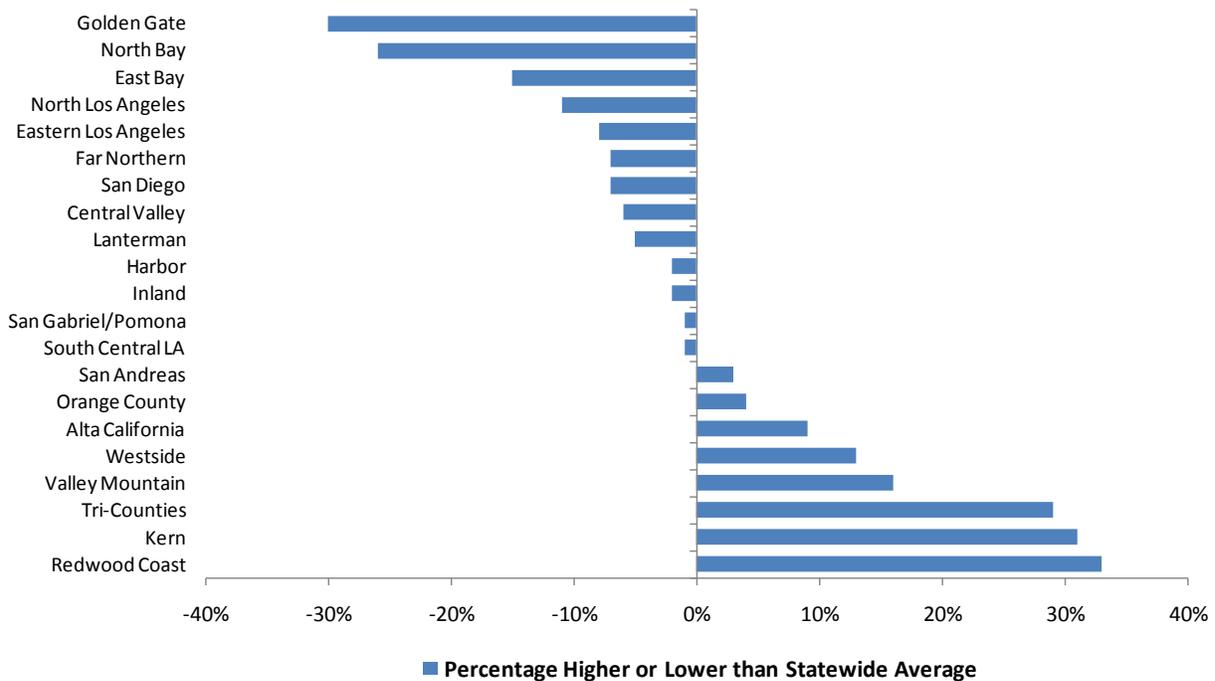
- Hospitalization incidents, which account for the greatest share of non-mortality incidents, spiked in March 2010 for the out-of-home population. A similar spike occurred in March 2009.
- The March 2010 increase was driven by hospitalizations for respiratory illness and involuntary psychiatric admissions.
- The increase in hospitalizations was not caused by a statistically significant increase at particular regional centers for these incident types, but rather by increases at several centers that were not large enough to require reporting back.

### More About These Data

The black line in the graph above represents the 12-month trend in out-of-home hospitalization incidents. The blue line represents the percentage of consumers statewide who experience one or more hospitalization incidents in a month. Both rates are case-mix adjusted, meaning that the trends account for changes in consumer characteristics over time. See page 2 for more details.

## Among the 21 regional centers, Kern and Redwood Coast had the highest non-mortality incident rates.

**Table 4: Non-Mortality Special Incident Rates by Regional Center Compared to State**



June 2009 – June 2010

### Key Findings:

- The variation among regional centers has decreased somewhat, primarily because the regional centers with the lowest rates have moved closer to the statewide average.
- Redwood Coast Regional Center and Kern Regional Center (KRC) had the highest non-mortality rates, at 33% and 31% above the statewide average, respectively.

### Follow-Up Activities:

- Acumen has been providing technical assistance to KRC and Tri-Counties Regional Center (TCRC) to assist in determining the cause of high incident rates as well as identifying possible remediation activities.

### More About These Data

The percentages above are case-mix adjusted, meaning that they account for differences in the characteristics of the consumer population over time. See Page 3 for more details.

## Acumen is focusing on medication errors in further discovery and remediation activities.

Acumen has expanded its use of SIR case reviews and statistical analyses as part of its monitoring, discovery and improvement activities associated with spikes or with longer term increases in incident rates. A number of additional activities will also support regional centers in avoiding future incidents. We describe these activities below.

### *Monitoring & Discovery Activities:*

- *Reporting Back:* Regional centers with quarterly spikes in individual incident types are required to report back to Acumen any discovery and remediation activities related to these spikes including a description of why any spikes occurred, what follow-up actions were taken, and whether they faced obstacles in implementing these follow-up activities. These responses are reviewed by the DDS Quality Management Executive Committee on a quarterly basis and may be used to develop strategies to mitigate risk to consumers statewide.
- *Long-term Increases in Incident Rates:* Acumen completed analyses of drivers of long-term increases in incident rates at KRC and TCRC Regional Centers. In both cases, medication errors were a key factor in the higher rates. Following a statistical analysis, we conducted a detailed review of the associated SIRs to determine common causes for these errors (including potential reporting differences). Missed doses were the most common causes of medication errors, including staff errors, consumers' failures to self-administer, and consumers away from their residence without their medications. Regional centers have typically responded to these types of errors with additional training and education. Acumen is working with regional center representatives and our consultant team to identify additional follow-up activities that may be appropriate, as well as lessons for other regional centers.
- *July 2009 Spike in Statewide Hospitalization Rates:* In the last semi-annual report, we documented a spike in hospitalization incidents in July 2009, concentrated in the internal infection and cardiac condition subtypes and driven by several regional centers with elevated rates. Regional centers that experienced these spikes were not able to find any systematic explanations or unusual trends. Acumen pursued additional statistical analysis of these incidents. There were 53 unplanned hospitalizations for cardiac conditions reported in July 2009, compared to 27 in June 2009. This difference is statistically significant. However, the elevated rates were not concentrated in any specific demographic group. For internal infections, 158 hospitalizations were reported in July 2009 compared to 111 in June 2009, a smaller but still significant increase. These increases occurred primarily in group facilities, including CCF and to a lesser extent SNF/ICF. This appears to have been a transient event. No further action is necessary.

- *March 2010 Spike in Statewide Hospitalization Rates:* The March 2010 spike in hospitalization rates appears to result from moderately elevated rates in multiple hospitalization subtypes at multiple regional centers, rather than a more *concentrated* spike. Because one of the subtypes was respiratory infection, we also checked data from the Centers of Disease Control and the California Department of Public Health to determine whether this spike coincided with broader hospitalizations rates for influenza in California. By March 2010, flu incidence was dropping statewide. This increase is similar to an increase in March of 2009. No further action is necessary at this time.
- *Follow-up on Decline in Suspected Neglect:* Acumen will conduct more detailed analysis on the observed declines in suspected neglect.
- *Follow-up on Chronically High Incident Rates:* Acumen will offer additional analytical and case file review support to RCRC to identify causes for this regional center's comparatively high incident rate.

#### *System Improvement Activities:*

- *DDS SafetyNet Website:* Upcoming quarterly content on the DDS SafetyNet website will focus on medication errors. Current content includes alerts for whooping cough and H1N1 influenza. Since the launch of the new version of this website, which is designed to promote health and safety for individuals with developmental disabilities, Acumen has been working to increase the size of the SafetyNet audience, make the website content more user-friendly and move all historical content to the new website.
- *Medication Errors Checklist:* Acumen is working with clinical specialists to create a medication administration checklist to add to the existing set of healthcare checklists, which are designed to help service coordinators, caregivers, and consumers and their families avoid unplanned hospitalizations.