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MORTALITY SPECIAL INCIDENTS

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

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INTRODUCTION AND BACKGROUND

This report summarizes mortality rates between January and June 2012 for DDS consumers living in the community. It compares mortality rates across recent years and identifies months in which mortality rates were unusually high.

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

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 (SIRs), 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 a consumer being the victim of a crime must be reported whether or not it occurred while the consumer was under vendored care. Mission Analytics Group (Mission) develops this report along with several others under a risk management contract with DDS.

This report summarizes mortality rates for DDS consumers between January and June 2012. The report has two main goals:

1. Update time trends in mortality rates from our earlier reports to include data through June 2012. DDS can use this report to observe long-term trends in statewide mortality rates, comparing the most recent six-month period to previous six-month periods.
2. Identify months in which statewide mortality rates were unusually high. For those months showing a statewide spike in mortality rates, we analyze the incident reports associated with the spike. By doing so, we can detect patterns that may lead to strategies to prevent similar events in the future.

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

1. The Client Master File.
2. The Client Development Evaluation Report (CDER).
3. The Early Start Report.

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 unadjusted mortality rate fell in the most recent period.

Table 1: Reported Deaths for DDS Consumers, January-June 2012 Compared to Previous Periods

	Jan-Jun 2011 (Last Year)	Jul-Dec 2011 (Last Period)	Jan-Jun 2012 (This Period)
Number of Consumers	**241,120**	**245,738**	**250,043**
Number of Reported Deaths	**913**	**815**	**814**
Deaths per 1000 Consumers	**3.79**	**3.32**	**3.26**

Key Findings:

- The number of deaths per 1,000 consumers was approximately the same as in the July-December 2011 period, 3.26 compared to 3.32. However, additional deaths for the most recent period may be reported in future months.
- The mortality rate is significantly lower than for the same period a year ago.

More About These Data

This report summarizes mortality rates for consumers living in the community (i.e., consumers receiving services from a regional center who do not reside in a developmental center or state-operated facility).

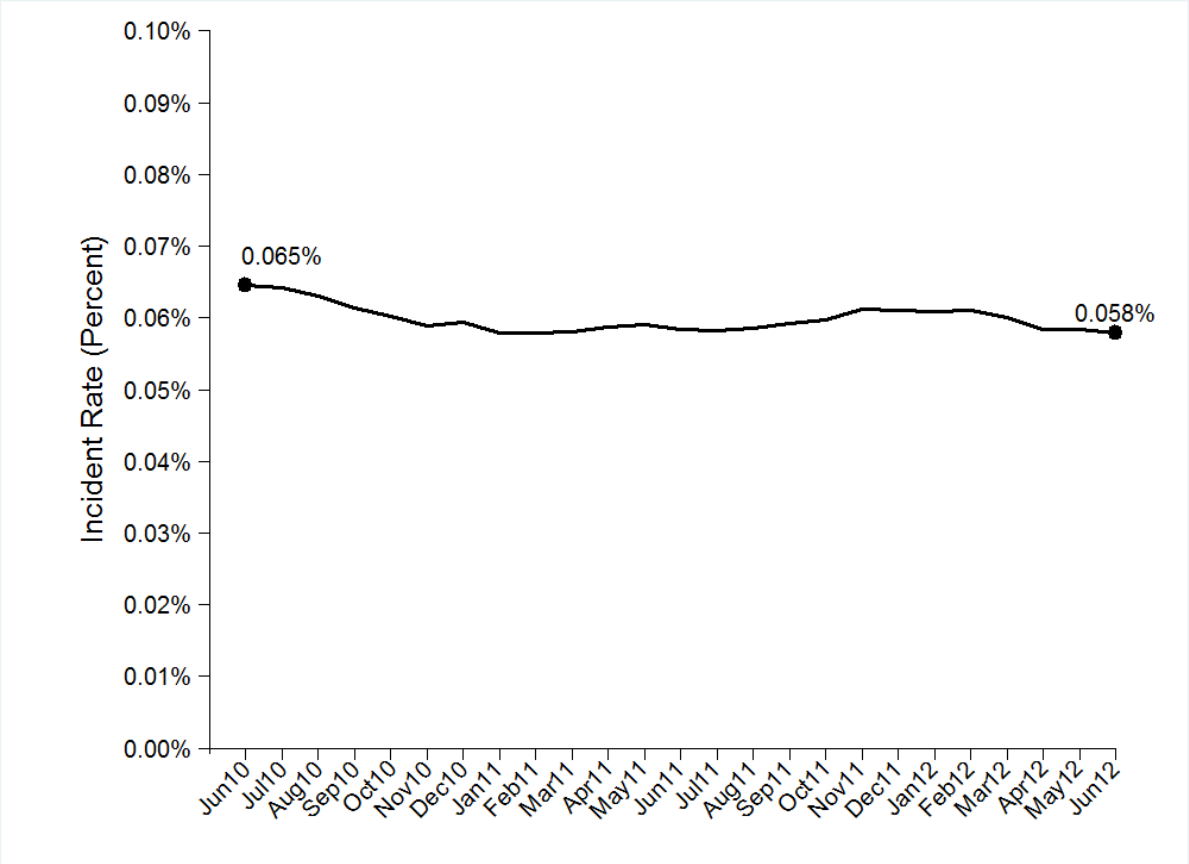
Number of Consumers refers to the average number of consumers served by regional centers in each month during the six-month period. This total is less than the number of all consumers served by regional centers at any time during the six-month period. The number of consumers is lower than previously reported due to data cleaning of records for non-active clients.

Deaths per 1,000 Consumers is calculated by dividing the number of reported deaths by the number of consumers, multiplied by 1,000.

The data used to generate this report were provided to Mission in July 2012. Although all deaths are reportable as special incidents, it may take time for deaths among consumers not under vendored care to be reported to the regional centers by parents/guardians. For this reason, it is common that additional mortality incidents are entered into the SIR system over time. Thus, the number of reported deaths may rise slightly as additional mortality data are reported to DDS. This is most likely to affect the count for the most recent period, but counts for earlier periods are also updated over time.

Controlling for consumer characteristics, statewide mortality rates have shown little change over the past few years.

Figure 1: Mortality Incidents, Statewide Case-Mix Adjusted Monthly Trend DDS Consumers since June 2010



Key Findings:

- Over the past several years, the trend in the statewide average monthly mortality rate has remained relatively constant. The rate fell between June 2010 and June 2012, but the moving average in June 2010 was elevated compared to earlier periods.
- As a result, the moving average for the statewide monthly mortality rate is only slightly lower (0.058%) than it was in December 2009 (0.061%).

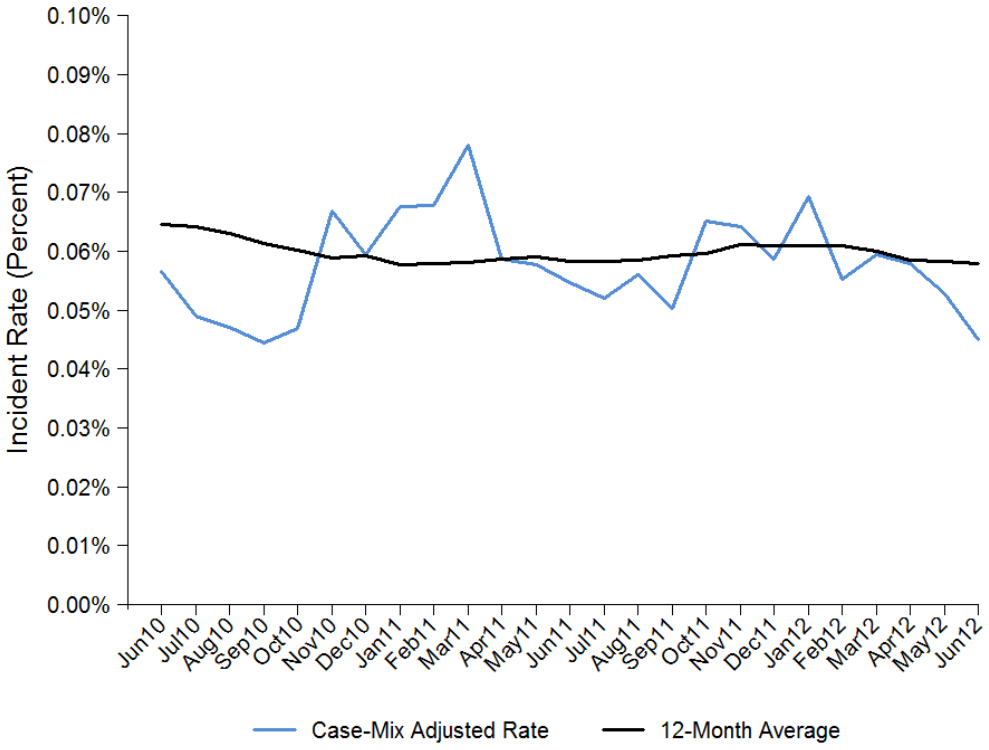
More About These Data

The line in Figure 1 represents a 12-month moving average for all DDS consumers. It is calculated by taking an average of statewide mortality rates from the most recent 12-month period.

The line in Figure 1 also accounts for the differences in the characteristics of the consumer population over time. This approach, called "case-mix adjustment," controls for consumer characteristics and removes these effects from the calculated trend. For example, the share of the population over the age of 65 might increase, which would cause mortality rates to increase.

Mortality rates stayed near the long term trend.

Figure 2: Statewide Mortality Rates, DDS Consumers
Case-Mix Adjusted Monthly Rates since June 2010



Key Findings:

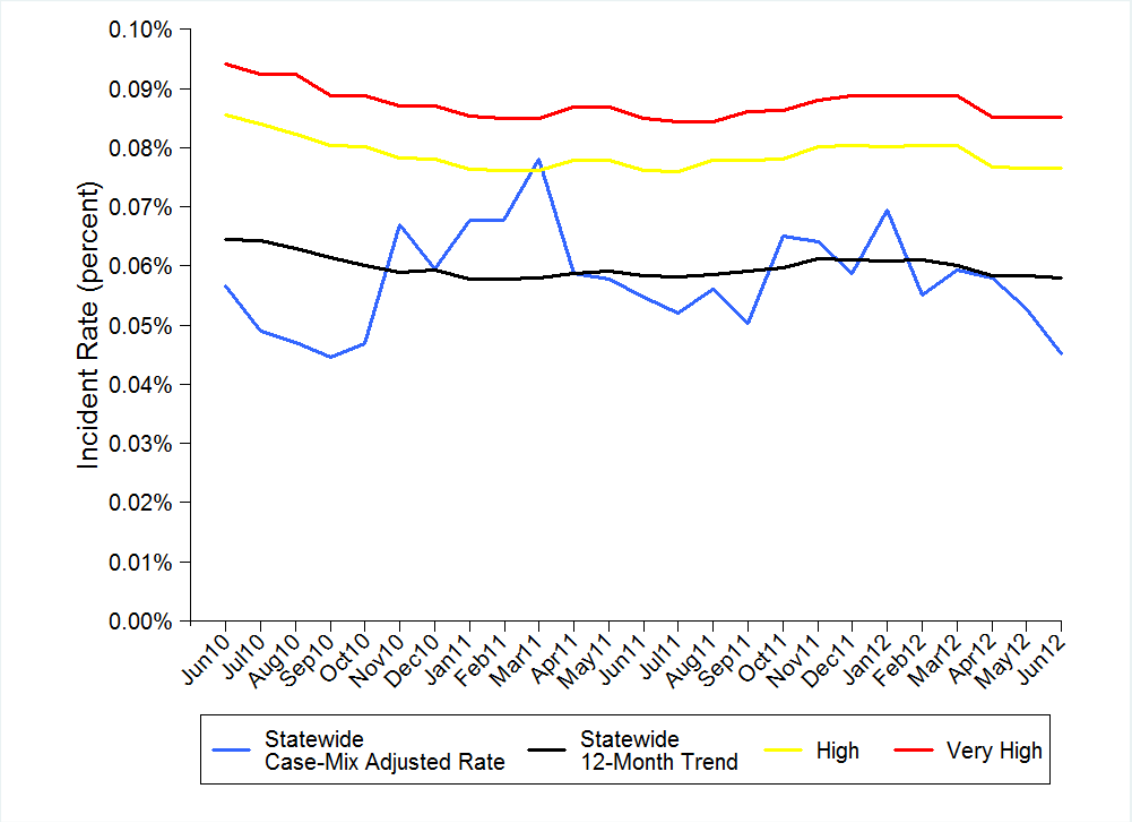
- During FY 2011-12, the mortality rate stayed near the 12-month average rate, rather than exhibiting the large drop and increase seen in the previous year.
- Additional deaths will likely be included as mortality reviews are completed over time and will increase the rate (see "More About These Data" on page 2). After accounting for these additional reports, we expect the May and June 2012 mortality rates to be similar to the previous year.

More About These Data

The line in Figure 2 is case-mix adjusted, accounting for changes in the consumer population. See the "More About These Data" section on page 3 for further details.

The mortality rate has been well below the "high" threshold during the January to June period.

Figure 3: Statewide Mortality Rates, DDS Consumers
Case-Mix Adjusted Monthly Rates since June 2010



Key Findings:

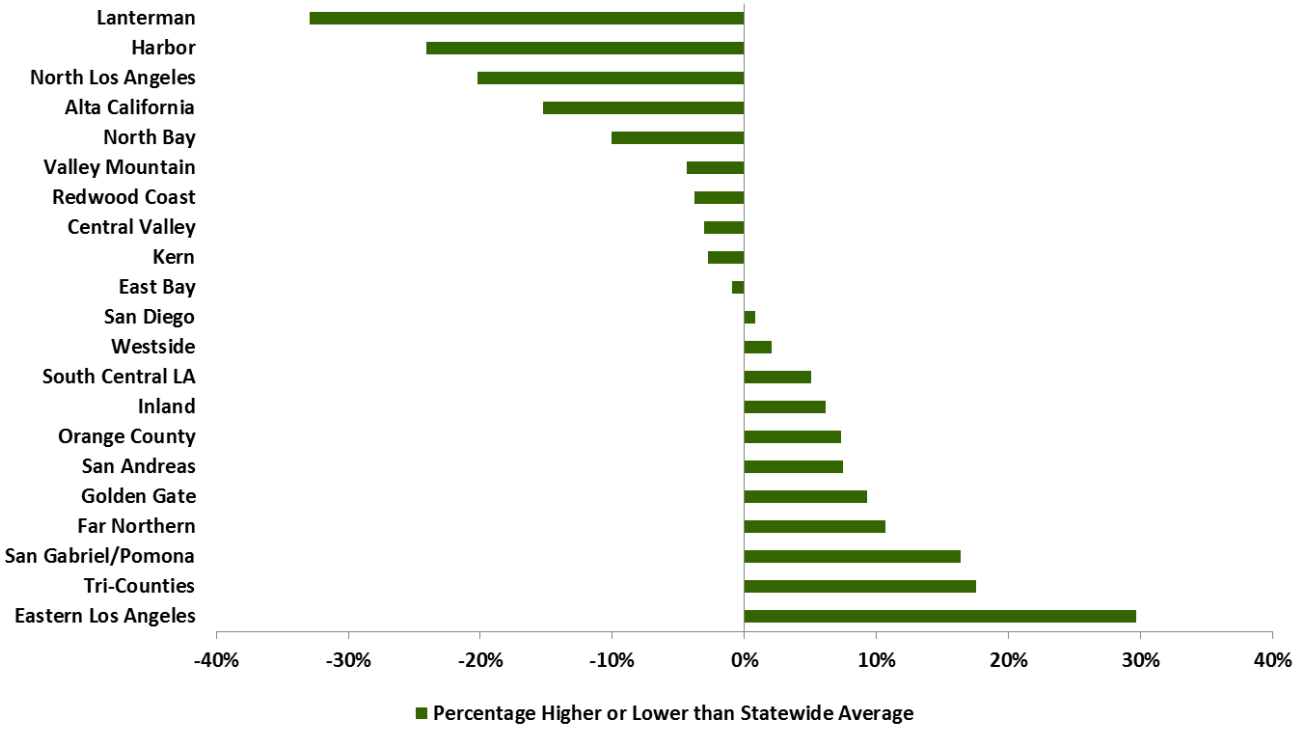
- There have been no spikes in mortality incidents since the “High” mortality rate in March 2011.

More About These Data

The updated mortality risk model includes all consumers over three years of age living in the community, regardless of residence status. Residence type (including no residential services) is included as a risk factor in calculating adjusted rates. This graph identifies 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.”

Only Eastern Los Angeles Regional Center had a mortality rate more than 20% above the state average.

Figure 5: Mortality Rates by Regional Center Compared to Statewide Average July 2011 – June 2012



Key Findings:

- At 30% above average, Eastern Los Angeles Regional Center had the highest adjusted mortality rate for the July 2011 to June 2012 period. The regional center had several months with high rates, although none of the increases was large enough to trigger reporting back.
- Most regional center mortality rates are within 20% above or below the statewide average.
- Between July 2011 and June 2012, no regional centers experienced spikes in mortality rates that required reporting back.

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.

Mortality rates fell across most residency types and age groups.

Table 3: Breakdown of Reported Deaths by Age and Residence Type
DDS Consumers Age 3 and Up, Jan-Jun 2012 Compared to Same Period Last Year

Characteristics in CDER	Share of Consumers	Number of Deaths	Deaths/1000 Jan-Jun 2012	Change from Jan-Jun 2011
Age				
3 to 13	31%	54	0.8	-6%
14 to 21	21%	63	1.4	-28%
22 to 31	18%	75	1.9	1%
32 to 41	10%	68	3.0	-28%
42 to 51	10%	114	5.4	-16%
52 to 61	7%	183	11.8	1%
62+	3%	214	27.3	-15%
Residency Type				
Family Home	73%	251	1.6	-17%
CCF	11%	170	7.2	-12%
ILS/SLS	10%	84	3.3	-11%
SNF/ICF	4%	169	25.5	-4%
Other	2%	31	13.0	6%

Bold indicates a statistically significant difference at the 95% confidence level.

Key Findings:

- At 25.5 deaths per 1,000 residents in SNFs or ICFs, the raw mortality rate was higher than in the previous six months, but lower than the same period a year ago. This is consistent with higher mortality rates in the winter.
- Most groups had lower mortality rates this year than in the same period a year ago, although these differences were not statistically significant.

Follow-Up:

- Because the mortality rate in SNF/ICF residences was elevated in July-December 2011 compared to the previous year, we will continue to monitor this rate to ensure there is no ongoing upward trend.

More About These Data

The rates shown above are raw rates and do not account for changes in consumer characteristics. CCF: Community Care Facilities. ILS/SLS: Independent Living Setting or Supported Living Setting. SNF/ICF: Skilled Nursing Facility or Intermediate Care Facility. ICF includes ICF/Developmentally Disabled, ICF/Developmentally Disabled-Habilitation, and ICF/Developmentally Disabled-Nursing. Other: Settings such as hospitals, community treatment facilities, rehabilitation centers, psychiatric treatment centers, and correctional institutions. Statistical significance is tested based on a difference in binomial distribution.

Breaking rates down by diagnosis, mortality rates decreased for all groups, except individuals with autism.

Table 4: Breakdown of Reported Deaths by Diagnosis
DDS Consumers Age 3 and Up, Jan-Jun 2012 Compared to Same Period Last Year

Characteristics in CDER	Share of Consumers	Number of Deaths	Deaths/1000 Jan-Jun 2012	Change from Jan-Jun 2011
Diagnosis				
Mild to Moderate MR	51%	377	3.4	-12%
Profound to Severe MR	10%	247	10.9	-13%
Unspecified MR	9%	41	2.4	**-35%**
Cerebral Palsy	15%	223	6.6	-12%
Autism	25%	31	0.6	19%
Epilepsy	17%	262	7.1	-12%

Bold indicates a statistically significant difference at the 95% confidence level.

Key Findings:

- There was a statistically significant 35% decrease in the raw mortality rate in consumers with unspecified mental retardation. This raw rate is not adjusted to reflect other factors (such as age) that may affect the risk of mortality.
- Compared to the same period a year ago, there was a 19% increase in the raw mortality rate for individuals with autism. This increase is not statistically significant.
- No other groups experienced statistically significant changes in the mortality rate.

More About These Data

The rates shown above are raw rates and do not account for changes in consumer characteristics. Most categories above are not mutually exclusive, as consumers may have more than one diagnosis. Percentages, therefore, do not add up to 100%.

Mission Analytics Group is expanding discovery activities for mortality SIRs and working to improve cause of death reporting.

Although mortality rates have fallen in the most recent period, mortality continues to be a critical focus for risk assessment and mitigation.

Discovery Activities:

- There was no statistically significant statewide increase in mortality rates during this period. Therefore, no additional discovery activities are planned.

Monitoring Activities:

- *Follow-Up on Long-term Increases in Mortality Rates*: Each quarter, Mission distributes a report to each regional center summarizing trends and changes in mortality rates. These reports identify long-term changes in incident rates as well as monthly spikes. Mission has developed a method to follow-up with regional centers experiencing long-term increases in mortality rates, analyzing their rates and proposing appropriate follow-up measures.

- *Reporting Back by Regional Centers*: Regional centers experiencing spikes in special incident rates provide structured feedback to DDS describing any follow-up measures taken to address the spike. This information on how regional centers respond to long-term trends may be used to develop strategies on how to mitigate risk to consumers statewide.