2009-2010 YEAR IN REVIEW

RISK MANAGEMENT AND MITIGATION

MISSION ANALYTICS GROUP, INC.
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INTRODUCTION AND BACKGROUND

According to Title 17 of the California Code of Regulations, vendors and long-term health care facilities must report certain "special incidents" that occur to consumers with developmental disabilities. This year-end report summarizes California's rates of reported special incidents during the fiscal year (FY) 2009-2010.

The California Department of Developmental Services (DDS) relies on a network of 21 regional centers to plan, coordinate, and monitor an array of services for individuals with developmental disabilities. In January 2009, DDS served 231,451 individuals with developmental disabilities in community settings. In 2001, DDS initiated a comprehensive risk prevention, mitigation, and management system as one cornerstone of quality services for consumers.

As part of this system, DDS monitors the occurrence of adverse events, or "special incidents" 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 person, if they occur when a consumer is under vendored care. (See last page for definitions of special incidents and 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 year-end report summarizes California's rates of reported special incidents during FY 2009-2010. It delineates special incident rates by type, comparing them with incident rates from the previous fiscal year. The rates and graphs presented in this report were constructed using data from the Special Incident Reporting (SIR) System from January 2002 through June 2010, augmented with three additional data sources maintained by DDS:

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

Mission Analytics Group, the risk management contractor for DDS, compiled this report based on statistical analyses that measure a consumer's risk of experiencing a special incident. The report concludes with a discussion of how DDS, Mission Analytics, and the regional centers are working to ensure effective risk management practices to prevent the occurrence of special incidents.

The rate of special incidents was higher in FY 09-10 than in FY 08-09 but lower than in FY 07-08.

Table 1
Reported Special Incidents for All DDS Consumers

	FY 07-08	FY 08-09	FY 09-10
Total Number of Consumers	249,547	263,177	263,027
Total Number of Reported Incidents	17,664	17,452	17,751
All Incidents per 1,000 Consumers	70.8	66.3	67.5
Deaths per 1,000 Consumers	7.1	6.5	6.8

FY 09/10 counts are from data received July 2010, with incidents reported by June 30, 2010.

Key Findings:

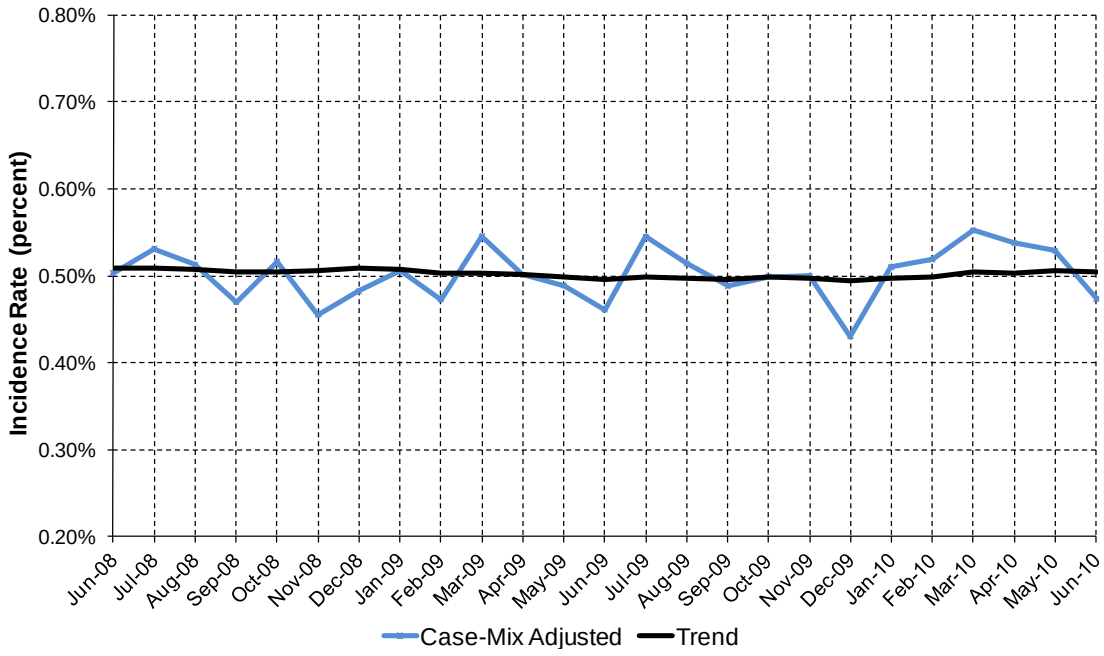
- Following a 5% increase in the consumer population from FY 07-08 to FY 08-09, the total number of consumers served by regional centers in FY 09-10 remained relatively flat compared to FY 08-09.
- In FY 08-09 to FY 09-10, the total number of incidents rose from 17,452 to 17,751. At 67.5 incidents per 1,000 consumers, the statewide rate of reported special incidents was 1.8% higher compared to the previous year. However, this change does not represent a statistically significant difference.
- The number of deaths per 1,000 consumers in FY 09-10 (6.8) was 4.6% higher than that of the previous year (6.5). This difference is not statistically significant. It remains lower than the FY 07-08 rate of 7.1 per 1000.
- At 6.8 deaths per 1,000 consumers, California's overall mortality rate appears to be lower than rates published by other states. The reported FY 08-09 mortality rate in Connecticut was 12.1 deaths per 1,000, while Ohio's 2009 rate was 9.3 deaths per 1,000, although the populations served by each state may differ. See Page 7 for details.

More About These Data

Total Number of Consumers refers to the total number of individuals served by DDS at any point between July 2008 and June 2009, excluding individuals served in developmental centers. See *Definitions* on page 9 for more details.

The non-mortality incident rate has remained very close to 0.5%, although it was elevated in the spring of 2010.

Figure 1: Statewide Non-Mortality Rates, All DDS Consumers Age 3 and Up Case-Mix Adjusted Monthly Rates since June 2008



Key Findings:

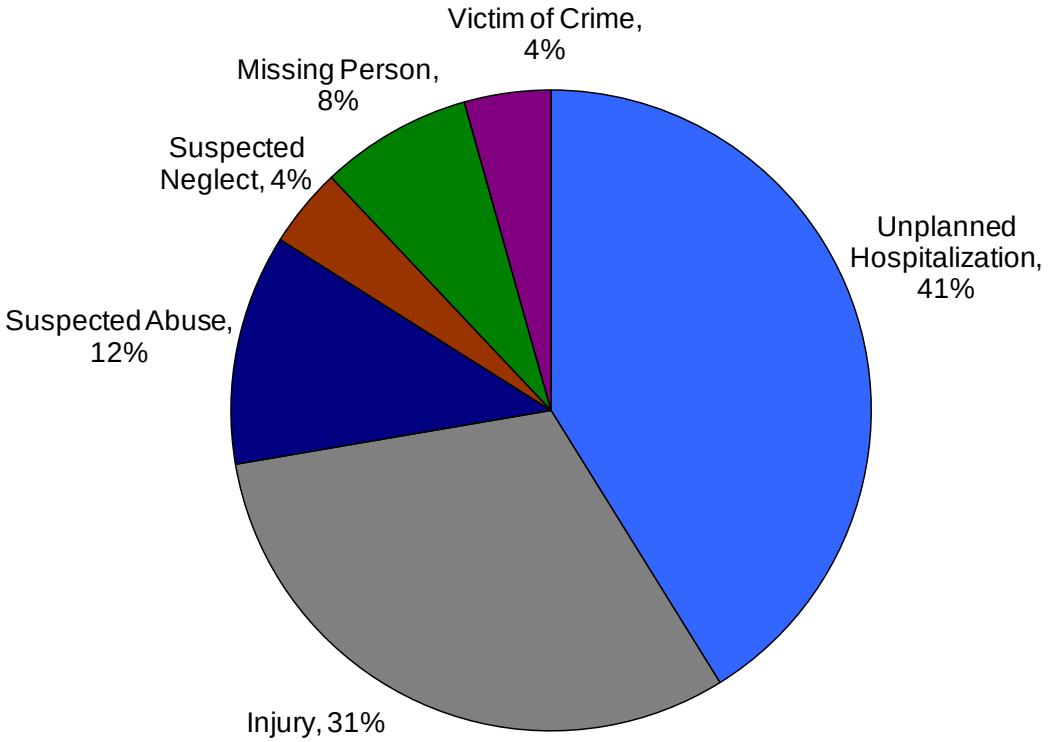
- After a short-term spike in July 2009, the monthly non-mortality special incident rate (blue line) was at or below the 12-month trend for the first part of the year, and then elevated above the 12-month trend for most of the January to June 2010 period.
- Despite this increase, the average rate over time was essentially the same in June 2010 as it was in June 2008.
- The March 2010 peak in non-mortality special incidents was statistically significant for out-of-home consumers, defined as individuals residing in community settings such as licensed residential services, Family Home Agency (FHA), Supported Living Services (SLS), or Independent Living Services (ILS). The increase in incidents for these consumers was driven by unplanned hospitalizations. We explore this issue further on Page 5.

More About These Data

The black line above represents a 12-month moving average. It is calculated by taking an average of statewide incident rates from the most recent 12-month period. The blue line represents the share of consumers statewide who experience one or more special incidents in a month. The lines shown on this graph account for differences in consumer characteristics as well as changes in the characteristics of the consumer population over time. This approach, called "case-mix adjustment," controls for consumer characteristics such as age and medical condition, and removes these effects from the calculated trend.

Unplanned hospitalization and injury incidents account for 72% of reported non-mortality incidents.

Figure 2: Breakdown of Non-Mortality Special Incidents by Type, All DDS Consumers, July 2009 - June 2010



Key Findings:

- Unplanned hospitalizations are the most commonly reported non-mortality incident type, accounting for about 41% of all reported incidents in FY 09-10. Injury incidents follow closely behind at around 31%.
- The least common types of reported incidents are suspected neglect, missing person, and victim of crime, which combined account for less than 20% of all special incidents.

More About These Data

Definitions of all special incident types can be found on the *Definitions* page (Page 9).

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

The high rate of unplanned hospitalizations drove up the overall incident rate for the year.

Table 2: Case-Mix Adjusted Breakdown of Special Incidents by Type, FY 09-10

	Avg. Monthly Incident Rate FY 09-10	Change from FY 08-09	Change from FY 07-08
Unplanned Hospitalization	0.21%	+8%*	+7%
Injury	0.17%	+2%	0%
Suspected Abuse	0.07%	+4%	-3%
Suspected Neglect	0.02%	-19%*	-27%
Missing Person	0.04%	+1%	-3%
Victim of Crime	0.03%	-6%	-3%

*** indicates statistically significant change**

Key Findings:

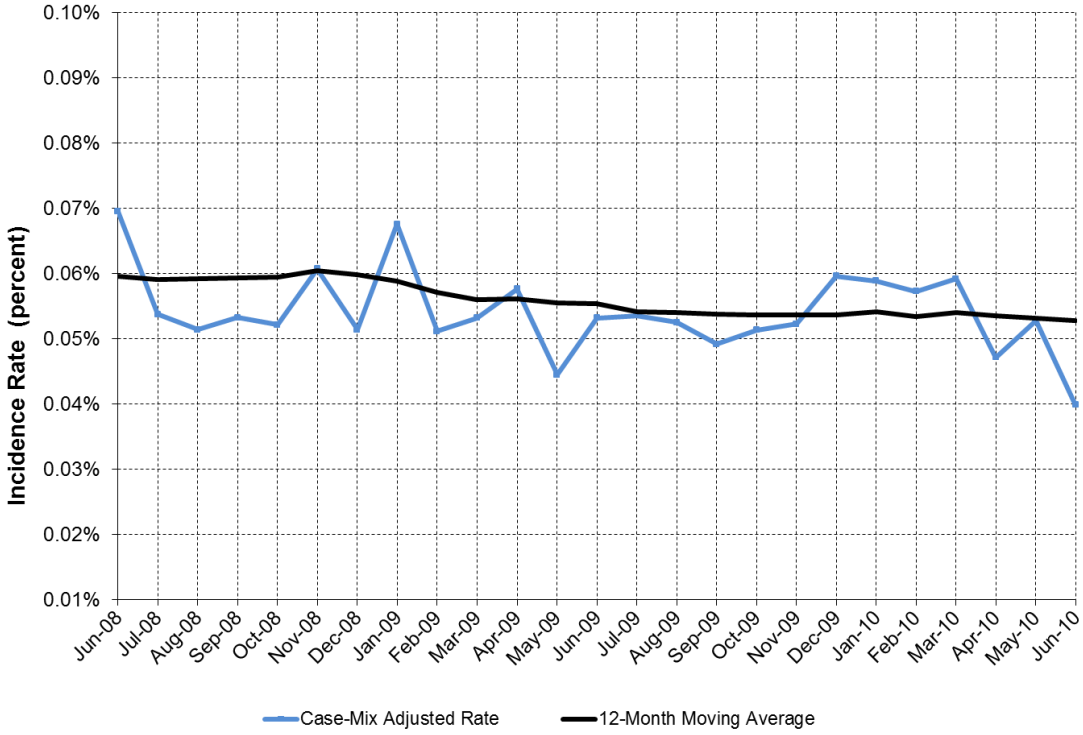
- In part due to the spike in March, the state experienced a statistically significant increase in unplanned hospitalizations in FY 09-10, with average monthly rates of unplanned hospitalization 8% higher than in FY 08-09.
    - An increase in respiratory illness was observed at multiple regional centers, but no individual regional center had an increase sufficiently large enough to require the center to report to DDS on investigation and mitigation activities.
    - Similarly, several regional centers had increases in involuntary psychiatric admissions, but no individual increase was sufficient to trigger additional reporting requirements.
    - North Bay Regional Center had a sharp increase in unplanned hospitalization reports as part of a general improvement in reporting practices.
    - This rate will be monitored; no additional follow up is planned.
- Changes in the reported rates of injury, suspected abuse and missing persons were not statistically significant.
- Reports of suspected neglect decreased significantly from the previous year, with rates declining by 19%. Victim of crime rates also dropped, by 6%, but this change did not represent a statistically significant change.

More About These Data

"Monthly Incident Rate for FY 09-10" refers to the rate of consumers statewide who experience one or more incidents in an average month. Rates are case-mix adjusted (refer to Page 3 for description). Case-mix adjusted rates include only individuals aged 3 and above.

Like the non-mortality incident rate, the winter increase in mortality rates was lower in magnitude and duration than the previous year.

Figure 3: Mortality Incidents, Statewide
Case-Mix Adjusted Monthly Rates since June 2008



Key Findings:

- After peaking in December 2009, monthly mortality rates (blue line) continued to be above the long-term average (black line) until April 2010, when they returned to lower spring and summer rates.
    - The increase in December 2009 was marginally significant for out-of-home consumers. Not adjusting for case mix, there appeared to be an increase in mortality rates among residents in community care facilities in this period. Additional analysis is underway, drawing on a review of these SIRs to identify causes of death in December.
- Despite the elevated rates between December 2009 and March 2010, the trend line for mortality rates has been slightly decreasing. The trend line in FY 09-10 was consistently below the trend line in FY 08-09.

More About These Data

The trend line (black line) is the monthly mortality rate averaged over the latest 12-month period. The trend is calculated by taking the average of the *Case-mix Adjusted Rate* (blue line) for the previous twelve-month period (case-mix adjustment described on page 3).

California's mortality rates appear to be no higher than published rates from other states.

Table 3: Comparison of Statewide Mortality Rates

State and Organization	Share of State Population Served	Population Included	Mortality Rate (deaths per/1,000)
California DDS, FY 09-10	0.7%	Children and adults living in the community	6.8
Connecticut DDS, FY 08-09	0.4%	Children and adults	12.1
Massachusetts DMR, CY 07	0.5%	Adults	17.6
Ohio MRDD, CY 09	0.7%	Children and adults	9.3

Key Findings:

- At 6.8 deaths per 1,000 consumers, California's mortality rate appears to be lower than those of other states we observed.
- Differences in mortality rates may occur as a result of differences in severity and disabilities between California's consumer population and those populations served by other states.

More About These Data

California mortality data include individuals with *Status Code 2*, or people diagnosed as having a developmental disability who are served in the community. This does not include individuals who are served in a State Developmental Center.

Connecticut mortality data was collected from the *Connecticut Mortality Annual Report (2008).* This document is available online: http://www.ct.gov/dds/cwp/view.asp?a=2042&Q=440134.

Massachusetts mortality data was collected from the *2007 Mortality Report*, and is also available online: http://www.mass.gov/Eeohhs2/docs/dmr/mortalityreport2007.pdf.

Ohio mortality data was collected from the report "Rates of Report by Selected Category per 1,000," found online at https://odmrdd.state.oh.us/health/MUIReport/2008/report08.htm.

The risk management contractor is expanding its analyses to better target remediation activities at the regional center and state level.

The risk management contractor, Mission Analytics, 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.

Update on Monitoring & Discovery Activities:

- *Discovery and Reporting Back:* Regional centers receive graphs each month that allow them to identify significant increases in special incident rates. They also receive reports each quarter summarizing trends in special incident rates. Regional centers are reporting back to DDS information about their follow-up activities to all spikes in incident rates. These reports will provide information in greater depth about any unusual increases in incident rates and help guide risk management activities.
- *Long-term Increases in Incident Rates*: The risk management contractor now investigates the factors driving long-term increases in incident rates at specific regional centers. For several regional centers, these investigations found medication errors to be a key factor in the higher rates. A detailed review of the associated SIRs found missed doses to be the most common cause. The contractor is working with regional center representatives and their consultant team to identify additional follow-up activities that may be appropriate, as well as suggested best practices for other regional centers.
- *Mortality Review:* The risk management contractor is completing a review of all FY 09-10 death SIRs to better categorize cause of death and permit improved tracking over time.

Update on System Improvement Activities:

- *Checklists:* During 09/10, the risk management contractor developed several sets of health care checklists, designed to help service coordinators, caregivers, consumers and their families avoid unplanned hospitalizations. For example, checklists on staph infections, bowel impaction or G-tube feeding can guide planning to monitor risks associated with these conditions that could require hospitalization.
    - Based on a survey completed in February 2011, nine regional centers had implemented the checklists into practice. The checklists and fact sheets are most commonly used to prepare for individual program planning (IPP) meetings, as training or resource material for care providers, and as a family resource.

- *Mortality Review Guidelines:* The risk management contractor also introduced a set of mortality review guidelines and tools to support best practice among regional center mortality review committees. By early 2011, 16 regional centers had implemented tools from the guidelines and/or adjusted their review practices.
- *DDS SafetyNet Website*: The DDS SafetyNet website and newsletter are additional avenues for education on specific issues identified from the data. For example, recent content on medication errors was designed in response to concerns raised in data analysis and technical assistance with several regional centers on injury incidents.

Planned Activities for the Coming Year:

- The risk management contractor will conduct further assessment of statewide patterns of hospitalization for respiratory illness and involuntary psychiatric admissions to determine the consumer characteristics associated with these events and identify mitigation strategies.
- DDS and the risk management contractor are developing reporting mechanisms to collect more detailed information from regional centers on how they respond to increases in their special incident rates.
- The models used for case-mix adjustment will be reviewed and updated, to better adjust for the regional center variance in case load characteristics.
- The risk management contractor and regional center staff will identify system changes to improve reporting practices for mortality special incidents, including more structured information on cause of death. Enhanced data collection will improve the information available in the mortality data analysis.
- In addition to the review of all mortality SIRs described above, the risk management contractor will also explore the use of vital statistics data on deaths. The vital statistics death file produced by the California Department of Public Health (CDPH) records cause of death for all deaths in the state, based on death certificate data. Vital statistics data are used to report population mortality rates. For example, the U.S. Centers for Disease Control and Prevention (CDC) use these data to report mortality rates and cause of death. There are significant delays in the release of vital statistics data. The most recent data available from CDPH represent deaths in calendar year 2009. However, vital statistics data can be used for comparisons between the DDS population and the overall state population.

Terms and Definitions

Case-Mix Adjustment – A process that accounts for differences in the characteristics of the consumer population over time. Case-mix adjustment allows us to distinguish trends driven by changes in population from trends driven by risk management practices. If, for example, there were an influx of medically fragile consumers into a given region, we would expect rates of unplanned hospitalization incidents to increase, even if the effectiveness of risk management practices did not change. Case-mix adjustment accounts for changes such as these so that rates (and risk management practices) can be reasonably compared to previous periods. Children under age 3 are excluded from case-mix adjusted results.

Injury – Serious injury/accident, including: lacerations requiring sutures or staples; puncture wounds requiring medical treatment beyond first aid; fractures; dislocations; bites that break the skin and require medical treatment beyond first aid; internal bleeding requiring medical treatment beyond first aid; any medication errors; medication reactions that require medical treatment beyond first aid; or burns that require medical treatment beyond first aid.

Missing Person – When a consumer is missing and the vendor or long-term health care facility has filed a missing persons report with a law enforcement agency.

Mortality – Any consumer death, regardless of cause.

Out-of-home Consumer – An individual residing in a community setting such as licensed residential services, Family Home Agency (FHA), Supported Living Services (SLS), or Independent Living Services (ILS), rather than in the home of a parent or guardian.

Raw (rate) – The unadjusted rate (e.g. the total number of deaths divided by the total number of consumers).

Suspected Abuse – Reasonably suspected abuse/exploitation, including: physical; sexual; fiduciary; emotional/mental or physical and/or chemical restraint.

Suspected Neglect – Reasonably suspected neglect, including failure to: provide medical care for physical and mental health needs; prevent malnutrition or dehydration; protect from health and safety hazards; assist in personal hygiene or the provision of food, clothing or shelter or exercise the degree of care that a reasonable person would exercise in the position of having the care and custody of an elder or a dependent adult.

Total Number of Consumers – The total number of individuals served by DDS at any point between July 2008 and June 2009. Note that this number is larger than the number of individuals served by DDS at any single point in time. This total includes consumers living in the community – that is, consumers receiving services from a regional center not residing in a Developmental Center or state-operated facility.

Unplanned hospitalization – Unplanned or unscheduled hospitalization due to the following conditions: respiratory illness, including but not limited, to asthma; tuberculosis; and chronic obstructive pulmonary disease; seizure-related; cardiac-related, including but not limited to, congestive heart failure; hypertension and angina; internal infections, including but not limited to, ear, nose and throat, gastrointestinal, kidney, dental, pelvic, or urinary tract; diabetes, including diabetes-related complications; wound/skin care, including but not limited to, cellulitis and decubitus;

nutritional deficiencies, including but not limited to, anemia and dehydration; or involuntary psychiatric admission.

Vendored Care – A consumer is considered “under vendored care” when they are receiving services funded by a regional center.

Victim of Crime - Includes the following: robbery, including theft using a firearm, knife, or cutting instrument or other dangerous weapons or methods which force or threaten a victim; aggravated assault, including a physical attack on a victim using hands, fist, feet or a firearm, knife or cutting instrument or other dangerous weapon; larceny, including the unlawful taking, carrying, leading, or riding away of property, except for motor vehicles, from the possession or constructive possession of another person; burglary, including forcible entry; unlawful non-forcible entry, and attempted forcible entry of a structure to commit a felony or theft therein; and rape, including rape and attempts to commit rape.