

## Measure 7: Length of Stay for Mental Health Inmates

### A. Background

A 1998 Bureau of Justice Statistics report concludes that 16% of jail inmates nationwide are mentally ill. Depending on the methodology used, Orange County Corrections estimates of the mental health population have ranged between 11% and 16% since 2000. For the past two years, 87% of those booked into the jail who have a mental health issue have been booked previously. Several JOC recommendations cover mental health. The analysis below isolates the average length of stay for mental health inmates.

### B. Before, During, and After JOC

No length of stay statistic for inmates with mental health issues was officially reported by Corrections to the Jail Oversight Commission. However, a 1995 survey by the National Institute of Corrections shows that Orange County Corrections reported a 45-day average length of stay for mental health inmates. An analysis conducted by Orange County Corrections staff in April 2002 also found an ALOS of 45 days for mental health inmates.

Not long after the acceptance of the final JOC report by the Board of County Commissioners, Corrections health services staff began to phase out use of the PULHEST mental health ratings. The replacement rating system was instituted during January 2003. Unfortunately this new rating system has not been in existence long enough to serve as the basis for an accurate ALOS statistic. However, it is possible to isolate the lengths of stay of those inmates who were assigned to the housing units specifically designated for inmates with mental health issues. Using the lengths of stay for these inmates, one can make ALOS comparisons over time. In addition, inmates who may have mental health issues receive a "W" designation from mental health staff in JailTrac. This designation is completely independent of the ratings systems used by Corrections health services. Thus, the lengths of stay for "W" inmates can also be compared over time.

### C. Tests for Statistical Significance

#### 1. Mental Health Housing Unit Comparison

The length of stay for each inmate who was last assigned to one of the mental health housing units was retrieved from JailTrac. The data were modeled using Autoregressive Integrated Moving Averages (ARIMA) procedures (the ARIMA model was  $\{1,0,0\}$ ). ARIMA is used to ensure that the time series being analyzed is free from autoregression (a source of mathematical error introduced when previous values of a series are strong predictors of current or subsequent values). If autoregression is not controlled, the likelihood of finding differences between two series greatly increases. ARIMA is an excellent procedure for modeling time series in order for accurate statistical comparisons to be performed. Once the ARIMA process was completed, the mental health time series was split into the three time groups. The modeled data were then analyzed using ANOVA to check for comparisons.

#### 2. "W" Designated Inmates Comparison

The length of stay for each inmate released between November 10, 2000 and June 13, 2003 who had a "W" designation was retrieved from JailTrac. The data were modeled using ARIMA procedures (the model was  $\{1,0,0\}$ ). Once the ARIMA process was completed, the mental health time series was split into the three time groups. The modeled data were then analyzed using ANOVA to make comparisons.

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### D. Results

#### 1. Mental Health Housing Unit Comparison

No significant main effect was detected. However, the length of stay for the three time periods was consistent with the 1995 and 2002 analyses indicating a 45-day average length of stay for mental health inmates.

#### *Average Length of Stay for Mental Health Inmates (Using Housing Units)*

Time Period	# of Releases	Length of Stay
11/10/2000—8/9/2001	589	49.53 days
8/10/2001—5/7/2002	695	48.98 days
5/8/2002—2/24/2003	765	48.71 days
<b>Overall</b>	2049	49.04 days

#### 2. Mental Health “W” Designation Comparison

A statistically significant main effect ( $p < .000$ ) was detected between the time periods studied for the length of stay of mental health inmates. Follow-up Scheffe tests indicate that time period 1 ( $p < .001$ ) and 2 ( $p < .001$ ) were both significantly different from time period 3. Meanwhile, time period 1 and 2 were significantly different from each other ( $p < .001$ ).

#### *Average Length of Stay for Mental Health Inmates (Using “W” Designation)*

Time Period	# of Releases	Length of Stay
11/10/2000—8/9/2001	5,790	46.6 days
8/10/2001—5/7/2002	6,178	45.6 days
5/8/2002—6/13/2003	6,727	55.5 days
<b>Overall</b>	18,695	49.5 days

The results of this analysis are actually more stable and consistent than in the housing unit analysis. Previous versions of this report indicated that the statistically significant results are more than likely due to the large sample sizes involved. Large sample sizes significantly inflate the chance of detecting statistically significant results. Overly large sample sizes may result in erroneous hypothesis testing. Fortunately, there are other statistical indicators which can be used to test whether a given result has practical significance. While previous analyses indicated a test statistic below the critical value of .20, the test statistic now stands at .78. This means that the observed results reported above cannot be dismissed as chance alone. Thus, it is fairly safe to say that the average length of stay of inmates with mental health issues has significantly increased after the JOC as compared to the time period before the JOC.

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### D. Best Practices

Not very many analysts or policy makers would suggest a model for an optimum average length of stay for inmates with mental health issues. However, the National Institute of Corrections conducted a survey of large jails and jail systems in 1995 which examined mental health issues. The survey results regarding length of stay and number of mental health inmates was compiled. A final “meta” average length of stay was calculated by Corrections staff to be 26 days.

Using the 49-day length of stay figure calculated previously, one can calculate a cost differential between the national average and the OCCD statistic. Assuming that OCCD could somehow reduce the ALOS for mental health inmates to the national average, it is possible to project a cost savings based on what an inmate would normally consume (all costs associated with an inmate stay). The cost projection appears below. Please note that the “marginal” per diem of \$8.75 already includes psychotropic drugs. The table below uses a 2-year average (2001 and 2002) of the number of inmates with “W” ratings.

#### *Projected Savings Assuming National Averages*

Type of Mental Health Population Estimate	OCCD Mental Health ALOS	National Mental Health ALOS	Difference	Marginal Per Diem	Annual Inmates Affected	Total Savings
“W” Designation	49 days	26 days	23 days	\$8.75	7,696	\$1,548,820

The total savings range is based on a large number of assumptions. On its face, the number of “W” inmates appears to be an overestimate of the number of inmates with mental health issues. Many inmates receive a “W” designation despite receiving mental health ratings that would place them in the non-mental health category. Once an inmate receives a “W” designation, they will always have that designation for each subsequent stay at the Orange County Jail. Thus, if an inmate’s condition improves, they will still have a “W” even though their mental health rating tells a different story. This overestimate may not be substantial. The 2-year average of 7,696 “W” inmates represents 13.9% of the bookings during that time frame. This percentage is in line with past estimates of the OCCD mental health population as well as the results of regional and national studies (see American Journal of Public Health, December 1995; Bureau of Justice Statistics, 1999; and Open Society Institute Report, 1999).

Meanwhile, the use of housing assignments is a significant underestimate, because not all inmates with mental health issues end up in mental health housing. It is recommended that the “W” designation statistic be employed.

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In addition, using the calculated national average of 26 days as a benchmark is perhaps risky. The judgment call involved in identifying an inmate as having a mental health issue arguably differs from inmate to inmate as well as jurisdiction to jurisdiction. Indeed, if one adjusted the level of acuity necessary to denote a mental illness, the numbers would change drastically. An analysis by OCCD regarding the new mental health ratings system indicates that the number of inmates with the highest acuity level is one third of the number at the second level. If OCCD were to include just the highest level of acuity, the mental health population would appear to have dropped significantly. At the same time, if OCCD were to count the top three levels of acuity, the number of mental health inmates would skyrocket. In short, we do not know if each of the jurisdictions responding to the 1995 NIC study used the same or similar rating systems.

Finally, an in-depth analysis of the recidivism of inmates with mental health issues is probably needed. A glance at the bookings data for 2001 and 2002 indicates that only 13% of the mental health bookings involved individuals being booked for the first time at Orange County. One individual has been booked 93 times. As the Central Receiving Center begins operations, it is imperative that some arrangement be made for directly measuring the center's effects on recidivism, and, as a result, inmate days.