

**California Department of Health Care Services  
Data Analysis for SB 1004, Medi-Cal Palliative Care  
September 1, 2016**

To develop the Medi-Cal Palliative Care policy, particularly the eligibility criteria, the Department of Health Care Services (DHCS) used a combination of published research, pilot program results, and data analysis. This document describes the results of the data analysis efforts.

The first analysis, shown in Figure 1 below, linked Medi-Cal eligibility status from the DHCS data warehouse with cause of death from the California Department of Public Health (CDPH) 2013 Statistical Master File. The CDPH data file contains information from 2013 death certificates for California decedents.

Among all Californians who died in 2013, heart disease (24.1%) and cancer (23.2%) were the two most common causes of death. Among Medi-Cal decedents overall, which represent approximately one-third of all California decedents, heart disease and cancer were also the most common causes of death. However, within Medi-Cal there are two distinct groups: a) dually-eligible Medicare and Medi-Cal beneficiaries, and b) Medi-Cal only beneficiaries (not eligible for Medicare). Most dually-eligible beneficiaries are age 65 or older.

The SB 1004 policy is primarily focused on Medi-Cal only beneficiaries, since Medicare, rather than Medi-Cal, provides coverage for physician services, prescription drugs, home health, and other palliative care services for most dually-eligible beneficiaries.

**Figure 1: Cause of Death and Medi-Cal Status Among 2013 California Decedents**

| Cause of Death                   | All California Decedents | Medi-Cal     | Medi-Cal Decedents |               |
|----------------------------------|--------------------------|--------------|--------------------|---------------|
|                                  |                          |              | Dually-Eligible    | Medi-Cal only |
| <b>Heart Disease</b>             | <b>24.1%</b>             | <b>23.2%</b> | <b>26.0%</b>       | <b>14.4%</b>  |
| <b>Cancer</b>                    | <b>23.2%</b>             | <b>20.4%</b> | <b>18.0%</b>       | <b>28.2%</b>  |
| Stroke                           | 5.5%                     | 5.9%         | 6.5%               | 3.9%          |
| <b>Chronic Lower Respiratory</b> | <b>5.5%</b>              | <b>6.0%</b>  | <b>6.9%</b>        | <b>3.3%</b>   |
| Alzheimer's                      | 4.8%                     | 4.6%         | 6.0%               | 0.4%          |
| Accidents                        | 4.5%                     | 6.0%         | 3.1%               | 15.6%         |
| Diabetes                         | 3.2%                     | 4.4%         | 4.7%               | 3.4%          |
| Flu/Pneumonia                    | 2.6%                     | 3.3%         | 3.9%               | 1.6%          |
| <b>Liver Disease</b>             | <b>1.9%</b>              | <b>2.6%</b>  | <b>1.4%</b>        | <b>6.4%</b>   |
| All other                        | 24.7%                    | 23.6%        | 23.5%              | 22.8%         |

Figure 1 was developed by linking Medi-Cal eligibility data with the California Department of Public Health (CDPH) Health Information and Research Section (HIRS) 2013 Statistical Master File. The analysis, interpretation, and conclusions are those of DHCS, not CDPH.

As shown in the far right column of Figure 1, the most frequent causes of death among Medi-Cal only decedents were cancer (28.2%), accidents (15.6%), and heart disease (14.4%). The primary reason for the differences in the major causes of death for Medi-Cal only decedents compared to dually-eligible or Californians overall is the younger age of Medi-Cal only beneficiaries; Medi-Cal covers over fifty percent of children in the state, less than a third of working-age adults, and less than a quarter of Californians over age 65. Figure 1 also highlights that liver disease was the fourth-leading cause of death for Medi-Cal only decedents, significantly higher than for Californians overall or dually-eligible decedents.

This data helps quantify, at a very broad level, the relative proportion of beneficiaries that could be affected by the selected eligible conditions for Medi-Cal SB 1004. The four eligible conditions for Medi-Cal SB 1004 palliative care, congestive heart failure (CHF), cancer, chronic obstructive pulmonary disease (COPD), and liver disease, are respectively included in the Heart Disease, Cancer, Chronic Lower Respiratory, and Liver Disease groups in Figure 1.

Note, however, there are several limitations to using the percentages in Figure 1 to estimate beneficiary enrollment in SB 1004. First, SB 1004 eligible conditions are defined more narrowly than the cause of death categories in the CDPH data file used to develop Figure 1. For example, "Heart Disease" includes CHF, as well as other heart diseases. Second, beneficiary choice and additional clinical criteria will determine which individual beneficiaries are enrolled in SB 1004 palliative care, further reducing the participation rate. And finally, Figure 1 is retrospective data, showing only decedents, and there is some variance in medical prognoses and patient outcomes. Some SB 1004 beneficiaries may be enrolled in the program for a longer or shorter period than expected, and may not die while enrolled in the program.

The second analysis, shown in Figures 2-3 on the following pages, was developed using the DHCS data warehouse, which includes eligibility information, fee-for-service claims and managed care encounters for Medi-Cal beneficiaries. The analysis focused on a sample of 1,237 Medi-Cal only (non-dually eligible) decedents without a share of cost, with a date of death range from August 1 to 31, 2015, who were continuously eligible for Medi-Cal during the 18 months prior to death (March 2014 through August 2015), and had any claims or encounters in that period. These decedents included individuals who were eligible for Medi-Cal prior to the implementation of the Affordable Care Act (ACA) as well as newly-eligible individuals who enrolled in Medi-Cal on or after January 2014.

Figure 2 shows the inpatient hospitalization and emergency department visit patterns in the last 18 months of life among all 1,237 decedents. Figure 3 shows the same type of information as Figure 2, but only for the 84 decedents in the August 2015 sample month with a CHF diagnostic code in their records in the DHCS data warehouse. Figure 3 is the only disease-specific utilization table prepared thus far.

As shown in both Figures 2 and 3, the total number of inpatient hospitalizations, inpatient days, and emergency department visits increased significantly in the months closest to the month of

death. For example, the number of decedents with any inpatient hospitalizations grew from over 41 individuals in the 13-18 month period, to 319 individuals in the 7-12 month period, to 572 in the 6 month period.

The SB 1004 policy and eligibility criteria can address the needs and desires of individuals earlier in the disease process than the period of hospice eligibility (six months prior to death). Figures 2 and 3 indicate that inpatient and ED visits often begin rising dramatically in the 7-12 months prior to death, before hospice eligibility. For patients who are at risk of or using the hospital or ED to manage their symptoms, including those not yet hospice eligible, palliative care programs offer an opportunity to improve care and avoid hospital stays or ED visits that are not consistent with the patient’s wishes.

**Figure 2: Utilization for August 2015 Medi-Cal only Decedents  
All Diagnostic Codes**

| <b>Inpatient and Emergency Department (ED) Utilization Results<br/>Medi-Cal Only Full-Scope Beneficiaries with August 2015 Month of Death,<br/>18 months of continuous, certified enrollment, and with Claims/Encounters<br/>in the 18 Months Prior to Death</b>   |                              |                        |                            |                                     |
|--|------------------------------|------------------------|----------------------------|-------------------------------------|
|  | <b>Period Prior to Death</b> |                        |                            | <b>Total Across<br/>All Periods</b> |
|  | <b>13-18<br/>months</b>      | <b>7-12<br/>months</b> | <b>Within 6<br/>months</b> |                                     |
| Decedents with Inpatient Hospitalizations  | 41+ (*)                      | 319                    | 572                        | <b>676</b>                          |
| Number of Inpatient Hospitalizations   | 55                           | 664                    | 1,308                      | <b>2,027</b>                        |
| Decedents with 1 Hospitalizations in Period  | 41                           | 168                    | 247                        |                                     |
| Decedents with 2 Hospitalizations in Period  | (*)                          | 73                     | 148                        |                                     |
| Decedents with 3+ Hospitalizations in Period   | 0                            | 78                     | 177                        |                                     |
| Total Inpatient Days   | 326                          | 4,242                  | 11,055                     | <b>15,753</b>                       |
| Decedents with ED Visits   | 70+ (*)                      | 576                    | 819                        | <b>954</b>                          |
| Number of ED Visits  | 105                          | 1,805                  | 2,758                      | <b>4,668</b>                        |
| Decedents with 1 ED Visit in Period  | 57                           | 255                    | 268                        |                                     |
| Decedents with 2 ED Visits in Period   | 13                           | 97                     | 174                        |                                     |
| Decedents with 3+ ED Visits in Period  | (*)                          | 224                    | 377                        |                                     |
| <b>Total Decedents</b>   |                              |                        |                            | <b>1,237</b>                        |
| Prepared by California Department of Health Care Services (DHCS), using data from DHCS Data Warehouse, accessed June 23, 2016. Hospitalizations identified by FI_CLAIM_TYPE_CD='03' & INPAT_ADMISSION_DT NOT MISSING. ED Visits identified by HEDIS Value Set using PROC_CD, REVENUE_CD & POS_CD. (*) Results with less than 11 decedents suppressed due to HIPAA requirements. The plus sign (+) and (*) after a number indicates while the actual figure is greater, the exact number is suppressed so as not to disclose a component suppressed number. |                              |                        |                            |                                     |

**Figure 3: Utilization for August 2015 Medi-Cal only Decedents  
With Congestive Heart Failure (CHF) Diagnostic Codes**

| <b>Inpatient and Emergency Department (ED) Utilization Results<br/>Medi-Cal Only Full-Scope Beneficiaries with August 2015 Month of Death,<br/>18 months of continuous, certified enrollment, and with Claims/Encounters<br/>in the 18 Months Prior to Death</b>   |                              |                        |                            |   |
|--|------------------------------|------------------------|----------------------------|---|
|  | <b>Period Prior to Death</b> |                        |                            | <b>Total<br/>Across All<br/>Periods</b> |
|  | <b>13-18<br/>months</b>      | <b>7-12<br/>months</b> | <b>Within 6<br/>months</b> |   |
| Decedents with Inpatient Hospitalizations  | (*)                          | 22+ (*)                | 41                         | <b>61</b>                               |
| Number of Inpatient Hospitalizations   | (*)                          | 46                     | 65                         | <b>111+ (*)</b>                         |
| Decedents with 1 Hospitalizations in Period  | (*)                          | 22                     | 28                         |   |
| Decedents with 2 Hospitalizations in Period  | 0                            | (*)                    | (*)                        |   |
| Decedents with 3+ Hospitalizations in Period   | 0                            | (*)                    | (*)                        |   |
| <b>Total Inpatient Days</b>  | <b>12</b>                    | <b>197</b>             | <b>529</b>                 | <b>738</b>                              |
| Decedents with ED visits   | (*)                          | 16+ (*)                | 37+ (*)                    | <b>59</b>                               |
| Number of ED Visits  | (*)                          | 38                     | 75                         | <b>113+ (*)</b>                         |
| Decedents with 1 ED Visit in Period  | (*)                          | (*)                    | 13                         |   |
| Decedents with 2 ED Visits in Period   | 0                            | (*)                    | (*)                        |   |
| Decedents with 3+ ED Visits in Period  | 0                            | 16                     | 24                         |   |
| <b>Total Decedents</b>   |                              |                        |                            | <b>84</b>                               |
| Prepared by California Department of Health Care Services (DHCS), using data from DHCS Data Warehouse, accessed June 23, 2016. Hospitalizations identified by FI_CLAIM_TYPE_CD='03' & INPAT_ADMISSION_DT NOT MISSING. ED Visits identified by HEDIS Value Set using PROC_CD, REVENUE_CD & POS_CD. (*) Results with less than 11 decedents suppressed due to HIPAA requirements. The plus sign (+) and (*) after a number indicates while the actual figure is greater, the exact number is suppressed so as not to disclose a component suppressed number. |                              |                        |                            |   |