Method Summary and Possible Metrics for SB 1004 Decedent Analysis

A. Link the public use death data file to claims/utilization data.

    1. Create a table of unique plan patients >21 years of age who accessed health care services in the analysis period.

        a. Recommended analysis period = 24 months prior to earliest date included in death data file.

    2. Link your table of patients to the death data file, matching on name, sex, and DOB fields.

        a. Consider multiple matching algorithms to account for variation in recording names.

            i. Exact match on all three name fields, gender, and DOB.

            ii. Exact match on first and last name, middle initial, gender, and DOB.

            iii. Exact match on first and last name, gender, and DOB.

            iv. Exact match on DOB, sex, name fragment on the last and first name with at least three letters in the last name fragment.

    3. Remove from the analysis population those patients that used health services in the 12 months preceding death.

    4. This is your decedent population.

B. Aggregate data to develop demographic information, summary and trended data describing utilization and costs in the final 12 months of life, by disease group.

    1. For all patients in your decedent population, gather inpatient and outpatient claims/encounter data for the 24 months preceding death.

        a. Recommended look-back period for disease assignment = 24 months.

        b. Recommended look-back period for utilization and costs = 18 months.

    2. Assign patients to disease groups according to primary diagnosis on claims. For patients that have multiple encounters that cross disease groups (for example, some encounters for cancer, some for COPD), assign the patient to the group that accounted for the largest proportion of costs in the analysis period.

    3. Remove cases where patients had hospital admissions for trauma or transplant in the final 6-12 months of life, if you wish.

    4. Categorize clinic visits, ED visits, inpatient admissions, hospice referrals, and other services of interest according to month prior to death (6 months prior to death, 5 months prior to death, and so on).

    5. Calculate intervals between hospital admissions to identify 30-day readmissions and intervals between hospital discharge and death, to identify 30-day mortality cases.

    6. Generate summary values for number of clinic visits, ED visits, admissions, hospital days, and costs, by month prior to death.

Useful Decedent Analysis Outputs

Descriptive data
- Number of unique decedents per disease group (SB 1004 designated x 4, plus "all others")
- Proportion male (if you wish)
- Ethnic distribution (if you wish)

Metrics
- Calculated for population as a whole, and by disease group

1) National Quality Forum (NQF) endorsed measures (# and proportion of patients)
- Chemotherapy in last 14 days of life (cancer patients only)
- Not referred to hospice
- First referred to hospice <3 days before death
- >1 ED visit in the last 30 days of life

2) Other quality metrics
- In-hospital deaths (# and proportion of patients)
- Admitted to hospital in last 30 days of life (# and proportion of patients)
- Median days from first hospice referral to death
- # and % pts referred to specialist palliative care (SPC) (if program exists and if data are available)
- # and % pts first referred to SPC <90 days before death (if program exists and if data are available)
- Median and mean days from first SPC referral to death (if program exists and if data are available)

3) Other patient-level analyses describing utilization and costs
- Average # of ED visits per patient in 12, 6, and 1 month preceding death
- Average # of admits and hospital days per patient in 12, 6, and 1 month preceding death
- Average # of clinic visits per patient in 12, 6, and 1 month preceding death
- Average total costs per patient in last 12, 6, and 1 month preceding death

4) Analyses at encounter level
- Average LOS per admit, last 6 months of life and last month of life
- Average cost per admission, last 6 months of life and last month of life
- # 30-day re-admits (all cause) across last 6 months
- # 30-day mortality admits (may be more than one for some patients)

5) Analyses of month-to-month trends
- ED visits, by month preceding death
- # of hospital admissions, by month preceding death
- Average LOS per admission, by month preceding death
- Total bed days, by month preceding death
- Readmissions by month
- Costs per admission, by month
- Average total cost per patient by month preceding death, last 12 months of life

6) Analysis of presentation timing
- Cumulative proportion of population clinically active by month, last 12 months
- Cumulative proportion of population with first ED visit or admission by month, last 18 months