The data for this project are simulated to represented data from a VA surgery database.

The goal of this project is to identify whether certain VA hospitals have too high (or low) of a death rate from heart surgeries compared to a hospital level risk adjusted estimate of death risk.  I need you to give me the observed death rate from surgery for each hospital for the most recent 6 months of data.  However, I also give you 3-years of data to develop hospital risk adjusted estimates of risk (e.g., expected death rates for the patient population observed in each hospital).  I also need some measure of variation so that you can tell me whether the observed rates are statistically higher than the expected rate for that hospital.  Note: what this means exactly will become more clear as you all ask questions about what is really expected in our report.

The data: Every six months at the VA a new set of data with all heart surgeries during that six month period is generated. Periods are numbered starting back in the 1980’s with period 1.  We have about 48 hours to produce summary reports for quality monitoring at each hospital (e.g. deaths, expected deaths, trends, tables, graphs, etc).  Most of these reports are produced using the past three years of data, including the most recent six month period, so the dataset provided includes this most recent three year period, #39.

The data consist of :

* HOSPCODE: hospital number
* SIXMONTH: six month period
* DEATH30: 30 day mortality
* HEIGHT: height (inches)
* WEIGHT: weight (lbs.)
* BMI: body mass index (kg/cm ^2)
* PROCED: procedure (0 = valve surgery, 1 = CABG surgery (other heart surgeries are excluded from this dataset))
* ASA – code for patient’s condition at start of surgery, 1 = good health, 5 = near death
* ALBUMIN: The normal range is 3.4 - 5.4 grams per deciliter (g/dL).

The data are two SAS datasets called: [vadata1Preview the document](https://ucdenver.instructure.com/courses/403916/files/7809969/download?wrap=1) and [vadata2Preview the document](https://ucdenver.instructure.com/courses/403916/files/7809971/download?wrap=1).  Below I list what dataset you are responsible for analyzing.

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| --- | --- | --- |
| Carpenter | Charlie | Vadata2 |
| Jones | Emma | Vadata1 |
| Kordas | Gordas | Vadata1 |
| Lowe | Melissa | Vadata2 |
| Patten | Luke | Vadata1 |
| Pickett | Kaci | Vadata2 |
| Shen | Guannan | Vadata1 |
| Trumble | Ilana | Vadata1 |
| Veasey | Stella | Vadata2 |
| Weber | Rachel | Vadata2 |
| Williams | Piper | Vadata2 |
| Winslow | James | Vadata2 |
| Zhang | Lingdi | Vadata1 |
| Zhou | Wenru | Vadata2 |
| Zhuag | Yaxu | Vadata1 |