

Week 2 pape



According to Bennett, Briggs & Triola (2009), descriptive statistics transforms data into a picture of information that is readily understandable using measures such as mean, median, mode, variation and standard deviation. Inferential statistics help researchers decide whether their outcomes are a result of factors planned within design of the study or determined by chance referencing probability values (P) to indicate significance of the change in results (Bennett, Briggs & Triola, 2009).

The two approaches are often used sequentially in that first, data are described with descriptive statistics, and then additional statistical manipulations are done to make inferences about the likelihood that the outcome was due to chance through inferential statistics” (Streiner & Norman, 1996). One example of descriptive statistics used in my workplace is studying our caregivers’ use of interpretative language services (ILS) for our non-English speaking patients.

Trending indicated extraordinary expenses were incurred over time above our annual budgeted amount and a closer look at the data was required to better understand our next opportunities for more efficient management of our related costs. Utilization of agency translation services for Spanish speaking patients was identified as a major factor driving costs up and a study was completed looking at the number of ILS agency contacts by day of the week.

Leaders wanted to know which days were the highest in demand for agency Spanish ILS before strategizing alternative staffing and resource plans. ILS agency contact data was collected from July 2012 through February 2013 by market per day of the week. The study reported a total of 4, 491 agency

contacts were made with non-english speaking Spanish patients. The data set included the following distribution for ILS agency contacts: Sunday (555), Monday (702), Tuesday (640), Wednesday (589), Thursday (745), Friday (649) and Saturday (611).

The central tendency measures that describe this data set include Thursday's value (745) as the mode, 642 is the mean and Tuesday's value (640) as the median. Staying current with our performance outcomes measured by patient and family satisfaction outcomes is critically important to assure we are providing patient centered care and optimizing reimbursement for our services. An example of inferential statistics commonly used in both my workplace and healthcare industry is patient and family satisfaction surveys.

A contracted survey vendor, using a complex computerized data program, continuously selects a systematic stratified random sample of discharged patients who have received services from our health system. Comprehensive data results from returned feedback surveys are reported to each participating health care system along with benchmarking percentiles against similar sized health systems. Sample size and T test measures are typically reported along with individual market, facility and department performance outcomes for generalizing to the larger patient population.

Our health system uses data at each of the four levels of measurement: nominal, ordinal, interval and ratio. According to Bennett et al. (2009), nominal measures apply to categorical variables such as race, ethnicity and language of our patient population which is tracked within our electronic health record system. Ordinal measurement describes data using a ranking

or order scheme (Bennett et al. 009) similar to the patient family satisfaction survey questions formatted with one through five ranking of possible answers with higher scores indicating better impressions of service. According to Nursing Research (2011) interval measures apply to data points that are equidistant but lack an absolute zero point of reference. Our primary care clinic teams carefully tracking and following diabetic patients' A1C levels, measuring for average blood glucose control over the past two or three months (" American Diabetes Association", 2013), is an example of interval measures.

Ratio measures apply to any data points with a scale of true zero (Bennett et al. 2009) which would be applicable to the ongoing monitoring our inpatient acute care hospitals conduct for length of stay and readmission rates within 30 days. Accurate interpretation of statistical information gives our organization an advantage for making day to day as well strategic decisions related to our financial viability as well as our quality and productivity performance outcomes.

Leaders have successfully identified a new resource plan utilizing greater telephonic translation options and less costly agency contacts based on their study of ILS frequency of Spanish agency translator contacts with patients. Unit leaders especially track the significance of decreasing and increasing patient satisfaction survey scores referencing the accompanying T test values to gauge their progress against team action plans. Our physicians nterface with our quality leaders monitoring their individual performance controlling their patients' A1C levels and are much more motivated to engage with their patients for achieving better outcomes. These approaches

to data are just a few of the many our organization values for statistical use as a data-driven industry requiring accurate and meaningful interpretations for guiding the many critical decisions made day to day sustaining our desired outcomes as a successful health care system provider.