



Applied Data Analysis & Statistics

Instructor-Led Course
Virtual or On-site

Course Overview

Numbers and statistics are essential and used daily to make sense of our world – but humans aren't built to understand them intuitively. Designed around actual health and healthcare examples and case studies, this interactive course is designed specifically for teams who need to understand, evaluate, and explain -- in plain language -- fundamental statistics and analysis in their daily work.

In the ever-changing health and healthcare environment of analysis and reporting about equity, social determinants of care, value-based purchasing, patient experience, risk-contracting, and quality (to name a few), teams need more than a nodding acquaintance with health and healthcare data analysis and statistics. To be successful, they need a fundamental understanding of health and healthcare measurement and statistics—and they need plain language skills to present, explain and discuss the resulting analysis and data displays to a wide-ranging audience.

Participants will learn about exploratory, confirmatory, and qualitative data analysis and their uses with the fundamental statistics health and healthcare professionals encounter daily. Using specific examples and exercises from work, learners will study the principles that reveal how to translate a number and complex statistical concepts into a language people can understand and use. You must provide samples from you work at least thirty (30) days before the course or we will use our standard health and healthcare examples.

Learning Objectives

After taking this course, learners will be able to:

- Explain what data analysis is
- Describe the different types of analysis like exploratory, confirmatory, qualitative
- Explain the importance of data lineage when considering data for inclusion in analysis and reporting
- Explain the importance of data governance for consistent, reliable analysis and reporting that inspires confidence in stakeholders
- Describe the characteristics of quality data
- Evaluate the quality of data
- Correctly identify the Levels of Measure (nominal, ordinal, interval, ratio), qualitative v. quantitative, and independent and dependent variables.

- Describe how Levels of Measure's unique characteristics inform analysis and data display
- Explain different sampling methodologies, sample sizes, inclusion and exclusion considerations, and critique examples
- Translate in plain language basic statistical terminology and methods utilized in healthcare, such as confidence intervals, point estimates, p values, standard errors, odds ratios, rates, logistic regression, risk-adjustment
- Explain the importance of risk-adjustment
- Describe 1-2 risk adjustment methodologies
- Demonstrate how understanding risk-adjustment models and predictive variables can improve data dashboards by adding important context

Course Details

Technology Needed: Virtual learners need to have a computer or laptop with access to the internet and will access the course via a link to a cloud-based learning platform. Learners can access audio via phone or computer. A headset and webcam are recommended.

Course Resources: Learners will receive course handouts.

	Open to Just Your Team		
How is it delivered?	Virtual	Virtual	On-site
How many can enroll?	Small size Up to 8 Learners	Standard size Up to 15 Learners	Standard size Up to 15 Learners
How is it scheduled?	Two half-days scheduled	Two half-days scheduled	One full day 9:00am – 4:00pm
How is it priced?	Flat fee	Flat fee	Flat fee plus travel costs

Course Instructor(s): Our instructors are data analysis experts with experience in public health and healthcare.

Course Content by Day

ONSITE COURSE DAY 1	
VIRTUAL COURSE DAY 1	VIRTUAL COURSE DAY 2
<p>Data</p> <ul style="list-style-type: none"> • Measurement for Improvement v. Measurement for Research • Types of Performance Improvement Measures • Populations + Sampling • Understanding Taxonomies + Datasets • Data + Data Types • Quantitative v. Qualitative Data • Evaluating a Dataset • Primary and Secondary Uses 	<p>Applied Statistics</p> <ul style="list-style-type: none"> • Empirical Rule • Absolute v. Relative Frequency • Percentiles • Normalizing Values • Standard Error + Standard Deviation • Confidence Intervals • p-values • Odds Ratios • Logistic Regression <p>Risk Adjustment</p> <ul style="list-style-type: none"> • Algebra of Effectiveness • Risk of what? • How models are developed and validated • How understanding the models will improve your data display <p>Case Study – pulling it all together</p>

Have questions about this course or need pricing information? Contact us at info@healthdataviz.com.