

HMIS Data Analytics On-Demand Course

Course Description

This on-demand course equips the participant with an analytic framework, set of skills, and best practices regarding a Homeless Management Information System (HMIS) ad hoc analysis to successfully create insight-driven data and reporting projects that culminate in increased stakeholder engagement and action. A combination of content, hands-on skill-building, and recommended resources are provided to transform the participant from a novice to a capable professional while providing opportunities for ongoing professional development and learning.

For Whom is This Course Intended?

This course is open to anyone who is interested in analyzing, interpreting, and communicating HMIS data. Participants are not expected to have high-level technical or statistical skills; only basic knowledge of the following is needed:

- HMIS data standards.
- How to pull an HMIS comma-separated value (CSV) file set (unless the participant has access to someone who can pull HMIS reports for them).
- How to enter data into Excel and navigate within it.

Learning Objectives

1. Understand how to develop a data analysis plan for ad hoc reporting projects.
2. Learn how to prepare and transform raw HMIS data into an analytic dataset.
3. Gain skills in how to build pivot tables and utilize filters and slicers to analyze and interpret HMIS data.
4. Become familiar with data visualization best practices.
5. Understand how to develop engaging data communications, including a data brief, for stakeholders.

Course Policies

Participants will have eight weeks to complete all six of the course modules, including homework and quizzes. Those participants who complete the course will be issued a Data Analytics Certificate.

Participants are expected to move through the course at their own pace and are responsible for completing all of their own work. Group input in discussion forums is entirely optional to participants, but peer sharing will enhance the experience and improve the quality of participants' learning.

Course Support

Course instructors will hold office hours each week for weeks two through eight of the course. These office hours will be an open forum for participants to ask questions about any of the modules that they are currently completing.

Technology

We recommend participants [download Google Chrome](#) to use to complete the course. There are known issues with Internet Explorer and the Learning Management System (LMS) platform that may cause interruption.

This course uses Microsoft Excel 365, but the general principles are applicable to all past versions of Excel, as well. Other programs such as Google Sheets may be used, but the instruction will not address issues with software outside of what is used in the course.

Course Schedule

Module	Description	Objectives	Assignments	Estimated Time to Complete
Module 1 Introduction	This introductory module covers course learning objectives and logistics. Review Excel basics and the Data Case Scenario used throughout this on-demand course.	Develop a Data Analysis Plan to answer questions about homelessness systems.	Review course materials. Ensure you are able to download and open the demo workbook in Excel. Community Work: Describe your plan for analysis and issues to examine.	1 hour
Module 2 The Data Analysis Plan	This module provides the foundation for conducting ad hoc data projects by reviewing the components of the Data Analysis Plan as well as how the Data Analysis Plan serves as a road map for the project.	Download, structure, transform, and clean data in preparation for data analysis.	Quiz: Ad hoc reporting and Data Analysis Plans. Begin demo workbook analysis. Community Work: Draft your Data Analysis Plan.	2–3 hours

Module	Description	Objectives	Assignments	Estimated Time to Complete
Module 3 Data Prep	This module provides an overview of how to prepare data for analysis while providing opportunities to gain hands-on experience in using formulas and functions to structure and transform data.	Explore how to get your data ready for analysis using formulas and functions.	Quiz: Data prep. Demo workbook data prep and variable creation. Community Work: Export your data and begin cleaning and transforming it.	5–6 hours
Module 4 Data Analysis	This module shows how to produce output using standard analytic techniques, coupled with considerations about how to interpret the output and identify insights.	Analyze data using pivot tables and slicers in excel.	Quiz: Data analysis. Data disaggregation and dealing with missing data. Community Work: Begin creating pivot tables.	5–6 hours
Module 5 Data Visualization	Data visualization transforms your output and analysis into key insights. This module will explore why you should rely on data visualization to tell your data story.	Summarize data findings and visualizations in a 2-page report.	Quiz: Data visualization. Community Work: Create charts in Excel.	3–4 hours
Module 6 Data Communication	Review data communication strategies and methods that can foster engagement with stakeholders while increasing their data fluency.	Develop key messages for target audiences, which incorporate data analysis findings.	Quiz: Data communication. Community Work: Draft a data brief.	5–6 hours

*Note: The materials developed for this on-demand course were derived from a demo workbook initially created by Andrea Miller of Waypoints Consulting.