

Thank you for participating in BAC@MC 2024. This document contains important background information including the competition's rules, guidelines, and data description.

Your team (consisting of between two and four undergraduate students) will review, possibly restructure, explore, and analyze the competition data. Each team will summarize their analysis, processes and conclusions drawn from the data in a poster that that must be submitted by May 1st.

If you have any questions, please contact us (see contact information below).

We look forward to receiving your posters and seeing you in May. Good Luck!

THE STORY

"Have you ever considered nursing homes?" asked Elder Lee.

"Nursing homes!" exclaimed Matt Chur, "How old do you think I am?"

Elder: "Not for you. As an investment? We really should diversify our portfolio. I think we are too tech-heavy."

Matt: "Oh, I see. That makes sense. You're right; I suspect there are plenty of baby boomers looking into nursing home options. Perhaps this is a good area for our investors."

Elder: "I'll ask Geri Attrick and her team to start diving into the data."

Matt: "I suspect you have a winning idea here – it could lead to a big year-end bonus."

A smiling Elder lifted his water bottle and said, "I'll drink to that."

You are a member of Geri Attrick's data analysis team. Geri has acquired a large US nursing home dataset for the years 2015-2021. Your analysis of this data must address the following research topics:

- Evaluate the overall financial performance of nursing homes in the United States during this time.
- o Identify influential factors affecting the financial performance of nursing homes.
- o **Determine** the most significant influential factors impacting nursing homes performance.
- Describe trends in performance and these influential factors.
- o Analyze the impact of COVID-19.

THE DATA

The data package includes the following files:

- o **BAC@MC 2024 Story.pdf** contains the competition story and the questions.
- Cost Report Tables (CostReport) contain financial information about nursery homes.
- o **Provider Information Tables** (ProviderInfo) contain basic information about the nursing homes.
- Health Deficiencies Tables (HealthDeficiencies) contain data on health deficiencies reported in the nursing homes.
- Service Quality Measures Tables (QualityMsrMDS) contain service quality measures for the nursing homes.
- o Penalties Tables (Penalties) contain data on penalties imposed on the nursing homes.
- COVID Vaccine Tables (CovidVax) contain COVID-19 vaccine data for the nursing homes. These tables are available for 2020 and 2021.
- Data Dictionaries (DataDictionary) contain variable descriptions for the tables above.

More information about the dataset can be found at

https://data.cms.gov/provider-data/topics/nursing-homes.

Note: Teams are not required to utilize all the provided data. Additional data sources can be incorporated into your analysis but you must identify and cite all such sources.

THE POSTER

- The poster should present the team's ideas, methodology, and any insights or conclusions based on the data analysis.
- o Phase one judging will be based on your analysis. Any additional data sources used to supplement your analysis should be cited on the poster.
- Posters must be submitted by midnight on May 1, 2024.
 - o All posters should be prepared such that they can be printed on a 36"x48" poster board.
 - Additional detailed instructions for poster submission will be made available a few weeks prior to the submission deadline. These instructions will be e-mailed to all participating teams and posted on the competition website.

POSTER EVALUATION CRITERIA

- Use of Data: The research topics are addressed by using the existing data in a creative way, and the significance and limitations of the data have been explored.
- Methodology/Analysis: The methodology is clearly explained, and the analytical strategy is appropriate to answer relevant research topics.
- Measures and Findings: The measures are well established, the conclusions are reasonable for the findings, critical thought is evident, and suggests future research.
- o Format and Style: The poster is visually appealing, the figures and tables are easy to understand, and the text is written in clear English with proper grammar.
- Presenters: Presenters are confident, professional, engaging with telling their story, and answered questions appropriately.

CONTACT