

PSM Program: Biostatistics
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UnitedHealthcare Medicare & Retirement
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Table of Contents

- Learning/Internship Objectives.....3
- Introduction.....4
- Description of Work.....6
- Internship Discussion.....8

Learning Objectives/Internship Objectives

- The Clinical Orchestration Workflow Execution team uses SAS programming language to develop Part D Member Outreach campaigns.
- The intern will be helping the team meet its objectives of development and timely delivery of these campaigns and help in data ingestion of response files for these campaigns.
- The intern will display great attention to detail to outline any data anomalies and improve quality of the outputs during the workflow development.
- The SAS programmer intern is expected to be a keen learner and collaborate with the Part D business stakeholders and senior level team members to understand the requirements for workflow development.
- The intern will collaborate with cross functional teams of Admins and Data Engineers for system maintenance and best practices implementation.
- The intern will collaborate with Part D Reporting and Analytics leads on the strategic use of data for modeling and reporting.

Introduction

The SAS Programmer internship at United Healthcare was part of the Early Careers internship program with UnitedHealth Group. Over 1,000 interns from all over the country participated in this experience either in-person or virtually. The internship program was 10 weeks of full-time work and included 2-3 weekly large-group meetings for the interns to learn more about the company, explore future career opportunities, and improve their mental health and that of those around them. Speakers presented topics ranging from work-life balance to diversity to social responsibility. In addition, the interns were flown to the Optum headquarters in Minneapolis for a 3-day in-person experience that included an address by the CEO, peer networking events, a group design thinking project, and a service project. When not in large-group meetings or at the in-person event, interns spent the rest of their hours working within their assigned departments. I was placed in the Medicare & Retirement STARS division of UnitedHealthcare as a SAS Programmer in the Part D reporting and analytics department. My specific team was interested in clinical orchestration workflow execution.

I was given a mentor in my department who met with me weekly to work through any challenges. He was also available to answer any questions that came up, encourage me, and suggest additional training I could complete when I had downtime. In addition, I was part of a peer mentorship team lead by a business analyst manager who gave us career advice and helped us navigate work in a large company. The interns were encouraged to network with each other and with full-time employees. I took advantage of this opportunity by meetings with multiple recruiters, the VP of my department, management in departments I had interest in working with later, and new full-time employees.

UnitedHealthcare (UHC) is a health insurance company that strives to help people live healthier lives and help make the health system work better for everyone. UnitedHealthcare, along with Optum, make up the UnitedHealth Group (UHG) family of businesses. UnitedHealth Group is a US Fortune 5 company and brought in \$400.7 billion in revenue in 2022. The company employs over 400,000 individuals worldwide and is ranked #7 on the 2023 LinkedIn Top Companies list in the United States.

UnitedHealthcare Medicare and Retirement serves approximately 13.2 million individuals in Medicare Advantage plans, Part D prescription drug plans, Medicare supplement plans, and retiree solutions. This works out to UHC serving 1 in 5 Medicare beneficiaries in the United States and five U.S. territories.

STAR Ratings were developed by the Centers for Medicare & Medicaid Services (CMS) to assess the quality of Medicare Advantage plans, which includes individual, group retiree, dual special needs, and Part D plans. Plan contracts are rated by 45 measures of quality on a scale of 1 to 5 stars. UnitedHealthcare continually seeks to improve their STAR Ratings to offer quality products to their members, and currently has more subscribers in Medicare plans with 4 stars or more than any other insurance carrier.

One of the ways UHC seeks to improve STAR ratings is by improving medication adherence of their members. For higher STAR ratings, members must refill their diabetes, hypertension, and cholesterol drugs on time. The Clinical Orchestration Workflow Execution team uses SAS programming language to develop Part D Member Outreach campaigns to improve STAR ratings. These campaigns target individuals that are at risk of becoming non-compliant with their cholesterol, blood pressure, or diabetes medication and place them into programs that increase the likelihood of these crucial medications being refilled on time.

Description of Work

*Due to the confidential nature of the work, techniques are highlighted, and results are omitted in this section.

Members who are at risk of becoming noncompliant with their medication are placed into programs to improve medication adherence. Depending on the needs of each individual member, some may move from one program to another. Each program has its own criteria, and sometimes a member is placed in the wrong program. A master control flow was developed by the adjacent business team, and they desired to see if members were following the correct flow into and out of these programs. I was tasked with creating code to check for this correct flow.

This project utilized a complicated group of data steps and proc sql queries. Some of the techniques used were using do loops, set by statements, and the first.variable and last.variable functions to establish the actual flow of the current programs. For one part of the project, I needed a lead function (the opposite of lag), which isn't offered in SAS. To do this, I first sorted the data in the opposite direction of how I wanted the different variables sorted and then made a new variable using lag function. Since the data was sorted backwards, using the lag function actually created a lead function after I sorted it back to the direction I wanted it in. This new variable created from the lag function produced a perfect lead variable. At this point, I used a series of do loops and conditionals to create flags for the individuals that were not correctly being moved to different programs. The logic for the program flow was not 100% specified before my internship ended, so I left the program with thorough comments so the next employee could update anything necessary.

Much of the work in this department focused on reporting the number of members in different programs. I was asked by my manager to have SAS create an automated email that sent out color-coded tables in the body of the emails. Rows with positive numbers were to be one color and rows with negative numbers needed to be another. The department regularly used PROC SQL to send emails, but I found that one cannot use logic to color the rows to specification unless the tables are sent in an attachment. Since the tables needed to go directly into the body of

the email, I needed to find another technique to do this. I found that if I used a data step to send an email, I was able to establish logic to create the color coding while also sending the tables in the body of the email.

Internship Discussion

All the internship objectives were achieved. I gained an understanding of Medicare and CMS as well as program quality measures and how UHC is working to improve them. I was able to interact with leads in many different adjacent departments to understand the process and flow of clinical orchestration.

Throughout the internship, I was able to improve upon my SAS programming skills learned at GVSU. The SAS Base Certification I earned while taking STA 616 is what landed me this internship in the first place, because it set me apart from the other candidates. At the beginning I found myself overwhelmed with the PROC SQL code I saw that was sometimes hundreds of lines for a single query. With time, I was able to follow what was going on and eventually add to it. I significantly improved upon my DATA step skills with the use of nested do loops and conditionals.

This internship was virtual which presented a few professional challenges. While the skills learned in the PSM program gave me a good base, I learned to communicate well over email and Teams, set up meetings for clarification, and network. I also learned to find ways to productively occupy my time when my mentor and manager were busy with other tasks and couldn't help me. I used the time to take courses on LinkedIn Learning (SQL and Python), read about UHC and Medicare, search job postings, and connect with recruiters for the jobs that looked most interesting.

The biggest challenge was that this position was virtual, and I was an intern coming in with very little knowledge. Since I couldn't quickly walk over to a coworker's desk for quick help troubleshooting a coding issue, I sometimes had to wait until the next day to have a Teams meeting with someone who could help me. The converse of this is that the virtual position allowed for flexibility with my schedule, zero commute time, and the ability to relax in my own home while working.

The Early Careers internship program at UHG was phenomenal. They treated the interns with respect, offered personal and professional paid training, brought all of us together for an in-person

experience, set up mentorship programs, and were available to help with any issues that came up. This is a company I would like to work with again at some point.

The internship program coordinators frequently reminded us to use the time to network, and I took full advantage of that. When I had downtime, I scoured the job postings to find those that interested me most. I found several interesting positions for quantitative research consultants at The Lewin Group, a subsidiary of UHG. I contacted the recruiter for those jobs who was happy to meet with me over Teams. From there, she sent my resume to two different department managers who met with me to learn more about the company. This meeting went so well that the managers sent my resume to the VP who offered me a job without an interview. I am currently working 20 hours per week for Explore Digits, which partners with The Lewin Group on government contracts looking for fraud, waste, and abuse in CMS and the CDC. They will increase my hours to full time when I graduate. The ultimate success of this internship was that I was able to leverage my experience to find an enjoyable job afterward.