

One Boys' Dream: Hitting a Homerun in the Bottom of the Ninth Inning

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Carey is a co-founder and co-leader of the CDISC Medical Device team. Carey has 37 years of experience with using SAS software. He has been involved in more than 20 products that have been cleared / approved by the FDA. His areas of expertise include in-vitro diagnostic devices, companion diagnostics, vaccines, thrombosis drugs, oncology drugs and other therapeutic areas.

Introduction

Walk-off Homerun



Have I Achieved My Dream?

Professionally,

- Yes

But how did I achieve this dream?

- 'and now the rest of the story'

The Backstory

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Misdiagnosed

Held back three times

- Kindergarten through 3rd grade

Third time at a special boarding school

- Proper medical treatment
- Went from reading on a 3rd grade level to a 7th grade level in one semester
- Discovered I was smart at math
 - Led to my interest in statistics and baseball

How I Became Interested in Statistics

Baseball



Article about regression to the mean in baseball:

- Low versus high batting averages at the beginning of the season regress to the mean by the end of the season.

High school, college and grad school

Did well enough on SAT to get a full academic college scholarship

Double majored in biology and chemistry

Masters' degree in epidemiology

GRE analytics score was in 99th percentile

My Career Path

My Career Path

Three distinct phases:

- Academic work in three medical schools as an epidemiologist
- A transition phase where I worked as a study coordinator on Alzheimer's disease clinical trials
- As a statistical SAS programmer for pharmaceutical and medical device companies

Epidemiologist

Three Medical Schools

- Louisiana State University
- University of Alabama at Birmingham
- Loma Linda University

Epidemiologist

Started with SAS 79.6 on an IBM mainframe.

- The version of SAS released in June of 1979

Worked on various case-control, longitudinal and cross-sectional studies

Used SAS to do statistical analyses, but not for report writing.

- Report writing was done with WordStar or WordPerfect (before MS Word)

Epidemiologist

I was very proficient with BASE SAS, STAT and GRAPH.

However, I had not yet been exposed to the SAS Macro Language.

Transition

Study Coordinator

- University of Southern California

What was the upside of working as a study coordinator?

- Knowing first-hand how AEs are handled in a clinic helps me understand how to handle AEs as a statistical programmer.
- Knowing how CRF's are handled and monitored helps me understand how data is collected in clinical trials.
- My first-hand experience with clinical trials was instrumental in me deciding to work as a statistical programmer in the pharmaceutical and medical device industries.

Transition

What was the downside of working as a study coordinator?

- Although I did some statistical analyses for the principal investigator, overall, I had less time for programming.

Statistical Programmer

Experience:

- Medical Devices – 11 years
- Pharmaceutical / Biotech – 11 years

Learned the SAS Macro Language

Learned reporting using DATA _NULL_

- Before ODS OUTPUT, had to INFILE a SAS .lst file to get a p-value in the DATA _NULL_ report
- DATA _NULL_ was how reporting was done prior to PROC REPORT and ODS destinations like RTF

Statistical Programmer

CDISC

- Co-founded the CDISC SDTM Medical Device team in 2006
 - Medical Device SDTM standards published in 2012
 - Still co-lead the team
- Involved in other CDISC teams and the development of other standards
 - Associated Persons Implementation Guide
 - SDTM Implementation Guides

Lessons Learned

Lessons Learned

Being an introvert is not a good excuse for not being able to stand in front of an audience and do a good presentation.

People skills are just as important as technical skills to be a good statistical SAS programmer.

Speak up at work

- To your manager, in team meetings, etc.
- Especially let your manager know what you want out of your career.

Lessons Learned

Don't be afraid to take risk.

Don't be afraid to admit mistakes.

Do what you enjoy the most.

Next Steps

Next Steps

No more

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Retirement

- Reading
- Travel
- Volunteer work
- New dreams to achieve

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