

WESTERN USERS of SAS SOFTWARE

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

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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



The Backstory

- 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

- 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 – 10 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

- 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

- No more
;
- Retirement
 - Reading
 - Travel
 - Volunteer work
 - New dreams to achieve

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