




Exponent  1

“Pursuing a Career in Science and Math”

The Road From Undergraduate to Graduate School

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Exponent  2

Outline for Today's Discussion

- **The Undergraduate Experience**
 - Taking advantage of it fully
- **Graduate School**
 - Choosing to attend graduate school
 - Choosing when to go to graduate school
 - Choosing a specific graduate school
 - Choosing what to study in graduate school
 - Choosing the best-fitting degree program
- **Potential Roadblocks**
- **Post-Graduate**
 - Choosing your line of research and work

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Exponent  3

*“Just because you love science,
it does not mean you have to
become a medical doctor”*


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Exponent  4

My Undergraduate Experience

- **Brown University, AB**
 - Pre-medical student
 - Majored in public health
 - Volunteered at hospitals
- **Undergraduate Summers**
 - NHLBI/NIH funded research
 - Three consecutive summers
 - Children's Hospital
 - Buffalo, NY
 - First journal publication

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Exponent  5

Four Years Fly By...

- **Pre-Graduation Thoughts**
 - Do I really want to go to medical school?
 - I don't know, but I will take the MCAT anyway
 - If I just delay medical school, what should I do in the meantime?
 - Work
 - More research
 - Travel
 - Figure out what to do next
- I thoroughly enjoyed my research experiences

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Exponent  6

My Transition Time

- **Post-Undergraduate School**
 - Took two years off and worked
 - Medical office
 - Other random positions
 - Prepared and sat for the MCAT
- Stayed connected with undergraduate advisors!!! (See why later...)
- Thought about what I really enjoyed about science and health
 - Discovered the field of public health...

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Discovery of Public Health

- It was a bit of a serendipitous or random discovery
 - Noticed many medical doctors had MPH degrees
- Researched the field and discovered that this might be a good fit for me





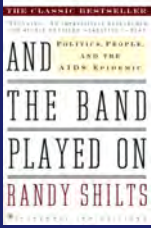


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Public Health

- Public health is not a single discipline
 - It includes many fields with the common purpose of protecting the health of populations
 - Epidemiology
 - Biostatistics
 - Environmental science
 - Toxicology
 - Health education
 - Behavioral science
 - Health policy, etc.



Public health is the science and art of preventing disease, prolonging life and promoting health

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Applying to Graduate School

- After two years of working/introspection
 - Choose to apply to a Master of Public Health program
 - Many programs required some work experience
 - Most programs accepted my MCAT scores and I did not have to take the GRE
 - Gathered recommendations from employers and undergraduate school advisors (**This is why**)
 - Applied to 7 or 8 schools
 - Selected a school based on program, reputation and location



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Exponent 10

My 1st Graduate School Experience

- Emory University, MPH
 - Initially Health Education/Behavior Science concentration
 - Switched to Environmental/Occupational Health concentration
 - Worked on various public health projects
 - CDC program evaluating environmental carcinogens
- Graduate Summers
 - Dekalb County Board of Health
 - Planned Parenthood of Georgia



Rollins School of Public Health

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Environmental Health Sciences

- Concerned with the adverse influence of the environment on human health and with controlling these influences
 - Traditionally, the field has focused on hazardous agents in the environment
 - Chemical –
 - ❖ Methyl Mercury
 - Biological –
 - ❖ *E. coli* O157
 - Physical –
 - ❖ Radiation




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Two Years Fly By Even Faster...

- Pre-Graduation Thoughts
 - I don't want to go to medical school
 - *And I feel relieved that I finally came to a conclusion that I knew all along in my heart*
 - I want to obtain a "PhD" in Environmental Sciences
 - Do I want to take a year off?
 - ✓ Yes
 - Do I want to apply for a deferred admission?
 - ✓ Yes
 - Do I want to leave Atlanta?
 - ✓ No



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My No Transition Time

- Last Semester At Emory
 - Completed a thesis
 - Applied to (1) school for deferred admission
 - Program required several years of work experience
 - Program accepted my MCAT scores
 - ❖ (Great, because they were expiring)
 - Gathered recommendations from graduate school advisors
 - Selected a school based on program and reputation
 - (Not necessarily location this time)
 - Waited for an admission/rejection response and enjoyed the Atlanta sunshine, but...



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Exponent 14

Future advisor called and said “hey, you’re admitted, but we want you to start now”

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Exponent 15

My 2nd Graduate School Experience

- Johns Hopkins University, DrPH
 - Environmental Health Sciences concentration
 - Worked on many environmental science research projects in Baltimore
 - Applied and received a NRSA/NIH grant
 - Covered tuition
 - Stipend
- Graduate Summers
 - Summer fellowship...
 - Air quality research
 - Doctoral research



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Summer Fellowship



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Exponent 17

Dissertation Research

- Third and Fourth Year
 - Switched to more appropriate advisor for dissertation research
 - Collected original data
 - Dissertation



Journal of Toxicology and Environmental Health, Part A
Current Issues
A Probabilistic Risk Assessment of Cryptosporidium Exposure Among Baltimore Urban Anglers
James D. Richardson¹, Ellen K. Silbergeld², Trudyanna O'Connell³,
Heather G. Soto⁴, Cheyenne L. San Francisco, CA, USA
¹Principal, Bloomberg School of Public Health, Johns Hopkins University,
Baltimore, MD, USA
²Associate Professor, Bloomberg School of Public Health, Johns Hopkins
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“PhD” can be used as a generic term for several different doctorate degrees

DOCTORAL PROGRAMS AT THE SCHOOL

The Doctor of Philosophy (PhD) degree is the degree program where scholarship is represented by the creation of new and innovative knowledge, and is primarily a degree for those individuals with research and/or teaching as their goal. Each department of the Bloomberg School offers the PhD degree. The degree and its requirements are overseen by the Johns Hopkins University Graduate Board. The PhD degree entails coursework and independent research. Generally, the program consists of 3-2 years of full-time coursework, followed by 2-5 years of full-time, independent research. The coursework ensures that a student has breadth and depth of knowledge in a particular discipline or area. The student's ability to conduct research is assessed by the preparation of a written dissertation.


The Doctor of Public Health (DrPH) degree is a Schoolwide advanced professional degree program designed for the student who has a Master of Public Health (MPH) or equivalent degree and who intends to pursue a leadership career as a public health professional. The mission of the DrPH program is to prepare graduates to advance the public's health through the integration and application of a broad range of knowledge and analytical skills in leadership, practice, policy analysis, program management and professional communication, coupled with preparation in a specific disciplinary public health field.

The Doctor of Science (ScD) degree is available in some departments as an alternative to the Doctor of Philosophy (PhD) degree. The ScD degree is for individuals of exceptional ability who seek to establish the methods and skills needed for a career in research, often in an academic setting. Departments that offer the ScD degree are:

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Potential Roadblocks



- **Funding For School**
 - Applied for a Pre-Doctoral NIH grant
 - National Research Service Award (NRSA)
- **Personal Life Changes**
 - During my second year in my doctoral program, I was diagnosed with multiple sclerosis

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Four Years Fly By Fast Again (Kind of)...

- **Pre-Graduation Thoughts**
 - I don't want to go into academia full-time
 - I don't think I want to work for the federal government (e.g. U.S. EPA)
 - I may want to go into the science/policy sector
 - I really think I may want to go into the private sector (e.g. consulting)
 - I may want to go into the state/local government sector (e.g. Health Commissioner - Department of Public Health)

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My Post Graduate School Experience

- **Post-Doctoral Fellowship** 
 - The National Academies, Board on Environmental Studies and Toxicology
 - Reviewed and contributed to the research of several projects including the evaluation of the current trends and the future of toxicity testing
- **ChemRisk** 
 - Scientific consulting firm based in San Francisco, CA
 - Provided risk assessment expertise in order to assist clients with their environmental and occupational health challenges

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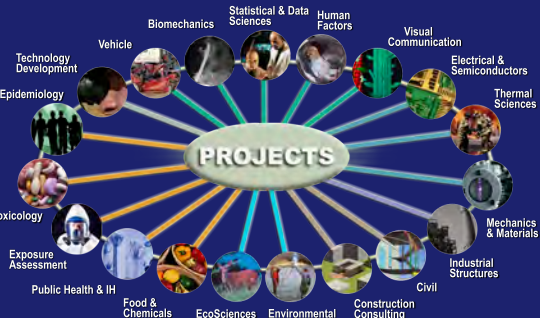
Current Experience

- **Exponent** 
 - Scientific and engineering consulting firm based in Menlo Park, California (**See next slide**)
 - Health Sciences Practice/ Center of Exposure and Dose Reconstruction
 - Located in Wood Dale, IL office
- **University of Illinois at Chicago** 
 - School of Public Health
 - Adjunct Assistant Professor in Environmental and Occupational Health Sciences

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Exponent's Areas of Practice



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Exponent 24

Nearly Another Five Years Fly By...

- **Early Career Thoughts**
 - I don't want to go into academia full-time
 - ❖ I enjoy my Adjunct Assistant Professor appointment
 - I don't think I want to work for the federal government (e.g. U.S. EPA)
 - ❖ Still may believe this
 - I may want to go into the science/policy sector
 - ❖ Perhaps on a project by project basis
 - I really think I may want to go into the private sector (e.g. consulting)
 - ❖ I enjoy consulting
 - I may want to go into the state/local government section (e.g. Health Commissioner - Department of Public Health)
 - ❖ Still very interested in this

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Questions & Answers