Managing measles & mumps outbreaks: summer at the Centers for Disease Control

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Introduction
• 8 week internship at CDC within the immunization and respiratory disease department (NCIRD)
• Focus on ongoing measles & mumps outbreaks in the US

Objective of Internship
Reinforce and improve quantitative research skills by assessing the effectiveness of the two-dose measles-mumps-rubella vaccine in preventing mumps outbreaks

Work profile
• Began a systematic review and meta-analysis for reported measles-mumps-rubella vaccine effectiveness in preventing mumps
• Assisted in data analysis for a range of mumps outbreaks across the US
• Participated in meetings involving several stakeholders, including state health departments and public/private migrant detention facilities

Reflection
• Provided administrative and research-related support for my supervisor and worked to target back-burner projects
• Systematic review of MMR2 effectiveness informs future public health decisions: dosage, vaccine design, etc.
• Gained significant understanding of the form & function of CDC as a government agency and its role in the larger systems affecting public health

Systematic review: the process
• Developed search query and inclusion/exclusion criteria
• Screened title and abstract of over 1300 scholarly articles via EndNote to select appropriate studies
• Worked with Lt. Ruth Link-Gelles, who will continue project with full-text review and statistical meta analysis
• Expected publication in 2020

Looking ahead
• Provided a perspective on the costs and benefits of working with a government agency
• Fantastic learning opportunity & was able to gain experience from a range of departments
• Able to access a much broader public health network for future research (i.e. senior thesis)

Conclusion
• Despite initially coming to CDC with a different set of expectations (i.e. would work on senior thesis), I learned so much on my project and when attending various talks/presentations on campus than I ever anticipated

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