

2016 Global Health Rotation: Zaragoza, Spain

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Background Information on Spain

As of July 2016, Spain has a total population of 48,563,476³. The urban population comprises 79.6% of the total population, with dense settlement around the capital of Madrid and the port city of Barcelona³. While Castilian Spanish is the official language nationwide and is spoken by 74% of the population, Catalan (17%), Galician (7%), and Basque (2%) are also official languages in various regions³. The Gross national income per capita (PPP international \$, 2013) is 31¹. The unemployment rate in 2015 was 22.1%³. Total health expenditure is 9.0% of GDP and, in 2013, there were 5.0 physicians per 1,000 individuals². The infant mortality rate is 3/1000 live birth as of 2015, and the adult mortality rate is 9.1 deaths/1000 population³. For the period from 2010-2015, the average life expectancy at birth for females was 85.1 years and 79.4 years for males¹. Ischemic heart disease is currently the leading cause of death in Spain, responsible for 41,300, or 10.4%, of all deaths. Figures A and B show the major causes of death in Spain¹.

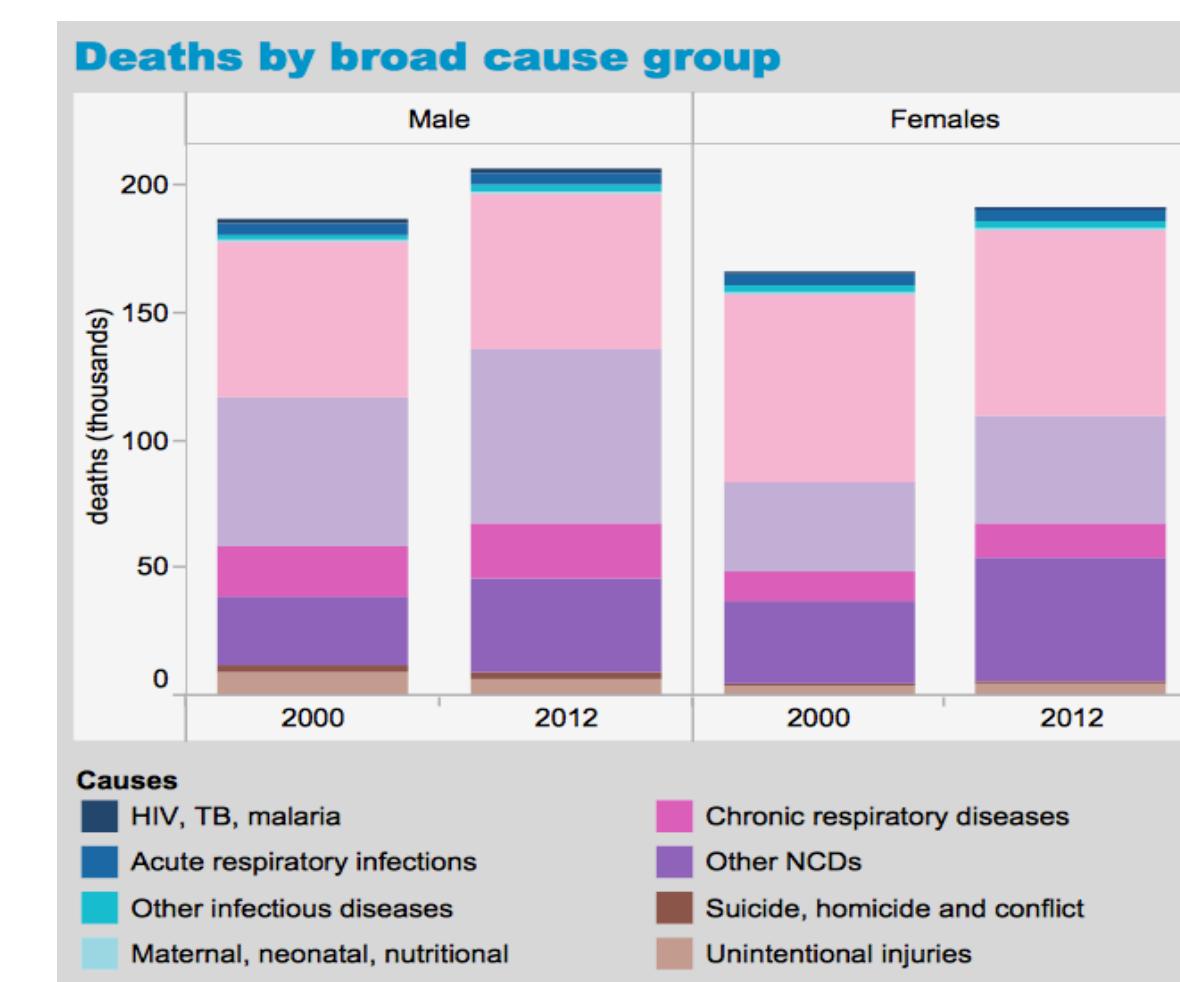
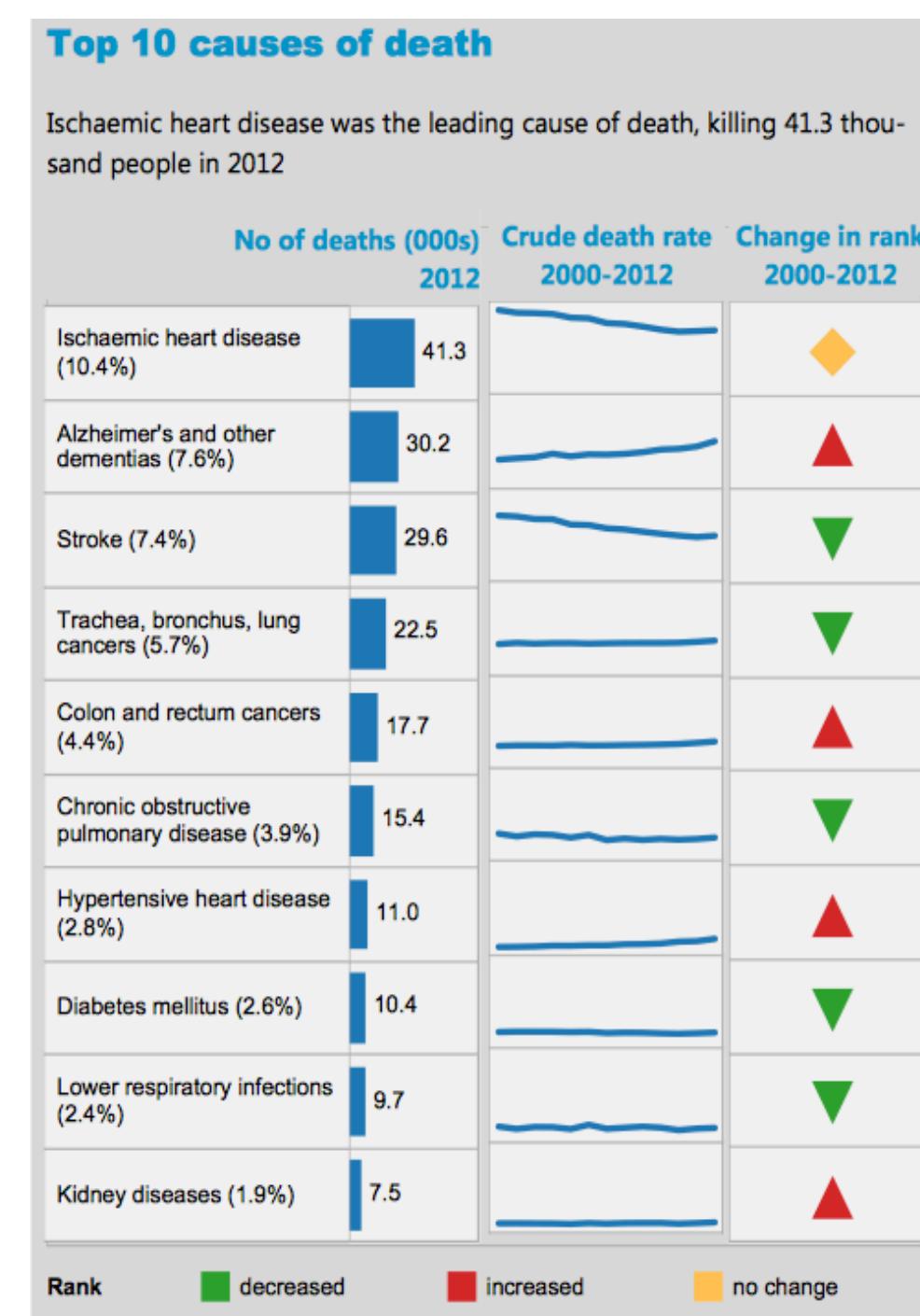


Figure A (left) shows the top 10 causes of death in 2012, while Figure B (above) shows the causes of death in broad groups¹.

Background Information on Zaragoza, Spain Global Health Rotation

For the month of July, I traveled to Zaragoza, Spain as part of a Global Health Rotation and agreement between Rutgers-Robert Wood Johnson Medical School and the University of Zaragoza School of Medicine. For the first week, I worked in primary care health centers both within the city of Zaragoza and in more remote locations.

For the final three weeks of the program, I was partnered each day with a physician and rotated in a variety of fields, including general surgery, pediatrics, cardiology, and endocrinology. The majority of rotations were completed at Miguel Servet University Hospital, a teaching hospital of the University of Zaragoza Medical School, equipped with 1345 beds. Other rotations included primary care at Royo Villanova Hospital, a 236 bed community teaching hospital, and gynecological surgery at Hospital Provincial Nuestra Señora de Gracia.

Additionally, as part of the program I was housed in a homestay with a third-year resident in family medicine. This was a great opportunity to become better acquainted with the city and improve my language skills.

Goals and Reasons for Going Abroad

As a Hispanic Studies major as an undergraduate, I had already studied in Spain, but was eager to return as a medical student. In spending the summer in Zaragoza, my primary goal was to gain clinical experience while immersed in the Spanish language and culture. I also wanted to apply the knowledge I had learned in the first year of medical school to patient care.

Lastly, I wanted to learn more about Spain's health care system. While the United States' total health expenditure is 17.1% of GDP, Spain spends far less, only 9.0%, with better health outcomes¹. Why is this? Having never worked within a universal healthcare system, I was excited to learn more.

Pictures and Stories from Abroad

On my first day in Zaragoza, I was assigned to work in rural medicine, driving one hour north to Sástago, Spain, a municipality of the Zaragoza province with 1,307 inhabitants. Within the city of Sástago there is a small government sponsored health center with five family medicine physicians on staff. After spending the morning in Sástago, we traveled next to Alborje, a remote municipality of 124 inhabitants. The physician I worked with estimates that she visits this town roughly once per week, seeing 2-3 patients. There are over 55 national health centers in the Zaragoza province, and each citizen is assigned to one based upon home address. The primary care physician is essentially the "gatekeeper" to the healthcare system, regulating patient referrals to specialty care. Overall, I was impressed with the complexity and efficiency of primary care in the region, as well as the electronic medical record, which was standardized throughout the autonomous community of Aragon, Spain, no matter the clinical setting.



The image on the left is of Miguel Servet University Hospital, where most of the rotations were completed. On the right is the interior of the Arrabal Health Center, where I worked in pediatrics and primary care.

My experience in Spain also helped to reinforce components of the first year curriculum. For a period of three days, I was assigned to work with a pediatric endocrinologist at Miguel Servet University Hospital, and applied knowledge learned in the first year. In seeing a child with suspected hyperthyroidism, I was able to interpret lab results and conduct a history and physical examination on the child. In fact, I was able to observe a clinical finding, exophthalmos, a protrusion of the eye anteriorly out of the orbit, not frequently seen in the United States and associated with this condition.

I am thankful for my experience abroad in Zaragoza, Spain, and learned a great deal from clinicians in a variety of areas. Physicians throughout the city were excellent teachers and allowed me to further develop my clinical and interpersonal skills. Being that very few if any of the patients knew English, I was compelled to communicate entirely in Spanish throughout the experience. While this proved challenging at the time, it allowed me to become more comfortable with immersion in a Spanish speaking environment. Additionally, I was able to sit for an oral examination to be a licensed medical interpreter upon my return to New Jersey. As a third year medical student next year, I will be certified to work with my patients using the Spanish language.

Aside from my clinical experience in Zaragoza, I befriended a number of local medical students who I worked with in primary care. I realized that medical education is quite different in Spain as well, with students completing a six year curriculum after graduating high school. Three years are spent learning the basic sciences, while the final three are comprised of clinical rotations.



The image of the left is an aerial view of Zaragoza and the Ebro river from atop the Basilica of Our Lady of the Pillar. The image on the right is of the main plaza in the city, Plaza Pilar.

Summary of trip and conclusions

I highly recommend the global health rotation in Zaragoza to first year students fluent in Spanish that are looking for global health shadowing experiences. I worked in a variety of settings, including clinics, health centers, community hospitals, and at a large teaching hospital. I was able to build upon history taking and physical exam skills developed in the first year all while communicating in the target language. I was also able to immerse myself in the Spanish culture by living with Spaniards, befriending local medical students, and traveling throughout the country on weekends.

Throughout the course of the trip, I developed an appreciation for the Spanish healthcare system and its central focus upon primary care and preventive medicine. I hope to return to Spain during my fourth year of medical school to complete a distinction project in Global Health on the history of medicine in Spain.

Contact info for program

More information about this program can be found at http://rwjms.rutgers.edu/global_health/

Funding For Program

Part of this program was paid for with funds from the Rutgers- Robert Wood Johnson Global Health Department

Works Cited

1. "Spain." *World Health Organization*. World Health Organization, n.d. Web. 28 Nov. 2016.

2. "UNdata | Country Profile | Spain." United Nations, n.d. Web. 28 Nov. 2016.

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