Interview: David Lenihan – CEO of PHSU and Kenira Thompson – President of Ponce Research Institute, Puerto Rico



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David Lenihan, CEO of Ponce Health Sciences University (PHSU), and Kenira Thompson, president of the Ponce Research Institute, highlight the institution's pioneering efforts in creating cultural competency for medical graduates and increasing investments in clinical research from the US for large-scale trials.



What are your perceptions of Puerto Rico's research community?

DL: Puerto Rico's research community is very close-knit. Different institutes are able to share resources to work collaboratively, and based on the size of PHSU (800 students), we receive an exceptional amount of research grant financing. We owe our success in this to a collaborative approach that encompasses all domains regardless of specialty, which in an island environment

becomes a larger priority.

KT: Puerto Rico faces certain disparities not only in terms of healthcare but also research. In fact, certain diseasesimpact our Hispanic communities differently than in the US or elsewhere. PHSU and the Ponce Research Institute have focused on addressing important issues specific reducing health disparities in hispanic communities. The university has recruited top-notch researchers to Ponce and provided the necessary resources they need. PHSU is recognized nationally and internationally in areas like cancer, HIV and neuroscience, all of which are encompassed under Puerto Rico's health disparity umbrella. Most of our operation is funded by the National Institute of Health (NIH), and we have also had successful clinical trials operations sponsored by the pharmaceutical industry for the last 20 years. Consequently, pharmaceutical companies have continuously looked for us to service as a high-quality site for their clinical trials. We have also managed to leverage resources with the local government and the Puerto Rico Science, Technology and Research Trust (PRSTRT), who are helping universities and industry strengthen their research capabilities to help recruit faculty researchers. PRIDCO has assisted us with the facilities and real estate necessary to make these operations functional and continue to grow.

DL: North America is facing a cultural deficit in healthcare, and our unique health disparity research is a real asset for the US. Despite the rapid increase in the Latino population, there is actually a decline per hundred thousand of Latino doctors. Such a decline affects not only the patient–doctor clinical reality but how a given disorder or disease is investigated. One example of this is cancer. Cancer can be very specific to genotypic or cultural backgrounds; PHSU is leading this area worldwide and our research is geared towards those health disparities. I truly believe that our approach to the cultural aspect of science and healthcare in general is the reason for our healthy research funding and frequent publication in top journals. We hope that the US will follow suit and commit more resources to this important area of research. We are now beginning to export this aspect of cultural integration in research to universities in North America as a means of encouraging greater collaboration between Puerto Rico and the US.

What exactly are these health disparities?

KT: For example, genetic ancestry studies have identified that breast cancer predisposition for Puerto Rican women is different than that of North American women of other ancestries. Our Cancer Biology Division has spent many years identifying the genetic markers specific to Puerto Rican breast and skin cancer predisposition compared to other Hispanic and global populations. We have also identified low DNA repair capacity as an important risk for breast cancer in Puerto Rican women. Our current research sits at the forefront of Precision medicine, which requires

epidemiological, demographic, and genetic information to make the best therapeutic decision for each individual patient. These targeted treatments for specific populations are extremely important for patient outcomes and for reducing costs.

How can institutions like PHSU contribute to having better cultural competency within the American medical community?

DL: Puerto Rico has four medical schools; all graduates have cultural competency in Hispanic healthcare. Puerto Rico is the main supplier of new Latino physicians to North America. With the population exploding in the US, the number of physicians with those skill sets to treat them need to be there. Most students at medical schools are white. For example, if I have a heart attack (I am white), only the doctor and my wife would be in the emergency room. If a Hispanic patient has a similar heart attack, the physiology is the same, but there might be 30 people in the room. Medical treatment for that patient will be the same, but the cultural handling of the patient – whom you talk to, physical contact with the patient, etc. – is very different. PHSU produces doctors in Puerto Rico with the necessary levels of cultural competency to effectively manage this kind of situation, whereas the majority of US-trained doctors lack this skill. While the Latino population of southern border states such as Texas, Arizona, or California has not changed much in recent years, it is changing in the central states. As that population moves inwards, there are far fewer physicians with that bi-cultural skill set in states such as Iowa, Nebraska, and Oklahoma.

PHSU creates doctors with this added value, and these doctors can treat many people and save many lives. I hope that as we start to highlight this nationally, it will start driving capital investment down to Puerto Rico. Health systems in New York, Oregon, and Missouri are already starting to supply capital resources to the island to continue enhance that training element. One institution in Brooklyn wants to become the first Spanish-speaking hospital system in the US, using PHSU's graduates for their residency programs, since Columbia and NYU graduates lack these skill sets. That fills a valuable need in North America. This is especially true given that the Hispanic population in the US is growing faster than such doctors (with these skill sets) can be produced.

Is the American healthcare community conscious of these rapidly changing demographics, and is it really taken into consideration?

DL: Medical schools move at glacial paces, and methods of teaching rarely evolve with the times. We are starting to change it here, but even at PHSU, things move slowly. The number of underrepresented minorities (URM's) entering medical school is fractional when compared to the actual percentage of URMs in the US. In states such as Oregon and Missouri, only a very small

percentage of the student population consists of Latinos. There needs to be a change in how we identify students who get into medical school. In my opinion, the US focuses far too much on the entrance exam, forgetting to factor in the way in which a given student will treat patients. It is a tough dichotomy to figure out, but I believe that the Puerto Rican schools are leading the field in this area.

What is your assessment of the situation of doctors rapidly leaving Puerto Rico for the US?

DL: As an outsider, my perception is that Puerto Rico, be it the government, the general population, or healthcare institutions, wants to hold on to the students who graduate. I am not sure if this is the answer. You cannot force someone to stay here if going to Miami means earning $50,000 more annually. Instead, by highlighting the unique skill sets of its graduates, Puerto Rico can ensure that more capital investment comes to the island, meaning that residents can expect to earn more, and then they will stay. This takes time, but we've already started the process by reaching out to some partners such as PRSTRT and Puerto Rico Industrial Development Company (PRIDCO) to help encourage this equalization of pay.

A physician in Puerto Rico will make approximately 50 percent of what a physician in the US makes for performing the same procedure. Puerto Rico is part of the US, medical education and hospitals are accredited by the same organizations, and the people in Puerto Rico pay the same taxes to Social Security and Medicare. Yet Puerto Rican physicians are not entitled to the same reimbursement rates as their US-based colleagues. This causes Puerto Rico to have a lack of capital, which—in term of healthcare organizations—is required for new equipment, building infrastructure, and hiring new physicians. Though the data regarding the so-called brain drain remain somewhat open to interpretation, by almost any measure the field of healthcare has experienced losses of qualified personnel. If rates were equalized, there would be more investments in hospitals for things such as new equipment, which would in turn incentivize graduates to stay, knowing they would be able to access that technology. We at PHSU hope to bring these investments to Puerto Rico by promoting healthcare to the southern part of the island and by developing partnerships with hospitals and universities in the US.

How have the recent cuts to Medicare Advantage affected Puerto Rico?

DL: Puerto Rico is not allowed to join the Affordable Care Act exchange. If a state does not join the exchange by the end of 2015, it will take a 17 percent cut in its block grant. As a territory, Puerto Rico is not allowed to join the exchange, yet it will have to take these cuts because they will be

forbidden from joining—think Catch 22. That means a significant reduction in capital investment to the island; the whole situation is nonsensical.

How attractive is Puerto Rico for pharmaceutical companies to work with PHSU to develop clinical research?

KT: We have multiple clinical research operations in Puerto Rico. Every medical school has an active site, and there are some other privately-sponsored sites, all of which work collaboratively to be competitive. PRSTRT has established a coordinated, multi-center, clinical research unit as an initiative to allow us to petition as a group to be included in some large-scale trials. This is a work-in-progress with industry and academia, and we continue to strive towards increasing the participation of Puerto Rico in large-scale clinical trials. As a US jurisdiction, Puerto Rico's regulation quality is comparable to the mainland, but our geographic distance is sometimes a competitive disadvantage. However I am confident that the concerted efforts of PRSTRT and our collaboration will allow us to participate in these large-scale trials in the near future.

DL: With more trials, we will have more opportunities to compete for NIH clinical research grants, which come with construction grants and other healthcare investments. Individually, it is tough for us to compete; our sample sizes are not large enough. If all of Puerto Rico's institutions can work together, as a group we will be much more competitive. One example of this is PHSU's collaboration with other health systems on the island in a significant research study on the unique febrile diseases of dengue and chikungunya. This research is needed throughout the Caribbean and the Southern Hemisphere, and PHSU leads the world in this research.

KT: A collaborative surveillance project with Saint Luke's Episcopal Hospital in Ponce has resulted in the establishment of a comprehensive febrile disease patient data set, which includes demographic, epidemiological and clinical data and is very critical for future research activities of global impact. At PHSU, in addition to producing physicians, we are also producing researchers. We have a PhD Program in Biomedical sciences that graduates top-notch researchers who continue with postdocs and establish themselves as academic researchers in multiple sites worldwide.

DL: To that end, we have made a financial commitment in scholarships to invest in this. Furthermore, we have a great public health program that fosters the previously mentioned bi-cultural skill set, and I believe that we have one of the best psychology programs in the US. All psychology schools in the US are scrambling to get internships or residencies for their students; we have been doing that for years at PHSU. In that sense, we surpass many top US schools in terms of curriculum delivery and student experience.

KT: Our psychology students are being trained not only by psychologists, but also physicians and researchers in a collaborative manner. Lots of courses are team-taught, making students unique and marketable for good jobs after graduation.

DL: Another interesting research program at PHSU is in our psychology program. In this study, our doctors, interns, and students do consultations on patients who enter the ER at one of our local hospitals. They found that almost 50 percent of patients coming into the ER have some level of psychological complaint: depression, bipolar, or just not understanding what the doctor told them at the last visit. By correctly identifying the patients' actual needs and what is and is not an emergency, this study has saved the hospital millions of dollars every year. The other interesting part of this study is that the psychology program interacts collaboratively with the medical program to improve patient care throughout *all* the health systems. This program is so exciting that we are preparing to expand it into North America.

Could PHSU serve as a role model for North American medical schools in general?

DL: It is not just North America that can benefit from our experience, but the entire world. There is a rapidly-growing middle class across the globe, and healthcare demands must be met. It will be tough to replicate in the US as our doctors need to infuse this cultural competency into the current health system, and PHSU should lead by example. Many schools in the US have zero Latino students and millions of Latino patients in their states, and we have several American universities that are asking us to teach cultural competency aspects of health delivery to students and doctors in their schools and hospital networks.

What would you like to achieve during your tenure here?

DL: I hope to quadruple our research and to have interacted with at least ten health systems across the US. These interactions with non-Puerto Rican health systems will contribute to a database on patients, in turn allowing us to apply for more basic science and clinical research grants that will provide a significant number of ROIs for Puerto Rico. I want medical students from other schools to come here to receive training that they would not receive in their home states. We have also entered into agreements with the St. George's University of London and the University of Nicosia for their students to do clinical training here, and in 2016, our students will have access to England, Spain, Egypt, Israel, Cyprus, and Greece for studies abroad. I would like to see us move from an average school to an exceptional one based on this distinctive cultural competency. The US needs this, and we can be number one in this niche.

Puerto Rico is the answer to many healthcare problems in the US. If managed correctly, the realizing of this tremendous potential could be the driving engine to bring Puerto Rico out of its economic crisis.

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