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Guatemala & the University of Pennsylvania: Meeting in the Middle

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Guatemala & the University of Pennsylvania: Meeting in the Middle

Abstract

The GUATEMALA-PENN relationship is a partnership that is borne from more than a century of research, service and scholarship. Our goal, with this book and with our programs, is to grow this partnership based upon the reciprocal needs of our Guatemalan stakeholders and the mission of the university. Guatemala is only one country away from the US. Our shared heritage and joint economic and social interests make it critical to foster a strong and mutually beneficial relationship between our two countries. Our connections have evolved over time in response to new knowledge gained about each other. This book is a testament to our collective past, present and future.

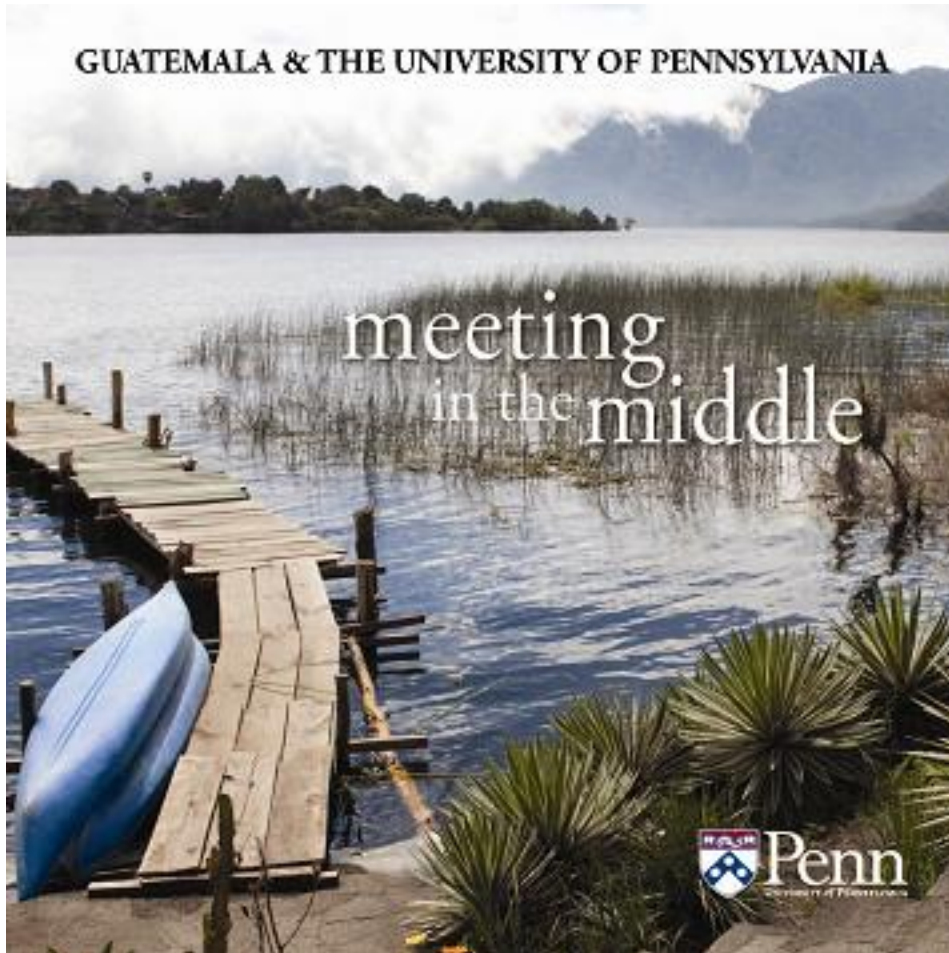
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GUATEMALA & THE UNIVERSITY OF PENNSYLVANIA

meeting
in the middle



Penn
UNIVERSITY OF PENNSYLVANIA



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Facing page, clockwise from top left: Universidad de San Carlos de Guatemala, University of Pennsylvania, Hospitalito Atitlán, Universidad Francisco Marroquín.

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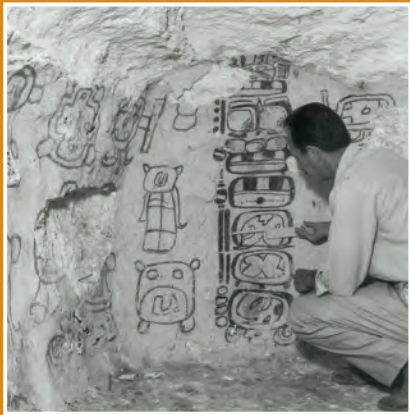
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past and present

A fine genius in his own country is like gold in the mine.

– BENJAMIN FRANKLIN,
POOR RICHARD'S
ALMANAC, 1733



Above: Aubrey Trik in Burial, Tikal, 1961.

Below: *Recetarios de Indios en Lengua Maya*, by John Pio Perez (Merida, 1870); George Byron Gordon, Penn Museum Director, 1910-1927; Excavations at Chocóla (~1908-1934); Tatiana Proskouriakoff (1909-1985) at Piedras Negras, 1936.

PENN'S RELATIONSHIP WITH GUATEMALA is characterized by a long-term commitment that has evolved over more than 100 years, making Guatemala one of Penn's oldest global partners. Historically, Penn's first projects were conceived and conducted by Penn scholars. Penn's commitment to Guatemala deepened over time, as projects became more collaborative and featured a two-way exchange.

Guatemala is one of Penn's primary global health partnership sites. Relationships have been developed with Universidad de San Carlos de Guatemala, Universidad Francisco Marroquín, the Hospitalito Atitlán and local Santiago Atitlán officials. Among these partners, Penn has earned the reputation of bringing together universities and other interest groups that otherwise might not have found ways to work together.

Future projects will aim to be Guatemalan-led, with Penn scholars providing training and guidance for projects driven by needs identified by Guatemalan scholars and communities. The goal of the partnership

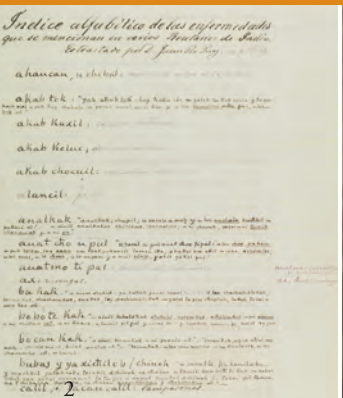
is to improve the health and wellbeing of Guatemalans in Guatemala and to broaden the global perspective and experience of Penn scholars.

The Values of the University of Pennsylvania

The University of Pennsylvania culture promotes the collaborative partnership with Guatemala. Penn's founding principles have infused Philadelphia and the University of Pennsylvania with a belief in the individual and in self-realization.

Penn's Academic Roots in Guatemala

Penn scholars have conducted archaeological and ethnographic research in Guatemala for over a century. Penn's presence in Guatemala began with Daniel Garrison Brinton, an archaeologist and ethnologist who studied Native American sources from Guatemala and became a professor at the University of Pennsylvania in 1886.



Tikal, Temple V. The topmost portion of this temple was excavated by Penn archaeologists, and the bottom portion was excavated by Guatemalan archaeologists.



Robert Burkitt first came to Central America in 1895 as an assistant to George Byron Gordon, then Director of the Third Copán Expedition in Honduras. Burkitt worked in the Alta Verapaz region of Guatemala, where he began studying linguistic patterns among the Kekchi Indians. At the turn of the century and until 1937, Burkitt excavated and collected in that region on behalf of the University Museum. (from *Send Me Mr. Burkitt...Some Whiskey and Wine!* By Elin Danien; Expedition Vol 27 No. 3)

M. Louise Baker (1872-1962) was a teacher and a preeminent artist for archaeological illustration associated with the University Museum. Her detailed and vibrant paintings of Maya pottery were featured in Museum publications between 1925 and 1943. She began to restore Maya pottery and create illustrations suitable for publication while she was still a student at the Pennsylvania Museum and School of Industrial Arts. Museum Director George Byron Gordon – who immediately recognized her talent – and his successor in 1927, Horace H. F. Jayne, fostered Baker's career by sending her throughout the United States and to other countries to paint collections of Maya pottery. In 1931, still under the auspices of the University of Pennsylvania, she painted extensive private collections in Guatemala City and Cobán, as well as newly excavated vessels from a Carnegie Institution dig at Uaxactún, Guatemala. She continued to paint Maya pottery for the University Museum until her failing eyesight forced her retirement in 1938. – from Elin C. Danien's work, *Paintings of Maya Pottery: The Art and Career of M. Louise Baker* (2006).

Penn archaeologists led other important excavations in Guatemala including at Chocóla, Piedras Negras, Tikal, and Quirigua.



Above: M. Louise Baker (1872-1962), preeminent illustrator of Maya art. Below: Vase from Quiché; Vase from Chamá; Vase from Chamá; Vase from Ratinlixul.





Mary Butler Lewis (1903-1970) re-excavated a number of sites in the Guatemalan highlands, in the late 1930s to early 1940s.

Due to its inaccessible location in the jungles of the Petén, Guatemala, the great Maya city of Tikal was only briefly visited by explorers until the Museum organized a large-scale project of excavation and restoration with the assistance of the Guatemalan government. Beginning in 1956 until 1970, under the successive leadership of Edwin Shook, Robert H. Dyson, Jr., and William R. Coe, archaeological investigations cleared many of the important buildings and revealed the dynastic, architectural, and settlement history of one of the most important Maya cities.

Dr. Robert Sharer, a Mayanist and an archaeologist, was a professor in the Department of Anthropology at the University of Pennsylvania. Dr. Sharer's work included extensive time spent excavating Quirigua, a classic Mayan site in the lowlands. It had been a secondary capital in Guatemala from about 426 A.D. until about 738. Dr. Sharer began his work at Quirigua in 1972 with

Dr. Coe who was an archaeologist as well as a masterful photographer and artist, and continued to excavate at the site until 1979.

Cultural anthropologists have made significant contributions as well. Dr. Ruben Reina examined the manufacture of pottery and the political system in the highlands. Dr. Simon Martin studies Epigraphy and is the museum's Guatemalan hieroglyphic specialist.

The Pennsylvania Declaration

In 1970, University of Pennsylvania Museum of Archaeology and Anthropology Director Froelich Rainey presented the famous Pennsylvania Declaration, giving the Museum the distinction of becoming the first in the world to stop collecting archaeological objects obtained through the looting and plundering of ancient sites. The Declaration helped to strengthen earlier laws preventing the illegal removal of artifacts from Guatemala and other archaeological sites, but which had not consistently been observed. Many other museums have since followed the Penn Museum's lead. The Pennsylvania Declaration can be viewed as a forerunner in the protection of international sites and an important moment in the Museum's rich history. – Alessandro Pezzati, the Senior Archivist at the University of Pennsylvania Museum of Archaeology and Anthropology (excerpted from *Expedition*: volume 52, number 2)

Dr. Sharer explained that the University of Pennsylvania Museum of Anthropology and Archaeology does not have large collections



Above: Linton Satlerthwaite examining Stela, Tikal, 1958; Workers raising Lintels on Temple I, Tikal, 1959; Potter family in Chinautla, Guatemala, 1955, participants in Ruben Reina's ethnographic research in social organization.



Mask in structure, Tikal, 1962.



Christopher Jones excavates Quirigua Mask, 1976.

from Guatemala because most of the archaeological material stays in the country of origin. The museum maintains the data and paper records from excavations, and it has some important ethnographic collections. One such collection includes woven materials from Guatemala, including huipiles collected by Dr. Sharer.

The Penn Compact

When Dr. Amy Gutmann became University President, Penn took a big step toward further growing Penn's relationship with Guatemala. 'Global engagement' became a major part of the University's new mission statement laid out in the Penn Compact.

According to Professor of Epidemiology, Dr. Charles Branas, one of the first countries Penn focused on in its new global engagement

strategy was Guatemala. He says, "there was a clustering of people that had gone to Guatemala and Penn already had wonderful long-term relationships there."

Penn-Guatemala Health Initiative

One of the factors contributing to the strong relationship with Guatemala is the Guatemala Health Initiative (GHI). Founded in 2004, it has been a service, education, and research home for Penn's partnerships in Guatemala. GHI got off the ground when the Provost's Office provided seed funding for two summers to encourage development of a field school for undergraduate research in Guatemala. Penn Abroad and the International Internship Program actively support the GHI and the Center for Undergraduate Research and Fellowships is committed to supporting

this undergraduate research enterprise. Undergraduate, graduate and professional students who attend the field school receive pre-travel orientation to prepare for their summer-long stay in Santiago Atitlán. Faculty conduct in-country courses and mentorship to help students undertake individual, independent research projects focused on community generated issues. Most student research is focused on issues that are pertinent to the Hospitalito Atitlán or other community based health organizations. Upon return to Philadelphia, students utilize this research experience to complete senior theses, peer reviewed publications, and applications for further research experience.

The community of Santiago Atitlán and the Lake District of Atitlán have become enthusiastic partners with University of Pennsylvania students. When the GHI was founded, the community of Santiago Atitlán

“When you have lived all your life in your country, and then you travel overseas and live outside of Guatemala, you open your eyes to the world. All the world is not Guatemala. There are different options, different opportunities, and you have to explore them. Take the best from your new experiences and apply it back to your life. Why not improve things and help your country?”

– DR. VICTOR
PUAC POLANCO
(PENN GM’12), USAC



Tatiana Proskouriakoff, a trained architect, worked as a draftsman for the museum on the Piedras Negras excavation in Guatemala during the 1936-37 season. This important excavation was begun by J. Alden Mason in 1931 and was later taken over by Linton Satterthwaite. Ms. Proskouriakoff eventually became a prominent Mayanist and a decipherer of Mayan hieroglyphics. These are images of the Acropolis of Piedras Negras, 1939.

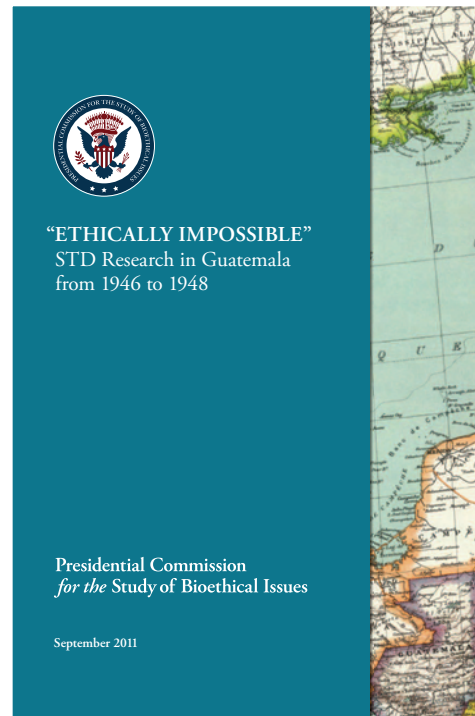


was reopening the Hospitalito Atitlán after many years of closure during the civil war. It is the only hospital on Lake Atitlán with 24 hour emergency and obstetric services. As such, it serves as a key health player and referral center in the lake region. Faculty and students from the GHI have contributed service, research and material support towards the construction of a new facility which opened in November 2010. Dr. Juan Manuel Chuc, Medical Director of the Hospitalito Atitlán, works closely with GHI faculty and staff to further local interests and to assist research projects implemented by Penn students who attend the GHI field school in Santiago Atitlán.

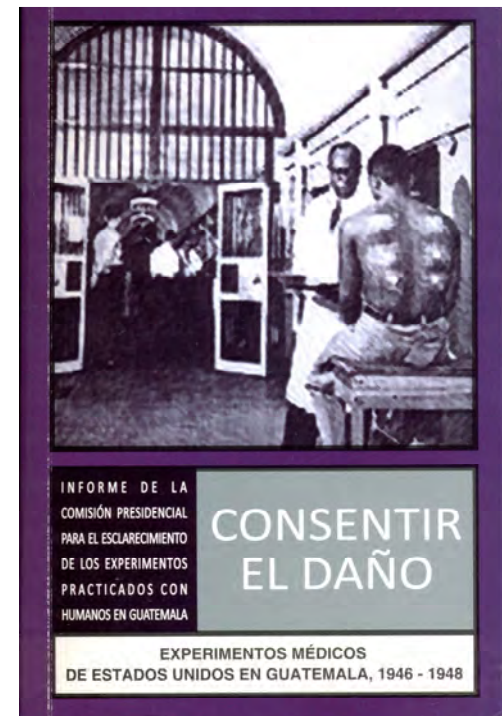
In 2004-5, University of Pennsylvania students performed a community health survey. This survey provided important data which supported the development of the Municipal Health Network of Santiago Atitlán, involving the Municipal Centro de Salud and all other health organizations in the community. The initial community health survey and follow-up research projects carried out with Penn students, have continued to identify health needs for the community. For example, concerns such as maternal health, mental health (related to trauma suffered through violence secondary to war, 2005 destructive mudslides, and loss associated with poverty) and respiratory health have been targeted as critical issues in Atitlán. Students conducted a follow-up health survey during the summer of 2012. The community actively supports and hosts our students with the Mayor of Atitlán (current and previous administrations) offering regular support and access. In addition, the head of the Municipal Health Network and Municipal Health Center has offered enthusiastic, unconditional support.

Ethically Impossible

Egregious ethical violations by US government-funded researchers in Guatemala in the 1940s were addressed by University of Pennsylvania President Amy Gutmann who chaired the White House Commission for the Study of Bioethical Issues. Dr. Gutmann delivered a report to President Obama detailing this shameful chapter in American medical history and stressed that “we need to learn essential practical as well as ethical lessons from the Guatemalan experiments so that nothing like this happens again.” The Commission went further in also recommending more broadly that the federal government develop a way to compensate volunteers who are harmed while participating in medical experiments and specifically requesting a response from the White House Office of Science and Technology Policy.



US White House Commission Report compiled under leadership from Penn and Guatemalan Presidential Commission Report.



“We now have a collaborative NIH grant with Penn directed at high quality scientific research grounded in important core ethical principles. This is important in our context, especially after the Ethically Impossible Study, which we believe is landmark.”

– DR. ERWIN CALGUA,
RESEARCH DIRECTOR, SCHOOL OF MEDICINE, USAC



RECIPROCITY IS A CENTRAL TENET of the Penn-Guatemala program. While the University of Pennsylvania may have abundant resources, Guatemala offers immeasurable value to Penn and its students and faculty. Establishing this relationship with Guatemala has allowed Penn students an opportunity to see the world beyond U.S. borders. The students have thrived when asked to offer more of themselves, to stretch beyond their familiar experiences and out of their comfort zone, and to adapt to another culture which is quite different from their own. Working, learning, and exchanging experiences in Guatemala has broadened students' and faculty's lives and professional experiences in profound ways.

Similarly, when Guatemalan physicians have come to the University of Pennsylvania for a year-long Master of Science in Clinical Epidemiology (MSCE) residency, both parties benefit. Guatemalan students are given the opportunity to learn at a top U.S. university,

and Penn medical students and faculty are able to meet individuals from a country which is one of the U.S.' closest neighbors. When the University of Pennsylvania hosts Guatemalan faculty from the Universities of San Carlos and Francisco Marroquín or the Hospitalito

Atitlán, Penn faculty and students learn a great deal about Guatemalan universities and institutions and their ongoing research projects. Most importantly, all partners find new ways to strengthen their friendships and collaborations for the future.



This library is a site of collaboration between University of Pennsylvania librarians and librarians from the Universidad Francisco Marroquín

A Two-Way Exchange

Dr. Francis Johnston, Emeritus Professor of Anthropology, sees that the idea of exchange began when many of Penn's researchers and archaeologists worked in Tikal and other sites throughout Guatemala. These collaborations fostered very positive and strong relationships among archaeologists. These relationships were not just diplomatic, but an exchange – both intellectual and cultural.

This sentiment is echoed among current faculty as well. Dr. Kent Bream (Penn M'90), Assistant Professor of Clinical Family Medicine and Community Health, says, "Students who want to work in an interdisciplinary way, a collaborative way, a partnership way, a respectful way, want to stay here.... You can see that glimmer in every single person that stays here. And it's wonderful. It really is."

Anne Seymour, Associate Director of the Penn Biomedical Library, is developing a

collaborative relationship with the librarians at the Universities of San Carlos and Francisco Marroquín, and with the Hospitalito Atitlán to build capacity in use of information technology, medical information resources and mobile telemedicine. Ms. Seymour has led a team of Penn faculty, undergraduates and librarians in investigating the feasibility of implementing mobile telemedicine and telementoring programs in rural locations such as the Lake Atitlán region. These programs are among many efforts that rely on, and fortify, the collaborative nature of the Penn-Guatemala relationship.



The Community is the Expert on the Community

When Dr. Bream's first students went to Guatemala, one of the sites that they evaluated was Santiago Atitlán, which was re-opening its hospital after years of civil war. He explains that "Community members said they were

The whole goal of our current programs is to partner in a two-way exchange, university to university, where we offer something and they offer something. The exchange is in research, the exchange is in teaching, and the exchange is in service."

– DR. CHARLES BRANAS,
PROFESSOR OF EPIDEMIOLOGY, PENN





Universidad de San Carlos de Guatemala medical campus.



I think we have to constantly exercise humility, constantly exercise our understanding that they are the experts in the community. They are the ones who know the dynamics of the community. We are there to learn from them and take advantage of that, and put it in action in this partnership. I think involvement of the community is a key factor and we are doing it little by little.”

**– DR. CLAUDIA VALEGGIA,
ASSOCIATE PROFESSOR OF
ANTHROPOLOGY, PENN**



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looking for an academic partner. We said, 'Well, these students are looking for a global health partner. So we'll become friends.' We then intentionally, over the next couple years, worked to build our relationship."

The philosophy of community-based participatory research and intervention became the cornerstone of the Penn programs in Guatemala. Penn may provide outside methodological expertise but it relies on the community for knowledge of its own issues.

Dr. Claudia Valeggia, Associate Professor of Anthropology and a biological anthropologist, shares Dr. Bream's commitment to community-based participatory research. Her research focuses on understanding the correlates of lifestyle transitions among indigenous and non-indigenous communities in northern Argentina and Guatemala. As the socio-cultural world changes, how does the ecology change? How is that reflected in fertility patterns among women and growth in children?

Dr. Valeggia feels that Penn has been exceptionally good at showing the community that faculty cares deeply about them, is highly invested in their wellbeing, and that Penn faculty will continue to return to Guatemala. She said, "We are not just there to gather data and never show up again."

Serena Stein (Penn C'09), says, "What the faculty taught me, and what every anthropologist and every researcher should know is to give something back while you're there." Ms. Stein says her time in Guatemala was "probably the best learning experience

that I've had. It solidified my passion for anthropology, and I would say a life long commitment to health issues, especially in the global dimension."

Dr. Justin Schram (Penn M'08) also had a powerful experience in Guatemala and learned to begin by asking questions and discovering community needs. He says, "Coming from our first world academic medical institution, placing yourself into a far different historical culture and tradition, you need to start by asking questions. You can't come in with answers." Reflecting the views of his mentors, he continued, "Community-based participatory research informed the way that GHI worked and what its principles were.



Dr. Schram talks with an Atiteca.

That approach is essentially to engage local knowledge and perspective to inform how you ask questions and learn what questions are relevant in the first place."

“Attending a local wedding, going to the market with an old woman, going to school with a kid, participating in one of the town fairs, or going to cultural events or church. These everyday events, being part of them, witnessing them, experiencing them with locals, really helps you understand the village. GHI enabled this immersive experience that I think helped integrate us in the town and understand the local traditions. We're not just showing up with our kit and stethoscopes and medicines and setting up shop for the day. We're really trying to become part of the town and learning its history and tradition, to find out how we can be useful in the context of their own society.”

—DR. JUSTIN SCHRAM (PENN M'08)



Above: Meeting of the Medical School Dean from the University of San Carlos, Dr. Jesus Oliva, and the Medical School Dean from the University of Pennsylvania, Dr. J. Larry Jameson, along with other faculty from both universities.



The Penn-Guatemala Program allows Faculty to Gain Insight and Grow Professionally



I feel, for me professionally, that it has allowed me to use the skills that I have in a very creative and constructive way. And personally, it takes me way out of my comfort zone. It gives me a challenge and an opportunity to create things that I couldn't otherwise create."

– DR. FRAN BARG (PENN GR'00),
ASSOCIATE PROFESSOR OF FAMILY
MEDICINE AND COMMUNITY HEALTH, PENN





Dr. Calgua and Dr. Martinez meet with Penn students in Philadelphia.

Two Countries with Similar Problems Can Learn from Each Other

The exchange between Penn and Guatemala holds the potential for great benefit to both. Dr. Branas says, “I would love to continue to grow the relationship between the universities and between Penn and the country at large.

Why? It really is in our backyard, and the problems are massive and reflect our problems here. The violence problem in Guatemala is connected to the violence problem here in the United States. We have cultural similarities that drive that violence, whether it be a culture of weapons, or a culture of violent activity. And Guatemala is only one country away.”

The old Hospitalito Atitlán that closed its doors after the 2005 mudslide.



“When we travel to another country, we learn even more than when we stay home. You actually learn from the exchanges. We have a lot of good things that come from having people from different backgrounds all together, working together, exchanging their experiences.”

– DR. SERGIO MARTINEZ
PROFESSOR OF ORTHOPEDIC
SURGERY, UFM



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“Penn has two important things to offer to a developing country like Guatemala. First, it has the capacity to train. It has the structure, the resources, and the highly trained individuals who can share with us knowledge, skills, and technology. Then it has the position to bring us together and open an opportunity to get two institutions that had never had worked together, to do it. I think Penn has a very important role here.”

—DR. DORIAN RAMIREZ FLORES (PENN GM'13), USAC



“The richness of the people and the relationships is fantastic, and we have good ties with their government. When we started this process several years ago, most global health programs were disease-based. Instead, we wanted our program to be partnership-based. Our plan was to link the program to what the other universities wanted and needed, whether it be research infrastructure, helping to establish an emergency medicine residency, or cross-fertilizing ideas. We would bring to bear Penn’s strengths in those areas of need.”

– DR. BRIAN STROM,
EXECUTIVE VICE DEAN FOR
INSTITUTIONAL AFFAIRS,
PENN MEDICINE



capacity building

Inauguration of the new Hospitalito Atitlán.

MUCH OF THE WORK THAT PENN faculty have conducted in Guatemala has been aimed at shoring up the country's capacity. Projects are designed to tackle needs identified by Guatemalan partners, and the work is carried out with local resources, including finances and physical labor. Key stakeholders, including Guatemalan experts and community-based collaborators, are involved from project inception through implementation. Their investment is required to assure that work will be sustained after Penn faculty and students return home.

Penn students and faculty gain a great deal from helping to buttress the infrastructure in Guatemala. They come back with a greater sense of purpose and an understanding of their place in the world. Often, students' work in Guatemala is life changing and helps them to

clarify the future direction for their careers. For faculty, teaching and working in Guatemala translates to time spent outside of the familiar classroom, stretching themselves and helping them to bring fresh, new materials into their teaching and professional work.

In these ways, capacity building becomes a two-way exchange.

Guatemala Belongs to Guatemalans

"There's so much to study in Guatemala! There's a world out there to study! When we go back, there will be very few of us to do these kinds of projects and who have this knowledge. We're going to have to pave a way to show people that this is important. It's one thing

to know that research is important and another to give it the priority that it needs. So we are going to have to start paving the way to get that culture started, of the importance of studying our country and not just relying on information from the outside." – Dr. Marilyn Santana (Penn GM'13), UFM

When Dr. Bream began exploring the possibilities for a partnership in Santiago Atitlán, he and his students conducted a community needs assessment and provided a report back to the community, in Spanish. The hospital used the findings to help prioritize their health needs. From it, they developed a strategic plan for health in Santiago Atitlán, and the community independently formed a health network of all the local providers.

“There is an advantage for the university, the Guatemalan society, and myself, to conduct research. In Guatemala, we need rigorous research, so that we can rely on the results. We want to believe that our results are close to the truth.”

– DR. RAMIREZ FLORES, USAC



Guatemalan physicians Vivian Salomon, Monica Paz, and Lorena Aguilera (all Penn '14, UFM) smile along with Benjamin Franklin during their first year of scientific training at Penn.

“It’s their strategic plan,” said Dr. Bream. “It’s their health network. It’s their idea, but we methodologically contributed our expertise. Guatemala belongs to Guatemalans. I’m very proud of what the students have

done. I’m very proud of what the people of Atitlán have done. It’s their accomplishment. But, when I went and saw their hospital that they built, their new one, I was bowled over. The only thing I think I’ve accomplished is my contribution to the students. I think the community of Atitlán has accomplished a lot, and I’m excited by that.”



Enhancing Dental Education in Guatemala

Dr. Ramiro Alfaro, Dean of the UFM Dental School, received his dental training in Guatemala and came to the University of Pennsylvania in 1964 to study oral surgery. He wanted to learn in the United States and then

Dr. Carlos Guillermo Alvarado Cerezo, General Secretary, Dr. Erick Arnoldo Porres Mayén, International Cooperation Director, and Dr. Erwin Humberto Calgua Guerra from Universidad San Carlos visit Philadelphia.



Anna Aagenes (Penn C'10) washes her laundry with women of Santiago Atitlán.

go back to Guatemala to teach and enhance dental education in his country. After a year and a half at Penn and a residency at Yale-New Haven Hospital, in 1967 he returned to teach and practice in Guatemala.

In 1976, Dr. Alfaro started planning a new dental school at the Universidad Francisco Marroquín. He explains the influence of the University of Pennsylvania as follows:

Dr. Strom with Dr. Ramiro Alfaro (Penn DM '72), Dean of the University of Francisco Marroquín Dental School.



(From left) Drs. Sergio Martinez, Charles Branas, Brian Strom, Rafael Espada, Erwin Calgua, and Rudolf Garcia-Gallont meet with Dr. Espada in his capacity as Vice President of Guatemala.

“The motivation that we received in our training in the United States is what gave us all the strength, force, and knowledge, to do things. If we hadn’t made those qualifications, we wouldn’t have been able to build an institution as good as the one that we have now. It would have been impossible.”

Dr. Alfaro explains that in the beginning, he communicated with a few of his professors and classmates from Penn, and they started an interchange of documents to use as guides for the development of the coursework. The first curriculum of studies at the new dental school was based mainly on that of the dental school of the University of Pennsylvania.

“This cooperative program between UPenn and UFM and USAC is responding to a very important need in Guatemalan society. I think there is a lack of more formal research in Guatemala, focused on our own problems – our own our social, health, and environmental problems. And to generate possibilities to solve those problems. I think it’s more important than just bringing one, two, or three or more people here. It’s about our whole society which needs to better understand its own problems, and the institutions of that society which may become strengthened by this collaboration. It’s very important. I think it will have a great impact. And that’s why it is necessary to continue with this program.”

– DR. RAMIREZ FLORES

“When we’re at Penn, we’re all Guatemalans. When we go back, I hope that we can maintain that and have joint projects. We’re all working toward the same goal. I think the joining of those forces will have an impact on our country.”

– DR. MARILYN SANTANA
(PENN GM’13), UFM



EWB building an irrigation system with Guatemalan NGO in Pajomel.



Farmers and engineers plan irrigation system, Pajomel.

Engineers Without Borders

Tony Sauder is a registered professional engineer and geologist, and a lecturer at the School of Engineering and is a mentor with Engineers Without Borders (EWB). Sauder led a group of students to Pajomel near lake Atitlán in the Sololá region of Guatemala to create an irrigation system for local farmers. The group met with Ati’t Ala’, a Guatemalan nongovernmental organization that works tightly with the community, to identify and plan the project. He explains that:

“Ati’t Ala’ is a nongovernmental organization with a Guatemalan agricultural engineer who has worked on community development projects. Among their staff, there’s quite

a bit of experience. We worked with Ati’t Ala’ leaders to identify Pajomel, high up on the escarpment, the edge of the crater that makes the lake, for irrigation.”

The project takes water from where it emerges in a spring and pipes it to plots where farmers can irrigate vegetables. It is an alternative to only a few farmers collecting water piecemeal from a couple of springs. Farmers in lakeside communities irrigate directly from the lake. There is some public perception, especially among the tourist restaurants along Lake Atitlán that buy vegetables from the farmers, that the water in Lake Atitlán is “dirty.”

“The lake is the main source of livelihood for the inhabitants on its shores, providing water for drinking, bathing, and for agriculture.

However, the lake has recently come under threat. Lack of proper sewage and water treatment has led to persistent contamination. Additionally, the lake has experienced many algal blooms leading to the spread of cyanobacteria, which periodically release toxins dangerous to the health of the people living around the lake.’ (from Post Implementation Report, prepared by Penn students Haoyu Deng and Sophia Stylianos, for Engineers Without Borders-USA).

The plan was to provide spring water for the farmers to irrigate their vegetables and help them avoid prejudice regarding lake water quality. The project was carried out by the community with a team of twelve Penn EWB students and two mentors during the summer of 2011. They returned in 2012 to implement a sanitation program of household latrines in Pajomel.



“Anything we do should have an applied aspect. The work that Penn is now doing in Guatemala is as good as it helps the people. Its value is judged on how it helps the people. Speaking personally, I know. I’ve developed to a point where, that’s how you measure the impact of what you do.”

– DR. FRANK JOHNSTON,
EMERITUS PROFESSOR OF ANTHROPOLOGY, PENN

“We have smart phones loaded with medical software: medical books, medical references, easy to access clinical information. It’s all loaded locally on the phone so you don’t need a cellular signal or an internet to access it.”

– DR. CARRIE KOVARIK,
ASSISTANT PROFESSOR OF DERMATOLOGY, PENN

Tele dermatology Program

Dr. Carrie Kovarik is a Penn dermatologist. She leads the Penn-Guatemala Tele dermatology Project in collaboration with Latin America’s largest dermatology society, INDERMA (Instituto de Dermatología y Cirugía de Piel). The Tele dermatology Project is modeled after a similar, successful Penn program in Botswana. Dr. Kovarik says that in Guatemala, “a lot of the physicians have expressed a need for telemedicine. They’d like to see that happen, especially with dermatology.”

Dr. Kovarik explains, “We’re working to get the telemedicine software on those phones so that the residents can send questions, cases, or pictures of x-rays to their mentors for advice. So when they go to remote locations, they’re not as isolated.”

In the Guatemala program, INDERMA will be answering the local consults, and

local specialists such as trauma doctors and radiologists also may become involved.

“The doctors there know the local diseases, they know the local medications,” says Dr. Kovarik. “If there’s a patient with really severe disease that needs to be referred, they know the landscape best to determine where they could actually put them. For all of our telemedicine programs, we try to keep the specialty care within the country if it’s possible.”

Dr. Sergio Martinez, Professor of Orthopedic Surgery, UFM, has been a strong proponent of the program in Guatemala. He saw that advances like telemedicine could improve care and access to care dramatically, with very few resources. He says, “I saw that it can be done without any big names behind it. Just with the will of the people. The will to say, ‘I can make a change.’ And that doesn’t come from myself alone, but from having a lot of people, and a lot of collaboration.”



Building Penn Student Capacity

Penn's presence in Guatemala has provided students with a wonderful experience that, for many, has served as a springboard to a deeper commitment to medicine and public health work in Guatemala and across the globe. It has motivated students to conduct broader research in medicine, midwifery, public health and anthropology. Many of the students who have taken part in the summer program have chosen to seek advanced degrees in these areas.

Jason Nagata (Penn C'08) went to Guatemala as part of the Penn-Guatemala program in the spring semester of his junior year. His experiences in Atitlán have helped him find ways to combine health and anthropology in his career. After graduating from Penn, he went to Oxford where he earned a Master's degree in medical anthropology. He is now in medical school at the University of California at San Francisco. He continues to use the experiences and skills he first began to develop in Guatemala in his career trajectory.

Sourav Bose (Penn C'11) completed a master's degree at the London School of Hygiene and Tropical Medicine (2012), and now attends medical school at Penn (2016). He says, of the GHI Program, "The faculty's the best part. They're all wonderful people. I'm happy to call them friends and mentors because the entire latter half of my Penn experience was completely shaped by the program and the experience it afforded me. GHI is really a year-round thing because when we come back, it's the faculty that mentor us on our papers, working with us to think about the problems we dealt with, and helping us plan next summer if we want to go back. Even if we're not going back, they become our friends. It really does become a separate family in itself, and that's something that really, really influenced my Penn experience."

Cara McGuinness (Penn C'10) spent two summers and an academic semester in Guatemala through GHI to research maternal and child health. She volunteered at Hospitalito Atitlán and apprenticed with local midwives to understand "the intersection of biomedical and traditional birth models."



Three-dimensional topographic map of Solola Region in Guatemala City.

“One of the strengths of the GHI Program is that students are really allowed to find their own questions as well as their own answers.”

– SOURAV BOSE
(PENN C'11)



Her experience gave her research and medical anthropology skills, and it taught her about “living and learning in a different culture.” It also encouraged her to pursue graduate training in anthropology. She says, “Talking only does so much. In order to be an anthropologist and to soak up culture and try to minimally affect culture, you have to be able to be quiet and listen.”

Anna Aagenes’ (Penn C’10) current work at Children’s Hospital of Philadelphia was inspired by her work in Santiago Atitlán. Anna’s research investigated patterns of helpseeking for women and children who experience violence at home. Her award-winning senior thesis on the topic set the stage for services planning in Santiago Atitlán and inspired MPH student Breah Paciotti (Penn PH’11) to dive deeper into the topic in subsequent summers.



Dr. Chuc and personnel from the Diabetes Education Project participate in a training session at the Hospitalito.

In 2010, in an effort to address contamination of the lake water in Lake Atitlán, the municipal government of Santiago Atitlán embarked on a campaign to build community laundry stations (pilas) that were intended to replace traditional clothes washing directly in the lake. Sascha Murillo (Penn C’11) created a video ethnography that explored women’s perceptions of this dramatic change in their daily life.



“I think that for me the Guatemala Health Initiative was really the experience that solidified my call to go into service in global health, to want to pursue medicine as a career, and to want to help other people in a sustainable way. I learn so much every time I go to Guatemala. It’s a program that has inspired me and continues to inspire me. It’s a reminder that there are a lot of health issues in the world that need some work.”

– JASON NAGATA
(PENN C’08)



research

OVER MANY DECADES, University of Pennsylvania faculty have deepened their research and professional development through their work in Guatemala. Guatemala offers rich opportunities in archaeology, medicine, public health, demography, nutrition and other disciplines. In more recent years, faculty have grown their partnerships with Guatemalans and have increasingly looked to Guatemalans to identify the local needs that research might help serve. Researchers have developed enduring friendships and professional connections from their work, as well as a true passion for the country.

In implementing their projects side by side with Guatemalan scholars and physicians, Penn faculty have transferred research skills and brought in new methodologies and resources. Many of the problems that Guatemala and Philadelphia face are similar. Conducting collaborative research into these shared interest areas helps all parties.

One important research project began in 1962, when Dr. Johnston began traveling to Guatemala to help Guatemalan researchers manage a massive growth and nutrition study begun in 1952. The growth tables that he developed have informed subsequent projects.

Dr. Johnston explains, “I think what we’ve done in Guatemala has contributed to an understanding of growth. It’s really helped to broaden the approach, particularly of educators, about the relationship between physical growth and mental development. There’s a fellow I first studied with in London who used to call growth a mirror of a society. The growth of our children reflects the way we care about the less advantaged and the children in the society. I really feel that what we’ve done has helped to establish that. I think it’s contributed to a lot about our understanding of malnutrition and the ecology of malnutrition, particularly in Latin American populations.”

Jason Nagata collects water samples in Lake Atitlán.



“International connections between institutions really occur because individual faculty members or groups of them had research interests which lead them that way, and then that gives something to build on.”

– DR. JERE BEHRMAN,
PROFESSOR OF
ECONOMICS, PENN



Penn students, faculty and librarians discuss technology needs with Hospitalito Atitán personnel.

The Incaparina Story

From 1969 to 1977, the Institute for Nutrition in Central America and Panama (INCAP), undertook a study examining the health impact of a food supplement, Incaparina, on a population of Guatemalan children. In this trial, participants were randomly assigned access to one of two nutrients. Three decades later, Penn economist, Dr. Jere Behrman led an economic and nutrition research project examining the impact of Incaparina, the more nutritious of the two food supplements, on Guatemalan health outcomes. Incaparina was shown to improve health outcomes

for Guatemalan children and for their children and grandchildren, providing a multi-generational effect. It is still in use throughout Central America.

Dr. Branas explains his perspective on the impact of Incaparina. He says, “If you go to Atitlán and drive to one of the puestos de salud, there’s always a bag of the powder along with measuring tapes and posters telling you where a child will be anthropometrically with or without the powder. It’s dramatic, visually dramatic. Incaparina’s impact has been felt throughout Central America and many portions of the developing world.

Dr. Behrman explains the scientific impact, as well. “At this point we have a series of papers published in various types of journals. Some are in the *Lancet*, a basic biomedical journal; one in *American Journal of Clinical Nutrition*, a leading nutritional journal; one in a major economics journal. So there’s some disciplinary spread, which reflects the disciplinary spread of the people involved. For those of us in the scientific community, this is the best we can do. And it’s very nice to be involved in this very special data set.”

“With our Guatemalan colleagues, and as a neutral third party, a private university, not a government entity – we at the University of Pennsylvania, which already had a good reputation in Guatemala – were able to uniquely get joint access to many things, data, people, places. This allowed us to do analyses and produce reports that were then directly reported back to the country’s Vice President and President.”

– DR. BRANAS



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Penn as Neutral Third Party

Penn’s unique relationship with the government and universities in Guatemala has allowed researchers to conduct important work that might not otherwise have been done. Its stance as neutral third party has fostered research and even facilitated access to covered data, but its relationship with Guatemalan partners is evolving away from designing and leading research. An important goal of Penn’s global engagement with Guatemala is to use Penn faculty skills to train and develop Guatemalan scientists.

Dr. Branas hopes that going forward, most of Penn’s scientific work will be generated and led by Guatemalans, and Penn faculty will serve as collaborators on that work. Partners will write scientific papers based on research conducted in Guatemala, and Guatemalan scientists will have primary authorship. As an example, one of the Penn trained Guatemalan investigators is conducting a study of the relationship between the commission of violence and negative mental health outcomes among a random sample of approximately 1,500 Guatemalans. This countrywide, house-to-house survey could only be conducted with Guatemalan leadership. It should generate data that will be published in peer-reviewed articles and showcase Guatemalan scientific expertise on a global stage.

RESEARCH PROJECT PROFILES

VICTOR PUAC POLANCO

The Relationship between Experience of Violent Events and Mental Health Outcomes in Guatemala

Dr. Puac Polanco completed the MSCE degree at Penn and is an Affiliate



Professor at the University of San Carlos de Guatemala (USAC). He is conducting a study, which began as part of his master's degree requirements, examining the relationship between the experience of violent events and mental health outcomes in Guatemala. His research team includes Dr. Dawei Xie, Associate Professor of Biostatistics at Penn, Dr. Victor Lopez from the Department of Psychiatry at USAC, and Dr. Branäs at Penn.

In Latin America and around the world, the burden of mental health outcomes such as post-traumatic stress disorder, anxiety, and depression are predicted to increase dramatically over the next twenty years. In Guatemala in 2009, lifetime mental health outcomes affected 27.8% of people between the ages of 18 and 65. While the specific cause of outcomes has not been identified, the daily experience of violent events is a likely contributor. Using interview data from 1,452 subjects in the 2009 National Study of Mental Health in Guatemala, collected by the USAC School of Medicine, Dr. Puac Polanco and his research team will examine whether an association exists between every day violent

events and mental health outcomes.

This work could increase our understanding of mental health problems and could provide insight into policy, law enforcement, and intervention programs needed to prevent mental health disorders.

JUSTIN SCHRAM

Community Based Priorities for Health

Dr. Schram began working in Guatemala as an undergraduate student in anthropology.



He helped to found the Guatemala Health Initiative as a first year medical student at Penn in 2004 and led the service learning trip that served as its initial activity. He conducted a community health survey in 2005 that established GHI's partnership with Hospitalito Atitlán. Based on the results of the survey he developed an interest in the health effects of indoor air pollution from open cooking fires. For his capstone project at Penn Dr. Schram conducted participatory health research into the barriers and facilitators to the reduction of indoor air pollution in Santiago Atitlán. Based on the success of the resulting clean cookstove pilot, he founded an NGO called Ahuyu.org with the objective to address the cycle of illness and environmental degradation perpetuated by open cooking fires. Dr. Schram has continued this work as an Internal Medicine resident and attending physician at the University of Washington. He continues to volunteer in the outpatient clinic at Hospitalito Atitlán and serves on the Board

of Directors for Amigos Hospitalito Atitlán. His work in Guatemala has been funded by the National Science Foundation, New York Academy of Medicine, Penn Provost Award for Interdisciplinary Innovation, and the Seattle Foundation.

JASON NAGATA

Social Determinants of Drinking Water Beliefs and Practices in Santiago Atitlán



Jason Nagata is currently completing his medical degree at the University of California at San Francisco, and as an undergraduate at Penn he studied in Guatemala as part of GHI during several summers. He became increasingly interested in how access to clean, safe drinking water and sanitation can impact public health. His research project used a mixed-methods approach to explore social determinants of drinking water beliefs and practices among the Tz'utujil Maya of Santiago Atitlán, Guatemala, through analysis of demographics, socioeconomic status, memory of historical events, sensory experience, and water attitudes. Quantitative survey results revealed that factors including literacy, years of schooling, distrust of the water supply, and current beliefs about tap water quality were associated with significantly different water practices. Nagata concludes that these and other factors continue to be significant determinants of water-related health, and that public health efforts would benefit from considering them during the design of health interventions.



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training

Universidad de San Carlos de Guatemala.

THE PENN-GUATEMALA HEALTH INITIATIVE has provided extraordinary opportunities for Penn students to expand their horizons to include a global perspective. GHI enables students to understand, first hand, what it is like to implement their work in a challenging new environment with a different level of resources and support. Dozens of Penn students have had extremely fulfilling research and education experiences in rural Guatemala. Time spent in Guatemala has shaped Penn students into citizens of the world.

In the beginning of the Penn-Guatemala relationship over 100 years ago, most students were archaeologists and anthropologists. Today, graduate and undergraduate students with an interest in Guatemala hail from diverse disciplines including Anthropology, Epidemiology and Biostatistics, Family

Medicine, Nursing, Bioethics, Dermatology, Library Sciences, Emergency Medicine, Trauma, Chronic Diseases, Health and Societies, Public Health, Social Work, Engineering, Landscape Architecture, and Business.

Teaching and Learning in a New Environment

The GHI program curriculum anticipates the need to prepare Penn students for their residency in Guatemala. Dr. Barg and the GHI faculty created a training program that teaches the students how to see the problems as an insider. The GHI faculty continue to work with students after they return to campus. The aim is to assist students to complete an academic product from their work. This may be a thesis,

“Because my duty in the university is to teach students how to do research and to conduct research myself, I felt that I needed to know more about biostatistics and epidemiology, to prepare my self to do a better job. I’m supposed to guide students on how to conduct research, and I have to feel confident about my own knowledge and experience and skills.”

– DR. RAMIREZ FLORES

a paper, a presentation for a professional meeting or a Fulbright application.

Dr. Barg says, “The thing that I find the most amazing is when you take a student who’s inclined in this direction anyway, and you put them in a totally different environment. They’re in a place where there’s a completely different language. Ways of being and ways of acting are entirely different from what they’re used to. And you give them a task, and you tell them, ‘Here’s something that you need to figure out.’ They stumble, but almost all of them get really turned on to figuring out the problem. They get turned on to research. They get turned on to trying to understand the contextual factors that affect health and life in an under-resourced environment. And they really do become experts in helping to figure things out.”



The pharmacy at the Hospitalito Atitlán.



Hospitalito in Atitlán, 2011

“Our emergency medicine residency program has a global health track. The people who have a special interest in that can use all their elective time to study global health issues, which is about 16 weeks during the course of their four years of residency. Eight weeks of formal instruction on various things, like tropical diseases, sustainable healthcare, and various other things. ...We teach the whole group of them bedside ultrasound, so when they go to places like Guatemala, they can use ultrasound machines. Our emergency medicine specialists provide this service at the Hospitalito Atitlán.”

– DR. ANTHONY DEAN, ASSOCIATE PROFESSOR OF
EMERGENCY MEDICINE, PENN

Sometimes people want to do things, great things, but they don't have the background to do it – or they don't have the idea. They have the heart to do it, but they don't know how to do it. So my idea is, right now, create information. Because the problem is, right now people have to make decisions without the information that they need to help them to make a better decision.”

– DR. PUAC POLANCO

Penn-Fogarty International Center Scientific Training Programs

Multiple Guatemalan students have also been given new opportunities for training at Penn. In 2010, Penn brought the first Guatemalan physician to participate in the MSCE degree program, fully funded through the NIH Fogarty International Center and other funding sources. Students spend one year at Penn studying epidemiology, biostatistics, bioethics, and public health. They return to Guatemala to study for the second year of their program with an arsenal of new skills and methodologies to implement and teach in their own country. Dr. Marilyn Santana explains one of the motivations for coming to Penn's MSCE program. “I found that there were a lot of errors in the information that was collected

[about diabetes in rural clinics in Guatemala]. There was no scientific or rigorous way of collecting the information. Everybody collected it differently. So all the information that I thought about diabetes in Guatemala, that was probably all wrong too, because there were no real methods. That's when I started to feel that there was a need to do things in a more precise way.”

As joint partners, Penn, USAC, and UFM operate two large investigator training programs for Guatemalan scientists. Owing to Guatemala's very large burden of chronic diseases and violence, these programs are in response to the shortage of scientists able to conduct rigorous research in reducing chronic diseases and trauma in Guatemala.

Both programs have two training pathways, the first of which is an Independent Investigator pathway, specifically designed



Dr. Victor Puac Polanco receives the 2011 Lancet Outstanding Research Project award.



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The community is the expert on the community. The community is the authority in the community. There isn't an outside authority on community issues.”

– DR. KENT BREAM, ASSISTANT PROFESSOR OF CLINICAL FAMILY MEDICINE AND COMMUNITY HEALTH, PENN





Collaborators at Universidad Francisco Marroquín, including, from left, Drs. Sergio Martinez, Brian Strom, Kent Bream, and Dr. Federico Alfaro, the Dean of the UFM School of Medicine.

to prepare Guatemalan students from USAC and UFM to become rigorous, independent scientific investigators. Year one of this two-year pathway is didactic and conducted in-residence at Penn and the second year is spent by trainees actually conducting research projects of relevance to Guatemala, in Guatemala. The second pathway, Associate Investigator training, is operated entirely in Guatemala and is designed to prepare clinicians and research staff at USAC, UFM, and affiliated hospitals to serve as collaborators and health policy champions. The pathway focuses on research fundamentals, data, and the ethical conduct of science and is taught

by Spanish-speaking Penn faculty, shoulder-to-shoulder with faculty from both UFM and USAC. Upon completion of their training, graduates from both pathways form scientific teams, join the leadership of international scientific organizations, and catalyze new research in advancing health for Guatemala and the world.

These training programs are built on long-standing, collaborative partnerships Penn has developed in Guatemala with USAC and UFM. They aim to greatly increase the likelihood of a critical mass of highly trained Guatemalan scientists that produce



Dr. Juan Manuel Chuc, Medical Director of Hospitalito Atitlán.

“ I think any teacher, above all, what we do is teach. We’re passing along knowledge, as well as how to get along in the world, to our students. It’s not all in the form of a classroom sense – that’s part of it, but it’s also just in the interaction between advisor and advisee, or it’s in taking students to the field, or getting them started in their own research.”

– DR. ROBERT SHARER, PROFESSOR OF ANTHROPOLOGY, PENN



Student and faculty learning and teaching occur in Philadelphia and in Guatemala.

research of value to Guatemala but also research that is published in the world's most prestigious scientific journals thereby raising the recognition of Guatemala as a global



scientific innovator. In addition to generous support from the NIH's Fogarty International Center, these programs are also supported by matching funds from the Guatemalan government and Penn as well as other public and private entities.

Both Penn and Guatemalan students have reaped great benefits from these exchanges.

The Impact of Teaching

Almost all of the faculty who have worked with the students in the Penn-Guatemala Program have reflected that success in teaching is one of their most significant goals

and achievements. Dr. Sharer expressed a common sentiment when he said, "I think we all want to think that whatever it is we chose to do in life has an importance and had some impact. The thing that I'm most proud is the fact that a number of my undergraduate students went on into this field, and a number of graduate students that came here to become archaeologists and work with me – now I'm watching them having careers."

Faculty and students alike care deeply about mentorship. Dr. Angel Velarde (Penn GM'13), USAC, is studying the epidemiology of chronic disease. He has learned a great deal from his Penn mentor and speaks of how his mentor pushes him to come up with new and innovative research ideas. He looks forward to returning to Guatemala with new research skills, training in how to apply for grants, and the strength of knowledge that will allow him to foster collaborations and enhance his career and the health of his country.



From top: Guatemalan and Penn faculty co-teach clinical research and public health courses in Guatemala – Dr. Justine Shults, Dr. Sergio Martinez, and Dr. Carmen Guerra.

I have this great opportunity that not a lot of people have. But, it's also a big responsibility. Can I do the things that I say that I can do? Will I need more training, or will this be enough? The great thing about this MSCE program is that you go outside, getting training that you will not have in your country. At the end what we want is to improve the condition of the people.

That's what I want to do right now, to start to work on this. They are expecting a lot from me. I'm not saying that I'm going to resolve Guatemalan problems in health. But if I can help with a little bit, if I can do a few things but I can do these things really well, I think it will be interesting.

It's going to be difficult. I mean, a country like mine has been doing the same things related to health over and over for the last 150 years, and the things haven't changed. We have still really bad health indicators. But we continue to do the same thing. How are we expecting to change things if we are doing the same thing?"

- DR. PUAC POLANCO



2012



2011

Guatemalan and Penn faculty co-teach courses for dozens of Guatemalan students at UFM and USAC.



mutual ambassadors

“My involvement has been with the entire community. I’ve developed a really strong connection with this community. After a while, it wasn’t just about the research – it was also about the people and the friendships I’ve made. The people, to me, are like family.”

– MELISSA GRADILLA
(PENN C’11)



THE RELATIONSHIP BETWEEN OUR GUATEMALAN PARTNERS and the University of Pennsylvania may be considered a relationship among institutions, but it was begun by individuals. Faculty from Guatemala and Penn fostered the alliance between the two countries through their devotion to the work itself and the commitment to global involvement and positive change. Over time, many participants have developed strong friendships and a genuine love for each other’s country. For this relationship to flourish, both parties must operate with the greatest of respect for each others’ cultural differences and expectations, as well as the recognition that the two countries share significant similarities. Each individual who has become involved

in the partnership behaves as an ambassador. He or she bears the responsibility to act with dignity and respect, especially when a visitor in another country.

These attitudes have built and fortified the Penn-Guatemala global partnership. Together, the partners will continue to collaborate and advance the important work of improving the health and wellbeing of the individuals and communities in each country. Guatemala is our neighbor, and if there’s one country that we should be partnered with, it should be the one that’s right next door. There will always be an ocean between India and the U.S., and between Africa and the U.S., but Guatemala is right down the road.



THROUGH THE PROVISION OF SERVICE IN GUATEMALA, Penn faculty and students are offered the opportunity to learn by solving real world problems. Work is conducted out of the laboratory and in the community, and students are asked to do more than is typically demanded back at their home campus. The projects that Penn program participants carry out are vital, and they bear the potential for significant impact on real people and their communities.

Guatemalan partners are asked to share their country's deepest needs and frailties with outside collaborators, and to be willing to turn over some of the leadership and labor to professionals from another country.

Dr. Martinez shares his view of the scientific partnership. "I'm an orthopedic surgeon; I do my work opening knees, bones, hips. I love it. And I also think, life has been very good to me. At some point you have to give something back, from all that you have received. And I feel sometimes ashamed that a lot of beautiful people come to my country on their weekends and on their vacations, and do all of this humanitarian work for our people. And I don't see many Guatemalans among them."



GHI students and faculty learn about green features of the new Hospitalito Atitlán.



Dr. Brian Strom at the Hospilito Atitlán.

“The Hospitalito Atitlán is grateful to the University of Pennsylvania as a founding academic partner since before we opened in 2005. The Penn Guatemala Health Initiative has shared our growth, our hardships and challenges, and our successes creating a mutual partnership for bilateral development. From construction programs in our three locations to strategic planning and respectful institutional relationships, we have exchanged ambassadors between Santiago Atitlán and Philadelphia. My visit to Penn was my first visit to the U.S. or Europe and my first trip by airplane; despite this, I felt that me in Philadelphia and Pennsylvanians in Guatemala were mutual global citizens. The Penn Guatemala partnership stands out in the history of both our institutions.”

– DR. JUAN MANUEL CHUC,
MEDICAL DIRECTOR, HOSPITALITO ATITLAN



Penn faculty and students help build the new Hospitalito Atitlán, 2010.



Shared Respect and Trust

The way GHI faculty proceeded first in Santiago, and later throughout the country, was to offer true partnership.

As Dr. Barg explains, “We have not gone and said, ‘Penn’s going to give you this,’ but rather, ‘How are we going to work out these problems?’ From the very beginning, we have identified key community leaders and worked very hard to gain their trust. I think that trust comes from the fact that we continue to go there, and we have a long-term investment, and people know we’re not just a flash in the pan. They really trust us. They trust our expertise. They trust the people we bring, and they deeply value the relationship with Penn. We have built up relationships with the mayor and many of the leading families in the town, and these are strong personal

“The people who I interact with in Atitlán and in Guatemala City, I interact with the same as my colleagues here and my neighbors here. They said, ‘Dr. Bream, you know, you and Penn are different. You guys are different because number one: you guys come back. All these other people came here to give us money; you guys sit with us, eat with us, and come back, you know, and come back again and come back again.’”

– DR. BREAM

and professional relationships. When we go there, I'm always impressed with the respect that we have and that then gets transferred to Penn. Over and over, families and community leaders will say that Penn is different from other universities that want to come down and 'do good.' The long-term engagement, the trust, and the mutual respect make a difference."

Host Families, and Penn's Second Home

Host families are an important part of the Penn-Guatemala relationship, and many students have formed strong bonds with these second families.

"The individuals we stayed with were so, so very nice. I'll never forget them," says Laury Rosefort (Penn M'12). "My host mother, I call her my Guatemalan mother, she was great



Penn students share a meal with their host family.

at understanding my deficit in Spanish and being patient with me and teaching me. She was also a youth educator for sign language, at least the Guatemalan version. As she was

communicating with me, she would not only speak Spanish, but she would also use sign language to put the two together."





intellectual diversity

The multi-disciplinary nature of Penn's program in Guatemala

A defining feature of Penn's program in Guatemala is its intellectual diversity. Over time, students and faculty from almost all of Penn's schools have pursued projects in Guatemala. The oldest collaboration dates back to archaeological work conducted in the late 1800s. Today, students and faculty take advantage of cross-school collaborations to understand their work in the context of other disciplinary paradigms.

Here are some highlights from Penn's schools:

ANNENBERG SCHOOL FOR COMMUNICATION

In the early 1960s, the School of Communications offered English to foreign physicians and dentists who were furthering their graduate education at Penn. These three-month summer programs prepared them for their upcoming coursework and gave them critical English language skills.

Annenberg scholars were key collaborators in the development of the HEALTHCOM Project, or Communication for Child Survival. This world-wide research and development project is based on a health education approach aimed at changing behaviors through social marketing, behavior

analysis, and anthropology. In 1988-1989, Annenberg faculty collaborated with the Institute of Nutrition of Central America and Panama (INCAP) in Guatemala to study knowledge, attitude, and practice of mothers with children under five. HEALTHCOM used the findings to update and tailor technical assistance for Guatemala's Ministry of Health, which was seeking ways to shore up its long-term child-survival activities through policy changes and message design.

THE SCHOOL OF ARTS AND SCIENCES

Students and faculty from SAS have a long history of engagement in Guatemala. Faculty from the Department of Anthropology have been working in Guatemala for over a century. Their projects have included excavating major archaeological sites such as Tikal, researching health and nutrition, studying ancient hieroglyphics and cultural norms, and investigating cultural factors that affect health. Current faculty are strong advocates of the close relationship with Guatemalan institutions, health facilities, and universities and they participate in growing the partnerships, strengthening transdisciplinary connections across Penn, pursuing independent and collaborative research there, and mentoring students who go to Guatemala for international research experience. Faculty and students from the Economics department

have made profound discoveries in the way nutrition affects growth and cognitive abilities, and ultimately, the health of communities, across multiple generations. Many students within the Health and Societies major in the Department of History and Sociology of Science have also gone to Guatemala to pursue research ideas and training.

SCHOOL OF DENTAL MEDICINE

The Penn Dental School has many academic programs, including a degree program for foreign-trained dentists, including Guatemalans. Dr. Ramiro Alfaro (Penn GM'65), Dean of the dental school at Universidad Francisco Marroquín in Guatemala, received training in oral surgery at Penn from 1964-1965. He was motivated to attend Penn after attending a pivotal guest lecture in 1962 from a visiting scholar and senior researcher in oral radiology, Dr. Leroy Ennis. Dr. Ennis, then Chair of the Oral Radiology Department at the University of Pennsylvania, was also the author of an important oral radiology text used internationally and at Guatemala's state dental school. At the time, the Guatemala Dental School used other textbooks by Penn scholars, including that of the University of Pennsylvania Dental School Dean (1951 to 1972), Dr. Lester William Burket. When Dr. Alfaro later founded a new dental school



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within Guatemala's private university, he received significant guidance from his former colleagues and mentors at Penn.

SCHOOL OF DESIGN

The School of Design emphasizes international work, and in recent years, a landscape architecture student spent a summer in Guatemala through the GHI Program, studying the potential for water management.

SCHOOL OF ENGINEERING AND APPLIED SCIENCE

The School of Engineering strongly encourages international study and has

provided robust support for work in Guatemala. Joseph Sun, the Vice Dean for Academic Affairs, School of Engineering and Applied Science, advises and guides students interested in studying and working abroad in countries including Guatemala. Tony Sauder is a lecturer in the Department of Chemical and Biomolecular Engineering at the Engineering school, a registered professional engineer and geologist with over twenty years experience in water resources, hydrogeology, and environmental engineering, and a professional mentor to the Penn Engineers Without Borders. He has led teams of Penn students in irrigation and sanitation projects in rural areas of Guatemala.

GRADUATE SCHOOL OF EDUCATION

Faculty from the Graduate School of Education worked with community members and faculty from the School of Medicine to produce health education videos in the local Tzutuji'l language about asthma treatment, prenatal care and labor and delivery. Erica Soler-Hampejsek (Penn Gr'08) completed her doctoral dissertation on Schooling, Gender, and Marriage in Guatemala. She examined how schooling affects the transition to marriage. The study was based on longitudinal data that she collected during her stay in Guatemala.

LAW SCHOOL

Students from Penn Law have pursued summer internships in Guatemala at El Instituto de Estudios Comparados En Ciencias Penales y Sociales, to study systems of justice in a different setting. Importantly, Dr. Anita Allen, Professor at Penn Law, Deputy Dean for Academic Affairs of the school, and Senior Fellow in the Bioethics Department, School of Medicine, serves on The Presidential Commission for the Study of Bioethical Issues. This Commission, chaired by Dr. Amy Gutmann, is an advisory panel of the nation's leaders in medicine, science, ethics, religion, law and engineering. By 2012, it released its report, "Ethically Impossible" STD Research in Guatemala from 1946 to 1948 and a follow-up to this initial report, identifying strategies for reconciliation and a path forward.

THE SCHOOL OF NURSING

The Nursing School has sent many students to Guatemala to train in partnership with the Hospitalito Atitlán and also with local health promotoras and midwives. Penn Nursing Professor and midwife Mamie Guidera has worked in Guatemala for years. She has developed strong relationships with local Guatemalan midwives and health promotoras, and has worked side by side with them and trained them in current midwifery techniques. After completing a summer research project with the Guatemala Health Initiative at the Hospitalito Atitlán in Santiago Atitlán, a doctoral student in the School of Nursing, Lisa Gatti, was awarded a Fulbright

Scholarship to study and work in Guatemala. Gatti also received an Afya Bora Consortium Fellowship in Global Health.

PERELMAN SCHOOL OF MEDICINE

Faculty, residents and students in the Perelman School of Medicine have active research, teaching and clinical service relationships with the Hospitalito Atitlán, the Universidad de San Carlos, and the Universidad Francisco Marroquín. Teams of medical students travel each spring to the Hospitalito Atitlán to learn about rural health care. Several medical students have returned for longer periods of time to conduct research on topics including community violence, alcoholism and intimate partner violence. Students from the MPH program have participated in research projects as part of the Guatemala Health Initiative.

SCHOOL OF SOCIAL POLICY AND PRACTICE

The School of Social Policy and Practice offers master's degrees in social work, social welfare, non-profit leadership and social policy; as well as a clinical doctorate degree in social work. Consistent with the program's mission to encourage students to think and work nationally and internationally across disciplines and cultures, several SP2 students have gone to Guatemala as part of the GHI program.

THE WHARTON SCHOOL

Sourav Bose took crisis management courses from the Wharton School as part of his completion of the Vagelos Program in Life Sciences and Management at Penn. Mr. Bose spent a summer completing research on ambulance transport and price barriers to emergency care in rural Guatemala through the GHI Program and published an important paper on his work in a peer-reviewed journal. He considered his participation in GHI and the mentoring he received afterwards as one of the highlights of his time at Penn. Influenced by his experience in Guatemala, he went on to pursue graduate work in public health at the London School of Hygiene and Tropical Medicine and will complete a medical degree at Penn.



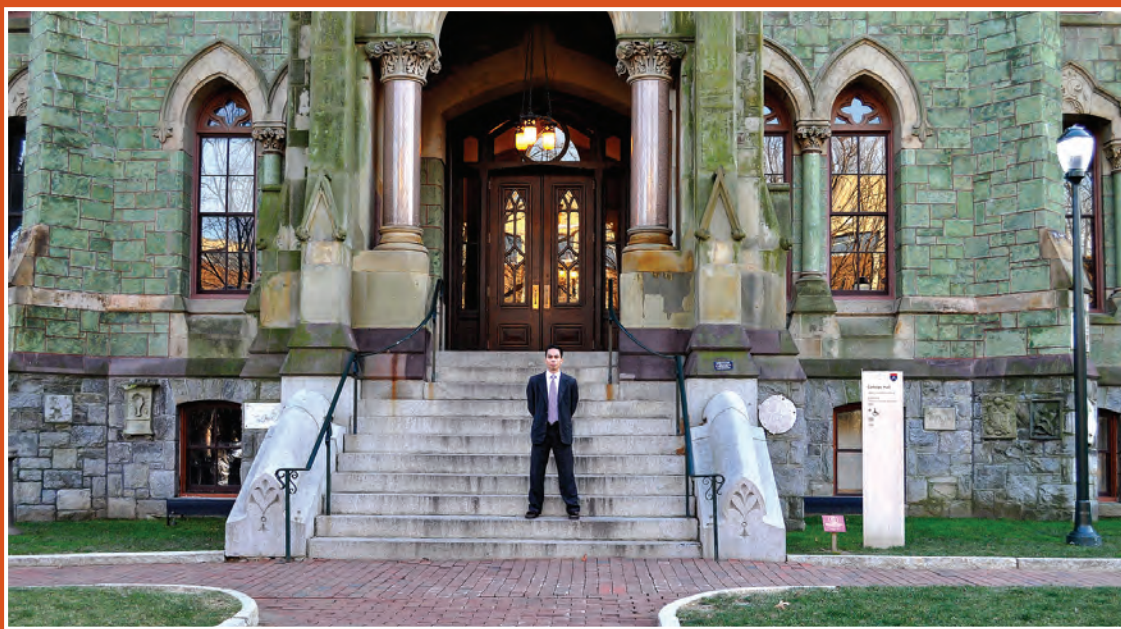
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Dr. Angel Velarde (Penn GM'13), USAC, stands in the middle of Penn campus.

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