

Foro Binacional de Salud

Binational Health Forum

2017



**UNIVERSITY
OF
CALIFORNIA**



UC|MÉXICO
HEALTH WORKING GROUP
GRUPO DE TRABAJO EN SALUD

***Construyendo puentes,
derribando muros***

***Building bridges,
breaking walls***

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**Mensaje de
la Presidenta
de la Universidad
de California
Janet Napolitano**

California y México comparten una larga y rica historia - un vibrante tapiz de artes, culturas, tradiciones, ambientes y gente. Desde que lanzamos la Iniciativa UC-México en enero de 2014, hemos fortalecido las relaciones entre los centros académicos de California y México. Varias ramas del gobierno mexicano también han sido socios esenciales en estos esfuerzos y estoy muy agradecida por las contribuciones de la academia y el sector público en ambos lados de nuestra común frontera.

La salud es esencial para la gente. Las amenazas para la salud no respetan fronteras. Tanto en California como en México tenemos desigualdades de salud no resueltas y necesidades de salud insatisfechas. Una de las maneras más eficaces de abordarlas es aprendiendo unos de otros: compartiendo conocimientos e incrementando los intercambios de estudiantes y profesores. Este Foro Binacional de Salud servirá como una plataforma para nuevas ideas de acción.

Nuestras metas son ambiciosas pero alcanzables, elevadas pero basadas en conocimientos sólidos y en necesidades genuinas. Creemos que una colaboración estratégica con nuestros socios en México no sólo mejorará la salud de ambas poblaciones, sino que también servirá como un nuevo modelo para la cooperación binacional.

Sinceramente,

Janet Napolitano
Presidenta

Mensaje del rector

de la Universidad Nacional

Autónoma de México

Enrique Graue

Desde su creación, hemos visto que la Iniciativa de la Universidad de California-México es una colaboración esencial. Hoy en día encontramos que esta relación profesional ha sido fructífera, oportuna e indispensable. La Iniciativa ha generado colaboración entre varias instituciones mexicanas, vinculadas a través de la UNAM y la Universidad de California con sus múltiples campus.

El intercambio a través de temas de salud ha sido extenso y significativo, como se ha visto hoy en este foro que nos reúne para discutir temas de interés mutuo, críticos para nuestra colaboración. El Grupo de Trabajo de Salud ha identificado las prioridades de salud en temas de salud y ha planeado intervenciones que prometen resultados beneficiosos para la población en México y California.

En estos tres años de trabajo conjunto, hemos sido testigos de las similitudes y diferencias de nuestras comunidades, y a través de la constante comunicación, nuestra relación se ha fortalecido. La relación construida y los puentes que nos unen son fuertes y sanos y, en el contexto político actual, son particularmente relevantes.

Muchas gracias por su participación y felicitaciones por la Iniciativa.

Enrique Graue
Rector

A message from
University of California
President
Janet Napolitano

California and Mexico share a long and rich history – a vibrant tapestry of arts, cultures, traditions, environments, and people. Since we launched the UC-Mexico Initiative in January 2014, we have strengthened relationships between academic centers in California and in Mexico. Several branches of the Mexican government have also been essential partners in these efforts, and I am very grateful for the contributions of the academy and the public sector on both sides of our common border.

Health is all about people. And health threats do not respect borders. Both in California and in Mexico we have unresolved health disparities and unmet health needs. One of the most effective ways for us to address them is by learning from each other: by sharing knowledge and increasing student and faculty exchanges. This Binational Health Forum will serve as a platform for new ideas for action.

Our goals are ambitious but achievable, lofty but based in sound scholarship and genuine need. We believe a strategic collaboration with our partners in Mexico will not only improve the health of both of our populations, but also serve as a new model for binational cooperation.

Sincerely,

Janet Napolitano
President

**A message from
the Rector of the
National Autonomous
University of Mexico
Enrique Graue**

Since its inception, we have seen that the University of California-Mexico Initiative is an essential collaboration. Today we find that this professional relationship has been fruitful, timely and indispensable. The Initiative has sparked collaboration across several other Mexican institutions, linked through UNAM, and the University of California with its multiple campuses.

The exchange across health topics has been extensive and significant, as witnessed through this forum today, which brings us together to discuss issues of mutual interest critical to our collaboration. The Health Working Group has identified top health priorities and has planned interventions that promise beneficial results for the population in both Mexico and California.

In these three years of joint work, we have witnessed the similarities and differences of our communities, and through constant communication our relationship has strengthened. The relationship built and the bridges that unite us are strong and healthy, and, in the current political context, particularly relevant.

Thank you very much for your participation and congratulations on the Initiative.

Enrique Graue
Rector

Objetivos del Foro

México y California comparten mucho más que una frontera. Ambos países comparten una rica historia, demografía y cultura así como una próspera economía. En California, los hispanos constituyen la minoría poblacional más grande con 12 millones de los 38 millones de habitantes del estado. Más de la mitad de los bebés nacidos en California tienen ascendencia mexicana o centroamericana.

Al propio tiempo, existen asimetrías claras en la riqueza; a pesar de tener apenas un tercio de la población de México, California tiene casi el doble del producto interno bruto (2.2 frente a 1.2 miles de millones de dólares). Desde la implementación del Tratado de Libre Comercio de América del Norte (TLCAN) en 1994, el comercio entre México y los Estados Unidos se ha quintuplicado. México se ha convertido en el principal mercado de exportación de California, superando ampliamente las exportaciones a Canadá, China, Japón y Corea del Sur. De la misma forma, México se ha convertido en la segunda fuente más importante de importaciones después de China.

La Universidad de California (UC) y la Universidad Nacional Autónoma de México (UNAM), las universidades públicas más grandes de sus respectivos países, también comparten una larga historia de colaboración. Comenzando

con el Instituto de la Universidad de California para México y los Estados Unidos (UC-MEXUS), establecido en 1980 con fondos del Consejo Nacional de Ciencia y Tecnología (CONACyT) y la UC, UC-MEXUS ha permitido a estudiantes e investigadores realizar estudios en áreas de interés mutuo para México y California.

En 2001, los Regentes de la UC, con el apoyo de la legislatura estatal de California, promovieron el establecimiento de un centro de UC en México para apoyar a su creciente misión académica de investigación y de servicio público en México. Casa California abrió sus puertas en 2003 y desde entonces ha sido un espacio de reunión para el intercambio de ideas de académicos y estudiantes de ambos lados de la frontera.

La presidenta de la UC, Janet Napolitano, lanzó en 2014 la Iniciativa UC-México para fomentar las alianzas académicas, científicas y culturales entre la UC y la UNAM y otras instituciones de educación superior, agencias gubernamentales y el sector privado en México. El Grupo de Trabajo sobre Salud, uno de los cinco grupos temáticos de la Iniciativa, ha recibido financiamiento de la UC y la UNAM y actualmente está realizando investigaciones sobre diabetes, salud materna y neonatal y violencia, así como programas de capacitación en gestión de la atención médica.

Más recientemente, en julio pasado, la Presidenta Napolitano y el Rector Enrique Graue de la UNAM renovaron el memorando de entendimiento entre la Universidad de California y la UNAM extendiendo dicho acuerdo hasta 2021.

Dada nuestra frontera compartida, historia, misiones académicas y preocupación por las personas de ambos lados de la frontera, un foro académico para discutir temas de salud relevantes para México y los EE.UU. es una buena oportunidad para continuar nuestros esfuerzos.

Las incertidumbres y preocupaciones resultantes de los cambios en la política exterior de los Estados Unidos dan aun mayor urgencia a esta reunión. El resultado de una potencial renegociación del TLCAN no son claros en este momento. Las órdenes ejecutivas en cuanto a la frontera y la deportación de inmigrantes indocumentados han creado una profunda ansiedad y frustración en toda la población afectada en ambos lados de la frontera.

Este foro académico se enfoca en temas de salud relevantes para México y los

Estados Unidos, con especial atención en California. El foro se centrará en ideas que podrían convertirse en acciones. Queremos no sólo ilustrar la fuerza de los vínculos existentes entre México y California, sino también impulsar un movimiento para estrechar y fortalecer nuevas alianzas.

Con la organización de este evento, queremos demostrar nuestra solidaridad con la población mexicana en California y otros estados. Independientemente de las políticas implementadas por el gobierno de Estados Unidos, queremos abordar los problemas de salud que afectan a las poblaciones vulnerables a través de investigaciones compartidas que pueden conducir a soluciones.

Finalmente, queremos que este foro sea un catalizador para eventos similares en el futuro, quizás sobre una base semestral, alternando sedes entre California y México.

Creemos en la construcción de puentes, no en la construcción de muros.

Jaime Sepulveda
Stefano M. Bertozzi

Forum

Objectives

México and California share more than just a border. They share a rich history, demography and culture, as well as a thriving economy. In California, Hispanics now constitute the largest minority, with 12 million (32%) of the 38 million residents of Mexican descent. More than one half of the babies born in California have Mexican or Central American ancestry.

At the same time, there are clear asymmetries in wealth; while California has just one third of Mexico's population, it has almost twice the gross domestic product (2.2 vs. 1.2 trillion USD). Since NAFTA was implemented in 1994, trade with Mexico has increased five fold, and Mexico has become California's largest export market – far surpassing its exports to Canada, China, Japan and South Korea – and its second largest source of imports after China.

The University of California (UC) and the Universidad Nacional Autónoma de México (UNAM), the largest universities in their respective countries, also share a long history of collaboration beginning with the University of California Institute for Mexico and the United States (UC MEXUS). Established in 1980

with funding from CONACyT and UC, UC MEXUS has enabled students and researchers to conduct studies in areas of mutual interest for Mexico and California.

In 2001, the UC Regents, with the support of the California state legislature, moved to establish a UC hub in Mexico to serve its expanding academic, research and public service mission in Mexico. Casa California opened in 2003 and serves as a meeting space for the exchange of ideas by scholars and students from both sides of the border.

UC President Janet Napolitano in 2014 launched the UC-Mexico Initiative to further foster academic, scientific and cultural partnerships between UC and UNAM, and other institutions of higher education, government agencies and the private sector in Mexico. The Initiative's Health Working Group, one of five, has received funding from both UC and UNAM, and it is currently conducting research in diabetes, maternal and neonatal health and violence as well as training programs in health care management and regulatory science.

More recently, this past July, President Napolitano and UNAM Rector Enrique Graue renewed the Memorandum of Understanding between UC and UNAM, extending the agreement of collaboration to 2021.

Given our shared border, history, academic missions and concerns for the people on both sides of the border, an academic forum to discuss health issues relevant to Mexico and the US seems an appropriate opportunity to continue our collaboration.

The uncertainties and concerns resulting from shifts in US policy give a sense of urgency to our meeting. The outcome of a potential renegotiation of NAFTA is not clear at this time. Executive orders regarding the border and deportation of undocumented migrants and the potential loss of health insurance for millions of poor people have created deep anxiety and frustration among affected populations on both sides of the border.

This academic forum is focused on health issues relevant to Mexico and the USA – with special focus on California. The forum will prioritize ideas that could be translated into action. We want to not only illustrate the strength of the existing ties between Mexico and California but also inspire a movement for new and strengthened collaboration.

We want to demonstrate solidarity with the Mexican population in California and other states. Whatever policies are implemented by the US government, we want to address health issues affecting vulnerable populations through shared research that can lead to policy solutions.

Finally, we want this forum to be a springboard for similar events in the future, perhaps on a semi-annual basis, alternating venues between California and Mexico.

We believe in building bridges, not building walls.

Jaime Sepulveda
Stefano M. Bertozzi

Programa 29 de Marzo

2:00 – 2:15 pm	Bienvenida y Objetivos de la Reunión	Jaime Sepúlveda, Director, Ciencias de Salud Global, UCSF Stefano Bertozzi, Decano, Escuela de Salud Pública, UC Berkeley
2:15 – 3:15 pm	Panel y Discusión I	<i>Moderador: Jaime Sepúlveda, Co-Presidente Grupo de Trabajo en Salud</i> Diabetes y la Ley del Impuesto al Azúcar Juan Rivera, Director, Instituto Nacional de Salud Pública Medidas para la Prevención de la Diabetes, una Perspectiva Binacional Dean Schillinger, Jefe, Division de Medicina Interna General en UCSF Plataformas Digitales y Apoyo Legal Roberto Tapia-Conyer, Director General, Fundación Carlos Slim Preparación para Pandemias Dean Jamison, Profesor Emérito de Salud Global, UCSF Violencia María Elena Medina-Mora, Directora, Instituto Nacional de Psiquiatría
3:15 – 4:15 pm	Panel y Discusión II	<i>Moderador Stefano Bertozzi, Co-Presidente Grupo de Trabajo en Salud</i> Portabilidad de Seguros de Salud Eduardo González-Pier, Consultor Migración y Derechos de los Migrantes Silvia Giorguli, Presidenta, El Colegio de México Utilización de Servicios de Salud Transfronterizos Julio Frenk, Presidente, Universidad de Miami Educación e Intercambio Científico William Lee, Coordinador de la Investigación Científica UNAM
4:15 – 4:30 pm	Palabras de Clausura	Janet Napolitano, Presidenta, Universidad de California Enrique Graue, Rector, UNAM

Recepción

March 29 Program

2:00 – 2:15 pm	Welcome Remarks and Meeting Objectives	Jaime Sepúlveda, Director, Global Health Sciences, UCSF Stefano Bertozzi, Dean, School of Public Health, UC Berkeley
2:15 – 3:15 pm	Panel and Discussion 1	<i>Moderator: Jaime Sepúlveda, Health Working Group Co-Chair</i> Diabetes and Sugar Tax Law Juan Rivera, Director, National Institute of Public Health Diabetes Prevention Policies, a Bi-national Perspective Dean Schillinger, Chief, UCSF Division of General Internal Medicine Digital Platforms & Legal Support Roberto Tapia-Conyer, General Director, Carlos Slim Foundation Pandemic Preparedness Dean Jamison, Professor Emeritus of Global Health, UCSF Violence María Elena Medina-Mora, Director, National Institute of Psychiatry
3:15 – 4:15 pm	Panel and Discussion II	<i>Moderator: Stefano Bertozzi, Health Working Group Co-Chair</i> Portability of Health Insurance Eduardo González-Pier, Consultant Migration and Migrants' Rights Silvia Giorguli, President, The College of Mexico Transborder Utilization of Health Services Juiio Frenk, President, University of Miami Education and Science Exchange William Lee, Scientific Research Coordinator, UNAM
4:15 – 4:30 pm	Closing Remarks	Janet Napolitano, President, University of California Enrique Graue, Rector, UNAM

Reception



Juan A. Rivera

El Dr. Juan A. Rivera es Director General del Instituto Nacional de Salud Pública (INSP) en México y Profesor de Nutrición en la Escuela Mexicana de Salud Pública. Fue Director fundador del Centro de Investigación en Nutrición y Salud del INSP. Es miembro de la Academia Nacional de Medicina, de la Sociedad Americana de Nutrición, del Comité Directivo Mundial de Prevención de la Obesidad/Prevención, Panel de Alto Nivel de Expertos en Seguridad Alimentaria y Nutrición y es Presidente de la Sociedad Latinoamericana de Nutrición. Dr. Rivera obtuvo su maestría y doctorado en Nutrición Internacional de la Universidad de Cornell. Sus intereses de investigación incluyen la epidemiología de bajo nutrición en todas sus formas, el estudio de los factores de riesgo de bajo nutrición y la generación de evidencia para orientar el diseño y evaluación de póliza y programas de prevención de bajo nutrición, y obesidad.

Dr. Juan A. Rivera is Director General of the National Institute of Public Health (INSP) in Mexico and Professor of Nutrition at the Mexican School of Public Health. He was the founding director of the Center for Research in Nutrition and Health at INSP. He is a member of the Mexican National Academy of Medicine, the American Society of Nutrition, the World Obesity/Public Prevention Steering Committee, the High Level Panel of Experts on Food Security and Nutrition and is President of the Latin American Society of Nutrition. Dr. Rivera earned both his master's and doctoral degrees in International Nutrition from Cornell University. His research interests include the epidemiology of malnutrition in all its forms, the study of risk factors of malnutrition, and the generation of evidence to guide the design and evaluation of policies and programs for the prevention of under-nutrition and obesity.

Diabetes and Sugar Tax Law

In the past three decades, the combined prevalence of overweight and obesity in Mexico has doubled in adults and has tripled in adolescents to reach prevalences of more than 70% in adults and more than 33% in school-age children and adolescents. In parallel, prevalence of Type 2 Diabetes (T2D) has reached about 14% in the adult population. One of the risk factors for obesity and Type 2 Diabetes is the high intake of added sugar in the Mexican diet. Over two-thirds of Mexicans consume more than the maximum recommended level of added sugar (>10% of total daily energy, according to WHO guidelines), and about 70% of all added sugars are consumed as sugar-sweetened beverages (SSB).

In response, the Mexican Congress approved an excise tax of MXP \$1.00 per liter on all SSB (~10%) and 8% tax on energy-dense nutrient-poor products (junk food). While Mexico was the first country to implement an SSB tax to specifically address the obesity and diabetes epidemic, other cities in California and the US and other countries also are applying this policy measure.

Results of a study about the effect of these taxes in Mexico on the purchase of taxed and untaxed beverages and foods have shown reduction in purchases of the taxed products. In addition, results of mathematical modeling show a potentially important reduction in obesity and T2 diabetes because of the taxes.

Key Messages

- Mexicans and people of Mexican ancestry in the US have among the highest prevalences of obesity and diabetes in the world.
- Although risk factors for obesity and diabetes are multiple, the high intake of sugar-sweetened beverages in these populations is among the leading risk factors for these conditions.
- Mexico and some cities in California are implementing taxes on SSB that are proving to be successful in reducing the purchases of these products and are likely to reduce the risk of obesity and diabetes.



Dean Schillinger

Dean Schillinger MD es médico y Director de la división de Medicina Interna General de la UCSF en el Hospital General de San Francisco. Experto internacional en salud pública relacionada con la diabetes, comunicación en salud y políticas de salud, fundó el Centro UCSF para Poblaciones Vulnerables y actualmente dirige su Programa de Investigación de Comunicaciones en Salud. Se desempeñó como Jefe del Programa de Prevención y Control de la Diabetes de California y ayuda a coordinar la Iniciativa de Investigación de la Diabetes UC-México. Ha centrado su investigación en la comunicación de la salud y las intervenciones para reducir las disparidades relacionadas con la alfabetización en salud, el riesgo de diabetes y el cuidado de la diabetes. Ha publicado >200 artículos en estos campos, contribuyendo a descubrimientos metodológicos que involucran ensayos, estudios cuasi-experimentales, experimentos naturales y evaluaciones de campañas de medios sociales. Schillinger es el director del Centro de NIH para la Investigación de la Diabetes del Tipo 2. Su investigación más reciente se ha enfocado en las políticas relacionadas con la prevención del consumo de bebidas azucaradas y conflictos de interés y financieros. Schillinger participó en la creación de una campaña de prevención de la diabetes dirigida por jóvenes, The Bigger Picture, thebiggerpicture.org, que fusiona las artes con la salud pública para catalizar la acción social; La campaña ha sido reconocida por la Academia Nacional de Medicina, APHA y la Coalición Latina para una California Saludable.

Dean Schillinger, MD, is a physician and Chief of UCSF Division of General Internal Medicine at San Francisco General Hospital. An international expert in diabetes-related public health, health communication, and health policy, he founded the UCSF Center for Vulnerable Populations and currently directs its Health Communications Research Program. He served as Chief of California's Diabetes Prevention and Control Program and helps coordinate the UC-Mexico Diabetes Research Initiative. He has focused his research on health communication and interventions to reduce disparities related to health literacy, diabetes risk and diabetes care. He has published more than 200 articles in these fields, contributing to methodologic discoveries involving trials, quasi-experimental studies, natural experiments and evaluations of social media campaigns. He is the site director for an NIH Center for Type 2 Diabetes Translational Research. His recent research has focused on the scientific basis of policies related to limiting consumption of sugar-sweetened beverages and has explored the role of financial conflicts of interest in causal research. He co-created a youth-led diabetes prevention campaign, The Bigger Picture, thebiggerpicture.org, which merges arts with public health to catalyze social action; the campaign has been recognized by the National Academy of Medicine, APHA and the Latino Coalition for a Healthy California.

**Diabetes
Prevention
Policies: a
Binational
Perspective**

A major determinant of disease burden in Mexico and the US is Type 2 Diabetes (T2D). In the US, Mexican-Americans are the ethnic group with the highest prevalence of T2D (23.8%) and pre-diabetes (44%). While bold policies, such as sugar-sweetened beverage taxes, have been launched and show encouraging results, additional multi-level interventions are desperately needed to curb the epidemic. The Trump administration's anti-Mexican policies – from trade sanctions to repealing the Affordable Care Act; from building walls to mass deportation – will

likely increase social disruption and stress. Such policies can impede T2D prevention and control efforts, creating even greater urgency for action. T2D can best be understood as a contemporary socio-ecological phenomenon. Diverse factors are hypothesized to underlie such vulnerabilities, including perinatal conditions such as malnutrition and breast-feeding practices, possible genetic susceptibilities, adverse dietary and lifestyle patterns, junk food marketing and globalized food economies (high consumption of sugar-sweetened beverages [SSB], processed

foods), urbanization and low physical activity, food insecurity and lower socioeconomic status, limited health literacy communication barriers, poor access to healthcare and poor quality of care, and sub-optimal adherence to treatment recommendations.

Coordination of multi-sector initiatives may provide new scientific discoveries and public health knowledge, as well as the necessary momentum to address the T2D epidemic in earnest. Innovative urban planning, health education, healthy food availability and affordability, and access to clean water and safe physical activity spaces require concerted efforts. Four major challenges need to be addressed: (1) reduce exposure to the social and environmental factors that increase risk for T2D at the population level; (2) increase identification and diagnosis of patients with pre-diabetes and diabetes; (3) increase effectiveness of therapeutic interventions to prevent and control T2D; (4), increase early identification and management of complications to improve quality of life.

A binational collaborative group involving the UNAM, the University of California, the Mexican National Institutes of Public Health and National Institute of Nutrition, has proposed a sequential approach to address the T2D epidemic. Work to date focusing on prevention has included: developing modeling studies of T2D policy interventions (e.g. SSB taxes) in both countries; social marketing strategies to influence the public discourse about T2D, its root causes and solutions; and planning implementation of a large-scale, quasi-experimental trial using metformin for T2D prevention in Mexico City. This binational T2D prevention research will help stakeholders better understand the commonalities and differences between California and Mexico for those of Mexican origin. Amid economic and political uncertainty and limited healthcare budgets, this collaboration can inform relevant policy and practice and represents a timely effort to improve health by building bridges, not by enforcing borders, and could serve as a model for regional and global collaboration.

Key Messages

- Type 2 Diabetes has reached a “tipping point” in Mexico and the US. From humanitarian, social and economic perspectives, large-scale policy inaction is no longer possible or tenable. While Type 2 Diabetes disproportionately affects low income and vulnerable populations, it should not be seen as an expected “side effect” of economic development.
- Insofar as Type 2 Diabetes is a socio-ecological disease, efforts must be made at multiple levels, and include stakeholders from health systems, food and transportation systems, the technology sector, economic sector, policy sector, and society at large.
- Important policy work is now underway in both countries related to creating disincentives to consume unhealthy beverages, from taxation to institutional bans to warning notices. This work needs to expand in breadth and scope.
- Nascent health communications and social marketing work are beginning to change the public discourse regarding the root causes of the epidemic in the US and Mexico, enabling additional policy advances.
- In addition to addressing social and economic policy, there is an opportunity to implement healthcare policies that can promote the prevention of diabetes. Our group has partnered with the Mexico City Secretary of Health to institute a screening and treatment initiative (PREVENT Initiative) for obese individuals with pre-diabetes in the city’s public healthcare system, using a widely available, safe and effective diabetes medication: Metformin. While the efficacy of Metformin for diabetes prevention is known, this will be the first large-scale initiative to evaluate “real-world effectiveness” in a large healthcare system.



Roberto Tapia-Conyer

Desde hace 10 años es Director General de la Fundación Carlos Slim, donde ha generado e impulsado iniciativas y modelos innovadores para fortalecer los sistemas de salud y coadyuvar a resolver apremiantes problemas de salud pública.

Durante 20 años ocupó diversos cargos en la Secretaría de Salud. Destaca su labor como Director General de Epidemiología, donde diseñó y puso en marcha el Sistema Nacional de Vigilancia Epidemiológica y el de Encuestas Nacionales de Salud. Como Subsecretario de Prevención y Promoción de la Salud fue Co-Fundador de la Iniciativa Salud México-California, hoy iniciativa de la Salud de las Américas.

Es miembro del Consejo Asesor Permanente de la Sociedad Mexicana de Salud Pública; de las Academias Nacionales de Medicina y Cirugía, así como de la Academia Mexicana de Ciencias. En el ámbito internacional, es parte del Consejo Consultivo del Consorcio de Cómputo Cognitivo en Salud IBM y del International Task Force for Disease Eradication de The Carter Center, entre otros.

Es profesor definitivo de la Facultad de Medicina de la UNAM por 35 años y ha sido profesor visitante en la Universidad de California en San Francisco, Irvine y Berkeley.

Roberto Tapia-Conyer, MD, MPH, MSc, DrSc has been the General Director of the Carlos Slim Foundation for the past 10 years. In that position, he has designed and implemented innovative initiatives and models to strengthen health systems and foster the solution of demanding health problems.

He served in the Mexican Ministry of Health for more than 20 years in several positions. As General Director of Epidemiology, he designed and implemented the National System of Epidemiological Surveillance, as well as the National Health Surveys. While serving as Vice-Minister of Prevention and Health Promotion, he was co-founder of the California-Mexico Health Initiative, currently known as the Health Initiative of the Americas.

He is a member of the Permanent Advisory Council of the Mexican Association of Public Health, the Mexican National Academy of Medicine, the Mexican Academy of Surgery and the Mexican Academy of Sciences. At the global level, he is part of the Advisory Council of the Cognitive Computing Consortium on Health IBM Watson and of the International Task Force for Disease Eradication at The Carter Center, among many other consulting bodies.

He has been a professor at UNAM's School of Medicine for 35 years and has been visiting professor at the University of California (San Francisco, Irvine and Berkeley).

Digital

Platforms and

Legal Support

Digital platforms have become the meeting point to exchange information and solutions, create communities, convene different populations and topple walls.

Platforms are the means to connect citizens with institutions, providing them with a two-way channel to guide their decision-making process.

The main purpose of the platforms we have been developing is to enable concrete and forceful actions:

- Guiding eligible persons through a comprehensive program to ease access to the citizenship process, exam and application to receive financial support.
- Increasing knowledge about legal services and counseling according to their immigration case status, and providing tools that connect immigrants with nonprofit legal experts and other resources across the US to obtain legal orientation and understanding or US immigration laws.
- Developing a full media program on culture, respect and human rights defense that all immigrants must know for their protection,

as well as promoting the use of a web portal with information about human rights pertinent to the Hispanic community.

- Offering the opportunity to receive job training, through courses covering more than 100 high-demand technical services such as farming, construction, client service, information technologies, among others.
- Showing the value of using free online educational tools such as Khan Academy in Spanish, Coursera and Aprende.org, as well as important information to validate official studies for those who are coming back to Mexico.
- Finally, giving psychological support and health counseling for those in the US or who return voluntarily or involuntarily to Mexico.

Key Messages

Digital platforms are a means to connect citizens with institutions, providing a two-way channel to guide their decision making regarding:

- Orientation to the citizenship process
- Job training
- Education
- Psychological support



Dean Jamison

Dean Jamison es Profesor Emérito de Salud Global en la Universidad de California, San Francisco. Anteriormente fue Profesor de Salud Global en la Universidad de Washington (2008–2013) y Profesor Visitante de Salud Pública y Desarrollo Internacional de la Escuela Harvard Kennedy y la Escuela de Salud Pública de Harvard (2006–2008). Previo a esto, Jamison estuvo en la Universidad de California, Los Ángeles (1988–2006) y en el Banco Mundial (1976–1988). Su última posición en el Banco Mundial fue Director de la Oficina del Informe sobre Desarrollo Mundial y autor principal del Informe sobre el Desarrollo Mundial de 1993 del Banco, 'Investing in Health'. En 1994 fue elegido a la Academia Nacional de Medicina. Jamison fue recientemente primer autor junto a Lawrence Summers de 'Global Health 2035', el informe de The Lancet Commission on Investing in Health.

Dean Jamison is Professor Emeritus of Global Health at the University of California, San Francisco. He previously served as Professor of Global Health at the University of Washington (2008–2013) and as the T. & G. Angelopoulos Visiting Professor of Public Health and International Development at the Harvard Kennedy School and the Harvard School of Public Health (2006–2008). Prior to that, Jamison had been at the University of California, Los Angeles (1988–2006) and at the World Bank (1976–1988). His last position at the World Bank was Director, World Development Report Office and lead author for the Bank's 1993 World Development Report, *Investing in Health*. In 1994 he was elected to the National Academy of Medicine. Jamison was recently co-first author with Lawrence Summers of *Global Health 2035*, the report of The Lancet Commission on Investing in Health.

**Pandemic
Preparedness:
An agenda for
Mexico-California
Collaboration?**

Globally, the threat of pandemics is growing due to factors such as increasing human-wildlife interaction, migration, travel, and trade, all of which facilitate pathogen spread. While health security – and in particular pandemic preparedness – is a stated component of the current global health agenda, a series of epidemics in recent years – including Ebola, flu, MERS, SARS, and Zika – highlight the reality that the world is largely underprepared to address the rising pandemic risk.

Pandemics, beyond being a significant health threat, are a great threat to a country's economy and security. It is estimated that the 2015 Ebola outbreak cost US \$2.2 billion globally, while the cost of the 2003 SARS outbreak was more than US \$50 billion. The 2016 Commission on a Global Health Risk Framework for the Future estimates that annualized loss from potential pandemics is more than US \$60 billion. Analysis by Fan, Jamison, and Summers on the potential cost of pandemic flu estimates that the annual inclusive losses from a severe pandemic would be US \$570 billion, equivalent to 0.7% of global

income. 'Inclusive loss' refers to the value of the loss taking into account the intrinsic loss from mortality increase, which is excluded from GDP.

Using the Fan et al. framework, it is reasonable to estimate that the expected annual loss from pandemic risk in Mexico is about 1% of GNI (or US \$12 billion per year in 2012) and, in California, about 0.35% of income or about US \$4.1 billion per year.

Despite the threat, pandemic preparedness and response are severely underfunded. Several challenges exist:

Inadequate investment in domestic prevention and preparedness: Public health systems, particularly surveillance, are essential for rapid detection and response to outbreaks. However, less than one third of countries are in compliance with the International Health Regulations, and many lack the systems and infrastructure for preparedness and response – from surveillance and laboratory capacity, to stockpiling, to manufacturing and health workforce surge capacity.

Insufficient investment in R&D for epidemic and pandemic preparedness: There are major gaps in the current R&D pipeline for key vaccines, diagnostics, and therapeutics for pathogens with high pandemic potential, including pandemic influenza.

Inadequate and slow mobilization of resources for pandemic response: It has proven difficult to mobilize sufficient resources in a timely manner. The slow mobilization of financing is considered a key factor in the slow Ebola response, resulting in higher mortality rates and economic losses.

The Commission on a Global Health Risk Framework suggests that an additional US \$4.5 billion should be invested in pandemic preparedness annually to support health systems strengthening, the prevention and response capacity of the international community, and research and development. This number omits the major increases in influenza vaccine manufacturing capacity almost certainly required for adequate preparedness.

Key Messages

- There is growing vulnerability to pandemics globally, with the potential not only for large loss of life but also significant economic costs to countries and the global economy.
- A number of emerging pathogens with pandemic potential pose threats globally, and for Mexico and the US (e.g., Zika), however pandemic influenza poses the most significant health and economic threat.
- The ongoing redefinition of US security in terms of military preparedness, and reduced diplomatic, foreign aid, and scientific expenditures, suggests the value for California to invest in statewide pandemic preparedness and to partner with Mexico to address this common threat.
- California-Mexico collaboration in preparedness could involve, among other measures, well-articulated surveillance systems, joint plans and planning response exercises, and significant investment in a geographically diversified capacity for rapid production of influenza vaccine.

**Summary by Naomi Beyeler, UCSF, and Dean Jamison*



**María Elena
Medina-Mora**

Directora General del Instituto Nacional de Psiquiatría (México) Centro Colaborador de la Organización Mundial de la Salud desde 1976. Miembro de El Colegio Nacional. Es profesora en la Universidad Nacional Autónoma de México (UNAM). Elegida para la Junta Internacional de Fiscalización de Estupefacientes de las Naciones Unidas por los periodos 2000–2005 y 2005–2007. Es miembro del Consorcio Internacional de Epidemiología Psiquiátrica del Grupo Asesor Internacional de la OMS para la Revisión de los Trastornos Mentales y del Comportamiento de la CIE-10 y Presidente del Grupo de Coordinación de Estudios de Campo para Trastornos Mentales y del Comportamiento de la CIE-11. Ha publicado más de 327 artículos en revistas científicas de revisión por pares 198 capítulos de libros y editado 18 libros y manuales. Tiene más de 11,000 citas en Scopus. Recibió el Premio Nacional de Excelencia en Investigación del National Hispanic Science Network on Drug Abuse (NHSN), el Premio Especial del Director General de la OMS para logros en el área de Control del Tabaco y el Premio de Excelencia en Liderazgo Internacional del Instituto Nacional de Abuso de Drogas.

Dr. Medina-Mora is the Director General of the National Institute on Psychiatry (Mexico), a WHO Collaborating Center since 1976. She is a member of the Colegio Nacional (National Academy). She has a teaching appointment at the National University of Mexico (UNAM). She was elected to serve at the UN International Narcotics Control Board for the periods 2000–2005 and 2005–2007. She is a member of the International Consortium of Psychiatric Epidemiology, of the WHO International Advisory Group for the Revision of ICD-10 Mental and Behavioural Disorders and Chair of the Field Studies Coordination Group for ICD-11 Mental and Behavioural Disorders. She has published more than 327 articles in peer-reviewed scientific journals 198 book chapters and edited 18 books and manuals and has more than 11,000 citations in Scopus. She received the National Award of Excellence in Research by a Senior Investigator from the National Hispanic Science Network on Drug Abuse, the WHO Director General Special Recognition Award for accomplishments in the area of Tobacco Control and the National Institute on Drug Abuse Award of Excellence in International Leadership.

Violence

Youth violence is a highly visible global health problem that is persistent and pervasive in Mexico and in the United States and has been jointly identified as a priority issue by both governments. It is a significant public health problem that causes tremendous harm to young people, families, and communities and is a leading cause of death and injury among youth. Throughout North America, youth violence is a complicated, interrelated social phenomenon where complex networks of transnational actors (migration, social disintegration, poverty and others) are interlinked across borders, placing youth and other vulnerable civilians at highest risk.

In Mexico, homicide is the leading cause of death among young men aged 15 to 29 years. In the United States, youth violence is currently the third leading cause of death of young people, with Black and Latino minorities disproportionately affected.

Yet, youth violence is not just about homicide. It is driven by adverse environments and includes types of violence that range from bullying and threats with weapons to the most serious form, homicide. Underlying this phenomenon are problems of inequity and lack of opportunities for youth, drug trafficking and use, migration linked to stressful experiences, and feelings of hopelessness and vulnerability. Gang formation,

violent behavior, drug abuse, mental and drug abuse disorders are not uncommon outcomes.

Migration has been linked to mental illness; its impact is related to the experiences that triggered migration and the quality of life in the United States. Research has shown that migrants increase their substance use and mental problems in the United States. Returning migrants bring back these treatment needs and, in addition, are victims of violence upon their return. Migrants in the United States and in Mexico are experiencing new forms of discrimination, families are being separated, and children and youth are left alone when parents migrate or are deported from the US. This situation calls for immediate action.

Youth violence typically involves young people hurting other youth. Youth violence and the associated negative impacts (homicide, emotional and physical abuse, substance abuse, suicide, mental disorders, etc.) demand comprehensive intervention strategies that target the highest at-risk groups. There is a strong need to implement action along the prevention continuum that reduces the social and economic burden of injury and morbidity from youth violence. A binational public health approach is an innovative strategy for meeting these needs in this transnational region.

Key Messages

- Youth violence is a growing and important problem in Mexico and the United States. Structural problems related to inequity and social exclusion, drug production, trafficking and use, and migration are underlying this phenomenon. Among its main social consequences are the replication and perpetuation of violence, drug abuse and mental disorders.
- Youth violence is a complex issue that requires cross-sector collaboration, as well as interventions that address risk and protective factors at the individual, peer, community and societal levels across the prevention continuum.
- There is an urgent need to implement measures to reduce violence rates and its deleterious consequences. A binational perspective brings an opportunity for action.

**The text is derived from a joint collaboration of a group of researchers with Michael Rodriguez, UCLA Blum Center on Poverty and Health in Latin America; Xochitl Castañeda, Director, Health Initiative of the Americas, UC Berkeley School of Public Health; Sergio Aguilar Gaxiola, UC Davis; Luciana Ramos, Corina Benjet, Nicolas Martinez, Instituto Nacional de Psiquiatría Ramón de la Fuente Muñiz, Mexico.*



**Eduardo
González Pier**

Eduardo González Pier es asociado distinguido del Centro de Desarrollo Global en Washington DC. Durante más de 20 años ha ocupado altos cargos en el sector salud y seguridad social en México. Recientemente se desempeñó como Subsecretario de Integración y Desarrollo del Sector Salud. Previamente fue Presidente Ejecutivo de Funsalud, Director de Finanzas y Coordinador de Planeación del Instituto Mexicano del Seguro Social (IMSS) y Jefe de la Unidad de Análisis Económico y Coordinador General de Planeación Estratégica de la Secretaría de Salud. Ha participado en la formulación e implementación de diversas iniciativas de reforma relacionadas con la seguridad social y el financiamiento de la salud, la más reciente fue la introducción del Sistema de Protección Social en Salud (Seguro Popular de Salud).

Sus intereses académicos y de investigación incluyen la estimación del valor económico de la salud, el diseño de paquetes de beneficios y el establecimiento de prioridades en el cuidado de la salud, la formulación de la política farmacéutica y la medición del desempeño hospitalario. Ha servido como asesor de El Fondo Monetario Internacional, el Banco Mundial y actualmente en la Organización Mundial de la Organización. Ha publicado en una amplia gama de temas de salud, protección social y seguridad social. Cuenta con una licenciatura en Economía y Matemáticas de la Universidad Washington and Lee en Virginia y una maestría y doctorado en Economía de la Universidad de Chicago.

Eduardo González Pier is a distinguished non-resident visiting fellow at the Center for Global Development in Washington, D.C. For more than 20 years he has held senior positions in the health and social security sectors in Mexico. Most recently he served as Deputy Minister of Health. Previously, he was Executive Chairman of Funsalud, a leading health policy think tank; Chief Financial Officer and Planning Coordinator of the Mexican Institute of Social Security (IMSS), the largest provider of pensions and health services in Mexico; and Chief Economist and General Coordinator of Strategic Planning at the Ministry of Health. He has actively participated in the design, approval and implementation of strategic social security and health financing legal reforms, such as the pension system reform and the introduction of the Social Protection in Health (Seguro Popular de Salud).

His current research interests include estimating the economic value of better health, designing benefit packages and priorities setting in health care, formulating pharmaceutical policy and measuring hospital performance. He has served as advisor to the International Monetary Fund, the World Bank and currently to the World Health Organization and has published on a wide range of health, social protection and social security topics. He holds a BS from Washington and Lee University and a PhD in Economics from the University of Chicago.

Portability of Health Care Insurance

Portability of health care insurance refers to the possibility of having access to medical treatment under the same health benefits plan in both the US and Mexico. Although still small in volume, health insurance portability already takes place among high-end privately insured populations on both sides of the border (e.g. business executives, medical tourists, expats and government officials). The enhancement of cross border portability entails both more affordable private insurance plans with dual coverage and, most importantly, the

introduction of cross border coverage for public insurance schemes in both Mexico and the US.

Health care is the single most important industry in the US and the second most important in Mexico. Cross border utilization of private and public insurance plans would greatly enhance market integration for health care services where both sides stand to gain from the large efficiency gains associated with market integration and from more affordable care that would lead to better health outcomes.

Nevertheless, large obstacles keep insurance markets from delivering more integrated cross border care. The most important of these are:

- Medical markets remain one of the most regulated and fragmented sectors in both countries. Quality of care is difficult to assess and cross border reimbursement of services requires better signalling including reliable accreditation instruments (beyond Joint Commission International).
- The US is one of the most expensive health care markets in the world. Allowing US

providers to invoice Mexican public and private insurance is not affordable for most Mexico-based health plans.

- Vested interests and politically powerful trade unions prevent both federal and state public insurers to purchase care outside of the US.
- Portability usually requires open-ended health plans (that allow for utilization outside the established network of providers). These plans are more expensive to run and typically require high co-payment schedules.

Key Messages

- While greater portability of Medicare could be made possible in the medium to long run (with the reimbursement of medical expenses of American expatriates living in Mexico), portability of social insurance (IMSS, ISSSTE) and Seguro Popular will not be feasible if these schemes remain underfunded and cost of care in the US is not generally affordable.
- The major challenge of expanding access to comprehensive cost-effective health care

by Mexican low-income migrants and their families left behind will most likely first be met through public health delivery networks run by states and financed through Seguro Popular.

- Private US-based health insurance portability could be improved by promoting joint ventures and collaboration efforts between leading Mexican and US teaching and specialty care hospitals.



Silvia Giorguli

Silvia Giorguli es Presidenta de El Colegio de México (Colmex). Ha sido profesora-investigadora del Centro de Estudios Demográficos, Urbanos y Ambientales (CEDUA) en El Colegio de México. Fue directora del CEDUA, Presidenta de la Sociedad Mexicana de Demografía y directora fundadora de la revista Coyuntura Demográfica.

Giorguli estudió Sociología en la Universidad Nacional Autónoma de México (UNAM), la maestría en Demografía en El Colegio de México, y obtuvo el doctorado en Sociología en la Universidad de Brown.

Su investigación se ha centrado en temas de: migración internacional de México a Estados Unidos y sus consecuencias para la población mexicana en ambos lados de la frontera en dimensiones como educación y formación familiar. Los artículos, capítulos de libro y libros coordinados por Giorguli se centran en tres líneas generales, educación, población y políticas públicas.

Actualmente participa como co-investigadora en el Proyecto de Migración Mexicana (Mexican Migration Project) con Princeton, la Universidad de Guadalajara y Brown University. También formó parte del Estudio binacional México-Estados Unidos sobre migración.

La profesora Silvia Giorguli es miembro del Sistema Nacional de Investigadores Nivel II, la Academia Mexicana de la Ciencia, Sociedad Mexicana de Demografía, Asociación Latinoamericana de Población, Asociación Americana de Población y la Unión Internacional para el Estudio Científico de la Población.

Silvia Giorguli is President of El Colegio de México (Colmex). She has been a researcher and director at the Center for Demographic, Urban, and Environmental Studies (CEDUA) at El Colegio de México. She was President of the Mexican Society of Demography and Founding Director of the magazine Demographic Coyuntura.

Giorguli studied sociology at the National Autonomous University of Mexico (UNAM). She earned a master's degree in demography at El Colegio de México, and a PhD in sociology from Brown University.

Her research has focused on issues of international migration from Mexico to the United States and its consequences for the Mexican population on both sides of the border in dimensions such as education and family formation. The articles, book chapters and books coordinated by Giorguli focus on three areas: education, population and public policies.

She currently participates as a co-investigator in the Mexican Migration Project with Princeton, the University of Guadalajara and Brown University. It was also part of the Mexico-United States Binational Study on Migration.

Professor Silvia Giorguli is a member of the National System of Researchers Level II, the Mexican Academy of Science, Mexican Society of Demography, Latin American Population Association, American Population Association and International Union for the Scientific Study of Population.

Migration and Migrants' Rights

International migration between Mexico and the US has changed in the past ten years leading to a new pattern with emerging flows back and forth between the two countries. For example, we have a significant regular flow of Americans under 18 who have moved – mostly with their former migrant parents – to Mexico in the past ten years. In addition, there is a continuous exchange of documented Mexican migrants – either permanent US residents or

holders of temporary work visas – who today represent a larger proportion of the flow while undocumented migration has significantly decreased. To complete the picture, there is a large binational community with families on either side of the border and whose everyday dynamics and expectations for the future are largely determined by the documentation status of Mexicans living in the US. A complex scenario of families with mixed documentation status

and migrants who left Mexico at very young ages and/or more than ten years ago anticipate the difficulties returning migrants, especially deportees, and their families (who may stay in the US or may also move to Mexico) are facing and will continue to face.

Although the migration flow of Mexicans to the US is at its lowest level since the 1990s, there is still a substantial yearly mobility of around 200,000 Mexicans and Americans moving to Mexico and another 180,000 from Mexico to US. These two figures suggest that the region will remain very mobile given the strong family links on both sides of the borders.

Migration trends can be used as a tool to identify the potential vulnerabilities that the announced shift in the federal migration policy may create for migrants and their families. The strong anti-immigrant discourse, the potential increase in the number of deportations, the uncertainty around the legal and administrative procedures for deportations will add to old

problems that have not been solved, creating a scenario of increased vulnerabilities for migrants and their families. In addition, many of the potential measures that are needed to face the current migration crisis need binational approaches and collaboration between the two countries. The safe management of return flows to Mexico and the transferability of working benefits from one country to the other are two examples of the need to discuss within a binational perspective migration issues that concern both countries.

Finally, we cannot isolate the Central American migration flows to and through Mexico from the broader discussion about the management of migration in the region. Any discourse about the protection of migrants' rights has to be coherent at the regional level. It cannot apply to one population but not to the other. This imposes a significant challenge of coherence for the Mexican government.

Key Messages

- In spite of the restrictive migration policies in the US, we can expect a large mobility between Mexico and US to continue given the history and the strong prevailing links of families on both sides of the border. Knowing the characteristics of the migration flows is necessary to anticipate some of the new vulnerabilities and the urgent specific measures needed to respond to the difficult situation that migrants and their families on both sides of the border are facing and will continue to face.
- Binational approaches are needed to manage the migration crisis, from the deportation process to the transferability of resources, assets and working benefits of returned migrants and the situation of the family left behind in the US.
- The discourse around the management of migration, shared responsibilities and the attention to migrants' rights has to include and be coherent with the policies targeted to the Central American flows to and through Mexico and to the US.



Julio Frenk

El Dr. Frenk obtuvo su título en medicina de la Universidad Nacional de México, al igual que una maestría en Salud Pública y un doctorado doble en Organización de la Atención Médica y en Sociología de la Universidad de Michigan. Además de sus trabajos académicos, que incluyen más de 150 artículos en publicaciones académicas y muchos libros y capítulos de libros, ha escrito dos novelas best-seller para jóvenes adultos en las que se explican las funciones del cuerpo humano.

El 16 de agosto de 2015, se convirtió en el sexto presidente de la Universidad de Miami. También ocupa un puesto académico como Profesor de la cátedra de Ciencias de Salud Pública de la Escuela de Medicina Leonard M. Miller.

Antes de unirse a la Universidad de Miami, el Dr. Frenk se desempeñó como Decano de la Escuela de Salud Pública T.H. Chan de la Universidad de Harvard.

El Dr. Frenk fue el director general fundador del Instituto Nacional de Salud Pública de México. Es también el fundador del Consejo Directivo del Instituto para la Métrica y Evaluación de Salud de la Universidad de Washington. Es integrante del Instituto de Medicina de EE. UU., de la Academia Estadounidense de Artes y Ciencias, de la Academia Nacional de Medicina de México e integra el consejo directivo de la United Nations Foundation.

Dr. Julio Frenk holds a medical degree from the National University of Mexico, as well as a master of public health and a joint PhD in medical care organization and in sociology from the University of Michigan. He has received honorary degrees from seven universities. He has published more than 150 articles in academic journals, as well as many books and book chapters. In addition, he has written three best-selling novels for youngsters explaining the functions of the human body.

Dr. Frenk became the sixth president of the University of Miami in August 2015. He also holds academic appointments as Professor of Public Health Sciences at the Leonard M. Miller School of Medicine.

Prior to joining the University of Miami, he was the dean of the Harvard T.H. Chan School of Public Health. He was the founding director-general of the National Institute of Public Health in Mexico. Julio Frenk served as the Minister of Health of Mexico from 2000 to 2006. He introduced a program of comprehensive universal coverage, known as Seguro Popular, which expanded access to health care for more than 55 million previously uninsured Mexicans.

He is a member of the American Academy of Arts and Sciences, the US National Academy of Medicine, and the National Academy of Medicine of Mexico.

Trans-border Utilization of Health Services

Three developments have changed the nature and magnitude of the exchange of personal health services between Mexico and the US during the past two decades: 1) trade liberalization resulting from the North American Free Trade Agreement (NAFTA) since 1994; 2) introduction in Mexico of a major health reform since 2004, which generated the conditions to achieve universal health coverage through the creation of a public health insurance called Seguro Popular; and 3) enactment in the US of the Affordable Care Act (Obamacare) since 2010, with the dual objective of extending health insurance and obtaining greater value for money.

In general terms, these three developments contribute to trans-border exchange of personal health services in its four basic forms: 1) movement of health care providers; 2) movement of health care consumers; 3) trans-border provision of services (basically through telemedicine); and 4) commercial presence or establishment of health care units in another country.

Despite recent policy progress in both countries, major challenges remain, including expanding access of Mexican migrants to comprehensive health care; improving the quality of services offered by Mexican providers; and containing

the costs of health care in the US through, among other things, the reimbursement of medical expenses of American expatriates living in Mexico (around one million) by Medicare and other payers.

The tense relationship that has developed between Mexico and the US since President Trump took office and his promise to deport undocumented Mexican immigrants, renegotiate NAFTA, and dismantle Obamacare will impact the exchange of personal health services in the North American region.

Key Messages

- Trade liberalization in North America has expanded the trans-border utilization of health services in its four forms:
 - » The movement of providers, especially Mexican nurses migrating to the US, has grown, given the huge deficit of nurses in the US.
 - » The number of trans-border health care consumers in search of either culturally compatible health services, in the case of US residents of Mexican origin, or cheaper services, particularly ophthalmological and dental care that are not often covered by conventional health insurance plans, is also growing. Many uninsured Americans travel to Mexico to receive services that would be much more expensive back home.
 - » The most important hospitals in the US (Massachusetts General Hospital, Mayo Clinic, and Cleveland Clinic, among others) have expanded the export of telemedicine services to different parts of the world, including Mexico.
 - » The establishment of health care units has also grown in North America. International Hospital Corporation, Christus Group, and CIMA have established certified hospitals in Mexico. This has produced an inflow of foreign exchange, more jobs, and better access to state-of-the-art technology.
- The expansion of health insurance in Mexico through Seguro Popular is offering the option to undocumented Mexican migrants in the US of getting costly health care services back home in case of need.
- The expansion of health insurance through Obamacare may have reduced the demand for costly health care services in Mexico by previously uninsured American residents.
- The migratory and trade decisions announced by the Trump administration and the dismantling of Obamacare will probably increase the movement of uninsured and under-insured American residents seeking cheaper care in Mexico, decrease the movement of healthcare providers (especially Mexican nurses and physicians willing to work in the USA), and complicate American investment in health care facilities in Mexico.
- The reimbursement of medical expenses of American retirees living in Mexico by Medicare remains a major opportunity both for Mexico, which would benefit from additional jobs and foreign exchange, and the US, since healthcare services are much cheaper south of the border.



William Lee

William Lee es licenciado en Físico a la UNAM (1992), y Maestro (1995) y Doctor (1998) en Física por la Universidad de Wisconsin-Madison. Desde 1998 es Investigador en el Instituto de Astronomía de la UNAM.

Ha realizado investigación en astrofísica de altas energías, fenómenos transitorios y fuentes de ondas gravitacionales. Cuenta con más de 70 artículos arbitrados y 2800 citas y trabajó para el desarrollo de infraestructura científica en México en el Observatorio Astronómico Nacional en San Pedro Mártir, B.C., y HAWC en Sierra Negra, Pue.

Es miembro de la Academia Mexicana de Ciencias (2006), de la Unión Astronómica Internacional (2009) y del Sistema Nacional de Investigadores, nivel III. Recibió el Reconocimiento Universidad Nacional para Jóvenes Académicos en Investigación en Ciencias Exactas (2009). Ha sido Director del Instituto de Astronomía de la UNAM y Secretario de la Academia Mexicana de Ciencias. Desde 2015 es Coordinador de la Investigación Científica de la UNAM.

William Lee holds a BS in Physics from UNAM (1992), and MSc (1995) and PhD (1998) from University of Wisconsin-Madison. He has been a Professor at Instituto de Astronomía-UNAM since 1998.

With research in high-energy astrophysics, transient phenomena and sources of gravitational waves, he has published more than 70 refereed papers with more than 2,800 citations and worked for the development of scientific infrastructure in Mexico at Observatorio Astronómico Nacional in San Pedro Mártir, B.C., and HAWC in Sierra Negra, Pue.

He is a member of the *Academia Mexicana de Ciencias* (2006), the International Astronomical Union (2009) and the *Sistema Nacional de Investigadores*, level III. Distinguished with the *Reconocimiento Universidad Nacional para Jóvenes Académicos* in the Physical Sciences (2009), he has served as Director of *Instituto de Astronomía-UNAM* and *Secretary of Academia Mexicana de Ciencias*. Since 2015 he is Vice-Chancellor for Science at UNAM.

**Education
and Science
Exchange**

Historically, academic exchange between Mexico and California has been strong in a number of disciplines across the research spectrum. This applies to basic science, applications of research, and social sciences and the humanities. There is evidently also a very significant demographic and social component to the relationship between population groups in

Mexico and California. However, in a way these two aspects are quite disjointed, and this hinders the potential for collaboration and mutual understanding. Case studies illustrate opportunities that can be taken advantage of in order to strengthen ties horizontally, across population groups, disciplines and borders.

Key Messages

Whereas there are important educational, scientific, social, demographic and cultural ties that historically bind and keep alive the ties between Mexico and California, there is much

room for strengthening and, above all, interweaving the different categories for a much wider, stronger and visible collaborative presence both in Mexico and in California.



Janet Napolitano

Janet Napolitano es la vigésima Presidenta de la Universidad de California, la Universidad de investigación pública más grande de los E.E.U.U. con diez campus, cinco centros médicos, tres laboratorios nacionales afiliados y un programa estatal de agricultura y recursos naturales. La Presidenta Napolitano ha lanzado iniciativas para lograr la estabilidad financiera de la Universidad y lograr la neutralidad del carbono en toda la Universidad para el 2025. De igual forma, la Presidenta Napolitano ha promovido la aplicación de investigaciones científicas de la Universidad en productos y servicios y ha concentrado recursos de la Universidad en la seguridad alimentaria mundial; y ha creado un programa para estrechar alianzas con México.

En 2014, fue nombrada miembro titular de la Facultad de Políticas Públicas Goldman de UC Berkeley, y en 2015 fue elegida miembro de la Academia Americana de Artes y Ciencias. Antes de unirse a la Universidad de California, la Presidenta Napolitano se desempeñó como Estados Unidos Secretaria de Seguridad Nacional del 2009 a 2013. Fue Gobernadora de Arizona, Procuradora General de Arizona y Abogada de los Estados Unidos para el Distrito de Arizona. La Presidenta Napolitano obtuvo su Licenciatura, *summa cum laude*, en Ciencias Políticas de la Universidad de Santa Clara y su Doctorado en Derecho de la Universidad de Virginia.

Janet Napolitano is the twentieth President of the University of California, the nation's largest public research university with ten campuses, five medical centers, three affiliated national laboratories, and a statewide agriculture and natural resources program. At UC, President Napolitano has launched initiatives to achieve financial stability for the University; achieve carbon neutrality across the UC system by 2025; accelerate the translation of UC research into products and services; focus UC resources on global food security; and create a system wide program with Mexico.

In 2014, she was appointed a tenured faculty member of UC Berkeley's Goldman School of Public Policy, and in 2015 she was elected to the American Academy of Arts and Sciences. Prior to joining the University of California, President Napolitano served as US Secretary of Homeland Security from 2009 to 2013. She is a former two-term Governor of Arizona, a former Attorney General of Arizona, and a former US Attorney for the District of Arizona. President Napolitano earned her BS degree, *summa cum laude*, in political science from Santa Clara University, and her JD from the University of Virginia.



Enrique Graue

Enrique Graue es el 34o rector de la Universidad Nacional Autónoma de México, la universidad pública más grande de América Latina, con una sobresaliente presencia en los 32 estados de la República Mexicana en diversos campus, polos de investigación y escuelas.

El rector Enrique Graue ha tenido una destacada trayectoria académica como especialista en Oftalmología y particular interés en trasplante de córnea. Fue director de la Fundación Conde de Valencia (Instituto Oftalmológico), y vocal del consejo nacional para la prevención y tratamiento de las enfermedades visuales (órgano consultivo de la presidencia de la República). En 2016, fue presidente del Congreso Mundial de Oftalmología en Cancún.

En el periodo 2007 a 2015 fue director de la Facultad de Medicina de la UNAM. Simultáneamente, fue presidente de la Academia Nacional de Medicina de México durante 2015 y 2016 y desde Noviembre de 2015 es Rector de la UNAM.

Como Rector, en foca su esfuerzo para elevar la calidad de la educación y desarrollar programas acuerdo a las necesidades del País.

Enrique Graue is the 34th Rector of the National Autonomous University of Mexico (UNAM), the largest public university in Latin America, with a large presence in the 32 states of the Mexican Republic in various campuses, research centers and schools.

Rector Enrique Graue has had an outstanding academic career as a specialist in Ophthalmology with particular interest in corneal transplantation. He was director of the Conde de Valencia Foundation (Ophthalmological Institute) and member of the National Council for the Prevention and Treatment of Visual Diseases (advisory body of the Presidency of the Republic). In 2016, he was president of the World Congress of Ophthalmology in Cancun.

From 2007 to 2015, he was director of the Faculty of Medicine of the UNAM. Simultaneously, he was president of the National Academy of Medicine of Mexico during 2015 and 2016 and since November of 2015 has been the rector of the UNAM.

As rector, he focuses his efforts on raising the quality of education and developing programs according to the needs of the country.



Jaime Sepúlveda

El Dr. Jaime Sepúlveda, Profesor Distinguido de Salud Global de Haile T. Debas, es el Director Ejecutivo de UCSF Global Health Sciences. Miembro del Gabinete del Canciller de UCSF, dirige un equipo de más de 300 profesores y personal.

Sepúlveda obtuvo dos maestrías y un doctorado de la Universidad de Harvard. Recibió el Harvard Alumni Award of Merit (1997) y fue elegido para servir en la Junta de Supervisores de Harvard (2002 a 2008). De 2007 a 2011, el Dr. Sepúlveda fue miembro del Equipo de Liderazgo de la Fundación Bill & Melinda Gates, donde contribuyó a aumentar el acceso a vacunas y otras soluciones eficaces de salud en los países de bajos ingresos.

Sepúlveda trabajó durante más de dos décadas en el gobierno mexicano, entre ellos el Director General de Epidemiología, Viceministro de Salud, Decano de la Escuela Nacional de Salud Pública y Director de los Institutos Nacionales de Salud de México. Sepúlveda diseñó el Programa de Vacunación Universal de México, logrando la cobertura universal de inmunización infantil. También fundó el Consejo Nacional del SIDA de México. Sepúlveda es miembro elegido de la Academia Nacional de Medicina y la Academia Americana de Artes y Ciencias.

Jaime Sepulveda, MD, DSc, MPH, MSc, the Haile T. Debas Distinguished Professor of Global Health, is the Executive Director of UCSF Global Health Sciences. A member of UCSF Chancellor's Cabinet, he leads a team of more than 300 faculty and staff.

Sepulveda obtained two master's and a doctoral degree from Harvard University. He received the Harvard Alumni Award of Merit (1997) and was elected to serve on the Harvard Board of Overseers (2002 to 2008). From 2007 to 2011, Dr. Sepulveda was a member of the Foundation Leadership Team at the Bill & Melinda Gates Foundation, where he contributed to increased access to vaccines and other effective health solutions in low-income countries.

Sepulveda worked for more than two decades in the Mexican government, including Director General of Epidemiology, Vice-Minister of Health, Dean of the National School of Public Health and Director of the National Institutes of Health of Mexico. Sepulveda designed Mexico's Universal Vaccination Program, achieving universal childhood immunization coverage. He also founded Mexico's National AIDS Council. Sepulveda is an elected member of the National Academy of Medicine and the American Academy of Arts and Sciences.



Stefano Bertozzi

El Dr. Stefano Bertozzi es decano y profesor de Gestión y Políticas de Salud en la Escuela de Salud Pública de Berkeley. Anteriormente, dirigió los programas de VIH y tuberculosis en la Fundación Bill y Melinda Gates. Trabajó en México como director del Centro de Investigación en Evaluación y Encuestas del INSP. Fue el último director del Programa Global sobre SIDA de la OMS y también ocupó cargos en ONUSIDA, El Banco Mundial y en el gobierno de la República Democrática del Congo.

Actualmente copreside el Grupo de Trabajo en Salud de la Iniciativa Universidad de California-México y es coeditor del Volumen sobre VIH/SIDA, Malaria y Tuberculosis del Proyecto de Prioridades en el Control de Enfermedades (DCP3). Ha servido en las juntas de gobierno y consejos consultivos de la OMS, ONUSIDA, El Fondo Global, el Plan de emergencia del presidente de los EE.UU. para el alivio del SIDA (PEPFAR), los Institutos Nacionales de Salud de los EE.UU. (NIH), la Universidad de Washington y la Asociación Médica de los EE.UU. (AMA). Ha asesorado ONGs y secretarías de salud y bienestar social en Asia, África y América Latina. Es miembro de la Academia Nacional de Medicina de los EE.UU. Tiene una licenciatura en Biología y un doctorado en Gestión y Políticas de Salud otorgados por el MIT. El título de médico lo obtuvo en UC San Diego y el entrenamiento en medicina interna en UC San Francisco.

Dr. Stefano Bertozzi is dean and professor of health policy and management at the UC Berkeley School of Public Health. Previously, he directed the HIV and tuberculosis programs at the Bill & Melinda Gates Foundation. Dr. Bertozzi worked at the Mexican National Institute of Public Health as director of its Center for Evaluation Research and Surveys. He was the last director of the WHO Global Programme on AIDS and has also held positions with UNAIDS, the World Bank and the government of the Democratic Republic of Congo.

He is currently co-chair of the Health Working Group for the UC-Mexico Initiative and co-editor of the Disease Control Priorities (DCP3) volume on HIV/AIDS, Malaria & Tuberculosis. He has served on governance and advisory boards for WHO, UNAIDS, the Global Fund, PEPFAR, the NIH, Duke University, the University of Washington and the AMA. He has advised NGOs, and ministries of health and social welfare in Asia, Africa, and Latin America. He is a member of the National Academy of Medicine. He holds a bachelor's degree in biology and a PhD in health policy and management from the Massachusetts Institute of Technology. He earned his medical degree at UC San Diego, and trained in internal medicine at UC San Francisco.



Xóchitl Castañeda

Xóchitl Castañeda Resumen Curricular Xóchitl Castañeda es directora desde el 2001 de la Iniciativa de Salud de las Américas, un programa de la Universidad de California Berkeley, Escuela de Salud Pública. Su liderazgo ha permitido crear programas binacionales para mejorar la salud y la calidad de vida de lo/as migrantes en Estados Unidos. Entre ellos, las semanas binacionales de salud y las ventanillas de salud en varios consulados de países Latinoamericanos. Por medio de estas estrategias, miles de personas reciben atención médica y orientación de cómo obtener servicios por parte de instancias gubernamentales y comunitarias en Estados Unidos. Se graduó como antropóloga en la Escuela Nacional de Antropología e Historia de México. Cuenta con estudios de postgrado en antropología médica de la Universidad de Harvard, de la Universidad de California, en San Francisco y en la Universidad de Ámsterdam, Holanda. En 1999 recibió el Premio Nacional de Investigación en Ciencias Sociales y Salud y recientemente, el Caucus Legislativo de California reconoció su trabajo. Ha publicado más de 150 trabajos científicos y ha servido como consultora para más de 30 organismos internacionales. Es miembro de la Junta Directiva de nueve organizaciones internacionales.

Xóchitl Castañeda is the Director of Health Initiative of the Americas (HIA) at the UC Berkeley School of Public Health since 2001. Her leadership has resulted in the creation of binational programs to improve the health and quality of life of migrants in the United States. Among them are the binational health weeks and “ventanillas de salud” in several consulates of Latin American countries. Through these strategies, thousands of people receive medical care and counseling on how to obtain health services by government and community agencies in the United States. A medical anthropologist by training, Castañeda was educated in Guatemala and Mexico and completed a post-doctoral fellowship in reproductive health at UC San Francisco and a post-doctoral in social science and medicine at Harvard and Amsterdam Universities. In 1999 she received the National Award for Research in Social Sciences and Health and recently the California Legislative Caucus recognized her work. She has published more than 150 scientific papers and has served as a consultant for more than 30 international organizations. She is also a board member of nine international organizations.



**Samuel
Ponce de Leon**

Samuel Ponce de Leon estudió médico en cirujano por la UNAM y se especialista en medicina interna y en enfermedades infecciosas. Obtuvo su Maestría en Ciencias en Epidemiología Hospitalaria y Calidad de la Atención Médica de la Universidad de Virginia. Es Nivel III del Sistema Nacional de Investigadores.

Actualmente es profesor de medicina en la Facultad de Medicina UNAM, jefe del laboratorio de Microbioma, y Coordinador del Programa Universitario de Investigación en Salud.

Ha realizado investigación clínica en prevención y control de infecciones, calidad de la atención médica, brotes epidémicos y enfermedades infecciosas y emergentes en general. Tiene 185 publicaciones científicas además de otras publicaciones de divulgación y análisis. Formó parte del grupo de respuesta a la pandemia de Influenza y miembro del consejo de emergencia pandémica de la OMS. En el año 2000 recibió el Premio al Mérito “Gerardo Varela” en la actividad de salud pública otorgado por el Consejo de Salubridad General. Secretaría de Salud.

Es miembro del consejo editorial de Salud Pública de México, de Archives of Medical Research, del Pediatric Infectious Diseases open access, y también pertenece a la Academia Nacional de Medicina, la Academia Mexicana de Ciencias y a la International Society of Infectious Diseases entre otras distinciones.

Samuel Ponce de Leon studied to be a surgeon at UNAM and is a specialist in internal medicine and infectious diseases. He received a Master's of Science in Epidemiology and Quality of Care from the University of Virginia. He holds the National System of Researchers Level III.

He is currently professor of medicine at the Faculty of Medicine at the UNAM, Head of the Microbioma Laboratory, and Coordinator of the University Health Research Program.

He has performed clinical research in infection prevention and control, quality of medical care, outbreaks of infectious and emerging diseases, and emergencies in general. He has published 185 scientific publications as well as other disclosure and analysis publications. He was part of the Influenza pandemic response group and a member of the WHO Pandemic Emergency Council. In 2000 he received the Merit Award “Gerardo Varela” in the public health activity awarded by the General Health Council. Secretary of Health.

He is a member of the editorial board of Public Health of Mexico, of the Archives of Medical Research, of the Pediatric Infectious Diseases open access, and also belongs to the National Academy of Medicine, the Mexican Academy of Sciences and the International Society of Infectious Diseases, among other distinctions.

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