Global health has emerged as one of the great issues of the 21st century. The world today is more densely populated, more highly urbanized and more closely interconnected than ever before. Every day, immigrants, tourists, and business travelers crisscross the globe, some unknowingly carrying diseases that can all too easily be passed from continent to continent. Every week, understaffed city hospitals and village clinics in Africa, Asia, and Latin America – already battling AIDS, malaria, pneumonia and tuberculosis – must now also cope with rising rates of obesity, diabetes, lung cancer and heart disease. Every month, pesticides and herbicides banned in the U.S. and Europe are sprayed on plants, trees and flowers in developing countries, putting the health of both workers and children at risk.

The purpose of Mount Sinai Global Health is to forcefully address these challenges through a sustained, coordinated, comprehensive plan of action encompassing research, training and clinical practice that builds on Mount Sinai’s unique strengths as a deeply altruistic, major academic medical center in the world’s most globalized city. By unifying the wide range of global health activities at Mount Sinai under one roof, combining innovative thinking with intellectual rigor, making maximum use of both human and technological resources, and giving equal weight to the demands of the present and the predicted needs of the future, we hope to create a successful model for global health programs around the world that can be sustained for years to come.

Goals. The goals of Mount Sinai Global Health are to:

- Enhance research, education and clinical services in global health across the Mount Sinai School of Medicine
- Inspire our faculty and students to work together to address the most pressing problems of health and disease that confront the world’s population
- Become a top 10 leader among academic global health programs in the United States;
- and
- Improve the health of people around the world with particular emphasis on the world’s most underserved populations.

Progress. We have made substantial progress in the past year towards achieving these goals:

- We have built a series of educational programs on multiple levels that include undergraduate courses and electives, a global health track in our MPH program, global health residency options in several major clinical departments, Fogarty international training programs, and most recently, two new post-residency fellowship programs.
- We have established formal partnerships with prestigious research institutes and academic health centers overseas – the Chulabhorn Research Institute in Thailand, the Cameroon Baptist Convention Health Board consortium, and the Instituto Nacional de Salud Publica in Mexico, and we have been designated a Collaborating Centre of the World Health Organization.
- We have strong global health research programs in cardiology, infectious diseases, cancer and environmental pediatrics, and we are working through our newly created Global Health Innovation Fund to allocate pilot project funding that will broaden the base of global health research in departments across Mount Sinai.
Under the leadership of Dr Jagat Narula, Associate Dean for Global Health, we have been designated the editorial office for the official Journal of the World Heart Federation, GLOBAL HEART.

We have dispatched medical missions to some of the world’s neediest places. This year alone over 60 Mount Sinai faculty, 40 students, 60 residents and 25 other professionals (nurses, respiratory technicians, social workers) have worked to improve the health of underserved populations in New York City, North Dakota, the US-Mexico border, Haiti, Liberia, Mozambique, Mongolia, India, Guatemala, the Dominican Republic and nearly 20 other countries.

To continue to move our program forward, Philip Landrigan, MD, Dean for Global Health, Jagat Narula, MD, Associate Dean for Global Health and the Mount Sinai Global Health faculty have developed this 5-year institutional strategic vision.

**Structure.** We have developed a formal structure for Mount Sinai Global Health that includes a leadership element, internal and external advisory committees, five program areas, a communications strategy and a strategy for philanthropy (see Figure).

**Program Leadership.** Mount Sinai Global Health is led by Philip Landrigan, MD, Dean for Global Health, and Jagat Narula, MD, Associate Dean for Global Health. David Muller, MD, Dean for Medical Education plays a special leadership role because of the central role education plays in Mount Sinai Global Health.

To guide the program and advise Drs. Landrigan and Narula, we have established an External Advisory Board, a Senior Faculty Advisory Committee, an and a Global Health Task Force. Additionally, to guide day-to-day program implementation and decision-making, we have formed a Global Health Leadership Team.

**External Advisory Board** This Board is comprised of a select group of internationally recognized physicians and scientists with expertise in global health – Jeffrey Koplan, MD (Emory University); Michael Merson, MD (Duke University); and Michelle Barry, MD (Stanford University). The Board will meet annually to guide the growth and development of the program and advise on strategic direction. Minutes of these meetings will be kept.

**Senior Faculty Advisory Committee** This Committee is comprised of senior members of the Mount Sinai faculty with a strong interest in global health – Paolo Boffetta, MD; Ebi Elahi, MD; Valentin Fuster, MD; David Muller, MD; Ramon Murphy, MD; and Peter Palese, MD. Its function, like that of the External Advisory Board, is to guide the growth and development of the program and advise on strategic direction. The Committee will meet twice each year with one of the two meetings occurring jointly with the External Advisory Board. Minutes of these meetings will be kept.

**Global Health Task Force** This is a committee of community advisors and philanthropic donors who have steadfastly supported and guided Mount Sinai Global Health. Their support has been essential to the development of Mount Sinai Global Health over the past 5 years.

**Global Health Leadership Team.** This group is comprised of the leaders of the five program areas of Mount Sinai Global Health. Their function is to guide day-to-day
program implementation and decision-making. Members are Natasha Anandaraja, MD; Ramin Asgary, MD, MPH; Holly Atkinson, MD; Luz Claudio, PhD; MD; Philip Landrigan, MD, MSc; Ramon Murphy, MD, MPH; Jagat Narula, MD. This group meets monthly. Minutes of these meetings are kept.

Program Areas. Mount Sinai Global Health is organized into five program areas – education, research, service, international training and human rights (see Figure). Each has a director who will be responsible for leading the program and mentoring faculty, trainees and students. The following sections outline the strategic plans and metrics for each area.

Education. Director, Natasha Anandaraja, MD, MPH.

Two-Year Goals
Undergraduate Medical Education.
- Establish a Distinction in Global Health within the MD degree program
- Establish a global health track for medical students in partnership with the Department for Medical Education and the Office of Admissions. This will be a 5-year MD/MPH program with the MPH degree and thesis in the global health track and a year of advanced field experience. We intend that the thesis will lead to a first-author publication for each student so that students in this program will qualify for the MD degree with Distinction in Research as well as Distinction in Global Health. We plan to explore possible linkages between this program and the Doris Duke Clinical research fellowship at Mount Sinai. We plan to recruit 1-2 students per year for total of 2-4 students enrolled in the track by year 2.
- Increase the number of summer students participating in global health projects to underserved populations in the US and overseas to 35.
- Establish INSPIRE student placement and funding. INSPIRE is an intensive mentored 3 month global health experience for 4th year medical students who want to explore global health as a career track. The plan is to accept one student per year.

Residency Training.
- We have recently secured agreement from the Chairmen of Pediatrics and Preventive Medicine to create a new 5-year combined residency program in Pediatrics/Preventive Medicine/Global Health. Trainees will complete both residencies and also obtain an MPH degree in the global health track. The program is currently being advertised to residency candidates. Our goal is to accept one resident per year beginning in July 2012.
- We plan to continue and possibly expand the very successful Global Health Residency Track which currently includes residents from the departments of Medicine, Emergency Medicine, Pediatrics and Psychiatry. Ten – fifteen residents are selected into the Global Health Track annually through a competitive process. For the past 5 years we have been sending these residents to overseas sites for 4-8 week extended fieldwork experiences. Global Health Track Residents also are required to take the Global Health MPH Prep course. The program has been described in Academic Medicine and in the Residency Guidebook issued by the Consortium of Universities for Global Health (CUGH).

Post-Residency/Post-Graduate Training.
- We have secured funding to support two new Fellowship positions in Global Health. One is supported by a three-year grant from the Mulago Foundation. The other, intended
to support a fellow working in global infectious disease research, is supported by a
training supplement that Dr. Peter Palese has generously made available from his major
grant from NIAID. The first infectious disease fellow has been selected and will start
fellowship in October 2011. We are currently selecting the first Mulago Fellow. Our
intention is that these will for the most part be one-year fellowships.

Continuing Medical Education.
• We plan to seek accreditation in 2012 from the American Society for Tropical Medicine &
Hygiene to offer a post-graduate diploma course in Tropical and Travel Medicine. We
have the necessary resources in-house at Mount Sinai to support this course. We will
organize the course in partnership with the MPH program and the Graduate School. It
will be the only diploma course in Tropical and Travel Medicine offered in the New York
metropolitan area.
• Establish a Telemedicine program. We plan to investigate and establish platforms for
distance learning and real-time consultation and teaching between Mount Sinai Global
Health faculty and local healthcare workers at partner sites across the globe using digital
and internet communication linkages.

Overseas Partnerships.
• We plan to increase faculty involvement and build capacity at 4 key partner sites
overseas. We intend to focus especially though not exclusively on Latin American sites,
because such focus recognizes Mount Sinai’s geographic location in East Harlem, our
historical ties to Latin American and the high level of proficiency in the Spanish language
among a high proportion of our faculty, trainees and students. Our work in these sites
will focus on developing reciprocal relationships in which we send our students and
faculty to the sites, and also students and faculty from the sites will be able to come
periodically to Mount Sinai to learn and collaborate.
• We are helping Dr. Narula develop an official MSGH relationship that focuses on the
global spread of cardiovascular disease with Aswan Medical Center [with famous British
Cardiothoracic Surgeon, Sir Magdi Yacoub] and Public Health Foundation of India [with
K Srinath Reddy].

Five-Year Goals
Undergraduate Medical Education.
• We plan to further expand the global health track for medical students to 5 students per
year. Through our philanthropic program (see below), we plan to raise funds so that
these positions are fully funded (half tuition scholarships and half tuition forgiveness
model)
• We plan to increase number of summer students participating in global health projects to
underserved populations in the US and overseas to 40
• We plan to establish additional INSPIRE student placement and funding for total of 2
students.

Residency Training.
• Continue the combined residency program in Pediatrics/Preventive Medicine/Global
Health
• Explore creation of parallel Preventive Medicine /Global Health programs with the
Departments of Medicine, Psychiatry and Emergency Medicine.
**Post-Residency/Post-Graduate Training.**
- Continue to recruit one fellow per year into each of our two currently funded fellowship positions (Mulago and NIAID).

**Continuing Medical Education.**
- Launch the diploma course in Travel and Tropical Medicine
- Launch the telemedicine program

**Metrics.**
Success of the Global Health Education Program will be measured by the numbers of students and trainees recruited into each of the training programs; their assessments of the quality of our programs; their academic success (advanced training and career placements); their publications, presentations, and posters.

A second metric will be our success in obtaining external funding from Fogarty and other sources to support our educational programs.

A third metric is whether we can successfully build partnerships with respected academic health centers, NGOs, and research institutions overseas that can host our students and trainees.

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**Research.** Director, Jagat Narula, MD

**Two-Year Goals**
- Create a Global Health Database that tracks all research projects in global health at Mount Sinai School of Medicine. This will be done in partnership with the Service Program (please see next section). Information collected will be displayed on an interactive map of the world to be posted on the Mount Sinai Global health website: [http://www.pc-everything.biz/worldmap/](http://www.pc-everything.biz/worldmap/).
- Develop a mentoring plan for research in global health and identify potential faculty mentors
- Build the Global Health Innovation Fund and award at least 5 pilot project grants per year through the Fund beginning in 2012.
- Secure at least one new research grant on a topic in global health by the end of 2012
- Create a Global Health Research Fellowship. To accomplish this goal, we are working with Dr Jagat Narula to put together a T32 grant application to support a novel Internal Medicine-MPH-GH-Cardiology training program [all in 6 years], with January 2012 as the target date. The application is intended for the newly created NIH-NHLBI-GH Office with (expected) Fogarty support. Dr Narula will be the PI.
- We are helping Dr Narula establish a formal relationship with a large evolving cardiovascular epidemiology center in Northern India, SIRSA; 14,000 subjects have already been enrolled. A pilot project is being developed and an NIH grant application is being written for an October 25th deadline.

**Five-Year Goals**
• Secure at least two additional new research grants on topics in global health by the end of 2015.

**Metrics.**
The prime measure of success of the Research Program in Global Health will be the number of research grants and total dollars awarded, as well as publications and impact factor.

A second measure will be the Return on Investment from the pilot project grants awarded.

A third metric will be achieved through tracking the careers of fellows accepted into the proposed T32 training program in global health - their publications, presentations, grants and professional appointments.

**Service.** Director, Ramón Murphy, MD

**Two-Year Goals**

• Create a Global Health Database that tracks all overseas medical missions from the Mount Sinai School of Medicine. This will be done in partnership with the Research Program (please see preceding section). Information collected will be displayed on an interactive map of the world to be posted on the Mount Sinai Global health website: http://www.pc-everything.biz/worldmap/.

• Develop an institutional policy for prior notification of all overseas medical missions. This will be done through the Global Health Database.

• Develop criteria for global health missions that are sanctioned by Mount Sinai.

• Among existing field sites, identify those that are best suited to be potential venues for future missions.

• Identify and recruit institutional partners to become “members” of the Mount Sinai Global Sinai Service Team.

• Build funding mechanism to help support trip expenses for Mount Sinai staff travelling to sanctioned programs.

**Five-Year Goals**

• Increase budget to help support service mission expenses for Sinai staff to sanctioned sites.

• Establish criteria and institutional policies for disaster response.

• Develop an emergency response team and an emergency response team database.

• Establish emergency relief fund to cover expenses for disaster relief teams, 1-2 per year.

**Metrics.**
The principal measure of success of the Mount Sinai Global Health Service team will lie in the number of medical missions successfully accomplished each year. Additional metrics are the numbers of patients treated and the numbers of faculty, students, trainees and other members of the Mount Sinai community who participate in these missions. All of these numbers will be tracked and entered into the Global Health Database.

A second metric will be the number of posters, presentations and publications that are generated by these missions.
A third metric will be measured by our ability to generate NGO and inter-institutional collaborations and external funding support from major foundations.

**International Training**  Director, Luz Claudio, PhD

**Two-Year Goals**

- Apply in September, 2011 to become a Fogarty Training Center in Geriatrics.
- Apply in October 2011 to become a Support Center for the Fogarty International Center of NIH. Program URL: [http://grants1.nih.gov/grants/guide/rfa-files/RFA-TW-11-001.html](http://grants1.nih.gov/grants/guide/rfa-files/RFA-TW-11-001.html). If we are successful in securing this grant, we will obtain funding to support placement of 4-6 medical students per year in 11-month overseas research training positions in partner institutions approved by NIH. Dr. Landrigan will be the Corresponding Principal Investigator and Dr Claudio the Principal Investigator.
- Continue our three ongoing Fogarty grants that support training programs for Latin American scientists in environmental and occupational medicine and for minority US students who wish to obtain an overseas training experience in global health.

**Metrics.**

- The first metric will be our success in obtaining a grant to become a Fogarty Training Center in Geriatrics
- The second metric will be measured by our success in obtaining a grant to become a Support Center for the Fogarty International Center of NIH.
- Our third metric will consist of tracking the careers of trainees in our Fogarty programs.

**Human Rights.**  Director Holly Atkinson, MD.

The Human Rights program is the newest component of Mount Sinai Global Health. It has evolved from our successful human rights clinical center and has received further impetus from substantial student interest. We present here a three-year plan for initial development and expansion of this new program.

**Program Administration**

- Develop a website to be incorporated as a separate page into the Mount Sinai Global Health website
- Launch a Health & Human Rights Newsletter

**Clinical Services**

- Expand clinical center (Torture Clinic) to meet weekly
- Provide mental health services for torture survivors including counseling, treatment, and community support groups
- Facilitate provision of basic primary care services for survivors
- Develop a clinic to care for survivors of sex trafficking
- Develop a sexual abuse/domestic abuse clinic
Education/Training

Undergraduate Medical Education
- Expand current training and provide more formal, structured clinical and non-clinical electives in Health and Human Rights for medical and MPH students
- Expand Human Rights Clinic opportunities to weekly sessions

Residency Training
- Provide formal, structured clinical and non-clinical electives in Health and Human Rights residents
- Develop and implement comprehensive medicine, psychiatry and emergency medicine residents training incorporated into their curriculum beyond electives

Post-Residency Training
- Develop and seek funding for Health & Human Rights Fellowship opportunities. These will be one-year advocacy and health and human rights fellowships to be organized in collaboration with NGOs with overseas component. They will be tailored for fellows and/or residents/medical and graduate students.

Continuing Medical Education
- Expand and develop comprehensive online educational modules for training in evaluation and affidavit writing/as well as health and human rights advocacy
- Present Health & Human Rights grand rounds and lecture series to raise awareness of health and Human Rights issues in the medical community

Research
- Undertake research in medical and social consequences among survivors of torture and abuse
- Conduct research on prevention and treatment strategies of human rights abuses and their consequences
- Undertake post-conflict exploratory missions to document abuses and torture in overseas locations
- Conduct educational research on trainees
- Conduct community participatory research that engages survivors in the research enterprise.

Social service and advocacy
- Develop outreach to survivor’s communities, break down barriers and create empowerment programs (for example, rights and available social and health services through workshops and radio pieces)
- Develop social support and services for survivors (including language classes, urgent food and shelter support, facilitating small grants to survivors and job training, referrals to NGOs, and identification and linkage to social service organizations)
- Train survivors in advocacy skills
- Develop a peer-to-peer educational program among survivors
- Facilitate provision of legal services to survivors
- Develop a resource manual for survivors
- Develop interpretation services/language bank
Metrics
- Number of survivors who received clinical and social services
- Number of trainees who have been trained in clinical, research, and advocacy skills
- Number of social service programs and media coverage and broader advocacy achievements
- Number of overseas services and missions
- Number of publications and presentations
- Number of research grants awarded.
- Number of fellowship awarded

Communications. We have created a website for Mount Sinai Global Health within the Mount Sinai website: http://www.mssm.edu/globalhealth.

Under the leadership of Dr Jagat Narula, we have been designated the editorial office for the official Journal of the World Heart Federation, GLOBAL HEART.

Philanthropy. Expansion of the Mount Sinai global health program to a position of national and international prominence will require resources. There already exists a philanthropic base in global health at our institution. A list of specific funding needs and naming opportunities has already been developed.