

PROGRAMME

09:30 – 10:00

Registration

10:00 – 10:15

Conference Opening

10:15 – 11:30

Session 1: "The Physical Sciences of Climate Change and the Health Connection"

*Dr. Stuart Robinson on The Physical Sciences;
Professor Ian Roberts on the Health Connection*

11:30 – 12:00

Tea Break

12:00 – 13:20

Session 2: "Preventing Global Catastrophe"

Dr. Mayer Hillman, Conference Keynote Speaker

13:20 – 14:00

Lunch & Campaign Stunt

14:00 – 15:00

Session 3: "Healthy People, Healthy Planet" - The Student Campaign

Mustafa Abbas

15:00 – 15:30

Tea Break

15:30 – 17:00

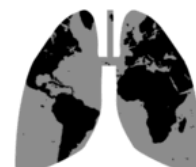
Session Four: "Climate Change Advocacy: From Research to Results"

*Professor Anthony Costello on Academic Advocacy;
Dr. David Pencheon on Putting Ideas into Practice and the Importance of
Health Profession Mobilisation*



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HEALTHY
PLANET

Dear Students,

Welcome you to the Medsin UCL Conference on 'Healthy People, Healthy Planet: Climate Change and Global Health"! This is the 2009 Annual Medsin South-East Regional conference and we are delighted to welcome students from Southampton, Bath, Bristol, Brighton, Peninsula and all across the London Universities.

Medsin UCL this year has prioritised widening participation and education in global health across the entire student body, engaging with all departments. In October 2008 we hosted the annual Medsin National Conference with our theme of "Power & Politics in Global Health", attracting over 450 students and world renowned speakers. This year we have launched and published UCL's first Global Health Magazine, Perspectives, and it is now in its third issue. And last but not least, we have launched the UCL Global Health Education Project.

In addition to this we also run a variety of projects, ranging from teaching sex education in secondary schools, to volunteering programmes as far afield as Ghana, to supporting organisations such as Médecins Sans Frontières.

We have also launched many new and successful campaigns at UCL this year. Stop AIDS began the year by hosting the annual Stop AIDS Speaker Tour; Malaria and Neglected Diseases Campaign organised the first ever global health lecture at UCL for medical students; Universities Allied for Essential Medicines passed a UCL Union motion on open access to UCL's patent information; and Healthy Planet successfully lobbied the Medical School to join the Climate and Health Council and sign their pledge.

Today is dedicated to looking at climate change from the health perspective, both as a curious student and as an impassioned advocate. We have so many wonderful speakers today who have such capacity to inspire and awe, but remember that today is about you.

It is about being Educated in the most pressing global health issue of the 21st century; it is about being Inspired to get involved and get engaged; and it is about finding the courage to take Action, be it through your lifestyle choices, your engagement in advocacy or in the simple act of signing a pledge or striving to learn more.

In whatever you do and wherever you go, we wish you the very best..

Medsin UCL. Educate. Inspire. Act.

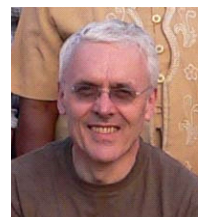
Davina Kaur Patel, Medsin UCL Co-President

Mustafa Abbas, Medsin UCL Co-President, Healthy Planet National Coordinator



FOREWORD

PROFESSOR ANTHONY COSTELLO



I am delighted the Medsin conference is being held at UCL. The energy and ideas of medical students can play an important role in the development of new initiatives for global health. Our world is getting smaller. The challenges for health in the 21st century are formidable. Communicable diseases and the ill-health associated with poverty are still widely prevalent, and the burden of non-communicable disease is increasing as people live longer. Climate change and the global economic crisis will severely test the world's commitment to achieve the Millennium Development Goals. But global networks and communications increase the opportunities for medical students and young doctors to make their voices heard. There are also many other ways to make links with less privileged partners, through electives, overseas attachments, research fellowships at home and abroad, and advocacy campaigns. Global health at UCL has never had such a high profile as today, and students and young doctors represent a key part of our efforts to make UCL a leading centre for research, education and advocacy.

Anthony Costello is Professor of International Child Health and head of the Centre for International Health and Development at the UCL Institute of Child Health, and Director of the UCL Institute for Global Health.

SPEAKERS

“THE PHYSICAL SCIENCES OF CLIMATE CHANGE”

Dr. Stuart Robinson



Stuart is a Royal Society University Research Fellow in the Department of Earth Sciences at UCL. His primary interests include the study of palaeoenvironments, palaeoclimates and the impacts of major environmental change.

“THE HEALTH CONNECTION”

Professor Ian Roberts



Ian Roberts is professor of epidemiology and public health at the London School of Hygiene & Tropical Medicine. His main research area is the prevention and treatment of serious traumatic injury. He trained as a paediatrician in the UK and then in epidemiology at the University of Auckland and at McGill University, Canada.

“PREVENTING GLOBAL CATASTROPHE”

Dr. Mayer Hillman – Conference Keynote Speaker



Mayer is Senior Fellow Emeritus at the Policy Studies Institute in London. He is one of the first proponents of personal carbon rationing as the way for the world’s population to prevent serious damage from climate change. Mayer’s studies have included those related to transport, urban planning, energy conservation, health promotion, road safety and environment policies, and particularly the implications of climate change, all of which he has presented evidence to several House of Commons select committees concerned with such issues.

SPEAKERS

“HEALTHY PEOPLE, HEALTHY PLANET”

Mustafa Abbas



Mustafa is the Medsin ‘Healthy Planet’ Campaign National Coordinator, Co-President of the UCL branch of Medsin, and a board member of the Climate and Health Council. He is currently undertaking an intercalated BSc in International Health at the CIHD.

“ACADEMIC ADVOCACY”

Professor Anthony Costello



Anthony is Professor of International Child Health and head of the Centre for International Health and Development at the UCL Institute of Child Health, and Director of the UCL Institute for Global Health. Although a specialist in maternal and child health, Anthony recently led the 31-strong UCL Lancet Commission on Managing the Health Impacts of Climate Change.

“PUTTING IDEAS INTO PRACTICE AND THE IMPORTANCE OF HEALTH PROFESSION MOBILISATION”

Dr. David Pencheon



David is currently the Director of the NHS Sustainable Development Unit (England), and is a UK trained Public Health Doctor. His main interests and areas of research include sustainable development, climate change, underpinning local and national public health action and policy with good information and evidence, amongst others.

“I wish everyone a really successful conference on this vital topic of climate change. As today’s (and tomorrow’s) doctors we have not just an opportunity but also a duty to be advocates for our patients and the public in health matters. While our prime responsibility is to each patient we care for, we have to recognise that every clinical decision may impact on others too. Thus the doctor’s duty is to society in its widest sense, and we must use that privilege wisely.”

PROFESSOR IAN GILMORE
President
Royal College of Physicians

“As health professionals, and as doctors especially, we have a duty of care to our patients, to the populations, and by implication to the planet. Medsin is doing a great job in reminding us of these three legs of one stool.”

PROFESSOR MIKE GILL & DR. ROBIN STOTT
Co-Chairs of the Climate and Health Council

“In my opinion there are two major problems facing humanity in the 21st century: global poverty and global warming. Let's consider global poverty. At the moment we live in a world of plenty where 15 million children starve to death each year, 800 million people go to bed hungry every day and 1.5 billion people do not have access to clean safe drinking water. Global warming with predicted increases in temperature of up to 6°C by 2100 will have profound impacts adversely affecting billions of additional people. Fundamentally global poverty is about unequal distribution of global wealth and resources. To alleviate global poverty and increase global health, we need to help poor countries to develop as quickly as possible. The golden rule of development is that it is always accompanied by an expansion of the amount of energy used. If these countries use the cheapest route, then their energy will be produced using carbon-based technologies such as coal, gas, and oil. This of course will accelerate global warming. So to deal with global warming, we must deal with developing countries, and thus we must for the first time in humanity's history tackle the unequal distribution of global wealth. Hence global warming is making us face the forgotten billions of people on the planet. So to solve global poverty and global warming we must make the world a fairer place.”

PROFESSOR MARK MASLIN

Head of Department and Director of the Environment
Institute

Department of Geography
UCL



MESSAGE FROM DR. DAVID PENCHEON

Medical students around the world have a vital and leading part to play in helping to adapt to, and mitigate, climate change. Why? Because medical students becomes doctors and it's the doctors who spend the money and generate the carbon. An in many countries, the doctors run the health service!

If the NHS were a country, it would be one of the larger countries in the world. A budget of over a £100 billion, 1.4 million employees, and responsible for a quarter of ALL public sector emissions in England.

The NHS consumes huge amounts of energy and resource, is responsible for millions of miles of travel moving goods, services, and people, and generates huge amounts of waste. That is money that could otherwise be going into direct patient care. But perhaps most important thing to do is the example that we as health professionals set. Just as in the days of poor tobacco control, the public had little incentive to quit smoking if doctors and other healthcare workers smoked, now we have an even stringer reason to walk the talk.

If medical students and doctors take a visible lead, then it makes it easier and more likely that others will follow. Promoting and protecting health is a core duty of doctors. Helping society to adapt to, and mitigate, climate change are therefore a core part of our role.

When I see a medical student on a bike, that's great - when I see a doctor on a bike I have real hope. Don't lose you passion and advocacy when you qualify, just use your position in society to be even more effective.. The future is not something that happens to us, it's something we create. What is happening now is happening on your watch and mine. The most important and fulfilling thing you are likely to do whilst you are on this planet is to address, as a

doctor, the most serious health issue we face, and if you do that well, you will be addressing so many other health issues: physical activity, diabetes, obesity, heart disease, road trauma, atmospheric pollution, asthma, resource wars, better diet, and global and intergenerational justice.

And one last reason to act now – it is so much more fun, fulfilling, and interesting, to be part of the solution than to be part of the problem. Just do it.”

DR. DAVID PENCHEON

Public Health Doctor

Director of the NHS Sustainable Development Unit (England)



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A BRIEF OVERVIEW OF CLIMATE CHANGE & GLOBAL HEALTH

This is a brief overview of the relationship between climate change and global health. All this information is easily accessible online with just a few clicks – see the bottom of this page for a student created resource page. We've added this section because, in our experience, the biggest obstacle to getting involved is that feeling of "I don't know enough". Hopefully this very quick run through of global health impacts will give you a starting platform on which to build further knowledge and give you the confidence to get involved in Healthy Planet.

Climate Change is a Global Disease of Inequity. The world's poorest, having contributed 3% to the world's total carbon emissions, will be hit hardest and soonest. Loss of healthy life years from climate change is estimated to be 500 times greater among the poor and vulnerable populations in Africa than in developed countries. The WHO Global Burden of Disease Project 200 estimated that the climate change that occurred since the climate baseline period 1961-1990 caused 150,000 deaths and 5.5 million DALYS (Disability Adjusted Life Years) in 2000.

Impacts on global health are all interrelated and overlap. We think these areas will give you a good overview of what the climate change and global health relationship looks like: **simple extreme events; complex climatic events; disruption of the El Niño Southern Oscillation (ENSO); infectious diseases; and rising sea levels.** We are not including non-communicable diseases, forced migration, or details of agricultural degradation (although the IPCC lists this as the one that will result in most deaths, it itself is a consequence of most of the below)

Simple extremes of temperature can kill. In many temperate countries, death rates during the winter season are 10-25% higher than those in the summer. In August 2003, the European Heat wave caused 35,000 heat-related deaths, mostly within dense urban centres as a consequence of the 'heat island effect'. Most of the excess deaths during times of thermal extreme are in persons with preexisting disease, especially cardiovascular and respiratory disease. The very old, the very young and the frail are most susceptible. Global climate change will be accompanied by an increased frequency and intensity of heat waves, as well as warmer summers and milder winters.

There is a direct link between major disasters driven by **complex climate events.** This is particularly the case in relation to weather-related disasters and to extreme precipitation and tropical cyclones that trigger widespread flooding and serious loss of life. Significant

health impacts can arise from the loss or contamination of potable water leading to disease, destruction of crops resulting in food shortages, poor nutrition and malnutrition. Health impacts are typically compounded by general infrastructure breakdown, notably with respect to water supply, sanitation and drainage. In the longer term, post-disaster mental health conditions such as depression and anxiety can also present serious problems. Developing countries are poorly equipped to deal with weather extremes, even as the population concentration increases in high-risk areas like coastal zones and cities.

The El Niño Southern Oscillation (ENSO) comprises changes in sea surface temperatures in the Pacific Ocean (El Niño) and in atmospheric pressure across the Pacific basin (Southern Oscillation). El Niño events occur irregularly, every 2–7 years. El Niño is associated with extreme weather (floods, drought) in countries surrounding the Pacific and in other parts of the world through distant connections. El Niño begins when the prevailing winds in the Pacific weaken and there is a shift in rainfall patterns. Prolonged dry periods may occur in Indonesia, the Philippines and Northern Australia and heavy rainfall, sometimes associated with extensive flooding, may occur in Peru and Ecuador. El Niño also has an effect on the Asian monsoon and on hurricane activity.

A growing number of studies have shown that the **El Niño cycle is associated with changes in the risk of diseases** transmitted by mosquitoes, such as malaria and dengue and other arboviruses. Malaria transmission is particularly sensitive to climate variations. In these areas of unstable malaria, populations lack protective immunity and serious epidemics may occur when the weather conditions make transmission possible.

Malaria, today, is mostly confined to tropical and subtropical regions. The disease's sensitivity to climate is illustrated by desert and highland fringe areas where higher temperatures and/or rainfall associated with El Niño may increase transmission of malaria. In areas of unstable malaria in developing countries, populations lack protective immunity and are prone to epidemics when weather conditions facilitate transmission. **Dengue** is the most important arboviral disease of humans, occurring in tropical and subtropical regions, particularly in urban settings. ENSO affects dengue occurrence by causing changes in household water storage practices and in surface water pooling.

Outside the influence of the ENSO, **changing precipitation levels** across the globe will impact on the geographical range of infectious diseases. While some ranges will contract, others will expand and the overall impact on human health will be negative. The geographical range of malaria, for example, has been modelled to include an extra 250 million people by 2080.

Sea-levels will rise as a result of climate change, mainly a result of thermal oceanic expansion and melting of the ice sheets. The rise is expected to be between 0.2 and 0.6m by

2100. This will have important consequences for densely populated, low lying areas such as the Delta region in Bangladesh or the Nile Delta in Egypt. For Bangladesh, at a 0.5m sea level rise there will be 10% land loss and displacement of 6 million. Arable land loss is a more severe consequence for countries that rely heavily on 'home grown' agricultural products as this will result in long term reduction in food production.

Climate Change is the defining Global Health issue of the 21st Century. With carbon emissions hurtling upwards, climatic systems distorted from every direction, and climatic tipping points ever looming just over the horizon, we are at a real and tangible risk of failing to prevent a Global Health Catastrophe. The poorest and the most vulnerable, those most directly dependent on the natural environment, are already feeling their health be eroded and livelihoods degraded while we in the developed world remain safe for the moment. But never forget the pervasiveness of global climate change and the deep connection that we hold with the environment. We may have emancipated ourselves from nature on a naïvely cognitive level, but as this crisis progresses we will see more and more clearly just how perfectly balanced our symbiosis with the environment is. Our ecosystem is what binds and sustains us – we must remember that it is our responsibility, our duty, to preserve it.

MUSTAFA ABBAS

Bibliography:

IPCC (Intergovernmental Panel on Climate Change) (2007) *Working Group II Summary for Policy Makers*, Cambridge University Press: Cambridge.

World Health Organisation (2003) *Climate Change and Human Health: Risks and Responses*: Anthony J. McMichael, D. H. Campbell-Lendrum, World Health Organization, C. F. Corvalan.

For Further Reading: please see UCL Medsin's Library <http://uclmedsin.org/libraryclimate.htm>

