

# Introduction to Module 1 (Infectious Diseases)

BSc Global Health

10<sup>th</sup> October, 2011

Graham Cooke



**Table 5.** Changes in Rankings for 15 Leading Causes of DALYs, 2002 and 2030 (Baseline Scenario)

Category	Disease or Injury	2002 Rank	2030 Ranks	Change in Rank
Within top 15	Perinatal conditions	1	5	-4
	Lower respiratory infections	2	8	-6
	HIV/AIDS	3	1	+2
	Unipolar depressive disorders	4	2	+2
	Diarrhoeal diseases	5	12	-7
	Ischaemic heart disease	6	3	+3
	Cerebrovascular disease	7	6	+1
	Road traffic accidents	8	4	+4
	Malaria	9	15	-6
	Tuberculosis	10	25	-15
	COPD	11	7	+4
	Congenital anomalies	12	20	-8
	Hearing loss, adult onset	13	9	+4
	Cataracts	14	10	+4
	Violence	15	13	+2
Outside top 15	Self-inflicted injuries	17	14	+3
	Diabetes mellitus	20	11	+9

Source : PLoS Med 2006



# Overview of programme

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Focus on the these key areas in depth

Provide a broader overview of more diverse subjects

What do we need know to understand how to reduce this projected burden of disease?

Structured the course around routes of transmission as these are relevant to interventions for prevention



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# Overview of 5 weeks



# Week 1: Airborne infectious diseases (10th-14th October)

	9.30 – 10.30	10.45 – 11.45	12.00-1.00	Afternoon 2
Monday 10 <sup>th</sup> October <b>Clinical LT</b>	<b>Talk: Introduction to Module 1 Graham Cooke</b>	<b>Introductory lecture: Future trends in global infectious diseases Graham Cooke</b>	<i>Methodologies in the study of infectious disease Helen Ward</i>	
Tuesday 11 <sup>th</sup> October <b>Roger Bannister</b>	<b>The swine flu epidemic – what we know now Dr Jake Dunning</b>	<b>How does surveillance and modelling help us control respiratory viruses? Peter White</b>		
Wednesday 12 <sup>th</sup> October <b>Roger Bannister</b>	<b>Latent TB infection; its diagnosis and importance to TB control Ajit Lalvani</b>	<b>Border policy and TB control Manish Pareek</b>	<b>Challenges in paediatric tuberculosis and community control Beate Kampmann</b>	
Thursday 13 <sup>th</sup> October (MSc)				
Friday 14 <sup>th</sup> October <b>Roger Bannister LT</b>	<b>MDR-TB : a growing challenge to global health – case studies Graham Cooke and Phillip du Cros (MSF)</b>			



# Week 2: Food and water borne infectious diseases (17th-21st October)

	9.30 – 10.30	10.45 – 11.45	12.00-1.00	Afternoon 2
Monday 17 <sup>th</sup> October <b>AM: Roger Bannister LT</b>	<b>Video , case study and discussion: Overcoming the barriers to treatment of HIV in Africa</b> <b>Nathan Ford</b>	<b>Video , case study and discussion: Overcoming the barriers to treatment of HIV in Africa (cont...)</b> <b>Nathan Ford</b>		<b>3pm In course assessment 1: Groups A-E</b>
Tuesday 18 <sup>th</sup> October <b>MSc AM/ Rothschild LT PM</b>	<b>Burden of disease</b> <b>Wendy Harrison</b>	<b>Burden of disease (practical)</b> <b>Wendy Harrison</b>	<b>Guinea worm film</b> <b>Wendy Harrison</b>	<b>Introduction to Zoonotic Tropical Diseases</b> <b>Wendy Harrison (Rothschild LT)</b>
Wednesday 19 <sup>th</sup> October <b>Cockburn LT</b>	<b>Lecture: Diarrhoeal disease</b> <b>Graham Cooke</b>	<b>Lecture: Pathogens and dirty water</b> <b>Stephen Smith (Env Engineering)</b>	<b>Lecture and group discussion : Access to clean water</b> <b>Mike Templeton (Env Engineering)</b>	
Thursday 20 <sup>th</sup> October <b>MSc room am / Rothschild PM</b>	<b>Introduction to Neglected tropical diseases</b> <b>Alan Fenwick</b>	<b>Introduction to even more neglected tropical diseases</b> <b>Alan Fenwick</b>	<b>Mass Treatment and Drug Resistance</b> <b>Prof Joanne Webster</b>	<b>School health and school feeding – improving education in Africa</b> <b>? (AF to confirm) 2-3pm</b>
Friday 21 <sup>st</sup> October <b>Roger Bannister</b>	<b>Research methods: Outbreak investigation</b> <b>Bethan Davis</b>			<b>3pm In course assessment 2: Groups F-J</b>



## Poster presentations on an emerging infectious disease (5%)

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Presentations and posters should cover the key determinants of (re)emergence and transmission, factors associated with persistence/control and public health implications

If, as a group, there's something you'd really like to do instead, discuss with me



## In course assessment 1: Poster presentations on an emerging infectious disease (5%)

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Students work in groups of three to produce a short presentation on an emerging infectious disease. The group should present in powerpoint and presentations should last 15 minutes and allow up to 5 minutes for questions.

Individual members should then work on their own poster/handout to submit at the end of the module. Written submission should be on one side of A4.





# Week 3: Vaccine preventable disease (24th-28th October)

	9.30 – 10.30	10.45 – 11.45	12.00-1.00	Afternoon 2
Monday 24th October	<b>Joint Teaching Day at UCL (9-1230)</b> Industrialisation: Asian success and dilemmas.			
Tuesday 25th October <b>Roger Bannister</b> LT	<b>Principles of Vaccination and EPI</b> <b>Alasdair Bamford</b>		<b>Inpatient mortality in South Sudan – A case for expanding vaccination</b> <b>Rahma Elmahdi (12-12.30pm)</b>	
Wednesday 26th October <b>Cockburn LT</b>	<b>Lecture and case studies: What are the obstacles to elimination of polio?</b> <b>Kath O'Reilly</b>		<b>Challenges and strategies for TB contact tracing in UK and South Africa - new approaches to old problems</b> <b>Martin Dediccoat</b>	
Thursday 27th October <b>MSc</b>				
Friday 28th October <b>Roger Bannister</b> am / Rothschild PM	<b>Trust in vaccines</b> <b>Dr Heidi Larson (LSHTM) and Pauline Brocard</b> <i>The role of vaccination in the control of flu pandemics TBC</i>		<b>The global challenge of HPV and scaling up vaccination</b> <b>Iacopo Baussano</b>	<b>Vaccination Journal Club:</b> <b>Moderator Alasdair Bamford (2pm-4pm)</b>



# Week 4: Sexually transmitted diseases (31st Oct – 4th November)

	9.30 – 10.30	10.45 – 11.45	12.00-1.00	Afternoon 2-4
Monday 31st October MSc room am / Cockburn PM	<b>Global Epidemiology of HIV and STIs</b> Graham Cooke	<b>Biomedical prevention in HIV</b> Jonathan Weber and Robin Shattock		<b>Use of ART for prevention in Africa</b> Sarah Fidler
Tuesday 1st November MSc	<b>Syphilis: what do we need to eradicate disease</b> Craig Tipple? (10-11.30am)	<b>Case Studies: Outbreak investigations by MSF</b> Ruby Siddiqui (MSF)	<b>Case Studies: Outbreak investigations by MSF (cont..)</b> Ruby Siddiqui (MSF)	
Wednesday 2nd November				
Thursday 3 <sup>rd</sup> November MSc room AM Peart room PM	<b>Lecture: Global Civil Society</b> Mariam Sbaiti 10-11am	<b>Seminar on HIV activism</b> 11.00am-12 noon Mariam Sbaiti		<b>Research methods: Case studies of STI (2-5pm)</b> Helen Ward and Sophie Day
Friday 4 <sup>th</sup> November Rothschild LT	<b>What do we need to do to prevent HBV related disease?</b> Graham Cooke	<b>How to critically appraise a paper</b> Graham Cooke		<b>Debate: the ethics of International Randomised controlled trials - the SAPIT case</b> Mariam Sbaiti/ Dr Wing May Kong – 2-4.30pm



# Ethical debate

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Student lead session to explore the ethical issues raised by a single study

More details to be provided at start of week 4



# Week 5: Vector-borne infectious diseases (7th-11th November)

	9.30 – 10.30	10.45 – 11.45	12.00-1.00	Afternoon 2
Monday 7th November <b>MSc room</b>	<b>Global burden of vector borne disease and introduction to malaria</b> Graham Cooke	<b>Malaria in the UK: where does it come from?</b> Deidre Hollingsworth	<b>Managing the sick child in sub-Saharan Africa</b> Kath Maitland	
Tuesday 8th November <b>MSc room</b>	<b>Vector control strategies in malaria:</b> John Marshall	<b>Interactive discussion: Should we use GM mosquitos?</b> John Marshall	<b>Can we use existing tools to eradicate malaria?</b> Maria-Gloria Basanez	
Wednesday 9th November <b>Cockburn LT</b>	<b>Leishmaniasis – principles and unmet needs</b> Dr Ingrid Muller	<b>Dengue fever</b> Gavin Screaton	<b>How will the control of infectious disease be improved by genomic analysis?</b> Christophe Fraser	
Thursday 10th November				
Friday 11 <sup>th</sup> November <b>Roger Bannister LT</b>	<b>In course Assessment: Critical Appraisal Paper</b> Moderator : Graham Cooke			



# Critical Appraisal of papers (5%)

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We will adopt a new format for critical appraisal

There will be a session on critical appraisal prior to ICA 2

We anticipate that it will have a similar format for the data handling question in the exam



# Principles of the course

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This module does not exist in isolation, it is designed in the hope you will make links to other parts of the course

We would like to make as much of the learning self-directed as possible – this is your opportunity to read broadly

We would like to learn from you, constructive feedback welcome

We will try to be flexible if there are good reasons to be



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# Questions and discussion

