

# TB RESEARCH METHODS

MCGILL UNIVERSITY • MONTREAL • JUNE 12-16, 2017



COURSE DIRECTOR:

**Dick Menzies**

MD, MSc

## DAY 1

Mon • June 12  
8.30AM – 5.00PM

Introductions and overview,  
Qualitative and Quantitative methods

## DAY 2

Tues • June 13  
9.00AM – 5.00PM

Operational research

## DAY 3

Wed • June 14  
9.00AM – 5.00PM

TB modeling and economic analyses

## DAY 4

Thurs • June 15  
9.00AM – 5.15PM

Randomized trials

## DAY 5

Fri • June 16  
9.00AM – 4.30PM

Molecular epidemiology, systematic reviews

HOSTS



GLOBAL HEALTH PROGRAMS

PROGRAMMES DE SANTÉ MONDIALE

Centre international de TB McGill



McGill International TB Centre



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\*Faculty and speaker information is available in the [Ukova](#) event app\*

# OVERVIEW OF SMALL GROUPS

GROUP 1	Randomized trials	Bill Burman & Greg Fox
GROUP 2	Systematic reviews	Faiz Ahmad Khan & James Johnston
GROUP 3	TB modeling and economic analyses	Olivia Oxlade, Alice Zwerling & Kevin Schwartzman
GROUPS 4 & 5	Operational Research	Tony Harries, Dick Menzies, Amrita Daftary & Gonzalo Alvarez. This group will meet together on Day 1, and split into sub-groups for the rest of the week. Potential topics for sub-groups include: community based participatory research (lead by GA) and qualitative methods (lead by AD)

# DAY 1 AGENDA

## MONDAY, JUNE 12

Time	
8.30AM	<b>Registration</b>
9.00-9.15AM	<i>Welcome and Introductions</i> Marcel Behr
9.15-9.30AM	Course objectives and overview Dick Menzies
9.30-10.00AM	How will research End TB? The Global Action Framework for TB Research Dick Menzies
10.00-10.30AM	How will research End TB? What are the 'big' questions in global TB research? Bill Burman
10.30-11.00AM	<i>Coffee Break</i>
11.00-11.30AM	Quantitative methods – overview of study designs Dick Menzies
11.30AM-12.15PM	Qualitative methods – overview and key concepts Amrita Daftary
12.15-12.30PM	<b>Discussion period:</b> How Quantitative and Qualitative Research are complementary Amrita Daftary & Dick Menzies
12.30-1.30PM	<i>Lunch</i>
1.30-2.10PM	<b>“Beat the clock”</b> Developing study objectives. From a problem to precise objectives in 5 minutes or less Dick Menzies
2.10-2.30PM	<b>Small groups:</b> Organization – who, where, what? Dick Menzies 
2.30-5.00PM (including coffee break)	<b>Small groups:</b> Overview of each topic by group leaders. Selecting a question and study design 
5.00-5.15PM	<i>Group Picture</i>
5.30-6.30PM	<i>Summer Institute Social</i> Venue: Students' Society of McGill University (3480 rue McTavish, Montreal, QC, H3A 1X9) <i>Complimentary snacks and non-alcoholic drinks—Wine can be purchased with cash.</i>

# DAY 2 AGENDA

## TUESDAY, JUNE 13

Time	
9.00-9.45AM	Lecture 1: Operational research – what- why and how Tony Harries
9.45-10.30AM	Lecture 2: Capacity building for operational research in low- and middle-income countries- the SORT IT Model Tony Harries
10.30-10.45AM	<i>Coffee Break</i>
10.45-11.30AM	Lecture 3: Principles and structure of a research protocol Tony Harries
11.30AM-12.00PM	Lecture 4: Examples of operations research changing policy and practice Tony Harries
12.00-12.45PM	From a community question to health policy– the story of GeneXpert in Nunavut Gonzalo Alvarez
12.45-1.45PM	<i>Lunch</i>
1.45-2.00PM	<b>Late-breaker 1</b> “Diplomacy in Immunity to TB: Host Tolerance”   Maz Divangahi
2.00-2.30PM	<b>“Beat the clock”</b> Two teams will compete to develop study objectives in 5 minutes or less. Team 1: Jay Johnston, Bill Burman Team 2: Gonzalo Alvarez, Faiz Ahmad Khan  <b>Judging</b> – Is the question clear (using PICO criteria) Tony Harries & Dick Menzies
2.30-5.00PM (including coffee break)	<b>Small groups:</b> Finalizing the study question. Picking the design, study populations, data sources 

# DAY 3 AGENDA

## WEDNESDAY, JUNE 14

### Time

9.00-9.45AM

Introduction to modeling

Alice Zwerling

9.45-10.30AM

Decision analysis modeling- methods and applications

Olivia Oxlade

10.30-10.45AM

*Coffee Break*

10.45-11.15AM

Economic analyses – not just dollars and cents

Kevin Schwartzman

11.15-11.45AM

Key modeling and economic analysis studies: top question, design and methods

Alice Zwerling

11.45-12.30PM

Realistic expectations: Sample size and power

Andrea Benedetti

12.30-1.30PM

*Lunch*

1.30-2.15PM

**Late-breaker 2**

“RCT of 4RIF vs 9INH for LTBI – first results” | Dick Menzies

**Late-breaker 3**

“Extent of immune response to ESAT6 is genetically controlled” | Erwin Schurr

2.15-5.00PM  
(including coffee  
break)



**Small groups:** Refining data gathering.

Data analysis and sample size



# DAY 4 AGENDA

## THURSDAY, JUNE 15

Time	
9.00-9.45AM	Trial design and selecting study populations– minimizing bias, maximizing generalizability Greg Fox
9.45-10.30AM	Clustered trial designs Greg Fox
10.30-10.45AM	<i>Coffee Break</i>
10.45-11.30AM	End-points, planned and unplanned secondary analyses, interim analyses, stopping rules Dick Menzies
11.30AM-12.00PM	Data analysis 101 Andrea Benedetti
12.00-12.45PM	My favourite recent RCT- best design, most important Dick Menzies & Greg Fox
12.45-1.45PM	<i>Lunch</i>
1.45-2.15PM	<b>Debate</b> “That the Randomized Controlled Trial is the only form of clinical research worth funding” Pro: Greg Fox  Con: Tony Harries
2.15-2.30PM	<b>Late-breaker 4</b> “M Health to enhance LTBI adherence—Lessons from an RCT”   J Johnston
2.30-5.00PM (including coffee break)	<b>Small groups:</b> Finalizing protocols. Preparing presentations. 
5.00-7.00PM	<i>5 a 7 (social hour) cash bar (optional)</i> <i>Thomson House</i>

# DAY 5 AGENDA

## FRIDAY, JUNE 16

Molecular  
epidemiology,  
systematic reviews

### Time

9.00-9.40AM

Systematic reviews and meta-analyses  
Jay Johnston

9.40-10.20AM

Individual patient data meta-analyses (IPD)  
Faiz Ahmad Khan

10.20-10.40AM

*Coffee Break*

10.40-11.20AM

Molecular methods for typing and branding the *tubercle bacillus*  
Marcel Behr

11.20AM-12.00PM

Applications of Whole Genome Sequencing (WGS) for tuberculosis  
Robyn Lee

12.00-1.00PM

*Lunch*

1.00-4.00PM  
(including coffee  
break)

**Small groups:** Presentation of study protocols  
by small groups. Comments on study protocols.



Moderators: Dick Menzies & Faiz Ahmad Khan

4.00-4.30PM

Course evaluations and closure  
Dick Menzies

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