



McGill

**McGill Summer Institute in
Infectious Diseases and
Global Health**

MCGILL UNIVERSITY • MONTREAL • JUNE 5-9, 2023

TB RESEARCH METHODS

DAY 1

Mon • June 5

8:30AM – 5:00PM

Introductions and
overview
Big picture stuff

DAY 2

Tues • June 6

9:00AM – 5:00PM

Randomized
trials

DAY 3

Wed • June 7

9:00AM – 5:00PM

Operational
Research

DAY 4

Thurs • June 8

9:00AM – 5:00PM

Systematic reviews
and, Controversies

DAY 5

Fri • June 9

9:00AM – 4:30PM

Modeling and
economic analysis

HOSTS



McGill



GLOBAL
HEALTH
PROGRAMS

**Centre
international
de TB McGill**



**McGill
International
TB Centre**

A PAHO/WHO Collaborating Centre for Tuberculosis Research



**MacLean
Centre for
Tropical
Diseases**
McGill University



McGill

M[i]⁴

Interdisciplinary Initiative in
Infection and Immunity

Institut de
recherche
Centre universitaire
de santé McGill



**Research
Institute
McGill University
Health Centre**

Infectious Diseases and Immunity in Global Health Program
Programme en maladies infectieuses et immunité en santé mondiale

OVERVIEW OF SMALL GROUPS

GROUP 1	Randomized trials	Bill Burman & (Biostatistician: Andrea Benedetti)	<p>Interpreting RCT results: This group will focus on the application of specific clinical trial results into TB program activities. This will include a careful comparison of the study population to the program population, review of the feasibility of the study intervention to the program, how to prioritize interventions when several have been tested in RCTs, estimating relative magnitude of the effect of different interventions on program outcomes, distinguishing statistical significance from programmatic significance.</p> <p>The past 10 years have provided us with substantially better regimens for treatment of latent TB (3HP, 4RIF). Ongoing trials focus on contacts of MDR-TB, or even shorter regimens (1HP, 6wP). The challenge is to get these better regimens widely used. Therefore, the RCT group will carefully review 2-3 papers on newer regimens and discuss their programmatic implementation. These discussions become similar in some ways to operational research, as they address barriers to using established tools in a program.</p>
GROUP 2	Systematic reviews	James Johnston & Mayara Bastos	<p>A choice is offered:</p> <ol style="list-style-type: none"> 1. Practical aspects. Searches, file management, data entry, quality assessment, and meta-analysis. This group will have hands on experience with searches – matching search strategies to the PICO, performing searches in different data bases. Saving searches and using different software to manage title selection. Data entry and meta-analysis using R. 2. Protocol development. If interest - a sub-group will work on developing a systematic review protocol – from PICO to Prospero registration.
GROUP 3	Operational Research Quantitative & Qualitative	Gonzalo Alvarez, Dick Menzies & Anna Mandalakas Stephanie Law (with Amrita Daftary)	<p>This group will split into multiple sub-groups for the week, to develop protocols for operational research. Questions will be proposed by participants and shaped into feasible operational research projects by all members of each sub-group, with the help of the facilitators, who will work with the groups – providing different perspectives and experiences. This year we will have ‘quantitative’ OR and qualitative OR sub-groups, lead by facilitators with particular expertise in these methods.</p>
GROUP 4	Costing in Operational Research	Jonathon Campbell, Alice Zwerling & Kevin Schwartzman	<p>This group (which may also split into sub-groups) will work on developing a protocol for operational TB research projects with a focus on the economic or costing aspects. The final protocol will describe the methods used to derive estimates of the true costs of novel programmatic interventions for TB. With the assistance of the facilitators, groups will examine various costs, such as those associated with implementation, capital costs and recurrent or ongoing costs, with the option of examining costs from societal vs health system perspectives. The small group will be guided by a toolkit for estimating costs associated with TB interventions.</p>

DAY 1: MONDAY, JUNE 5

8:30AM	<i>Registration</i>
9:00-9:30AM	Introductions, Course objectives and overview Dick Menzies
9:30-10:00AM	How will research End TB? The “big” questions in TB Research Bill Burman
10:00-10:30AM	How will research End TB? Bridging basic science and Clinical research. Marcel Behr
10:30 - 11:00	How will research end TB? Engaging people affected by TB for an inclusive research agenda. Amrita Daftary (ZOOM)
11:00-11:15AM	<i>Coffee Break</i>
11:15-11:45AM	How will research End TB? What about kids? Anna Mandalakas
11:45-12:15PM	How will research end TB? “Bridging The Know-Do Gap in Tuberculosis” Madhu Pai
12:15-1:00PM	Lunch
1:00-1:30PM	A smorgasbord of TB Research methods: 1. Disability post TB – a new outcome Mayara Bastos
1:30-1:45PM	Late Breaker 1: Stephanie Law
1:45 -2:00PM	Small groups: Organization – who, where, what? Dick Menzies
2:00-5:00PM (Includes Coffee Break)	Small groups: Overview of each topic by group leaders Forming sub-groups and selecting objectives
5:00 – 7:00 PM	To be confirmed... 5 a 7 (social hour – this is an informal get together of TBRM – as the main reception is on Wednesday. Cash bar - sorry) Thomson House, 3650 McTavish St, <i>All TBRM participants and faculty with a passion for TB Research!</i>

DAY 2: TUESDAY, JUNE 6

Time	
9:00-9:30AM	DPSICO-TB: Developing study objectives. From a clinical problem to study questions Dick Menzies
9:30-10:10AM	Trial design and selecting study populations—minimizing bias, maximizing generalizability Bill Burman
10:10-10:55AM	Clustered trial designs: DOBS vs DOTS Greg Fox (ZOOM)
10:55- 11:15 AM	<i>Coffee Break</i>
11:15 – 11:45AM	Including Children, pregnant women, vulnerable populations in trials - how, and when Anna Mandalakas
11:45-12:15PM	Applying RCT results to practice – clinical and public health Bill Burman
12:15-12:45 PM	“After the researchers pack up and go home” - sustaining/scaling up - example from ACT4 Thu Anh Nguyen (TBC)
12:45 - 1:45PM	<i>Lunch</i>
1:45-2:15PM	A smorgasbord of TB Research methods: 2. Qualitative methods - a complementary approach to researching TB Amrita Daftary (ZOOM)
2:15-2:30PM	Late Breaker 2: Thu Anh Nguyen
2:30-5:00PM (Includes Coffee)	Small groups: Work on projects

DAY 3 WEDNESDAY, JUNE 7

Time	
9:00-9:30AM	Lecture 1: Operational research – what- why and how. Gonzalo Alvarez
9:30-10:00AM	Lecture 2: Capacity building for operational research in low- and middle-income countries. Priya Shete (ZOOM)
10:00-10:30AM	Lecture 3: Principles and structure of a research protocol Dick Menzies
10:30-10:45AM	<i>Coffee break</i>
10:45-11:15AM	Lecture 4: Examples of operations research changing policy and practice Thu Anh Nguyen
11:15-11:50PM	Examples of Operational research in Canada - that worked! Gonzalo Alvarez
11:50-12:30PM	A Smorgasbord of TB research methods: 3. Using Big data. New lessons learned using Canadian data from many sources. Can this be applied in LMIC? Jay Johnston
12:30-12:40PM	Group photo
12:40-1:30PM	<i>Lunch</i>
1:30-2:00PM	All about sample sizes—what, how, how many Andrea Benedetti
2:00-2:15PM	Late Breaker 3: Jonathon Campbell
2:15-5:00PM (Includes Coffee)	Small groups: Work on projects

DAY 4 THURSDAY, JUNE 8

Time

9:00-9:30AM

Systematic reviews

Jay Johnston

9:30-10:00AM

Individual patient data meta-analyses

Mayara Bastos

10:00-10:30AM

The nuts and bolts of Research: Publishing your results (or, getting past those #\$\$@! Reviewers)

Jonathon Campbell

10:30-11:00AM

Coffee Break

11:00-12:00PM

Controversies in TB Research: Shorter vs safer

The top priority for TB trials is safety and tolerability. (Safety first) Bill Burman

The top priority for TB trials is shortening duration (The shorter the better). Susan Dorman

Perspectives from the course participants

Discussion

12:00-1:00PM

Lunch

1:00-1:30PM

Data Analysis 101

Andrea Benedetti

1:30-1:45PM

A smorgasbord of TB Research methods: 4. Genomic epidemiology of TB

Marcel Behr

1:45-2:00PM

Late Breaker 4:

Mayara Bastos

2:00-5:00PM

(Includes Coffee)

Small groups:

Finalizing protocols

Preparing presentations

DAY 5 FRIDAY, JUNE 9

Time

9:00 - 9:30 AM

All about the money: how to accurately assess the true costs of a new public health/TB program intervention

Jonathon Campbell

9:30 - 10:00 AM

Introduction to modeling—what it can do, what it can't

Alice Zwerling

10:00 - 10:30 AM

Economic analysis—cost effectiveness, cost minimization, cost-outcome descriptions—what's the difference?

Kevin Schwartzman

10:30 - 11:00 AM

Coffee break

11:00 - 11:30 PM

Decision analysis for economic evaluation—methods, applications, and key studies in TB

Alice Zwerling

11:30 - 12:00 PM

Dynamic transmission modeling for TB—principles and applications in endemic settings

Juan Vesga (ZOOM)

12:00 – 12:30

A smorgasbord of TB Research methods: 5. Demystifying Pharmacokinetics – How, why, what PK can tell us

Fajri Gafar

12:30 - 1:30 PM

Lunch

1:30 - 4:00PM
(Includes Coffee)

Small groups:

Presentation of study protocols by small groups

Comments on study protocols

Moderated by: TBC

4:00 - 4:30PM

Course evaluations and closure

Dick Menzies