Organised by

National Centre for Infectious Diseases

NCID MONTHLY RESEARCH MEETING

BRINGING PEOPLE TOGETHER,

BRIDGING SCIENCE AND MEDICINE

15 Mar 2024 | Friday | 11.00am – 12.00pm

About the Meeting

Our research meetings are held every third Friday of the month, with the aim to:

- Inspire research ideas and participation
- Provide guidance on research studies
- Foster research collaborations

Who Should Attend

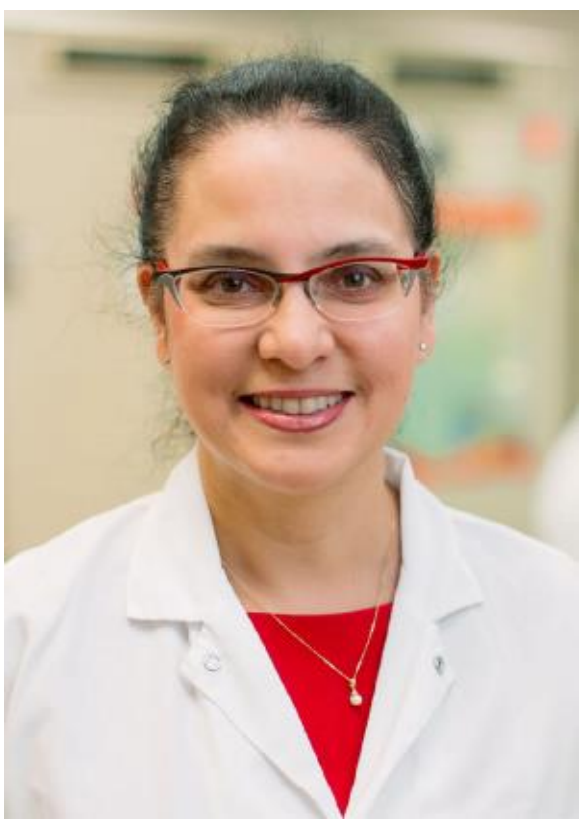
All who are interested in research are welcome to attend.

NCID Short -Term Fellowship Grant Incoming Visit
Professor Robin Patel, Mayo Clinic

NCID is proud to welcome Prof Robin Patel. Prof Patel is hosted by Dr Shawn Vasoo as part of his NCID Short -Term Fellowship Grant. In this session, Prof Patel and Dr Vasoo will be presenting on diagnostic stewardship and blood culture.

11:00 AM **Impact of Rapid Pathogen Identification From Blood Cultures**
Dr Shawn Vasoo

11:30 AM **Diagnostic Stewardship**
Prof Robin Patel



Prof Robin Patel is a Canadian born microbiologist and is the Elisabeth P and Robert E Allen Professor of Individualised Medicine and a Professor of Microbiology and Medicine at the Mayo Clinic.

Prof Patel leads an active research laboratory and is the Director of the Antibacterial Resistance Leadership Group (ARLG) Laboratory Center of the National Institutes of Health. She has deep expertise in antimicrobial resistance, diagnostic testing for bacteria and the study and application of emerging technologies. She has also worked to introduce the use of phage therapy in clinical practice and has performed extensive work in infectious diseases and syndromic diagnostics; she is a thought leader in diagnostic stewardship.

To Register

Visit https://for.sg/mar2024researchmeeting or scan QR code.
This event will be held in **NCID Cares** and via **Zoom**.
*CME/CNE/CPE points will be awarded

Impact of Rapid Pathogen Identification From Blood Cultures

by **Dr Shawn Vasoo**
Clinical Director
Senior Consultant
Head, Infectious Disease Research Laboratory
National Centre for Infectious Diseases

Septic shock carries high mortality, which may be exacerbated by inappropriate initial therapy. Inappropriate therapy may result from unanticipated antimicrobial resistance. Conversely, positive blood cultures may result from contamination, leading to unnecessary therapy, procedures and prolonged hospitalization. Clinicians may also resort to broad spectrum antimicrobials and be hesitant to de-escalate while awaiting susceptibility results. The role of rapid pathogen and resistance identification in bacteremia will be briefly reviewed and preliminary results from a local study (RABbiT NCT02743585) on the clinical impact of a strategy for rapid pathogen and resistance detection in a setting with a moderate to high levels of antimicrobial resistance will be shared.

Three Learning Points:
1. Rapid diagnostics' role in pathogen identification and resistance determination in bacteremia / sepsis
2. The current benefits and limitations of rapid diagnostics for pathogen and resistance determination
3. First hand experience from a study examining 1 & 2 in a context with moderate-high levels of antimicrobial resistance

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Diagnostic Stewardship

by **Prof Robin Patel**
Director, Infectious Diseases Research Laboratory
Professor of Individualised Medicine
Professor of Microbiology and Medicine
Mayo Clinic, Rochester, Minnesota

Advanced microbial diagnostics are providing rapid information about microbes causing infections and their resistance to antimicrobial agents in ways never before possible. Appropriate testing is becoming more difficult as the number of available diagnostics and associated cost increases. Diagnostic stewardship is a strategy to meet this challenge and idealize patient care. Diagnostic stewardship is "…appropriate use of laboratory testing to guide patient management, including treatment, to optimize clinical outcomes and limit the spread of antimicrobial resistance." (Source: https://doi.org/10.1093/cid/ciy077). Diagnostic stewardship requires adjustment of current clinical practices, as empiricism yields to diagnostic-driven management. Either overuse or underuse of microbial diagnostics may be problematic, and both are happening.

There are many strategies. Test menus must be curated. Some microbiology tests are outdated and need to be dropped. At the same time, menus should be expanded to include appropriate advanced diagnostics, with guided use. Provision of test ordering guidance at the point of ordering can drive appropriate test ordering, with diagnostic algorithms informing ordering guidance. To assess safety and maximize value of emerging diagnostics, implementation science studies are increasingly needed. Clinical trials that address the impact of deploying novel diagnostics and define ideal situations where they should be used are important to inform appropriate use of new diagnostics. Facile interpretation of results, in a way that results in appropriate actions, is another part of diagnostic stewardship, and may need to be linked to real-time antimicrobial stewardship, especially in challenging cases.

Three Learning Points:
1. Ordering guidance can improve diagnostic stewardship
2. Ordering algorithms can guide diagnostic stewardship
3. Clinical trials to sometimes needed to address impact and define ideal utilization of new tests