Theme 5: Clinical/Research Training & Capacity Building

Prof Priscilla Rupali, Christian Medical College Vellore
Dr Benedict D Michael, University of Liverpool
NIHR-GHRC: Opportunities

Global Health Pump Priming

Short Placement Award for Research Collaboration (SPARC)
https://www.nihr.ac.uk/documents/nihr-infrastructure-sparc-short-placement-award-for-research-collaboration-where-can-i-go/12159
Clinical Training

• The Intervention

• The Legacy
Clinical Training

• The Intervention

• The Legacy
## Intervention Domains & Components

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*Each component tailored to hospitals’ needs & capacity*

with thanks to Dr Desmond
Intervention Domains & Components

Each component tailored to hospitals’ needs & capacity

with thanks to Dr Desmond
Multicentre studies

- 385 screened
  - 217 suspected CNS infection
  - 44 (20%) confirmed
    - 18 aseptic meningitis
    - 13 purulent meningitis
    - 13 encephalitis

- Delays encephalitis > meningitis
  - To suspicion
    - 4 (0.3–312) vs. 0.3 (0.1–12) h, P < 0.001
  - To LP
    - 23 (4–360) vs. 12 (2–48) h, P = 0.04
  - To treatment
    - 7 (0.5–312) vs. 3 (0.3–312) h, P = 0.002

- 65 children
  - Only 11/17 had PCR

Acute central nervous system infections in adults—a retrospective cohort study in the NHS North West region


Suboptimal management of central nervous system infections in children: a multi-centre retrospective study

Christine Kelly, Aman Sohal, Benedict D Michael, Andrew Rordan, Tom Solomon and Rachel Kneen
Northwest Neurological Infections Network
Lumbar Puncture Pack

Dr Benedict Michael
NIHR Doctorial Research Fellow

Brain infections UK: www.BrainInfectionsUK.org
Institute for Infection and Global Health, University of Liverpool
Clinical Training

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Training at MLW/CoM/QECH

• MLW:
  • Research training
  • Wellcome Trust PhD and various funders’ post-doc/senior fellowships
  • Operational internships
  • All clinical MLW researchers work at QECH

• CoM & QECH - main UG and PG medical training centre in Malawi:
  • MBBS
  • BSc in various healthcare subjects
  • Masters of Medicine, MPH, PhD programmes
Training at CMC

• 100-year old medical training institution
• Variety of UG and PG medical/nursing/other health programmes
• ID department:
  • International Short Course in Clinical Tropical Medicine
  • Conference of the Clinical ID Society (India)
  • Secondary Hospital Antimicrobial Stewardship training
  • Global Health & Humanitarian Medicine course
  • Transplant ID course
  • Fellowship and DM in ID
Training at NIMHANS

• National training centre for neurology, virology/microbiology and psychiatry, neurosurgery, psychology
• Short courses, regular training, longer term programmes UG -> post-doctoral
• MICROCON (Conference of the Indian Association of Medical Microbiologists)
Training at Fiocruz (Fundação Oswaldo Cruz)

- Leading Public Health research organization
- Most prominent science and technology health institutions in Latin America.
- Sites in 6 Regions across Brazil and in Mozambique
- Provides: teaching, research + development (Biomanguinhos: diagnostic tests, vaccines)
- Offers Courses in public health, biotechnology, infectious disease, and related areas:
  - Post-graduate level Degrees (Masters, PhDs)
  - Technical training
  - Distance learning
- Collaboration between Fiocruz and Hospital da Restauracao in Recife: Neuroimmunology Course
Ever struggled with a patient with a brain infection? This great value CPD course is a must for any clinician or scientist with an interest in neurological infections.

NeuroAccess!
Improving neurological clinical skills in areas with the greatest burden of encephalitis

NeuroPACES
The Walton Centre MRCP PACES Neurology Course

NeuroID
Liverpool Neurological Infectious Diseases Course
Dr Benedict D. Michael
Senior Clinician Scientist Fellow
Honorary Consultant Neurologist
University of Liverpool
The Walton Centre NHS Foundation Trust
NeuroPASS Course
1 day, 80-100 students
How to Talk like a Neurologist
NeuroPASS Podcasts
Intro to...
Deep Dive into...
20x Spotify
NeuroPASS Clinical videos
How to walk like a Neurologist
Eliciting and interpreting signs
Youtube
NeuroPASS eLearning
Acute presentation
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**NeuroPASS Clinical videos**
How to walk like a Neurologist
Eliciting and interpreting signs

**NeuroPASS Book**
Undergraduate focus

**NeuroPASS Podcasts**
Intro to...
Deep Dive into...
20x Spotify
NeuroID eLearning

• Existing
  • 20 done
    • TB, HSV, toxoplasmosis

• To Do:
  • Syndromic Approach
    • Meningitis
    • Encephalitis
    • Myelitis
    • ADEM
    • Guillain-Barré Syn
    • Acute Flaccid Paralysis
    • Post-infectious

• To Do:
  • Pathogen approach
    • Rabies
    • Listeria Rhombencephalitis
    • Cerebral Malaria
    • HIV dementia
    • Progressive Multifocal Leukoencephalopathy
    • SSPE
    • Syphilis
    • Prion
    • Cerebral abscess
    • Mucormycosis
    • Acanthoemeba
    • Scrub Thyphus
    • Neurocysticercosis
    • Infection causing stroke
Breakout Session

Outcomes:
5.1b: Plan likely clinical training components in the intervention
5.3: Training plan - wider programme
5.5: Plan research training: PhDs, short-term fellowships, exchanges
Breakout Session - Intervention

• What educational needs do we anticipate?
  • Suspicion of a brain infection
  • Cerebrospinal fluid sample collection
  • Sample transport
  • Result communication
  • Results interpretation
  • Results actioned

• Who would deliver the training and who would receive?

• How much can be online?

• How do we assure compliance?

• Where and when to deliver the training?
Thank you
The Intervention- Framework

• Suspicion and sample collection
  • eLearning module(s)
    • Altered sensorium
    • When to LP
    • What samples to send
  • LP video/course

• Sample transport and processing
  • Face-to-face

• Interpretation, communication, action
  • eLearning module
    • CSF Interpretation
  • Face-to-face
  • Quiz
Breakout Session- Wider

• eLearning
  • Key topics
    • 3/ faculty to supervise