

## ESCMID Observership Executive Summary: Transplant Infectious Diseases

**Location:** Royal Free London Hospital, United Kingdom.

**Dates:** 1st – 5th June 2026. **Supervisors :**

1. **Dr Indran Balakrishnan**, chair AMS Committee, Consultant/Hon.Assoc Professor in Medical Microbiology, Royal Free Hospital and University College London

2. **Prof Alison Rodger**, Professor & Consultant Physician in Infectious Diseases, Department of Infection, Royal Free London, Institute for Global Health, University College London.

**Sponsorship :** Malaysian Society of Infection Control & Infectious Diseases (MyICID)

**Prepared by:** Dr. Alif Adlan Mohd Thabit, ID Physician, Selayang Hospital, Malaysia

### Overview & Objectives

This report summarizes key clinical and operational insights from a clinical observership at Royal Free Hospital London, an ESCMID collaborative center with solid organ transplant facilities. The primary objectives were to evaluate pre-transplant donor/recipient workup, manage complex post-transplant infections, analyse surgical antimicrobial stewardship practices, and a tour of the High Level Isolation Unit (HLIU) designed for High Consequence Infectious Diseases (HCID).

### Core Clinical Insights for ID Practice

- **Advanced organ perfusion & diagnostics:** RFLH heavily utilizes distinct organ perfusion technology to increase graft viability. For ID physicians, this introduces new paradigms in monitoring perfusion fluids for donor-derived infections and initiating targeted prophylaxis early in the peri-operative period.
- **Pre-Transplant workup & psychosocial evaluation:** Candidate selection extends far beyond routine infectious screening. It requires rigorous psychosocial evaluation, mental health assessments, and early logistical planning for vaccinations (e.g. vaccines like Shingrix prior to transplant) and travel risk counselling.
- **Complex drug-Drug interactions:** Managing post-transplant complications requires vigilance regarding interactions between immunosuppressants and antimicrobials. Notable challenges discussed included managing ART regimens (e.g., protease inhibitors) alongside Tacrolimus dose tapering, and navigating Bactrim-induced hyperkalaemia.
- **Managing High-Consequence Infectious Diseases (HCID):** Observations at RFLH's High Level Isolation Unit (HLIU) highlighted the UK's national standardized use of unified PPE (PAPR) for High Consequence Infectious Diseases (HCID) and complex returning travellers, emphasizing not just IPC, but staff welfare and patient psychological support during prolonged isolation.

### AMS Strategies

**Carbapenem-Sparing approaches:** Use of agents like temocillin and teicoplanin and effective carbapenem and vancomycin-sparing alternatives.

- **Risk-Stratified Durations:** Intra-abdominal infections are strictly risk-stratified to dictate shorter with effective source control versus longer antibiotic courses.



- **Surgical Prophylaxis:** Strict adherence to peri-operative surgical prophylaxis guidelines , with proactive, MDT-driven management of difficult-to-treat infections (e.g., multidrug-resistant organisms).

### Operational Observations: IT Infrastructure

A stark contrast was observed in digital infrastructure. RFLH's **CERNER** system enables rapid, seamless access to clinical notes, and antimicrobial susceptibility testing (AST) during morning blood culture meetings. By contrast, Selayang Hospital's (my centre) Total Hospital Information System (THIS), now interfaced as bHIS (backup Hospital Information System) presents severe limitations that hinder rapid diagnostic stewardship and clinical decision-making.

### Strategic Recommendations for Malaysian Practice

1. **Advocate for IT revitalization:** Push for urgent upgrades to local hospital information systems (such as THIS at Selayang Hospital) to better support rapid clinical data access and diagnostic stewardship.
2. **Integrate transplant coordinators & MDTs:** Emulate the structured RFLH MDT model by ensuring dedicated transplant coordinators are actively involved in pre- and post-op care to manage patient logistics, minimizing defaults and improving follow-up adherence.
3. **Refine local AMS protocols:** Draft and propose updated protocols for solid organ transplant recipients that prioritize carbapenem-sparing agents and enforce shorter, evidence-based durations for post-operative intra-abdominal infections.
4. **Enhance pre-transplant clinics:** Adopt a more holistic clinic model that incorporates standardized early vaccination schedules and dedicated travel/exposure risk assessments for transplant candidates.

**Q1 :** To what extent did my Observership visit meet my expectations?

It was a highly positive attachment, fulfilling the objectives of the ESCMID observership.

#### 1. Pre-Transplant infectious evaluation

- **My objective:** To learn about the pre-transplant infectious evaluation of donor and recipient workups.
- **The outcome: Fully met.** By attending the Renal Transplant Clinics and Hepatology Clinics, I gained exposure to complex pre-transplant candidate selections. I observed the intricacies of evaluating psychosocial factors, managing travel risk counseling, navigating drug-drug interactions (such as ART and immunosuppressants), and planning prophylactic vaccinations.

#### 2. Post-transplant complications & MDROs

- **My Objective:** To gain knowledge on post-transplant infectious complications (e.g., in graft rejection cases) and difficult-to-manage infections like multidrug-resistant organisms.
- **The Outcome: Fully Met.** My participation in Hepatology ICU MDTs, Renal Infection MDTs, and HIV MDTs immersed me in these exact scenarios. I reviewed complex cases including VRE in post-liver transplant patients, CMV encephalitis, recurrent *Stenotrophomonas*, and suspected donor-derived infections. I also learned about the complexities of managing infections in patients experiencing antibody-mediated rejection requiring plasma exchange and pulsed steroids.

### 3. Antimicrobial stewardship & surgical prophylaxis

- **My Objective:** To gain an understanding of the practice of surgical antibiotic prophylaxis and antimicrobial stewardship.
- **The Outcome: Fully met.** My timetable integrated extensive shadowing in ITU Antibiotic Stewardship rounds and dedicated AMS rounds. Through these, I observed strict adherence to intra-abdominal infection guidelines, the practical implementation of carbapenem-sparing agents (like temocillin and teicoplanin), and the importance of risk-stratifying antibiotic durations.



### Unexpected and Value-Added Discoveries

Beyond my core objectives, my reflections show that I gained crucial insights into areas I may not have initially anticipated:

- **Organ perfusion technology:** I gained exposure to cutting-edge organ preservation techniques (NRP, Organox, HOPE) and the unique infectious disease challenges they bring to the peri-operative period.
- **Systems and Infrastructure:** I recognized how heavily clinical success relies on efficient digital infrastructure. Experiencing the CERNER system highlighted the urgent need to revamp the local Total Hospital Information System (THIS) back at Selayang Hospital to improve rapid diagnostic stewardship.
- **High Consequence Infectious Diseases:** Touring the High Level Isolation Unit (HLIU) provided me with a gold-standard benchmark for unified PPE protocols (PAPR) and workflows for returning travelers.

In summary, the observership provided a highly targeted, objective-driven experience that directly answered my initial goals while equipping me with broader systemic insights to implement back in Malaysia.

Q2: What aspects of the observership visit could be improved?

#### 1. Extending the duration for longitudinal follow-up

My one-week timetable was incredibly dense, moving rapidly from Hepatology ICU MDTs to TB Clinics and HLIU tours. While this provided an excellent broad overview, a slightly longer duration (e.g., 2 to 3 weeks) would allow for longitudinal patient follow-up. For instance, it would have been valuable to see the clinical outcomes of the complex cases I discussed, such as the post-liver transplant patient on IV Daptomycin with the anterior abdominal wall hematoma, or the patient with aseptic meningitis.

#### 2. Dedicated time for policy and protocol Review

I noted that adopting risk-stratified durations for intra-abdominal infections and carbapenem-sparing protocols will require buy-in from stakeholders at Selayang Hospital. Future observerships could benefit from protected "admin/desk time" to sit down with the AMS lead or pharmacists to review and download their actual written policies, audit templates, and guideline frameworks. Bringing back these concrete templates makes it much easier to draft local adaptations.

#### 3. Laboratory bench shadowing for diagnostic stewardship

Diagnostic stewardship—specifically regarding rapid tests like CSF PCR and viral loads—as a crucial learning point. While I attended blood culture meetings and utilized the CERNER system on the clinical side, dedicating a half-day to shadowing the bench scientists inside the microbiology and virology labs could be highly beneficial. Seeing exactly how they process

samples, the machines they use, and how they manage turnaround times could provide practical insights for improving laboratory workflows in Malaysia.



#### 4. Two-way knowledge exchange

My reflections highlighted the stark contrast in resources (e.g., IT infrastructure, drug availability) between the NHS and the Malaysian KKM healthcare system. A fantastic addition to a future observership would be requesting a 30-minute slot during their Infection Departmental Teaching to present a complex case or an overview of the transplant ID challenges at Selayang Hospital. This turns an observership into a true collaborative exchange, allowing the Royal Free experts to offer tailored, realistic advice for resource-constrained settings.

**Q3: Was the Royal Free London Hospital the right choice as an ESCMID Collaborative Centre for me ?**

Based on the objectives I set out to achieve at the Royal Free London Hospital (RFLH), here is a breakdown of why RFLH was a **perfect strategic and clinical fit** for my goals:

#### 1. Direct alignment with my clinical objectives

My initial application outlined three specific goals: learning about pre-transplant infectious evaluation, managing post-transplant complications (such as graft rejection and multidrug-resistant organisms), and understanding surgical antibiotic prophylaxis. RFLH provided a highly targeted environment to meet these exact needs through specialized clinics and Multidisciplinary Team (MDT) meetings, including the Hepatology ICU MDT and the Renal Infection MDT.

#### 2. Logistical flexibility

I noted that other prominent centers, such as King's College Hospital, require a minimum three-month commitment. RFLH's flexibility accommodated my concentrated one-week observership from 1<sup>st</sup> – 5<sup>th</sup> June 2026 , allowing me to maximize my learning without prolonged absence from my duties at Selayang Hospital.

#### 3. Exposure to specialized facilities

As an Infectious Diseases physician, my exposure went beyond standard transplant care. RFLH's preparedness for High Consequence Infectious Diseases (HCID) and its High Level Isolation Unit (HLIU) provided me with a unique, gold-standard benchmark in infection control. Touring this facility and learning about unified PPE protocols directly expanded my expertise in High Consequence Infectious Diseases (HCID).

#### 4. High-Level multidisciplinary mentorship

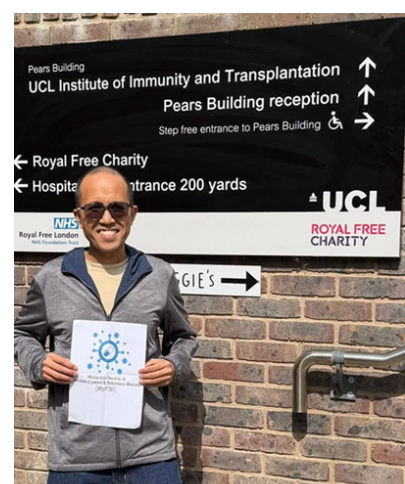
I was seamlessly integrated into multiple specialized teams. Shadowing a diverse roster of experts—ranging from Dr. Indran Balakrishnan in Medical Microbiology to Dr. Mark Harber and Dr Gareth Jones in the Renal Transplant Clinic, Dr Mukerjee at the Liver Transplant Clinic, and Prof. Alison Rodger at the HLIU —gave me a holistic view of how different departments collaborate to optimize patient outcomes.

Ultimately, RFLH provided the exact mix of advanced clinical pathology, structural efficiency (like their CERNER system), and high-level MDT integration I needed to draft actionable improvements for my local practice.

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ID physician, Selayang Hospital, Malaysia





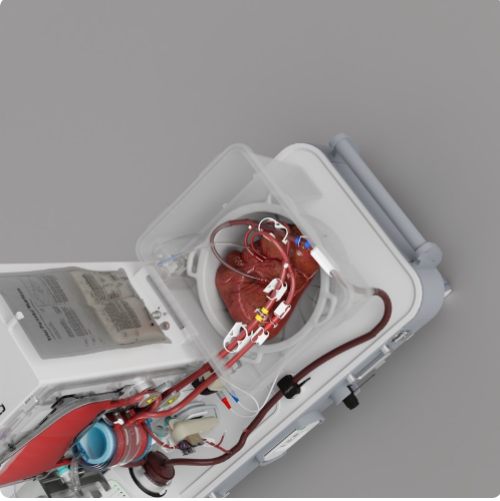
| Observer Week Timetable for Alif Adlan Mohd Thabit |               |                                            | Week 1                                         |                                                                      |
|----------------------------------------------------|---------------|--------------------------------------------|------------------------------------------------|----------------------------------------------------------------------|
| Date                                               | Time          | Activity                                   | Location                                       | Report To                                                            |
| 1-Jun                                              | 09:00 - 11:00 | Micro Shadowing and Blood Culture Meeting  | Micro Office                                   | Micro Regs                                                           |
|                                                    | 11:00 - 12:00 | Hepatology ICU MDT                         | ICU 4 South, go from BC meeting                | Micro Consultant - Dr Emmanuel Wey                                   |
|                                                    | 13:00 - 14:00 | Renal Infection MDT                        |                                                | Micro Consultant - Dr Emmanuel Wey                                   |
|                                                    | 14:00 - 16:00 | ITU Antibiotic Stewardship round           | Go from Micro Office                           | Micro Consultant - Dr Robin Smith                                    |
| 2-Jun                                              | 09:00 - 13:00 | Renal Transplant Clinic                    | Renal Unit, 3rd floor (up ramp)                | Renal Consultant - Dr Mark Harber                                    |
|                                                    | 13:00 - 14:00 | Infection Departmental Teaching (optional) | Neuroscience seminar room, 11th floor          | Dr Siobhan Rowland                                                   |
|                                                    | 14:00 - 17:00 | TB Clinic                                  | Grove Clinic                                   | TB Consultant in Clinic                                              |
| 3-Jun                                              | 09:00 - 11:00 | ID Ward Shadowing                          | 11South Doctors Office                         | Dr Rishi Banerjee                                                    |
|                                                    | 11:00 - 12:00 | ID Radiology MDT                           |                                                |                                                                      |
|                                                    | 12:00 - 13:30 | AMS Round                                  | Meet in Micro Office or Dr Balakrishnan Office | Dr Indran Balakrishnan, Micro Consultant                             |
|                                                    | Afternoon     | High Level Isolation Unit Tour             | 11South Doctors Office                         | Prof Alison Rodger                                                   |
| 4-Jun                                              | 09:00 - 13:00 | Renal Transplant Clinic                    | Renal Unit, 3rd floor (up ramp)                | Renal Consultants - Dr Rhys Evans, Dr Phil Masson or Dr Gareth Jones |
|                                                    | 13:00 - 14:00 | Infection Departmental Teaching (optional) | 11 North Seminar Room                          | Dr Siobhan Rowland                                                   |
|                                                    | 14:00 - 17:00 | HIV MDT and Shadowing                      | Neuroscience seminar room, 11th floor          | Dr Deniz Kaya (HIV Reg)                                              |
|                                                    | 17:00 - 18:30 | Optional Liver Transplant MDT              |                                                | Micro Consultant - Dr Emmanuel Wey                                   |
| 5-Jun                                              | 10:00 - 12:30 | Hepatology ICU MDT                         | ICU 4 South                                    | Micro Consultant - Dr Emmanuel Wey                                   |
|                                                    | 12:30 - 13:30 | Liver Transplant Listing Meeting           |                                                | Micro Consultant - Dr Emmanuel Wey                                   |
|                                                    | 14:00 - 17:00 | Hepatology Transplant Clinic               | Clinic 6, 1st floor                            | Hepatology Consultant - Dr Mukherjee                                 |



The image shows a Trexler flexible-film patient isolator, a high-level isolation unit used for patients with highly contagious diseases. It features a flexible film enclosure with a viewing window and a supply unit with air-cooling vests hanging from the external part of the frame.



The image shows a group of medical professionals, including David Nasralla, standing next to a liver transplant team member who is involved in piloting ARC. They are in a clinical setting, possibly a seminar room.



The image shows the OrganOx metra platform, a device designed to keep donor livers in a near physiological state outside of the body. It is a complex piece of medical equipment with various tubes and components.

The OrganOx metra platform designed to keep donor livers in a near physiological state outside of the body  
<https://www.royalfree.nhs.uk/news/cutting-edge-technology-unlock-more-transplants-across-country>

David Nasralla with some of the other members of the liver transplant team who will be involved in piloting ARC.  
<https://www.royalfree.nhs.uk/news/cutting-edge-technology-unlock-more-transplants-across-country>

Figure 3. A Trexler flexible-film patient isolator in an isolation room within the Royal Free Hospital high-level isolation unit. The supply unit is shown connected to the isolator via the porthole and 1 of the 2 bag-and-seal systems can be seen on the right-hand side of the supply unit. The standing/exercise area for the patient has been extended from the main frame in this photograph (front right). Blue air-cooling vests hang from the external part of the frame, ready to be donned by staff entering the half-suits in the isolator walls.

Alonso A, Cohen J, et al.NHS England HCID Networks. Clinical Management of Hospitalized Patients With High-Consequence Infectious Diseases in England. Health Secur. 2024 Sep;22(S1):S50-S65.