IEQAS

IRISH EXTERNAL QUALITY ASSESSMENT SCHEME CLG

# Programme & Book of Abstracts

**Annual Conference, Thursday 2nd October 2025**

**Ashling Hotel, Dublin**

IEQAS
IRISH EXTERNAL QUALITY ASSESSMENT SCHEME CLG

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Welcome to this year's IEQAS Conference. IEQAS is the longest standing quality initiative in the Irish health service. The IEQAS Annual Conference, is an important event for showcasing commitment to education and improvement in External Quality Assessment (EQA).

The Irish External Quality Assessment Scheme CLG (IEQAS) is a not-for-profit company, overseen by a Board of Directors and a Steering Committee, which includes representation from the major professional bodies involved in Irish laboratory medicine.

We continue to provide EQA schemes for laboratory medicine (including primary care), offering professional advice and guidance as necessary.

An increasingly important role for IEQAS is participation in national and international initiatives that have the objective of improving quality of analysis in laboratory medicine.

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## Organisation Structure

| | |
|---|---|
| **Directors:** | |
| Dr Peadar McGing | Formerly Principal Biochemist, Mater UH |
| Hazel Graham | Formerly IEQAS Quality Manager |
| Paudy OGorman | Laboratory Manager, Mater UH |
| David Walsh | Director of Strategy & Business, AstraZeneca |
| Esther Purcell | Principal Clinical Biochemist, St. Vincent's UH |
| Dr Irene Regan | Consultant Clinical Scientist, Lancashire Haematology Centre |
| Ruth Adams | General Council, Mater UH |
| **Company Secretary:** | |
| Yvonne Burke | IEQAS Operations Manager |
| **Members: Steering Committee** | |
| Dr Susan FitzGerald (Chair) | Consultant Microbiologist, SVUH |
| Cara Ward (Vice Chair) | Senior Medical Scientist, Letterkenny UH |
| Dr Peadar McGing | Formerly Principal Biochemist, Mater UH |
| Hazel Graham | Formerly IEQAS Quality Manager |
| Dympna Murphy | Formerly Chief Medical Scientist, Tallaght UH |
| Brendan Byrne | Principal Biochemist, Mater UH |
| Anne Kane | IEQAS Scheme Manager |
| Maria Phelan | IEQAS Scheme and Quality Administrator |
| Yvonne Burke | IEQAS Operations Manager |
| **Members: Specialist Advisors** | |
| Therese Driscoll | Formerly Senior Medical Scientist, Tallaght UH |
| Bernadette Jackson | POCT Manager, Naas General Hospital |
| Padraig Kiernan | Chief Medical Scientist, Connolly Hospital |
| Marguerite MacMahon | Principal Biochemist, Mater UH |
| Richard McCafferty | Chief Medical Scientist, St James's Hospital |
| Deirdre Murphy | Chief Medical Scientist, The Rotunda Hospital |
| Victoria Murphy | Senior Medical Scientist, Tallaght UH |
| Niamh Mullen | Senior Medical Scientist, Tallaght UH |
| Carl Talbot | Principal Biochemist, Coombe Hospital |
| Magdalena Kobielus | Senior Medical Scientist, SVUH |
| **Additional Specialist Advisors:** | |
| Prof Gerard Boran | Consultant Chemical Pathologist, Tallaght UH |
| Dr Catherine Flynn | Consultant Haematologist, St James's & The Coombe Hospital |
| Phyllis Reilly | Chief Medical Scientist, NPT, Tallaght UH |
| Dr Verena Gounden | Consultant Chemical Pathologist, Galway UH |

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## Annual Conference Programme, Thursday 2nd October 2025

| | | |
|---|---|---|
| | **First Plenary, Liffey Suite**<br>**Chair:** Dermot McBrierty, ACSLM | ACSLM |
| 09:55 | IEQAS Chair's Welcome Address | Cara Ward, IEQAS |
| 10:00 | Overview of the IVDR and impact for laboratories established in Ireland | Dr Philip Kelly, Project Manager, HPRA |
| 10:30 | Regular Transfusion: The patient experience | Dipika Shah, Senior EQA Scientist, UK NEQAS |
| 11.10 | **Coffee** | |
| | **Second Plenary, Liffey Suite**<br>**Chair:** Catherine Byrne, CORU | MSC MEDICAL SUPPLY COMPANY LTD |
| 11.30 | Advanced Practice in Laboratory Medicine: Threat or Opportunity for the patient, for everyone? | Dr Irene Regan, Consultant Clinical Scientist, Lancashire Haematology Centre |
| 12:10 | Advanced Practice within HSCPs in Ireland | Dr Marie Ó Mír, Chief Executive Officer ISCP |
| 12:30 | Lunch- Chesterfield Brasserie | |
| | **Clinical Chemistry Workshop, Phoenix Suite**<br>**Chair:** Dr Paula O'Shea, ACBI | Roche |
| 13.45 | Assessing the Impact of Analytical Variability for AST/ALT Assays on FIB-4 Index and Patient Referrals: An Irish Perspective | MacDara Hickey, Medical Student, UCD, SVUH |
| 14:15 | AST in the IEQAS EQA Scheme | Anne Kane, Scheme Manager, IEQAS |
| 14:30 | Verification of Faecal Calprotectin Measurement on the Biosystems A15s Analyser | Mariah Kelly, Senior Medical Scientist, UCH, Galway |
| 14:45 | Outcome Studies in Laboratory Medicine: Value and Practical Applications (Zoom) | Prof Zhen Zhao, Professor of Clinical Pathology and Laboratory Medicine, IFCC/ Weill Cornell Medicine, New York |

| | | |
|---|---|---|
| | **Haematology Workshop**<br>**Montpelier Suite**<br>**Chair:** Fiona Crotty, TU Dublin | |
| 13:45 | IEQAS Blood Cell Morphology Annual Review | Dr Catherine Flynn, Consultant Haematologist, St James's Hospital |
| 14:45 | Setting up an 8 colour CLL MRD panel on the FACSCanto flow cytometer | Gráinne O'Grady, Medical Scientist, MMUH |
| 15:00 | An evaluation of a new method for alpha Thalassaemia screening in a large Irish Haemoglobinopathy Centre using Haemoglobin Barts Immunochromatographic Test | Annie Howard, Final year student, Technological University Dublin /St James's Hospital |
| 15:15 | Ektacytometry in the diagnosis of RBC membrane disorders | Kevin Colgan, Medical Scientist, Children's Health Ireland, Crumlin |
| | **Microbiology Workshop**<br>**James Joyce Suite**<br>**Chair:** Dr Sinead Mc Dermott, SVH | |
| 13:45 | MedLIS in Microbiology: The Beaumont Experience | Dr James Donnelly, Consultant Clinical Microbiologist, Beaumont Hospital |
| 14:15 | Case Series of *Fusobacterium* Infections | Grace Rothwell-Kelly, Microbiology SpR, UH Waterford |
| 14:45 | Transition to ISO15189:2022: Lessons Learned | Anne Dickinson, Pathology Quality Manager, SVUH |
| | **Transfusion Workshop**<br>**Beckett Suite**<br>**Chair:** Padraig Kiernan, Connolly Hospital | The Brennan & Co Group<br>QuidelOrtho |
| 13:45 | Major Haemorrhages/Trauma Simulation | John Duffy, Senior Medical Scientist, Haemovigilance Officer, Mater UH |
| 14:05 | Resolving anti-CD38 interference in indirect antiglobulin testing using 0.04M dithiothreitol: impact of Daratumumab levels | Ciara Bauer, Senior Medical Scientist in the RCI Laboratory, IBTS |
| 14:20 | Feasibility Study for the Provision of Rh+K matched transfusions for Rh c Negative Women of Childbearing Age at the National Maternity Hospital | Aisling Ross, Medical Scientist, NMH, Holles St |
| 14:45 | Minimising the usage of O Rh D negative blood in Emergency situations. | Denise Neary, Chief Medical Scientist, Blood Bank & Tissue Est, SVUH |

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## Member Updates 2025/ 2026

IEQAS has been providing a range of national and partner schemes to all its members since 1981 making us one of the longest standing quality initiatives in the Irish Health Service.

Our national schemes include Clinical Chemistry, Full Blood Count, Blood Cell Morphology and HbA1c and we have over 100 laboratories departments, from within the Irish hospitals, participating in these schemes. Participation allows our members compare their assay(s) performance against other Irish laboratories to ensure the highest-quality laboratory service testing in Ireland for patients.

We offer over 200 schemes in co-operation with our Finnish partners Aurevia Oy (Labquality), and details of these schemes can be found on our website www.ieqas.ie.

## IEQAS Director and Committee Updates

Since our Conference in 2024, we have welcomed to the IEQAS Board of Directors: David Walsh (Director, AstraZeneca). Paudy O Gorman (Laboratory Manager, Mater Misericordiae University Hospital), Esther Purcell (Clinical Biochemist, St Vincent's University Hospital), Dr. Irene Regan, Consultant Clinical Scientist, Lancashire Haematology Centre and Ruth Adams, General Counsel, Mater Misericordiae University Hospital.

Dr Suzy FitzGerald (Consultant Microbiology, St Vincent's Hospital) is our new Chair of the IEQAS Steering Committee, with Cara Ward (Letterkenny General Hospital) as Vice Chair.

Dr Verena Gounden, Consultant Chemical Pathologist, University Hospital Galway, has joined the IEQAS Clinical Chemistry Review Group.

Carl Talbot, Principal Biochemist, Coombe Hospital, has joined IEQAS as a Specialist Advisor in statistics.

Niamh Mullen, Senior Medical Scientist, Tallaght University Hospital and Magdalena Kobielus, Senior Medical Scientist, St Vincent's University Hospital have joined IEQAS as Specialist Advisors to our Haematology Review Group.

IEQAS values all the time and expertise our Directors, Steering Committee members and Specialist Advisors provide, all of whom act in a voluntary

capacity. We would also like to pay a special thank you to all the laboratory staff in Tallaght University Hospital, Mater University Hospital, Children's Health Ireland (CHI), Crumlin, St James's Hospital and The Coombe Hospital, for facilitating IEQAS with sample collection, storage and distribution.

IEQAS is always happy to hear from experienced laboratory personnel that may be interested in joining the IEQAS Steering Committee/ Review Groups. Please e-mail info@ieqas.ie for further information.

## IEQAS EQA National Schemes 2025/ 2026

- **NEW - IEQAS Full Blood Count Scheme 2026:** There are six distributions per annum in this scheme. For 2026 two of these distributions will be a fresh blood survey (including full differential & PLT-F). Such material provides valuable information and will be continued where possible.

- **IEQAS HbA1c Scheme -** The Irish members HbA1c results were once again put forward for inclusion in The International Federation of Clinical Chemistry and Laboratory Medicine, IFCC EurA1c-project for HbA1c 2024. Results are published on the IEQAS website. This project is planned again for October 2025.

## IEQAS Annual Scheme Orders for 2026

IEQAS will email all existing members to inform them of when and how to submit their annual re-order in November 2025. Details of all our national and partner schemes are available on our website www.ieqas.ie

Laboratories can join our schemes at any time during the calendar year and will be charged the pro rata rate. We pride ourselves on the local personal support and guidance we provide to all our members. For all queries, please contact us at info@ieqas.ie or via phone 01 4957356.

## Quality Assurance

IEQAS is committed to delivering a high-quality EQA service to support Irish laboratories. We represent Irish EQA both Nationally and Internationally.

- **International Council for Standardisation in Haematology (ICSH)**: Jointly with the Academy of Clinical Science and Laboratory Medicine (ASCSLM), IEQAS are affiliated with the ICSH. Richard McCafferty is the Irish representative.
- **The European Organisation for External Quality Assurance Providers in Laboratory Medicine (EQALM)**: IEQAS is a member of (EQALM) and contributes to many EQALM surveys, which assist in suggesting improvements for EQA schemes across Europe.
- **Health Products Regulatory Authority (HPRA)**: IEQAS have regular contact with the HPRA. Individual participant performance is never discussed and remains the responsibility of the participant.
- **ISO9001:2015:** IEQAS is accredited to this standard demonstrating our ongoing commitment to quality, customer satisfaction, operational efficiency and continuous improvement.
- **1SO17043**: IEQAS is in the initial preparatory stage and assessing our readiness to achieve this standard via UKAS.

## National Representation

- **National NPT Committee:** Anne Kane is the IEQAS representative on this committee. The Guidelines for safe and effective management and use of Point of Care Testing were published in 2021 and are available on our website www.ieqas.ie. The guidelines are being updated and IEQAS will input on behalf of EQA in Ireland.
- **Reference Interval Harmonisation Project Group**: Dr Peadar McGing represents IEQAS on this National Clinical Programme for Pathology project.

## IEQAS Information Technology

We have recently launched our new logo and website (www.ieqas.ie). Our aim was to create a user-friendly website making it easier to access information on our available EQA schemes, quality systems, news and events. This is the first step in our planned Information Technology improvements, we will continue to work hard to meet the needs of our members.

**IEQAS Supporting Research**

IEQAS is offering an annual €1000 bursary to IEQAS scheme members/ laboratories to support research in laboratory medicine, specifically in the area of External Quality Assessment (EQA) and quality to advance knowledge and/or practice in Ireland. Further details can be found on our website www.ieqas.ie


**IEQAS Annual General Meeting (AGM)**

Our AGM will take place on Wednesday the 15th of April 2026. All IEQAS members are welcome to attend in person or online.

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We hope you enjoy the Annual Conference today.

**Yvonne Burke, BComm, BSc, MSc, IEQAS Operations Manager**

## IEQAS Committee Positions

IEQAS are seeking experienced medical scientists or clinical biochemists working in the Irish healthcare system who may wish to join IEQAS as part of our steering committee/ review groups or specialist advisor roles.

Please email info@ieqas.ie with expressions of interest.

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## We are Hiring

### IEQAS Scheme Manager

IEQAS are currently recruiting for the position of IEQAS Scheme Manager. This is a great opportunity for someone who has clinical laboratory experience and is seeking a move into a management role in Ireland's national external quality assessment (EQA) scheme.

All details are available on our website www.ieqas.ie

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# Plenary Session: Abstracts & Biographies

## Plenary 1

**Title:** Overview of IVDR and impact for laboratories established in Ireland

***Dr Philip Kelly,*** *In Vitro Diagnostic Medical Devices Regulation Project Manager, Health Products Regulatory Authority (HPRA)*

**Abstract:**

The In Vitro Diagnostic Medical Devices Regulation (IVDR) represents a significant shift in the regulatory landscape for in vitro diagnostic medical devices (IVDs) across the EU. This presentation will provide an overview of the IVDR framework and cover key topics such as the regulatory requirements for IVDs manufactured and used in-house, as well as the potential for supply interruptions and device discontinuations. Attendees will gain a clearer understanding of the IVDR framework, with a focus on relevant aspects for laboratories, and receive practical insights into how they can prepare for and mitigate these challenges.

**Biography:**

Philip Kelly is the IVDR Project Manager at the Health Products Regulatory Authority. Holding a PhD in Chemistry and Chemical Biology, he is active at the European regulatory level as a member of the IVD Working Group and co-chair of the Clinical Investigation, Performance Study and Evaluation Working Group. Philip's work focuses on implementing and advancing the understanding of the regulatory framework for in vitro diagnostic medical devices (IVDs). Philip has extensive experience in the technical, regulatory, and performance aspects of IVDs.

**Title:** Regular Transfusion – The patient experience

***Dipika Shah,*** *Lead Scientist at UK NEQAS*

**Abstract:**
Every three weeks, Dee has blood samples taken to see how many units she needs for transfusion. Those blood test and transfusion days start early, sometimes with anxiety, sometimes with resolve but each one is a small act of resilience. Living with a chronic condition means showing up—for yourself, for your work, for your people—even when you're tired.

Dee often wondered: when a sample gets tested or even rejected, does anyone stop to think about the patient behind it? About the kind of day, they're having? When blood is issued for transfusion, does anyone consider the story of the person it's meant for—their history, their fears, their resilience? Behind every sample tube, every unit of blood issued, every name on a form, there's a human being whose life doesn't pause between tests.

This is a personal experience of having regular transfusions over many years, the trials and tribulations and the emotional rollercoaster of life that comes with it, that's shaped who she has become.

**Biography:**
Dipika (Dee) started her career at Newham General hospital. where she was being treated as a patient. The curiosity of being transfused enticed her into a career in blood transfusion, where she got her first job as a Trainee BMS back in the 1990's, and where she obtained her State Registration.

Her 10 years at Newham General ended when she got married and moved to Northwest London moving to work at the Clementine Churchill hospital, a small BMI hospital which was a perfect move for a newlywed.

After 2 years working in a small private lab and doing multi-disciplinary weekend and night shifts, Dee saw her career path move back to the NHS at the Royal Free Hospital where she worked as a BMS for a year.

A senior role then took her to Northwick Park Hospital where she stayed for 17 years, until UKNEQAS BTLP had a rare job going and she started just before lockdown. She started as a Senior BMS in March 2020, and last year was made an 8a Lead Scientist.

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# Association of Clinical Biochemists in Ireland

## Annual Conference
## 14-15th November 2025

## Hodson Bay Hotel, Athlone

### Themes

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- Paediatric laboratory medicine
- Inherited Metabolic Disease
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- HSE Spark Innovation
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# Plenary Session: Abstracts & Biographies

## Plenary 2

**Title:** Advanced Practice in Laboratory Medicine- Threat or Opportunity for the patient, for everyone?

***Dr Irene Regan,*** *Consultant Clinical Scientist, Lancashire Haematology Centre*

**Abstract:**
This presentation will focus on Irene's current role and how their data show that small changes can have a big impact on the patient pathway without compromising quality and safety. Irene will consider whether Advanced Practice (AP) in Laboratory Medicine is a threat or opportunity for the patient, for everyone?

The main focus of Irene's role is diagnosing patients with blood disorders. They are either referred to Clinical Haematology by their GPs or inhouse consultants with abnormalities of their blood count, or bleeding/bruising problems. She sees these patients in her Haematology Diagnostic Clinic. She diagnoses a blood or bone marrow condition in around 20% of these patients and refers these to medical consultant haematologist colleagues for onward treatment. They have a target discharge or onward referral of 40 days for routine referrals. This initiative prioritises patients that require timely treatment and management, frees up medical consultant time to provide medical management.

Irene also contributes to direct patient care by providing referral triage, Haematology advice and guidance to GPs and other colleagues. This initiative standardises approach to A&G and patient pathways.

Advanced Practice in Laboratory Medicine offers a timely opportunity as The Haematology Workforce, a comprehensive view report is being published. This report provided a necessary assessment of the current state of the haematology workforce, highlighting vital pressures around staffing levels, unrecorded work and current strains in the system. However, it must also be recognised that AP may be seen as a threat.

However, Irene concludes and finds in their work setting that a well-qualified, well-resourced and diverse range of medical, scientific and other health professional roles working together as an integrated team is vital to provide the best service for their patients.

**Biography:**
Irene is a Consultant Clinical Scientist in Haematology at Lancashire Haematology Centre, UK. Her specialist responsibilities are Director/Haematology Laboratory Lead Consultant and Scientific Advisor to the Transplant Programme. She is Joint Training and Clinical Supervisor for Higher Specialist Scientist Training (HSST) in Clinical Haematology, a collaboration between the site and Belfast City Hospital.

Previously Irene spent the majority of her career as Chief Medical Scientist (Coagulation/Haematology) at Children's Health Ireland at Crumlin (formerly OLCHC) Dublin, which hosts the National Paediatric centre for haematology/oncology and haemostatic disorders. She held a Clinical Research Fellowship with University College Dublin and the National Children's Research Centre, Crumlin. She has been a visiting lecturer on the MSc programme in Clinical Laboratory Science at Technological University Dublin and has completed her term as extern examiner on the BSc in Biomedical Science.

Currently Irene is a guest lecturer at Manchester University and is an examiner for the Royal College of Surgeons in Ireland (RCSI) membership examinations. She is actively involved in collaborative research. Her research interests include analytical haematology, coagulation, laboratory diagnostics, cardiology and education. She has supervised many undergraduate and post-graduate students at BSc, MSc, PhD, MD, MCh and MBA level.

Irene is also a fellow of the Academy of Clinical Science and Laboratory Medicine (FACSLM) and the Royal College of Pathologists UK (FRCPath). She is a registered Clinical Scientist with the Health Care Professions Council (HCPC) UK. She is on the specialist register for Healthcare Scientists (AHCS UK) and European Specialists in Laboratory Medicine (EuSpLM).

Irene was President (2014-2018) of the Academy of Clinical Science and Laboratory Medicine (ACSLM), the professional body and previous competent authority for medical scientists in Ireland. She is currently a member of many steering committees and working groups.

**Title:** Advanced Practice within HSCPs in Ireland

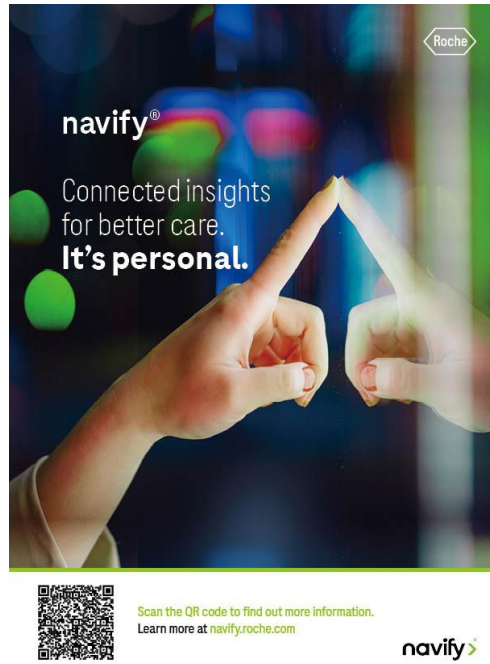
***Dr Marie Ó Mír,*** *Chief Executive Officer, Irish Society of Chartered Physiotherapists*

**Biography:**
Dr. Marie Ó Mír is the CEO of the Irish Society of Chartered Physiotherapists (ISCP). She is the Co-Chair of the Health and Social Care Professions Alliance (HSCPA), an umbrella organisation of Professional Bodies, representing over 21,000 HSCPs. She is a Chartered Physiotherapist, having worked clinically for 27 years, the majority of which was spent in CHI, Crumlin, where she developed the first national Paediatric Orthopaedic Triage Clinic, delivered by physiotherapists. Marie was awarded a PhD from UCD in 2019 for her research on Advanced Practice Physiotherapy in Paediatric Orthopaedics.

Marie has worked previously with the HSCP Office in the HSE to publish the Advanced Practice Competency Framework for HSCPs and is currently a member of the Expert Working Group, set up by the Department of Health, to develop Xray referral rights for physiotherapists, encompassing education and governance frameworks and legislative changes.

Marie regularly lectures on Paediatric Orthopaedics and advanced practice. She has presented her research both nationally and internationally, including at the World Congress of Physical Therapists in Singapore 2015, in Cape Town in July 2017 and in Geneva in 2019 and Dubai 2023.

**Kindly sponsoring: Clinical Chemistry Workshop**



# Workshop Abstracts & Biographies

## Clinical Chemistry

**Title**: Assessing the Impact of Analytical Variability for AST/ALT Assays on FIB-4 Index and Patient Referrals, an Irish Perspective

***MacDara Hickey**, Medical Student, University College Dublin/St Vincent's Hospital*

**Abstract:**
ASSESSING THE IMPACT OF ANALYTICAL VARIABILITY FOR AST/ALT ASSAYS ON FIB-4 INDEX AND PATIENT REFERRALS, AN IRISH PERSPECTIVE
*Hickey M1, Morley C2, 3, Walsh I4, Amoruso M4, Donohue F5, Dillon A3, Purcell E3*
*1 UCD School of Medicine, University College Dublin, Belfield, Dublin 4*
*2 Technological University Dublin, Grangegorman, Dublin 7*
*3 Saint Vincent's University Hospital, Elm Park, Dublin 4*
*4 Mater Misericordiae University Hospital, Eccles St., Dublin 7*
*5 Saint Michael's Hospital, Dún Laoghaire, Co. Dublin*

The FIB-4 Index is a widely used non-invasive tool for liver fibrosis risk stratification. However, the calculation does not account for differences in AST and ALT results between laboratories or analytical methods, which may impact patient categorisation and referral decisions.

The aim of this research was to identify limitations of the FIB-4 Index and to suggest methods of improvement where possible.

Twenty anonymised serum pools were prepared at St. Vincent's University Hospital (SVUH) and distributed to two additional laboratories (Mater Misericordiae University Hospital (MMUH) and St. Michael's Hospital (SMH)) for AST/ALT analysis. Hypothetical patient ages (in 5-year intervals) and platelet counts (normal, mild, or severe thrombocytopenia) were assigned to each pool. FIB-4 scores were calculated for each laboratory result set. Patients were categorised according to referral thresholds, and reclassification rates were compared across sites.

**Biography:**
MacDara Hickey is a second-year medical student in University College Dublin. Having entered with an Entrance Scholarship, he was made a scholar of the Ad Astra Academy and has been pursuing research with Saint Vincent's University Hospital's Biochemistry Lab over the summer holidays. He is interested in laboratory medicine and enjoys playing tabletop games in his spare time.

**Title**: AST in the IEQAS EQA Scheme

***Anne Kane,*** *IEQAS Scheme Manager*

**Abstract:**
The introduction of new analyser platforms and/or methods is challenging for labs. IEQAS can help labs assess the relative performance of their new assay systems and consequent effects on patient results. This information may also support the lab's discussions with suppliers and manufacturers. The changes seen in AST assays will be discussed in this presentation.

**Biography:**
Anne Kane joined IEQAS in 2012 and is the Scheme Manager for the IEQAS National schemes. She previously worked as a Senior Medical Scientist (DIT, Kevin St.) in the Biochemistry Lab in Crumlin Hospital. Anne holds a MSc in Clinical Biochemistry from TCD.

**Title**: Verification of Faecal Calprotectin Measurement on the Biosystems A15s Analyser

***Mariah Kelly**, Senior Medical Scientist, University College Hospital, Galway*

**Abstract:**
Background: This study aimed to verify the performance of the BioSystems A15s analyser for measuring faecal calprotectin as a diagnostic and monitoring tool for inflammatory bowel disease at University Hospital Galway. Materials and methods: The study evaluated the assay's precision, linearity, functional sensitivity, accuracy, and compared it with the current external Diasorin Liaison XL method used by Viapath Analytics LLP in London. A cost-benefit analysis for the introduction of faecal calprotectin testing onsite was conducted.

Results: Results demonstrated that the BioSystems faecal calprotectin assay met acceptable standards for within-assay and within-laboratory precision. The assay also demonstrated acceptable functional sensitivity and linearity up to 1632 µg/g. In terms of accuracy, a proportional bias was observed at higher faecal calprotectin concentrations. Implementing this onsite testing at University Hospital Galway is projected to reduce turnaround times from an average of 16 days to 2-3 days. It will significantly enhance patient management by reducing unnecessary colonoscopies and result in substantial cost savings estimated between €1.36 million and €4.09 million over five years.

Conclusions: While the study supports the integration of the BioSystems A15s analyser into routine clinical practice at University Hospital Galway, further research is needed to refine the faecal calprotectin cut-off values specific to the hospital's clinical context. The findings underscore the analyser's potential to improve diagnostic efficiency and patient outcomes in gastroenterology services at University Hospital Galway.

**Biography**:
Mariah Kelly is a Senior Medical Scientist in the Department of Clinical Biochemistry at University Hospital Galway. She graduated from Galway-Mayo Institute of Technology (now Atlantic Technological University) in 2019 and began her career as a Medical Scientist at CHI, Crumlin before joining University Hospital Galway in 2020. Mariah completed her MSc in Biomedical Science at Ulster University in 2024. As part of the MSc, she verified a method for measuring faecal calprotectin on the BioSystems A15s analyser in collaboration with Consultant Chemical Pathologists Damian Griffin and Verena Gounden.

**Title**: Outcome Studies in Laboratory Medicine: Value and Practical Applications

**Prof Zhen Zhao,** Professor of Clinical Pathology and Laboratory Medicine, IFCC/ Weill Cornell Medicine, New York

**Abstract**:
Advances in diagnostic technologies have substantially improved analytical and clinical performance; however, high accuracy does not automatically translate into patient benefit. This presentation highlights the work of the IFCC Task Force on Outcome Studies in Laboratory Medicine (TF-OSLM), which addresses the critical gap between test validation and demonstration of real-world impact. Through analyses of recent proposals, case studies, and model-based evaluations, we illustrate how outcome studies can measure the true value of diagnostics in terms of operational efficiency, clinical decision-making, patient outcomes, and cost-effectiveness. Examples include before-and-after studies of high-sensitivity cardiac troponin implementation and automated critical value reporting, both of which demonstrated measurable improvements in care. By advocating for outcome-driven evidence in research, policy, and practice, TF-OSLM aims to reshape the evaluation and adoption of laboratory tests to ensure they deliver tangible benefits to patients, providers, and health systems.

**Biography:**
Zhen Zhao, PhD**,** is a Professor of Clinical Pathology and Laboratory Medicine at Weill Cornell Medicine and serves as the Director of the Central Laboratory at NewYork-Presbyterian/Weill Cornell Medical Center. She earned her PhD from Northwestern University and is board-certified in Clinical Chemistry.

Dr. Zhao has authored over 100 peer-reviewed research articles and currently chairs the IFCC Task Force on Outcome Studies in Laboratory Medicine. She is the President of the ADLM Academy and a Past President of the NACCCA. She has received several awards including the IFCC Distinguished Women Scientist Award For Contribution to In Vitro Diagnostics.

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# Workshop Abstracts & Biographies

## Haematology

**Title**: Blood Cell Morphology Scheme - Annual Review

***Dr Catherine Flynn**, Consultant Haematologist, St James's Hospital*

**Abstract**
IEQAS Blood Cell Morphology Review.

**Biography:**
Speciality: Myeloid Malignancies and Bone marrow failure

Dr Catherine Flynn currently holds the position of consultant haematologist at St. James's Hospital and Coombe Women and Infants University Hospital since 2007.

She holds a Bachelor of Medicine, a Bachelor of Surgery and a Bachelor of Obstetrics from the Queens University of Belfast (1995). She completed specialist haematology training in Dublin. Her training took her from Ireland to the University of Minnesota, Minneapolis, United States where she started a haematology fellowship with a subspecialty interest in stem cell transplantation (2003-2006). She completed her MD on haematopoietic stem cells and haematopoiesis in the Katholieke Universiteit of Leuven, Belgium. She returned to Dublin in 2007 and works as a consultant haematologist. She is clinical lead for the National Adult Bone Marrow Transplant Program.

Dr Flynn's clinical interests include malignant myeloid diseases (myeloid leukaemia and myelodysplasia), transplantation, bone marrow failure syndromes and haematological diseases during pregnancy. Her research interests include myeloid diseases, aplastic anaemia and haematological disease in pregnancy. Dr Flynn has published in these areas.

Catherine was appointed as Clinical Associate Professor in TCD in June 2022.

**Title:** Measurable residual disease in chronic lymphocytic leukeamia & practical considerations for its application in the laboratory

***Gráinne O'Grady**, Medical Scientist, The Mater Misericordiae University Hospital*

**Abstract:**
MEASURABLE RESIDUAL DISEASE IN CHRONIC LYMPHOCYTIC LEUKAEMIA & PRACTICAL CONSIDERATIONS FOR ITS APPLICATION IN THE LABORATORY.
G. O'Grady, N. Stratton, A. Fortune, B. Philbin. Mater Misericordiae University Hospital, Dublin.
The emergence of novel therapeutic agents for Chronic Lymphocytic Leukaemia (CLL) have cultivated a need for high-sensitivity residual disease detection. Measurable residual disease (MRD) is a useful tool in measuring the depth of treatment response and ongoing clinical trials have demonstrated that MRD is a strong prognosticator in CLL. The International Working Group for CLL (iwCLL) provide recommendations on CLL MRD by immunophenotyping, outlining the core markers for inclusion in antibody panels and dictates a minimum sensitivity of 0.01%. This investigation aimed to develop a high-sensitivity flow cytometry assay for CLL MRD detection in peripheral blood, meeting or exceeding iwCLL recommendations for sensitivity. The BD FACS Canto II flow cytometer was optimised for use with the BC DURAClone RE CLB kit and the detection capabilities of the assay were measured. The assay achieved a lower limit of quantitation of 0.1%, failing to meet iwCLL guidelines. The limit of blank was 0.0008% +/- 0.0031, and limit of detection was 0.0064%. Assay validation was limited by sample availability, as well as instrument and software capacity for high-throughput and large data analysis respectively. Further investigation is required to implement this assay into the laboratory service at MMUH as the iwCLL guidelines were not met, however, this project highlighted some key considerations for the application of MRD testing in the clinical lab. Future developments will investigate deficiencies in instrument optimisation and will include a full re-validation of the assay.

**Biography:**
Gráinne O'Grady is currently working as a basic grade medical scientist in the Haematology lab at the Mater Misericordiae University Hospital. She has held this position for four years, since completing her undergraduate degree in Biomedical Sciences from Technological University Dublin, with a double major in Haematology and Histology. More recently, Gráinne completed her MSc in Biomedical Sciences from University of Ulster and completed a research project on the use of multicolour flow cytometry in residual disease analysis as part of her studies. Over the course of her career, Gráinne has gained experience in diagnostic testing for a variety of haematological conditions, including routine haematology, immunophenotyping, haemoglobinopathy screening, specialised coagulation, and blood film morphology.

**Title:** An evaluation of a new method for alpha Thalassaemia screening in a large Irish Haemoglobinopathy Centre using Haemoglobin Barts Immunochromatographic Test

***Annie Howard**, Final year student, Technological University Dublin /St James's Hospital*

**Abstract:**
Alpha thalassaemia is a rare inherited genetic disorder which affects the production of normal haemoglobin. The severity of the phenotypes ranges from clinically silent carriers to incompatible with life, a condition referred to as Haemoglobin Barts Hydrops Fetalis. Alpha thalassaemia, though previously observed more commonly in the tropical and subtropical regions, is now more prominent in other regions of the world due to mass population migration. An immunochromatographic (ICT) strip test method called the i+LAB α Thal IC Strip Test Kit was evaluated during the course of this study, to determine the efficacy of the kit in screening for and diagnosing alpha thalassaemia. It is a lateral flow immunochromatographic test which detects the presence of Haemoglobin Barts (Hb Barts) in lysed EDTA blood samples. Hb Barts is a γ4 tetramer produced when there is a reduction in or absence of alpha globin chain synthesis, as seen in alpha thalassaemia.

EDTA samples referred to the St. James's Hospital Haematology laboratory for haemoglobinopathy screening were tested using both the ICT method and the currently used supra-vital staining method for detection of Haemoglobin H (Hb H) inclusions by microscopy (H Prep method). Samples from individuals with mean cell haemoglobin (MCH) < 25 pg, and normal serum ferritin results were selected for testing for this project. This group of individuals was referred to as the target population for haemoglobinopathy screening. Samples from individuals with known alpha thalassaemia, previously confirmed by genetic testing, formed the true positives group. The true negative cohort comprised of samples from individuals confirmed by genetic testing to be negative for the most common alpha thalassaemia mutations. Due to the small sample size of the true negative group, samples from individuals suspected to be negative for alpha thalassaemia based upon normal red cell indices and normal HPLC results were also selected for testing. This was the suspected negative cohort. The ICT and H Prep methods were performed on samples from the true positive, true negative and suspected negative groups.

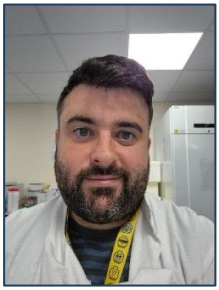
It was determined that the ICT method was more sensitive than the H Prep method, with a slightly lower specificity observed, although the sample numbers tested were limited by the time constraints of the study. These findings mirror the results seen in previous international studies evaluating the kit, however, further sample testing and access to more samples with genetics results would help confirm the sensitivity, specificity, positive predictive value and negative predictive value of the ICT method. The ICT method was found

to be both more sensitive and less labour-intensive than the H Prep method, but with higher reagent cost. Nevertheless, the improved performance and turnaround time of the ICT method is appealing, particularly in relation to limited staff resources and the high sample throughput observed in the Haemoglobinopathy Laboratory.

**Biography:**
Annie Howard is a newly employed Medical Scientist in the Haematology Department at St. James's Hospital. She graduated from TUD in 2025, having completed her final year research project in the Haemoglobinopathies Laboratory at St. James's Hospital. She completed 1000 hours of placement at the hospital during the third year of her undergraduate degree, rotating through each of the six disciplines, Haematology, Biochemistry, Transfusion Science, Immunology, Microbiology and Histopathology. Prior to beginning her career as a Medical Scientist, she worked as an MLA in the Cell Counting and Morphology Laboratory during the summer of 2024.

**Title:** Ektacytometry in the diagnosis of RBC membrane disorders

***Kevin Colgan**, Medical Scientist, Children's Health Ireland, Crumlin*



**Abstract:**
Membranopathies are inherited disorders that affect the red cell by changing the structure of the membrane through loss or deformability of proteins. Current procedures for diagnosing membranopathies consist of a Full blood count, Blood film and an EMA binding assay. The EMA assay can offer a sensitive and specific diagnosis for hereditary spherocytosis (HS) but other methods only offer an indication towards a diagnosis. Suspected membrane disorders, which are EMA negative, are routinely sent for DNA analysis, which can be costly and have long turnaround times.

Ektacytometry is the study of the cell membrane under stress. The Osmoscan analyser assesses the cell membrane under different osmotic values. The test is used to evaluate for inherited RBC membrane disorders, which are commonly responsible for haemolytic anaemia, differentiating among HS, hereditary elliptocytosis (HE) and pyropoikilocytosis (HPP), Southeast Asian ovalocytosis (SAO) and hereditary stomatocytosis (HSt). The osmotic deformability profiles obtained from this assay provide information about cell water content, surface area, and the heterogeneity in these cellular properties, information that by conventional methods would require several different types of measurements.The introduction of this assay expands the laboratory's capability of distinguishing between these different membrane disorders and potentially affect treatment plans.

**Biography:**
Kevin Colgan has worked as a Medical Scientist in Crumlin Children's Hospital for about 10 years. He has experience working in the Haemoglobinopathy, Haematopoietic stem cell transplantation (HSCT) and Flow cytometry sections of the laboratory. Kevin has been involved in the development of enhanced diagnostic screening and confirmation of haemolytic anaemias and Red cell disorders in the Haematology Laboratory.

# Workshop Abstracts & Biographies

## Microbiology

**Title**: MedLIS in Microbiology: the Beaumont experience

***Dr James Donnelly**, Consultant Clinical Microbiologist, Beaumont Hospital*

**Abstract:**
In August 2024, Beaumont Hospital's Clinical Microbiology laboratory transitioned to MedLIS, Ireland's new national Laboratory Information System. In this talk, James will discuss the implementation process from the microbiology laboratory's perspective—covering system testing, staff training, validation, and preparation for accreditation. He will reflect on how MedLIS has impacted day-to-day workflows, workload distribution, and overall service delivery. James will also share some of the key challenges encountered along the way, alongside the benefits and improvements the system has brought. From successful adaptations to persistent challenges, James aims to give an honest account of what worked, what didn't, and what they've learned through the process.

**Biography:**
Dr James Donnelly is a recently appointed Consultant Clinical Microbiologist at Beaumont Hospital and a Fellow of the Royal College of Pathologists (UK). Prior to this, he completed higher specialist training in Clinical Microbiology in Ireland and held a Clinical Lecturer post at the Royal College of Surgeons in Ireland. He was the lead Non-Consultant Hospital Doctor (NCHD) for the implementation of MedLIS in the Clinical Microbiology department at Beaumont Hospital, where he supported system testing, staff training, and early rollout. His professional interests span clinical service delivery, health professions education, and laboratory systems optimisation.

**Title:** Case series of *Fusobacterium* infections

***Grace Rothwell-Kelly**, Microbiology SpR, University Hospital Waterford*

**Abstract:**
*Fusobacterium* species are Gram-negative anaerobic bacilli that are normal flora of the mouth, gastrointerstinal and female genito-urinary tracts. They are opportunistic pathogens and are often implicated in severe multi-systemic infections. *Fusobacterium* species can cause a wide variety of clinical presentations and can have serious complications and frequently requiring surgical drainage or debridement.

We present three cases of severe *Fusobacterium necrophorum* infections. These three patients presented acutely unwell requiring intensive care unit admission, but all had different clinical presentations. The three patients required surgical interventions for source control. Early microbiology samples led to optimisation of antimicrobial treatment and guided further investigations and management.

These cases highlight the need for multidisciplinary management, appropriate antimicrobials and surgical source control.

**Biography:**
Dr Grace Rothwell-Kelly graduated from Medicine in Trinity College Dublin in 2018. She completed Basic Specialist Training in General Medicine before specialising in Clinical Microbiology. She spent three years working in clinical microbiology in St Vincent's University Hospital and is currently working in University Hospital Waterford as a microbiology specialist registrar. Areas of interest include infections in immunocompromised patients and antimicrobial stewardship.

**Title**: Transition to ISO15189:2022 - lessons learned

***Anne Dickinson**, Pathology Quality Manager, St Vincent's University Hospital*

**Abstract:**
ISO15189 is the international standard for medical testing laboratories. At the end of 2022, a new edition of ISO15189 was published, meaning that those laboratories who are accredited to ISO15189 must realign themselves to comply with the new edition – ISO15189:2022. In Ireland, INAB is the national body who provide assessment and hence award accreditation to ISO15189. INAB provided a framework through which this transition to compliance with the new standards was achieved. Each lab realigned their Quality Management System, prepared a transition plan and performed gap analysis on the new edition of the standards. INAB assessment to the new edition standards started early last year, and all accredited medical testing laboratories in Ireland will now have been assessed to the new edition of the standards. SVHG had the transition assessment in September 2024. We are now preparing for annual assessment November 2025 and are therefore taking the opportunity to review and reflect on the previous transition assessment and the subsequent year of auditing and monitoring to identify any learnings or additional changes which can be taken this year to improve our updated processes. This presentation is prepared to give a brief outline of our review of the updated standards, our evaluation of the most significant changes required to our processes, and the effectiveness of the changes which were implemented to accommodate the new requirements.

**Biography:**
Anne started her career as a trainee Biomedical Scientist in Queen Mary's Hospital, Roehampton, London. After qualification with an HNC she then went on to complete a BSc and MSc in Biomedical Science specialising in Clinical Chemistry. During this time, she worked as a Medical Scientist in the Clinical Chemistry main laboratory and in the Regional Protein Reference Unit associated with the hospital. This provided her with 10 years' experience in general Clinical Chemistry and with more specialised knowledge in detection, quantitation and monitoring of paraproteins. In 1999 Anne moved to Dublin and took a position as locum Medical Scientist and later Senior Medical Scientist in the Endocrinology laboratory in St Vincent's Hospital. Anne was appointed Quality Manager for Pathology, St Vincent's Hospital in 2013 and now works to maintain the Quality Management System and compliance with ISO15189 for all of laboratory disciplines across the Pathology Department.

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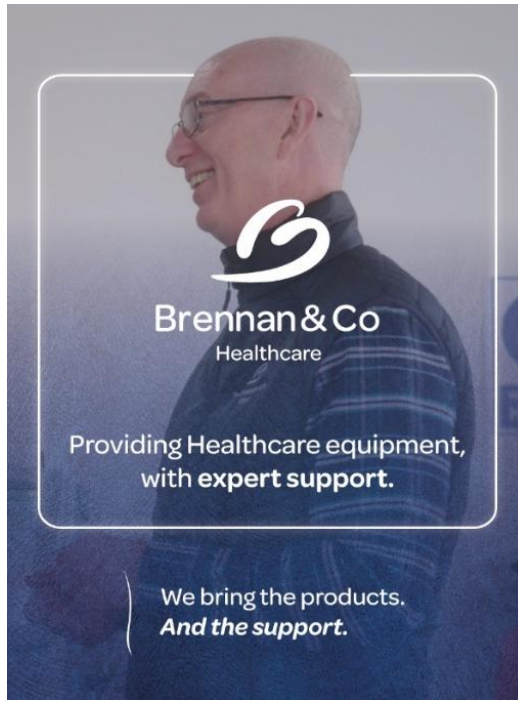

# Workshop Abstracts & Biographies

## Transfusion

**Title:** Major Hemorrhages/Trauma simulation

***John Duffy, Haemovigilance Officer**, Senior Medical Scientist, Blood Transfusion Department, The Mater Misericordiae University Hospital*

**Biography:**
John works in the blood transfusion laboratory in the Mater Misericordiae University Hospital Dublin as a senior medical scientist – Haemovigilance Officer. He has held this role since 2021 before which he worked as a medical scientist in blood transfusion. The haemovigilance team here is comprised of four members, three nurses and one medical scientist bringing blended knowledge and experience to the role. John also holds a MSc in Medical Science from Ulster University (2020) and his BSc was in Biomedical Science jointly awarded in 2014 by University College Cork and Cork Institute of Technology (now MTU).

**Title:** Resolving anti-CD38 interference in indirect antiglobulin testing using 0.04M dithiothreitol: impact of daratumumab levels

***Ciara Bauer**, Senior Medical Scientist in the RCI Laboratory, IBTS*

**Abstract:**
Background: anti-CD38 monoclonal antibodies interfere with the indirect antiglobulin test by binding to CD38 on red cells, causing panreactivity. To overcome this, 0.2 M DTT is used to denature CD38, but it is time-consuming and denatures blood group antigens, such as Kell. Castro Izaguirre et al. demonstrated that 0.04 M DTT treatment in gels preserves Kell antigen expression while resolving anti-CD38 interference. The impact of high daratumumab levels on its performance has yet to be determined. This study evaluates 0.04 M DTT for resolving daratumumab interference, using the 0.2 M DTT method as a reference, and quantifies daratumumab concentration by ELISA.

Material and Methods: antibody screens were performed on 38 daratumumab patient samples using 0.2 M and 0.04 M DTT methods, including 4 alloantibody-spiked samples. Kell typing of a K+ cell treated with 0.04 M DTT assessed Kell antigen preservation. Daratumumab concentration in the 34 neat samples was measured using an ELISA kit.

Results: with 0.2 M DTT treatment, 34/38 (89.5%) screens were negative and 4/38 (10.5%) were positive. The antibody specificities of the four spiked samples (anti-D, -Fya, -c and -Jka) were correctly identified. In contrast, 38/38 samples showed positives screens with 0.04 M DTT-treated cells. Anti-Jka specificity could not be confirmed in the spiked sample using 0.04 M DTT-treated panels. Kell antigen expression was preserved after 0.04 M DTT treatment. A weak, positive association between daratumumab concentration and the aggregated agglutination score of the 3 screening cells treated with

0.04M DTT was observed (ρ=0.14). This association was not statistically significant (p=0.429).

Discussion: treating red cells with 0.04 M DTT preserves the Kell antigen but does not overcome daratumumab interference in gels, therefore this method is not suitable for use by transfusion services. Daratumumab plasma concentration does not significantly influence agglutination strength in 0.04 M DTT-treated antibody screens.

**Biography:**
Ciara is a Senior Medical Scientist in the Red Cell Immunohaematology laboratory at the Irish Blood Transfusion Service. She holds a BSc in Medical Science (First Class Honours, 2021) and an MSc in Clinical Laboratory Science (First Class Honours, 2025) from TU Dublin. Her professional interests include innovation, leadership in healthcare, and process improvement within the laboratory setting. Ciara is currently pursuing a Professional Diploma in Clinical Leadership at RCSI.

**Title:** Feasibility Study for the Provision of Rh+K matched transfusions for Rh c Negative Women of Childbearing Age at the National Maternity Hospital

***Aisling Ross,*** *Medical Scientist, National Maternity Hospital, Holles St*

**Abstract:**
The provision of Rhesus and Kell matched red cells for women of childbearing potential represents a critical focus in the field of transfusion medicine, aiming to prevent haemolytic disease of the foetus and newborn. Rh c negative women are at risk of developing anti-c with non-matched transfusion or previous pregnancy, which can lead to severe foetal complications. This project explores the feasibility, benefits and challenges associated with implementing a phenotype matching protocol for Rh c negative patients at the National Maternity Hospital, Dublin.

This study encompasses a comprehensive review of current practices, prevalence of anti-c and outcomes of matched versus unmatched transfusions. Determining the origin of the maternal anti-c was a key aspect of this study's retrospective audit. Among the total cases of anti-c, 33% had a history of transfusion prior to the development of anti-c antibodies.

The research also aimed to evaluate, pregnancy outcomes and overall foetal impact as well as logistical implications of adopting this matching strategy. In the Netherlands, national guidelines introduced in 2011 mandated matching for the Rh c and E antigens in women under 45 years of age for transfusion. Evidence confirms substantial benefits where the incidence of anti-c formation has decreased from 46.8 to 30.4 per 100,000 pregnancies. This policy acted as a model for this research project.

Project findings suggests that Rhesus and Kell matched transfusions significantly reduce antibody production rates and would as such improve neonatal outcomes when applied to antenatal care. Challenges exist such as blood supply management, IT infrastructure limitations and increased screening costs. This project aims to provide evidence-based

recommendations to enhance current transfusion protocols, maternal-foetal health, and policymaking in the National Maternity Hospital's transfusion service.

**Bibliography:**

Aisling Ross is currently work as a medical scientist in the blood transfusion laboratory at the National Maternity Hospital (NMH), Dublin. She completed her Bsc in Medical Science at the Technological University Dublin (TUD) in 2020 and recently completed her Msc in Biomedical Science at Ulster University Coleraine (UU). She submitted my thesis in August 2025 on the feasibility of providing Rhesus and Kell matched transfusions to Rh c negative women of childbearing potential at the NMH.

**Title:** Minimising the usage of O Rh D negative blood in Emergency situations

***Denise Neary,*** *Chief Medical Scientist, Blood Bank & Tissue Est, St Vincent's University Hospital*

**Biography:**
Denise Neary is the Chief Medical Scientist in the Blood Transfusion and Stem Cell Transplant laboratory in St. Vincent's University Hospital (SVUH). The Blood Transfusion Laboratory based in SVUH provides a service to St. Michael's hospital, St. Vincent's Private hospital and St. Columcille's hospital.

Denise has been a member of the National Transfusion Advisory Group (NTAG) Laboratory Special Interest Group and was heavily involved in the implementation of a national service level agreement for the re-routing of red cells and platelets.

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