

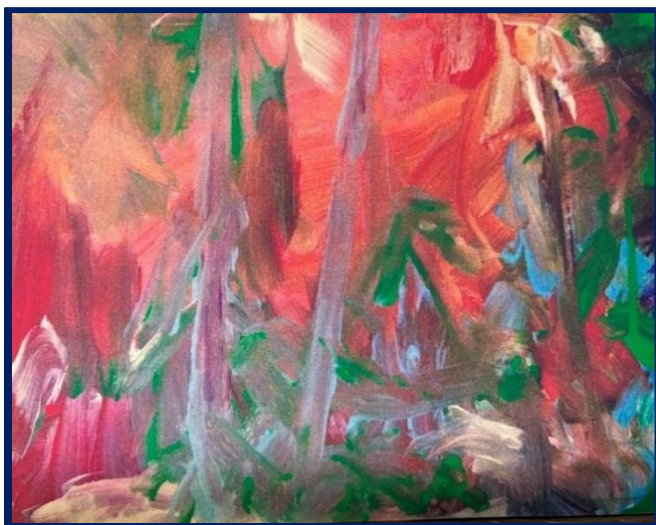


IRISH EXTERNAL QUALITY ASSESSMENT SCHEME CLG

Programme & Book of Abstracts

Annual Conference, Thursday 1st October 2026

Radisson Blu Royal Hotel, Dublin 8



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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.



Organisation Structure

IEQAS Directors:

Ruth Adams	General Council, Mater Misericordiae University Hospital (UH)
Dr Peadar McGing (Chair)	Formerly Principal Biochemist, Mater Misericordiae UH
Paudy O Gorman	Laboratory Manager, Mater Misericordiae UH
Dr Paula O'Shea	Consultant Biochemist, Mater Misericordiae UH
Esther Purcell	Principal Biochemist, St Vincent's UH
Dr Irene Regan	Consultant Clinical Scientist, Lancashire Haematology Centre, UK
David Walsh	Director of Strategy & Business, AstraZeneca

Company Secretary:

Yvonne Burke	IEQAS Operations Manager
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IEQAS Members - Steering Committee:

Yvonne Burke	IEQAS Operations Manager
Dr Brendan Byrne	Principal Biochemist, Mater Misericordiae UH
Mike Corrigan	Chief Medical Scientist, CHI at Temple Street
Dr Susan FitzGerald	Consultant Microbiologist, St Vincent's UH
Dr Verena Gouden	Consultant Chemical Pathologist, Galway UH
Anne Kane	IEQAS Scheme Manager
Mary Kirrane	IEQAS Scheme Manager
Dr Peadar McGing	Formerly Principal Biochemist, Mater Misericordiae UH
Maria Phelan	IEQAS Scheme and Quality Administrator
Phyllis Reilly	Chief Medical Scientist, Tallaght UH
Claire Walsh	Chief Medical Scientist, Blackrock Clinic
Cara Ward (Vice Chair)	Senior Medical Scientist, Letterkenny UH

IEQAS Members: Review Groups / Specialist Advisors

Clinical Chemistry:

Dr Brendan Byrne	Principal Biochemist, Mater Misericordiae UH
Dr Verena Gouden	Consultant Chemical Pathologist, Galway UH
Bernadette Jackson	Formerly NPT Manager, Naas General Hospital
Anne Kane	IEQAS Scheme Manager
Mary Kirrane	IEQAS Scheme Manager
Dr Peadar McGing	Formerly Principal Biochemist, Mater Misericordiae UH

Haematology:

Dr Áine Burke	Consultant Haematologist, Sligo UH
Dr Catherine Flynn	Consultant Haematologist, St. James's Hospital & Coombe Hospital
Anne Kane	IEQAS Scheme Manager
Mary Kirrane	IEQAS Scheme Manager
Magdalena Kobelius	Senior Medical Scientist, St Vincent's UH
Richard McCafferty	Chief Medical Scientist, St James's Hospital
Maria Phelan	IEQAS Scheme and Quality Administrator
Niamh Mullen	Senior Medical Scientist, Tallaght UH
Victoria Murphy	Senior Medical Scientist, Tallaght UH
Cara Ward	Senior Medical Scientist, Letterkenny UH

HbA1c:

Prof Gerard Boran	Consultant Chemical Pathologist, Tallaght UH
Anne Kane	IEQAS Scheme Manager
Mary Kirrane	IEQAS Scheme Manager
Marguerite MacMahon	Principal Biochemist, Mater Misericordiae UH
Phyllis Reilly	Chief Medical Scientist, Tallaght UH
Caroline Reilly	Specialist Medical Scientist, CHI at Crumlin

Blood Transfusion:

Padraig Kiernan	Chief Medical Scientist, Connolly Hospital Blanchardstown
Deirdre Murphy	Chief Medical Scientist, Rotunda Hospital

Microbiology:

Dr Susan FitzGerald	Consultant Microbiologist, St Vincent's UH
Claire Walsh	Chief Medical Scientist, Blackrock Clinic

Statistics:

Specialist Advisor:

Carl Talbot	Principal Biochemist, Coombe Hospital
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NPT: Specialist Advisor:

Phyllis Reilly	Chief Medical Scientist, Tallaght UH
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Specialist Advisors (Non-Members):

Dr Catherine Flynn	Consultant Haematologist, St. James's Hospital and Coombe Hospital
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IEQAS Annual Conference Programme

Thursday 1st October 2026

Radisson Blu Royal Hotel, Dublin 8

First Plenary

Chair: Laura Flynn,
Quality Manager,
Beaumont Hospital



09:55	IEQAS Chair's Welcome Address	Dr Suzy FitzGerald, IEQAS Steering Committee Chair
10:00	EQA and the Patient	Dr Tony Badrick, Chief Scientific Officer, The Royal College of Pathologists of Australasia Quality Assurance Programs

11.00 **Coffee**



Second Plenary

Chair: Dr Paula O'Shea,
Consultant Clinical Biochemist, Mater Misericordiae University Hospital and Our Lady's Hospital Navan



Biomnis

11.20	From Festivals to the Laboratory: Findings from the HSE Emerging Trends Laboratory	Sinéad McNamara, Senior Biochemist, HSE National Drug Treatment Centre in Dublin
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11:50	Beyond the Result: Navigating Risk, Knowledge and Better Decisions in Laboratory Medicine	Dr Valerie Mulholland, CEO of GMP Services
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12:30	Lunch	The Chancery Grill
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Clinical Chemistry Workshop

Chair: Kelly Foley, ACBI
President, Principal
Clinical Biochemist, Cork
University Hospital



ASSOCIATION OF
CLINICAL BIOCHEMISTS
IN IRELAND

13:45	Quality Control in the Laboratory	Dr Graham Lee, Consultant Clinical Biochemist, Mater University Hospital
14:15	Calculation Issues - eGFR	Dr Peadar McGing, Formerly Principal Biochemist, Mater University Hospital
	LDL recalculated -The move from Friedewald to Sampson	Dr Verena Gounden, Consultant Chemical Pathologist, Galway University Hospital
	Elevated Total Protein	Martina Kelly, Senior Medical Scientist. Sligo University Hospital
14:45	TUH Toxicology Service Setup	Claudia Russell, Medical Scientist, Tallaght University Hospital
15:00	Case Study: Adult-Onset Hypophosphatasia with Atypical Femoral Fractures: A Diagnostic and Management Challenge	Dr Michael O'Meara, Specialist Registrar in Chemical Pathology, CHI at Temple Street

15:15 A Vision of Future EQA

Dr Tony Badrick, Chief Scientific Officer, The Royal College of Pathologists of Australasia Quality Assurance Programs

Haematology Workshop

Chair: Richard McCafferty, Chief Medical Scientist, St James's Hospital



13:45 IEQAS Blood Cell Morphology Case Studies

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

14:45 Testing for Malaria Using the Automated Haematology Analyser Sysmex XN- 31 in a Non-Endemic Setting: A Diagnostic Accuracy Study

Ellie Mc Laughlin, Medical Scientist, St James's Hospital

15:00 Streamlining reporting of neutropenic blood films using digital morphology and Sysmex XN analyser flags

Ailin McMahon, Senior Medical Scientist, Limerick University Hospital

15:15 Association Between CD19 CAR T-Cell Expansion and Clinical Outcomes following CAR T-cell Therapy

Cíara Dempsey, Medical Scientist, St. James's Hospital

15:30 Haemophagocytic Lymphohistiocytosis (HLH)- Understanding Immune Dysregulation Through Laboratory Diagnostic Tools

Mike Corrigan, Chief Medical Scientist, CHI at Temple Street

Microbiology Workshop

Chair: Dr Suzy
FitzGerald, Consultant
Microbiologist, St
Vincent's University
Hospital

- | | | |
|-------|---|--|
| 13:45 | Beyond the needle:
Innovative approaches for
reducing blood culture
contamination rates in the
emergency department | Dr Sarah Kenny, Specialist
Registrar in Clinical Microbiology, St
James's Hospital |
| 14:15 | The Fuzzy Line Between
Susceptible and
Resistant: Reviewer
Differences in Disc
Diffusion Interpretation for
Penicillin in
Staphylococcus aureus | Dr Anne-Marie Dolan, Consultant
Microbiologist, Tallaght University
Hospital |
| 14:45 | Enhancing Pathogen
Detection and
Turnaround Times with
the Allplex GI-EB
Screening Assay | Daniele Gomes Da Silva, Medical
Scientist, Blackrock Clinic, Dublin |
| 15:15 | Rapid blood culture
diagnostics in haemato-
oncology gram negative
bacteraemia | Gillian Garvey, Medical Scientist, St
James's Hospital |
-

Transfusion Workshop

Chair: Deirdre Murphy,
Chief Medical Scientist,
The Rotunda Hospital



13:45	The Ten Commandments of Blood Transfusion -- illustrated with case studies	Dr Kieran Morris, Consultant Haematologist and Director of the RCI Laboratory in the IBTS, Dublin
14:15	Optimizing O RhD Negative Management in a Level 4 Hospital	Leah Fitzpatrick, Medical Scientist, St Vincents University Hospital
14:30	Validation of Bloodtrack and Winpath Enterprise for handling Batch products.	Paiel Jamal, Medical Scientist, The Coombe Hospital
14:45	Maternal Antibodies (Immune Anti-D, c and K) Associated with Risk of Haemolytic Disease of the Fetus and Newborn: Assessment of Critical Antibody Levels/Titres and Review of Referral Thresholds	Sarah Fagan, Medical Scientist, National Maternity Hospital, Dublin
15:00	Optimising Fibrinogen Replacement and Blood Product Utilization, using a Retrospective Audit and Thromboelastography (TEG) during Major Haemorrhage events	Daniel Mc Gowan, Medical Scientist, St Vincents University Hospital

IEQAS thanks our sponsors for their continued support



LABQUALITY

Member Updates 2026/2027

Established in 1981, the Irish External Quality Assessment Scheme CLG (IEQAS) is one of the longest-standing quality initiatives in the Irish Health Service. As a national, not-for-profit body, IEQAS drives continuous improvement in laboratory medicine by supporting clinical and extra-laboratory services across Ireland



Mary Korrane

NEW IEQAS STAFF MEMBERS

We would like to welcome Mary Korrane who joined IEQAS as our new EQA Scheme Manager and Lisa Clarke as QMS consultant as we commence our work for ISO 17043: 2023



Lisa Clarke

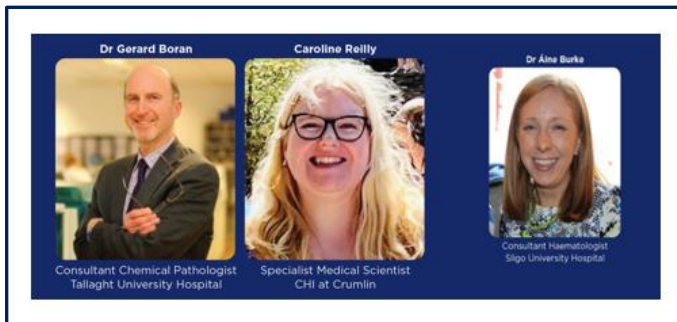
IEQAS is pleased to announce the appointment of Dr Paula O'Shea to our **Board of Directors** in October 2026



IEQAS is delighted to welcome the appointment of
Dr Verena Gouden, Claire Walsh, Phyllis Reilly and Mike Corrigan
to our **Steering Committee**



IEQAS is pleased to announce the appointment of Dr Gerard Boran and
Caroline Reilly to our **HbA1c Review Group** and Dr Áine Burke to our
Haematology Review Group



Farewells from IEQAS

We extend our sincere gratitude to retiring IEQAS members

Hazel Graham, Dympna Murphy, and Therese Driscoll

Thank you for your exceptional work, invaluable guidance, and steadfast commitment over the years. We wish you all the very best in your well-deserved retirement and future endeavours





We would also like to send our warmest wishes to Richard McCafferty, Chief Medical Scientist in Haematology at St. James's Hospital, who retires later this year. As a valued member of the IEQAS Haematology Review Group, Richard has represented both IEQAS and the ACSLM at the International Council for Standardisation in Haematology (ICSH) meetings. Thank you, Richard, for your dedication and leadership



Best wishes to Dr Catherine Flynn, Consultant Haematologist, St. James's Hospital & Coombe Hospital, who has kindly and comprehensively reviewed and reported on the IEQAS Blood Cell Morphology (BCM) Scheme for a number of years, also presenting the Annual IEQAS BCM Review at the IEQAS Conference and doing so for the final time in 2026



IEQAS would also like to extend a special **Thank You** to the dedicated laboratory staff, working in the below hospitals, that assist IEQAS with sample collection, storage, and distribution:

- Mater University Hospital
- Tallaght University Hospital
- Children's Health Ireland (CHI), Crumlin
- St James's Hospital
- The Coombe Hospital

IEQAS is always happy to hear from experienced laboratory personnel that may be interested in joining the IEQAS Steering Committee/ Review Groups in Clinical Chemistry/ HbA1c and Haematology.

Please e-mail info@ieqas.ie for further information.

IEQAS Strategic Plan 2026-2028



IEQAS launched our Strategy Plan 2026 – 2028 at our members AGM in April 2026. This three-year strategic roadmap was shaped by extensive consultation with our management team, board, and external partners. It defines a clear direction for IEQAS in a rapidly evolving healthcare landscape.

What this means for you:

- **Guaranteed Standards:** We are actively pursuing ISO 17043 accreditation
- **Strengthen and expand our portfolio of EQA schemes**
- **We are upgrading our digital infrastructure,** aiming to deliver faster, more intuitive reporting systems and simpler data submission tools
- **We are deepening engagement across Ireland,** bringing laboratories closer together for better peer comparison and localised support
- **We aim to advance education and professional development,** offering new learning resources to support the continuous professional growth of our members

NEW - IEQAS Full Blood Count Scheme 2027: There are six distributions per annum in this scheme, two of which will be fresh blood surveys. The commutable, single donor samples are unique and provide a true assessment of the performance of your analysers. (Platelet-F is included). Please contact IEQAS if you are interested in joining this scheme.

We hope you enjoy the Annual Conference today.

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

LABQUALITY

Kindly sponsoring: Book of Abstracts

LABQUALITY DAYS

11-12 February 2027 | Helsinki, Finland

Welcome to Labquality Days – Northern Europe's leading congress dedicated to quality in laboratory medicine.

The scientific congress brings together laboratory and quality management professionals to learn, exchange experiences, and connect, with a unique focus on quality as the foundation of reliable diagnostics and better healthcare.

2027 programme highlights

- Laboratory medicine in a changing world
- AI in everyday work of clinical laboratories
- Patient safety

1,000+
visitors

100
speakers

60
exhibitors

**View the scientific programme and
register at labqualitydays.com**

Scan here



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- Handles up to 12 tasks from a single system, cutting manual handling for your team
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Kindly sponsoring: Plenary 1

Save the Date

BioMedica 6th-7th April 2027 RDS, Dublin

Ireland's largest and most influential meeting
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6th-7th April 2027 | RDS, Dublin

Where Science Meets the Patient Journey: Diagnostic Stewardship in Practice



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Plenary Session: Abstract & Biography

Plenary 1

Title: EQA and the Patient

Professor Tony Badrick, Chief Scientific Officer, RCPAQAP



Abstract:

EQA and its relevance to the patient and how important it is. In this talk, the value of EQA will be demonstrated from a clinical perspective. The role of EQA and the growing importance of traceability will be described. How participants use EQA and the patient risk it can create will be shown with concrete examples. Different assays for the same measurand that produce different results. An introduction to pre-and post-errors and EQA surveillance programs will be presented. Some common errors detected by EQA that identify clinically significant assay problems will be shown.

Biography:

Tony Badrick AM, BAppSc, BSc, BA, M Lit St (Math), MBA, PhD (QUT), PhD (UQ), FAIMS, FAACB, FADLM, FAIM, Member Aust Maths Soc, FRCPA (Hon), FFSc(RCPA), GAICD. Tony is currently the Chief Scientific Officer, RCPAQAP and was the CEO of the Royal College of Pathologists of Australasia Quality Assurance Programs, 2015-2025.

- Adjunct Professor at the School of Pharmacy and Pharmacology, Griffith University
- Honorary Associate Professor at the National Centre for Epidemiology and Public Health, ANU College of Health and Medicine, and ANU College of Science
- Honorary Associate Professor, Faculty of Medicine, Bond University, Gold Coast
- Visiting Fellow, Australian Institute for Health Innovation, Macquarie University
- President of the Asian Pacific Federation of Clinical Biochemistry and Laboratory Medicine
- Member of the Executive Board and secretary elect of the International Federation of Clinical Chemistry and Laboratory Medicine
- Chief Examiner of the Faculty of Science of the Royal College of Pathologists of Australasia
- Tony has published over 300 articles in refereed journals and 11 textbook chapters, mainly in the areas of QC, EQA, liver function and sustainability



Kindly sponsoring: Coffee



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Unleashing the power of digital transformation



Introducing the Quality Software Plan

We understand that labs must meet stringent quality requirements to ensure analytical reliability, compliance and patient safety. As you navigate fragmented quality control (QC) processes and increasing demands on your lab service, digitisation provides an effective way to tackle these challenges. **The Quality Software Plan is designed to simplify QC processes and meet end-to-end quality needs; providing real-time monitoring, automated QC analytics and interlaboratory benchmarking to give labs control and peace of mind in their results.**

Smart QC management with real-time insights

Simplify quality processes and elevate care with one end-to-end solution



Automate daily workflows

Efficiently review quality control data within a single interface



Support troubleshooting

Quality control results are linked with relevant activities and data to provide context, such as instrument maintenance events



Manage ISO 15189 requirements

Enable centralised access to quality data, including reports and advanced metrics such as Measurement Uncertainty



Access peer group comparisons

Enable monitoring of performance over time using aggregated peer group data

Connect your lab's QC ecosystem for optimised QC processes across workflows

Integrate QC data from across your laboratory

- ✓ Link to patient samples
- ✓ Initiate re-runs
- ✓ Mask an instrument
- ✓ Re-route samples



Instrument maintenance insights

Peer group insights and long-term metrics

Included in the Quality Plan:



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Kindly Sponsoring: Plenary 2




Colosafe® is a non-invasive stool DNA test that detects the methylation of the Syndecan-2 (SDC2) gene. SDC2 methylation is highly specific to colorectal neoplasia, offering molecular insight that complements haemoglobin-based detection.

Bowel Cancer - Screening Challenges

- Colonoscopy Demand:** Waitlists remain long, with many FIT positive patients ultimately found to have no cancer or high-risk polyps.
- Follow-up Rates:** Approximately 20% of FIT-positive patients in Ireland decline colonoscopy, leaving diagnosis incomplete.
- Unscreened Populations:** Many people under age 57 remain unscreened.

Clinical Performance & Efficacy

Colosafe® has been utilised in routine clinical practice for over 1 million patients internationally, demonstrating excellent sensitivity and specificity, identifying more cancers at an earlier stage while minimizing false positives.

St. Vincent's University Hospital Study

St. Vincent's University Hospital examined SDC2 methylation on colonic tissue samples (n=83) revealing a progressive, stepwise increase in SDC2 levels across the neoplastic spectrum. In 83 stool samples, SDC2 expression analysis showed a 98.3% negative predictive value for the exclusion of advanced colorectal neoplasia. This prospective study is ongoing.

83.8% Overall Sensitivity	98% Specificity	87% Sensitivity for Stages I-II	42.1% Sensitivity for Advanced Adenoma	98.3% NPV (advanced colorectal neoplasia)
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The Way Forward

Colosafe® adds a molecular dimension to colorectal risk assessment. By detecting tumour-derived DNA methylation alongside FIT, it supports more informed triage — helping prioritise patients for colonoscopy while providing additional reassurance where risk is low.



How to order a Colosafe test

A consumer can order a colosafe test from their GP or clinic.

It cannot be ordered directly by a consumer as a Healthcare Professional is required to refer a patient for a colonoscopy should the result be '**Detected**' — methylated SDC2 present in sample'.

Sample Required: fresh stool (posted the day of collection preferably)

Where is the test performed?

All testing is done locally at the accredited molecular laboratory in Eurofins Biomnis.

 **Biomnis**

Email: sales@ctie.eurofinseu.com  www.colosafe.ie Call: 01 293 3690 (option 5)

Plenary Session: Abstracts & Biographies

Plenary 2

Title: From festivals to the laboratory: Findings from the HSE Emerging Trends Laboratory

Sinéad McNamara, Senior Biochemist, HSE National Drug Treatment Centre in Dublin



Biography:

Sinéad McNamara is a Senior Biochemist with the HSE National Drug Treatment Centre, where she has worked for over 20 years. During this time, she has developed LC-MS methods for the detection of new psychoactive substances and other drugs of concern in urine. More recently, she has been working in the HSE Emerging Trends Laboratory, focusing on the identification and monitoring of emerging drug substances in Ireland to support harm reduction, early warning and public health responses. This work helps identify changing drug trends and substances of concern, providing information that can inform harm-reduction messaging and interventions. Sinéad is also involved in the HSE Safer Nightlife programme and has played a key role in the development and delivery of drug-checking initiatives at Irish music festivals, which were first piloted at Electric Picnic in 2022.

Title: Beyond the Result: Navigating Risk, Knowledge and Better Decisions in Laboratory Medicine

Dr Valerie Mulholland, CEO and Principal Consultant at GMP Services



Abstract:

Between a laboratory result and an action lies a decision: what matters, what could cause harm, whether we know enough, and when there is sufficient confidence to act. Yet decisions rarely come with perfect information. Knowledge may be incomplete, assumptions hidden and uncertainty unavoidable. Drawing on principles of risk-based decision-making (RBDM), this presentation explores how we can better navigate that territory, not by adding another risk-management methodology, but by thinking more deliberately about the journey.

Biography:

Dr Valerie Mulholland is CEO and Principal Consultant at GMP Services and has more than 25 years' experience working in quality and regulatory practice across the life sciences, including the pharmaceutical, medical device and blood transfusion sectors. Her PhD research at TU Dublin examined how risk-based decisions are made in practice, drawing on decision science and lessons from other high-risk industries. Her work focuses particularly on the role of knowledge, uncertainty, subjectivity and human judgement in making robust and defensible decisions. Valerie now works with organisations and professionals to translate those insights into better quality risk management and decision-making in practice.



Workshop Abstracts & Biographies

Clinical Chemistry

Title: Quality Control in the Laboratory

Dr Graham Lee, Consultant Clinical Biochemist, Mater UH



Abstract:

Clinical diagnostic laboratories in Ireland and beyond invest considerable time trying to control and assure the quality of their test methods. Analytical performance specifications and targets are applied formally and layered with clinical judgement and occasionally informed by clinical outcome measures. When such standards are not met, the laboratory may also invest considerable time troubleshooting and discussing with other stakeholders. On occasion it feels like we are not on the same page as others; we don't all seem to share the

same standards of acceptability! Maybe I am the only one with such an experience? This presentation gives some focus to defining acceptability, reminds delegates of some of the tools and approaches that should be incorporated into their QMS, not least emphasising patient power! (i.e. harnessing patient data) to help monitor and exemplify the potential impact of poor analytical performance. This presentation invites delegates to maintain and build communication amongst the spectrum of stakeholders across the clinical diagnostic landscape with a concerted effort to help deliver requisite analytical quality.

Biography:

Prof Graham Lee BSc (Hons), MSc, PhD, FRCPath, CSci, EuSpLM

Graham Lee is Consultant Clinical Biochemist, Mater Misericordiae University Hospital (MMUH). He is clinical professor at the School of Medicine, University College Dublin where he is course director of the MSc in Clinical and Diagnostic Biochemistry. He trained in the UK obtaining Fellowship of the Royal College of Pathologists in 2010. He has experience working in many clinical biochemistry laboratories and healthcare settings in Ireland and the UK (East Midlands & London). He is Past-President of the Association of Clinical Biochemists in Ireland and previous Chair of the ACB's Republic of Ireland (ROI) region as well as ACB ROI regional tutor. He has worked on several Irish national programmes including the National Clinical Programme for Pathology and the HSE Laboratory reform Clinical and Scientific Advisory Group. He has made a number of contributions to the EFLM (European Federation of Laboratory Medicine) as corresponding member of the Task Group for the EFLM's Post-graduate Syllabus Course and coordinator of the course's Liver module. He is full member of the EFLM's Working group on Biomarkers of Diagnosis and Follow-up of Nitrous Oxide Abuse.

Combined Clinical Chemistry Session:

***Title:** Calculation Issues – eGFR

Dr Peadar Mc Ging, formerly Principal Biochemist, Mater UH

****Title:** LDL recalculated -The move from Friedewald to Sampson

Dr Verena Gounden, Consultant Chemical Pathologist, Galway UH

*****Title:** Elevated Total Protein

Martina Kelly, Senior Medical Scientist, Sligo UH

***Title:** Calculation Issues – eGFR

Dr Peadar Mc Ging, formerly Principal Biochemist, Mater UH

Abstract:

Use of eGFR (estimated Glomerular Filtration Rate) is now well established as the practical measurement of renal function in all but the most specialised clinical scenarios. What remains controversial is how to calculate it.

There are a number of formulae in common use, and more in development. The MDRD equation (1999) was the first routinely used eGFR calculation to be based on laboratory data only. This facilitated addition of eGFR to routine renal profile reports. Ten years later came the Chronic Kidney Disease Epidemiology Consortium (CKD-EPI) equation, which correlated better with actual GFR measurement. These both included advice to add a factor based on race.

In 2021 the US National Kidney Foundation (NKF) and the American Society of Nephrology (ASN) recommended implementation of a modified CKD-EPI creatinine equation, without the race variable, in all laboratories in the United States. The following year The EFLM recommended not to implement that US-proposed race-free CKD-EPI equation in European laboratories. It recommended keeping the 2009 version of the CKD-EPI equation, but without applying a race correction factor.

This is also what has been recommended in Ireland. In 2023 The National Clinical Programme for Pathology (NCP) issued 'Recommendations for Calculation and Reporting of eGFR in the Laboratory' (issued in conjunction with the National Renal Office) - 'The CKD-EPI (2009) method for calculation of eGFR (which does not include correction based on race or ethnicity) is the preferred method for calculation of eGFR'.

The European Kidney Function Consortium (EKFC) creatinine-based eGFR equation is a newer equation which looks very promising, but further evaluation is needed. Other issues in eGFR calculation include creatinine method choice and decisions on creatinine versus cystatin C assays. This short workshop aims to raise awareness of these issues and recommendations and will facilitate some discussion of them.

Biography:

Dr. Peadar McGing is a retired Principal Biochemist, formerly of the Mater Hospital. He is current Chair of the IEQAS Board of Directors, and a member of both the IEQAS Steering Committee and the Clinical Chemistry Advisory Group. Peadar was co-author, along with Hazel Graham, of the 40-year history of IEQAS (1981 to 2021; downloadable from the IEQAS website).

Dr. McGing is editor and co-author of the ACBI's guideline booklets *The Biochemistry of Body Fluids* and *Guidelines for the Use of Tumour Markers*. On his retirement he was awarded Fellowship of the Association for Clinical Biochemistry and Laboratory Medicine (now the Association for Laboratory Medicine). This award was made for 'outstanding contribution to clinical biochemistry'.

Away from academia, Peadar's main interests are in history (especially medical), writing and athletics (where he is a very active participant).

****Title:** LDL recalculated -The move from Friedewald to Sampson
Dr Verena Gouden, Consultant Chemical Pathologist, Galway University Hospital

Abstract:

This short talk will outline the rationale and implementation of changing LDL cholesterol reporting in the Clinical Chemistry Laboratory at Galway University Hospital, from the Friedewald equation to the Sampson/NIH equation. It will highlight the key limitations of the Friedewald equation and the practical considerations involved in implementing the new calculation in routine clinical practice.

Biography:

Dr Gouden is a consultant chemical pathologist at Galway University Hospital since 2024. She completed her medical undergraduate studies and specialist training in South Africa, then later undertook a visiting fellowship at the Clinical Laboratory at the NIH, Clinical Centre in Bethesda, USA. Dr Gouden received the status of Diplomate of the American Board of Clinical Chemists in 2014, her PhD in Medical Biochemistry in 2021 and fellow of Royal College of Physicians Ireland in 2025. She is a current member of the IFCC task force on Outcome based studies in Laboratory Medicine, current RCPI national speciality Director for Chemical Pathology and a member of the IEQAS Steering Committee.

*****Title:** Elevated Total Protein

Martina Kelly, Senior Medical Scientist, Sligo UH

Biography:

Martina Kelly is a Senior Medical Scientist in the Biochemistry Department at Sligo University Hospital.

Title: Tallaght University Hospital Toxicology Service Setup
Claudia Russell, Medical Scientist, Tallaght UH



Abstract:

Background: Conflicting results between the validated laboratory Quidel Triage immunoassay (IA) and unvalidated near-patient ADP screening cards at Tallaght University Hospital (TUH) have compromised clinical confidence and complicated acute patient management.

Objective: This cross-sectional study evaluated screening pathway accuracy to design a unified, laboratory-governed hybrid framework. Four specific comparisons were executed: (1) Quidel vs. LC-MS to verify detection accuracy; (2) Quidel vs. Randox MultiSTAT to evaluate equivalence or superiority; (3) ADP vs. LC-MS for a limited assessment of unvalidated method performance; and (4) MultiSTAT vs. LC-MS to assess validation candidate performance.

Methods: Sixty adult and paediatric urine specimens (20 true negatives; 40 positives spanning 7 analytes) were analysed. Duplicate aliquots were stored at -80°C and blindly analysed via high-resolution LC-MS at stated decision levels. Primary outcome measures included percentage concordance, qualitative agreement, sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) across diverse platform cut-offs. Inter-assay significance was evaluated using ANOVA.

Results: Perfect agreement with the confirmatory method (sensitivity 1.0, specificity 1.0, PPV 100%, NPV 100%, $p > 0.05$) was achieved by Quidel and MultiSTAT for barbiturates, cocaine, EDDP, tricyclic antidepressants (TCA), and THC. However, 19 of 60 samples exhibited an inter-assay discrepancy against LC-MS for at least one core Quidel analyte. Significant variance was isolated to Benzodiazepines (BZO) across all assays ($p < 0.01$; Quidel: sensitivity 0.944, specificity 0.857, PPV 74%, NPV 97%; MultiSTAT: sensitivity 1.0, specificity 0.809, PPV 69%, NPV 100%; ADP: sensitivity 0.625, specificity 0.733, PPV 55%, NPV 79%). This arose from sub-threshold concentrations of alprazolam/midazolam below the limit of reporting (LOR) and potential cross-reactivities. Opiates demonstrated minor specificity degradation (Quidel: 0.981; MultiSTAT: 0.962; ADP: 0.882). Apparent Amphetamine (AMP) and Methamphetamine (mAMP) errors across all platforms (PPV 0%) were analytically driven by structural cross-reactivity (pseudoephedrine) or distinct cut-off disparities against the ultra-low LC-MS LOR (Quidel/MultiSTAT/ADP thresholds up to 1000 ng/mL vs. LC-MS LOR of 10–20 ng/mL). While the MultiSTAT's panel expansion unmasked minor 6-MAM variance (specificity 0.982), overall inter-method variance was not globally significant for the total sample cohorts (60-sample Quidel/MultiSTAT vs. LC-MS ANOVA: $p = 0.607$; 16-sample multi-platform ANOVA: $p = 0.801$).

Conclusion: This evaluation provides definitive analytical evidence to resolve local method conflicts. While Benzodiazepine cut-off dynamics and divergent detection thresholds (Amphetamines) accounted for isolated variances, mapping these diagnostic boundaries against the LC-MS gold standard allows TUH to safely implement a robust, laboratory-governed hybrid workflow bridging rapid near-patient utility with strict diagnostic governance.

Biography:

Claudia graduated from Technological University Dublin in 2019 and began working as a Medical Scientist in the Clinical Chemistry laboratory at Tallaght University Hospital (TUH) that same year. Claudia had a role in the validation and introduction of the Roche ALD CSF assays for total-tau, phospho-tau, and β -amyloid to TUH, a nationwide service. Claudia is currently in year 2 of the MSc in Clinical Chemistry through TCD. Claudia's thesis is a comparison study of urinary toxicology methods for use at TUH and focuses on the validation of one of these methods.

Title: Adult-Onset Hypophosphatasia with Atypical Femoral Fractures: A Diagnostic and Management Challenge

Dr Michael O'Meara, Specialist Registrar in Chemical Pathology, CHI at Temple Street

Abstract:

A 69-year-old lady presented to the emergency department following a low trauma fall that resulted in a right subtrochanteric femoral fracture. This was on a background of a 6-month history of bilateral thigh pain with resultant referrals to neurology and rheumatology. While an inpatient a referral was made to the metabolic bone service due to the low trauma nature of the injury. On review the patient had persistently low alkaline phosphatase levels for several years, with no work up of same. A subsequent nuclear medicine bone scan also revealed a left atypical femoral fracture which was repaired electively. Genetic testing revealed a mutation in the ALPL gene, and cascade screening revealed 50% of her offspring has testing positive for the condition. The patient had been treated with the antiresorptive denosumab for 3 years prior due to a diagnosis of osteoporosis, which is contraindication in hypophosphatasia. This case underscores the importance of measuring alkaline phosphatase levels and investigation of same. Asfotase alfa (Strensiq) is approved for treating the condition but is currently not available in Ireland.

Biography:

Michael O'Meara is a third-year Specialist Registrar in Chemical Pathology currently rotating through the Childrens University Hospital, Temple Street. Prior to working in Chemical Pathology Michael spent significant time periods working as a renal registrar, haematology and transfusion registrar and completed the basic specialist training scheme in internal medicine and medical membership exams and is now working towards completion of FRCPath exams. Michael was also a medical scientist in clinical chemistry many years ago in St James' Hospital. He won the John O'Dowd medical for best quality improvement for the Faculty of Pathology in RCPI in February 2026.

Title: A Vision of Future EQA

Dr Tony Badrick, CEO of The Royal College of Pathologists of Australasia Quality Assurance Programs



Abstract:

A personal view of a possible future EQA will be described. This involves a mixture of continuously monitored patient-based medians and out-of-range interval data, commutable EQA samples and conventional synthetic EQA material.

Biography:

Tony Badrick AM, BAppSc, BSc, BA, M Lit St (Math), MBA, PhD (QUT), PhD (UQ), FAIMS, FAACB, FADLM, FAIM, Member Aust Maths Soc, FRCPA (Hon), FFSc(RCPA), GAICD. Tony is currently the Chief Scientific Officer, RCPAQAP and was the CEO of the Royal College of Pathologists of Australasia Quality Assurance Programs, 2015-2025.

- Adjunct Professor at the School of Pharmacy and Pharmacology, Griffith University.
- Honorary Associate Professor at the National Centre for Epidemiology and Public Health, ANU College of Health and Medicine, and ANU College of Science

- Honorary Associate Professor, Faculty of Medicine, Bond University, Gold Coast
- Visiting Fellow, Australian Institute for Health Innovation, Macquarie University.
- President of the Asian Pacific Federation of Clinical Biochemistry and Laboratory Medicine.
- Member of the Executive Board and secretary elect of the International Federation of Clinical Chemistry and Laboratory Medicine.
- Chief Examiner of the Faculty of Science of the Royal College of Pathologists of Australasia.
- Tony has published over 300 articles in refereed journals and 11 textbook chapters, mainly in the areas of QC, EQA, liver function and sustainability.

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Workshop Abstracts & Biographies

Haematology

Title: IEQAS Blood Cell Morphology Scheme - Annual Review

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

Abstract

IEQAS Blood Cell Morphology Annual 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: Testing for Malaria using the Automated Haematology Analyser Sysmex XN- 31 in a Non-Endemic Setting: a Diagnostic Accuracy Study

Ellie McLaughlin, Medical Scientist, St James's Hospital



Biography:

Ellie Mc Laughlin is a Medical Scientist working in Clinical Cytometry in the Haematology Department at St. James's Hospital in Dublin, Ireland. She has also worked at the Irish Blood Transfusion Service where she worked in the Issue Lab at the National Blood Centre in Dublin. Her main scientific interests are in Haematology and Blood Transfusion. She completed her Honours Bachelor of Science Degree in Medical Science at Technological University Dublin (TU Dublin) Grangegorman City Campus. During her final year she completed her research project at St. James's Hospital on the Sysmex XN-31 Automated Haematology Analyser where she performed a diagnostic accuracy study, comparing the analyser's results for malaria detection and quantification with the rapid diagnostic test and microscopy. She has continued to collect data on the XN-31 for its validation, the first of its kind in the UK and Ireland. Ellie will describe and discuss her research findings in her presentation

Title: Streamlining Reporting of Neutropenic Blood Films using Digital Morphology and Sysmex XN Analyser Flags

Ailin McMahon, Senior Medical Scientist, Limerick University Hospital



Abstract:

Introduction: Neutropenia is a common haematological finding associated with infection, medication and a variety of haematological disorders. Peripheral blood film examination plays a vital role in determining the cause of neutropenia. Manual blood film review is a labour-intensive and time-consuming process. Neutropenic samples account for a large part of this workload in diagnostic laboratories. This study had two main aims: To evaluate the effectiveness of the CellaVision DI-60 in the morphological assessment of neutropenic blood films and to assess whether the referral pathway for patients with neutropenia could be improved and streamlined.

Method: This retrospective study included 204 neutropenic peripheral blood films collected at the University Hospital Limerick between January and March 2026. All films were examined independently using both manual microscopy and digital morphology. Agreement was assessed for identification of clinically significant morphological findings, infection-related morphological findings, and EDTA-related morphological changes. The association between analyser flags, other full blood count abnormalities, and blood film findings was also assessed.

Results: Of 204 neutropenic samples, 32 required manual review following initial DI-60 assessment. The DI-60 demonstrated substantial overall agreement with manual microscopy for clinically significant and

EDTA-related changes, but only fair agreement for infection-related morphological changes. Analyser flags for blasts and nucleated red blood cells were significantly associated with clinically significant abnormalities on blood films, as was a finding of thrombocytopenia on the FBC. The reactive lymphocyte analyser flag was significantly associated with infection-related features. Blood films on patients with an isolated neutropenia without relevant analyser flags were identified as extremely low risk in all patients with the exception of haematology/oncology patients. In total 36 blood films were referred to the clinical Haematology team for review. Half of these required clinical action which ranged from monitoring/repeating the FBC to routine or urgent referral to Haematology for further investigation.

Conclusion: These findings indicate that the DI-60 is an effective examination tool for all neutropenic blood films and can therefore reduce the manual workload. Manual microscopy remains important to confirm diagnostically relevant morphological abnormalities. The combination of analyser flags and additional cytopenias can be successfully used to identify high-risk neutropenias for urgent review and to streamline the referral process to the clinical haematology team.

Biography:

Ailin is the morphology senior medical scientist in the Haematology lab in University Hospital Limerick. She is currently undertaking a Professional Doctorate in Healthcare practice in the University of Limerick where she is investigating the role of circulating tumour DNA and immune markers in assessing treatment response in patients with Diffuse Large B cell Lymphoma. As part of her role as morphology senior she has overseen the introduction of the Cellavision DI-60 to the Haematology lab in UHL. She supervised this study on streamlining the reporting of neutropenic blood films which she will present on Rachel's behalf.

Title: Association Between CD19 CAR T-Cell Expansion and Clinical Outcomes following CAR T-cell Therapy

Cíara Dempsey, Medical Scientist, St. James's hospital

Abstract:

ASSOCIATION BETWEEN CD19 CAR T-CELL EXPANSION AND CLINICAL OUTCOMES FOLLOWING CAR T-CELL THERAPY

Authors: *Cíara Dempsey^{1,2}, Hayley Foy-Stones², Larry Bacon², Claire Wynne¹ and Nicola Gardiner.²*

1. School of Biological, Health and Sport Science, Technological University Dublin.

2. Cryobiology Laboratory and Department of Haematology, St. James's Hospital, Dublin.

Introduction: Chimeric Antigen Receptor T-cell (CAR T-cell) therapy has revolutionised treatment in relapsed/refractory B-cell malignancies. However, patients experience CAR T-cell-associated toxicities such as Cytokine Release Syndrome (CRS) and Immune Effector Cell-Associated Neurotoxicity. CAR T-cell expansion and exhaustion expression has been suggested as a potential biomarker for adverse outcomes. There is currently no standard or best practice for monitoring CAR T-cell kinetics.

Methods: A total of 20 patient's biobanked peripheral blood mononuclear cell (PBMCs) samples were obtained at day 7, post CAR T-cell infusion. The PBMCs were isolated from EDTA-anticoagulated blood samples and cryopreserved and thawed for subsequent analysis. The cells were analysed by flow cytometry using CD19 CAR detection reagent and T-cell exhaustion markers. The T-cell exhaustion markers analysed were Programmed Cell Death 1 (PD-1), Cytotoxic T-lymphocyte-associated Protein 4 (CTLA-4), T-cell Immunoglobulin and Mucin-domain containing 3 (TIM-3), B and T-lymphocyte Attenuator (BTLA) and Lymphocyte-activation gene 3 (LAG-3). The research question focused on whether CD19 CAR T-Cell expansion level or the T-cell exhaustion phenotype are associated with clinical outcomes, including long-term survival and CAR-T related toxicities.

Results: We identified that higher CD19 CAR T-cell percentage is associated with the incidence of CRS, with a p-value of 0.0157. We demonstrated PD-1 expression was significantly higher in patients who

experienced CRS with a p-value of 0.0133. We identified a trend that patients who did not respond to treatment had higher levels of exhaustion markers; PD-1 and LAG-3 compared to those who achieved a complete metabolic response with the p-values 0.0408 and 0.0361 respectively. We found that patient who received Yescarta CAR T had a higher percentage of CD19 CAR T-cells at day 7 compared to Kymriah CAR T with a p-value of 0.0355. Using a real-time patient assessment as a case study and the patient cohort data, we were able to create a potential model to predict the incidence of CRS and ICANS by their CD19 CAR T-cell expression and exhaustion marker status.

Conclusion: CD19 CAR T-cells and exhaustion markers were successfully enumerated using this multi-parameter flow cytometric assay. There was an overall trend of a higher percentage of exhaustion in patients who had persistent disease, particularly in PD-1 expression. A higher percentage of CD19 CAR T-cell expansion was associated with the incidence of CRS. This assay enumerating CD19 CAR T-cells and T-cell exhaustion expression at day 7 could be used to monitor patient's CAR T-cell expansion/exhaustion and act as an early predictor to aid patient management during CAR T-cell-associated-toxicities.

Biography:

Cíara Dempsey. BSc (Honours) in Medical Science. St. James's Hospital. Cíara Dempsey is a medical scientist in Cryobiology at St. James's Hospital. Cíara is a recent graduate in Medical Science at Technological University Dublin. In her final year, Cíara specialised in Haematology and Clinical Immunology, and completed her final year project at St. James's Hospital. Her undergraduate research focused on evaluating the association between CD19 CAR T-cell expansion and exhaustion and clinical outcomes following CAR T-cell therapy through flow cytometric analysis.

Title: Haemophagocytic Lymphohistiocytosis (HLH): Understanding Immune Dysregulation Through Laboratory Diagnostic Tools
Mike Corrigan, CHI Temple Street



Abstract:

Haemophagocytic lymphohistiocytosis (HLH) is a rare but potentially fatal hyperinflammatory syndrome caused by uncontrolled immune activation and failure of normal immune regulation. Defects in cytotoxic T-cell and natural killer (NK) cell function impair the elimination of activated immune cells, resulting in excessive cytokine production, persistent inflammation, haemophagocytosis, and progressive organ damage. HLH may arise from inherited genetic defects (primary HLH) or occur secondary to infections, malignancies, autoimmune conditions, and other immune triggers. Early recognition is challenging because HLH often mimics sepsis and other inflammatory disorders. This presentation explores the laboratory aspects of HLH, including the pathophysiology responsible for the characteristic laboratory abnormalities, current diagnostic and monitoring biomarkers, and the challenges of laboratory diagnosis. It emphasises the importance of comprehensive testing and multidisciplinary collaboration in supporting timely diagnosis and effective patient management.

Biography:

Mike Corrigan is the Chief Medical Scientist in Haematology at Children's Health Ireland (CHI) at Temple Street. He has more than 20 years' experience working in paediatric haematology laboratories, with expertise spanning both routine and specialised haematology services. His areas of special interest include haematopoietic stem cell transplantation (HSCT) and parasitology. Mike is also a member of the Irish External Quality Assurance Scheme (IEQAS) Steering Committee.

Workshop Abstracts & Biographies

Microbiology

Title: Beyond the needle: Innovative approaches for reducing blood culture contamination rates in the emergency department

*Dr Sarah Kenny, Specialist Registrar in Clinical Microbiology,
St James's Hospital*

Abstract:

Blood culture contamination rates in emergency departments (EDs) pose challenges to accurate diagnosis and patient care. This quality improvement project aimed to enhance the blood culture collection process in a tertiary centre ED by the use of the Kurin Lock Initial Specimen Diversion (ISD) device. The Kurin Lock is a novel device that diverts and isolates the first flash (about 0.15 ml) of blood, which may contain contaminants that can lead to a false-positive blood culture result. Employing a pre- and post-intervention study design, the project spanned from an 8- week period September to October 2022 (pre-intervention) and September to October 2023 (post-intervention). The intervention incorporated the use of the Kurin ISD device and Chloraprep in the blood culture collection process. Prior to intervention alcohol skin or chlorhexidine wipes were used for skin disinfection. Staff education preceded the intervention, emphasizing proper device utilisation. Contamination rates during the intervention period were compared to the corresponding months in the preceding year using the chi-square test. The combined use of the Kurin ISD device resulted in a significant and substantial reduction in contamination rates, dropping from 18.4% in 2022 to 4.9% in 2023. Ultimately these results contribute to evidence-based strategies for minimising contamination and advancing the quality of care in tertiary centre EDs.

Biography:

Dr Sarah Kenny is a fifth-year Specialist Registrar in Clinical Microbiology, currently based at St. James's Hospital, Dublin. She holds both the FRCPath and MRCPI qualifications. Dr. Kenny graduated from the University of Galway in 2016 and completed her Basic Specialist Training in Medicine at St. James's Hospital in 2021.

Title: The Fuzzy Line Between Susceptible and Resistant: Reviewer Differences in Disc Diffusion Interpretation for Penicillin in Staphylococcus aureus

Dr Anne-Marie Dolan, Consultant Microbiologist, Tallaght University Hospital.



Biography:

Dr Anne-Marie Dolan is a Consultant Microbiologist working in Tallaght University Hospital.

Title: Enhancing Pathogen Detection and Turnaround Times with the Allplex GI-EB Screening Assay

Daniele Gomes Da Silva, Medical Scientist, Blackrock Clinic, Dublin

Abstract:

This presentation explores how introducing this analyzer into our lab has significantly increased turnaround times for diagnoses, to help clinical decision making, infection control and public health notifications, using 3 case studies from real patients in Blackrock Clinic.

Title: Rapid blood culture diagnostics in haemato-oncology gram negative bacteraemia

Gillian Garvey, Medical Scientist, St James's Hospital



Abstract:

Authors: S. Kenny^{1}, G. Garvey^{1*}, J. Flynn¹, L. Rose¹, S. Whelan¹, A.M. Dolan¹, R. Traynor¹, A. Power¹, B. Boyle^{1 2}*

** Joint first authors*

¹ Department of Clinical Microbiology, Centre for Laboratory Medicine and Molecular Pathology, St. James's Hospital, James's Street, Dublin, Ireland

² Department of Clinical Microbiology, Trinity College Dublin, Ireland

Title: Impact of rapid bloodstream infection diagnostics in haematology–oncology patients with Gram-negative bacteraemia: validation and preliminary data from rapid genomic blood culture panel identification and rapid antimicrobial susceptibility testing system evaluation.

Rapid organism identification and antimicrobial susceptibility testing are critical in haematology–oncology bloodstream infections, and novel rapid diagnostics such as multiplex PCR and direct-from-blood-culture phenotypic antimicrobial susceptibility testing platforms may provide earlier clinically relevant results.

Methods: Initial validation assessed the BioFire® Blood Culture Identification 2 (BCID2) panel and the VITEK® Reveal rapid phenotypic AST platform containing 21 antibiotics for Gram-negative organisms. BioFire® BCID was evaluated using 120 quality control spiked, and clinical blood culture samples, with sensitivity and specificity calculated using Wilson 95% confidence intervals. VITEK® Reveal was evaluated using 48 spiked and clinical blood cultures, with

categorical agreement (CA), essential agreement (EA), and error rates compared with standard AST. A preliminary prospective observational study was conducted in adult haematology–oncology patients with Gram-negative BSIs (n=22). Time from blood culture positivity to BioFire® BCID2 identification and VITEK® Reveal result was compared with MALDI-TOF identification, and VITEK 2-AST result. Antimicrobial stewardship interventions, resistance detection (including ESBL detection using ceftazidime/clavulanate), and concordance with final AST were analysed.

Results: BCID2 demonstrated 100% sensitivity and specificity, with accurate detection of all target organisms and resistance genes. VITEK® Reveal showed good performance. However, Very major errors for piperacillin–tazobactam were observed in two isolates with VITEK® Reveal. One *Escherichia coli* isolate with piperacillin–tazobactam resistance was shown by whole genome sequencing to harbour the OXA-1 gene, this resistance was not detected by VITEK® Reveal.

In the clinical evaluation, organisms included *E. coli* (n=9), *Klebsiella pneumoniae* (n=7), *Klebsiella oxytoca* (n=3), *Enterobacter cloacae* complex/*Klebsiella aerogenes* (n=2), and *Pseudomonas aeruginosa* (n=1); 77% of episodes occurred in neutropenic patients. Median time to VITEK® Reveal susceptibility result was 6.5 hours, compared with 28 hours for MALDI-TOF and 52 hours for VITEK-2-AST. This enabled potential earlier antimicrobial stewardship interventions in 45% of episodes.

Conclusions: BCID2 demonstrated excellent diagnostic accuracy. VITEK® Reveal showed overall agreement with reference testing, with some variability observed across agents. The availability of rapid AST significantly reduced time to actionable results in high-risk haematology–oncology patients. These findings represent interim data from an ongoing evaluation.

Biography:

Gillian is a Medical Scientist with 10 years' experience working in clinical laboratories in Ireland, the majority of which has been spent at St James's Hospital, Dublin. Her professional experience spans Viral Serology and Diagnostic Microbiology, with particular interests in antimicrobial susceptibility testing, virology, and blood culture diagnostics.

In addition to her laboratory role, Gill has extensive experience as a Practice Educator. She supports the education, training, and clinical placement of Medical Scientist students and a broad range of multidisciplinary learners within St James's Hospital, including Microbiology and Infectious Diseases registrars, as well as other students requiring experience in the microbiology laboratory.

Gill's presentation forms part of her Msc work, which focuses on St James's Hospital's participation in a clinical evaluation of VITEK REVEAL, undertaken in partnership with bioMérieux and the St James Reveal Study team. The work explores the potential role of this emerging technology in antimicrobial susceptibility testing and its application within a routine diagnostic microbiology service.

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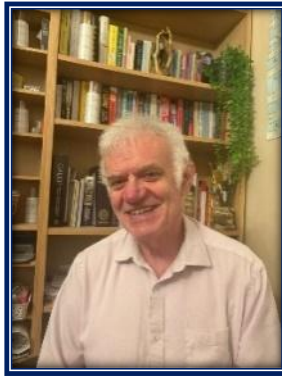
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Workshop Abstracts & Biographies

Blood Transfusion

Title: The ten commandments of blood transfusion illustrated with case studies

Dr Kieran Morris, Consultant Haematologist and Director of the RCI Laboratory in the IBTS, Dublin



Abstract:

This short presentation summarises what is important in pre transfusion testing and highlights some complex issues, illustrated by case-based studies, which are real time, but patient identification details are not disclosed. The samples were referred to the Red Cell Immune Haematology Laboratory in the Irish Blood Transfusion Service in the last twelve months.

Biography:

Dr Kieran Morris has a long career in transfusion medicine and has served in many positions and roles. Kieran is unique in UK and Ireland having specialist qualification and fellowship of the Royal College of Pathologists in transfusion medicine, though his specialty is recognised as a separate discipline in Europe and North America. He has had responsibility for donor medicine, laboratory testing, component production and manufacture, Haemovigilance and patient blood management. Kieran served as Chief Executive Officer (2009-

2014) and Medical Director (2014-19) with the Northern Ireland Blood Transfusion Service but is delighted to have returned to the “front line” of patient care, which is where it all began really.

Acknowledgements:

Dr Cailin Nieuwenhuizen, Conor Galvin, Megan Gallagher, Jessica Purcell, Megan Flood Red Cell Immune Haematology Laboratory Irish Blood Transfusion Service.

Title: Optimizing O RhD Negative Management in a Level 4 Hospital
Leah Fitzpatrick, Medical Scientist, St Vincent's University Hospital

Abstract:

This study aimed to evaluate current practices in the management of O RhD Negative blood in Ireland and to identify strategies to optimise its utilisation in the context of a constrained national supply. A multi-faceted methodology was employed, incorporating a national survey, retrospective audit, modelling and an expert interview.

Survey findings demonstrated considerable variation in practices across hospital sites, particularly in relation to re-routing and stock management. Re-routing data identified inconsistencies in the remaining shelf life of units prior to redistribution. A retrospective audit further supported these findings, highlighting variability in local practices.

Modelling of Code Red scenarios indicated that implementation of alternative transfusion strategies could significantly reduce demand for O RhD Negative units, with Model B (O RhD Positive issued upfront in eligible patients) demonstrating a projected reduction of 91% ($p < 0.001$). Insights from the interview highlighted additional operational and systemic challenges not fully recognised at laboratory level. HSE data was used to benchmark local practices and identify areas for improvement.

Overall, the findings informed recommendations including the development of national guidelines, improved communication, consideration of a national redistribution framework and the introduction of targeted policies to reduce wastage and optimise utilisation of O RhD Negative blood.

Biography:

Leah Fitzpatrick is a Medical Scientist working in the Transfusion Laboratory at St. Vincent's University Hospital. Leah qualified with a BSc in Medical Science from Technological University Dublin and is currently undertaking her professional training within the Transfusion Laboratory, where she has developed a strong interest in transfusion medicine and the important role of the laboratory in supporting safe and effective patient care.

As part of her undergraduate degree, Leah completed her thesis entitled '*Optimizing O RhD Negative Management in a Level 4*

Hospital: A Review of Current Practices and Modelling the Introduction of Novel Policies to Improve Blood Utilisation and Reduce Wastage’.

Through this work Leah developed a particular interest in the management and appropriate utilisation of O RhD Negative red cells, as well as the challenges surrounding blood availability and wastage. She is passionate about exploring ways to optimise the use of O RhD Negative blood and contribute to sustainable and effective transfusion practice in Ireland.

During her time at Technological University Dublin, Leah was nominated for the Jerry McSweeney Award in recognition of her academic and professional development while on clinical placement and was awarded runner-up.

Title: Validation of Electronic Batch Product Traceability Using BloodTrack™ and WinPath Enterprise

Paiei Jamal, Medical Scientist, The Coombe Hospital



ABSTRACT:

The implementation of electronic tracking systems in transfusion practise is essential to improve traceability, reduce human error, and enhance patient safety. This project aimed to validate and evaluate the integration of the BloodTrack system with WinPath Enterprise (WPE) for the management of batch products, with a focus on workflow efficiency, cost and user experience.

The validation process included Operational Qualification (OQ) and Performance Qualification (PQ) to assess system functionality, bi-directional communication, and end-to-end workflow performance. In addition, a comparative cost analysis, user survey (n=10), and a one-week audit of Anti-D administration (n=38) were conducted to evaluate efficiency, user perception, and documentation accuracy.

The validated system demonstrated successful bi-directional communication between the two systems, maintaining full traceability of all batch products across all testing stages. In clinical practise, staff requirements for the administration of batch products were reduced from two to one through system-integration verification, eliminating the need for manual second-person checks. This reduced turnaround time from 20 minutes (manual) to an estimated 5 minutes (electronic), resulting in significant cost savings (€14.52 vs €1.83 per administration). Audit findings identified a 15.8% (n=6) documentation error rate in the manual process. Survey results indicated high user agreement, with mean Likert scores above 4.6/5 across all domains, and 80% (n=8) of respondents recognising the removal of second

person checks as a key benefit. These findings support the implementation of electronic tracking systems to enhance traceability, reduce transcription errors, and improve efficiency in transfusion practice.

BIOGRAPHY:

Paiel Jamal is a recent Medical Science graduate from Technological University Dublin (TU Dublin). Having previously lived in Italy, she moved to Ireland to pursue her education and completed her undergraduate degree in Medical Science (BSc). Her final-year research project was conducted within the Blood Transfusion Department at The Coombe Hospital, focusing on enhancing the traceability of batch products through the integration of BloodTrack and WinPath Enterprise. Her research interests include transfusion practice, haemovigilance, laboratory information systems and patient safety.

Title: Maternal Antibodies (Immune Anti-D, c & K) Associated with the Risk of Haemolytic Disease of the Fetus and Newborn: Assessment of Critical Antibody Levels/Titres and Review of Referral Thresholds.
Sarah Fagan, Medical Scientist, National Maternity Hospital, Dublin

Abstract:

Introduction/Background: Haemolytic disease of the fetus and newborn remains an important cause of fetal and neonatal morbidity despite advances in prophylaxis, fetal genotyping and antenatal surveillance. Maternal antibody levels are used to identify pregnancies requiring specialist fetal surveillance. This study evaluated the relationship between maternal anti-D, anti-c and anti-K antibody levels and clinically significant fetal and neonatal outcomes, with particular emphasis on reassessing the maternal anti-D threshold for referral.

Materials and Methods: A retrospective audit was conducted of pregnancies complicated by immune anti-D, anti-c or anti-K alloimmunisation managed at the National Maternity Hospital, Dublin, between 2012 and 2025. Maternal antibody levels were evaluated in relation to fetal anaemia, requirement for intrauterine transfusion (IUT) and neonatal outcomes. Fetal haemoglobin obtained at cordocentesis was adjusted for gestational age and expressed as multiples of the median. The diagnostic performance of maternal anti-D thresholds of ≥ 4 , ≥ 6 and ≥ 6.96 IU/mL was compared. Receiver operating characteristic analysis was also performed to assess prediction of IUT.

Results: Of 108 anti-D pregnancies, 38 (35.2%) required IUT. At first IUT, 29/38 (76.3%) fetuses had moderate or severe anaemia. The lowest maternal anti-D concentration associated with moderate or severe fetal anaemia was 6.96 IU/mL. For detection of moderate or severe fetal anaemia, thresholds of ≥ 4 , ≥ 6 and ≥ 6.96 IU/mL each achieved 100% sensitivity and 100% negative predictive value. Increasing the threshold from ≥ 4 to ≥ 6 IU/mL increased specificity from 30.4% to 39.2% and positive predictive value from 34.5% to 37.7%, without loss of sensitivity. Receiver operating characteristic analysis for prediction of IUT demonstrated an area under the curve of 0.848 ($P < 0.001$), with an optimal threshold of 15.2 IU/mL, sensitivity of 86.6%

and specificity of 74.0%. Among pregnancies managed without IUT, clinically significant neonatal haemolytic disease remained evident, including postnatal red-cell transfusion in 24/71 anti-D neonates. Two anti-c pregnancies required IUT, while none of five anti-K pregnancies required IUT.

Conclusions: Increasing the maternal anti-D referral threshold from 4 to 6 IU/mL improved specificity without reducing sensitivity for moderate or severe fetal anaemia in this cohort. These findings support external prospective validation of a 6IU/mL referral threshold, which may reduce unnecessary specialist surveillance while maintaining detection of clinically significant fetal anaemia. Maternal antibody concentration should not, however, be considered in isolation, particularly when assessing neonatal risk. Larger cohorts are required before changes to anti-c or anti-K referral thresholds can be recommended.

Biography:

Sarah Fagan currently works as a Medical Scientist in the Blood Transfusion Laboratory at the National Maternity Hospital (NMH), Dublin. Sarah completed her BSc in Medical Science at the Technological University Dublin (TUD) in 2023 and recently completed her MSc in Biomedical Science at Ulster University Coleraine (UU). She submitted her thesis in August 2026 on “Maternal Antibodies (Immune Anti-D, c & K) Associated with the Risk of Haemolytic Disease of the Fetus and Newborn: Assessment of Critical Antibody Levels/Titres and Review of Referral Thresholds”.

Title: Optimising Fibrinogen Replacement and Blood Product Utilization, using a Retrospective Audit and using Thromboelastography (TEG) during Major Haemorrhage events
Daniel Mc Gowan, Medical Scientist, St Vincents University Hospital



Abstract:

Major haemorrhage contributes significantly to mortality worldwide with coagulopathy occurring in 25–35% of cases. Fibrinogen is often the first coagulation factor to decrease to critically low levels (<1.5 g/L) with timely and targeted replacement critical in major haemorrhage management. The project combined a retrospective audit and a TEG feasibility study, to assess differences between fibrinogen products (Fibryga® vs. RiaSTAP®) and the potential value of TEG-guided fibrinogen replacement in major haemorrhage. The audit assessed differences in biochemical composition by evaluating total fibrinogen usage, administration times, fibrinogen dose required to correct hypofibrinogenaemia, and blood product utilisation within 24 hours of major haemorrhage protocol activation. No significant differences between fibrinogen products were observed in total fibrinogen usage ($p = 0.265$), administration time ($p = 0.505$) or 24-hour utilisation of red blood cells ($p = 0.871$), platelets ($p = 0.691$), fresh frozen plasma (FFP) ($p = 0.621$) or human fibrinogen concentrate (HFC) ($p = 0.561$). A statistically significant difference was detected in mean fibrinogen dosage ($p < 0.001$) to correct hypofibrinogenaemia. TEG parameters including reaction time and citrated functional fibrinogen were interpreted to identify hypofibrinogenaemia and distinguish isolated fibrinogen deficiency from other coagulation factor deficiencies. Forty-nine TEG cases were evaluated with clinically relevant coagulation abnormalities identified in 65.3% and evidence of altered haemostatic management in 79.6% of cases. Early fibrinogen replacement in favour of FFP was observed in 28.3% of cases. Findings show that appropriate HFC selection with TEG-directed transfusion strategies

may reduce unnecessary transfusions and optimise fibrinogen replacement during major haemorrhage events.

Background to Project: Major haemorrhage is a significant contributor to morbidity and mortality worldwide, accounting for up to 1.5 million deaths and approximately 40% of all trauma-related fatalities. Traditional major haemorrhage protocols (MHP) are focused on a fixed ratio, typically a 1:1:1, of red blood cells (RBC), fresh frozen plasma (FFP) and Platelets (Plts). Coagulopathy occurs in approximately 25–35% of major haemorrhage cases, requiring a personalised haemostatic resuscitation response in addition to the conventional MHP. Coagulation complications, such as Trauma Induced Coagulopathy (TIC), can lead to worsening outcomes if not identified and treated early. Fibrinogen plays a vital role in haemostasis and is often the first coagulation factor to decrease to critically low levels (<1.5 g/L) during major haemorrhage events. Timely and targeted fibrinogen replacement is therefore critical in the management of major haemorrhages with the current clinical guidelines recommending levels >1.5 g/L. A new fibrinogen product (Fibryga®) was introduced into the Blood Bank Dept. of St. Vincent's University Hospital in March . 2024. Fibryga offers additional factor XIII which differs from the biochemical makeup of the previous product (RiaSTAP®), offering advantages in improved clot stability, room temperature storage, easier reconstitution, and reduced product wastage. The use of viscoelastic haemostatic assays (VHA), such as thromboelastography (TEG), has been increasingly recognised as an effective means of guiding fibrinogen replacement therapy, whilst reducing unnecessary transfusions during major haemorrhage events. Recent MHP guidelines have encouraged a shift from an empiric fixed-ratio transfusion response in favour of a goal-directed haemostatic resuscitation guided by VHA.

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	Delegate Name Badges
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	Haematology Workshop
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