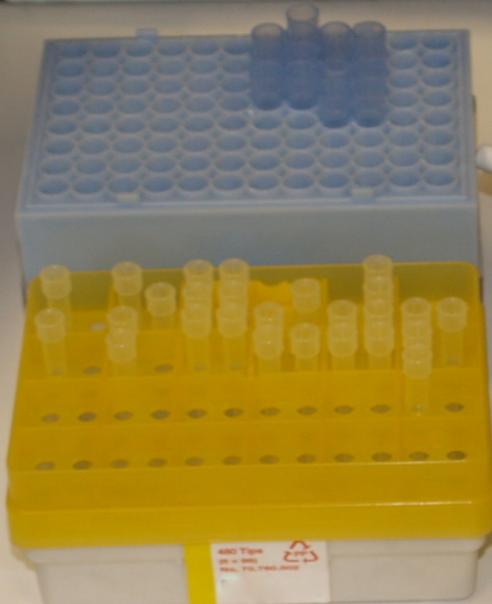


IEQAS Participants' Conference

Thursday 6th October 2011

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IEQAS
Irish EQA Scheme

Laboratory
Medicine

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Welcome

I would like to welcome you to this year's IEQAS Participants' Conference, which continues its focus on quality improvement in Irish laboratory medicine. This year, IEQAS celebrates 30 years of operation, making it one of the longest-standing quality initiatives in the Irish health service. IEQAS promotes inter-professional cooperation, with its Steering Committee consisting of nominees from the major professional bodies involved in laboratory medicine in Ireland. Laboratory medicine is a constantly evolving specialty and I am delighted to see that IEQAS also provides an EQA service for Point-of-Care Testing, taking it outside the traditional laboratory setting. As Minister for Health, maintaining the highest quality is a matter of central importance to me, and I extend my best wishes for the success of this conference.

A handwritten signature in black ink that reads "James Reilly". The signature is fluid and cursive, with the first name "James" written in a larger, more prominent script than the last name "Reilly".

Dr James Reilly
Minister for Health
29th September 2011



Acknowledgements

We would like to thank the following for their generous support towards the running of the Conference today

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*Cover Photograph:
Dr Peadar McGing, Mater Misericordiae Hospital, Dublin*

Plenary Programme

10:00 – 13:00 (approx)

Registration Tea/Coffee from 09:15

First Plenary Session

Chair: Ms Hazel Graham, IEQAS Quality Manager

- 10:00 Chairman's address**
Dr Ned Barrett, IEQAS[#]/MWRH Limerick
- 10:10 The National Clinical Programme in Pathology**
Dr Gerard Boran, IEQAS[#]/Programme Director for Pathology, HSE
- 10:30 IQC and EQA in Irish laboratory medicine: observations and suggestions**
Prof Claus Luley, Universität Magdeburg, Germany

11:15 – 11:50 Tea/Coffee

Second Plenary Session

Chair: Dr Gerard Boran, IEQAS[#]/Programme Director for Pathology, HSE

- 11:50 National Medical Laboratory Information System (MedLIS) Project**
Mr Fergus Murray and Mr Michael Nerney, MedLIS Project
- 12:10 Survey of point-of-care services in the Republic of Ireland – follow-up**
Ms Ruth O'Kelly*, Coombe Women & Infants Hospital/POCT Consultative Group Sub-committee
- 12:30 What's new in IEQAS and Labquality – schemes, software and accreditation**
Ms Patricia Howley, IEQAS and Ms Jonna Pelanti, Labquality, Finland

IEQAS[#] Member of IEQAS Steering Committee

* Specialist Advisor to IEQAS

13:00 – 14:15 LUNCH

Afternoon Workshops (parallel)

14:15 – 16:00 (approx)

CLINICAL CHEMISTRY

Chair: Dr Tom Smith IEQAS[#] /St Vincent's University Hospital

14:15 Uncertainty, a practical approach

Mr Rowland Reece*, St Vincent's University Hospital

14:35 HbA_{1c} for diagnosis of diabetes?

Dr Ophelia Blake*, St James's Hospital, Dublin

14:55 Reference range harmonisation survey

Dr Peadar McGing*, Mater Misericordiae Hospital

15:15 eGFR survey

Mr Rowland Reece*, St Vincent's University Hospital

HAEMATOLOGY

Chair: Ms Dympna Murphy, AMNCH Tallaght*

14:15 Blood Cell Morphology scheme review

Dr Kanthi Perera*, MRH, Tullamore

15:05 POCT in Haematology: a case of Hobson's Choice?

Ms Fiona Donohue, St Michael's Hospital, Dun Laoghaire

15:15 EQALM Post-analytical survey & IEQAS RDW survey

Mr Ivan Shirley, IEQAS[#]/St Vincent's University Hospital

15:25 Case studies

1. Ms Therese Driscoll*, AMNCH, Tallaght
2. Ms Nora Kinsella, St James's Hospital
3. Ms Marie Dooley & Ms Ashling Sweeney, MRH Tullamore

IEQAS[#] Member of IEQAS Steering Committee

*Specialist Advisor to IEQAS

**Labquality Helpdesk will be available during the day.
Contact IEQAS Reception for details.**

IEQAS

Since 1981, IEQAS has offered External Quality Assessment (EQA) schemes to Irish laboratory medicine, with the aim of achieving and maintaining the best possible quality through a continuous process of monitoring, education, training and support.

Steering Committee

Barrett, Ned ²	<u>Chairman</u> Consultant Clinical Biochemist, Mid-Western Regional Hospital, Limerick
Shirley, Ivan ¹	<u>Vice-Chairman</u> Chief Medical Scientist, St Vincent's University Hospital
Boran, Gerard ³	Consultant Chemical Pathologist, AMNCH Tallaght
Brady, John ¹	Chief Medical Scientist, Our Lady's Children's Hospital
Carr, Alan ¹	Senior Medical Scientist, AMNCH Tallaght
Graham, Hazel	IEQAS Quality Manager
Howley, Patricia	IEQAS Operations Manager
O'Sullivan, Niamh ³	Consultant Microbiologist, Our Lady's Children's Hospital / Coombe Women's Hospital
Smith, Tom ²	Principal Biochemist, St Vincent's University Hospital

Associated Professional Bodies

¹ Academy of Medical Laboratory Science

² Association of Clinical Biochemists in Ireland

³ Royal College of Physicians of Ireland, Faculty of Pathology

Additional Sub-Committee members

Blake, Ophelia	Principal Biochemist, St James's Hospital
Byrne, Eileen	Senior Clinical Biochemist, St Vincent's University Hospital
Clarke, Frank	Lecturer, School of Biological Sciences, DIT
Driscoll, Therese	Senior Medical Scientist, AMNCH Tallaght
Judge, Gerry	Chief Medical Scientist, AMNCH Tallaght
McGing, Peadar	Principal Biochemist, Mater Misericordiae Hospital
Mulligan, Clare	Chief Medical Scientist, Midlands Regional Hosp Mullingar
Murphy, Dymrna	Chief Medical Scientist, AMNCH Tallaght
O'Gorman, Paudy	POCT Manager, AMNCH Tallaght
O'Kelly, Ruth	Principal Clinical Biochemist, Coombe Women and Infants University Hospital
O'Shea, Paula	Consultant Clinical Biochemist, Galway University Hospital
Perera, Kanthi	Consultant Haematologist, Midland Reg Hosp Tullamore
Quirke, William	Medical Scientist, Mid-Western Regional Hospital Limerick.
Reece, Rowland	Principal Biochemist, St Vincent's University Hospital

Operations Management

Graham, Hazel (Quality Manager)
Howley, Patricia (Operations Manager)
Cooke, Anne (Scheme Administrator)

Abstracts

Chairman's address

Dr Ned Barrett, IEQAS and Consultant Biochemist, Mid Western Regional Hospital, Limerick

Abstract

The Irish External Quality Assessment Scheme for Laboratory Medicine (IEQAS) was launched in May 1981. The Scheme is educational rather than regulatory in nature. It monitors the quality of results reported in Irish Laboratory Medicine and offers professional advice and guidance as necessary. It fully meets the IFCC requirements for EQA Schemes by supporting quality improvements in the analytical / examination services provided by participating laboratories for the benefit and safety of patients.

Of itself, passive participation in External Quality Assessment is not enough to drive quality improvement. Goals and specifications must be set. IEQAS reports must be understood and interpreted correctly so as to prompt corrective actions and guide quality improvement. The Annual Participants Conference provides a valuable opportunity for all of us to learn from the experiences of our colleagues and the wisdom of our invited guest speakers.

The support of all the professional bodies in Irish Laboratory Medicine over the past thirty years has been crucial to the success of the scheme. The IEQAS Steering Committee coordinates the work of the various Review Groups and Specialist Advisors. The demand for IEQAS services has grown considerably in recent years. This has presented new challenges for the organisation and its staff. Also, the very difficult circumstances prevailing in the publicly-funded health services seem set to continue for several more years.

Biography

Dr Ned Barrett is Chairman of the Steering Committee of the Irish External Quality Assessment Scheme for Laboratory Medicine (IEQAS). He is Consultant Clinical Biochemist at the Mid-Western Regional Hospital in Limerick.

The National Clinical Programme in Pathology

Dr Gerard Boran, IEQAS and Programme Director for Pathology, HSE

Abstract

The HSE's Clinical Strategy & Programmes Directorate has established a National Clinical Programme in Pathology with the initial objective of implementing a National Pathology Network. This presentation will cover the background to this development including important clinical changes that are likely to impact. The 10 Principles of Laboratory Medicine Modernisation will be reviewed: these summarise the main requirements for service improvement, including patient confidence, user satisfaction, quality, safety, and value for money.

Objectives for the Clinical Programme during the first 3 years will be reviewed, including the need to implement a well-managed and clinically-driven National Pathology Network which will eliminate waste and inefficiencies, thereby funding modernisation. Though the scope heretofore is limited to cold laboratory work from primary care settings, adoption of a cooperative Hub-and-Spoke model brings a wider range of tests in scope with higher savings potential. Also, changes in staffing levels, skill mix and work practices will apply to the whole system (both hot and cold work).

The Clinical Programme also plans a national network of specialised lab services, and a National Pathology Catalogue to assist in demand management including protocols for common clinical problems. Systems for central monitoring of laboratory quality, costs, user satisfaction and public confidence will be established.

Biography

Dr Gerard P Boran MB, MSc (Lond.), FRCPI, FRCPath, has been consultant chemical pathologist at AMNCH Tallaght Hospital since 1997. He trained in chemical pathology at St. James's Hospital, the Royal Free Hospital London, Lewisham Hospital London and the United Medical and Dental School and was appointed consultant in chemical pathology at the Hull Royal Infirmary in 1993. He has previously served as Dean of the Faculty of Pathology of the RCPI and was recently appointed HSE Programme Director for the National Clinical Programme in Pathology. Areas of publication include pathology informatics, endocrine and metabolic biochemistry, and point of care testing.

IQC and EQA in Irish laboratory medicine: observations and suggestions

Prof. Dr. med. Dipl. Chem. Claus Luley, Institut für Klinische Chemie der Otto-von-Guericke-Universität in Magdeburg, Germany

Abstract

Some countries like Sweden and Germany have detailed guidelines for IQC and EQA in medical laboratories. Others, like Ireland, have not. The ISO standard 15189 requires only the existence of such systems without naming further details. For Ireland, this results in heterogeneous practises performing IQC. A national guideline by Irish authorities would to improve the situation and ensure a high and equal quality level of medical laboratory analyses in Ireland.

Most Irish laboratories use IT systems for processing their laboratory data. Quality modules which ensure an equal handling and evaluation of quality data, however, are rare. A quality module will be presented with features which allow a rapid evaluation of quality data and quick access to error sources.

Biography

Professor for Clinical Chemistry at the Otto-von-Guericke university in Magdeburg, Germany; Director of the institute for clinical chemistry and pathobiochemistry; Director of the central laboratory of the university hospital; Director of the lipid clinic; Head of the commission "Good Laboratory Practise" of the AML.

Memberships:

Deutsche Gesellschaft für Klinische Chemie; American Association for Clinical Chemistry; Deutsche Gesellschaft für Laboratoriumsmedizin; Deutsche Gesellschaft für Arterioskleroseforschung; European Atherosclerosis Society International Atherosclerosis Society; Lipidliga; American Heart Association.

National Medical Laboratory Information Systems (MedLIS) Project

Mr Fergus Murray, Project Manager and Mr Michael Nerney, Quality/Change Manager, MedLIS Project

Abstract

The National MedLIS project is responsible for the purchase and implementation of new IT-based systems for the clinical laboratories in the HSE and Voluntary hospitals. These new systems are required to address the immediate and serious clinical risks associated with the continued operation of current IT systems in these laboratories, or in some cases to provide IT systems for areas of laboratory work that don't have such systems.

This project will directly support the achievement of the HSE's key service strategy and objectives including the laboratory modernisation process, clinical strategy and care programmes, and the integration of patient records. It will build on work completed during the Laboratory Information Management Systems (LIMS) project halted by the HSE.

The strategic goal for this project is *"To ensure patients healthcare providers have rapid 24-hour access to complete and up-to-date accurate laboratory data across all sites"*. The deployment model for the proposed new National LIS will be based on a central single instance of the software and database. This model will facilitate the maximum sharing of information across sites, thereby ensuring that clinicians have access to the full laboratory diagnostic data on each patient.

The successful implementation of the new National LIS across the laboratories will deliver significant benefits for both the patient and the organisations concerned, with some potential for Exchequer benefits also. These include improved quality of patient care, timeliness of service (faster turnaround of laboratory results), security and availability of patient information, standardisation and support for accreditation, ability to support increasing workload, and reduced incidence of unnecessary repeat tests and risk of litigation.

Biography

Fergus Murray graduated from Trinity College Dublin and trained as a Computer Programmer and Systems Analyst in the early 1980's. He worked for Hibernian Insurance PLC, Chase Manhattan Bank (UK), Edinburgh District Council (UK) and Cement Roadstone

Holdings, and was involved in designing, developing and implementing a variety of large IT systems.

In 1993, Fergus joined the South Eastern Health Board as a Senior Systems Analyst and was responsible for the continued development of the Board's financial and procurement systems.

Appointed IT Project Manager in 1999, he has been involved in a number of projects, for example: In 1999, he led a project to procure an integrated suite of financial and procurement systems for 5 of the former Health Boards. In 2005, he had a lead role in developing healthcare messaging services to communicate electronic laboratory results and GP out-of-hours reports to General Practitioners. Fergus received an MSc in Healthcare Informatics from TCD in 2008. In 2009, he had a key role in designing a solution to support the National Histopathology QA programme. In April 2011, he was assigned as Project Manager for the National MedLIS project.

Michael Nerney trained as a Medical Laboratory Scientist in the early 1970's at the Regional Hospital Galway and the College of Technology Kevin Street. He specialised in Microbiology and moved to the Midland Regional Hospital Portlaoise in 1977. Michael received an MSc in Health Informatics from Trinity College Dublin in 1999. He was appointed laboratory system manager for the Midlands Hospital Group in 2000. In 2008 he was appointed LIMS project manager and since 2011 he has taken over as Quality\Change manager for the National Medical Laboratory Information System (MedLIS) Project.

Survey of point-of-care services in the Republic of Ireland – follow-up

Ms Ruth O’Kelly, Principal Clinical Biochemist, Coombe Women and Infants University Hospital and POCT Consultative Group

Abstract

Guidelines for Point of Care Testing (POCT) in the hospital setting were produced by the POCT Consultative Group in 2008 and an initial survey on POCT in Ireland was carried out that year to provide a baseline. This survey, based on a similar WEQAS survey, found that POCT was poorly resourced with most support available for blood gases and glucose testing. Most respondents also indicated that there were very few dedicated POCT staff to monitor and manage this service. Connectivity was identified as an underdeveloped area and this survey was published in May 2011 in the Irish Journal of Medical Science.

A second survey was carried out in 2011 and was designed to audit against the 15 recommendations of the Guidelines. There were 39 replies out of a possible 45 and this was an increase on the first survey (27 replies). Nearly a quarter of respondents (23%) reported their hospital had no POCT committee. Those hospitals that had POCT committees stated that 70% met at least quarterly. Twenty-one (54%) of the 39 respondents said that their hospital had full-time (3 sites) or part-time POCT staff. This compares similarly to the first survey when 15/27 (56%) reported staff assigned to POCT although at that time most had other duties. However POCT Operational teams were now in place in 5 hospitals.

Respondents were asked if POCT could be performed as efficiently in the central laboratory and most felt that this only applied to POCT for cardiac markers. Approximately half (54%) of respondents stated that all POCT devices in their institution had been approved by their POCT committee and 28% of respondents indicated that adverse incidents had been reported to their POCT committee in the last year.

The survey showed that laboratory staff believed that POCT services were important to health-care. Most (92%) respondents agreed or partly agreed that the use of POCT benefitted the patient and 77% agreed or partly agreed that POCT can be an economic alternative to laboratory services when the whole patient pathway is considered. Most (87%) agreed or partly agreed that the future

of blood/urine testing in secondary care is POCT managed by laboratory professionals.

Problem areas that were highlighted included training of users and connectivity of devices to information systems. A third of respondents felt that users were not adequately trained in the use of POCT – most training was provided by the manufacturer, except for blood gases/metabolites where users were trained by laboratory staff. POCT devices are still largely not connected to information systems – glucose (13%) and blood gases (26%) were most likely to be connected. No urinalysis or Drugs of Abuse POCT was reported to be connected.

Monitoring of POCT in primary care / community by laboratory professionals is still in its infancy – only 10% of respondents were involved in community POCT or intended to do so.

In conclusion, there has been no significant change in numbers of staff allocated to POCT since the last survey in spite of the positive attitude by laboratory staff to POCT. However the existence of POCT Operational teams shows that POCT is becoming more organised at some sites. There is a lack of involvement by hospital laboratory staff in POCT in primary care /community in spite of the fact this is a growing area. Lack of connectivity of POCT devices to laboratory / hospital information systems is still an issue. As one respondent said “POCT is not taken seriously in the hospital”

Biography

Ruth O’Kelly is Principal Clinical Biochemist at the Coombe Women and Infants University Hospital, Dublin 8. She is a graduate of UCD in Biochemistry and is a Fellow of the Royal College of Pathologists and is registered on the European Register of Specialists in Clinical Chemistry and Laboratory Medicine. She is a member of the POCT Consultative Group and chair of the sub-committee on surveys and is a Specialist Advisor to IEQAS on POCT. She is also Vice-President of the Association of Clinical Biochemists in Ireland.

IEQAS annual review 2010/2011

Ms Patricia Howley, Operations Manager, IEQAS

Schemes

This year marks the 30th anniversary of IEQAS (and coincidentally the 40th anniversary of our Finnish colleagues in Labquality). In 2011, seventy different institutions (54 hospitals) participate in schemes with IEQAS. We now have 692 different analysers and POCT meters in 72 different schemes.

This year, six new schemes have been introduced following requests from participants. IEQAS has continued to expand into the area of EQA for POCT meters: POCT Lipids and POCT HbA_{1c}.

Labquality have asked us to remind participants to always use their Labquality Client Code when returning results.

The current schemes are:

ABO & Rh grouping	General Bacteriology
Alcohol in serum	General Clinical Chemistry
Angiotensin Converting Enzyme	Gram stain Blood culture –
Antibody screening/compatibility testing	Gram stain Blood culture + Gram stain colonies
Antiglobulin test, direct	<i>H. pylori</i> antibodies
Antistreptolysin titre	<i>H. pylori</i> antigen detection
APTT, fibrinogen	Haemoxymeter
Blood Cell Morphology	HbA _{1c}
Blood culture	HbA _{1c} variants
Blood Gas	Herpes simplex 1 & 2 antibodies
<i>Borrelia burgdorferi</i> antibodies	Hormones/Haematinics
C Reactive Protein	Infectious mononucleosis
<i>C. difficile</i> , cult & toxin detection	Lipids and Lipoproteins
Coeliac disease	LMW-Heparin/antiFXa
Conjugated Bilirubin	Measles virus antibodies
CSF	Mumps virus
Cytomegalovirus antibodies	Mycobacterial culture & smear
D-dimer	Mycobacterial smear
Drug abuse screen & confirmation in urine	Myocardial Markers
Drug monitoring (therap drugs)	Myocardial Markers + CRP
ESR	Natriuretic peptides, B-type
ESR for Alifax users	<i>Neisseria gonorrhoea</i> culture
Faecal Blood	Parasites in Faeces
Full Blood Count	POCT Lipids scheme
Fungal culture	Pregnancy Test
	Protein in CSF

PSA	Thyroid gland antibodies
PT (INR)	TSH Receptor antibody
Rheumatoid factor & citrullin antibodies	Tumour Markers
Rotavirus & adenovirus, antibody detection	Urine Culture
RS virus, antigen detection	Urine strip test B
Synovial fluid crystals	Urine, quantitative chemistry
Throat strep culture	Varicella zoster virus

New for 2011

<i>Bordetella pertussis</i> antibodies	Parathyroid Hormone
Drug abuse screen in urine	Semen analysis
Influenza virus A&B antigen	Urine Culture, quantit screen

Achievements and Plans

ISO 9001:2008: In December 2010, IEQAS once again passed a surveillance audit to maintain certification to ISO 9001:2008 standard.

International standardisation for HbA_{1c}: The HSE Project Team, chaired by Ned Barrett, successfully implemented dual reporting (IFCC and DCCT) on 1st July 2010. Hazel Graham and Ophelia Blake are also members of the team which will continue until the end of 2011, when dual reporting will cease. As a result of the HbA_{1c} standardisation project, there are currently 50 POCT meters routinely participating in our EQA scheme.

Special Survey - POCT Audit: In March 2011, IEQAS facilitated an audit by Ruth O'Kelly and the POCT Consultative Group and Subcommittee. This audit is a follow-up to their 2008 audit (Ir J Med Sci (2011) 180:237-240), carried out shortly after the publication of the POCT Guidelines, and will be useful to evaluate the effectiveness of the guidelines. The results were presented earlier this morning.

Special Survey - Harmonisation of Reference Ranges: A follow-up to the 2010 pilot study was conducted in September 2011, on 10 clinical chemistry analytes. Further surveys are planned for other disciplines. The results will be presented during the Clinical Chemistry workshop this afternoon.

Special Survey - eGFR: This survey was to assess the feasibility of adding eGFR as an analyte in our General Clinical Chemistry EQA

scheme. The results will be presented during the Clinical Chemistry workshop this afternoon.

Special Survey - RDW: Following a short survey on the reporting of RDW (Red Cell Distribution Width) we have decided to include it in the list of analytes for Full Blood Count from FBC 077. The results will be presented during the Haematology workshop this afternoon. Survey results are printed later in this booklet.

EQALM Survey - Post-analytical EQA scheme for automated haematology: EQALM (European Committee for External Quality Assurance Programmes in Laboratory Medicine), of which IEQAS is a member, offered this web-based scheme via IEQAS. A small number of Irish labs participated in 2009 and 2010. The results were presented at the EQALM Conference in Lisbon in October 2010 and will be presented at the Haematology Workshop this afternoon. 14 Irish Labs are currently participating in the 2011 Survey.

Fresh material for Clinical Chemistry scheme: Following previous successful special surveys, IEQAS now include fresh residual serum samples at least three such samples each year.

Participant Satisfaction Survey: We plan another survey in 2011 which will be combined with the Conference evaluation form today (also available online).

New Labquality Schemes for 2012: The new Labquality programme is available on IEQAS website. New schemes and pilot surveys for 2012 include:

- HIV antibodies for Point of Care (4/year)
- HTLV T-cell lymphotropic virus, antibodies (4/year)
- Legionella*, antigen detection in urine (4/year)
- Streptococcus pneumoniae*, antigen detection in urine (4/year)
- Leucocyte differential count for Haemocue (pilot)
- Norovirus, detection (pilot)
- Plasmodium falciparum*, antigen detection (pilot)

We wish to thank all members of the Steering Committee and other IEQAS sub-committees for their continued support and commitment. We welcome four new Specialist Advisors (POCT): Eileen Byrne, Clare Mulligan, Ruth O'Kelly and Paula O'Shea. We wish our outgoing Specialist Advisor for HbA_{1c}, Prof John Nolan, well in his new position in Denmark. We would like to thank the laboratories and staff in AMNCH, St James's, Mater Misericordiae

and OLCH Crumlin for facilitating IEQAS with sample preparation, storage and distribution.

Despite the difficult economic climate, we have managed to continue to provide and expand a wide-ranging EQA service. I would like to thank my colleagues Hazel Graham and Anne Cooke for their continued professionalism, hard work and dedication.

Biography

Patricia Howley joined IEQAS in 1999, and took over as Operations Manager in 2007. Patricia graduated from NUIG with a BSc in Chemistry and received an MSc in Quality and Safety in Healthcare Management in 2009 from the Royal College of Surgeons in Ireland.

What's new in Labquality – schemes, software and accreditation

Ms Jonna Pelanti, IT Manager & EQA Co-ordinator, Labquality, Finland

Abstract

This year Labquality celebrates its 40th anniversary. This also is a year when a lot is happening and more so during the years to come. We are in the midst of accreditation, we have several new schemes planned for the following year and we are renewing our whole IT-system.

Labquality receives requests for new schemes on a yearly basis. Arranging a totally new scheme requires some background work as to where to obtain the samples and find an expert, how many laboratories would participate, how many times the scheme should be organized etc. During 2011, pilot surveys for the schemes *Legionella* antigen and *Streptococcus pneumoniae* antigen detection in urine were arranged and will be a part of our program of 2012. In addition, the schemes for Human T-cell leukaemia virus antibodies (HTLVAb) and HI virus antibodies for POC methods are available at laboratories' requests. We also arranged a pilot survey of human embryo assessment using video material of two-day-old embryos. All the new schemes are marked as "New" in the programme catalogue for 2012 which will soon be published. The coming pilots for 2012 include surveys for veterinary laboratories, Leucocyte differential count for Hemocue devices, Norovirus detection and *Plasmodium falsiparium* antigen detection.

Labquality started its accreditation process during the year 2010 and we had our first accreditation audit performed by FINAS in August of this year. The aim is that Labquality will have accreditation status for 36 different schemes according to ISO 17043, an internationally accepted accreditation standard for proficiency test providers. The accreditation status will show that Labquality has competence to produce external quality assessment schemes with expertise and good knowledge. To our customers, accreditation can be experienced as an even more harmonized way of providing schemes and it also ensures that we have a professional and competent personnel.

In 2010 we started a large IT-project in Labquality and now during the summer of 2011 we have taken a huge leap within this project. The new system is called LabScala. LabScala will first be built in

Finnish and English but in the future we hope to be able to provide our customers with the opportunity to use it in their own language.

We aim to build a new system able to receive and handle our clients' method changes, results, orders, invoices and also to provide our customers with new kinds of reports and other information. Adding to this, the new system will provide our staff with a new and modern working environment and help us work in a more automated way. We expect this new program to make the turnaround time of schemes faster. Furthermore, we can also accomplish the functions required by accreditation easier. In the future it will also be possible to receive versatile and even tailor-made, client specific reports. The schemes which will be run using LabScala will be marked with the letters LS in our program for 2012. The first LabScala-schemes are hormones A and B, Urine strip test A and glucose meters.

Biography

Jonna Pelanti has a master of science in technology degree and a clinical biochemist degree. She began her professional training in Helsinki University central hospital in 2001 when working with her master's thesis on measurement of nitric oxide in human samples. She then went on to work with forbidden substances in animals in the Finnish food safety authority Evira. In 2007 she began her specialization training as clinical biochemist in the hospital district of Helsinki and Uusimaa and after graduating joined Labquality where she is responsible of different schemes and also of developing Labquality's new IT-system. Jonna is interested in external quality assurance in general and as a science. She also has, thanks to her technology background, an interest and knowledge in information technologies. She is fascinated with developing external quality assurance with the help of modern IT solutions.

2012 Labquality: new schemes and other changes

New schemes

- 5090 Hi virus, antibodies, POC (e); 4/year
 - 5089 HTLV T-cell lymphotropic virus, antibodies (e); 4/year
 - 5597 *Legionella*, antigen detection in urine; 4/year
 - 5598 *Streptococcus pneumoniae*, antigen det. in urine; 4/year
- e = e-scheme

New frequencies and changes in delivery months

- 2220 Down's syndrome screening, 1st semester
 - Now one survey per year
- 2570 Glucose meters 1
- 2580 Glucose meters 2: HemoCue
 - Now four surveys per year
- 1261 Glycated haemoglobin A_{1c}
 - Now six surveys per year
- 5041 Gram stain, blood culture, methods without carbon
- 5042 Gram stain, blood culture, methods with carbon
 - Now four surveys per year
- 4200-4201 Leucocyte differential count, 3-part, automated
 - Now four surveys per year
- 2240 Proteins, electrophoresis
 - Now four surveys per year
- 2226 Prostate specific antigen
 - Now four surveys per year
- 4140, 4150-4155 Reticulocyte count, automated and manual methods
 - Now four surveys per year

Pilot Surveys

For details, inquires and enrolments please contact IEQAS.

- 4190 Leucocyte differential count, HemoCue
- 5675 Norovirus, detection
- 5430 *Plasmodium falsiparium*, antigen detection
- 6410 EQA for human embryos
- 0000 EQA for veterinary laboratories (number will be given later)

Changes in analytes

- 2610 Acid-base status and electrolytes, new analytes: Crea and Bun (urea)
- 2700 Tumour markers, new analyte: anti-mullerian hormone
- 2540 Myocardial markers, no more analytes: LDH1 and CRP (>5mg/L).

Clinical Chemistry Workshop

Uncertainty, a practical approach

Mr Rowland Reece, Principal Biochemist, St Vincent's University Hospital

Abstract

An uncertainty evaluation is now required for all medical laboratory measurements.

Laboratories should attempt to identify all the significant components and to make a reasonable determination of uncertainty, which is stated as the uncertainty of measurement, as defined by ISO/IEC 17025 (2008) and previously GUM 1995.

Measurement uncertainty (MU) enables users to obtain the probability of making an incorrect decision based on measurement, and to manage the consequential risks.

Two types are described, A and B.

Practical determination of MU will focus primarily on type A, based on simple calculations of error, benchmarked against quoted desirable quality specifications.

Type B uncertainties arise from pre-analytical and post-analytical processes and need to be identified, quantified, if possible, and minimised. Total MU is therefore derived from the combined uncertainties identified in the laboratory.

Biography

Rowland Reece is a Principal Biochemist in the Clinical Biochemistry department of St Vincent's University Hospital Dublin. He has been working there since 2002. Prior to that, he worked in UCH Galway and in Beaumont Hospital, Dublin. He is a specialist advisor to IEQAS.

HbA_{1c} for diagnosis of diabetes?

Dr Ophelia Blake, Principal Biochemist, St James's Hospital

Abstract

HbA_{1c} has been widely used as a test to estimate the degree of glycaemic control. Recently, the International Expert Committee recommended that HbA_{1c} be added to the diagnostic criteria of diabetes mellitus (DM); the 2010 ADA clinical practice recommendation defines HbA_{1c} levels of over 6.5% (48 mmol/mol) as DM and an HbA_{1c} between 5.7 and 6.4% (39 – 47 mmol/mol) as preDM.

Whole blood samples for HbA_{1c} can be obtained regardless of prandial state, making it a more convenient way of testing for the disease; it is simpler than FG or OGTT for both the patient and the health care provider. HbA_{1c} levels correlate well with FG levels, mean postprandial and 2PP glucose levels. They also predict diabetes-specific complications and have been the basis for diabetic treatment decisions. Because the current DM diagnostic criteria are based on an increased risk of developing DM related chronic complications, using HbA_{1c} for the diagnosis of DM is a rational approach.

The diagnostic criteria for DM and preDM have been changed several times. However, there does not appear to be a complete consensus regarding the use of HbA_{1c} for diagnosis of DM. The HbA_{1c} criteria issues such as the analytical (incl pre-analytical), the reliability and the relationship to diabetic microvascular complications will be presented.

Biography

Dr Blake is a Principal Clinical Biochemist in the Clinical Biochemistry Department of St James's Hospital, Dublin since 2007. She has interests in Diabetes, Prostate cancer, clinical liaison and quality management. Ophelia completed her PhD on Prostate Specific Antigen in the Department of Surgery in the Mater Hospital/UCD. She is a member of the Biochemistry group of the NCCP for prostate cancer management in Ireland and was a member of the national HSE lead project team overseeing implementation of the International Standardisation of HbA_{1c} (2010).

Reference range harmonisation survey

Dr Peadar McGing, Principal Biochemist, Mater Misericordiae Hospital

Abstract

Different hospitals having different reference ranges is a source of confusion and frustration for users of clinical laboratories. For many tests there are sound reasons for those differences but for others there is no good reason for the variation.

In the UK's West Midlands region a project was initiated in 2007 to pragmatically agree reference ranges for ten common biochemistry tests – sodium, potassium, urea, chloride, bicarbonate, phosphate, magnesium, albumin, total protein, and osmolality. That project has been expanded and has been taken up by the UK Department of Health as a national initiative.

In the Republic of Ireland a joint initiative by ACBI, AMLS, and RCPI (Fac.Path), in conjunction with IEQAS, is reviewing possible harmonisation of reference ranges here. A pilot study was conducted of reference ranges for sodium, potassium and urea. The findings of this pilot study were presented and discussed at a workshop during the 2010 IEQAS conference.

Based on the experience of the 2010 Pilot Study, and drawing on feedback from participants in the 2010 workshop, a decision was taken to collect reference range data from Irish laboratories for all ten analytes featured in the initial UK study. A survey of reference range and related data was conducted by IEQAS and data collected from this survey will be presented and discussed at the 2011 conference workshop.

Biography

Peadar McGing is Principal Biochemist in the Mater Hospital, and a Fellow of the Royal College of Pathologists. Peadar is currently Chairman of the Scientific Committee of the Association of Clinical Biochemists in Ireland and a Specialist Advisor to IEQAS; he is also a former member of IEQAS sub-committee and co-founder of Cardiac Markers scheme. He is editor and co-author of recent ACBI guidelines on Fluid Analysis (2009) and Tumour markers (2010). Peadar is a graduate of UCC (BSc) and TCD (MSc, PhD). His hobbies include writing, photography, athletics, and tennis.

Haematology Workshop

Blood Cell Morphology review scheme 2010-2011

Dr Kanthi Perera, Consultant Haematologist, Midland Regional Hospital, Tullamore

Abstract

During the last year IEQAS circulated 6 morphology cases. Although the availability of slides is limited, we managed to send very informative slides to cover red cell, white cell and platelet abnormalities. The presentation will review some of the morphological abnormalities in each case with a brief review of the diagnosis, to include how you could arrive at the diagnosis.

Biography

Dr Kanthi Perera graduated from the Faculty of Medicine, University of Colombo, Sri Lanka, initiated her post-graduate training in Sri Lanka and completed it at The Royal London Hospital in England. She was appointed as the first Consultant Haematologist in the National Cancer Hospital in Colombo and gave the leadership for the establishment of the first stem cell transplant unit in the country at the National Cancer Hospital. Dr Perera was hugely involved with both undergraduate and postgraduate teaching in the country. She moved to Ireland in 2001 and held a temporary consultant post in Mid-Western Regional Hospital, Limerick for 3 years and in UCH Galway for 9 months and is now Consultant Haematologist at the Midland Regional Hospital in Tullamore. Dr Perera carries out regular morphology teaching for SpRs and is a member of IEQAS Haematology Review Group.

POCT in Haematology: a case of Hobson's Choice?

Ms Fiona Donohue, Senior Medical Scientist, St Michael's Hospital Dun Laoghaire

Abstract

The lack of choice for POCT in Haematology and the selection and validation of POCT instruments for Haematology testing for use in the Emergency Department of St Michael's Hospital is discussed.

Biography

Fiona Donohue graduated from DIT, Kevin St and Trinity College with BSc in Biomedical Science in 1992 (majoring in Haematology/Blood Transfusion) and commenced work in St Vincent's Hospital in the Immunology and Haematology laboratories. Fiona moved to St Michael's Hospital in Dun Laoghaire in September 1994 and completed her MSc in Molecular Pathology in 1999. She worked in Biochemistry and Microbiology before being appointed as Senior Medical Scientist in the Haematology laboratory in 2005.

EQALM Post-analytical survey report

Mr Ivan Shirley, Vice-Chairman IEQAS and Chief Medical Scientist, Haematology Laboratory, St Vincent's University Hospital

Abstract

This pilot scheme surveyed European laboratories on actions taken post analysis of automated FBC results. This is a web based scheme therefore no blood samples were circulated. Laboratories were provided with FBC results, with histogram and graphs for their own analyser.

The survey showed that there was a wide variation in the actions taken by different laboratories to abnormal results.

The aim of this presentation is to discuss the main findings from this survey and consider agreed laboratory procedures on reflex testing and reporting.

Biography

Ivan Shirley FAMILS is Chief Medical Scientist in the Haematology Department in St Vincent's University Hospital, Dublin 4. He has served on the IEQAS Haematology Review group for 13 years and the Steering Committee for 10 years. In 2007 he was appointed Vice Chairman of the Steering Committee.

RDW & BCM Survey responses

Do you routinely measure RDW for patient samples?

26 responses: Yes = 21 (81%) No = 5 (19%)

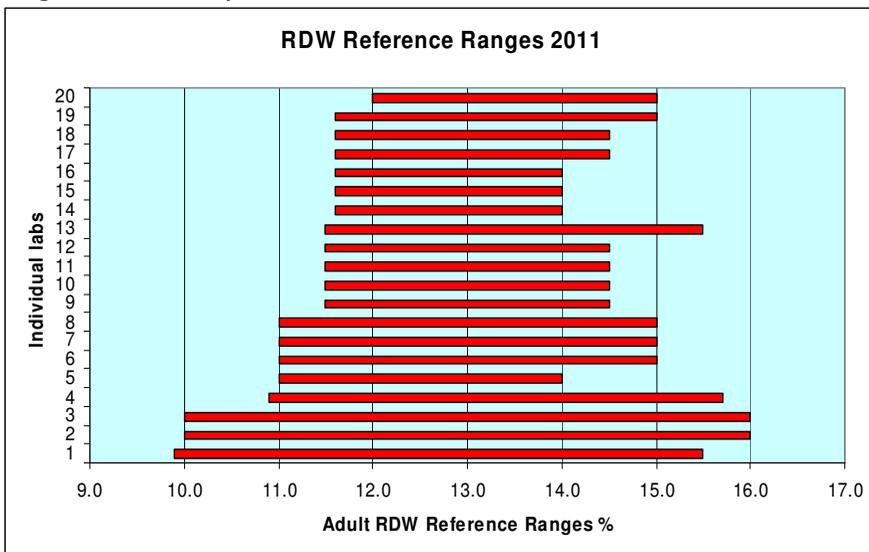
(1 lab measures RDW but does not report; another cannot report until participating in an EQA scheme for RDW).

Unit of measurement for RDW

21 responses: %= 19 None = 1 Other = 1

Reference range(s) for RDW

20 responses (adult ranges shown here; 3 labs had additional ranges for children).



Would you prefer 2 Blood Cell Morphology blood films per distribution?

25 responses: Yes = 11 (44%) No = 14 (56%)

Would you be prepared to pay extra for 2 blood films?

24 responses: Yes = 6 (25%) No = 18 (75%)

(3 labs already in UKNEQAS scheme; 3 others made reference to budgetary restriction.)

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Unit B06 Nutgrove Enterprise Park
Rathfarnham, Dublin 14

Tel: 01 495 7356

Fax: 01 495 7838

Email: ieqas@eircom.net

Web: www.ieqas.ie

