

Wirral University Teaching Hospital



NHS Foundation Trust

RESEARCH DAY

Friday 16th November 2007
9.30 – 15.30

Education Centre
Arrowe Park Hospital

PROGRAMME

Registration and Coffee
9.30 – 10.00



Accredited by Royal College of Physicians
4 External Credits (Ref: 38992)

Dr Melanie Maxwell
Session Chair; Morning Session

Dr Melanie Maxwell is Head of the Clinical Practice Research Unit at Wirral University Teaching Hospital NHS Foundation Trust. Qualifying with an MBBS from London University in 1985, Melanie has worked in the NHS ever since - starting on the South Coast (Hastings) and ending up in Wirral. She pursued a career in Paediatrics for 6 years before stumbling into Public Health Medicine whilst gaining Community Paediatric experience. Finding public health very enjoyable and challenging, she then re-trained and, since 1997 has been Director of Clinical Effectiveness and Consultant in Public Health Medicine at Wirral Trust. Melanie states that her research interests lie firmly in effective services, and her publications include papers on availability of the 'morning after' pill, effectiveness of paediatric hospital at home and clinical epidemiology of rotavirus.

Professor J E Ellershaw MA FRCP
Keynote Speaker; Morning Session

John Ellershaw is Professor of Palliative Medicine at the University of Liverpool. He is Director of the Marie Curie Palliative Care Institute Liverpool and Medical Director of the Marie Curie Hospice Liverpool. He is currently National Clinical Lead Palliative Care (Specialist) with the Department of Health End of Life Programme based on his work with the Liverpool Care Pathway for the Dying Patient (LCP).

Kathy Doran
Session Chair; Afternoon Session

Kathy Doran has worked for 25 years in the public sector, as a civil servant and as a National Health Service manager. Prior to taking up her post as Chief Executive of Wirral PCT she was Chief Executive of Birkenhead and Wallasey PCT and Head of Primary Care at the Department of Health. She also worked at the former Wirral Health Authority and Wirral Community Trust. Kathy is also a Board Member of National Institute of Health Research Advisory Board.

Dr Louise Wood
Keynote Speaker; Afternoon Session

Dr Louise Wood is Head of Innovation and Industry R & D Relations in the Research and Development Directorate of the Department of Health and a member of the Directorate's Senior Management Team. She is Co-Chair of the Ministerial Industry Strategy Group (MISG) Clinical Research Working Group and chairs the UKCRC Industry Road Map Group. She also chairs the National Institute for Health Research (NIHR) Medical Devices Clinical Research Group. Louise is also Chair of the NIHR IS Programme Board and a member of the NHS CFH Research Capability Programme External Reference Group and the Royal College of Physicians Working Party on Physicians and the Pharmaceutical Industry. Louise joined the Department of Health in January 2005 from the Medicines and Healthcare products Regulatory Agency where she held a variety of posts, most recently as Director of the General Practice Research Database Division and member of the Agency's Executive Board.

MORNING SESSION

Theme
Research in Wirral ~ Life after 50

Chair:
Dr Melanie Maxwell
Head of Clinical Practice Research Unit

Keynote Speaker:
Professor John Ellershaw
Palliative Care Consultant

- 10.00 – 10.10: Introduction to the Session: Dr Melanie Maxwell
- 10.10 – 10.40: **Keynote Address**
Professor John Ellershaw
- 10.40 – 10.55: Competency in Microscope Skills
Dr David Galvani; Consultant Haematologist, APH
- COFFEE BREAK**
- 11.15 – 11.30: Clonal Relatedness of *C.difficile* in Wirral Hospitals
Betty Ouma; Biomedical Scientist, Medical Microbiology
- 11.30 – 11.45: Evaluation of a Computerised Nutrition Screening Tool
Dr Melanie Maxwell; Head of CPRU
- 11.45 – 12.00: Corporate Nursing and Midwifery Service Review
Les Porter; Clinical Nurse Practitioner APH
- 12.00 – 12.15: Stress and Cardiac Autonomic Profiles in Dialysis
Dr Joe Delaney; Senior Research Fellow; Renal Medicine

12.15 – 13.15: Lunch and Poster Viewing

AFTERNOON SESSION

Theme

Clinical Trials

Chair:

Kathy Doran

Chief Executive, Wirral Primary Care Trust

Keynote Speaker:

Dr Louise Wood

Head, Industry R&D Relations, DoH

- 13.20 – 13.30: Introduction to the Session: Kathy Doran
- 13.30 – 13.45: The PDMED and PDGEN Clinical Trials
Dr Chris Turnbull, DME Consultant, APH
- 13.45 – 14.15: **Keynote Address**
“Working with Industry – Why Bother?”
Dr Louise Wood
- COFFEE BREAK**
- 14.25 – 14.40: Clinical Trials Collaboration ~ Hospital & Primary Care
Dr John Lorains, Consultant Physician, APH
- 14.40 – 14.55: Making Research a Reality ~ Working in Collaboration
Lynda Appleton: Research Nurse, CCO
- 14.55 – 15.15: Wirral CTU ~ From Concept to Christmas
Dr Rod Owen, Clinical Trials Unit Manager, APH

15.20: End of Day: Award of Prizes

Presentation Abstracts:

Morning Session

10.10 – 10.40: **Keynote Address**
****Professor John Ellershaw****

10.40 – 10.55: Competency in Microscope Skills
Dr David Galvani; Consultant Haematologist, APH

Despite being central to the practice of Haematology, microscopy skills are not assessed prior a trainee entering Haematology. Critical thinking, employing the visual data, adds further complexity to the diagnostic process. The described research used an ethnological qualitative methodology and employed a semi-structured interview. 20 Consultant Haematologists were interviewed to determine what makes a 'good' microscopist. The results transcribed and analysed using the N-vivo package. Only 75% routinely used a template during microscopy, the remaining 25% 'eyeballed' the material and relied upon pattern recognition to reach the correct diagnosis. The research begins to identify the skills that could be assessed in a trainee prior to entering this specialty. It opens up further research questions about 'field dependency' in aspiring Haematologists. The fact that a quarter of Consultants have abandoned a systematic approach emphasises the need for better quality tools to ensure continued professional competence.

11.15 – 11.30: Clonal Relatedness of *C. difficile* in Wirral Hospitals
Betty Ouma; Biomedical Scientist, Medical Microbiology

The aim of the study was to determine the relatedness of *Clostridium difficile* isolates from inpatients in Wirral Hospitals by analysing chromosomal DNA patterns by pulsed-field gel electrophoresis (PFGE). Stool samples were tested for *C. difficile* toxins by ELISA and, if positive, were cultured onto *Clostridium difficile* Moxalactam Norfloxacin (CDMN) agar. Multiplex PCR was used to confirm the strains as *C. difficile* and to distinguish between the two main toxigenic types and non-toxigenic types. PCR reactions to detect the gene encoding the binding (*cdtB*) component of binary toxin were performed. Toxinotyping of binary toxin positive isolates was determined by amplifying and cutting the B1 and A3 fragments with restriction enzymes *HincII*, *AccI* and *EcoRI*. All the *C. difficile* strains were subsequently genotyped by PFGE. The *tpi* gene was detected from 51 isolates. 47 A+B+ isolates gave *tcdA*, and *tcdB* signals; 2 A-B+ isolates gave negative *tcdA* but positive *tcdB*; and 2 A+B- isolates gave positive *tcdA* and negative *tcdB*. Four isolates previously classified as A-B+ and A+B- were positive for the binary toxin. From these four isolates, two were found to be toxinotype

VI and two as toxinotype III (the hypertoxin-producing type). A total of 12 PFGE types and 6 subtypes were identified. The modified typing method was successful. There was no particular pattern in the distribution of the PFGE types in relation to wards suggesting that during the period of study, there were numerous sporadic cases and very few instances of nosocomial spread or outbreak situations. The study confirms that the genotypic characteristics of *C. difficile* isolates could be clearly identified by PFGE. Introduction of PFGE for the typing of *C. difficile* in Wirral Hospitals will help cut the overall costs of treating patients with *C. difficile* infection. This will be achieved by enabling the infection control team to target their resources more efficiently, distinguishing between true outbreaks and a number of coincidental sporadic cases.

11.30 – 11.45: Evaluation of a Computerised Nutrition Screening Tool Dr Melanie Maxwell; Head of CPRU

Introducing a new process such as nutrition screening into an organisation requires time and resources. Initially barriers to implementation may be present. The aim of this study was to assess implementation of a locally validated nutrition-screening tool throughout a large district general hospital. Compliance with nutrition screening rose from 20% to 60% for all new inpatient admissions during the study period. Qualitative assessment of the views of nursing staff (n=42) from across all specialities rated Wirral Hospital Nutrition Screening Tool (WHNST) as quick to complete (74%), easy to use (95%), acceptable in clinical practice (81%) with good coverage of the patient population (93%). Inter-rater reliability was assessed between nurse and research dietician completing WHNST on a cohort of 200 patients, and found to be 'fair' ($k=0.2$). This study identified several means by which reliability of WHNST may be improved; this requires further investigation. Referrals to dietetics increased by 10% during the assessment period compared with the previous year. WHNST was successfully implemented. However, validity in terms of inter-rater reliability needs to be improved between nurse and dietician, before WHNST can be recommended for use as a fully integrated working tool.

11.45 – 12.00: Corporate Nursing and Midwifery Service Review Les Porter; Clinical Nurse Practitioner APH

Utilising the knowledge and skills of specialist nurses in the organisation, a service review system has been developed that places the patient's experience at the heart of the review process. Covering areas such as essence of care, standards for better health and key strategies such as 'saving lives', this review balances compliance with identified best practice and actual patient experience. The nursing review team examines the care provided for ten patients per ward, scrutinising documentation, observing environments and interviewing nursing staff.

Central to this process are detailed discussions with patients. Results are immediately available to all staff members via face to face feedback at ward level, presentations to divisional boards and a designated web page on the Trust's intranet. The review scores are presented in percentage format, colour coded, using a traffic light system to determine ward performance. Review information is circulated electronically with data dispatched directly to relevant areas of the organisation.

12.00 – 12.15: Stress and Cardiac Autonomic Profiles in Dialysis

Joe Delaney: Senior Research Fellow, Renal Medicine

Dialysis patients often suffer from stress, anxiety and depression. These psychological states have been shown to influence cardiac autonomic function, especially resulting in depressed vagal tone. The main aims of this study were to compare measures of psychological stress and cardiac autonomic function before and after dialysis. We were also interested in identifying the major factors contributing to psychological stress in this patient group. 27 patients (15F, 12M, 65 ± 13.7 yrs, mean ± SD), were investigated. A visual analogue scale (VAS) was used to assess psychological stress and both heart rate response to slow deep breathing (HRR-SDB) and short-term heart rate variability (HRV) were used as measures of cardiac autonomic tone. Psychological state and cardiac vagal activity both improved during the dialysis process. All patients who were picked up by hospital-organised transport identified this as their major source of psychological stress before dialysis. It is possible that psychological factors especially related to poor transport arrangements, impact upon cardiac autonomic tone, particularly influencing cardiac vagal tone. Reduction of stress and improvement in autonomic tone may be associated with enhanced cardiovascular survival.

Presentation Abstracts:

Afternoon Session

13.30 – 13.45: The PDMED and PDGEN Clinical Trials

Dr Chris Turnbull, DME Consultant, APH

Parkinson's Disease is a progressive neurological disabling condition that affects about 110,000 people in the UK with 8,000 new cases annually. There is great uncertainty about the relative effectiveness of current treatments. PDMED is a large open randomised trial of these different medications for early and late cases of Parkinson's disease. The main outcome measure is a specific quality of life scale (PDQ-39). Nationally over the last 5 years about 1300 patients have entered the study, about 1050 to the early and 250 to the late arm. In Wirral about 40 patients are in the early arm. About 30 of these patients are also taking part in PDGEN for a genetic research.

13.45 – 14.15: **Keynote Address: “Clinical Trials – Why Bother?”
Dr Louise Wood**

14.25 – 14.40: Clinical Trials Collaboration ~ Hospital & Primary Care
Dr John Lorains, Consultant Physician, APH

The fundamental problem is that, at the same time as demanding a reduction in hospital-based medicine, the Government also wants increased patient accrual to clinical trials. A consequence of the drive towards care of chronic conditions in the community is that Trusts such as Wirral University Teaching Hospital will not have the numbers of suitable patients that they historically were able to access. Equally, no single GP, or Group Practice, will have sufficient numbers either; so only as a ‘joint venture’ can the potential patient pool be reached and participation in studies enabled. The proposed scheme is that of a ‘Hub’ (Trust) and ‘Spoke’ (GP Practices). Amongst the essential roles of the ‘Spoke’ practices would be the identification of potential study participants and to advise patients of the upcoming study. Additionally, making sure that colleagues, other surgery staff and potential participants were able to meet with the Trust PI at a suitable location. The proposal also ensures that training would be extended to any GP Practice wishing to establish itself as a research active centre, with a view to a longer-term role as a ‘Hub’ managing its own ‘Spokes’.

14.40 – 14.55: Making Research a Reality ~ Working in Collaboration
Lynda Appleton: Research Nurse, CCO

The value and importance of a team-based approach to research is well documented. Through effective collaboration knowledge and expertise can be shared, with enhanced opportunities for networking and mutual learning. Nurse and allied health professional-led research is unique and can make a significant contribution to health service research. The Merseyside and Cheshire Cancer Network (MCCN) Research Group was set up in 2005 with two fundamental objectives in mind, i) to build research capacity and capability amongst group members and ii) to develop and undertake a research study led by nurses and allied health professionals from across the region. The issues, challenges and successes which have shaped and influenced the collaboration will be explored, in addition to an overview of the research study. The MCCN Research Group has successfully engaged members from a diverse range of disciplines and settings including patient representatives from three regional support groups, healthcare professionals from primary, secondary and tertiary care and academic staff. The unique contribution of individual knowledge, expertise and experience has supported all phases of the research process. This innovative team approach, led by Clatterbridge Centre for Oncology, will outline the drivers for user involvement, collaborative working, knowledge transfer and protocol development.

14.55 – 15.15: Wirral CTU ~ From Concept to Christmas

Dr Rod Owen, Clinical Trials Unit Manager, APH

The Wirral Clinical Trials Unit (CTU) at Arrowe Park Hospital formally opened at the beginning of April. The Unit also functions as the R&D Office for the Trust. From the outset, the decision was taken to have Research Network staff 'embedded' within the structure of the Unit to facilitate recruitment of patients to clinical trials. The Cancer, Diabetes, Degenerative & Neurodegenerative Diseases, Medicines for Children and Stroke Networks all have staff regularly working out of the CTU. This Unit has been commended for the level of support offered it offers, and the model has been suggested for adoption outside of the Merseyside & Cheshire area. The CTU envisages a growing involvement in 'Portfolio' studies next year; currently, Trust investigators are involved in 17 such studies and a further 7 are progressing through Network development, ethical or R&D approval, and 4 studies are being considered for 'Portfolio' status by UKCRN. Simultaneously, the CTU has expanded the commercial clinical trials work of the Trust by the addition of one newly approved study each month since April. The potential income to the Trust from patients recruited to these additional trials has increased the total potential income by 135% over the same period. There are currently another 7 studies in varying stages of negotiation, ethical or R&D approval, and site evaluations have been undertaken in respect of a further 3 studies.