NHS NORTH WEST INFECTION CATALYST EVENT SUMMARY

11th September 2009
Foresight Centre, Liverpool University

Event Sponsored by NHS North West R&D

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NHS North West Infection Catalyst Event
Held on 11th September 2009 at the Foresight Centre, Liverpool University, Liverpool

Event Summary:
NHS North West in collaboration with the Liverpool Biomedical Research Centre and partners in the NHS academia and industry held a joint interactive workshop to build on research strengths and expertise in infection research in the North West. The event aimed:

- To support the development of a strategic approach to infection research in the North West.
- To promote a step change in North West infection research
- To improve links with NHS organisations and Universities to facilitate infection research and support changes in practice
- To speed up the process of taking research breakthroughs into NHS patient care and treatments
- To improve links with HEIs with expertise in infection research
- To contribute to the NW's economic and wealth agenda through the attraction of additional R&D funding to the NW

Keynote speakers were, Professor Peter Winstanley, Head of School of Clinical Sciences, University of Liverpool and Executive Director NIHR Biomedical Research Centre; *First Translational Gap*, Dr John Douglas, Director of the Division of STD Prevention at the National Center for HIV, STD, and TB Prevention, CDC, Atlanta, USA; *Second Translational Gap: Why don't we use the evidence?* Dr Stuart Eglin, Director of Research and Development at NHS North West, Professor Ray Borrow, Head of Vaccination Unit, HPA, *New Technologies: Serology* and Professor Neil Hall, School of Biological Sciences, University of Liverpool, *New Technologies*.

The focus for discussion was "Managing infection across the community and hospital interface" with the priority areas of knowledge translation, infection diagnoses and health service research and provided an opportunity for people from diverse disciplines and fields to discuss infection policy, research, and practice.

The event was conducted using a forum known as 'Open Space' which was facilitated by an external facilitator. The method is designed to enable people with mutual interests to meet and progress ideas for research proposals in a short period of time. Participants have control over what is discussed and can choose to participate in the various discussion forums generated on the day. At the conclusion of the discussion forums decisions are made about the outcomes and

next steps to progress proposals. The event is an important part of the wider catalyst programme which promotes new collaborations and innovative bids for funding.

An evaluation of the day was undertaken by a research team from the School of Population, Community and Behavioural Sciences, at the University of Liverpool as part of an ongoing assessment of the impact of the catalyst programme. The academic lead is Dr Ciara Kierons (0151 794 5594).

Summaries of the open space discussions, including the names of the participants are outlined below:

Topic	Proposal	Group Convenor	Key points of discussion	Next Steps	Who?	Interested people	Key people
Impact of preventative and participatory interventions on patient outcomes and healthcare costs.	Information sources ie hospital episode statistics Methodologies Outcome measures/end points Link with national health and research agendas eg World Class Commissioning	Paulo Lisboa	Difficulty in obtaining baseline data to evidence impact of practice eg reducing the number of devices. Research questions: - The value of screening admissions for elective surgery as opposed to emergency admissions. - Reporting of infections needs review eg in intensive care EU HELIX scheme.	Audit good practice eg catheters inserted to reduce work load. Reducing unwanted variation in care. RCT implementing EU guidelines in a couple of hospitals - hospital acquired infections Can RFID (Radio Frequency Tags) help monitor practice in care homes, hospitals and GP practices? Systemic effects Community transmitted infections – may rely less on hospital monitoring and more on hospital episode statistics. Need a link with World Class Commissioning &	Paulo Lisboa Katie Merrick David Britt Martin Kiernan	Deb Mandal	

				agencies. Unnecessary prescribing in GPs eg antibiotics for infections that may prove negative on admission to hospital. Need for better education eg re: transactional nature of doctor-patient relationship leading to unnecessary prescribing. Need for point of care testing to inform prescribing in PCTs			
How do we communicate the benefits of implementing research findings for different audiences? For example patients/organisations/clinicians. Topics: financial, mortality, morbidity, length of stay etc	What makes "healthcare managers" think? Eg reputation, economics, PROMs What methods exist to translate findings eg graphical versus numbers?	Talib Yaseen	Target different audiences – getting across the message Marketing and psychology – strategies to get the message across Recognition that different messages/triggers are needed for different types of organisations/population groups Linking outcomes Use of new interventions (digital/govs etc) that lead to behavioural change and increased adherence to self management	Discuss with Steve Pashley aligned work John Moores Digital Media & Media City – Salford Explore behaviour change at present level What are the 10 high impact research outputs that should be implemented at hospital, GP or patient level? Pull rather than pushed into organisation Links to "QIPP". Systematic Reviewers R&D Manager Health Economics	Talib Yaseen Paulo Lisboa Stuart Eglin	Mark Gabbay	

				Epidemiologist Multiple audience engagement eg Board members			
Vaccines from design to clinical trial to general use	How to make better vaccines for existing infections for HIV	Tom Blanchard	Multi-pathogen vaccine - viability - accessibility Public perception of vaccines generally Difficulty in implementation of existing vaccines Impact of inducing seropositivity Design a more immunogenic vector Global/developing world versus developed world	Grant applications	Tom Blanchard Andy Ustianowski Pam Vallely Ray Borrow David Robertson	Mark Gabbay	
How can we get clinicians and other healthcare professionals to recognise that invasive forms of healthcare interventions carry risk?	How can we ensure that the risks of invasive medical device are recognised?	Martin Kiernan	Can you measure risk of the devices and prove the element of danger? How can we get clinicians to pause and reflect on the need for the intervention? Can we operationalise the desired position? Can we revise pathways to look from the patient safety angle and not the operational?	Examination of policies/procedures to see how many have a patient safety angle Development of a PR campaign on devises for HH for clinical and patient Develop a feedback mechanism for performance	Martin Kiernan, Talib Yaseen, Peter Kinderman, Subhash Anand, Peter Isaacs	Peter Diggle John Cheesbrough Sarah O'Brien	Debbie Fielding
Where we have evidence why don't we use it?	What are the factors that influence how evidence is assimilated into practice?	Sarah O'Brien	Clinician factors Management factors: Trust/providers/commissioners Patients	Frame qualitative research questions Identify suitable leader	Martin Kiernan Stuart Duff Sarah O'Brien Peter Isaacs Deb	Mark Gabbay Peter Diggle	

					Mandal		
Health Care Associated Infection: how do we know what works?	Health care associated infections: what really works? Is it: -Hand hygiene -Staffing levels -Staff habits -Antibiotic policy -MRSA screening -Invasive device type -Patient perception	John Cheesbrough	End points used chosen for ease – need better ones Current clinical data difficult to use – need to agree on what data to collect – prospective data collection may be required Try to collect data on ALL HCAI over time in consistent way over one year. Case mix record all above exp variables	Reliable data on incidence of MRSA Reliable data – MRSA screening – SHA? Extrapolate backwards using lab data Consider patient rep to develop	John Cheesbrough Peter Diggle David Britt Eric Bollin Olusola Bolarin	Sarah O'Brien Martin Kiernan	Andy Dodgson (MRI)
I do not create the research question but R&D facilitates the application/sponsorship and approvals. What is it you as a researcher would like to see as the service delivered by the R&D Department?	What do researchers expect from an R&D Department? Background: Perception that R&D Departments aren't effective Role to support grant applications ie through provision of stats advice – but bids are often presented the day before submission therefore researchers experience a negative	Julia West	Researchers are not aware of the R&D Department's expertise R&D Departments need to communicate what services are on offer. Research needs to be integrated into each division There are parallels with the University People do their own thing until people need support Need to make it mandatory to include R&D Department Re timelines – R&D Department needs to be involved early in the process. There are two processes: the R&D management process including costings and the facilitative process to support the researcher	Distinguish the R&D management processes including costings from facilitative role to inform the development of bids R&D representation on division's R&D committees (or if no attendance is possible to receive papers) ? change the name Need to integrate research into day to day practice	Julia West Ian Cook Maria Thornton		

	experience		Some departments have committees – they need to let R&D know				
Biobanking – is there a need? How can it be organised? What type of samples?	NW Biobank for infection Commercial potential Potential for use in long term drug safety studies Need to look at what can be collected now to answer research questions in the future.	Andy Ustianowski	? establish a new biobank for infection or build on existing banks Needs to be sustainable May need individual biobanks – HIV, host genomics baseline Need right demographic data Ethical considerations – consent for existing samples May have life insurance implications Financial implications May not need biobank may need cyber archive	Need a conversation with Bill Ollier re biobanks (Andy) Arrange a blood borne virus meeting with a focus on sequencing and future research – participants: David, Bill, Pam, Andy, Ray, Neil Hall and Eric Bolton Need to identify who to go to for samples – need communication strategy	Andy Ustianowski Tom Blanchard Ray Borrow David Robertson Pam Vallely	Olusola Bolarin Paulo Lisboa Bill Ollier Neil Hall, Eric Bolton	Munir Pirmohamed (Liverpool)
Diagnostics for infections and drug resistance in the context of 2nd generation sequencing technologies	How do we translate genomics into diagnostics?	David Robertson	Deep sequencing of HIV, Hep B, flu etc Cost/benefit Training needed to cope with “genomics revolution” How do we get this technology in a clinical setting? What are the good things to look at? Is there a biobank?	Identify/start a biobank of patient samples taken over time of chronic population Meet again with blood virus researchers to identify samples Discuss grant	Tom Blanchard Pam Vallely David Robertson Eric Bolton	Paulo Lisboa Dr D Mandal	
Reducing uncertainty about antibiotic prescribing in primary care	Reducing uncertainty about antibiotic prescribing in primary care	Mark Gabbay	C Diff – prevention Expert information – targeted Collaboratively produced	Links to Nursing-home group Links to Chest Infection Group Expert timely	Katie Merrick Sheila Hillhouse Mark	Olusola Bolarin	

				information Host response – clinician response	Gabbay		
Public patient involvement in microbiological research – why and how?	Why PPI is important Patients can advise researchers/leads to improved protocols Patients/carers/public can identify what is beneficial Research funded out of public purse therefore needs to be beneficial Liverpool BRC uses PPI to prioritise research Researchers argue re funding – PPI can highlight that this behaviours isn't appropriate Need to engage younger people	David Britt	Proven benefits of PPI in social research Need to demonstrate advantages to bio science researchers Widening participation – possible research grant proposal Using innovative methods: theatre, twitter, text, blog, social marketing Need robust processes to ensure appropriately experienced/skilled people	MRC/BBRC call PPI innovative methods to increase PPI DNA project Liverpool BRC – how to reach more general population. – website – grant application – meet scientist session – annual basis Liv Royal – PPI incorporated into research process – patients to review patient info sheets – right people to be involved finding cohorts that are genuinely interested – roles need to be specified – need to increase involvement of people from hard to reach groups/diverse ethnic groups How do academics decide what research to do? – self interest? (sometimes but rarely money) (security) esteem – papers – grants Need to link to PCTs (PPI informed)	David Britt Sarah O'Brien Tom Blanchard Julia West Katie Merrick Judith Greensmith Sheila Hillhouse Stuart Eglin Maria Thornton Peter Winstanley	Peter Winstanley Paulo Lisboa Stuart Eglin	Cheng-Hock Toh Social Researcher required

				research interests to wider research agenda Improvement Foundation – engaging comm. And helping them make small improvements Tropical med- patient engagement via plays to comm research outcomes Need to exploit existing links – students -young carers –learning disability – physical disability Tom Blanchard: Drop out from out-patient clinics Could access ethnic minorities via NHS employees (overseas)			
International comparisons of processes and policies re infectious diseases	International comparisons of processes/policie s on infection control	Ian Cook	Powerful social/economic (pharma) forces /barrier effects Powerful environmental/climate factors Infrastructure differences (delivery by part-trained staff) Medical devices and technology need to be appropriate Also transfer within and between countries Barriers due to	WHO contact – interest in technology transfer to developing countries Funding – MRC International networking at first Comparison at micro/macro level and local/international (This may be much broader than infection control) Case studies in:	Paulo Lisboa Peter Diggle Ian Cook Stuart Duff	David Britt Sarah O'Brien	Andres Issakov

			politics/religion/stigma Globalisation – no respecter of national borders	UK, USA, China, India, another European country, Sub-Saharan Africa China- social change, affluence, change from rural to urban Mobile populations – does intervention become diluted or undermined by mobility/globalisation To what extent is health in UK compromised by uncontrolled disease/infection elsewhere? –Routes of infection			
STOPPIT Withdrawing PPI therapy in the emergency medical admission patients	Stop PPI to reduce CDAD Randomise over 65s needing antibiotics to stop PPI (Proton Pump Inhibitor) versus continue	Peter Isaacs	Look at prevalence of PPI in admissions (in Salford and Blackpool) Take stool specimens in all entrants Obtain full medications list	PPI prevalence Restructure and cost proposal	Peter Isaacs Sarah O'Brien John Cheesbrough Eric Bolton	Tom Blanchard, Mark Gabbay Olusola Bolarin	Support from NW RDS
Why do NHS consultants <u>not</u> want to do research	Why do NHS consultants (Medical and non-medical) not want to do research SHA does what? Flexibility and sustainability funding £12 million in year Hearts and minds Need to double	Stephen Gordon	Peter Diggle "Research = clinical trial" fallacy Prof Winstanley not static and getting worse Talib Yaseen SPA will decrease soon Talib Reports for SHA for research money not worth the effort - Too high entry cost Context RLUH not the same as Morecambe Bay No driver "What's in it for	CLRN improving things Research - good teachers - good clinicians = underlying quality Income streams for DGH – CLRN and commercial RLUH – a couple of topics – resource ie FOCUS (including consultant	Stephen Gordon Peter Diggle Peter Winstanley Talib Yaseen Dr D Mandal Stuart Eglin Stuart Duff Sheila		

	the number of people in trials in five years Need quality research ("Excellent") Social sciences research on attitudes KAP Structures and organisation study on effectiveness Horses for courses – need to re-direct to NIHR Trusts should appoint NIHR faculty and QC measurement		me?" will swamp them ? junior doctors – no longer doing projects Expectation - academics } - consultants } NIHR Consultant researchers and consultant research time Stuart Eglin- involved in trials = better patient outcomes. Is there evidence? Patients in trials do better than patients not in trials – evidence? Talib Yaseen – no time in job plan	researchers) Ruthless leadership (QC maintained) Stuart Eglin – who should do the research? Maybe only some trusts should do research? Prof Winstaley Health Service Management ideas paper	Hillhouse Anne-Marie Martindale		
Diagnosis of pneumonia in community and hospital	Collect samples in community and hospital - big obstacle in primary practice. Apply new techniques to improve rate of diagnosis – need to sort out extraction of nucleic acid. Develop new point of care diagnostics – BinaxNOW. GP's can separate viral/bacterial	Stephen Gordon	Clinical diagnosis and management discussion. GP's not using CNRB 65 – masses of patients, especially children need to rule in/out need for antibiotics. *urine, *blood, *service support, *cost. AQ pneumonia – 4 hour antibiotic. Barriers – getting samples, - real-time result, - medico-legal threat. B-lactam and macrolide reflex. GP - no chest x-ray, no tests,	Info transfer back to who/when? (Out of hours service). Should we speak to patient? Should patient expect more information (procalitonin, CRP etc)? Bimolecular methods – can track more bugs, - can also do serotyping. Logistics and relevance of results. Alteration of management. ? linked series of	Stephen Gordon Mark Gabbay John Cheesbrou gh Andy Ustianowsk i Ray Borrow Olusola Bolarin	Sarah O'Brien Eric Bolton	Involve Wyeth in vaccine profile studies.

	throat, but pneumonia difficult.		or bedside test – pneumococcal Ag	studies. UKCRC/CLRN. Adopted network study - Topic network.			
How to treat patients with Health Associated infections ICU – general wards – home – prevent re-infections - MRSA	How to treat patients with Health Associated infections ICU – general wards – home – prevent re-infections - MRSA		Diagnostic method Device (non-invasive method of determining extent of infection – decision to keep in hospital or discharge Swine flu device MRSA	Diagnositc method Tools to help decision making process Antibiotic prescribing in hospitals		Andy Ustianowski Olusola Bolarin Prof Anand	Microbiologist ID specialists Pharmacist Decision makers
Future-proofing: how do we plan infection prevention when we reach 2020	How do we handle elderly infected patients in 2020? Fewer hospital beds by 2020?. More elderly patients in residential and nursing homes by 2020? What needs to be put in place to avoid hospital admission?	Peter Winstanley	Change primary care staffing and responsibilities Reach out from Hubs (which might not be hospital) for IV antibiotics Point of care diagnostics Web based communications	Scenario planning to define research questions Pilot studies	Peter Winstanley Ian Cook Sheila Hillhouse Katie Merrick Subhash Anand Mark Gabbay	Tom Blanchard Andy Ustianowski Olusola Bolarin	
Changing sexual behaviour – RCT – waiting room video versus 1:1 psychological intervention	Primary and secondary prevention in STI RCT: relative efficacy and cost effectiveness between audio visual material and 1:1 intensive intervention	Deb Mandal	Primary research question End points Finding Partners	Meeting soon Link with CDC	Deb Mandal	John Douglas Sarah O'Brien	
Managing partner's		Deb			Deb		

genital wars – role of serial serology (HPV)		Mandal			Mandal		
RCT on non-specific urethritis		Deb Mandal			Deb Mandal		
Treating patients effectively with AP	MRSA screening Prevent HCAIs Get patient home early versus lying on hospital beds	Olusola Bolarin			Olusola Bolarin		

Next Steps:

NHS North West will contact discussion leads to ascertain if any assistance is required. The event summary and contact details will be circulated to participants to facilitate discussions to develop the proposals outlined. The event summary will be posted on NHS North West's R&D Team's website www.research.northwest.nhs.uk to promote the infection catalyst programme and encourage people not already involved but with an interest or experience in infection research to get involved. There will be a follow up event in the New Year to maintain momentum and track progress.