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CITY UNIVERSITY
LONDON

School of Health Sciences

Annual Doctoral Student Conference

Book of proceedings

23rd April 2013

The School of Health Sciences is committed to providing a supportive learning environment for all its MPhil and PhD students



Welcome to the School of Health Sciences inaugural Doctoral Student Conference.

The School is committed to providing a supportive learning environment for all of our MPhil and PhD students. A modern and interdisciplinary approach is central to the School's research ethos. The aims of this School-wide conference are to provide the opportunity for our research students to gain experience and confidence in communicating and promoting their important research work, enable them to meet others engaged in doctoral research and strengthen our doctoral student community.

The breadth of conceptual, methodological, and logistical questions raised, confronted and overcome by our doctoral students is truly impressive. This book of abstracts highlights the rich and challenging array of doctoral research currently being conducted and supported within the School of Health Sciences.

I am confident that much of this research has the potential to be widely disseminated and influential across a range of professional areas and disciplines. It is evident from the quality of the abstracts presented that many of our doctoral students will go on to become research leaders of the future.

Professor Stanton Newman
Dean, School of Health Sciences,
City University London

Overview of the conference

9.00 - 9.30	Coffee and registration - Northampton Suite C, 4th Floor, University Building		
9.30 - 10.00	Welcome - Northampton Suite A Welcome and opening address from Professor Stanton Newman, Dean of the School of Health Sciences		
10.15 - 11.35	Oral session 1A Location: Northampton Suite A	Oral session 1B Location: Room 307B	Oral session 1C Location: Room 307C
11.35 - 12.00	Coffee and poster presentations - Northampton Suite C		
12.00 - 1.00	Oral session 2A Location: Northampton Suite A	Oral session 2B Location: Room 307B	Oral session 2C Location: Room 307C
1.00 - 1.45	Lunch and poster presentations - Northampton Suite C		
1.45 - 2.45	Oral session 3A Location: Northampton Suite A	Oral session 3B Location: Room 307B	Oral session 3C Location: Room 307C
3.00 - 3.30	Closing remarks - Northampton Suite A Closing remarks from Professor Ken Grattan, Dean of the Graduate School, and presentation of poster prize		

Overview of oral presentations

Session 1 - Oral presentations - 10.15 - 11.35

10.15 - 11.35	Oral session 1A Location: Northampton Suite A Chair: Dr Kathryn Waddington	Oral session 1B Location: Room 307B Chair: Dr Ahalya Subramanian	Oral session 1C Location: Room 307C Chair: Prof Chris McCourt
10.15 - 10.35	BENATO, Rosa: Discursive Constructions of Transmasculine Identities and Sexual Orientations	ABDEL-HAY, Ahmed: Early detection of Diabetic Retinopathy in Diabetic patients	OATES, Jennifer: The relationships between personal experience of mental health problems and subjective well being in UK mental health workers?
10.35 - 10.55	ROGERS, Mohamed Kemoh: Narratives of individuals and couples in relationships with one known HIV positive partner (serodiscordant relationships)	ALLISA, Ruba: Vision in subjects with hyperawareness of afterimages and "visual snow"	HARDING, Celia: A randomised controlled study to determine the effectiveness of nonnutritive sucking as a tool for enabling effective transition
10.55 - 11.15	STOCKER, Robert: 'We're strange. We're monogamous': sex and commitment in the narratives of men who have married men (MWM)	CHETTY, Sabah: Structured Illumination for low-cost three dimensional imaging of the human retina	IBRAHIM, Ghada H: Role of the health system on women's utilization of maternal health services in Sudan
11.15 - 11.35	GRUNDY-BOWERS, Matthew: Barebacking and sexual role: An interpretative qualitative analysis of HIV-negative / unknown status men who have bareback sex with men	GILLESPIE-GALLERY, Hanna: Capturing the secrets of the dark - Contrast vision at low light levels in normal aging	McGLOIN, Sarah: The journey of ethical approval and access for data collection within the NHS

Session 2 - Oral presentations - 12.00 - 1.00

12.00 - 1.00	Oral session 2A Location: Northampton Suite A Chair: Dr Jitka Jancova	Oral session 2B Location: Room 307B Chair: Dr Gill Craig	Oral session 2C Location: Room 307C Chair: Dr Julia Jones
12.00 - 12.20	FTEROPOULLI, Theodora: In Good Heart: The Quality of Life of Adult Congenital Heart Disease Patient	CLIFFORD, Gayle: Issues in cross-cultural interviewing in the Jamaican context	ALTAWELI, Roa: Interventions use during the second stage of labour: An exploration of what affects their use in Jeddah, Saudi Arabia

12.20 - 12.40	WICKWAR, Sadie: Predictors of Quality of Life (QoL) in patients with thyroid eye disease (TED) seeking orbital decompression surgery	TARIQ, Shema: 'I just accept it, but in my heart it pains me because as a woman you have to breastfeed your baby.' The impact of infant feeding decisions on African women living with HIV in London	TUFFOUR, Isaac: A Study of the Experiences of Black African Service Users (BASUs) of Mental Health Provision in England: An Interpretative Phenomenological Analysis
12.40 - 1.00	ALHARAZI, Ruba: Understanding registered nurses' and student nurses' positive mentorship experiences in Jeddah (Saudi Arabia) using appreciative inquiry	BULA, Agatha: Exploring experiences with home-based peer support of exclusive breastfeeding in the context of HIV in the rural Malawi	GAFOS, Mitzy: Intravaginal insertion in KwaZulu-Natal: sexual practices and preferences in the context of microbicide gel use

Session 3 - Oral presentations - 1.45 - 2.45

1.45 - 2.45	Oral session 3A Location: Northampton Suite A Chair: Prof Sally Hardy	Oral session 3B Location: Room 307B Chair: Dr Steve Gruppette	Oral session 3C Location: Room 307C Chair: Dr Katerina Hilari
1.45 - 2.05	LEE, Suzanne: Risk perception in women with high risk pregnancies	JIA, Yingxin: Investigation of mechanisms for discomfort glare	IACOVELLI, Roberta: Gendered discourses in Speech and Language Therapy and Nursing: A review of the literature
2.05 - 2.25	ROCCA, Lucia: An ethnographic study of the Barkantine Birth Centre	PATTERSON, Emily: Can glaring light improve vision?	HOCKEY, Hannah: An investigation of skills involved in repeating real and nonwords and sentences
2.25 - 2.45	OWEN, Tom: Promoting quality of life in care homes	SAUNDERS, Luke: Avoiding a blind alley: Examining vision loss in patients with glaucoma during their predicted remaining lifetime	BEKAERT, Sarah: Challenges in choosing research methodologies (as a novice researcher)

Oral presentations

ABDEL-HAY, Ahmed

Early detection of Diabetic Retinopathy in Diabetic patients

It is estimated that 220 million people have Diabetes worldwide (WHO, 2010). The Royal College of Ophthalmologists estimate that 1 in every 25 people suffer from Diabetes in the UK. Most individuals with Diabetes will suffer from some form of retinopathy, although the severity of the retinopathy will vary. In the current clinical practice vascular and structural changes in the retina are used to grade progression in diabetic retinopathy (DR) and this is often taken as an indicator of the severity of vision loss. Changes in visual function may, however, precede detectable structural damage. In this study Red-green (RG) and yellow-blue (YB) thresholds were measured using the Colour Assessment and Diagnosis (CAD) test in patients with DR and related to their clinical grading classification.

Methods: 105 patients diagnosed with diabetes were examined. DR was graded according to ETDRS severity scale as no retinopathy, mild, moderate, severe DR and presence/absence of macular oedema. Colour thresholds were measured using the CAD test (Expert Rev. Ophthalmol. 6:409-420, 2011) together with other patient-specific information: Visual Acuity, duration of diabetes, HbA1c and central subfield (CSF) thickness.

Results: All diabetic patients showed loss of chromatic sensitivity (with mean RG and YB thresholds exceeding six times normal values). The clinical grading of disease progression showed negligible correlation with either RG ($r^2=0.048$) or YB thresholds ($r^2=0.096$). Patients with no DR often exhibited normal visual acuity (6/6), but showed significant loss of colour vision.

Conclusion: These preliminary findings suggest that RG and YB colour thresholds can provide

a sensitive measure of functional change in diabetics that does not relate well to observed vascular and structural changes.

ALHARAZI, Ruba

Understanding registered nurses' and student nurses' positive mentorship experiences in Jeddah (Saudi Arabia) using appreciative inquiry

Clinical experience is a vital part of nursing education as it exposes students to the reality of their future career and helps them to gain practical skills. Although there is considerable research on mentorship in nursing in relation to the UK and other Western countries, a thorough search of the literature regarding the mentorship process in the specific context of Saudi Arabia failed to reveal any studies. The aim of this study emerged from a best evidence literature review on mentorship and based on the findings of the case study completed in the early part of this doctorate to investigate the current practice of mentorship in clinical settings in Jeddah, Saudi Arabia. Findings of the case study showed that neither mentors nor mentees were happy with the current arrangement. The students believed mentorship is not beneficial to them and the nurses resented the time they were asked to devote to the students. Therefore, the aim of this study was to investigate the factors contributing to positive mentorship experiences in nursing in Jeddah, Saudi Arabia by exploring the mentors' (registered nurses) and mentees' (student nurses) positive experiences in relation to mentorship. The design of this study is a qualitative study conducted through an appreciative inquiry (AI) theoretical perspective. The study was conducted in three different settings (one government hospital with its collaborative government college and one private college) in Jeddah, Saudi Arabia, where mentoring is practised. Data were collected through semi-structured focus groups (total of six focus groups) with mentees ($n=3$) and mentors

($n=3$). Main themes emerged from the data analysis are: communication, involvement, encouragement, reciprocity, students' sense of fear, the role of the mentor (elements/ characteristics of the role, preparation for the role and feedback), process and resources (time availability, collaboration between the college and the hospital).

ALLISA, Ruba

Vision in subjects with hyperawareness of afterimages and "visual snow"

The purpose of this study was to examine the extent to which the processing of different stimulus attributes remains normal in "visual snow" (VS) patients. Six VS patients and nine control subjects were examined. Advanced vision tests were used to assess visual acuity (VA), colour sensitivity, chromatic afterimage strength and duration and pupil response amplitudes and latencies to chromatic stimuli. Preliminary results show that the VS patients exhibited normal VA, colour sensitivity and chromatic afterimage strength. Both controls and three of the VS patients exhibited pupil constrictions to the onset of the coloured stimulus, followed by recovery during the stimulus and a further constriction at stimulus offset. The pupil responses in three of the VS patients lacked the rapid recovery phase following the initial constriction to stimulus onset. The absence of pupil recovery suggests the presence of a more sustained retinal afferent signal that drives the pupil response and this may be linked to differences in retinal processing of visual signals that cause the perception of visual snow.

ALTAWELI, Roa

Interventions use during the second stage of labour: An exploration of what affects their use in Jeddah, Saudi Arabia

The increase in medical intervention has had a significant influence over the last century in western and developed countries, and such practices continue to increase despite efforts to encourage normal childbirth. The aim of this

project is to explore the use of interventions during the second stage of labour among healthcare professionals in Jeddah, Saudi Arabia and determine what factors may be influencing their use. It builds on the findings of my Master's dissertation, which identified a high rate of routine interventions. To fulfil this aim, the research includes data from an exploratory qualitative study, conducted using an ethnographic approach. Data collection methods included participant observations of 19 labours and births (11 in HA and 8 in HB) and semi-structured interviews with 29 healthcare professionals (16 in HA and 13 in HB) comprising obstetricians [$n=10$], midwives [$n=12$], nurses [$n=6$] and nurse-midwife [$n=1$] from two government hospitals in Jeddah, Saudi Arabia. In addition, the hospital labour and delivery ward policies and guidelines from those hospitals were also collected. Data were collected between October 2011 and September 2012 in Jeddah, after seeking ethical approval from City University London and from each of the hospitals involved in the study. All participant observations, interviews, field diary, and hospital documentation was recorded using a word processing package (Word 2010) and then transferred into qualitative data analysis software (QDAS) (Atlas.ti 7), which was used for the data analysis. My first impressions of these data are that there are many interventions used during labour and births, which are influenced by many factors mentioned by the healthcare professionals during the interviews or observed during birth. These factors are likely, however, to cluster into a smaller number of broad themes. One of the major themes that I am currently analysing is the routine use of the Electronic Foetal monitoring (EFM).

BEKAERT, Sarah

Challenges in choosing research methodologies (as a novice researcher)

'Choosing' your methodology as a novice researcher from the history of research to date is a mammoth task and challenging. What is the best methodology for how I wish to explore pregnancy choices in teenage women? In my methodology journey I found five main

challenges. Firstly, knowing yourself: what are my motivations to doing this piece of research and where are these motivations situated within a research paradigm? I found I was coming from a Foucauldian feminist perspective, wishing to give women voice and explore possible power relations in decision making. Secondly, exploring my ontological and epistemological ideologies. I feel that knowledge is cocreated and that there are multiple truths - leading me to a post-positivist, social constructionist, hermeneutic approach. Thirdly finding a framework that reflects these paradigmatic approaches; one which allows for exploration of power in relationships and doesn't reduce the participants' voices. It was easier to identify what my research was not (making me a critical theorist). A further challenge was settling with 'story telling' or a narrative approach as it is a broad tool. I needed to accept that a narrative approach could be simple and how I would examine the women's 'stories' to reflect my paradigms was my focus: using the Listening Guide (Gilligan et al 1982) and the Voice Centred Relational Method (Mauthner and Doucet 2003) - listening for plot, reader response, the voice of 'I', resistance and relationships. As a novice researcher, setting down one's methodology is a race through the history of philosophy, a crash course in learning to articulate your position and aim in a credible language and framework. Being comfortable with the fact that your own work may sit in a less established area of research has been my main challenge.

BENATO, Rosa

Discursive Constructions of Transmasculine Identities and Sexual Orientations

Transgendered people trouble the hegemonies of sexed bodies and the gender binary but trans identities are also embedded in discourses of power which challenge as well reinforce normative constructions of gender. Historically, trans narratives have been described and analysed through medical or psychological discourses which have often essentialised and homogenised trans peoples' lived experiences. This thesis concerns issues of identity, embodiment and sexual practice in the UK

transmasculine community. Discourse analytic methodological approaches have been used to analyse 22 in-depth interviews with transmen. Analyses of how transmen discursively construct their gender identities and sexual orientations will be presented and queer and feminist theory will be utilised to demonstrate how these constructions both destabilise and reinforce the gender binary, challenge understandings of what it means to be a man and trouble existing feminist and queer theory.

BULA, Agatha

Exploring experiences with home-based peer support of exclusive breastfeeding in the context of HIV in the rural Malawi

Exclusive breastfeeding (EBF) for 6 months is ranked as the most effective way of feeding babies in Sub-Saharan Africa where HIV positive women are poor and infant mortality is high. However, mixed feeding is common, increasing risks of infant death due to malnutrition, diarrhoeal, HIV, and other infectious diseases. Community-based Interventions has proved effective in promoting EBF in poor settings. Results of MaiMwana intervention in Malawi are underway. However, there was little attention on the needs of HIV positive women during the design and conduct of these interventions. The aim of this study was to explore the importance and experiences with implementing the intervention in Mchinji, Malawi in the context of HIV.

Method: I purposively selected and conducted qualitative in-depth interviews with 39 key informants in Mchinji, Malawi between January to August 2012 using a pre-designed interview guide. Responses were analyzed by Framework analysis. The study was approved by the Malawi National Health Sciences and City University London research ethics committees.

Results: HIV positive and negative women were supportive of the intervention for continuity of infant feeding counselling as volunteers spend more time with them. HIV positive women appreciated the visit because they had to tell their story to someone. However, some

did not disclose their status due to fear of stigma and abandonment by family members present during the visit, making it difficult for counsellors to effectively provide counselling on EBF. Service users also find the intervention as not being cost-effective due to lack of time and money to travel to the hospital for other health services.

Conclusion: It is important for projects to consider the needs of HIV positive women when designing community-based interventions to reduce HIV transmission and deaths among infants. Integration of services is desired considering the levels of poverty and distance to health facilities.

CHETTY, Sabah

Structured Illumination for low-cost three-dimensional imaging of the human retina

Screening for retinal diseases is important in order to identify issues at an early stage. There are many existing technologies for imaging the retina, ranging from the cheap and simple, yielding 2D images, to more sophisticated but expensive instruments producing 3D images. This research aims to apply an established microscopy technique in a novel way in order to create a low-cost, simple alternative which is capable of giving 3D images. The technique involves imaging the eye using structured light for illumination, instead of even illumination as in conventional imaging. A set of images collected using this atypical illumination are fed into a algorithm in order to produce a higher resolution 3D image than possible with an equivalent conventional system. There are many parameters of the design which can be explored using simulation and this forms a core part of the research. The first laboratory-based prototype system will produce evidence for proof of concept, whilst the next prototype will be used to collect retinal images from participants.

CLIFFORD, Gayle

Issues in cross-cultural interviewing in the Jamaican context

Adult HIV prevalence in the Caribbean is over 1%, higher than in any other world region outside of sub-Saharan Africa. The proportion of women in the Caribbean living with HIV (53%) is higher than that of men (47%). Women are often caregivers and breadwinners and bear responsibility for the health of the family; the impact of maternal HIV infection can be enormous, including loss of earnings and a reduced ability to care for family members. Jamaica has successfully reduced the incidence of mother to child transmission of HIV from 25% in 2004 to less than 5% in 2009, and few children are now born HIV positive. Disclosure of HIV status to seronegative children is identified by many HIV positive mothers as important and a significant cause of anxiety, impacting on their physical and mental health. There is limited research on the benefits and barriers of disclosure to children in low/middle-income countries. However, research in high income countries suggests considerable benefits to mothers including: improved communication/closer relationship with children, reduced anxiety, increased ability to plan for the future and care for own physical and mental health, and increased medication adherence/clinic attendance. My PhD aims to use IPA (Interpretative Phenomenological Analysis) to explore the lived experiences of Jamaican mothers, focusing on their views and experiences of disclosure to their seronegative children. In 2012/2013, I conducted interviews with 15 HIV positive mothers and 10 professionals working in the HIV field in Jamaica. This presentation will report on work to date and will focus on some of the challenges and tensions of conducting research with poor urban women in Kingston, Jamaica. These include: gaining access, working with gatekeepers, establishing rapport, and linguistic/transcription issues. I will use researcher reflexivity as a tool to better understand the conduct of research with minoritised women in Jamaica.

FTEROPOULLI, Theodora

In Good Heart: The Quality of Life of Adult Congenital Heart Disease Patients

Background and aim: Previous research provides mixed findings about the quality of life (QoL) of adult congenital heart disease (ACHD) patients and the differences in terms of disease severity. Methodological limitations hinder the ability to draw conclusions on the subject. The present study sought to explore the impact of disease severity on QoL by utilising four pre-defined severity groups of ACHD patients and the associations between medical, operative, and psychosocial factors and QoL.

Methods: A cross-sectional comparative study was conducted. Participants included 314 ACHD patients, aged 18-76, recruited from the Heart Hospital in London. Self-reported questionnaires assessing QoL, mood, social functioning, and other psychosocial measures were administered. Demographic and medical information was obtained from the hospital records. A series of Analyses of Variance (ANOVA) were performed to explore differences in QoL between the four severity groups. Correlations were performed to explore potential associations between the variables.

Results: Preliminary results indicate reduced QoL in the most severe group compared to the other groups. Certain medical, operative and psychosocial factors strongly associated with QoL.

Discussion: Disease severity appears to have an impact on the QoL of ACHD patients. A number of medical, operative, and psychosocial factors were found to be associated with QoL. The present preliminary analysis lays important foundations for further group comparisons and regression modelling between the factors after the completion of a longitudinal assessment.

GAFOS, Mitzy

Intravaginal insertion in KwaZulu-Natal: sexual practices and preferences in the context of microbicide gel use

Microbicides are experimental products being evaluated to find out if they reduce the risk of HIV infection for women during sexual intercourse. All HIV prevention microbicides tested to date have been vaginally applied lubricant-based gels. The acceptability of microbicides among women who engage in intravaginal insertion practices to achieve 'dry' sex has been questioned. In this paper, I examine whether the use of intravaginal insertions could be in conflict with the introduction of vaginal microbicide gels. The Africa Centre was part of the Microbicides Development Programme evaluating PRO2000/5 microbicide gel. We conducted in-depth-interviews and focus-group discussions with women enrolled in the trial as well as women and men from the community. The analysis focused on people's knowledge of intravaginal insertion in the community and trial participants' experience of using trial gels. Intravaginal use of a variety of products was widely acknowledged. I found that the experience of using trial gels – which made sex 'hot', 'tight' and 'dry' – matched the desired outcomes of intravaginal insertion. I found that vaginal 'dryness' described the removal of excessive amounts of unusual discharge, rather than the removal of normal vaginal secretions and that intravaginal insertion is not exclusively associated with a desire for 'dry' sex. A major difference between intravaginal insertion and gel use was the focus on female sexual pleasure in relation to the gel. These findings do not negate the gender imbalances of sexual encounters in this population, but they do present an image of female sexual desire and sexual expectation that has often been absent in discussions about intravaginal insertion. The findings suggest that vaginal microbicide gels may be more acceptable in communities where intravaginal insertion is practiced than was previously thought, and that the local knowledge, language and understanding of using products vaginally may actually facilitate the introduction of microbicide gels.

GILLESPIE-GALLERY, Hanna

Capturing the secrets of the dark - Contrast vision at low light levels in normal aging

Standard vision tests often involve brightly lit, black letters on a white background, providing optimal viewing conditions. However in the real world, most conditions are far from optimal and this method of testing vision may be insensitive to changes in vision caused by normal aging and / or early stage disease. We measured declines in contrast vision from bright to dark light levels in the aging retina, and how this differs in subjects with ocular disease. Binocular summation, the enhancement of performance by using two eyes rather than one, was also determined to establish how it changes with light level and age.

Methods: Contrast thresholds were measured at five light levels, from 0.12 to 34 cd/m², in 95 participants, aged 18-85 years using the functional contrast sensitivity test. Stimuli were presented at the central fovea and the parafovea, at 0° and ±40° respectively, for both binocular and monocular viewing. In addition to clinical examination, a number of filters excluded abnormal eyes and corrections were applied to adjust for age-related optical factors. A Health of the Retina Index, a quantity that captures the subject's thresholds from dark to bright light levels, was calculated to characterise performance change with age.

Results: Contrast thresholds showed a steeper decline with age, and were more correlated with age at the parafovea ($r^2 = -0.34$) than the fovea ($r^2 = -0.19$). 23% of 'clinically normal' participants had performance outside the normal limits, as did 83% of participants with ocular disease. Binocular summation of contrast signals declined with age. Participants with ocular disease had lower levels of binocular summation.

Conclusion: Age-related, functional vision loss is greater at the parafovea compared to the fovea, and binocular summation declines linearly with age. People with ocular disease not only have poorer contrast vision, but also have worse binocular summation.

GRUNDY-BOWERS, Matthew

Barebacking and sexual role: An interpretative qualitative analysis of HIV-negative / unknown status men who have bareback sex with men

Gay men remain disproportionately affected by HIV and sexual infections, acquired predominately through condomless anal sex, also known as barebacking. Using Interpretative Phenomenological Analysis, this research aims to generate a better understanding of the influences that affect HIV-negative and unknown status gay men and their decisions to engage in bareback sex, specifically exploring the relationship between sexual role and barebacking behaviour. For anal sex to occur between two men, one is required to be anally receptive the other insertive. Commonly, the receptive partner is known as a bottom, the insertive partner a top and a man who engages in both 'versatile'. These sexual roles are also adopted by some gay men as an identity, however because anal sex is invariably compared in relation to heterosexuality, these roles and identities are often social constructed and dichotomised along heteronormative gender stereotypes. It has been argued that a better understanding is required to provide more effective HIV prevention, yet despite there being much research on the topic of gay men and barebacking, little consideration has been given to the influence of sexual role on barebacking behaviours. Men who have sex with men (MSM) in London were targeted via gay press, email broadcasts and leafleting, to take part in depth qualitative interviews. The interviews were digitally recorded and transcribed verbatim and the data were managed using NVivo9™. A total of 13 gay were interviewed, the average age of participants was 39 years (range 29-55) and all had engaged in bareback sex between 0-90 days prior to the interview. Three superordinate themes were identified from the analysis of the men's narratives: 1) setting the scene – how men located their barebacking narratives; 2) negotiating bareback sex and minimising risk; and 3) the meanings and significance of bareback sex. An overview of which will be presented.

HARDING, Celia

A randomised controlled study to determine the effectiveness of non-nutritive sucking as a tool for enabling effective transition to full oral feeding

Seventy two premature infants were enrolled onto a randomised controlled study to determine the effectiveness of non-nutritive sucking as a tool for enabling effective transition to full oral feeding. Sixty eight infants completed the study. Parents were trained to carry out the intervention which included coaching to recognise infant states and involved supporting the infant to develop oral readiness signs.

Patients and methods: Infants who participated were born between 26 -42 weeks gestation and were recruited from a Level 3 inner city neonatal unit. Infants with neuro-disability were also included. Infants with no significant difficulties were randomly assigned to one of three groups; Group 1, non-nutritive sucking pre-tube feeding; Group 2, non-nutritive sucking on onset of tube feeding and Group 3, Control. Group 4 included infants with neuro-disability who were randomly assigned to each of the conditions.

Results: The authors found no significant differences between the groups receiving non-nutritive sucking and the Control group. Group 1, NNS on onset of tube feeding, $n = 19$; Group 2, NNS pre-NGT feed, $n = 20$; Group 3, Control, $n = 20$, $X^2 (2, n = 59) = 4.33, p = .115$. Number of days for these three groups ranged from 8 -50 days with additional outcomes as follows; Group 1; NNS pre NGT = 19.7 days average (range 8 - 50); mode = 11 days ; Group 2 ; NNS onset NGT = 16.5 days average (range 9 - 48); mode = 14 days; Group 3; Control = 23.9 days average (range 9 -50); mode = 25 days. A one-way ANOVA between all four groups evaluated number of days in hospital. There was a significant difference between the groups, most notably, between the Control group in comparison to the other three groups, Brown-Forsythe $F (3, 64) = 2.5, p = .06$. Other outcomes included sucking skills (statistically significant changes in normal, disorganized and dysfunctional sucking patterns) and early language evaluation.

Conclusions: Non-nutritive sucking did not impact significantly on the transition to full oral

feeding. There was a significant difference in the number of days in hospital between the Control group and the other three groups; it is suggested that this could be due to increased parent confidence as well as parental skill in identifying oral readiness signs and other infant non-verbal cues, thus leading to effective management.

HOCKEY, Hannah

An investigation of skills involved in repeating real and non-words and sentences

Children with spoken language disorders find it difficult to repeat made-up words ('non-words'). Children with these difficulties also find sentences hard to repeat; a task which is included in several paediatric standardised language assessments. However it is unclear which language processing skills are measured by repetition tasks. If we were able to identify these, it would enable clinicians to plan targeted intervention for children who present with language disorders. Building on a study published by Chiat and Roy in 2008, this longitudinal investigation is looking into three types of skill hypothesised to have independent contributions to non-word repetition accuracy: 1) the child's stored word knowledge, 2) the child's phonological short-term memory, 3) the child's phonological and articulation skills. It is also investigating what these factors tell us about children's ability to repeat sentences 12 months later. Participants in the study are children aged 3 - 3 1/2 years old (34 boys, 21 girls). They all completed a word and non-word repetition task, a picture naming task, picture-label recognition task and a span task. They were also assessed using a standardised language test and using two standardised non-verbal tests. The children are presently being revisited and they are completing the phase one tasks again to see how their skills have evolved in these areas over time. They are also completing a sentence repetition task and a task looking at their grammatical skills, so that we can determine the extent to which the early developing language processing skills predict later ability. The presentation will report on the rationale, methods and results from phase one of the longitudinal study. Using t-tests and correlation analysis, results so far support the predictions. Phase two hypotheses will also be

discussed, though no results will be presented for this phase, as data-collection is currently in progress.

IACOVELLI, Roberta

Gendered discourses in Speech and Language Therapy and Nursing: A review of the literature

This project investigates gender assumptions or 'gendered discourses' in two health professions: speech and language therapy and nursing. These professions are both largely female dominated, with males accounting for a low percentage of the workforce: only 1-2% of speech and language therapists (RCSLT Bulletin, 2007) and only 10% of nurses (NHS, 2008) are males. There is a rising interest in addressing the gender disparity in such professions, and this project will contribute to and expand the current discussion on the topic. The aims of the research can be summarised as follows: To understand how gender is relevant for people's decision to enter nursing and speech and language therapy, and also to leave; To understand how gender/gender discourses influence everyday practice in these professions; To underline the similarities and differences between speech and language therapy and nursing as sex-segregated professions. To address these questions, this research project undertakes a qualitative analysis of interviews and focus groups with practising speech and language therapists and nurses, as well as the analysis of written documents around speech and language therapy and nursing, such as career leaflets and contracts. The results of the research will be published in different types of publications and presented at conferences, such as the 8th International Gender and Language Association Conference (2014). This paper aims to present a review of the literature on the topic, and the key areas covered are: What are gendered discourses; What are gendered professions; Speech and language Therapy as a gendered profession; Nursing as a gendered profession.

IBRAHIM, Ghada H

Role of the health system on women's utilization of maternal health services in Sudan

This study aims to analyze the reproductive health system in order to understand better its drawbacks particularly the poor performance of the health facilities and the perinatal services provided there, health providers and their capabilities and satisfaction whether who are working on the facilities or in the communities. Moreover, this study identifies the cultural and women's factors that affect their decision and constitute barriers that preventing needy women to use perinatal services; thus, expose them to risk of maternal complications or may be exacerbated to morbidity.

Data: Both qualitative and quantitative data used in the study. For the quantitative data, three data sets of nationally representative surveys have been used which are Sudan Household Health Survey (SHHS) in 2006 and 2010 as well as health facility mapping survey in 2008. Two questionnaires were applied in both SHHS2006 and SHHS2010 surveys. The household questionnaire consists of two parts: a household schedule which gathers data related to basic demographic information from all individuals included in the household whereas the second part of the household questionnaire obtains information on characteristics of the physical and social environment of the household. Woman's questionnaire addressed twelve sections related to women and child health, contraception, social network and social services aspects. Health facility mapping survey (HFMS) was applied with both private and public health facilities that providing primary and secondary health services. The HFMS questionnaire collects information regarding the health providers working there, services provided, description of the infrastructure of the health facility. Samples of sizes 6173 women and 6065 women aged 15 to 49 years, ever married in 2006 and 2010 respectively as well as 4745 health facility are considered in the analysis. For the qualitative data, 6 FGDs with women have been conducted and 3 FGDs with village midwives as well as 17 in-depth interviews with decision makers and other stakeholders and

14 health providers in 5 primary health centres were considered in an ethnographic survey that has been conducted between May and July in 2012. The survey investigates the obstacles related to reproductive health system in Sudan, quality of health services, obstacles facing health providers and affect their performance or career development. Also, the survey investigate the challenges 4 that facing women who used the perinatal health services in the last pregnancies and to what extent there previous experiences well affect the utilization of perinatal services in the future as well as identifying the reasons of not use maternal services among nonusers.

Methods: This study developed a new conceptual framework that has been developed based on the behavioral model of the contextual and individual influences on health services' use which was developed by Anderson. The framework contains three interrelated components which are environmental and human resources for health and women's characteristics; they represent the input of the model whereas maternal health services utilization constitutes the process of care. Also maternal health output, maternal health outcome, and health impact are the three other components that are included in the model. Each component contains a set of indicators that have been calculated based on the three data sets and the qualitative data.

Significance: This study fills a current gap in research on women's behaviour in seeking perinatal health services in Sudan. It provide insights on main factors that determine women's decision of family planning use and inform decision makers with some guidelines to reform the reproductive health system with respect to health providers, quality of health services, health facilities. Furthermore, some policy implications of the findings and suggested solution to improving the reproductive health system under limited resources are discussed.

JIA, Yingxin

Investigation of mechanisms for discomfort glare

The presence of a bright light source in the visual field, particularly when viewed against a dark

background, can generate visual discomfort which is often described as 'discomfort glare'. The mechanism for discomfort glare remain poorly understood, even after 50 years of multidisciplinary research [Mainster, M. A. et al., 2012, American Journal of Ophthalmology, 153(4):587-593]. This study examines the effect of source size, background luminance and eccentricity on discomfort glare thresholds. Throughout the study the pupil size of each observer was measured in real time, allowing the calculation of retinal illuminance, a quantity proportional to the amount of light per unit area of the retina. Discomfort glare thresholds were estimated with a staircase procedure: the retinal illuminance was increased or decreased depending on whether the participant indicated the absence or presence of discomfort glare, respectively. The subjects were required to view a source of light presented against a simulated residential street background in the form of uniform flashes of light of varying intensity. Five glare source sizes (i.e. 0.28, 0.62, 1.04, 1.33 and 1.73 degrees in diameters), three background luminances (0.25, 2.5 and 25 cd/m²) and three eccentricities (3, 6 and 12 degrees) were investigated. It was found that at the threshold for discomfort glare, the retinal illuminance is approximately constant and independent of source size, background luminance and eccentricity. This indicates that what is important for discomfort glare is the local concentration of light impinging on a given region of the retina. A model based on saturation of photoreceptor signals in the retina is put forward to account for the observed experimental findings.

LEE, Suzanne

Risk perception in women with high risk pregnancies

Risk perception in women with high risk pregnancies affects their decisions about perinatal care and is of interest to anyone involved in the care of pregnant women. Existing research shows pregnant women do not perceive risk in the same way as health professionals. This presentation describes a metasynthesis of qualitative studies of risk perception in women with high risk pregnancies.

Methods: A systematic search of eight electronic databases was conducted. Additional papers were obtained through searching references of identified articles. Seven studies were identified that reported qualitative research into risk perception in relation to high risk pregnancy. A metasynthesis was developed to describe and interpret the studies.

Results: The synthesis resulted in the identification of six themes: determinants of risk perception; not seeing it the way others do; normality versus risk; if the baby is ok, I'm ok; managing risk; the lesser of two evils.

Conclusions: This metasynthesis suggests women at high risk during pregnancy use multiple sources of information to determine their risk status. It shows women are aware of the risks posed by their pregnancies but do not perceive risk in the same way as healthcare professionals. They will take steps to ensure the health of themselves and their babies but these may not include following all medical recommendations. Professionals working with women with high risk pregnancies should be aware of this to ensure communication is open, respectful and realistic.

McGLOIN, Sarah

The journey of ethical approval and access for data collection within the NHS

The journey to gain ethical approval and access for data collection is often a long a tortuous path. As a PhD candidate I have travelled some distance along this path and my travels on this journey continue and I feel it important and helpful to share my experiences for those about to embark on a similar path. The presentation will focus upon my experiences of the key stages of gaining ethical approval for a nursing study to be carried out within two National Health Service Trusts (NHS). My study involves face to face interviews with ex-intensive care unit patients to examine their perception of the nursing contribution to intensive care. These stages focus upon the accurate completion and submission of the Integrated Research Application System (IRAS) application form and the development

of a clear and coherent protocol for the study. The role of other key documentation such as the Site Specific Information (SSI) form will be explored. The process of simply booking the local National Research Ethics Service (NRES) ethics committee meeting will be discussed as will the experience of attending such an event as a novice researcher. The role of the research passport will be examined and the importance of the letter of access will be considered. The need for research governance training and what this involves is also explored. Finally, the complexities of liaising with the research and development at each individual NHS Trust will also be examined. The presentation will be a frank and candid reflection of the journey I have undertaken. Through this I aim to help those about to commence a similar journey and the trials and tribulations they may also have to face on the way.

OATES, Jennifer

The relationships between personal experience of mental health problems and subjective well being in UK mental health workers?

Recent surveys of NHS staff have identified that healthcare workers experience high levels of mental ill health and distress, and that they access and require health services differently to the general population. There has also been in recent years a policy push to employ people with personal experience of mental illness as mental health workers, based on an appreciation of their 'expertise by experience.' Most existing studies of mental health workers' health and well being have focused on stress, and burnout but have not taken into account the positive as well as negative effects of their personal experiences of mental illness on their work. There is a need for research evidence to identify how mental health workers may improve and maintain their mental health. One way of addressing this is through an exploratory study looking at how staff with mental health histories maintain their well being and resilience.

This presentation will discuss initial results from a mixed methods study exploring how mental health nurses' personal mental health history relates to their well being.

OWEN, Tom

Promoting quality of life in care homes

Older people have identified the importance of having control over how they lead their lives and the care that they receive. This is also echoed in government policy across all four nations of the UK. However, there remains a lack of real understanding of what this looks like in care homes and how to make it happen. Through working in partnership with care homes across the UK and adopting an analysis process called Immersion and Crystallization (Borkan, 1999), the research to date has gathered insights into good practice in supporting ‘voice, choice and control’ for older people; the vital role of leadership in helping to creating a culture that enables older people to experience ‘voice, choice and control’; and the obstacles to supporting voice, choice and control and how stronger partnership-working between care homes, the community and the wider health and social care system can make a difference.

PATTERSON, Emily

Can glaring light improve vision?

Purpose: Light scattered within the eye reduces object contrast, leading to poorer quality images in the presence of bright light sources. An example of this is the visual loss experienced in the glare of oncoming car headlights. However, the addition of veiling light due to light scattering over the retina can improve the sensitivity of the cells within the retina. It is poorly understood how these two factors — a reduction in target contrast and a possible increase in retinal sensitivity — interact to affect overall sensitivity to contrast. We investigate how contrast is affected by glare source intensity, surround luminance and test target location on the retina. The aim is to provide a new and more accurate way of modeling changes in contrast sensitivity in the presence of glare.

Methods: 40 subjects with normal vision were investigated. A psychophysical flicker-cancellation test (Ophthalmic & Physiological Optics, 17, 171, 1997) was used to measure the amount and angular distribution of scattered

light in the eye. Contrast thresholds were measured using the Contrast Acuity Assessment test (ASEM, 74, 551-559, 2003). Three glare source intensities (i.e.o, 1.35 and 19.21 lm/m2 in the pupil plane), three eccentricities (50, 100 and 150), and three background luminances (1, 2.6 and 26 cd/m2) were investigated.

Results: As expected, sensitivity to contrast decreases in the presence of high intensity glare. However, in general, predictions of contrast based on scattered light overestimate the degradation of visual performance. By combining scatter-based predictions with a model of retinal sensitivity, the accuracy of predictions was improved.

Conclusion: In the presence of glare, observers tend to perform better than traditional methods of calculating image contrast would predict. The current model provides a more accurate way of estimating changes in an observer’s sensitivity to contrast in the presence of bright light sources.

ROCCA, Lucia

An ethnographic study of the Barkantine Birth Centre

The Barkantine Birth Centre, opened in 2008, is a well-established urban freestanding birth centre with a target of 600 births/year. It is consistently achieving about 82% of spontaneous vaginal births and a similar percentage of normal births, keeping caesarean sections at 9% and instrumental birth at about 8%. High rates of normal birth within freestanding have also been reported nationally by the Birthplace Study. However, to date there is a knowledge gap regarding key elements in midwifery practice, environment, and organisation of care, which may potentially affect rates of normal birth. This ethnographic study aims to contribute to the theory-generation in the arena of ‘how to keep birth normal’. This is the first ethnographic study of an inner city freestanding midwifery-led unit in the UK serving a multi-ethnic population. This is a post-critical ethnographic study carried out by an insider researcher, who has carried out fieldwork at the Barkantine from April 2011 to June 2012. Participants included birth centre service users and staff as well as stakeholders at

the referral hospital. A total of 91 participants were recruited. The participants reflected the local multi-ethnic population. The fieldwork included participant observation, in-depth interviews, local operational procedures, guidelines and photographs. Audio recordings were transcribed and anonymised in order to maintain confidentiality. Analysis is currently being carried out using a constructionist Grounded Theory approach in order to develop a mid-range theory. Atlas.ti computer software is being used in order to manage the large amount of data but some manual analysis is still included. Constant comparative methods are being used throughout the analytic process. Two service users have helped at every stage of this project. The data is currently being analysed and emerging findings will be presented at the conference.

ROGERS, Mohamed Kemoh

Narratives of individuals and couples in relationships with one known HIV positive partner (serodiscordant relationships)

Introduction: Knowledge about how the Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) affect individuals and couples is changing. In order to understand the complexities of relationships where one person is known to be HIV positive, new theoretical constructions are needed. Within this qualitative PhD study, Strauss and Corbin’s (1990, 1998) grounded theory methodology was used to construct a substantive theory of serodiscordant relationships. Symbolic interactionism provided a theoretical framework to understand these relationships from the perspectives of “actors” for whom serodiscordance has symbolic meaning. This proposed oral presentation explores the interpersonal and social experiences of both the HIV positive and negative partners in serodiscordant relationships.

Method: Through direct involvement in data generation, transcribing, analysis and theory construction, the researcher repeatedly interacted with and immersed in the data. Ethical approval was granted by the South East

London Research Ethics Committee (REC) 1. Participants were purposively recruited from three NHS Genitourinary Medicines (GUM) clinics in North East London. Theoretical sampling focused on seeking to clarify concepts that emerged from data. 30 narratives were generated from 22 individuals and couples in current serodiscordant relationships. A qualitative data analysis software ‘Maxqda’ facilitated data management and analysis.

Findings: Analyses is ongoing but emerging themes include: (1) Experiencing challenges (2) Describing emotional impact of serodiscordance (3) Mistrusting own experience (4) Difficulties with disclosure within and outside of relationships.

Discussion: Albeit in different guise, HIV positive individuals and couples are confronted with psychosocial experiences and HIV is still a stigmatising disease with no cure. In order to understand and explain “how individuals and couples experience HIV serodiscordance”, it is essential to discover the meanings from those who interpret the relationships through symbolic interactions and interpretations.

Practical relevance: This research provides evidence that informs policy and develops interdisciplinary practice on HIV serodiscordant relationships.

SAUNDERS, Luke

Avoiding a blind alley: Examining vision loss in patients with glaucoma during their predicted remaining lifetime

Glaucoma is a chronic eye-disease that disrupts what can be seen in the visual field (VF) and can lead to irreversible blindness. Patients with glaucoma require continual monitoring with automated VF examinations, and are estimated to account for more than one million NHS clinic visits a year in the UK. One overall measurement of VF loss is represented by the mean deviation (MD). This study aimed to estimate the proportion of glaucoma patients in clinical care in the UK that are at risk of progressing to MD levels that correspond with visual disability in their lifetime.

Methods: Over 400,000 VFs from centres in London, Cheltenham and Portsmouth were retrospectively analysed. Deterioration rates for the VFs from the eyes of 3790 patients were calculated through regressing MD damage over time and individual patient residual life expectancies were used to extrapolate the level of MD damage at death. These MDs were compared against levels corresponding to visual impairment and statutory blindness. Novel colour coded motion plots written in R were used to explore MD loss simultaneously in both eyes over time against residual life expectancy.

Results: Of those patients with a series in each eye, 5.2% (95% CI: 4.5 – 6.0) were expected to progress to statutory blindness and a further 10.4% (95% CI: 9.4 – 11.4) were expected to reach visual impairment in their lifetime. 90.9% (CI: 85.7 – 94.3) of patients who progressed to statutory blindness had damage of -6dB in at least one eye at presentation.

Discussion: Only a small minority of glaucoma patients in clinical care, typically with worse damage at diagnosis, are at risk of progressing to visual impairment or statutory blindness. Efficient case finding methods are important in ensuring that patients do not suffer from visual disability in their lifetime.

STOCKER, Robert

'We're strange. We're monogamous': sex and commitment in the narratives of men who have married men (MWMM)

The sexual behaviour and relationship arrangements of male couples have been well documented in the sociological and health sciences literature. However, few studies have explored sex and commitment among men who have 'married' men (MWMM) in a legally sanctioned form (e.g. civil partnership). MWMM confront two sets of discordant discourses and norms. On one hand they are socialised, to varying degrees, in a gay subculture said to promote casual sex over monogamous relationships. Gay men are also part of mainstream culture where the meanings and

practices of marriage, although fluid, operate at discursive and normative levels to endorse stable, permanent and monogamous relationships. Drawing on personal narratives elicited through qualitative interviews with 28 men in civil partnerships in the UK this paper explores how MWMM reflexively engage with and reconcile these discordant discourses and norms into meaningful arrangements in their own lives. The majority reported monogamous relationships. Monogamy was more common among younger men, men in relationships of shorter duration, and men with minimal experience or engagement with gay sexual culture. Nine men reported arrangements that allowed for a degree of sexual non-exclusivity while also protecting their relationship, and partner, from emotional harm and sexual infection. Consistent with previous research this study finds that monogamy is not taken for granted but reflexively negotiated among male couples. Furthermore, the narratives of MWMM provide a more nuanced picture of assimilation and resistance than is presented in abstract academic and public debates which tend to suggest that same-sex couples who 'marry' uniformly acquiesce to emerging (homo) normativities.

TARIQ, Shema

'I just accept it, but in my heart it pains me because as a woman you have to breastfeed your baby.' The impact of infant feeding decisions on African women living with HIV in London

UK guidelines advise the avoidance of breastfeeding in HIV-positive women. Although this minimises the risk of mother-to-child transmission of HIV, the consequences of formula feeding (FF) on the mother are often overlooked. This may be important given that 75% of pregnant HIV-positive women in the UK are from African countries, where breastfeeding is socio-culturally normative.

Methods: We conducted semi-structured interviews with 23 pregnant African women diagnosed with HIV recruited from 3 NHS clinics. We also interviewed healthcare professionals (3) and charity professionals (2). All interviews were transcribed verbatim and analysed in NVivo 9.0

using grounded theory.

Results: Women spoke of the cultural importance of breastfeeding in African communities, describing great social pressure to breastfeed and fears that FF would signify their HIV status. They had significant concerns about the physical and psychological effects on their child, and felt that their identity as a 'good mother' was compromised by not breastfeeding. However almost all women chose FF, driven by the desire to secure an HIV-negative child. Their resilience was strengthened by financial assistance with FF; examples of formula-fed children who were healthy; and support from partners, family, peers and professionals. One woman chose to breastfeed her child. Poor knowledge of transmission risk, fears about HIV disclosure and a belief that breastfeeding was good for her child contributed to her decision. Healthcare professionals believed that some women were likely to breastfeed due to the complex social environment in which feeding decisions were embedded and that this was unlikely to be revealed to clinical teams.

Conclusions: The decision to avoid breastfeeding came at considerable personal cost to this group of women. Financial and psychological support increased women's capacity to adhere to their decision. Professionals working with HIV-positive women should be aware of the difficulties encountered by women and provide appropriate support and education both antenatally and postnatally.

TUFFOUR, Isaac

A Study of the Experiences of Black African Service Users (BASUs) of Mental Health Provision in England: An Interpretative Phenomenological Analysis

This research focuses on the experiences of Experiences of Black African Service Users (BASUs) utilising mental health services in England, with particular attention to their experiences of the recovery approach to health care delivery. It examines the meaning of recovery and its various processes. Studies on recovery in the UK context are explored, and the

theoretical explorations of transcultural nursing and the perceived inequalities of services to ethnic minorities provide a foundation for investigating the present question. This qualitative case study inquiry draws from Interpretative Phenomenological Analysis in its methodological approach, as it seeks to explore the lived experiences of BASUs of the recovery oriented approach in the mental health care system in England. Entering this field of study from a phenomenological perspective provides a potential opportunity to consider the Recovery model's cultural sensitivity, and provide additional insight into the model's impact on this specific service user community, that continues to contribute significantly to mental health statistics in terms of higher rates of mental health experience and significantly high ratios for enforced detention.

WICKWAR, Sadie

Predictors of Quality of Life (QoL) in patients with thyroid eye disease (TED) seeking orbital decompression surgery

This study examined factors associated with the Quality of Life (QoL) of patients with TED seeking orbital decompression surgery.

Methods: Ninety-two adult patients with TED due to undergo orbital decompression surgery at Moorfields Eye Hospital, London were assessed on illness severity, activity and duration, the Graves Ophthalmology Quality of Life questionnaire (GO-QOL- two subscales; visual and psychosocial function), and the Hospital Anxiety and Depression Scale (HADS). Regression models were used to identify which factors were associated with QoL in this population.

Results: Participants were 71% female, 80% white, had a mean age of 47 years and a mean disease duration of 53 months. Clinical levels of anxiety were found in 39% and clinical levels of depression in 24%. The regression model accounted for 81% of the total variance in the GO-QOL psychosocial function scores. After demographic and clinical variables were controlled, socio-cognitive processes explained

the most variance (25%) in psychosocial function scores ($p < 0.001$). The model explained 67% of the variance in the GO-QOL visual function scores. After demographic, clinical and socio-cognitive process variables were controlled for, anxiety and depression explained 15% of the variance in GO-QOL visual function scores ($p < 0.001$).

Conclusions: After accounting for clinical and demographic characteristics psychosocial variables made a large contribution in accounting for QoL. It is of note that a large proportion of this population experience clinical levels of depression and anxiety. This paper emphasises the importance that clinicians when planning surgery for TED patients, are aware of the psychosocial factors that could potentially influence outcome. Longitudinal studies would need to be conducted to explore direction of causality.

Poster presentations

BASS FAGAN, Fabia

Development of a Quality of Life assessment for patients undergoing a Transcatheter Aortic Valve Implantation (TAVI)

Transcatheter Aortic Valve Implantation (TAVI) is indicated as a less invasive treatment option for patients with severe, symptomatic Aortic Stenosis (AS), who are of great surgical risk. TAVI involves implanting a stent-based prosthesis through minimally invasive measures. AS has become the most frequent valvular heart disease within Europe and North America, affecting 2-7% of the population >65 years. AS is a chronic, progressive disease; severe symptomatic AS is associated with significant morbidity and mortality, producing a number of symptoms, leading to a poor prognosis. There is a developing field of research concerned with the creation, evaluation and implementation of quality of life measures within health services research. Currently the only research surrounding quality of within the TAVI population are quantitative studies, using generic or non-disease specific quality of life assessments. No attempt has been made to create a disease specific quality of life assessment, nor has there been a qualitative research study within the TAVI field. The ability to evaluate quality of life post TAVI is particularly significant in the elderly population it was developed within due to their often extensive comorbidities and a disease specific quality of life assessment can offer an effective way in which to measure the effectiveness of treatment, as well as aiding decision making within the multi-disciplinary team when considering the use of TAVI.

The aims of the research are:

1. To explore the participants quality of life pre and post Transcatheter Aortic Valve Implantation (TAVI)
2. To develop a TAVI specific Quality of

Life assessment

3. To validate the research findings amongst a proportion of the research participants in the form of member checking.

This research will use grounded theory methodology.

BEHN, Nicholas

Communication and quality of life outcomes in people with acquired brain injury (ABI) following project-based treatment

Introduction: Communication impairments are common following acquired brain injury (ABI) and have a significant impact on a person's quality of life post-injury. Treatment approaches typically involve training appropriate social skills to a person with ABI or training strategies to a communication partner. However, neither of these approaches has been shown to improve quality of life. A viable yet largely unstudied alternative, project-based treatment, has been proposed where the person with ABI works collaboratively towards a common goal (or project), providing a meaningful, engaging and motivating environment. To date, no study has evaluated its effects for people with ABI.

Methods/Procedures: Twenty-four people with ABI with communication impairments will be selected to participate. Following initial assessment, a project-based treatment will be conducted twice weekly for 4 weeks (each session lasting 2 hours) in groups of three people. Twelve people will be allocated into a delayed treatment condition, in order to provide a control group. Immediate and longer-term follow up (2-4 weeks) assessments will be conducted. Treatment effects will be measured using quality of life questionnaires before and after treatment, and through blind ratings of conversations between the person with ABI and

a significant other. Finally, participants will be interviewed to explore their experiences of the treatment.

Significance: The study is significant as it will further our understanding of an alternative treatment of communication impairments for people with ABI. It is hypothesised that the treatment will have a positive impact on a person's communication skills, insight and awareness and quality of life. It will also enable people with ABI to engage in a motivating and meaningful project. Family members and/or paid carers may also benefit by being involved in training to improve their communication skills. Finally, the results will have strong implications not only for speech and language therapists but also, other members of the interdisciplinary team (occupational therapists, physiotherapists, psychologists) and for other clinical populations, namely dementia and learning disability.

CAIN, Helen

A Prospective Study of Pre- and Early-Verbal Markers for Language Impairment

Background: Specific Language Impairment (SLI) and Autism Spectrum Disorder (ASD) are both developmental disorders which have a significant impact on language and communication skills. Because both disorders place children at risk of educational and psycho-social difficulties, early intervention in both cases is crucial. However, at the present time, little is known about the early developmental trajectories of the disorders, and what markers may be present even in infancy which will identify children who may go on to be diagnosed. This study aims to address this gap in knowledge by recruiting very young children and studying their language skills longitudinally.

Research Questions:

1. What is the prevalence of language delay in the language-high-risk group as opposed to the ASD-high-risk group and the control group?
2. Do non-verbal communication skills differ across the three groups and do these markers predict language ability at 24 months of age?

3. Do early speech and pre-speech vocal behaviour differ across the three groups and do these markers predict language ability at 24 months of age?

Methods: The study will use two groups of "high-risk" infants and a control group, and will assess children at around 12 and 24 months of age. Children will be recruited to the high-risk groups on the basis of having an elder sibling with a diagnosis of either SLI or ASD. The children will be assessed using a "dynamic assessment" methodology, which measures how much support a child requires to complete a task, rather than simply whether or not they can complete it. Children will be video-recorded in play with a parent, which will be used to examine their non-verbal communication and spontaneous vocalisation. They will also participate in a more structured task with the researcher, which will assess their imitation skills and their receptive language

CTORI, Irene

An investigation of ethnic differences in the spatial profile of macular pigment

Macular pigment (MP) is thought to protect the central retina from the cumulative damage of blue light exposure and oxidative stress associated with the prevalence of age-related macular degeneration (AMD). It is believed that reduced levels of MP are associated with increased AMD prevalence. MP levels, measured as macular pigment optical density (MPOD) and its distribution (i.e. spatial profile) vary among individuals. MP spatial profiles may differ between ethnicities, possibly due to differences in the retinal architecture. This may contribute to the ethnic variations seen in prevalence of AMD with figures of 2.4% (Black), 4.6% (Chinese) and 5.4% (White) given in the past. The methodology for measuring MPOD varies, causing problems when comparing data from different ethnic studies. We propose to investigate the differences in MP spatial profile and its relation to retinal architecture in three healthy ethnic groups: 100 White, 100 Black and 100 Asian subjects. To our knowledge, this is the first study to include Asian subjects in a comparison study of MP

levels. Measurements will be taken using non-invasive techniques including the MAP test (City University London) and digital retinal imaging (Spectralis OCT). Since the constituents of MP (lutein and zeaxanthin) are derived solely from the diet, information regarding the usual dietary intake of these will be collected. The impact of other known risk factors for AMD on the MP spatial profile (such as family history of AMD and smoking status) will also be analysed. The hypothesis is that MP spatial profiles significantly vary across different ethnicities. White subjects are predicted to exhibit lower MPOD measurements when compared to Asian and Black subjects, and the patterns of spatial profiles are expected to vary between the groups. In addition, it is anticipated that dietary intake of lutein and zeaxanthin influences MP levels in all the ethnicities investigated.

DABASIA, Priya

The effects of spectacle correction of refractive error on results from the Moorfields Motion Displacement Test (MDT) Enhanced suprathreshold algorithm (ESTA)

Introduction/Purpose: MDT is a software program that assesses the ability to discriminate movement of a line stimulus at various locations in the visual field (VF). Previous research demonstrated MDT to be a predictor of VF loss in glaucoma, and that MDT is robust to the effects of refractive error. However, other psychophysical vision-function tests (e.g. Zeiss Frequency doubling technology perimeter) recommend correction of refractive error for near spherical values exceeding ± 7.00 DS. We investigated the effects of refractive error correction on ESTA in healthy eyes.

Methods: Twenty eyes of 12 subjects with near refractive errors exceeding ± 4.50 DS or -6.00 DS underwent ESTA MDT with and without spectacle correction in a randomised order. All subjects had healthy eyes following a comprehensive eye examination, and normal visual fields using the reference standard test (Humphrey C24-2 SITA Standard). MDT failure was indicated by a global 'Probability of true damage' (PTD ≥ 3.0), an index summarising the

number of unseen stimuli at different locations.

Results: Near refractive sphere at the testing distance was -7.75 DS to $+8.38$ DS. Global PTD test scores were significantly lower with refractive correction compared to without (Wilcoxon P signed ranks test, $p = 0.03$). Pearson correlation between near sphere and global PTD without spectacle correction was weak ($r^2 = 0.068$, $p = 0.268$). Two subjects with normal VFs failed MDT both with and without spectacle correction. Specificity of MDT without spectacle correction was 0.65 (95%CI 0.41-0.84) rising to 0.85 (95%CI 0.61-0.96) with spectacle correction.

Conclusion: Correction of near refractive error is indicated when near refractive correction exceeds $+4.50$ DS or -6.00 DS. This is important if MDT is used as a community screening test where technicians may be unable to correct the near refractive error. Future research should refine the thresholds beyond which correction of refractive error is required, and include the effects of astigmatic defocus.

GALANTE, Lara

Cultural adaptation and psychometric testing of the Scenario Test for people with aphasia, with insight on cognitive aspects of independent communication

Background and aims: The Scenario Test, originally developed for use in The Netherlands, is used to assess the multi-modal (verbal and non-verbal) communicative effectiveness of people with aphasia, in a range of day-to-day settings. We aim to adapt an English version of this test for use in the UK. Moreover, a few preliminary studies have identified a possible link between ability to communicate effectively and nonverbal cognitive factors such as attention, working memory and executive functions, regardless of the individual's severity of aphasia. In tandem with the development of the English Scenario Test, the study aims to investigate this relationship between independent and effective communication and nonverbal cognition via an accompanying battery of tests.

Methodology and procedures: This project has two phases: 1) Pilot testing. We will adapt the English version of the Scenario Test, provided by the developers, for use in the UK. This will be tested together alongside all other assessments to be used in the study on a small group of people with aphasia (n=5) to test the English Scenario Test's acceptability and the feasibility of the overall testing; and 2) Testing of the English Scenario Test's psychometric properties (all aspects of reliability, validity, and sensitivity to change), and the participants' cognitive and linguistic profiles on a large sample (n≥60) of eligible people with aphasia and non-aphasic controls (n=20). Sensitivity to change will be tested on a subset of aphasic individuals (n=20) with recent stroke (~2 weeks post onset and after 3 months).

Contribution to the discipline: This project will produce an essential tool for the assessment of people with aphasia, and also provide systematic data on the contribution of cognition to communicative effectiveness. The Scenario Test also has potential to serve as a tool in future studies for measuring the efficacy of total communication/AAC training.

GERARD, Yvonne

Patients Experience of Cataract Surgery Using a Grounded Theory Approach

Patients diagnosed with cataracts are unable to see clearly as the normal transparent lens has become opacified (see figure 1). Acquired opacity of the lens, irrespective of the patients vision, is known as cataracts (Kanski, 2008). Surgery is the ultimate treatment, which affects their overall vision and quality of life. Despite the number of cataract surgeries performed, there has been no assessment of the surgical experience. Numerous cataract measurement tools exist in the United Kingdom (UK) such as Visual Symptoms and Quality of Life (VSQ), Visual Function 14 (VF-14), Vision Core Module (VCM1) etc. However, these tools have failed to identify the outcome of cataract surgery (DoH, 2005; DoH, 2007). Reasons for this are unclear; as research has yet to look in detail through qualitative studies at patients' experience of the pre-operative and post-operative phases of cataract surgery. The

research site will be at Moorfields Eye Hospital NHS Foundation Trust and outreach facilities. The outcome is to inform policy and procedure for improving the patient's experience of cataract surgery and to develop a trajectory model of care.

HORAN, Sarah

Development of an Atrial Fibrillation specific Patient reported outcome measure

Atrial fibrillation is the commonest cardiac arrhythmia affecting 1% of the population (Reardon and Camm, 1996), its incidence increases with age and rises up to 17% of the population in patients over 84 years old (Dorian et al, 2000). It has been shown that atrial fibrillation can affect the quality of patients' lives (Hannon et al, 2009) and has many symptoms including shortness of breath, tiredness and palpitations which can also impact patient's quality of life. Atrial fibrillation also carries an increased risk of stroke, which can be life changing for patients. Treatment options for atrial fibrillation vary from medication to invasive procedures such as catheter ablations.

Quality of life is defined as 'individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns' (The WHOQOL Group, 1995).

Design and Methods: It is hoped that by using focus groups, questions specific to quality of life in patients with atrial fibrillation will be developed primarily from patients, relatives and hospital staff caring for patients with atrial fibrillation. Once the questionnaire has been created, interviews will be held to check if the questions are clear and well understood. A pilot study will follow to test the questionnaire and then interviews of participants who have completed the questionnaire will be undertaken to measure the effectiveness. The questionnaire will also be statistically tested to measure reliability and accuracy and it is hoped that the items used in the questionnaire will be reduced in number. The field testing of the questionnaire and validation of the study are to follow as the final stages. As a large amount of data will be

collected the software research package NVIVO will be used throughout this study (www.qrsinternational.com).

HUCK, Anneline

An Eye Tracking Study of Sentence Reading in Aphasia

Aphasia is an acquired language impairment which is a common consequence of a stroke. This study explores how individuals with aphasia make use of lexical and semantic factors in sentence reading. Readers may be sensitive to how often words occur in the language (word frequency) and to how well words fit in the context of a sentence (predictability). Sentence reading will be studied with eye tracking. A first experiment will investigate semantic (predictability) and lexical factors (word frequency) in the reading of simple sentences. These contain frequent and infrequent words, and words will be either in a predictable or unpredictable context. A second experiment will explore how semantic and lexical factors influence reading in more complex sentences. These will contain a temporal structural ambiguity. For example, in the sentence "the child knew the answer was right" the phrase "the answer" can be understood as belonging to two different structures: it can belong to the verb "knew" or it can start a new clause as in "the answer was right". The disambiguation area "was right" then indicates that the latter interpretation is the correct one. The use of sentence structure depends on the intended sense of the verb in its context and its most frequent structure, and is thus a lexical-semantic factor. If readers can use their semantic and lexical knowledge they should find it easier to resolve such ambiguities than if they have impaired semantic and lexical knowledge. The aim is to recruit twenty individuals with aphasia and reading impairment as well as twenty controls that are matched for age, gender and education. Several standard pen and paper back-ground tests of reading will be carried out with participants with aphasia. All participants will perform two reading experiments whilst their eye gaze is tracked. Each sentence will be followed by a yes/no question in order to

check comprehension accuracy. Results will be analyzed for comprehension accuracy as well as eye movement measurements such as initial fixation duration, total fixation duration and number of regressions. Results showing an influence of semantic and lexical information in the reading of ambiguous sentences would emphasize the essential role of non-syntactic factors in the assessment and treatment of sentence-level impairments in people with aphasia.

JEAVONS, Charlotte

Parental consent and Fluoride Varnish Schemes: lessons from dental screening

In 2006 the Department of Health issues guidance reversed the consent mechanisms that could be used for dental public health programmes, i.e. from negative to positive. 1 The implications of this change have been significant, with some programmes ceasing to exist due to poor uptake. 2 Furthermore it is thought that those that have continued may now be contributing to dental inequalities as a result of the inverse care law.

Objective: To explore and critically evaluate the published literature in relation to dental public health programmes that specifically require consent and to draw on any concepts found, and to apply them to the implementation processes of fluoride varnish programmes.

Methods: A literature search was conducted using two electronic data basis. Literature was systematically compared against specified criteria before rigorous assessment using the CASP tool. 4. Literature was required to meet a 50% threshold of positive answers prior to detailed analysis via thematic extraction.

Results: Overall, 10 articles were included and assessed. 5-15. However, little evidence exists that details consent procedures for Fluoride varnish programmes. Evidence from epidemiological programmes that use similar procedures to gain parental consent proved a useful proxy and as a consequence, data from epidemiological programmes were extrapolated and applied to Fluoride varnish schemes.

Discussion: There appears to have been a simple transfer of implementation methods for gaining parental consent from epidemiological programmes to Fluoride varnish programmes, with little or no consideration of the appropriateness of such procedures. This is surprising given that the number of epidemiological programmes in operation has significantly reduced exist due to poor uptake resulting from the 2006 change to consent guidelines. 1-2 As a result it seems that children, particularly from lower income families, are being passively excluded from taking part because signed parental consent forms have not been received. 6-7 This is likely therefore, to be increasing dental inequalities.

Conclusion: Currently there is little understanding amongst the dental profession of the implications of using specific consent procedures, and more importantly, what knowledge and evidence there is available is being overlooked.

KISTNER, Judith

Conversation in Aphasia

Background: Gestures play an important role in everyday communication. They provide additional information to conversation partners about the meaning of verbal utterances and help to clarify even abstract concepts. There is also evidence that gestures are not simply produced for the benefit of the listener but also support the speaker. People with aphasia have speech and language impairments, usually as a result of stroke. Given the role of gesture in communication, it is important to know how people with aphasia use gesture as both an accompaniment to speech and as a compensatory modality.

Aims: This study will examine the natural conversational use of gestures in aphasic speech and addresses the following questions:

- To what extent do people with aphasia employ gestures in conversation, and how does this compare to non-aphasic people?

- What roles do gestures play for people with aphasia? Is there evidence for gestures being used in communicative and/or facilitative ways?
- What meanings are expressed in gestures and how do these relate to the co-occurring speech?
- How does the use of gesture in aphasia relate to the severity and nature of the linguistic impairment?

Methods and Procedures: 20 people with aphasia will be recruited, ten with syntactic and 10 with lexical impairments. This will enable us to explore the impact of contrastive language impairments on gesture. Data will also be collected from 20 controls matched for age, gender and education level. Conversation samples will be collected with two different conversation partners (familiar and unfamiliar) and two different conversation genres (procedural and narrative). Video samples will be transcribed and analysed for both gesture and speech production. Examples of analyses include the following: Instances of word retrieval difficulty will be coded and analysed for resolution. The co-occurrence of gesture with these instances will be investigated. This will illuminate the potentially facilitative role of gesture. Gestures that accompany speech (iconic, metaphoric, beat, and cohesive gestures), and gestures that replace speech (pantomime and emblems) will be explored. This will indicate whether participants are using gesture mainly to supplement or to replace speech. In the case of co-speech gesture, the relationship between speech and gestures will be explored, e.g. to illuminate how gesture and speech are combined to convey meaning.

MOORE, Donna

A review of postnatal mental health websites: Help for healthcare professionals and patients

Purpose: The internet offers an accessible and cost-effective way to help women suffering with various types of postnatal mental illnesses and also can provide resources for healthcare professionals. Many websites on postnatal mental illness are available but there is little information

on the range or quality of information and resources offered. The current study therefore aimed to review postnatal health websites and evaluate their quality on a variety of dimensions.

Methods: A systematic review of postnatal health websites was conducted. Searches were carried out on four search engines (Google, Yahoo, Ask Jeeves and Bing) which are used by 98% of web users. The first 25 websites found for each key word and their hyperlinks were assessed for inclusion in the review. Websites had to be exclusively dedicated to postnatal mental health or have substantial information on postnatal mental illness. Eligible websites (n = 114) were evaluated for accuracy of information, available resources and quality.

Results: Results showed that information was largely incomplete and difficult to read; available help was limited and website quality was variable.

Conclusions: The top five postnatal mental illness websites were identified for (1) postnatal mental illness sufferers and (2) healthcare professionals. It is hoped these top websites can be used by healthcare professionals both for their own information and to advise patients on quality online resources.

MOSS, Becky

Assistive technologies, writing and social participation in people with aphasia

Background: Aphasia is an acquired language and communication impairment which affects approximately one third of people who have a stroke; it can also be caused by traumatic brain injury or tumour. Aphasia is not an intellectual impairment, but causes difficulties with processing and producing language. Speaking, auditory comprehension, reading and writing may all be affected, and every person with aphasia will experience a unique constellation of strengths and difficulties in these areas, which may sharply dissociate. Therapeutic interventions for aphasia sometimes focus primarily on regaining speech

and comprehension, but writing and reading deficits can also have a significant impact on social participation and self-esteem. Standard writing therapies improve treated words but can be time-consuming and have limited carryover.

Aim: A small number of studies have indicated that assistive technologies (voice recognition software, text-to-speech software), though originally developed for other user groups, may benefit people with aphasia who have chronic writing and reading impairments. This mixed-methods, case series study will work with ten such participants to test whether an assistive technologies training intervention can harness their retained speaking and auditory comprehension skills and enable compensatory communication strategies, bypassing the need for conventional writing and reading.

Methods: Over the course of 10-15 tailored one-to-one sessions, supplemented by practice exercises at home, each participant will be trained and supported to use assistive technologies. Quantitative assessments of language, social participation and well-being will be conducted before the intervention, immediately afterwards, and three months later. Qualitative data from participant observation and artefacts will be collected during the intervention, and in-depth semi-structured interviews will take place before, after and three months post-intervention.

Potential impact: Data will be analysed to explore the impact of assistive technologies on writing and reading, and examine the relationship between writing, social isolation and participants' sense of identity and quality of life.

PAGE, Pamela

"Who is visiting who?" – A descriptive, qualitative appraisal of visiting experiences within adult general critical care units (AGCCUs) utilising a Grounded Theory methodology.

Aims of the study: To examine the lived experiences of family members, patients and practitioners in relation to visitation in AGCCUs; To formulate a middle-range theory in

relation to visitation in AGCCUs; To discern and understand the relationship between patient, practitioner and relative in AGCCUs.

Background & Methods: If we profess to deliver family centred care then it is essential to understand the experiences of both patient and family members in AGCCUs. We know that illness is a crisis to a person and his/her family and therefore care of the family unit is an integral feature of holistic care. A qualitative methodology has been selected to yield rich, in-depth descriptions of visitation experiences of patients, family members and practitioners within AGCCUs. Such enquiry requires a process of documentation and description. The emerging inductive theory is directed towards bringing new knowledge into view. There are several qualitative methodologies and a Grounded Theory approach has been selected for the following reasons. The ontological basis is “open”, and is deemed to be appropriate in exploratory, small-scale humanistic research which is sought in this study.

Ethical approval: The participants include practitioners, patients and relatives who work or have been cared for within AGCCUs. The protection of their human rights is facilitated by seeking ethical approval via the Integrated Research Application System (IRAS) and the Research and Development department of a NHS Trust. Informed consent will be sought at the point of interview.

Summary: This study may contribute towards a framework for preventative, supportive and therapeutic intervention to those patients and their families who have to experience critical care.

PATEY, Andrea

Development of a theoretical and methodological basis for designing interventions tailored toward the direction of behaviour change

Clinical practice guidelines assist clinicians in providing best practice healthcare in an evidence-based manner. Changing practice behaviour is difficult, requiring interventions to support behaviour change. Interventions aim to either decrease actions that are ineffective

or harmful (e.g. routine preoperative test ordering) or increase actions that are beneficial (e.g. Intermittent Auscultation for foetal surveillance). Many studies have used theory-based approaches to develop these interventions, but no distinction has been documented to guide intervention content depending on whether the aim is to increase or decrease the frequency of the target behaviour change (i.e. doing more of something versus doing less). However, research findings suggest that this distinction may be important. Operant Learning Theory makes a crucial distinction between techniques that increase a desired behaviour (e.g. application of reinforcement) and those that decrease an undesired behaviour (e.g. withdrawal of the reinforcement, punishment), suggesting that there are discrete approaches to changing behaviour depending on the direction of change. The proposed study, using mixed methods approach of quantitative synthesis, content analyses, descriptive analysis, as well as triangulation methodology aims to inform the development of interventions to change clinicians' behaviour in terms of the desired direction of change. Specifically, we will 1) analyse intervention content of three behaviour change interventions (one of each: increasing, decreasing or replacing behaviour), to identify behaviour change techniques used in these interventions; 2) assess clinicians' perceptions about the influences of clinical behaviour change, using examples from three categories (increasing, decreasing or replacing behaviour); 3) assess whether predictors of behaviour change differ depending on the direction of behaviour change; 4) develop draft guidelines for designing interventions based on the three categories of clinical behaviour change in healthcare settings. This project will enhance intervention development methods by focusing on desired direction of behaviour change improving the effectiveness of implementation interventions and ultimately patient care.

PHILIPPAKI, Eva

“In vitro Measurement of Intraocular Lens Glistenings”

Background: Intraocular lenses, after being implanted, often develop inclusions in their

polymer matrix, known as glistenings. Such optical imperfection can contribute to retinal straylight and disability glare due to light scatter. The purpose of this study is to evaluate and quantify light scatter by measuring in vitro light angular distribution on intraocular lenses with different amounts of glistenings.

Methods: Six IOL samples were placed in an incubator for 3 days at 50 °C to induce lens glistenings. Lenses were removed and left for one day to settle at room temperature. Both pre and post incubation, digital images of the IOL were taken with a Nikon FS-2 slit-lamp using standardized settings. Measurements of scattered light intensity were recorded for 24 different angles. Two sets of measurements were taken, one for a 3mm and another for a 5mm pupil size corresponding to photopic and mesopic conditions respectively.

Results: In all cases, increased light scatter appears in IOLs with glistenings compared to clear IOLs. The distribution of scattered light for clear IOLs (no glistenings) shows insignificant changes between a 3mm and a 5mm pupil size, while for IOLs with glistening, the angular distribution of scattered light increased for the small pupil size. This is shown in both small-angle (central) and large-angle (skirt) domains.

Discussion: Pupil size has little effect on retinal straylight in the normal eye. However, in the case of IOLs with glistenings pupil size dependence is evident. Correlation of pupil size and glistenings' size and distribution for different IOLs should be investigated further as well as the significance of the association between glistenings and human visual function and perception.

RICE, Brian

Trends in the incidence of tuberculosis among heterosexuals living with HIV in England and Wales

Background: Many persons diagnosed with heterosexually acquired HIV infection in the United Kingdom originate from countries where the prevalence of both HIV and tuberculosis is high, primarily countries in sub-Saharan

Africa. We calculate annual tuberculosis incidence rates, and investigate risk factors for tuberculosis, among heterosexual adults seen for HIV care in England and Wales.

Methods: Records of heterosexual adults (≥ 15 years of age at diagnosis) in England and Wales reported to the national HIV and AIDS Reporting Systems between 2002 and 2010 were linked to the national tuberculosis database (1999 to 2010). Annual incidence rates of tuberculosis among heterosexual adults living with diagnosed HIV were calculated on the basis of the number of heterosexual adults seen for HIV care in a given year and the number, in that same year, with a first episode of tuberculosis at the time of, or subsequent to, their HIV diagnosis.

Results: Between 2002 and 2010, almost one in 10 (4266/45 322) heterosexual adults seen for HIV care in England and Wales were diagnosed with tuberculosis, of whom the majority (92%) were diagnosed at the time of, or after, their HIV diagnosis; 84% (3307) were black African. The annual tuberculosis incidence rate decreased from 30 per 1000 in 2002 to 8.8 per 1000 in 2010 ($P < 0.01$). The annual tuberculosis incidence rate among those not on antiretroviral therapy (ART) was significantly higher than among those using ART (2010: 36 versus 3 per 1000; $P < 0.01$).

Conclusions: The annual tuberculosis incidence rate among heterosexual adults seen for HIV care in England and Wales has declined significantly over the past decade. However, the 2010 rate remains significantly higher than in the general population. Our findings support routine HIV testing in tuberculosis clinics, screening for latent tuberculosis in HIV diagnosed persons, and the prompt initiation of ART where appropriate.

ROPER, Abi

Testing a computer gesture therapy for aphasia (GeST): who might benefit and how?

Background: Aphasia is a language disorder commonly acquired following stroke. Those severely affected can be almost entirely unable to produce written or spoken language.

Gesture therapy has been shown to improve the ability to communicate non-verbally in people with severe aphasia (Caute et al, 2012) however we know that outcomes are affected by therapy intensity (Bhogal et al., 2003; Pulvermüller et al., 2001, Daumüller & Goldenberg, 2010). Current speech and language therapist resources however make high intensity therapy delivery difficult to achieve. The introduction of well-designed computer delivered therapy resources proposes a promising solution to this challenge. Researchers at City University (Marshall et al, under review) developed and piloted a novel computer gesture therapy tool (GeST) with 9 people with severe aphasia. Findings demonstrated that pilot participants were significantly more able to gesture practised items following intervention, although gains only occurred when supported by a speech and language therapist.

Aims: To further assess the efficacy of GeST; to reveal who might benefit most from its use; what gains users experience across communication and whether access to the tool affects users' attitudes towards technology.

Methods: A repeated measures design across two treatment groups will be used to investigate therapeutic gains across 30 participants who have access to the tool with support from a speech and language therapist. Methods will include quantitative and qualitative data collection techniques and a range of standardised and novel assessments. Details will be reported within the proposed poster.

Intended Outcomes: Outcomes are intended to supplement and extend the results of Marshall et al.'s pilot project and to contribute clinically relevant prognostic indicators. Findings will also contribute to the growing evidence base surrounding technology use in healthcare.

TUROLA, Massimo

4D Light Field Ophthalmoscope: a fast and low-cost instrument to image the retina

Introduction: The lack of early diagnoses of eye diseases, such as glaucoma, is one of the causes of blindness and loss of quality of life. A simple and inexpensive instrument as the 4D Light Field Ophthalmoscope makes possible early diagnosis with rapid scans of subjects, especially high-risk patients, in settings including GP surgeries, with great benefit for patients.

How it works: Traditional instruments capture two-dimensional images. The 4D Light Field Ophthalmoscope will be able to record the light field, that is a function containing information about radiance and direction of all the light coming from the retina. Therefore in one snapshot we could get information about its three-dimensional volume, enabling features such as 3D topography, synthetic focusing of different layers, stereoscopic imaging and dynamic aberration correction. For example getting a 3D profile of the surface of the retina would give instantaneous information about the depth of optical disc, and could be an ally in diagnosing an early stage of glaucoma, with reduced costs compared with conventional instruments.

Technique and work plan: Positioning an array of micro-lenses on the image plane of an imaging system captures the Light Field. Each micro-lens could be thought as a pixel of the final image, while each pixel of the detector under it contains the information regarding the direction of the rays. Development is divided in two stages.

1. Numerical simulations of both simple and retinal imaging system
2. The building of the first prototype, including getting the ethical approval, and the first measurements of the retina.

Both stages will also include the development of image post processing methods and software, conference attendance and networking with other research groups and companies related the 4D light field imaging.

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