

Research & Development

Annual Report

April 2010 – March 2011



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Foreword

The last 12 months has seen a step-change in our research activity and ambition. This has been highlighted by the application submitted to the Healing Foundation for a major collaborative grant with Brighton University and Brighton and Sussex Medical School. If successful, this will pave the way for a significant academic research appointment. Our Psychosocial programme of research has also been evolving into a cohesive support for the hospital outcomes agenda, to extend this work beyond breast topics. The IRP student research programme has proved very successful for both the hospital and the student researchers, and has helped to strengthen our involvement with BSMS. Our local CLRN continues to support our efforts in developing and recruiting to official NIHR Portfolio projects, and our increased funding reflects our growing participation in these projects.

The main programme of work within the field of Wound Healing and Tissue Reconstruction has continued to evolve, with the potential now to aspire to Portfolio status with full CLRN recognition. This work stream will also be facilitated by the hospital Charitable Funds, and the designation of a major portion of these to the research programmes.

Roger Smith
Director R&D
Consultant Plastic Surgeon

New developments

- Baljit Dheansa and Di Lawrence-Watt have developed and prepared a major bid to the Healing Foundation to set up a Burns Research Centre. The bid is collaboration between QVH, the BMRF, the University of Brighton, and the Brighton and Sussex Medical School and is for a total sum of £1.5 million. We are very proud to have been shortlisted to the final five – in a field of strong competition from much larger institutions – and await the final decision in June.
- Aside from the bid to the Healing Foundation, two bids were submitted to the RfPB funding stream – one by the Research Psychologist, and one by the Anaesthetics department to develop their work looking at use of paracetamol. The Anaesthetics Dept is also preparing bids to support studies investigating remote ischemic preconditioning, and non-surgical site pain. We have submitted two bids to the national i4i funding stream.
- We were delighted with the success of our very first full-day Research Day in June, which was extremely well attended by clinicians from all departments. We were fortunate to have Norbert Kang (RAFT) as an invited speaker, whose presentation sparked a great deal of interest, as well as presentations from IRP medical students and from each clinical department. This event followed on from the well-attended bi-annual research mornings, which have been helping to build a multidisciplinary approach and foster a culture where participation in R&D is both expected and normal. The main speaker at the December Research morning was Prof Pietro Ghezzi (Professor of Experimental Medicine), whose very stimulating talk has prompted interest in a new collaborative study looking at EPO.
- We have been very pleased to host our first cohort of 13 undergraduates from Brighton and Sussex Medical School, who spent 9 months of their 4th year with us working on research/audit projects, supervised by QVH consultants. Both students and supervisors found the experience to be beneficial. Following on from the success of this programme, a new cohort of 11 students started on November 5th and are well on the way to completing their research projects, which they will present at our next Annual Research Day.
- A detailed, cohesive programme of research projects has been developed by our Research Psychologist (Sinead Ni Mhurchadha), with 1 new RfPB grant having been submitted, and a further one in preparation. We hope to develop a collaboration with Prof Lesley Fallowfield (University Sussex), who will be the key speaker at our Annual Research Day in June.
- The MATISS EU-funded project looking at the use of cryogels in wound healing, undertaken with Brighton University and academic/industrial partners in Sweden and Belgium, was successfully concluded on schedule. A new product has been developed which it is anticipated should be ready for clinical trials soon. This second phase of the research will be funded by a further EU grant application (currently in process).
- The Trust has successfully increased its rate of accruals to official NIHR portfolio studies, which has been recognised by our CLRN. The Trust benefits from the support of the CLRN, who have awarded funding to support a variety of research posts at the hospital, with an uplift being given for 2011-12. Baljit Dheansa (Burns Consultant) is research lead for Injuries and Accidents across the CLRN patch of Surrey and Sussex.
- The number of patients recruited during 2020-11 to participate in research approved by an ethics committee was 365, with 26 research studies up and running. 52 clinical staff were involved in carrying out these studies. These staff participated in research covering three medical specialties (Plastics, Anaesthetics, Corneoplastics), as well as professions allied to medicine.
- New governance structures were put in place, with full suite of Standard Operating Procedures, to ensure consistency with national guidelines and expectations. An R&D Operating Capability Statement was also developed, as a public document.

Organisation and staffing profile

The R&D Department presently consists of one R&D Director (0.075WTE), one R&D Manager (0.66WTE) and one Research Assistant (0.19WTE).

Funding was received from the Comprehensive Local Research Network (CLRN) to support 0.5WTE (or about 85%) of the R&D Manager's post. Other income to support the R&D infrastructure comes from commercial studies, which in addition to paying general Trust overheads, are charged a fee of £700 per study specifically for R&D Department services in processing their applications and setting up contracts. This year the R&D Department has also provided governance and regulatory services for a commercial study looking at the use of insulin in reducing scarring, and this is bringing in an extra £7828pa.

Clinical Research Staff

In addition to the R&D Department, the Trust presently supports one Burns R&D Co-Ordinator (0.8WTE), one Anaesthetics Research Registrar (0.2WTE) and one Research Psychologist (1WTE). The Burns R&D Co-Ordinator is funded by the Burns Centre out of its clinical budget. Commercial work undertaken by the Burns Centre also helps to support this post. The Anaesthetic Research Registrar post was funded by reducing other anaesthetists' hours in line with the EWTD, and so is cost-neutral to the Trust. However, funding was also received from the CLRN baseline funding (£24,237) to support some of this post. The majority of the Research Psychologist post is currently funded by the Trust, with £3600 supported by the CLRN (baseline funding).

Di Lawrence-Watt (ex-Prof of Anatomy at BSMS) has been engaged to act as Research Consultant, advising the Trust on the development of new research protocols, grant bids, and strategic alliances, and the Trust is greatly benefiting from the expertise she has brought to the role. Initially this post was funded by the Charitable Funds, but it is now funded by the R&D Budget.

Some clinical departments also each have their own arrangements for Research Fellows, which are funded by the departments themselves and which are not managed by the R&D Department.

Future staffing considerations

It is a longer-term aim of the Trust to work towards appointing a 0.5WTE Clinical Lecturer post. This post would be a joint appointment with the University of Brighton, and would be partly funded by the QVH Charitable Funds, which has a sum of money earmarked specifically for research. A proposal regarding this has been submitted to the Trustees of the Charitable Fund and has been approved.

The Trust is now working towards building up the critical mass of research which would make this an attractive post to the right individual, and discussions have been had with the Dean of Brighton University to seek advice on the direction this strategic push should take.

A further aim is the establishment of Research Fellow posts in each specialty, along the lines of the Research Registrar in Anaesthetics, which has successfully academicized that department.

Accommodation

The R&D Department is presently housed in small offices next to Health Records. The department will need to be rehoused when the new build goes ahead, and a suitable location is currently being sought. Dedicated desk space has been made available for the Research Psychologist's post, in the same portacabin as the Breast Care Nurses.

It is a strategic aim of the R&E Strategy Committee to work towards the provision of a Skills Lab.

Training and Development

The R&D Manager regularly attends induction to speak to all new clinical recruits. They are all issued with an R&D pack which includes all up to date R&D policies. This is a useful forum to quickly identify juniors who are interested in R&D, and provide them with guidance and assistance.

Individual training tailored to the individual is provided by the R&D Department to all novice researchers who require guidance navigating the complex approvals process and legislation surrounding it.

It is a legal requirement that all staff involved in Clinical Trials complete Good Clinical Practice (GCP) training, and the Trust has facilitated this for staff – either by providing an onsite trainer, enabling access to off-site courses at other Trusts, or by paying for staff to do an individual online course. Commercial companies regularly run refresher GCP courses for staff involved in the clinical trials they run at the Trust. The R&D Manager also runs a more general refresher GCP course, open to all QVH staff.

Research Design Service

Our Research Design Service (RDS) at the University of Brighton provides a good service in training staff in RfPB grant applications, with seminars being run at the Trust, and support also provided to individual researchers on a one-to-one basis.

The R&D Manager sits on the RDS Stakeholder's Board, representing NHS Trusts in the patch. The Board exists to monitor and support the activities of the RDS and guide its strategic development, and to identify ways in which the activities of the RDS can be developed to better meet the needs of the NHS.

Annual Trust R&D Day

We were delighted with the success of our first ever Trust R&D Day in June, which built on the success of the previous R&D mornings. It featured an invited speaker from RAFT (Norbert Kang), as well as presentations from IRP medical students and from each clinical department. At our December R&D morning we were fortunate to have Prof Pietro Ghezzi (Professor of Experimental Medicine) as our key speaker. These meetings have proved to be very popular with clinicians from all departments.

Departmental meetings

Individual departments also run their own Audit & Research meetings, providing a forum to discuss new ideas and present completed studies.

CLRN training

The Trust has access to training provided by the CLRN for any studies which are accepted onto the National Portfolio. These mainly focus on GCP training.

The CLRN has also provided training to the R&D Manager on the new CSP system. The R&D Manager regularly attends area-wide meetings on aspects of the CLRN system.

NIHR membership

Dr Steve Fenlon has been made a member of the faculty of the National Institute for Health Research (NIHR), by virtue of his successful grant application to the NIHR RfPB funding stream. This prestigious award has facilitated access for the Trust to further NIHR funding streams via the CLRN.

Governance Structure

R&D at the Trust is managed via a strategic committee and a governance committee. The purpose of the R&E Strategy Committee is to stimulate and develop R&D activity and education within the Trust and the BMRF; to foster collaborative working with external academic organisations; and to consider, drive and approve R&D strategy and development issues. Its membership includes the Chief Executive, a non-executive director, the R&D Director, the Post-graduate Tutor, the Chief Executive of the BMRF, the BMRF Scientific Advisor, the R&D Consultant, and a senior QVH plastics clinician. This Committee is advised by its respective supporting committees at QVH and BMRF.

The R&D Governance Committee's purpose is to manage R&D Activity within the Trust. Its members include: Director of R&D, Director of Nursing & Quality (executive director with responsibility for research governance), the R&D Consultant, Chief Pharmacist/Clinical Trials Pharmacist, Clinical Governance Facilitator, Anaesthetics Lead, Burns Lead, Corneoplastics Lead, Hand Surgery Lead, Maxillofacial Lead, Nursing Lead, Oncoplastics Lead, Healthcare Science Lead, Orthodontics Lead, Clinical Audit Manager, R&D Manager, Finance Dept representative (R&D budget accountant), Designated Individual with responsibility for Human Tissue Authority license, Chair of R&E Committee, External academic advisor from the BMRF, and an External academic advisor from BSMS. The Committee also has two very active patient representatives who play a valuable role in advising on new projects.

The R&D Governance Committee reports to the R&E Strategy Committee. The R&E Strategy Committee reports to the Quality and Risk Committee for governance matters, and to the Clinical Board for strategic matters.

The Director of Nursing acts as Nominated Consultee, for participants unable to consent.

The R&D Manager sits on the Eye Bank and Tissue Engineering Committee.

Trust policies which cover R&D: SUSARS, Research Fraud, Code of Practice for Researchers, Pharmacy policy for Clinical Trials, Intellectual Property, Overheads Policy. In addition, we have adopted a new and comprehensive range of Standard Operating Procedures, in line with national guidance, to ensure consistency in our approach to R&D Approvals: P02-Manage Study Participating Planning Tool v1; PO3 Confirm Study Approvals v1; PO4 Setup and Control External Agreements v1; PO5 Setup and Control Internal Agreements v1; PO6 Setup and Control Study Processes v1; PO7- Give NHS Permission v1; PO8-Oversee Study v1; S04-Ensure Study Funding and Approvals are Managed v1; S05- Manage Study Sponsor Planning Tool v1; S06-Give Decision on Sponsoring v1; S07-Provide and Manage External Agreements v1; S08-Ensure NHS Permission is Received by the CI v1; S09-Ensure Study Oversight v1; S10-Ensure Study Closedown is Managed v1

R&D approvals

The Trust uses the national Integrated Research Applications System for all new studies. The R&D Dept provides extensive guidance on using this new system. The Trust also undertakes all Site Specific Assessments on behalf of the Ethics Committee and in line with new Ethics guidelines. This is routinely performed at approval stage.

Time to approval is very swift at this Trust. The Trust uses national systems to manage the studies in proportion to risk, and has recently adopted the Research Support Services framework recommended SoPs.

Research Passport – the Trust has fully implemented the nationwide Research Passport system, helping to facilitate studies where researchers are based at multiple sites.

Sponsorship status

It should be noted that the majority of research carried out at QVH is investigator-led ie designed and conducted by our own staff. These kinds of studies are considerably more onerous to start up than multi-centre studies where the Trust is merely acting as a recruiting site. They require the Trust to provide structures to support the development of protocols as well as the subsequent management of the active projects.

No research study may begin in the NHS without a Sponsor being identified. The Trust continues to offer its researchers the benefits of providing Sponsor status for the studies they initiate. Not all Trusts in our patch undertake this, due to the heavy ethical, governance, legal and financial responsibilities it entails. QVH believes that it is right to support its researchers in developing new projects, and to encourage the spirit of intellectual enquiry, and so continues to provide Sponsorship status for all non-CTIMPs plus phase IV CTIMPs. The Trust's capacity for R&D, and it's commitment to research, is clearly stated in the RDOCS, which is a publically available document endorsed by the Board.

Finance

The CLRN awarded the Trust £72,709 in 2010-11, of which £34,148 was to support the R&D Manager's post, £24,237 for dedicated research time for the Anaesthetics Research Registrar, and £3600 to help support the Research Psychologist's post. The Trust has received an uplift in R&D funding for 2011-12.

The paracetamol study (now in analysis) was funded in full by an RfPB grant.

Funding was also awarded from the EU for participating in the MATISS joint international research study on cryogels (co-ordinated by University of Brighton). A further follow-on study and attendant grant bid is being planned.

The Trust received £6,750 from the Brighton and Sussex Medical School to support the IRP students who undertake research projects at the hospital.

£2100 was received as fees for R&D Approvals services. A certain amount of funding is also being earned by providing contracted out research governance and regulatory services to the company sponsoring Charles Nduka's insulin study (£7830pa).

Charitable Funding

The Trust's own Charitable Funds have been instrumental in facilitating local research studies with small pump priming awards, and will continue to be available for clinicians to bid for on a response-mode basis. A strategy is being developed for judicious investment in capacity-building activities for the bulk of the Fund.

For a summary Budget statement, see Appendix on page 24.

Comprehensive Local Research Network (CLRN)

The Trust is a member of the Surrey and Sussex Comprehensive Local Research Network (CLRN). The Trust works with the CLRN to maximize opportunities for Portfolio studies, identify new studies the Trust

may participate in, and implement new national systems and structures. The CLRN distributes R&D resources amongst its members, according to a national algorithm. The R&D Director sits on the CLRN Board, and the R&D Manager regularly attends meetings for LRDOs, working closely with the Senior Manager Dr Kala Ratnajothy and the Lead Research Management & Governance Manager Lindsay Marchant.

Baljit Dheansa is the CLRN lead for Injuries and Accidents Specialty Group, which is responsible for promoting and raising the profile of research through the provision of infrastructure within the specialty of burns.

NIHR CSP

Local approval processes have been adapted and overhauled to meet the requirements of the NIHR CSP system and to integrate with the national approvals system via the online Integrated Research System. There have also been substantial new procedures implemented to meet the requirements of the new Research Support Services Framework. The Trust will continue to work with the CLRN to implement the new RDMIS system when it is adopted in June 2011.

Intellectual property

The Trust engages the services of NHS Innovations South East to assist with commercializing its intellectual property, and this year is actively pursuing commercialization options with two separate innovations – one of which is a database, and the other a medical device.

Activity

Participation in clinical research

The number of patients receiving NHS services provide or sub-contracted by the Queen Victoria Hospital NHS Foundation Trust in 2010/11 that were recruited during that period to participate in research approved by a research ethics committee was 365.

Participation in clinical research demonstrates QVH's commitment to improving the quality of care we offer and to making our contribution to wider health improvement. Our clinical staff stay abreast of the latest possible treatment possibilities and active participation in research leads to successful patient outcomes.

QVH was involved in conducting 26 clinical research studies in 2010-11, with 52 clinical staff involved in carrying out these studies. These staff participated in research covering three medical specialities (Plastics, Anaesthetics, Corneoplastics), as well as professions allied to medicine. (see table below).

STUDY	NUMBER OF PARTICIPANTS	NUMBER OF QVH STAFF INVOLVED
Rapid autologous sprayed keratinocytes	1	2
100 consecutive SSG donor sites – outcome data	10	3
A pilot study of histological and clinical variables contributing to both a long-term natural history and an estimation of time from injury for normal cutaneous scars taken at routine scar revisions at 4 plastic	No figures available as CI is away till end of May.	1

surgical units in the UK		
A randomised controlled study comparing a dynamic splinting protocol v a static splinting with early active motion protocol	0	3
Tinzaparin in patients with burns	21	2
Models of Medical Leadership and their Effectiveness	1	1
Improving wound healing. Assessment of parameters at the wound surface that affect healing and the survival of skin grafts and cultured cells	10	1
The effect of oral Ivermectin on Demodex associated blepharitis	0	2
Comparison between sheet grafts and 1:1 mesh grafts in burnt patients	5	3
What influences blood flow in free flap surgery?	0	2
Burn care, how should we assess our performance?	0	3
Post functional outcome of hand burns and effect on quality of life	4	3
Comparison of efficacy of the Versajet system of hydrodissection and traditional surgical techniques in the debridement and wound preparatin of lower limb trauma wounds	0	1
A study of long term outcomes of paediatric burn injury. To assess the child and family satisfaction with the initial care and psychological support received, and the final result achieved	0	2
Improving the use of limbal stem cell sheets for ocular surface rehabilitation through the development of cell banking and delivery methods	84 cornea rims	3
LASER Doppler Imaging of blood flow in split thickness skin grafts	4	3
The Use of Laser Doppler Imaging to Examine Blood Flow in Free Flap Surgery - a feasibility study	10	3
Comparison of remifentanil patient-controlled analgesia vs. oral morphine analgesia for change of dressing in burns patients	0	1
A comparison of Pre-Medication with Oral Paracetamol v Intravenous Paracetamol given at time of induction for post-operative analgesia following wisdom tooth extraction	88	2
The psychosocial and support needs of men undergoing surgery for gynaecomastia (male form of breast enlargement) and their expectations of surgery	10	2
An investigation of the efficacy of a single low dose of insulin in the prevention of excessive cutaneous scarring in bilateral breast reduction patients – A phase II clinical trial	0	2
Appearance related concerns of women undergoing surgery for acquired and congenital breast conditions and their impact on levels of intimacy and satisfaction with surgery	96	3
The use of nanofibres for the treatment of cutaneous wounds	20	1
The effect of pH on corneal repair	1	0

Extent of extra-capsular fibrosis following breast implant insertion	0	2
Biology of the normal breast	0	1

The Trust also undertook a number of supervised audits with 4th year medical students from the Brighton and Sussex Medical School:

- Prevalence of occult breast cancer in breast reduction patients
- Treatment of over-granulating surgical wounds
- Are you content with consent?
- A retrospective review of the outcomes in patients with epiphora referred to an oculoplastic unit
- Retrospective review of lower eyelid surgery for cicatricial entropion

In addition to the above studies, there were also a two students undertaking MSc research projects in the Orthodontics Department, supported and Sponsored by Guys Hospital.

Involvement in NIHR portfolio studies

Accruals for NIHR portfolio studies are recorded in detail on a national database. The level of CLRN funding received by the Trust is partly determined by accrual figures. Accrual in 2010-11 was 84 participants, which represented an increase on the previous year. We expect accrual rates for NIHR Portfolio studies to continue increasing. In 2010-11 5 new NIHR portfolio studies were approved, via the CSP system.

Consumer involvement

QVH strives to find a meaningful way to involve consumers in its research activity. We are fortunate to have two very involved consumers who sit on our R&D Governance Committee as patient representatives, and take a very active role in advising on and monitoring the research activities of the Trust. We have also been actively pursuing a new line of research into psychosocial aspects of the surgery we undertake – much of this has been qualitative in nature – and we are seeking ways of analyzing patient perspectives on outcomes, in line with the Darzi report recommendations. We have also run a series of very useful focus groups to obtain consumer feedback on grant bids which we have been developing.

REGISTERED RESEARCH & DEVELOPMENT PROJECTS WITH ETHICS APPROVAL ONGOING IN 2010-11

Post functional outcome of hand burns and effect on quality of life

Chief Investigator B Dheansa

Status: IRP Study; recruiting

The best outcome after a hand burn is difficult to assess. There is no reliable method of working out how much functional outcome must be regained and how this may affect the patient's quality of life. This study will attempt to collect information about hand function after burn injury in order to develop a validated outcome measure. Key questions are how well do hand burns heal and how does this effect quality of life. We plan to recruit 10 patients with varying depths of hand burns and using several methods of physical and patient focused outcome assessment design a validated tool to assess outcomes

The study has been designed by a medical student in consultation with Surgeons, Nurses, Occupational and Physiotherapists, we have also consulted a patient focus group on the questions they feel are important to research in Burns.

An investigation of the efficacy of a single low dose of insulin in the prevention of excessive cutaneous scarring in bilateral breast reduction patients - A phase II clinical trial. (Commercial study)

Chief Investigator: Charles Nduka

Status - recruiting

The purpose of this trial is to determine the efficacy of a single application of insulin in reducing scar formation. Scarring is an immense clinical problem estimated to affect 100 million patients per annum. Scars affect both appearance and function. Scar tissue's inflexibility and contraction reduces mobility and function of affected body parts, joints and orifices such as the eye and mouth. Scarring results in disfigurement, disability, psychological problems alongside requiring multiple further corrective surgical procedures to reconstruct features and restore function. Currently there is no truly effective antiscarring treatment available to patients. Development of such a treatment would significantly improve quality of life for thousands of patients per annum, and reduce costs to the NHS. Laboratory research together with a small clinical trial (15 patients) has provided evidence for a novel antiscarring activity of insulin, where application of a single low dose early after wounding significantly reduces the scar tissue producing cells present and consequently scar tissue. The proposed large-scale multicentre clinical trial involves 75 patients undergoing non cancer related breast surgery to be recruited across two hospital sites. These patients have two identical wounds (one per breast), allowing matched inpatient placebo control. Each patient after giving informed consent would undergo their elective surgical procedure as per routine apart from each breast wound would be randomly allocated to receive either insulin or the placebo as subcutaneous injection along a 3cm end of the wound. Patients would be followed up as per routine (23wks and 3months) plus two additional follow up appointments at 6 and 12 months. At each of these their wound/scar would be assessed, photographed and a silicone mould taken by the nursing practitioner.

The effect of pH on corneal repair

Chief Investigator: Justin Sharpe

Status ongoing

This is a lab-based project and will examine the proliferation, migration and differentiation of corneal epithelial cells and corneal stromal keratocytes in response to variations in pH. Proliferation assays will be undertaken using tritiated thymidine uptake assays and migration will be investigated by the use of scratch wound assays and by measuring ex vivo explant outgrowth. Corneal epithelial cell differentiation

will be studied by measuring cytokeratin 3 (K3) and cytokeratin 19 (K19) expression by real time PCR and Western blot analysis.

This project forms part of an integrated wound repair and regeneration research programme at the Blond McIndoe Research Foundation.

In Vitro Study Of Endothelial Cells Damage During Femtosecond Laser-Assisted Descemet's Stripping Endothelial Keratoplasty

Chief Investigator: D Lake

Status: Not yet started

The cornea is the clear window at the front of the eye which is made of five layers. The innermost layer of endothelial cells is responsible for pumping fluid out of the eye which makes the cornea clear and thin giving good visual clarity. Corneal surgeries can be performed using simple microkeratome blade or by use of modern lasers like Femtosecond lasers. Our aim of this project is to assess the optimal depth of the corneal ablation, which can be performed safely without jeopardizing endothelial cell function. This will be an in-vitro study of 15 eye bank corneas that will have femtosecond laser application at different depths in posterior corneal stroma with standard spot separation and spot size.

A study of long term outcomes of paediatric burn injury. To assess the child and family satisfaction with the initial care and psychological support received, and the final result achieved

Chief Investigator: T Cubison

Current status – IRP Project; completed

A study was carried out in Newcastle in 2003/4 to review children who had sustained a scald injury more than 5 years previously to ascertain their long term outcomes. This project identified that of a number of outcome measures assessed the patient and family, structured survey was the most useful. This new project will involve contacting the families of a cohort of East Grinstead patients and facilitating the completion of the same patient and family surveys to identify what the long term psychosocial effects of the burn incident have had on the East Grinstead family group. The data will then be compared with the initial cohort.

The East Grinstead database will be used to identify the cohort of paediatric patients that were burnt between 2002 and 2004. The students will then attempt to trace the families using hospital notes, GP details and other NHS sources if possible. The patient and family questionnaires will then be sent out by post with a covering letter explaining the study and the purpose of the collection of data. The family will also be asked to provide a digital photograph of the area of the child that was injured if possible. The students will send out the letters and follow up with a telephone call where practical and ensure that the families have any help required to complete the questionnaires. When the questionnaires return the students will input the data into a database and compare the East Grinstead children with the Newcastle Group.

Investigation into the effects of Maxillofacial type sports injuries

Principal Investigator: K Lavery

Current Status: completed (external)

This will entail the use of qualitative research, through questionnaires, to 156 Maxillofacial departments in the NHS within the United Kingdom. The questionnaire will examine the incidence of sports injury to site specific areas of the facial skeleton e.g. Zygoma, Maxillae, Mandible, Frontal bone etc and the type of sport played to occur such injury. People who had prior facial fractures during admittance of a facial sports injury will be excluded from the proposed study as they may be overly susceptible to these types of injuries. The questionnaire will also provide information on gender, age and physical activity level of the participant. The information will then be processed,

analysed and the results from the questionnaire will give a novel and detailed insight into the occurrence of sports injury within the facial skeleton

LASER Doppler Imaging of blood flow in split thickness skin grafts (pilot study)

Chief Investigator: J Giles

Current status – IRP Project; completed

Breast Reconstructive surgery occurs after a woman has undergone a mastectomy for the treatment of breast cancer. A variety of techniques are used. Free flap surgery gives the best cosmetic results but is technically the most difficult option. Laser Doppler Flowmetry (LDF) is a well established technique to monitor the blood flow in the microcirculation. The Moor LDI2 scanner measures incident and reflected laser light shone on to the flap. Analysis of the intensity and frequency shift of the reflected light allows an indirect measurement of red cell velocity within the flap. The result is expressed in 'flux units'. The scanner measures blood flow to a depth of 1-1.5mm. The Moor LDI2 scanner allows larger areas to be scanned more rapidly than similar machines used in the past. Laser Doppler scanning has been successfully utilised in free flap monitoring in other centres and has been validated in breast free flap surgery. In this study we hope to establish the feasibility of using the Moor LDI2 scanner to monitor flap blood flow during and after surgery. If this study is successful, the next step in our research programme will be to examine the effects of various interventions on flap blood flow and surgical outcomes.

Appearance-related concerns of women undergoing surgery for acquired and congenital breast conditions and their impact on levels of intimacy and satisfaction with surgery

Chief Investigator: C Nduka

Current status – Ethics Committee granted; recruiting

Previous research confirms that plastic surgery can offer psychosocial benefits for women undergoing breast surgery but it does not address *all* the psychosocial experiences of patients or indeed *all* patient groups (Sandham & Harcourt 2007; Harcourt et al., 2003). There is a paucity of research examining the appearance and intimacy concerns of women undergoing breast surgery for acquired or congenital conditions which this study hopes to address. This is a prospective, longitudinal survey of all women who are undergoing breast surgery (specifically reconstruction, congenital asymmetry, reduction) at the Queen Victoria Hospital. The study will employ standardised measures. Comparisons will be made both within and between patient groups and therefore enable more tailored support as it is currently unclear how they differ in their care needs and the extent to which these needs are met

The effect of oral Ivermectin on Demodex associated blepharitis (CTIMP)

Chief Investigator: D Lake

Status: Ethics Approval and MHRA Approvals granted

Blepharitis is an almost ubiquitous problem in the Caucasian population over the age of 40. It causes ocular irritative symptoms, dry eye and occasional more serious corneal complaints such as ulcers, scars and vascularisation. There is no cure for blepharitis.

Blepharitis is associated with demodex mite infestation in the eye lash follicles.

This study will look at whether Ivermectin (a drug already used for mite infestations ie scabies etc), can reduce the infestation in demodex and reduce symptoms and signs of blepharitis.

Rapid autologous sprayed keratinocytes

Chief Investigator: T Cubison, S Booth

Status: Ethics Approval pending subject to minor changes to protocol

Burn wounds requiring closure with split skin grafts require skin to be harvested from a donor site. A Donor site usually heals in 10 – 14 days (similar to partial thickness wounds) the donor site heals by a process known as epithelialisation where skin cells from hair follicles divide and move over the wound to close it. We believe that we may speed this process up by using the cells taken from a small piece of skin and reapplying them onto the wound.

We aim to evaluate whether the application of a rapid harvest Keratinocyte suspension improves healing and reduces scarring in skin graft donor sites and use this as a model for deep partial thickness burn injuries. Patients undergoing a skin grafting procedure will be recruited and the skin graft donor site treated with isolated skin cells. The rate of healing will be measured and compared against control areas to give an accurate measurement of wound healing. Image analysis of digital photographs will be used to measure the rate of wound closure. Transepidermal water loss will be used to quantify the permeability of the skin to water. As one of the main functions of skin is to minimise evaporative water loss this is an important measure of its function.

A randomised controlled study comparing a dynamic splinting protocol versus a static splinting with early active motion protocol in EPL (Extensor Pollicis Longus) tendon repairs zones 2-6 after traumatic injury.

Chief Investigator: F Mellington

Status: Ethics granted; Recruiting

This study aims to investigate whether a static splinting with early active motion protocol is as effective as a dynamic splinting protocol, using ROM (range of movement) outcomes.

Comparison of remifentanil patient-controlled analgesia vs. oral morphine analgesia for change of dressing in burns patients

Chief Investigator: T Vorster

Status: Ethics Approval granted; MHRA approval granted

Failure to provide adequate analgesia for burns patients has a correlation with long-term outcome [1]. Burns dressing changes result in severe, short lasting periods of pain with little or no residual pain [2]. They require profound analgesia of short duration. It is current practise to give large doses of morphine with little or no titration or patient control, resulting in potentially inadequate analgesia, remnant sedation and delayed recovery [3]. Patient-controlled analgesia (PCA) has been shown to be effective in burns patients [3-5]. Ultra short acting opioids with rapid onset in PCA systems may be more effective than longer acting opioids with slower onset for the dressing changes. Remifentanil has a rapid onset providing profound analgesia with a very short duration of action. Remifentanil is particularly appropriate in this context as it does not accumulate in the body, irrespective of the dose used, or the duration of the infusion. There are no other opiates available with these unique characteristics. It has been shown to be safe and effective when used as a target-controlled infusion for burns dressing changes [6]. Remifentanil PCA has been validated for use in obstetric patients for labour pain [7, 8], which has similar characteristics to the pain experienced during burns dressing changes ie. short-lived periods of intense pain. Remifentanil is being used 'off license' for this indication.

Improving the use of limbal stem cell sheets for ocular surface rehabilitation through the development of cell banking and delivery methods

Chief Investigator: S Daya

Status: Recruiting. PhD study.

The limbus, surrounding the cornea is thought to contain cells from which corneal epithelium is derived. Often referred to as stem cells, recent work by Pellegrini using antibodies to p63, a transcription factor found in slow cycling cells with a long proliferative lifespan, reinforced this belief. Damage to the limbus, from disease or trauma, causing limbal deficiency can manifest itself in a loss of barrier function, conjunctival invasion and total loss of vision.

Pellegrini's group successfully used cultured autologous limbal epithelial cell sheets to resurface the corneas of patients with unilateral stem cell deficiency. More recently, cultured corneal epithelial cells from either contralateral or living relatives' eyes have been used.

To maximize the potential of these techniques and avoid damage to living donor tissue, we previously evaluated the use of cultured cell sheets from cadaveric limbal tissue.

Although successful, several problems exist with this technique: If cells don't grow or donor corneas are unavailable the operation has to be rearranged. Also the cell sheets are very fragile, cannot easily be transported and only one or two patients can be treated from a single limbal ring which are limited in supply.

The aim of this project is to develop the current technique allowing storage of expanded cells and/or sheets of limbal epithelial cells on a carrier membrane. The potential to store cultured viable limbal cells would allow distribution to centres without specialised cell culture facilities and allow more patients to be treated from a single donated eye.

The psychosocial and support needs of men undergoing surgery for gynaecomastia (male form of breast enlargement) and their expectations of surgery.

Chief Investigator: Charles Nduka

Collaborative study with University of West of England

Current status – being written up

Gynaecomastia is the most common form of breast abnormality seen in men. It can be a source of great embarrassment and have a negative impact on quality of life for those living with this condition. However, there is an absolute dearth of literature exploring the psychosocial impact of gynaecomastia and corrective surgery. Therefore, the purpose of this study is to gain an understanding of the lived experiences of men with gynaecomastia and to identify their psychological and support needs as well as explore their expectations of surgery. This is a piece of qualitative research using semi-structured interviews. Data will be analysed using Interpretive Phenomenological Analysis (IPA). This study will highlight the information and support needs of this patient population in order to inform service provision at the Queen Victoria Hospital and pave the way for further research in this under-studied area.

Seeding of skin stem cells onto nanofibre constructs to reduce the formation of contractures and scars following burn injuries.

Chief Investigator: J Sharpe

Sponsored by BMRB

Current status: Recruitment is still ongoing with the possibility of a new BSMS student taking over the project

Severe burn injuries extend deeper than the outermost layers of the skin. When patients suffer full thickness burns the dermis is lost. The dermis gives the skin elasticity and mechanical strength and its integrity is vital for the formation of the outermost layers of the skin that protect the skin from water loss and microbial ingress. The dermis consists of cells and collagen fibres. In healthy skin these fibres have a 'basket weave' pattern. Following injury, cells in the dermis move to repair the wound by laying down fresh collagen but they do this in a disorganised manner, rather than replicating the original fibre pattern, leaving a scar which contracts and is unsightly. Both fibroblasts and keratinocytes cause contraction of the scar. The intervention that interests us most involves introducing very fine fibres called nanofibres into the wounds to stop contraction during healing. Nanoscale engineering of the environment to control cell behaviour is emerging as an area with great therapeutic potential, particularly in the fields of medical implants and materials. In collaboration with the Institute of Biomedical Engineering, Imperial College, London, BMRF have produced electrospun fibre constructs made with specifically engineered properties to keratinocytes and fibroblasts to produce an ordered matrix of collagen fibres that is likely to reduce wound contraction and scarring. When electrospun fibres are combined with gelatin gels seeded with cells, contraction can be measured in vitro. They are currently assessing the effect of introduced keratinocyte stem cells on contraction of the artificial scaffold. Data from this study has allowed BMRF to win a grant from the 'Fondation Le Lous'. They have been contacted by this foundation who has indicated that they would be willing to fund this project beyond the amount we submitted (25,000Euros, the maximum amount that could be requested in this application). They are therefore consulting with them to extend this project to a commercial partner who is willing to collaborate and fund the work. As nanofibre technology holds such potential for wound healing BMRF will also, in collaboration with the team from Imperial College, apply to the Medical Research Council in July to extend this work which, if successful, would also provide BMRF with two new researchers to undertake this project.

Improving wound healing. Assessment of parameters at the wound surface that affect healing and the survival of skin grafts and cultured cells

Collaborative project with the BMRF; funded by BMRF grant award

Chief Investigator: B Dheansa

Current status – The final few patients are being recruited

The take rate of conventional skin grafts and cultured cells is of clear importance to the wound healing process and the subsequent outgrowth of healthy cells is important in terms of wound closure and scar reduction.

Current, although limited, research indicates that pH is a potent influential factor for the wound healing process and that different pH ranges are required for certain distinct phases of the wound healing process. Generally pH is a neglected factor when it comes to treatment of wounds with the majority of research focused on chronic wounds. Little attention has been paid to the effects of pH on the healing of acute burns trauma.

The psychosocial and informational needs of women undergoing surgery for congenital breast asymmetry

Collaborative project with University of West of England

Chief Investigator: C Nduka

Status: In write-up.

Distortions of breast size and shape can have a detrimental impact on the wellbeing of women. However, very little research to date has explored the psychosocial impact of congenital breast asymmetry and the support needs of these women who are seeking corrective surgery. Therefore, the purpose of this study is to gain an understanding of the lived experiences of women with congenital breast asymmetry and to identify their psychological and informational needs. This is a piece of qualitative research using semi-structured interviews. Data will be analysed using thematic content analysis. This study will highlight the specific information and support needs of this patient population in order to inform service provision at the Queen Victoria Hospital.

A Comparison of Pre-Medication with Oral Paracetamol versus Intravenous Paracetamol Given at Time of Induction for Postoperative Analgesia Following Wisdom Tooth Extraction (CTIMP)

Funded by RfPB grant award

Chief Investigator: S Fenlon

Current status – recruitment completed. In analysis.

This study aims to determine if orally (PO) administered paracetamol given as a premedication one hour preoperatively has equivalent analgesic effect to that of intravenous (IV) paracetamol given at the time of surgery.

This will be a double-blinded controlled equivalence trial comparing the visual analogue scale (VAS) pain scores between two groups of randomly assigned consecutive participants undergoing general anaesthesia for wisdom tooth extractions. Patients will either receive oral paracetamol tablets one hour preoperatively on the ward or IV paracetamol at the time of the operation. Corresponding placebo preparations will be administered simultaneously.

Our primary end point will be the proportion of patients in each study arm who experience meaningful pain relief one hour postoperatively. This will be determined by measuring visual analogue scale (VAS) pain scores in recovery. Meaningful pain relief is defined as those experiencing mild or no pain. Secondary end point: Time taken to the request for 'rescue analgesia' in recovery.

The effect of intra-operative passive movement on non-surgical site pain after breast reconstruction

Chief Investigator: C Patel

Current status – in write up.

The hospital's physiotherapists have designed a simple, safe and reproducible set of passive movements that can be performed on a patient without delaying or hindering their prolonged breast reconstruction. We have called this therapy "Intra-operative Passive Movements (IPM)". During prolonged breast surgery, IPM may be effective in reducing NSSP through reducing neural tension and avoiding both pressure and immobility in soft tissues, muscles and joints. Our aims are to look at the incidence of NSSP and whether IPM reduces it.

A pilot study of histological and clinical variables contributing to both a long-term natural history and an estimation of time from injury for normal cutaneous scars taken at routine scar revisions at 4 plastic surgical units in the UK

Principal Investigator: T Cubison

Current status – recruiting

Keloid and hypertrophic scarring are both disfiguring scars that affect individuals after injuries, operations and burns. There are no universally effective remedies for scarring, and we often have to rely on surgical techniques of scar revision which in reality simply create more scars. Once a scar is created there are few means by which we can control it. Scars can continue to grow larger (keloid scars) or they can be raised, painful, red and associated with joint contractures (hypertrophic scars). Managing scarring takes up a significant proportion of the workload of a plastic surgeon and can seriously reduce the quality of life for the sufferer; nowhere is this seen more commonly than in burnt patients. Surgery has reached a biological frontier when it comes to scarring, having little effective understanding of the process which has led to a paucity of treatment options. This research will attempt to address scarring in a "back to basics" approach, we are not studying abnormal scarring, which has already been done, but we are trying to achieve a clearer picture of what a normal scar actually represents. With this information abnormal scarring may become easier to distinguish from normal scarring and so new avenues of therapy can be opened.

Forensic anthropologists are frequently involved with the identification of either living or dead human subjects. To date, there are no studies showing the long-term changes that occur in scars. If a clear set of histological (microscopic) variables that change with time can be established then an accurate estimation of time duration from injury could be achieved. This would give the investigator knowledge as to when an individual has been injured which would provide more information to identify them with. It also has medico legal implications providing a better evidence base for medical witness testimony in court regarding the nature of scars.

Extent of extra-capsular fibrosis following breast implant insertion

Chief Investigator: R Smith

Status – recruiting.

Breast cancer is the commonest cancer affecting women in the UK and USA, with over 41,000 and 270,000 cases respectively, being diagnosed annually. A significant proportion of these patients would have previously undergone implant augmentation, either for aesthetic reasons or as part of a previous reconstruction. In a number of cases where such women have subsequently undergone free flap breast reconstruction, we have encountered significant perivascular fibrosis when dissecting out the internal mammary vessels to perform anastomosis. The popularity of the internal mammary artery and vein as recipient vessels has increased over recent years with Quaba et al reporting over 70% of surgeons using them in delayed breast reconstruction.

The formation of a capsule around a prosthetic breast implant is well documented. The extent of fibrosis into the deeper tissues and its effect on recipient vessels for free flap breast reconstruction is not known.

In those women undergoing capsulotomy/capsulectomy we propose to take small biopsies of deeper tissue and examine them histologically for evidence of fibrosis. If there is evidence supporting this theory, then it may influence the reconstructive surgeon to consider an alternative technique in this particular sub group of patients.

Enzymatic debridement on burns patients (children and adults): a comparison to standard of care. Phase III

Commercial study

Principal Investigator: P Gilbert

Status: completed

In 2004 QVH took part in Phase II of this trial comparing a new enzymatic debriding agent (debrase) to standard surgical care. Debrase (DGD) is an agent derived from pineapple stem which has the ability to "eat" dead tissue leaving a healthy wound bed. This Phase III study is enquiring if DGD is effective in a larger population of patients including children, if successful the sponsors hope this treatment will reduce the need for surgery as this often sacrifices healthy tissue with healing potential in the process of debridement.

This is a phase III trial to compare whether Debrase is more effective in debriding deep burn wounds than standard surgical debridement and closure with split skin grafts. Primary end points are: % of wound debrided; Secondary end points are: time to complete wound closure and % wound treated with split skin graft

Comparison between sheet grafts and 1:1 mesh grafts in burnt patients

Chief Investigator: B Dheansa

Status: recruiting; some problems with recruitment due to due to fewer patients requiring surgical closure

Meshing is the term used for cutting slits into a split skin graft and stretching it open prior to transplantation. Meshed grafts have a number of advantages over sheet grafts, which are generally perforated by scalpel: 1) Meshed grafts can be stretched to cover a larger area than sheet grafts; 2) the contour of the graft can be adapted to fit an irregular recipient bed; 3) blood and tissue fluid can drain freely through the meshed graft to allow for increased graft take; 4) In the event of bacterial contamination only a small portion of the graft may be lost; 5) meshed graft offers multiple areas for re-epithelialisation^{i,ii,iii}. The main disadvantages of meshed grafts are the large area that must heal by second intention, and the persistence of mesh pattern in the healed graft. In areas of cosmetic sensitivity, sheet graft is still frequently used to avoid mesh pattern, but graft loss may be higher for the reasons outlined above. Some of these problems have been addressed by using unexpanded 1:1.5 machine meshed skinⁱⁱ.

Anecdotal evidence suggests that 1:1 mesh has the advantages of machine meshing, but with a similar cosmetic outcome as sheet graft. We are currently the only centre in the UK using a mechanical 1:1 graft mesher.

100 consecutive SSG donor sites - outcome data

Chief Investigator: B Dheansa

Status: recruiting;

Split Skin Grafting (SSG) is a common procedure. Although previous reports on skin graft donor sites report healing times, complications and benefits of particular dressings there is a paucity of data on the long term appearance. Healing times range from 7 to 20 days. Delayed healing or donor site infection may significantly affect the long term appearance of a donor site. Equally there is little data comparing patient and clinical views on donor site appearance in the long term. The method of dressing donor sites used in this department differs from other centres.

Aim: To provide information on the long term appearance of split skin graft donor sites and relate this to healing times and complications. In addition, to provide a comparison between patients' and clinical views on the appearance of the donor site. To compare healing and complication rates of this departments dressings protocol with other series.

Pharmacokinetics of antibiotics in burn patients

PhD project in collaboration with University of Brighton

Part-funded by Royal Pharmaceutical Society

Chief Investigator: J Allen

Status: completed; **PhD awarded**

Patients with major burns experience pathological changes which have been shown to influence the pharmacokinetics of antibiotics. Subsequently it has been demonstrated that conventional doses of some antibiotics given to patients with major burns may result in sub-therapeutic serum concentrations. This multi-centred study aims to measure serum concentrations of the antibiotic – colistin. This antibiotic is used to treat life-threatening infections in burns patients, but there is little pharmacokinetic data known in this population. The results will be fed back to participating burns units to adjust doses if necessary, and the pharmacokinetic data obtained used to develop a model for the dosing of colistin in this group of patients. These results will be combined with previous pharmacokinetic studies for a meta-analysis to further develop a model for dosing of antibiotics in major burns patients.

Biology of the Normal Breast

Recruiting site for the Ludwig Institute

Principal Investigator: R Smith

Status: Recruiting – problems due to departure of histopathologist; adopted onto the National Portfolio

In this project we are proposing to collect tissue that would normally be discarded when healthy women undergo breast reduction surgery at the Queen Victoria Hospital NHS Trust, East Grinstead, Surrey. Women will be provided with an information sheet and ask for consent to donate this excess tissue for research purposes. If consent is obtained, breast tissue removed by the surgeons will be sent directly to the Breakthrough Pathology Core Facility in the Breakthrough Breast Cancer Research Centre together with a copy of the consent form and the following patient information (name, hospital number, age, parity). At this stage the material will be assigned a specific number by the Pathology Core Facility. Following macroscopic inspection by a pathologist (Dr. Jorge Reis-Filho), sample areas will be removed for diagnostic purposes and with Dr Reis-Filho's consent the remaining tissue will be used for research purposes. The samples removed for diagnostic purposes will be fixed overnight, processed, embedded, cut and stained. Dr Reis-Filho will examine the slides and write a report covering the macroscopic examination and histopathology of the tissue. The case will be reviewed by a consultant pathologist (Dr Ashutosh Nerurkar) and the final diagnostic report sent to the Queen Victoria Hospital NHS Trust, East Grinstead, Surrey. No further information will be required from the patient and there will be no patient follow up.

PLANNED PROJECTS NOT YET given ethics approval

A multicentre, prospective, controlled, randomized, comparative trial of Glyaderm® and split thickness skin graft versus split thickness skin graft alone in full thickness skin defects - Commercial

Can rapid harvest skin cells improve donor site healing? – S Booth

A Randomised Controlled Trial of Pain Experienced During the Administration of Botulinum Toxin Injection With or Without Prior Cryoanalgesia – C Nduka

Breast Reduction Study (pilot study) – Sinead Ni Mhurchadha

What influences blood flow in free flap surgery? – Julian Giles

Queen Victoria Hospital NHS Foundation Trust Budget Statement

Cost Centre: 504 Research

Year to date as at month end Mar 2011

Budget Holder: Sarah Dawe

Period 12 Financial Year 2011

Income

Month Actual £	Month Budget £	Variance fav/(adv) £	Month Worked WTE	Month Budget WTE	Code	Account Name	Full Year Budget £	YTD Actual £	YTD Budget £	Variance fav/(adv) £
5,113	3,290	1,823			20109	R&D Income (Nlhr Flex/Sustain)	39,480	47,822	39,480	8,342
(4,368)	1,541	(5,909)			20110	R & D Income	18,492	0	18,492	(18,492)
1,958	542	1,416			20111	R&D Income (Clinical Trials)	6,504	7,273	6,504	769
(14,703)	589	(15,292)			20112	R&D Income (Project Rpc 179)	7,068	0	7,068	(7,068)
1,750	0	1,750			20113	R&D Income Cim Contingency	0	11,661	0	11,661
(6,750)	469	(7,219)			20873	Sussex University Ip Income	5,628	1,875	5,628	(3,753)
(17,000)	8,431	(28,431)				Subtotal	77,172	88,831	77,172	(8,641)

Payroll

Month Actual £	Month Budget £	Variance fav/(adv) £	Month Worked WTE	Month Budget WTE	Code	Account Name	Full Year Budget £	YTD Actual £	YTD Budget £	Variance fav/(adv) £
(1,819)	0	(1,819)	1.00		70005	Consultant	0	(18,313)	0	(18,313)
(337)	(331)	(6)	0.18	0.18	72160	A&C Band 4	(3,972)	(3,983)	(3,972)	(11)
(6,328)	(6,319)	(9)	1.66	1.66	72175	A&C Band 7	(75,828)	(75,086)	(75,828)	742
(12,876)	0	(12,876)			79120	Research Staff Transfer	0	(12,876)	0	(12,876)
(21,361)	(8,660)	(14,711)	2.84	1.84		Subtotal	(78,800)	(110,268)	(78,800)	(30,468)

Non-Pay

Month Actual £	Month Budget £	Variance fav/(adv) £	Month Worked WTE	Month Budget WTE	Code	Account Name	Full Year Budget £	YTD Actual £	YTD Budget £	Variance fav/(adv) £
(1)	0	(1)			33505	Stationery	0	(88)	0	(88)
0	0	0			33600	Postage	0	(300)	0	(300)
0	(277)	277			34110	Professional Service Fees	(3,324)	(10,938)	(3,324)	(7,614)
0	(57)	57			34200	Travel & Subsistence	(684)	(804)	(684)	(120)
(47)	0	(47)			34201	Travel & Subsistence(P)	0	(469)	0	(469)
0	(22)	22			34705	Training Course Fees - Non-Nhs	(264)	0	(264)	264
0	0	0			34709	Training Course Fee-Non-Nhs(P)	0	(26)	0	(26)
21	0	21			35300	Hospitality	0	(40)	0	(40)
6,919	(592)	7,511			35401	Research Project Rpc 179	(7,104)	(300)	(7,104)	6,804
0	0	0			35610	Patients Research Payments	0	(300)	0	(300)
0	0	0			35705	Licences And Subscriptions	0	(1,026)	0	(1,026)
8,891	(848)	7,838				Subtotal	(11,378)	(14,280)	(11,378)	(2,814)

TOTAL

Run Date: 15 APR 11

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