

Research at QVH

Research at QVH focuses on the highly specialised work in which the trust is one of the leading units worldwide.

Working with the Blond McIndoe Research Foundation, we have particular research strengths in the treatment of burns, building on our long history of pioneering work, and have also carried out research into the development of epithelial and cartilage cell culture techniques and their delivery to patients. Our strong position in translational research was recognised by CHI (the former Commission for Healthcare Improvement) at our last inspection, who commented that 'there are excellent examples of pioneering and innovative research being used to improve patient care', and since then feedback from the Department of Health has rated our programme as 'strong'.

The trust works closely with the Blond McIndoe Research Foundation (BMRF) - pictured above - an independent registered charity, which has an extensive research infrastructure situated in the hospital grounds. Once it reopens, its new international class Clean Room, one of only a handful of units in the UK which comply with EU directives, will allow a considerable expansion in the translation of the cell-culture work to clinical practice, and will complement the development of the programme over the next few years.

Under the 'Wound Healing and Tissue Reconstruction' programme, the BMRF are conducting innovative clinical studies investigating the application of sprayed cultured autologous keratinocytes to paediatric scalds, and sprayed cultured skin cells in combination with meshed split thickness skin grafts in patients with full thickness burns. The novel approach to the delivery of limbal stem cells has potential for widespread clinical application. We have translated into clinical practice the polymerase chain reaction technique, developed in the laboratory, and used it to monitor the fate of these donor cultured corneal limbal cells via DNA fingerprinting. Since its start in 2002-03, this programme (encompassing a range of projects) has produced many publications.

Our Research and Development (R&D) strategy has recently been widened to include a new avenue of research exploring the psychosocial aspects of both trauma and elective surgery. This new emphasis draws on the work of many of the Trust's renowned surgical specialties, and builds on the experience gained in previous successful projects on telemedicine and 'Returns to Work Following Burns'.

How has our research benefited patients?

Our completed research project on the use of telemedicine continues to bear fruit, with the telemedicine technology now having been rolled out to 25 remote sites. This enables trusts to securely transmit images and clinical data, facilitating more rapid clinical decisions and avoiding inappropriate transfers. The software is easily transferable to other sites, and has been purchased by two other trusts. On the basis of this project, the trust was invited to contribute evidence to the House of Commons Health Committee report on 'The Use of New Medical Technologies within the NHS'.

Our corneal stem cell culture project, in partnership with BMRF, has been recognised as an official change in practice for end-stage corneal disease, having attracted international attention.

Past work with the BMRF on the application of cultured cells to mastoid cavities has been rolled out into regular clinical practice, leading to improved take of cultured cells for patients with long-standing symptomatic discharging mastoid cavities.

Our project with BMRF on cultured buccal epithelial cells has also been translated into a change in practice. Radial forearm flaps, which are used for intra-oral reconstruction, are lined with these cells. This therefore creates a thin reconstruction of full thickness cheek defects extending into the buccal cavity in cancer patients. Since the lining element of reconstruction is with cultured buccal epithelial cells, it is neither hair-bearing nor lined with keratinocytes which have a long-term problem with desquamation.

Involving the public

Consumers are always involved in the design of all our research projects, and the trust particularly welcomes the involvement of any further members of the public who may wish to comment on an aspect of a research project, or be involved in its design or execution. Please contact the R&D department if you are interested.

Recent research projects

- Malocclusion and bullying
- Do rectus sheath blocks improve postoperative analgesia in patients undergoing abdominoplasty?
- A comparison of pre-medication with oral paracetamol versus intravenous paracetamol given at time of induction for postoperative analgesia following wisdom tooth extraction
- The effect of intra-operative passive movement on non-surgical site pain after breast reconstruction
- 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
- A double blind, placebo controlled trial to investigate the efficacy of Zesteem in accelerating the healing of split thickness skin graft donor sites
- A comparison of the effect of wearing Bangerter occlusion foils on idiopathic blepharospasm between occlusion-positive and occlusion -negative patients.
- The emotional experiences of patients following removal of the eye (evisceration or enucleation)
- double blind, placebo controlled, randomised trial to investigate the efficiency of Juvista in the improvement of scar appearance of patients undergoing bilateral reduction mammoplasty
- Evaluation of the Advanced Vision Science Intraocular lens
- The experience of patients returning to work following burns injuries - a qualitative study
- Extent of extra-capsular fibrosis following breast implant insertion
- Do genetic tests help specialists to detect cancer cells?
- Enzymatic debridement on burns patients (children and adults): a comparison to standard of care. Phase III
- Ex-patients' views of their autonomy within the physical rehabilitation ward environment - a qualitative study
- Efficacy of ultrasound guided retro-mammary blocks for post-operative pain control in patients undergoing breast surgery
- Comparison between sheet grafts and 1:1 mesh grafts in burnt patients
- 100 consecutive SSG donor sites - outcome data
- Changes in cardiac output during induced hypotensive anaesthesia and effects of tilting during Maxillo-facial surgery
- A prospective randomised clinical trial investigating orthodontic bond failure rates using a self etch primer system and a conventional two stage etch and bond system
- A randomised controlled trial of Goode T-Tubes in patients undergoing cleft palate repair - 20-year follow up
- Translaryngeal injection of local anaesthetic - a comparison of spread following injection at deep end inspiration with deep end expiration phases of the respiratory cycle
- To ascertain the usefulness of the Aintree Catheter as a means of intubation and to compare its usage via a laryngeal mask (LMA) and an intubating laryngeal mask (ILMA)
- A comparison of resorbable versus metal plates for the management of fractured mandibles
- An investigation into the application of sprayed cultured autologous keratinocytes to paediatric scald injuries, in an attempt to reduce scarring by achieving wound closure by three weeks from the time of injury
- A comparison between sprayed cultured skin cells in combination with meshed split thickness skin grafts and meshed split thickness skin grafting alone in patients with full thickness burns
- Pharmacokinetics of antibiotics in burn patients
- Comparison of codeine phosphate and morphine sulphate in infants undergoing cleft palate repair

- An exploration of perioperative practitioners' knowledge compared to care delivered to elderly patients during surgery
- The use of the Polymerase Chain Reaction (PCR) technique to monitor the fate of donor cultured corneal limbal cells used to reconstruct the surface of patients' eyes
- Does LRTI improve first metacarpal stability following trapeziectomy
- Telemedicine: the clinical evaluation of the use of telemedicine in tertiary trauma referrals to a regional specialty centre
- New markers in breast cancer
- Measurement of tracheal airway pressures during transtracheal jet ventilation
- Recovery profile and side effects of remifentanyl-based anaesthesia with desflurane or propofol for prolonged surgery
- A critical examination of the management of extensor tendon repairs by early active mobilization
- CTFS II HLA Matching in Corneal Transplantation
- Trapeziectomy - which surgical approach is best?
- Multi-centre trial of Alphacor keratoprosthesis
- Re-repair of cleft palate using Furlow technique
- Buried absorbable sutures are an acceptable alternative to removed non-absorbable sutures for closure of wounds of the face
- Trapeziectomy - Can early mobilisation prevent stiffness?