NEWCASTLE ACADEMIC MUSCULOSKELETAL CLINICAL DIRECTORATE

Introduction:
The Musculoskeletal Clinical Directorate comprises Orthopaedic Surgery and Rheumatology; one of the few departments in the country to combine both specialities in the same Directorate. There is therefore the potential to deliver integrated care and research across these related disciplines. Both specialties include the whole range of services for patients of all ages. Within Orthopaedics, all of the major sub-specialities are represented, with an emphasis on complex and specialist care, including a Major Trauma Centre, Spinal Surgery, Paediatric Orthopaedics, Arthroplasty and Oncology. In Rheumatology, subspecialty expertise includes resistant arthritis/vasculitis, paediatric/adolescent rheumatology, spondyloarthropathy, systemic lupus erythematosus, scleroderma, and Sjögren’s syndrome.

Research:
• The Newcastle Musculoskeletal Research Group (MRG) encompasses researchers at Newcastle University and clinicians at NUTH. Achievements include: European League against Rheumatism (EULAR) Centre of Excellence; Arthritis Research UK (ARUK) Experimental Arthritis Treatment Centre; ARUK Centre of Excellence in Rheumatoid Arthritis Pathogenesis, MRC/ARUK Centre for Integrated Research into Musculoskeletal Ageing, Ageing Limbs strand of NIHR-Newcastle BRC.
• National leadership within the department (e.g. Chairman of NIHR Translational Research Partnership (TRP), ARUK Inflammatory arthritis clinical study group & MRC/APBI RA-MAP consortium, MRC DPFS and stratified medicine panel membership, MRC Translational Research Group membership, CI of UK primary Sjögren’s syndrome registry (UKPSSR), ICM director. Leadership within subspecialty interests in foot and ankle, spine surgery, trauma and oncology.
• Established links between researchers at University and clinicians at the Trust. Track record of industry engagement in Orthopaedic surgery with clinical research grouping and numerous industry funded studies. Recent Newcastle-led MRC DCS/Biomedical Catalyst award for a phase IIa clinical trial in repurposing an oncology drug for the treatment of rheumatoid arthritis (RA) with an industrial partner & Glasgow/Birmingham universities; MRC stratified medicine collaboration (MATURA), MRC/ABPI RA-MAP consortium, BBSRC Case studentships, education grants, Wellcome Fellowships), TRP projects (2 in RA, 3 in Sjögren’s) and several early phase clinical trials. Regular tissue banking in place. ARUK Tissue Engineering Centre.
• Strong track record in grant funding success from research councils and major charities (total £30millions between 2008-13 with MRG staff as PI).
• Active participation of NIHR portfolio research including commercial studies, with 10 out of 11 rheumatology consultants currently engaging in a total of 46 NIHR portfolio studies. 416 publications between 2008-13. Increasing activity in portfolio studies in trauma and elective orthopaedics.
• Cadaveric teaching laboratory driving standards and collaboration with industry. Strong track record of attracting Academic Clinical Fellows in Orthopaedic Surgery and Rheumatology (ACF). Development of internationally renowned teaching materials (e.g. GALS, pGALS) and patient education materials.
• UKPSSR. ARCogen. Purpose-built clinical research facilities with ultrasound, peripheral MRI, DEXA, arthroscopy suite and tissue-processing laboratory. Movement laboratory development with links to CARU and Culture Lab.

Our Vision - “Expand, Enhance, Engage, Empower & Excel”:
1. **Expand**: Increase grant income especially through NIHR, research councils, and ARUK. Increase NIHR portfolio research activities and commercial clinical trials. A study for every patient.
2. **Enhance**: Integrate clinical research into clinical practice, improve clinical data management. Strengthen research infra-structure. Develop novel diagnostic and assessment technologies.
3. **Engage**: Create an ethos that enthuses and motivates patients/public/staff to participate in clinical research. Widen access to clinical research and encourage and support clinical staff to develop studies. Encourage cross disciplinary working to capitalise on strategic strengths.
4. **Empower**: Support academic training in rheumatology and orthopaedic surgery. Develop capacity for both medical and AHP research staff with career development in order to reach critical mass. Support clinical innovation and implementation within the directorate. Encourage and support NHS clinicians to initiate high quality clinical research projects.
5. **Excel**: Drive impactful research. Deliver research studies to time and target. Ensure effective and fair deployment of NIHR and other NHS research funding.

Specific Objectives:
1. **Short-term (1-2 years)**: Identify key strategic research themes which play to local strengths and opportunities.
2. **Medium-long term (3-5 years and beyond)**: Develop a culture of clinical and scientific collaboration leading to an increase in grant income and access to portfolio studies.