19/149 Solid Organ Replacement, Transplant and Donation

Summary

The National Institute for Health Research (NIHR) is interested in receiving research proposals from the community that will overcome barriers and challenges to organ donation and transplantation, specifically SOLID organ donation and transplantation of those organs that are included on a donor card; heart, lungs, cornea, liver, pancreas, small bowel, tissue, kidneys, and bone.

Applications focused on blood and stem cell studies would be considered out of remit for this particular call and should be submitted to the researcher-led workstreams of the participating programmes.

Given the scope of this call, we would welcome applications that span the remit of one or more of the participating research programmes and which comprise of co-ordinated teams of investigators spanning different specialties/disciplines and geographical centres.

We expect to receive applications that are co-produced, demonstrating an equal partnership with service commissioners, providers and service users in order to provide evidence and actionable findings of immediate utility to decision-makers and service users. Applicants may wish to consult the **NIHR INVOLVE guidance on co- producing research.**

Specific areas of interest for research

For the purposes of this call, seven broad themes have been described below with examples of particular areas of interest for research. However, these are examples and do not represent an exhaustive list.

Applicants should also consider the following:

The ethical and consent issues involved and how these will be addressed.

- Equity of access to both donation of organs and transplantation of organs across different patient groups, including for example ethnicity, gender, cultural beliefs and geographical distribution of disease burden.
- The potential impact on health inequalities.

1. **Donor and organ assessment:**
   This would include objective and quantitative biomarkers that improve the assessment of donor and organ quality and are likely to improve transplantation success and recipient outcomes, as well as alternative service delivery models for such assessments.
2. **Donor management:**
   Interventions / technologies in donors which are initiated prior to organ retrieval to optimise organ quality and transplant recipient outcomes are of interest, as are alternative service models for delivering donor management, including for example (but not exclusively) the role of donor assessment centres.
3. **Organ and donor perfusion**
   These include perfusion technologies applied either to donors or individual organs during organ retrieval to optimise organ quality and hence transplant recipient outcomes.
4. **Transplantation**
   Technologies or interventions employed during the surgical transplantation of solid organs likely to enhance the surgical success of the transplant and with improved recipient outcomes.
5. **Post-transplant care**
   Technologies or interventions designed to optimise the longevity and function of transplanted organs and hence organ recipient quality of life, including alternative

service models for delivery, are of interest.

6. **“Next wave” of transplantation**
   This could include technologies which may impact upon transplantation in the longer-term, for example (but not exclusively) cellular therapies for reducing rejection, xeno-transplantation and 3D-printing of organs, as well as alternative service delivery models.