

**Purpose** Geographical imbalance in cornea supply is a key feature of global eye banking. Most countries of South Asia particularly India suffer from donor cornea shortage which limits the number of keratoplasties, thereby aggravating the already high burden of removable blindness. The purpose of the project is to identify and cross-pollinate best practices from two leading eye banking institutions in India and Germany, and thereby improve service delivery of both systems. The project is supported by the GIZ Hospital Partnerships funding program on behalf of the Federal Ministry for Economic Cooperation and Development (BMZ) with a co-financing by the Else Kröner-Fresenius Foundation (EKFS). It started in 2021 and will last upto 2023.

**Methods** A joint expert group from both organisations conducted a series of workshops to identify the areas of intervention and specific practices to be introduced at the Indian partner's region. The overall increase in cornea collections and transplants, documented systemic improvement measures and research output were defined as the key outcomes.

**Results** Interim results are presented here. Two interventions identified were expansion of catchment area of cornea collection in India, and improved information management system to monitor the progress and efficiency of the collection centres. Under the former intervention, the hub-and-spoke model from the German partner was introduced to the most populous state of India through establishment of two new cornea collection centres (spokes) for Hospital based Cornea collections. In six months these centres have supplied 79 donor corneas leading to 63 transplants at the hub. Under the latter intervention, the specifications of a baseline data capture and operations management system which can be used in low resource settings are being developed.

**Conclusion** The initiative has shown how best practice from one geography can be adapted and successfully implemented in another geography. Furthermore, the public knowledge resources created in the project can be used by other eye banks to advance eye banking in their respective countries.

#### P26-A125 DONATION MEDICINE: A CHANGE OF PARADIGM IN PROCURING OCULAR TISSUES FOR TRANSPLANTATION

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**Purpose** To reflect on the implementation of the concept of 'Donation Medicine' as a substitute for 'Procurement' to describe the Foundation's activities in the procurement of ocular tissue and donor selection, considering that the prevailing connotation of procurement (the action of obtaining materials, goods and services necessary to the functioning of a productive activity) did not express satisfactorily all the social, human and medical implications of a programme aimed at promoting ocular tissue donation and recovery. Moreover, in medicine the term 'Procurement' is generally associated with the worst therapeutic outcome, which is the end of a human life.

**Methods** A retrospective evaluation of the main indicators pertaining to activities in 2021 was performed, with particular regard to donor screening, tissue recovery, and the human and professional relations with donor families and hospital staff.

The results were assessed by an interdisciplinary team, composed of eye bank and healthcare personnel, regulators and experts in medical humanities.

**Results** In 2021, in light of 2944 non-oppositions to donation (opting out system), 891 consultations of the national SIT donor registry were performed (Sistema Informativo Trapianti), with 2551 clinical charts reviewed, 4332 related phone consultations performed, and 2032 nasopharyngeal swabs for SARS-CoV-2 nucleic acid tested; as a consequence, 2213 condolence and gratitude letters were sent to donor families, of which 57%(1269) conveyed the outcome of donation, along with 115 gratitude letters sent in instances of the non-recovery. 24 families requested, and were granted, the opportunity to visit the eye bank.

**Conclusion** A consensus was reached on the evidence that the term 'Procurement' has obvious limitations in the long term nurturing and maintenance of the motivation of the eye bank and healthcare personnel. As a consequence, the concept of 'Donation Medicine' was implemented to define and develop the activities related to the promotion of donation, the recovery of ocular tissues for transplantation, and internal/external relations with healthcare personnel, thus changing the meaning of 'Procurement', from a process at the end of a life to the realization of a new pathway of care that takes into account both donor families and recipients. Donation medicine begins with the re-opening of the donor clinical chart, the interaction with donor relatives and the recovery of a precious gift for use in the restoration of sight of patients.

#### P27-A149 LIVERPOOL RESEARCH EYE BIOBANK-OUR EXPERIENCE OF EXPANDING TO COLLECT FROM LIVING DONORS

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**Purpose** The Liverpool Research Eye Biobank (LREB) collects tissue for researchers who wish to study a wide range of ophthalmic conditions and develop new and more effective treatments. Historically the LREB has collected whole globes and conjunctiva from cadaveric donors but in 2021 we expanded to start collecting tissues from living donors who were undergoing ophthalmic surgery in the St Paul's Eye Unit in Liverpool. The aim was to provide tissue and fluid samples from patients with specific eye disease to research projects and create a bank of ophthalmic samples that can be provided to future research projects. Here we reflect on our experience after a year of collections.

**Methods** The clinical team discuss donation with patients during the pre-op appointment. Consent is taken on the day of surgery using an electronic consent form available on PENS. Samples are taken according to the patient's consent preference and then stored appropriately within a fridge/freezer close to theatre. Samples are then transferred for processing to the University of Liverpool (UoL). Fluids such as aqueous and vitreous are preserved at -80°C. The majority of ocular tissue collected is preserved by fixing in 10% neutral buffered formalin then transferred to 70% ethanol for long term storage. On request samples have been preserved using alternative methods such as snap freezing in liquid nitrogen. All samples are logged using a laboratory information management system.

**Results** Collections depend on the cooperation of the clinical teams and we have had very good engagement from them. The UoL works closely with St Pauls Eye Unit and the physical proximity between the two has been helpful. The location of the storage fridges close to theatre is important to limit extra effort for busy clinical teams. Regular training of consenters was key to ensure compliance with SOPs. In 11 months, we consented 419 donors and collected 673 samples including corneal tissue, iris, sclera, lens/capsule, retinal membranes, tenons, muscle, aqueous, vitreous, blood.

**Conclusion** After the success of collections from one site we plan to expand to collect from multiple sites including Aintree and Alder Hey Children's Hospital.

#### P28-A146 THE IMPACT OF COVID-19 PANDEMIC ON EYE BANKING IN THE LUBLIN EYE BANK, POLAND

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**Purpose** The purpose of this study was to investigate the impact of the COVID-19 pandemic on the Lublin Eye Bank activities.

**Methods** We compared the corneal donors screening rules, number of harvested corneas before, during, and after the pandemic (2019, 2020, 2021, 2022 years).

**Results** In 2019 we had 182 corneal donors and 360 harvested corneas; in 2020 – 114 donors and 227 corneas; in 2021 – 151 donors and 300 corneas, and in 2022 till the 15th November – 115 donors and 228 corneas. From the 11th March 2020, when the World Health Organization had declared a global pandemic, our Eye Bank ceased all activities until the 10th May 2020. We started then, according to recommendations of Polish Transplantation Society, performing a nasopharyngeal swabs specimen collecting for every corneal donor. In 2020 we noted only 1 positive donor, whereas in 2021 we had 9 and in 2022 - 12 SARS-CoV-2 positive donors, respectively. Overall mean reduction in the number of corneal donors and obtained corneal tissues of 6,3% was observed in the Lublin Eye Bank

**Conclusion**

1. COVID-19 pandemic had an influence on the Lublin Eye Bank activities.
2. Fortunately, the pandemic did not have a major impact on the number of donors as well as the corneas collected in our bank.

#### P29-A135 IMPACT OF COVID-19 ON CORNEAL DONATION AND TRANSPLANTATION IN HONG KONG

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**Purpose** With many health and policy issues arising from COVID-19, the Hospital Authority Eye Bank of Hong Kong encountered challenges related to ocular donor suitability and availability. This review aims to analyse the impact of a global

pandemic on corneal donation and transplantation in 2020 and 2021, compared to the pre-COVID period in 2019.

**Methods** This cohort study evaluated data collected from the Hospital Authority Eye Bank from January 2019 to December 2021. The number of corneas harvested, including voluntary donations initiated by the deceased's relatives and approached cases by Eye Donation Coordinators, tissue distributed, transplanted and disposed, the reason for disposal as well as the usage of the transplanted corneas in 2020 and 2021 were compared to the pre-COVID period of 2019.

**Results** The number of corneas harvested dropped by 17.6% in 2020 compared to the pre-COVID period of 2019, and rose almost back to baseline in 2021. However, despite having near-normal number of harvested corneas in 2021, the number of corneal transplants using fresh corneas were still reduced by 30% in 2020 and 27% 2021. The observation can be explained by the seven-fold increment in disposal due to suboptimal quality from a cancer donor in 2021. The proportion of corneas used for optical, therapeutic and tectonic purposes remained stable throughout the three years.

**Conclusion** COVID-19 yielded brief periods of service interruption and reduced number of eligible donors, leading to a noticeable rise in solicitation from cancer donors in 2021. The pandemic resulted in a longer corneal transplant waiting time. Nevertheless, The proportion of different corneal transplantation remained stable, with even the development in new techniques such as Descemet's Membrane Endothelial Keratoplasty and enhancement in services such as provision of ultra-fresh Keratolimbal allografts despite the limitations in the COVID-19 era.

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#### P30-A119 MICROBIAL CONTAMINATION OF AMNIOTIC MEMBRANE

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**Purpose** This retrospective study aims to compare the rate of microbial contamination in fresh, non-preserved amniotic tissue as opposed to decontaminated cryopreserved tissue, thereby being able to determine the efficiency of the decontamination procedures applied during amniotic tissue preparation in the Cornea Bank Essen.

**Methods** The amniotic tissue was retrieved from donor placentas acquired through elective c-section. Tissue preparation was performed according to standard operation procedures of the Cornea Bank Essen. Briefly, the tissue is rinsed with sterile balanced salt solution (BSS) and decontaminated with BSS containing anti-infectives. Preservation included the application of a cryopreservation solution containing anti-infectives and glycerin. The tissue is stored at a temperature of -80°C. Screening for microbial contamination of amniotic tissue in its pre- and post decontamination status is part of the process.

In this study, data from 107 placentas prepared in the eye bank were retrospectively evaluated for the microbiological status to determine the effectivity of the procedure.

**Results** Out of the fresh, non-preserved amniotic tissue, 53 were tested positive for microbial contamination. The most common species identified were *C.acnes* and *Staphylococcus*