

**BACKGROUND:** Biometry has the potential to improve refractive outcomes of cataract surgery in developing countries. However, the procedure is difficult to carry out in remote areas.

**PATIENTS AND METHODS:** The feasibility of automated biometry using portable devices was assessed in an eye camp in a remote Kenyan community and reasons for failure were documented. PC-IOLs in the range of 17-27 dioptres (dpt) were implanted and a model was created to predict spherical refractive error if a standard 22 dpt lens had been used. **RESULTS:** In 104 out of 131 eyes (80%) biometry was possible. Failure to obtain K-readings in eyes with coexisting corneal pathology was the main limiting factor. The calculated mean IOL strength to achieve emmetropia was 21.56 dpt with a SD=1.96 (min: 14.78 dpt, max: 27.24 dpt). If 22 dpt lenses had been implanted around 20% would have had an error of more than 2 dpt and 7% an error of more than 3 dpt. **CONCLUSION:** Biometry is a challenging procedure in remote areas where comorbidities are common. However, without biometry and implantation of different IOL powers poor refractive outcome can be expected in around 20% of patients.