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## **Development of a national screening network for Retinopathy of Prematurity**

Aim:

Improve the care for newborns at risk for developing Retinopathy of Prematurity (ROP), by creating a digital network for grading of Retcam images taken in different screening locations by a selected number of grading centers.

Introduction:

The use of Retcam® imaging devices is increasing in the Netherlands. Currently about ten hospitals are using this device to document and follow-up on cases screened for ROP. The incidence of ROP which needs to be treated is low, so identifying those cases often results in consultation of more experienced colleagues or even transfer to another center. To minimize transportation of these critically ill children, a National Grading Center (NGC) will be established.

Methods:

At the screening centre an imaging device is used to take pictures of each new-born at risk for developing ROP. At the decision of the ophthalmologist all or just some pictures and essential data about the infant are uploaded through a secure internet connection to the NGC portal. Currently the option of such a portal is being developed via 'Oogartsennet', a secure website used for the referral of ophthalmological patients in the Netherlands. An automatic alert will notify the ophthalmologists experienced in grading and treating ROP to assess the pictures and advise about follow up and treatment. The result is then sent back through the same portal to the referring ophthalmologist.

Results:

Creating a secure digital environment in which Retcam images can be staged by experienced ophthalmologists in a few grading centers will prevent unnecessary transport of these infants. They would ideally only be referred to be actually treated. Furthermore, easy feedback on images will increase experience of the referring ophthalmologist.

Conclusion:

A NGC can possibly increase experience of referring ophthalmologists and minimize transfers of critically ill infants.