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Bedside retino tele-ophthalmological screening, as an "off-label" transport activity: The Hungarian model

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Background: Neonatal Emergency and Transport Service of the Peter Cerny Foundation (NETS-PCA) was founded in 1988 with the primary aim to ensure a special neonatal transport facility. Premature Eye Rescue Program (PCA-PERP) was established in 2008 and it uses wide field digital retinal imaging with remote interpretation (WFDI-TM).

Aim: The aim of our analysis was to demonstrate the feasibility and sustainability of the Program operated by NETS-PCA.

Methods: Premature eye rescue program (PCA-PERP) is based on bedside, non-invasive retinal examination performed by qualified neonatal nurse practitioners using a RetCam Shuttle portable WFDI camera. The images are transferred online and interpreted remotely by an ophthalmologist. To demonstrate the sustainability of the system the total cost of investment and maintenance were analysed over the first five year period and compared to the most recent 2018 data.

Results: Our cost-analysis of the first five years demonstrated that 3722 examinations were performed, saved 92,248 km and 3,633 staff working hours. The net present value was 127,847 Euro at the end of 2014 with a payback period of 4.1 years. In 2018 a total of 1034 screening examinations, 22 on-site laser treatments and post-intervention follow-up examinations were performed, resulted in savings of 10,215 running km and around 48,000 Euro.

Discussion: Advantages of PCA-PREP it can decrease the need for transport (neonatological benefit), the workload of ophthalmologists (health system benefit) and it has got documentation benefit (quality-control, patient follow-up, scientific analysis).

Conclusions: PCA-PREP as bedside ROP screening with telemedicine interpretation, beside clinical benefits, is a cost effective, feasible and sustainable system.

Biography

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