

PROJECT ABSTRACT

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<b><i>Title of Project:</i></b>	<b><i>Establishment and Implementation of a New Screening Law for Early Detection and Treatment of neonatal Eye Disease in Costa Rica</i></b>
<p><b>Purpose:</b> Costa Rica has a well-established Social Security System with multiple hospitals that serve the vast majority (&gt;95%) of its population's medical needs.</p> <p>Neonatal Screening programs for Cardiology, Hearing, Metabolic and, Immunodeficiency diseases exist in the Social Security system. There is no program for Neonatal Ophthalmic screening. It is critical that early detection and treatment of childhood ocular disease and avoidance of long-term blindness that such a program be implemented.</p> <p><b>Methods:</b> To better understand the need for neonatal ocular screening, a longitudinal retrospective study was performed. The study was between September 1, 2017, and August 31, 2019. It included 8681 or 94% of the 9233 live births in Costa Rica's CCSS hospitals. Children less than 32 weeks of gestation were excluded. Visual disabling pathology was found in more than 11% of newborns. This data was assembled and brought to the Legislative Assembly by the Costa Rican Society of Pediatrics, the Costa Rican Society of Ophthalmologists and, the Director of the National Hospital for children. The preliminary results have been published in (REOP-Vol VIII; N. 1, 2021).</p> <p>A plan for approval of a new Costa Rican law - mandating the establishment of a neonatal ophthalmic screening program was studied.</p> <p>The following components are necessary:</p> <ol style="list-style-type: none"><li>I. Organization of a network of qualified ophthalmologists familiar with pediatric eye diseases and their diagnosis and treatment.</li><li>II. Identification of the pediatricians working within the nurseries and NICU'S of the CCSS that will examine and refer appropriate children.</li><li>III. Establishment of a well-defined referral system between pediatricians, ophthalmologists, and administrative personnel to record and memorialize all data.</li><li>IV. Collection and disbursement of ophthalmic equipment necessary to examine and diagnose neonatal eye disease.</li><li>V. To establish a consistent protocol for screening of the infant's eye by the pediatrician -which includes the timing of the examination and criteria for the referral to an ophthalmologist.</li><li>VI. Education of all involved personnel.</li><li>VII. Commitment from the Social Security system to fund this program and help solicit support for this new law.</li><li>VIII. Collection and publication of all data from the first full year, from activation that includes the number of children diagnosed with eye disease, the percentage of each diagnosis and, breakdown of medical and surgical treatment needed.</li></ol> <p><b>Results:</b> The final approval of this law-Ocular Screening of Newborns is presently being analyzed by the Costa Rican Legislative Assembly.</p>	

Once approved, it will be signed into law by the President of the country.

The education of CCSS nurseries and neonatal units is proceeding successfully. Presently 7 out of the 23 pediatric nurseries in the country have been educated and are ready to begin screening. Ongoing education by trained pediatricians continues in the remaining nurseries.

**Conclusions:** The enactment of this law in Costa Rica and the early diagnosis of newborn ocular pathology will help prevent permanent blindness and disability for many children. It is expected that the success of this program will help stimulate the formation of other national models throughout the world.