

Early diagnosis of vision disorders in children: the first trial in Trentino is now open

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A healthcare teleconsultation project for the prevention of eye disorders in children. This is the main objective of the experimental project launched last month in the Province of Trento.

But there is more: the ongoing experimentation will make it possible to facilitate communication between health professionals (Pediatricians – and orthoptists/ophthalmologists), to test the use of certified digital tools for the standardized and objective evaluation of eye disorders in children, improving the care of young patients, and to intercept early, also through the development of artificial intelligence algorithms, potentially disabling eye disorders in children.

The early diagnosis of eye disorders in children is a challenge that needs to be met both clinically and economically and socially. For this reason, the study is part of one of the four areas of the “Digital health and artificial intelligence: tools for bringing the health service closer to citizens and for the development of the provincial system” project funded by the Autonomous Province of Trento with resolution No. 2475 in December 2022 and promoted as part of the activities of TrentinoSalute4.0, which includes the Trento Province Healthcare System, Fondazione Bruno Kessler and the Autonomous Province of Trento.



The tools that will be used in the experimentation to achieve the objectives also include the structuring of a channel for teleconsultation between pediatricians and pediatric orthoptists/ophthalmologists. For this reason, technological integration between the pediatric

chart and the platform for corporate teleconsultation is being developed, which will allow the family pediatrician to easily and securely share evaluations with doubtful or positive outcomes with orthoptists/oculists. Gli strumenti che verranno impiegati nella sperimentazione per il raggiungimento degli obiettivi includono anche la strutturazione di un canale per la **teleconsulenza** tra **PLS** e **ortottisti/oculisti**. Per questo è in fase di sviluppo l'integrazione tecnologica **tra la cartella pediatrica e la piattaforma per il teleconsulto aziendale** che permetterà al pediatra di famiglia di condividere in maniera semplice e sicura **le valutazioni con esito dubbio o positivo** con gli ortottisti/oculisti.

The instruments



Fourteen videorefractometers have been made available by APSS and will be used within the project for infrared reflex assessment in children up to 6 months of age and for visual screening up to 3 years of age. The instruments were delivered to pediatricians who had volunteered to participate in the study, to district orthoptists, and to a group of hospital ophthalmologists in February.

Additionally, the APSS Ethics Committee has approved the InPOSA (Early Detection of Anterior Segment Opacity) research protocol, which provides for the implementation of artificial intelligence algorithms for the early detection of anterior segment opacity in infants. The algorithms will be created by the Data Science for Health unit at Fondazione Bruno Kessler's Digital Health and Wellbeing Center, which, once validated, will allow doctors to have key support for diagnosis.

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