Sana AudioPulse

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Abstract:

Detecting hearing loss in the first six months of life is essential to prevent permanent communication deficits. An estimated 588 million people had mild or severe hearing loss globally in 2000. In Brazil, an estimated 26.1% of the population had some level of hearing impairment in 2003. For rural and/or poor populations, access to an audiology clinic is costly and difficult. Sana AudioPulse presents a low-cost, portable method for ubiquitous national detection of hearing loss. Our application uses cellphones interfacing with specialized hardware to objectively screen newborns for hearing impairment with a suite of hearing standard pediatric screening tests. The audiological data is securely transmitted wirelessly to a remote centralized medical database for certification and validation by professional audiologists. Our one- and three-year projections estimate a net income of $39,000 and $575,000 during the first and third year (10 then 50 healthcare facilities).