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### **The Concept of Medical Homes Becomes Inspirational to the Implementation of Infant Hearing Screening Programs in China**

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#### *Abstract:*

Although audiology is still being developed in China, universal newborn hearing screening (UNHS) has however made significant progress in terms of policy formulation and infrastructure establishment. As of 2009, UNHS has become mandatory in China to all newborns but the limited resources and inefficient healthcare system pose great challenges to the implementation of HIS. This paper shares a grassroots' model of screening 196,404 newborns through the regional healthcare system for women and children in China.

#### *Summary:*

The concept of medical homes has become a cornerstone of the Year 2007 Position Statement for hearing screening as an integrated approach to early screening. Despite the much different healthcare systems between US and China, this concept is a strategic guidance to the design and implementation of UNHS in China. How to effectively utilize the existing resources has inspired hearing professionals in China to experiment with various UNHS models. This paper shares our experiences of using the regional healthcare system for women and children to deliver UNHS in Chengdu, one of the largest inland cities.

The latest research indicates that UNHS has well been implemented in coastal cities or economically developed regions in China. In Shanghai and Tianjin, for example, over 98% of newborns were screened each year. By 2012, 95% of newborns in China, by law, should

receive hearing screening in the whole country, a target viewed as a huge challenge to a country where 1% of the healthcare resources has to support more than 20% of population on earth. Therefore, hearing professionals have to rely on the present healthcare system for more innovative approaches. China has long set up a comprehensive healthcare network for women and children, characterized by three levels of roles in that community health centers as Level 3 provide health screening, district clinics as Level 2 are responsible for basic medical care and municipal hospitals as Level 1 treat all difficult cases referred from the above clinics. Each level of healthcare involves family members, social workers, and professionals who manage initial screening, rescreening, diagnosis and intervention according to the responsibilities in the system. This system has been successful in bringing down prevalence of major diseases and improving the general health of women and children since 1949.

For the last three years, a brand new UNHS model has been introduced into this healthcare network in Chengdu. The medical resources were allocated for screenings, thus formulating an UNHS system "that is accessible, continuous, comprehensive, family centered, coordinated, compassionate, and culturally effective." A total of 196,404 newborns received initial screening and 490 babies (0.25%) were later diagnosed with SNHL. Proper interventions were provided through the city rehabilitation programs. As a result, the screening rates have climbed up from 32.45% in 2007, 60.65% in 2008 and 83.45% in 2009. More importantly, all of those were accomplished without causing extra financial pressure on a healthcare system that has already been underfunded. This UNHS model has proved to be cost effective in the regions with large population yet limited resources. We will explain how UNHS has been implemented and managed, and discuss pros and cons for its potential expansion into more regions in China. Ultimately the value of this project is to demonstrate the important concept of medical homes applied to early hearing screening not just in USA but can also be inspirational in other parts of the world, especially in developing countries where more than 80% of people with hearing loss reside according to the estimates of WHO.