Discussion

Our data showed a prevalence of CH in a regional screening center of China of 1 in 2418 newborns over the previous 12-year period. This is comparable to the prevalence levels reported for neighboring Japan (1 in 2864) [5]. In general, children with CH detected by neonatal screening who received early treatment had normal growth. But our results suggested that there was a marked increase in the prevalence of CH infants who were overweight or obese, which was consistent with reports that the BMI values of children with CH were steadily higher than the 95th centile during the first 6 years of life [6]. It is thought that children with CH generally weigh more than their peers and show a loss of BMI plasticity during the first years of life, possibly as an extended result of fetal and neonatal hypothyroidism [7]. The factor that caused this phenomenon is still poorly understood and requires further investigation. The observations in our study indicated that the detection of CH, early treatment and follow-up in our country is likely to have a beneficial effect on reducing the impact of this disease.

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Experience of Setting up a Microbiology Service for Rural Facility-Based Sick Newborn Care Unit

Studies across the developing world have shown that infection is a major cause of neonatal and childhood morbidity and mortality in rural setting [1, 2]. Documentation of the burden of infection in this population, including microbial aetiology is, however, scanty. Due to lack of resources, blood culture is an irregularly used investigation, largely restricted to urban and semi-urban tertiary centres in India [3]. Microbiology laboratory support is usually not available in rural health-care facilities in resource-poor settings. Treatment of infection, by default, remains empirical. In order to achieve a uniform level of care across urban and rural neonatal units, alternative approaches for laboratory facilities need to be considered. The present study describes a system to provide microbiological facility to a remote rural facility-based sick newborn unit in India. This unit at Suri Sadar Hospital, Birbhum, was the second unit to be developed in India, based on the Purulia model [4].

Laboratory support was provided from a nodal centre at Kolkata, located 220 km from the rural unit. The preparatory phase included interactive visits to the study site, onsite training, development of guidelines and standard operating procedures. Variations in data observed due to individual difference in use of terminology were standardized. Patient information was collected and blood for culture was drawn for babies with clinical sepsis or perinatal risk factors. Specimen transport was done thrice a week. Blood culture was performed by BACTEC 9050. Delayed entry of vials proved to be an acceptable methodology. Identification was performed by conventional methods and confirmed by using ID32E, ID32GN and ID32C kits (bioMérieux, Marcyl’Etoile, France). Kirby Bauer disc diffusion
method along with Clinical Laboratory Standards Institute (CLSI) guidelines were used for anti-microbial susceptibility testing [5].

Positive results were informed telephonically to the rural unit. Negative results were informed after 48–72 h so that antibiotics could be discontinued. The final reports generated at the end of 7 days were sent by electronic mail. The hard copies of the reports were handed over, to the transport personnel, on the next trip.

Sepsis was clinically diagnosed for around one-third of admitted babies (181 out of 589). The culture positivity rate was 41.7%. *Klebsiella pneumoniae* was the most common cause of sporadic sepsis in the unit. Gram-negative organisms exhibited complete resistance to WHO recommended first- and second-line antibiotics such as ampicillin, gentamicin and cefotaxime, which were empirically used in the unit. Emergence of carbapenem resistance was documented.

The system ensured that timely and appropriate treatment was provided to the septic neonates. Our study faced some specific problems. Natural disasters and political unrest disrupted and delayed transport of specimens. Limited resources meant that specimens of a few babies were missed. Due to lack of facilities for septic screen, clinical features alone were used for presumptive diagnosis of sepsis.

In conclusion, the present study suggests that despite the distance between the two centres and the problems faced, the system could help in providing quality microbiology support in regions where it is not available and to a population for whose care it is essential.

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**References**


**Urinary screening for renal disease among apparently healthy school children in Qatar**

**Introduction**  
The increasing incidence of chronic kidney disease (CKD) among both children and adults is a global health problem. Urinalysis using dipstick method is the most common screening procedure for the early detection of renal diseases among asymptomatic subjects at a relatively low cost that may lead to the reduction of CKD [1–3].

This study was conducted to determine the prevalence of kidney disease among apparently healthy school children in Qatar and to address a urinary screening strategy in this locality.

**Subjects and methods**  
To ascertain the prevalence of urinary abnormalities, 3,645 apparently healthy primary school children in the state of Qatar from November 2006 to May 2008 were screened. Approval to conduct this study was obtained from the Ethical and Research Committee of Hamad Medical Corporation. Children with age range from 6 to 12 years were included in this study using a random sample, stratified by age and sex. Students with known renal conditions and/or on medications that affect the results of urinalysis were excluded from screening. Informed consent was obtained from the children’s parents or caregivers and school directors. First morning urine samples were collected from children at home and subjected to urinalyses at school clinic using the dip-and-read reagent strips (Combur 10-Test M strips and Urilux-S instrument for reading and printing the results of urine test strips, Roche Diagnostics, Germany). A