

A SPECIAL STUDY ON PROVISION OF CARE FOR SICK NEWBORNS IN THE PRIVATE SECTOR IN NEPAL

Background

Nepal has made significant progress in reducing child mortality from 153/1000 live births in 1990 to 38/1000 live births in 2014. However, the efforts to decrease neonatal mortality continues to lag behind at 23/1000 live births contributing to more than half of under-5 deaths.

According to Nepal Demographic and Health Survey (NDHS) 2011, seventy-eight percent of caretakers sought care when a child had symptoms of ARI; half of these went to private providers irrespective of the setting, urban or rural. About twenty-two percent did not seek care from any source. There is a topographical gradient with public and private sector sources used approximately equally (31% vs 40%) in mountain districts, with less than 1/3 of care from public sources in hill districts and a little over 20 percent from public sources in the Terai. MICS 2014 shows a similar picture. Of the 7.7 percent children below one year of age, presenting with symptoms of pneumonia within the previous two weeks of the survey, almost half of them were taken to private providers and about a quarter to public provider. Seventy eight percent of these sick children were prescribed antibiotics; almost double by the private providers.

While it is plausible that the patterns of care-seeking would be similar for this age group, we are left to speculate. Specifically for those in their first week or two of life, one might expect a somewhat lower rate of care-seeking due to cultural norms of confinement over this period of time.

For risk of life-threatening illness, it is particularly very young infants we are concerned about. Our public health goals include:

- reducing the proportion of such cases for which no care is sought outside the home;
- increasing timeliness of care-seeking when danger signs are present (most especially for very small newborns—bearing in mind that about $\frac{3}{4}$ of newborn deaths are among those weighing <2500g at birth);
- increasing the proportion of such cases brought to hospital (and ensuring quality of in-patient care); and
- improving the quality of care for service provided on an outpatient basis, whether in public or private sector settings (including timeliness, appropriate drugs and dosage, and suitable follow-up).

To help achieve such objectives, we need to understand barriers and enablers on both the family and health services sides of the equation.

As the need to engage the private sector in MNH (maternal and newborn health) has become increasingly evident, the revised National Safe Motherhood and Newborn Health long-term plan (2006-2017) has identified public-private partnerships as one of the key approaches, although this has not yet yielded much fruit (in-country production of CHX being a notable exception). Private medicine shops play an important role for other health services as well. In recognition of this, USAID and MoH have had a long-standing engagement with a social franchising network, Sangini, implemented by the social marketing NGO, Contraceptive Retail Sales (CRS), under which such medicine shops provide injectable contraception and other family planning services. This network currently numbers over 3000 outlets.

Achievement of high population effective coverage of sick child care, including infections in young infants, requires adequate quality services by all providers including the private providers, given that they account for most such care. This study led by the Child Health Division, in collaboration with Save the Children and CRS, was designed to investigate current treatment practices for sick young infants, influences on such practices, and opportunities for effective intervention.

Methodology

This study was an exploratory situation analysis assessing public and private service providers' knowledge, attitudes and practice to treat possible severe bacterial infection (PSBI) among children less than six months of age. It was comparatively small and *cannot* be considered nationally representative.

Six diverse districts were purposively selected covering Mountain, Hill and Terai ecological zones. They included: Sankhuwasabha, Kathmandu, Dailekh, Morang, Rautahat and Kailali. Within each district, a stratified random sample of five Sangini network medicine shops, five non-Sangini medicine shops, and four public sector primary care centers or health posts (PHC/HP) were selected for a total of 84 (60 private and 24 public) healthcare service sites. Of the 60 private medical shops surveyed in the study, 30 were Sangini network members (5 with CURE) and 30 were non-Sangini. Of the 24 public health facilities surveyed, 19 were health posts (HP) and 5 were primary health care centers (PHC). Data were collected through interviews using a pre-tested questionnaire. The information was collected from the main service providers in the medicine shops and from in-charges or other main service providers (in the absence of the in-charges) in the public health facilities. Collected questionnaires were reviewed during regular field visits by Save the Children staff and the study team of School of Planning, Monitoring, Evaluation and Research (SPMER). Save the Children obtained IRB approval of the study from the Nepal Health Research Council (NHRC).

Key Findings

The profile of health worker credentials was similar in medicine shops and government health clinics, however medicine shop health workers had, on average, substantially more years of experience. Ninety percent of the private service providers were CMAs or HAs and the remaining 10 percent were Auxiliary Nursing Midwives (ANM)/Staff Nurses and Pharmacists/Pharmacy assistants. The majority of the public health care providers were certified medical assistants/health assistants (CMA/HA) and others were ANM/Staff Nurse and one Medical Doctor. A

small proportion had a dual practice, working in both medicine shops and government clinics.

Service Hours and Availability:



Opening hours and availability of health workers were considerably greater in medicine shops than in public clinics. More than half the surveyed medicine shops provided services for more than 12 or more hours a day. The PHCs/HPs were open 6 days a week with official opening hours from 10am to 4pm, however, most did not remain fully open for their advertised hours, often opening late and closing early.

Treatment of sick young infants:

All of the private and public health facilities reported treating young infants for minor conditions. Almost all private medicine shops in the sample reported treating PSBI in young infants. Approximately half reported having treated 1 or more PSBI cases, aged <2months, over the previous 3 months, using injectable antibiotics. By contrast, only 3/24 public sector clinics reported having treated any such cases over that period.

Treatments given in medicine shops for young infant illness included a broader range of drugs than in public clinics. In addition to penicillins and gentamicin,



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medicine shops used a variety of cephalosporins. Injectable steroid use was reported by a number of these outlets as well as some use of inhaled and oral salbutamol and steroids. Little difference in treatment was seen comparing Sangini network vs. non-Sangini medicine shops. The public health providers reported largely adhering to the CBIMCI or CBIMNCI protocols of the government while treating young infants for ARI, pneumonia and PSBI.

Types of medicines:

Commonly used oral antibiotics by the private health care providers were amoxicillin, cefixime, amoxicillin-clavulanate, azithromycin, cotrimoxazole, cefopodoxime, cefaclor, cephalixin, flucloxacillin, cefixime CV and chloramphenicol. The majority of the public health care providers reported using oral cotrimoxazole, oral amoxicillin. The injectable antibiotics most commonly reported for use by private health care providers for treating young infants were gentamicin, ceftriaxone, amikacin, cefuroxime, ampicillin and cefotaxime, while public health care providers reported using primarily gentamicin and occasionally ampicillin. The private providers were found to be using salbutamol via nebulizer, syrup asthalin/salbutamol, syrup Beta-2 expectorant (cough syrup containing salbutamol) and Ipravent via nebulizer. About a third of private providers reported using injectable steroids to treat young infants. The steroid products used included dexamethasone, bethamethasone, Betinosole and hydrocortisone. In the public health sector reported use of salbutamol and steroids was negligible.

Dosing and duration of treatment:

Dosing was generally done by weight. Private medicine shops generally used adult scales, weighing the mother with and without the baby and determining the weight difference (without removing the baby's coverings). By contrast, in public clinics generally weighing was done using Salter or pan scales, removing the baby's coverings.

Both private clinic and public health facility service providers were found to occasionally shorten the duration of treatment for similar reasons: if the baby's conditions improved significantly, if the child developed side effects from the medicine, if the child's

guardian did not want them to take the full course of treatment. Reasons unique to public facilities were unavailability of appropriate drugs in the facility or the demand of syrup by the caretakers. For private clinics, if the care givers were unable to cover the cost of the full treatment, the duration of treatment was shortened. The picture for follow-up differed between private clinics and public health facilities. Over two-thirds of private facilities reported that most young infants receiving injectable antibiotics came for follow up to receive their injections while very few public health facilities reported that young infants return for follow up. Follow-up appeared somewhat deficient in both private and public service delivery sites.

Job aids and record-keeping:

The private health care providers used a broad range of reference material which included text/course books, MIMS/CIMS/NIMS, CBIMCI booklets (rarely) and dose charts while public sector providers reported using the CBIMCI book and CBIMNCI booklet as a job aid. Many of the public facilities did not have the updated CB IMNCI protocols. None of the private health care facilities were found to be keeping records of treatment provided to sick young infants though many Sangini outlets has registers to record family planning services they had provided. The public health facilities used CBIMNCI registers, though the records of the previous three months showed low number of cases; either due to poor recording practices or low volume of cases seen.

Willingness of Private Providers to Modify Current Treatment Practices:

The private medicine shops expressed interest in adopting changes to provide appropriate treatment to sick young infants appropriately. Almost all of the health workers in medicine shops expressed interest in being trained to improve the quality of treatment they would provide young infants with PSBI, and were interested to receive/use treatment guidelines if available. They considered the Ministry of Health a very credible source of sound clinical guidelines. Some said they would be willing to pay for the trainings. Private providers also expressed interest in use of a kit, like CURE, containing the required medications



and injection equipment to facilitate treatment of young infants with PSBI and indicated they would be ready to use the kit if made available to them. Almost all those interviewed in private medicine shops indicated willingness to maintain records of management of sick young infants.

Implications

As the main source of care of sick young infants, it is



critical to find ways of effectively engaging with the private sector. As expected, there were some deficiencies identified. Some encouraging findings to engage with the private sectors are:

- The credentials of health workers were comparable in the public and private sectors though private providers working in medicine shops generally had more years of professional experience.
- Opening hours and availability of health workers were considerably greater in medicine shops than in public clinics making them a more convenient source of care. So engaging with the private sector offers an opportunity to help ensure quality care to sick young infants. This should be taken into

account during overall planning and program design

- In addition to antibiotics, some private practitioners who provided care to sick young infants used injectable steroids which can be very harmful practice. Means need to be found to effectively discourage this practice.
- Dosing was reportedly done by weight but private medicine shops generally used adult scales, resulting in an inaccurate weight for the baby which often leads to higher dosing of medicines. While higher dosing is not dangerous for most of the medications prescribed to newborns, excessively high doses of gentamycin, can cause irreversible kidney damage. To improve dosing accuracy in both private and public facilities, Salter scales with color coding, associating weight with the appropriate dosage, could be purchased in bulk and be distributed to facilities in need.

The good news is that private providers are quite interested in using good clinical guidelines for such cases and they see the MoH as a particularly credible source of such information. It appears there are promising conditions for constructively influencing the practice of medicine-shop-based health workers treating sick young infants. Private providers expressed interest in utilizing Ministry of Health clinical job aids used in public facilities, if they were available. To increase the use of these protocols, one approach could be to make the guidelines available on the Ministry of Health website for easy download and reference.

Information

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