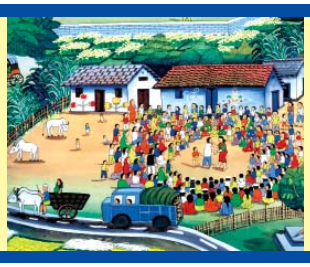


Nepal Family Health Program II
Technical Brief # 31
www.nfhp.org.np

Strengthening IP Practices in Peripheral Health Facilities

Hospital support staff in Surkhet district taking the initiative to bury hospital waste with the help of a bulldozer after IP/HCWM training

BACKGROUND

Infection prevention (IP) practices are highly emphasized in Nepal's national medical standards[1] and in the *Policy on Quality Assurance in Health Care Services 2064*. The Health Care Waste Management (HCWM) Guideline[2] also stresses the importance of proper IP practices and management of health care waste. Infection prevention, including universal precautions, is necessary to prevent risk of disease transmission and infection such as HIV, HBV, surgical wound and sepsis to both clients and providers. Because infections can result in increased morbidity and mortality, infection prevention becomes an important element of quality health services.

For this reason, the National Health Training Center (NHTC) and other Department of Health Services divisions conduct trainings on IP/HCWM, with support from partners, including the Nepal Family Health Program II (NFHP II). NFHP II's assistance included supporting hospitals for whole-site, on-site IP/HCWM training and incorporating IP and HCWM practices in most of clinical trainings such as the comprehensive family planning and counseling (COFP/C), implant, IUCD, mini-laparotomy, no-scalpel vasectomy, and skilled birth attendance (SBA) trainings.

NFHP II also provided 3-day need-based, whole-site on-site IP training in select HFs through its field offices and at all hospitals in NFHP's 22 core program districts (CPDs).

Improvement in IP/HCWM practices in Uchidih sub-health post, Bara district

In 2010, when NFHP II field staff Balmaya reached Uchidih sub-health post (SHP) for technical supervision, she found that the HF staff were dressing wounds and providing services with un-sterile instruments. The collection and disposal of health care waste was not done properly and the toilet was not functioning. Discussion with the staff revealed that they all knew about basic infection prevention (IP) and health care waste management (HCWM) practices but there were some gaps in their knowledge and skills.

Using a quality improvement (QI) tool, Balmaya assisted the HF staff assess IP/HCWM practices to identify the gaps and their causes and prepare action plans. She also carried out a supervision visit together with the district health officer (DHO) supervisor during which half-day, whole-site/on-site coaching and discussions pertaining to IP/HCWM issues were held. She shared the findings during the district quality assurance working group (QAWG) meeting, where the members collectively decided to complete activities as per the action plan. During this meeting, the quality improvement (QI) committee was also formed to monitor and support implementation of the action plan. Based on the action plan, the QI committee coordinated with the district public health office (DPHO) and quality assurance working group (QAWG). The DPHO and QAWG helped support the construction of a placenta pit, waste disposal/burning pit, and provided an autoclave/boiler, stove and support for repair of the toilet and service delivery room at the SHP.

In a subsequent supervision visit in 2011, Balamaya found the SHP was providing services with sterile instruments, and that placenta and other health care wastes were being managed properly. In addition, both the service provision room and toilets were clean.

In spite of such training efforts, it was found that IP/HCWM practices were poor in most health facilities.

A study conducted by the Management Division in 2007 focusing on HCWM practices in 162 health institutions, including public and private hospitals, poly-clinics, medical shops, primary health care centers, health posts and sub-health posts (SHPs) revealed that only 23% of HFs had incinerators and only 36% had placenta pits.

NFHP II's baseline study (VHSP)[3] done in 17 districts revealed significant shortcomings in IP and HCWM practices in health facilities. Only 45% had available water in the premises, 38% had autoclaves/boilers, 30% had functioning toilets and most importantly, only 11% of HFs burned wastes in incinerators/burning pits.

Based on the above experiences and results, during NFHP II's project period, it was decided that lack of knowledge

[1] National Medical Standard (NMS) for Contraceptives (2010) and Maternal and Neonatal Health (2009), FHD

[2] HCWM Guideline (2009/10), Management Division

[3] Village Health System Profile, Baseline 2008, NFHPII

and skills among service providers/support staff was not the only cause of poor IP/HCWM practices, but also inadequate physical facilities, equipment and supplies. Improving IP/HCWM practices was therefore a key technical area for NFHP II to focus on.

STRATEGIC APPROACH

This comprehensive approach encompasses a sequence of steps and activities from identification of gaps, their root causes and interventions for viable and sustainable solutions under the leadership of the District Public Health Officer (DPHO) team. The DPHO/Quality Assurance Working Group (QAWG) played a vital role in addressing gaps identified[4].

Rather than off-site group based training, NFHP II employed an on-site approach involving all technical, management and support staff during technical supervision[5] to improve IP/HCWM practices as follows:

- The health facility (whole-site, on-site) identifies gaps and their root causes pertaining to IP/HCWM practices using quality improvement (QI) tools (checklist) during technical support visits.
- Based on the findings (cause of the gap), HF staff identify the most appropriate solution(s), prepare action plans and implement them accordingly. Coaching is carried out if gaps related to knowledge and skills are identified.
- QI committees are formed as per the Health Facility Level QI Guidelines[6] and include key HF staff and health facility operation and management committee (HFOMC) members.
- QI committees are linked with the district QAWGs and district supervision system.

NFHP II supported DPHOs address gaps through technical support and by providing funds from the quality assurance (QA) district fund[4] and by exploring local resources.

ACTIVITIES/INPUTS

After initial assessment of over 1000 HFs visited during supervision/technical support visits, a need-based, whole-site, on-site IP/HCWM strengthening program was planned and implemented in 257 HFs and 10 hospitals in 20 CPDs. During this process, NFHP II supported HF staff assess and address the IP and HCWM gaps using QI tools, thereby helping them better understand the situation of their HF.

Key inputs are summarized below:

- **Assessment and action planning:** Assisted HF staff assess IP/HCWM practices, identify gaps and prepare action plans
- **Formation of QI committees:** Facilitated formation of 267 QI committees in HFs and hospitals.
- **On-site coaching**: If identified gaps were about knowledge and skills, on-site coaching was done (e.g. autoclaving, preparation of chlorine solution).
- **Support physical facilities and provision of equipment/instruments:** Based on gaps identified, NFHP II provided materials, equipment, instruments and supported in strengthening the physical facilities to improve IP/HCWM practices (See Table 1)
- **Supported HF staff to link with DPHO/QAWG and HFOMC:** To get support for addressing identified IP/HCWM gaps, NFH P II assisted district QAWGs link with and facilitated use of the district fund and HFOMC for other resources to improve IP/HCWM practices.

Table 1: Support provided in improving physical facility, equipment/instruments (QA District Fund)

Support provided	Number of HFs
Water supply support	382
Placenta pits	126
Waste disposal/burning pits	439
Toilet repair	135
Autoclave/boiler	635
Stoves	612

On-site coaching of HF staff on proper use of autoclaves

[4] *Strengthening District Quality Assurance Working Groups and Use of district funds (Technical brief # 25*

[5] *Technical Support Visits(Technical Brief # 18)*

[6] *Quality Improvement System Implementation Guideline, Management Division, 2010.*

RESULTS

IP/HCWM problems are caused not only by lack of skills and knowledge, but also by the management practices of HFs or hospitals. This IP/HCWM strengthening process provided all staff, HFOMC and hospital management committee members with an opportunity to understand the various gaps and their root causes and subsequently find appropriate solutions.

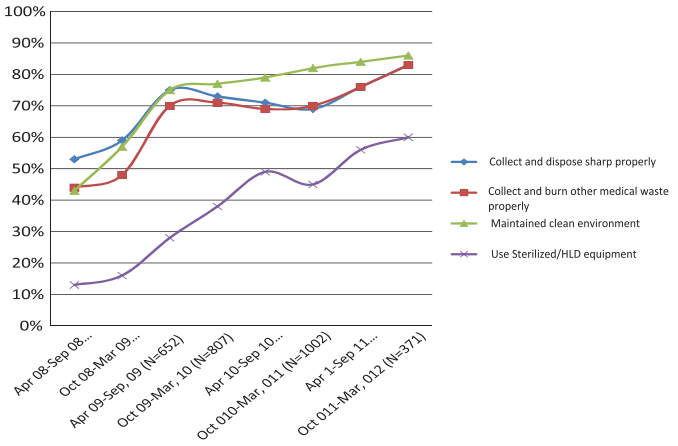
Placenta and waste burning pits at the Rolpa District Hospital

Toilet after repair in Rampuruwa Health Post, Bara

NFHP II monitoring data reveals significant improvement in IP/HCWM practices in health facilities since the beginning of the project in April 2008 to Mar 2012. During supervision visits, collection and disposal of sharps increased significantly from 53% to 83%, and collection and disposal of other health care waste from 44% to 83%.

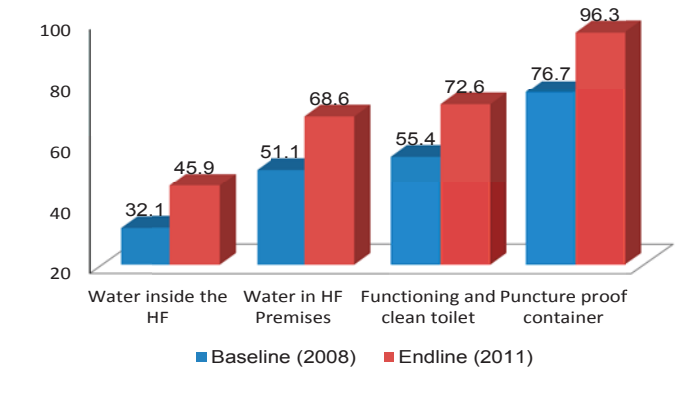
Similarly, cleanliness of the HF environment increased from 43% to 86%, and most importantly, use of sterilized/ high-level disinfection (HLD) instruments increased from 13% to 60% (See Graph 1).

Graph 1: Improvement in IP and Health Care Waste Management Practices in Health Facilities (Monitoring Data)



Similarly, HFA[7] baseline and end-line data shows significant improvement in physical facilities and other materials essential for improving IP/HCWM practices in health facilities. Availability of water within HF premises increased from 51% to 69% whereas availability of functioning/ clean toilet increased from 55% to 73%. The availability of puncture proof containers also increased from 77% to 96% (See Graph 2).

Graph 2: Improvements in Physical Facilities for IP/HCWM (HFA data)



The QA district fund was critical for improving IP/HCWM practices, and helped enhance the quality and performance of services at health facilities.

[7] Health Facility Assessment, 2011

CHALLENGES

- DPHO supervisors do not consider IP/HCWM the responsibility of technical/program focal persons, therefore their engagement in the process and instilling in them a sense ownership are significant challenges.
- Procuring and transporting materials and equipment to remote health facilities is difficult and requires tremendous effort.
- There is limited physical space (land) in HF premises for waste disposal and placenta pits.
- Proper IP and HCWM practice is still not given enough importance by health workers and its in-depth assessment is considered an additional work burden.
- The perception is that IP/HCWM is a technical and not a management problem and that it is the responsibility of nursing and support staff only.

LESSONS LEARNED

- Continuous monitoring with use of checklists and support/coaching during TSVs using the PI approach (see Tech Brief # 18) was effective at improving IP/HCWM practices. This helped HF staff understand that even minor problems may affect service delivery if not appropriately addressed.
- The QA district fund and QAWG were highly effective and useful at immediately addressing most of the IP/HCWM gaps.
- The whole-site, on-site approach is more effective at identifying and addressing root causes of IP and HCWM gaps than repeated off-site training with few participants.
- Functional QI committees at HFs comprised of both technical and management staff and HFOMC members were effective at ensuring team work and addressing gaps pertaining to IP/HCWM practices.

RECOMMENDATIONS

- The family health division should use the IP/HCWM strengthening approach during clinical services training such as family planning and SBA.
- DPHOs should take responsibility to implement the IP/HCWM strengthening process in its HFs.
- Coaching should be mainstreamed at the national level in coordination with the NHTC to update gaps in skills.
- Administrative support is crucial for the sustainable management of IP/HCWM practices at health facilities and hospitals.
- IP/HCWM should be integrated into routine services and technical priorities and should be taken as an inevitable part of improving the quality of health service delivery.

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The program/research described in this article was supported under the Nepal Family Health Program II which is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of NFHP II and do not necessarily reflect those of USAID or The United States Government.

NFHP II is implemented by JSI Research and Training Institute, Inc., in partnership with Engender Health, Jhpiego, Save the Children, World Education, Inc., Nepal Technical Assistance Group, Nepal Fertility Care Center, Management Support Services Private Ltd., Nepal Red Cross Society, United Mission to Nepal, BBC Media Action, Digital Broadcast Initiative Equal Access Nepal, Family Planning Association of Nepal and Center for Development and Population Activities.