Original Article

Extending Professional Education to Health Workers at Grass Root Level: An Experience from All India Institute of Medical Sciences, New Delhi

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ABSTRACT

Background: In India, the opportunities for professional education of the grass root level health workers are grossly inadequate. Capacity building of all categories of health workers is needed for enhancing health outcomes. **Objectives:** To plan and implement a professional development training program for all categories of allied health workers and to assess its outcomes in terms of knowledge and skills **Materials and Method:**We planned and organized a 'one week'(15 h) training program for 10 categories of allied health workers (1260) working in our hospital. The program included nine generic skills/topics: the prestige of AIIMS, sterilization & infection control, universal precaution, biomedical waste management, public health, life style & healthy nutrition, fire safety, communication skills and office procedure besides subject specific skills. Trainers were drawn from 12 departments. Training methodology included interactive lectures, narratives, demonstrations, videos, PPT slides, and informal discussions with participants. The effectiveness of the program was judged on the basis of participants' feedback, feedback from the supervisors, and our own observations post training. **Results:**Feedback from the participants and their supervisors after training was encouraging. The participants described training as a "life time experience". The supervisors reported improvement in confidence, communication skills, and awareness of workers. **Conclusion:**The success of the program was due to the use of interactive methods, involvement of multidisciplinary team, and commitment from leadership. We recommend that professional education should be linked with career advancement. Academic institutions can play a key role in taking such initiatives.

Keywords: Heath worker, interactive teaching, patient safety, staff development

Introduction

Continuing professional development (CPD) of health professionals is seen as a potential instrument for achieving optimum health outcomes. Medical professionals in India have some access to continuing medical education programs, in the form of conferences, seminars, workshops, and other activities. However, the avenues for continuing education of other health professionals and allied health workers are almost nonexistent. World Health Organization South East Asian Regional Office(WHO-SEARO) has emphasized that revitalization of primary healthcare calls for an urgent need to strengthen the education and training of health workforce at the community level.[1] This will ensure that the workforce understands the current health challenges and health systems of the country, is competent to work with the people, and the community in delivering public health interventions based on the primary healthcare.

The role played by medical colleges in extending professional education to their allied health personnel appear to be too few and floating. Problems exist in both the 'content' and the 'process' of CPD. Medical colleges

Access this article online

Quick Response Code:

Website: www.ijcm.org.in

DOI: 10.4103/0970-0218.126358

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Received: 06-08-13, **Accepted:** 19-10-13

working in a tertiary hospital set up, hardly focus on the needs of grassroot level workers. Secondly, the 'process' of training is largely traditional and didactic. WHO-SEARO, in its efforts towards teaching of public health at the undergraduate level has recommended a competency-based approach, integrated learning, with participation from a multidisciplinary team, with focus on interactive learning.[2] However, an assessment of current status reveals that the training methodology is largely confined to lectures and some times, with audiovisual demonstrations. Most public health schools set up in low income countries blindly follow their counterparts in high income countries, reproducing classroom-based teaching, churning out epidemiologists with limited understanding of how to work within health systems to address local health needs.[3]

In this backdrop, our group though located in the premier institute, All India Institute of Medical Sciences (AIIMS), New Delhi took up the challenge of organizing a training program for 1,260 health workers employed in the hospital, to upgrade their skills as an essential requirement for their career progression. The decision taken by the hospital to train the health workers belonging to 'Group-D', was mainly driven by the recommendations made by the Central 6th Pay Commission to abolish the existing Group D cadre and upgrade them to Group C, with a grade pay of Rs 1,800.00. This was subject to the condition that the employee possesses a minimum educational qualification of pass in 10th class or else, must undergo a special training program for skill enhancement. AIIMS administration found that there was thousands of staff belonging to various cadres who did not possess minimum educational qualification; hence, required to undergo special training. The task of organizing this large scale training was entrusted to KL Wig Centre for Medical Education and Technology (CMET), which routinely provides in-house media facility for the AIIMS faculty besides organizing faculty development programs in medical education at the institutional and national level. Incidentally, CMET has state of the art facilities in terms of a venue and equipment required for conducting various types of interactive workshops.

The objective of our article is to share our experience of organizing a comprehensive training program for all categories of hospital-based allied health workers, utilizing an interdisciplinary approach. We conceptualized that training would not only result in financial benefit to the workers; but likely to contribute to improved job performance, leading to organizational effectiveness. This could also be seen as a pathway for linking academic establishment with service delivery.

Materials and Methods

The main challenges were to involve an interdisciplinary team of trainers, elicit cooperation from various departments to depute their trainees without disrupting the routine work of the hospital, besides organizing the logistics of training.

In order to meet the deadline, we planned 1 week's training program (duration 15 h) in batches of 50 each, on a 'morning-afternoon' shift basis, each session lasting for 3 h duration. We utilized existing training facilities of CMET, free time, and services offered by the faculty.

Content development

The heterogeneity of the various categories of participants with different job description and skill set was a major challenge. Though we could not conduct any formal training need assessment for constraint of time, we held discussions with the concerned supervisors to understand the job profile of various categories of workers. Considering the views of the supervisors, and the time constraints of the participants and the faculty, we finalized the program consisting of nine generic skills (common to all workers) to be supplemented with job specific skills. A list of generic skills and job specific skills and the spectrum of workers covered under the program are enumerated in the Table 1.

For all categories of workers we included an introductory session called '*AIIMS ka Gaurav*', (Prestige of AIIMS). This session was devoted to the self-introduction by the participants, the course overview, and a PowerPoint presentation on AIIMS. Through this session we brought out the importance of the role played by the participants to the mission of AIIMS.

With more than 50,000 people present in the campus at any given point of time, the patient safety as well as the safety of the staff is a matter of foremost concern. We therefore decided to include fire safety, sterilization and infection control, universal precaution, biomedical waste management as core topics. Communication skills, office procedures, public health and preventive aspects, and role of lifestyle and healthy nutrition also deserved place as core topics for discussion. During the last session, the participants were motivated to play advocacy role for voluntary blood donation and organ donation.

The job specific skills were dealt in such a manner that the participants were sensitized to good practices based on standard protocols either borrowed from WHO guidelines (e.g., hand washing) or based on hospital protocol (e.g., waste disposal). In case of hospital attendants, for example, more stress was given to topics like hand washing, wearing gown/gloves/mask, and

Table 1: List of skills/topics/issues covered during the training

List of skills/topics	
Generic skills/issues	
AIIMS ka Gaurav (The prestige of AIIMS)	
Universal Precaution	
Biomedical Waste Management	
Communication Skills	
Office Procedures	
Public Health Preventive Aspects	
Nutrition and Life Style management	
Fire Safety	
Motivating blood/organ donation	
Job specific skills	
Category	*Topics*
Sanitary attendant/ hospital attendant	Sterilization and infection control
	Preparation for OT, patient transfer
Office attendant	File management
	Telephonic conversation
	Interaction with patients/visitors
Engineering (Civil/ Electrical/AC) *Beldar*, *khalasi*, mason, plumber, fitter	Electrical and other safety and cleanliness at work place
	Complaint management
	Understanding of material and tools: Wood work/plumber/fitters/etc.
	Understanding of material and tools: Masonry work
Kitchen staff, cook	Safe and quality food cooking
	Patient feed preparation
	Presentation and distribution of food
Laundry attendant	Laundry equipment and operation
Animal attendant	Care of Animals
	Food for animals
	Maintenance and cleanliness of animal cages
Mali (horticulture staff)	Floriculture/bonsai
	Manure and pesticide

AIIMS: All India institute of medical sciences, OT: Operation theatre, AC: Air conditioning

transferring patients from wards to operation theatre (OT). For office attendants, we discussed the code of conduct for a public servant, office procedure, movement of files, and handling telephone calls.

Deployment of trainers

Based on the variety of topics, we had to involve several disciplines of AIIMS to depute faculty or staff, who are motivated, trained, and willing to spend time. We borrowed support from administration and hospital administration to facilitate the deployment of faculty from concerned departments. The Department of Hospital Administration, spared 10 resident doctors pursuing Masters' program who could speak Hindi. Similarly, we drew faculty from nursing, dietetics, physical medicine, community medicine, engineering division, and administration; often on rotation basis. We held a meeting with all trainers to discuss the training strategy, so as to maintain the uniformity in training.

Recruitment of participants

Recruitment of participants posed a challenge, because the participants were posted in several locations, often on shift system. We introduced a 'token system' for recruiting participants. We held meetings with the supervisors and gave them token slips to be passed on to the participants. The participants were expected to bring these slips at the time of registration. This system had several advantages, first it ensured that the communication reached every worker who otherwise, was not readily accessible. Secondly, every supervisor could depute certain number of participants without affecting the routine duties of his/her unit. Thirdly, it ensured that every batch was full, without causing any wastage of the training slots.

Training methodology

The main method of training was interactive lectures using Hindi as a medium of instruction. A novel feature of our training was extensive use of narratives, demonstrations, videos, role play, and informal discussions with the participants on their personal experiences. Even though PowerPoint presentations were used, they were explained in Hindi. We introduced several demonstrations and hands on training for developing skills such as wearing protective, (gloves, gown, and mask), cleaning or sweeping the floor, segregating hospital waste in to three types of waste bins, and ensuring safe movement of patients in trolleys. The training kit distributed to the participants also included a T-shirt, with AIIMS logo embossed on it. The idea was to provide an incentive to instill corporate spirit.

Evaluation of the program

Considering the background level of participants and time constraint, we did not administer any formal written test, practical, or viva for evaluating the program. Nevertheless we extensively used 'self-reflection' and feedback from the participants during each session and the valedictory session. This was supplemented with informal feedback from their supervisors, based on their observations of participants during their practice. We also observed the intended and unintended effects of the program using a qualitative approach to the evaluation.

Results

Through this training program, we were able to sensitize 1,260 workers belonging to 10 categories in 31 batches, in a span of 6 months.

Feedback received from the participants was extremely encouraging. The following quotes represent a cross section of opinion expressed repeatedly by many participants during the feedback session. Asked as

to how they found the workshop experience, many participants expressed:

"Sir, it was a 'life time experience' for us, as we never heard about such a kind of training for a group like ours…we are deeply indebted to the organizers for giving such a unique experience"

Asked whether they would be able to implement some of the techniques learnt in the workshop in their day today practice, a sanitary attendant responded as follows:

"We are now confident of wearing gloves, gown and mask… we can also segregate and dispose hospital waste in to red bins, blue bins, and yellow bins…we also picked up how to move patients in a trolley from OPD to operation theatre etc., smoothly…however, if we have to improve our practice in our settings, we suggest you should also train our supervisors, otherwise, our voice may not be heard at all."

This gave us an idea that organizational changes require intervention at various levels.

"Sir, I am a sanitary attendant engaged in sweeping and swabbing the floor…none of my superiors had told me about the proper steps in handling my job…now that I know the right method, I will go back and improve my job…"

Another participant, an office attendant, who was a victim of unauthorized absence lamented:

"Sir, some time ago, I had a fight with my boss, …I went on a leave assuming that it would be sanctioned…ultimately, the leave was not sanctioned…I was subjected to 'harassment', issuance of memo, show-cause notice, pay cut, break in service etc.…now, I realize the importance of following rules and office procedure…"

Feedback from the concerned supervisors after training was encouraging. The supervisors reported that the participants who returned from the workshop showed marked improvement in their confidence level, communication skills, and team work.

During the course of discussion with the participants, they brought to our notice some issues and 'grievances' such as distribution of consumable items (gloves, gown, disinfectant, etc.) to the sanitary attendants, tools and equipment to the engineering staff, need for compensating "extra" duties performed beyond office hours, and their privileges like leave travel concession. We brought these issues to the notice of administration, so as to play a proactive intervention, rather than solving problems on ad-hoc basis.

A couple of unintended effect of this program is noteworthy. Firstly, through this exercise we could bring together hundreds of trainers within the institute belonging to several departments, who can be seen as a pool of trainers for the future training programs. Secondly, we could witness an overwhelming sense of gratitude from this group after the training, whenever we met them in wards, outpatient departments (OPDs), corridor, lift, or parking place.

Discussion

The results of our study not only showed successful completion of a large scale training exercise, but also showed early evidence of participants' satisfaction in terms of the tangible changes in their level of confidence and competence. The approximate cost of training was only Rs 250/- per participant. Combining the evidences coming from the participants' feedback, supervisors' comment, and our own observation of the enthusiasm generated in this group, we have a reason to believe that the investment of time and effort we put in this program is 'value for money'. Apparently, there is a need to extend this program to the supervisory staff as a part of capacity building.

The success of our program can be attributed to a host of factors such as involvement of multiple disciplines, supportive leadership, recruitment of participants through 'token system' without affecting the routine work, use of interactive methods of training including practical demonstrations, ample use of narratives, anecdotes, reflections, and participants' experience in the training methodology. Another crucial factor is "carrot and stick" approach adopted in this exercise. The participants were conscious of the fact that they would be entitled for higher grade pay only after the completion of the training. Moreover, they were also provided with incentives such as workshop kit and refreshment. The training also would have served as a refreshing 'break' from routine 'mundane' job.

Faculty involvement in an 'institutional activity' is a tricky issue in any medical college, because of too much stress on research and publication and no reward for such efforts.[4] We could resolve this issue by involving resident doctors, dieticians, and other staff who were also given a certificate of appreciation. The rotation system had double advantage of harnessing more number of trainers, without disturbing the routine duties of a particular trainer.

A major limitation of our study was lack of experience or models from which we could borrow ideas for holding such a kind of training. Training programs reported earlier have been targeted for a specific health problem or intervention. A training program has been reported for the training of traditional birth attendants in using

modern methods of birth asphyxia resuscitation in 54 villages of Chandigarh during 1989-1991.[5] Those who received advanced training practiced modern methods more frequently than their counterparts. In another study of refresher training and continuing education of paramedical ophthalmic assistants (PMOA), 43 h of training was conducted by the Lions Aravind Institute of Community Ophthalmology.[6] The methodology consisted of lectures, practical demonstrations, and hands on training in the outpatient department. The evaluation of the training revealed that the PMOAs found the training useful especially in the areas such as patient counseling, instrument and equipment maintenance, assistance in the OT, which they were lacking in their basic training.

A study of factors influencing the performance of 750 community health workers in Kenya, revealed that the performance was mainly influenced by the training partners.[7] In comparison with earlier studies, our focus was on enhancing the skills of different category of workers within the same organization, with the assumption that a kind of synergy would contribute to organizational effectiveness, rather than addressing one or two categories in a piecemeal basis.

Lack of structured evaluation of the program is another flaw in our study. We relied on the reflection of participants as a major source of evidence of successful completion, rather than measuring the outcome performance. However, there are studies to show that reflection is a valuable tool in medical education and public health, which we used extensively.[8] We have plans to conduct a short-term evaluation of the post-training practices followed by the participants, which may throw further light on the effectiveness of the training.

Many of the participants themselves have expressed that the training should not end up as a 'one time activity'. We recommend regular, continuous, cumulative, and integrated approach to the training at all levels, linked with the performance assessment of staff. Towards this end, there is a dire need for establishing a Human Resource Development (HRD) Cell. AIIMS has already made a beginning by establishing HRD Cell.

We also suggest that future programs like this should make frequent use of problem solving, group games, role play, simulation, video films, and theatrical methods for making the training more enjoyable experience. Research and innovation hold the key to unravel the success of such programs. We need to wait and watch the long-term effects of this program in enhancing the performance of the workers and its impact on healthcare delivery. Our study has implications not only on the capacity building of the health professionals, but also on the vital role of academic institutes to establish links with the education of other health personnel towards the end of better healthcare.

Acknowledgments

We are grateful to AIIMS Administration, Departments of Hospital Administration, Security, Nursing, Community Medicine, Physical Medicine and Rehabilitation, Dietetics, Organ Retrieval Banking Organization, Sanitation, and Engineering for sparing faculty for conducting the training.

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How to cite this article: Deepak KK, Kumar Y, Adkoli BV. Extending professional education to health workers at grass root level: An experience from All India Institute of Medical Sciences, New Delhi. Indian J Community Med 2014;39:38-42.

Source of Support: Nil, **Conflict of Interest:** None declared.