

## **Evaluation of a successful intervention for sustainability and effects in post research phase**

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### **Abstract**

**Introduction:** Promoting appropriate use of drugs is an essential element in achieving quality of health and medical cares for patients and the community, and also to minimize financial burden.

**Objective:** The objective of this paper is to assess the successful intervention for sustainability and effects in post research phase. To address these problems, a variety of educational, managerial and regulatory strategies to improve prescribing have been tried in Nepal. When training is combined with a managerial intervention i.e. peer-group discussion, it results into improved changes in prescribing practices of paramedics in several practices.

**Methodology:** A prospective, three-way design study consisting of small group training, small group training followed by peer-group discussion and control was conducted in three regions of Nepal including one hill and two terai (plains) districts from each region. The study included all health post from the sampled districts, making 80 health posts the study population.

**Results:** The study revealed the effectiveness of the peer-group discussion approach in improving the prescribing practices. An assessment to identify the sustainability of the strategy and its effect within the district healthcare system after the completion of the research phase was undertaken. The study found that peer-group discussion was discontinued in all targeted districts and the improved practices were not sustained after the completion of the research. Various reasons have been found for not continuing the effective intervention.

**Key words:** Drug use, INRUD, Nepal, Intervention, Sustainability, Peer-group discussion, Self-assessment

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Promoting appropriate use of drugs is an essential element in achieving quality of health and medical cares for patients and the community, and also to minimize financial burden. To address these problems, a variety of educational, managerial and regulatory strategies to improve prescribing have been tried in Nepal. Among the strategies tested, training alone has been found to give limited effects in improving the prescribing practices in the public sector<sup>1</sup>. The conventional managerial strategy i.e. supervision/monitoring seems better than training in bringing desired changes though both training and supervision are seen commonly as means of earning extra allowances, and service quality is not seen as a priority<sup>2</sup>.

When training is combined with a managerial intervention i.e. peer-group discussion, it results into improved changes in prescribing practices of paramedics in several practices including diarrhoea, no pneumonia, pneumonia and scabies<sup>3</sup>. This has been shown by a study conducted by International Network for Rational Use of Drugs (INRUD, Nepal). It was a three-way design and the three groups consisted of small group training, small group

training followed by peer-group discussion and control. It was conducted in three regions of the country and sample included randomly selected one hill and two terai (plains) districts from each region. The training districts were Sunsari, Dolakha and Bardia. Similarly, training combined with peer-group discussion included Mahotari, Banke and Surkhet districts. The peer-group discussion involved presentation of self-assessment results of health posts by in-charges and discussion on results in presence of District Health Officer, every month. The control districts were Ilam, Morang and Bara. The study included all health posts from the sampled districts, thus making 80 health posts, the study population. The data was collected prospectively by using the carbon copy prescriptions (CCPs). The CCPs were supplied to the health facilities through district health office.

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The study revealed that small group training combined with peer-group discussion was powerful strategy to improve the prescribing practices but small group training alone was not powerful to improve the practices.

The study included six months period between January and July 2000. Although the effectiveness of the peer-group discussion approach was demonstrated but it was realised that a further assessment to be undertaken to identify the sustainability of the strategy and its effect within the district health care system after the completion of the research phase.

The main aim of this paper is to assess sustainability and effects of the successful intervention i.e. peer-group discussion after completion of the research phase.

### Materials and methods

The assessment was conducted six months after completion of research phase (i.e. in January 2001) in the same 80 health facilities of the nine districts where the research was completed. As in the research phase, control, training and training combined with peer-group discussion groups were the same.

The data were collected using interview, focus group discussion (FGD) and carbon copy prescriptions.

The interview was conducted with District Health Officer/District Public Health Officer (DHO/DPHO) of three districts where peer-group discussions were undertaken. The questionnaire mainly included- use

of carbon copy prescriptions, collection of carbon copy prescriptions, transportation of carbon copies to the district, presentation of findings from health posts to district manager, peer-group discussions on the findings and reasons for continuity or discontinuity of peer-group discussions in the district.

The FGDs, one each in the three peer-group discussion districts were conducted with 6-8 in-charges of health posts. The FGDs also explored the same issues as in the interview including the perception of in-charges for continuation of peer-group discussions in the districts.

The carbon copy prescriptions were transported from health posts to the district health office by in-charges of health posts when they attended the regular district meeting. The prescription were collected from the district health office and transported to Kathmandu by a member of the research team. The prescription data were analysed by using SPSS package.

The qualitative data from interviews and FGDs were categorised and analysed by content analysis method.

The data from control and peer-group discussion districts are extracted and presented in this article.

### Results

Table 1 shows that the use of carbon copy prescriptions continued in the control districts even after the completion of research but it was discontinued in two peer-group discussion districts

**Table 1:** Name of districts and number of carbon copy prescriptions

District	Number of Prescriptions (Baseline)	Number of Prescriptions (6 month research assessment)	Number of Prescriptions (Post research assessment)
<b>Control</b>			
Ilam	456	853	835
Morang	1232	1157	1353
Bara	830	1350	1384
<b>Peer-group</b>			
Banke	329	757	827
Mahotari	406	733	0.0
Surkhet	533	747	0.0

Table 2 shows that the peer group discussion was discontinued in all three districts after the research phase. In interviews the DHO/DPHO expressed that they did not continue the peer-group discussion activity due to the following reasons- not included in district programme, no request from the study team to continue the process and the budget not allocated for the activity. However, DHO/DPHO pointed out that

the process could have been continued if it was included in the policy. Similarly, FGDs with health workers revealed that the peer-group discussion was discontinued after the research phase because it was not included in the agenda of the regular monthly meeting organised in the district. Table 3 shows that the improved prescribing practices were not sustained in the post research period.

**Table 2:** Districts and status of peer-group discussion

District	Research Phase (up to 6 months)	Post Research Phase
Peer-group		
Banke	yes	no
Mahotari	yes	no
Surkhet	yes	no

**Table 3:** Prescribing practices in control and intervention districts

Selected Prescribing practices	6 month assessment (research phase)			Post research assessment		
	Control districts	Intervention (peer group discussion) districts	Change(Control Vs Peer group discussion)	Control districts	Peer group discussion) districts	Change(Control Vs Peer group discussion)
ORS alone in diarrhoea (%)	Decreased from 16.0 to 5.0	Increased from 17.9 to 53.6	Significant (p= 0.006)	Decreased from 16.0 to 4.1	Increased from 17.9 to 44.0	Not significant at p= 0.05
Cotrimoxazole plus Paracetamol in pneumonia (%)	Increased from 37.1 to 63.6	Increased from 31.6 to 58.9	Significant (p= 0.043)	Increased from 37.1 to 55.0	Increased from 31.6 to 46.6	Not significant at p= 0.05
Paracetamol alone in no pneumonia (%)	Decreased from 40.0 to 27.3	Increased from 7.1 to 45.8	Significant (p= 0.005)	Decreased from 40.0 to 35.4	Increased from 7.1 to 28.6	Not significant at p= 0.05
Benzyl benzoate alone in scabies (%)	Decreased from 14.8 to 5.3	Increased from 12.5 to 23.2	Significant (p= 0.007)	Decreased from 14.8 to 2.4	Increased from 12.5 to 21.4	Not significant at p= 0.05

## Discussion

In the setting of the developing countries, every year several intervention studies are conducted for improving drug use practices at primary healthcare level. Significant improvements are achieved in the

intervention group in comparison to control in several practices during the set period of time. This study has demonstrated that when a study is completed, all the processes and methods used during the study ceases

completely. None of the stakeholders feel obligation for continuing the process. The health system also moves with its own policy, plan and priority, there by the intervention activities discontinue.

The success and positive outcomes of a research should be pilot tested in the health system. The successful intervention should be implemented to provide the benefit to the community.

### **Conclusion**

The improvement in the practices achieved during the research period is ceased after the research is phased out because the intervention also discontinues. It means that the patient/community is barred from the beneficial effect of the intervention after the research is completed. So, the successful intervention should be pilot-tested and implemented to provide the benefit to the community.

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