

Communication Brief

Practice-Based Learning Approach: an alternative responsive method for Health Information System change intervention

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Executive Summary

The effectiveness of traditional short-term training in classroom or hall settings is controversial. Thus, considering an alternative responsive approach is imperative. In this communication brief, we introduce the Practice-Based Learning Approach (PBLA) as an alternative training method that appears to be more effective and efficient. We investigated the effect of the PBLA between December 1st and 30th, 2020., on a sample of four health centers namely, Gebrekiristos, Abela, Wonago, and Regdina. Using a standard mentorship guideline, we considered a purposive sample of HMIS registries: ANC, Delivery, PNC, FP, OPD, and Emergency units, since these cover large proportions of the registries' activities. Before the implementation of PBLA training, the performance rates of these health centers were 43%, 34%, 57%, and 26% respectively. Following the PBLA approach, we observed a remarkable improvement in their performance. Gebrekiristos HC showed an increase to 97%, Abela HC to 89%, Wonago HC to 83%, and Regdina HC to 97%. The difference was significant ($P < 0.05$). These findings highlight the effectiveness of PBLA in enhancing the performance of health centers. The approach has a superior effect in helping learners improve their competence", and performance with a higher possibility of putting the training/learning into practice.

Introduction

Practice-Based Learning Approach (PBLA) is understood in contrast to 'classroom or hall' or 'theory-based' learning. It is a learning approach centered on the actual work area, and its prime interest is in developing effective skills and practices (1).

Ethiopia's Ministry of Health (MOH) introduced an information revolution agenda as a priority area of the health sector, as mentioned in the Health Sector Transformation Plan (HSTP) of the country to strengthen the method and practice of collecting, analyzing, and disseminating information for decisions at the lower level (2).

In this regard, though changes have been noticed, there was a gap in ensuring the quality of data and promoting an information-use culture, particularly at the point of data source in health facilities (2, 3). To address these gaps, in 2018, MOH established a collaborative work between six selected public universities in Ethiopia, of which Hawassa University is one, to support regional health Bureaus through the Capacity Building and Mentorship Program (CBMP). The objective of CBMP is to create model health facilities and Woredas for the Information Revolution in the targeted SNNPR and Sidama regions of southern Ethiopia (4,5). After two years of implementing CBMP, we found that the expected change was occurring very slowly with our conventional training approach. As widely accepted (6), we observed that the conventional short-term training approaches were not effective for the following major reasons. First, the training was skewed towards knowledge/theory and was not strongly skill/practice-oriented.

Second, most of the training was provided outside the actual working area, in rented halls in town, where trainees could not link what they learned to practice. Third, most of the time, the selection of appropriate trainees is not guaranteed. Fourth, after taking the intended training, trainees were not keen on putting the training into practice. Fifth, the approach is costly; transportation, per diem, training hall rent, and other administrative costs appeared higher, and finally, absenteeism from work during training and travel days was a challenge. Therefore, considering an alternative responsive training approach that could address the above gaps was decisive.

Methods and materials

We required considering an alternative, relevant, and responsive approach that has a sound scientific base, the PBLA. Although the approach is not original, this approach is believed to have various scientific merits in

terms of training efficiency and effectiveness (1). In this communication brief, our PBLA approach means an actual work area-centred learning approach with the primary goal of self-renewing and effective skill and practice development in specific areas, particularly in ensuring data quality of sampled registries using standard mentorship checklists. We selected one sample health center from each of four CBMP-targeted districts/Woredas/ Shabedino, Hawela, Wonago, and Sankura for the PBLA intervention between December 1st and 30th, 2020. The HCs are Gebrekiristos from Shebedino, Hawela Lida from Hawela, Wonago from Wonago, and Regdina from Sankura. These HCs were also used as a working area training site for the remaining HCs found in each district, locally known as woredas, to enable participants to cascade the training in their respective facilities using the same approach. Though the effectiveness of the cascaded training was not included in the current report.

The PBLA intervention was carried out between December 1st and 30th, 2020, by an experienced CBMP mentor on a sample of registries, OPD, and Emergency unit, FP and ANC, Delivery, and PNC using a standard mentorship guideline. Pre-intervention data were collected by the CBMP mentors who provided the training and considered as baseline data. While the pre-intervention data shows the change we achieved following our preceding conventional approach, the post-intervention data indicates progression after the PBLA intervention.

Results

Our findings, which are presented in Figure 1, demonstrate a significant improvement following the PBLA intervention. Initially, the scores for Gebrekiristos HC, Abela HC, Wonago HC, and Regdina HC were 43%, 34%, 57%, and 26%, respectively. After the intervention, these scores rose substantially to 97%, 89%, 83%, and 97% (mean difference = 0.051, $P < 0.05$), highlighting the effectiveness of the approach (Table 1).

As illustrated in Figure 1 and Table 1, PBLA appears to be an effective approach for driving change, not only by efficiently transferring specific skills and practices to trainees with high success rates but also by offering an efficient solution. This method is structured as a need-

Table 1: Mean score differences of the changes before and after PBLA in the selected facilities, Dec. 2020.

Measurement	Mean	SD	95%CI	p-value
Post-intervention score	0.91	0.29	[0.86, 0.96]	0.000
Pre-intervention score	0.40	0.499	[0.32, 0.48]	
Difference	0.51	0.59	[0.41, 0.61]	

trainees while simultaneously enhancing their competence, capacity, and overall performance. As a result, the likelihood of trainees effectively applying their newly acquired skills increases. Additionally, the approach minimizes training

based, practical, and skill-oriented training conducted within real working environments—health centers. By integrating training into the workplace and considering operational units, PBLA ensures the participation of the right

and transportation days while maintaining high-quality instruction. Moreover, the lower absenteeism rate among trainees further underscores the efficiency of this model.

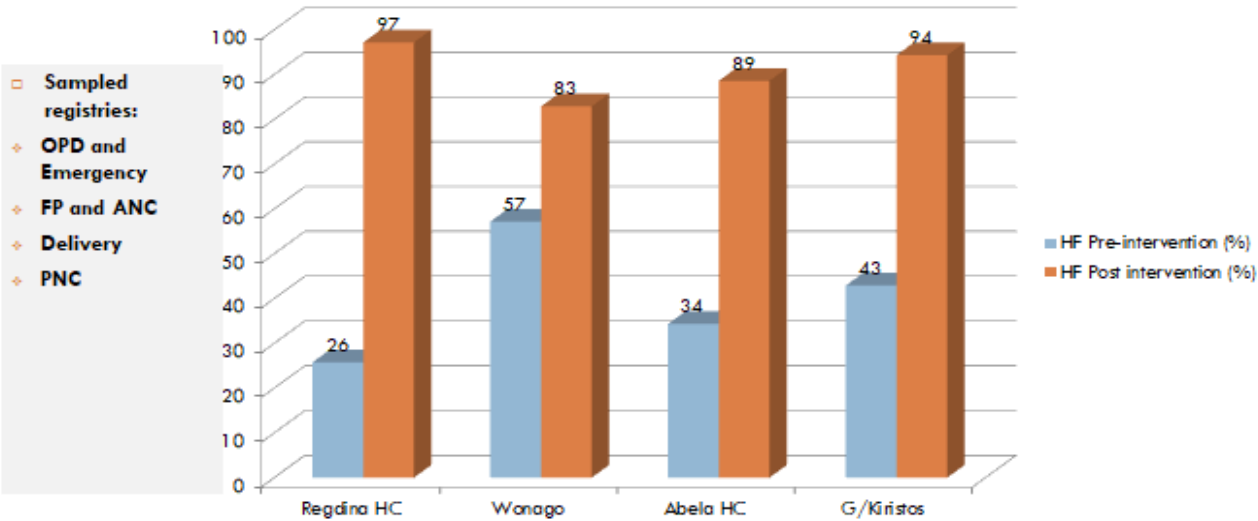


Figure 1: Changes in HMIS registries before and after PBLA in selected HCs, Dec 2020

However, our observations were limited to a sample of health centers where the initial PBLA was implemented by the CBMP team. A broader analysis, including data from the cascaded PBLA across all woreda health centers, could provide deeper insights and reinforce the findings of this communication brief.

Conclusion and Recommendations

This approach has proven to be more effective and efficient both in terms of accelerating change and minimizing resource costs and budget. Besides, its potential to bring about accelerated change in the HIS data quality can be exemplary

for other similar health system activities. However, we intensely believe that refreshment training for updating the general knowledge of expectant trainees based on up-to-date knowledge is crucial, and has to be done on a need basis.

Policy implications: The traditional way of conducting short-term training has drawn significant attention for in-service training, including HIS. However, it often falls short of expectations in terms of effectiveness and efficiency. The training was heavily focused on knowledge and theory, rather than practical skills. Conducted in rented halls away from the actual work area, it hindered trainees from linking their learning to practice. Additionally, the appropriate selection of trainees was often not ensured. After completing the training, many trainees lacked the motivation to implement what they learned. The approach incurred high costs due to transportation, per diem, hall rental, and other administrative expenses, and absenteeism from work during training and travel days posed significant challenges. Therefore, PBLA could be an alternative responsive method for HIS change intervention, addressing these shortcomings by providing need-based, practical, and skill-oriented training in actual working environments, such as health centers.

Recommendations: CBMP, collaborative organizations (MOH, RHBs, and WoHoS), and all HIS partners should consider PBLA as an alternative approach to conducting training for capacity building. The training should be need-based, practice/skill-oriented, and be based in the actual working area consistently.

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Ethical considerations

This study was performed following relevant guidelines and regulations and approved by the Institutional Review Board (IRB) of Hawassa University, College of Medicine and Health Sciences, Hawassa.

Conflicts of interest

The authors declared that no conflicts of interest exist

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