



Original Research Article

Quality Assessment of Immunization Services: A Cross Sectional Study at UHCs of Ahmedabad Municipal Corporation

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ABSTRACT

Background: Worldwide immunization coverage shows an increase in the past years but the validity of the official reports for measuring change over time has been questioned. Quality assessments are being recognized as integral components of new and existing healthcare programme. Thus accurate immunization information is essential for the improvement in the programme performance. This study tried to assess the quality of immunization services at UHC (at headquarter and in its field centre) and also tried to assess client satisfaction.

Aims and Objectives: 1. Assess the quality of services at the immunization centres. 2. Evaluate client satisfaction regarding immunization services.

Methodology: The study was conducted at different UHCs (immunization centers) run by Ahmedabad Municipal Corporation. 24 out of total 58 urban health centers and 1 field immunization centers from each of this UHC of AMC were selected on random basis. Visit was carried out on Mamta day without prior information. Data was collected by using pretested and predesigned proforma. Data was compiled and analyzed with help of Epiinfo 7.

Results: Coverage of immunization is increasing, but still drop out ratio is high due to various reasons. Available space for vaccination is inadequate at 50 % of UHC and 91.7% of field centers. Logistics (Electric and equipment supply) are almost 100%. Knowledge of the worker regarding vaccination and vaccination technique are average. Clients are satisfied with the services provided at 75 % of the centers.

Conclusion: Immunization quality is well maintained at almost all the centers, but still there are many scopes of improvement and many areas to work upon.

Key words: Immunization, UHC, Ahmedabad Municipal Corporation

INTRODUCTION

To maintain vaccines perfectly conserved from its manufacture through administration requires an adequate cold chain infrastructure, compliance to standards and effective management. At the end of the

chain, primary health care providers must have adequate knowledge to manage the cold chain. [1-3]

To improve management, the World Health Organization (WHO) has created a setoff practice guidelines for different

service levels, which include immunization techniques, vaccine monitoring, cold chain management and broadcasting systems. [3] For example, for the cold chain, these guidelines recommend: the vaccine storage in remote sites should be maintained in the temperature range of 2-8oC, the use of minimum/maximum thermometers, temperature charts and the shake test. [3,4] However, these guidelines are often practically quite difficult to implement in field situations due to various factors like infrastructure problems and work load pressures. [5-10] Routine Immunization is one of the most cost effective public health interventions. MPHW/Link Workers provide critical support in mobilizing and tracking beneficiaries for immunization. Immunization gives each child a minimum of four contacts with the health system before the age of one year; it is a tremendous opportunity that is often underutilized. Quality assessment activities have increased in recent years, stimulated by a diversified rationale, experiences and perspectives. Most intervention survey should reflect the provider's, management's and client's perspectives regarding services. There is also increasing need to ensure that providers stick to service delivery protocols so as to achieve desired health outcomes, and to be able to measure service quality on a continuing basis.

Aims and Objectives

The overall objective of this study was to show that services can be improved to the desired level in acceptable manner by creating an active environment at the health facilities. More specifically the project aimed:

1. To assess the quality of services at the immunization centres.
2. To evaluate client satisfaction regarding immunization services.

3. To assess the knowledge of workers regarding immunization doses, schedule and route.

MATERIALS AND METHODS

- **Study design** : Cross sectional study
- **Study period** : December 2012 to February 2013
- **Selection of study units:**
 - The study was conducted at different UHCs (immunization centres) run by Ahmedabad Municipal Corporation.
 - There are total 58 UHC in AMC divided in 6 zones.
 - 4 UHC from each zone was randomly selected.
 - So, total 24 out of 58 urban health centres and 1 field immunization centres from each of this UHC of AMC were selected on random basis.
 - Thus 24 UHCs and 24 session sites were selected.
- Pre-set standards are used assess the quality of immunization services, [11,12] IPHS standards used to assess infrastructure [13]
- **Method:**
 - Visit was carried out on Mamta day without prior information.
 - Data was collected by using pretested and predesigned proforma.
 - Health workers were interviewed for their knowledge regarding immunization dose, schedule and routes.

RESULTS

On observing quality of immunization at UHC we find that ILR and deep freezer were properly positioned in 18 centres. Temperature was regularly recorded at over ninety percent of Urban Health Centres. Ice packs are arranged in criss cross pattern only in 33 percent centers. Vaccine vial properly placed in over 90 percent centers. At four centers other than vaccine

vials are placed in ice lined refrigerator. No vaccine vial was found in stage three/four or in frozen state at any urban health centre.

In 83 percent session supplies are adequate to conduct the Mamata day properly. In most of the session minor logistic like Mamata card, measure tap or pregnancy detection kits are not available. Reconstitution time on vial is written in around 62 percent of session cites. In some of session cites they wrote reconstitution time on vial telly sheets. Mamata card is properly maintained by 65.7% beneficiaries. On checking past entries in these

beneficiaries' Mamata card of 73.1% card was properly filled by health workers. Cold chain was properly maintained in all session cites so not a single vial was found with stage three/four VVM. [Table-2] Electric supply is almost continuous at all the centers; and if there is power cut, it resumes in few minutes. Disposable syringes as well as hub cutter was used at all the centers. Gloves were not used by 30 percent of vaccinator. At some centers, DOTS center and immunization center timing are same and within one premises.

TABLE 1: Observation at Urban Health Centers

Sr. no.	Observation	Yes	No	Total
1	Was DF/ILR properly positioned?	18 (75%)	6 (25%)	24 (100%)
2	Temperature recorded regularly?	22 (91.66%)	2 (8.33%)	24 (100%)
3	Was thickness layer of ice inside the equipment > 5 mm ?	10 (41.7%)	14 (58.3%)	24 (100%)
4	Was Ice-packs arranged in criss-cross manner?	8 (33.3%)	16 (66.7%)	24 (100%)
5	Vaccine in proper position in ILR?	22 (91.6%)	2 (8.33%)	24 (100%)
6	Anything other than vaccine in ILR?	4 (16.7%)	20 (83.3%)	24 (100%)
7	None of the vial was found to have missing/damaged label & stage 3/4 VVM status			
8	None of the T-series vaccine was found frozen (DPT, TT)			

TABLE 2: Observation at Session Site

Sr. no	Observation	Yes	No	Total
1	Was the space adequate ? ¹	7 (19.17%)	17 (70.83%)	24 (100%)
2	Availability of items/supplies for use during the session.	20 (83.3%)	4 (16.7%)	24 (100%)
3	Check for expiry & VVM before starting session	19 (79.17%)	5 (20.83%)	24 (100%)
4	Do they write about reconstitution time on vial?	15 (62.50%)	9 (37.50%)	24 (100%)
5	Is Mamata card maintained properly by beneficiary?	134 (65.7%)	70 (34.3%)	204 (100%)
6	Is Mamata card filled properly?	98 (73.1%)	36 (26.9%)	134 (100%)
7	None of the vial found in VVM stage 3/4 at the end of session			

DISCUSSION

Quality assessments are being recognized as integral components of new and existing healthcare programme for improvement of health services. For quality of services uninterrupted supply of logistic is necessary and in AMC area there was adequate stock of vaccines. There was

immediate response to breakdown and vaccine supply. Expired or VVM grade 3 vaccine was not present which indicate that maintenance of cold chain was proper at UHC, session site and also during the transportation. Most of the centers had good facilities. This finding is contradictory to the study conducted in Uttar Pradesh and

Jharkhand. ^[14] This difference may be because that study was conducted in rural areas and our study focused on urban area. Most of the centers were accessible for the serving community but few centers were away from slum area. Problem of accessibility was reported in some studies conducted at urban slum in India. ^[15-17] Our study area was Ahmedabad corporation area and focus is on outreach services so accessibility is not a problem and these studies were conducted many years before so they may not have proper infrastructure. Gloves were not used by 30 percent of vaccinator; proper aseptic precaution should be taken like usage of gloves and proper hand-washing before each session. At some centers, DOTS center and immunization center are at the same place that may be harmful to children. So they should be kept separate and if this is not possible at least contact of suspected patients should be prevented. Mamata card is properly maintained by 65.7% beneficiaries. If beneficiaries are educated properly they will maintain the Mamata card. Health workers should be educated properly so that they fill Mamata card properly. In most of the session minor logistic like Mamata card, measure tap or pregnancy detection kits are not available if possible all the logistic should make available at all session sites. The causes for high dropout rate were migrants, side effects of previous vaccination, social factors, etc. These findings are similar to other Indian studies. ^[18-21]

CONCLUSION

Immunization quality is well maintained at almost all the centers, but still there are many scopes of improvement and many areas to work upon.

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