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Original Research Article

Utilization of quality assessments in improving adolescent reproductive and sexual health services in rural block of Maharashtra, India

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ABSTRACT

Background: The present study was conducted with an objective to evaluate the quality of ARSH services; assess if these services met the National Standards of care and to utilize periodic program improvement recommendations through the WHO - quality assessment (QA) tools. Quality of ARSH services at twenty public health facilities in a rural block of a state in India were assessed using WHO-QA tools with a pre-test post-test interrupted time series design.
Methods: Seven standards of care addressing provision of quality ARSH services (Standard I-IV); demand generation for these services (V-VI); and management information system (Standard VII) were assessed using WHO-QA tools for five years (2009-2014). Data analysis was done using Excel scoring template developed jointly with WHO. Scores were given for each standard and to each facility.
Results: Periodic interventions resulted in improving the average facility score from 27% to 83% and overall standards score from 28% to 81% at baseline and endline survey respectively. The average scores for Standards I-IV improved from 43% 86%; for standards V–VI from 3% to 66% while for standard VII from 16% to 92% at baseline and endline survey respectively.
Conclusions: Appropriate QA and periodic evidence-informed program inputs improved the quality and utilization of ARSH services. However, community outreach activities continued to be challenging. The assessment demonstrated feasibility and usefulness of using the WHO-QA tools to monitor and improve the quality of ARSH services.

Keywords: Quality assessment, ARSH, Standards, Quality of care, India

INTRODUCTION

This paper pertains to utilization of quality assessments in improving adolescent reproductive and sexual health (ARSH) services in one Rural Block of Maharashtra, India. In this block, an external research team collaborated with Government of Maharashtra to establish, operationalize, evaluate, strengthen and sustain the ARSH clinics at total twenty centres (six primary health centres (PHCs), one sub district hospital (SDH), one Rural Hospital (RH) and twelve subcentres (SCs). The objective of the present study was to conduct the WHO quality assessment (QA) survey at the selected health facilities in the block and provide inputs to continually improve ARSH services at each facility by identifying gaps and devising targeted strategies to overcome these gaps intermittently.

The Indian public health standards for community health centres, draft guidelines (Directorate General of Health

Services, Ministry of Health and Family Welfare, Government of India, 2012) and the ARSH Strategy in the RCH Phase II National Programme Implementation Plan, Ministry of Health and Family Welfare, Government of India), provided the overall policy and programme framework for setting the seven standards of care to address the provision of quality ARSH services.[1,2] The assessment of ARSH at 20 centres in a rural block in Maharashtra was done using the WHO-QA tools in accordance with the WHO Quality assessment standards.

National Health programmes in India are implemented through a network of well-established public health care facilities that caters to both urban and rural areas. The rural health care system (Figure 1) in India consists of SCs, PHCs, RHs and SDHs. The SC is the most peripheral and first point of contact between the primary health care system and the community. It is manned by one auxiliary nurse midwife (ANM) and one multipurpose worker male (MPW); covering a population of about 3000-5000. A PHC is a referral unit for six SCs; with four to six in-patient capacity, manned with a Medical Officer (MO) In charge and 14 subordinate paramedical staff covering population of about 30,000. RH is a 30 bedded Hospital/Referral Unit for four PHCs with specialized manpower. SDH with some additional facilities is the secondary referral unit above the RH. District Hospital (DH) is the tertiary referral center with good healthcare infrastructure providing specialized care located at district headquarters.

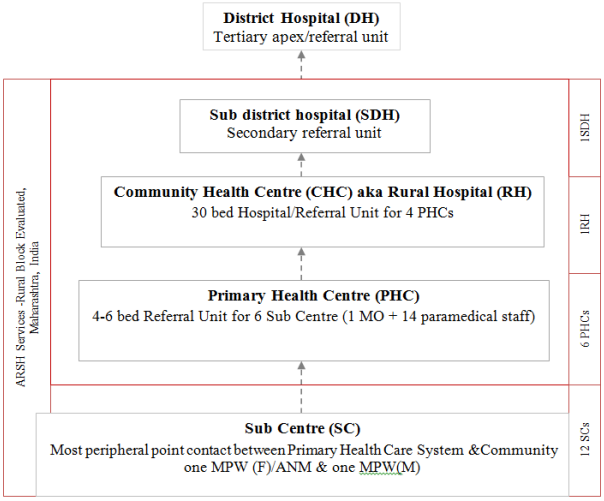

Figure 1: Structure of service delivery unit in the rural health care system in India.

The ARSH strategy was introduced as part of reproductive and child health program RCH -II in all states in India since 2005 to ensure that the sexual and reproductive health needs of adolescents are adequately met. To facilitate the ARSH strategy, Government of India developed an Implementation Guide enumerating seven standards for providing adolescent friendly health services (AFHS) at government health facilities.[2]

First standard ensures the availability of specified service package (preventive, promotive, curative and referral) through a dedicated ARSH clinic and an outreach program for adolescents. The second standard emphasizes on delivery of effective services at these clinics with adequate manpower, guidelines /SOPs and equipment/supplies. For the provision of these services, the third standard focuses on providing a favorable environment at clinics- location, timing, basic amenities, privacy and confidentiality; while the fourth standard stresses on the need for trained service providers with good communication skills and non-judgmental attitude towards the adolescents. The fifth and sixth standards set the benchmarks for provision of the ARSH services in the community. While the fifth standard focuses on creating an enabling environment in community by sensitization of the various gatekeepers and distribution of IEC material; the sixth standard ensures that adolescents are informed about the availability of services at the AFHCs through appropriate signboards at the facilities and IEC activities in schools and public places. The seventh and final standard is about Management Information System (MIS) for recording and reporting all the activities in the ARSH program.

The ARSH services were rolled out by the state governments through the district program implementation plans (PIPs). The states operationalized services at district /sub-district hospital level and some of these hospitals were further selected to deliver a specified package of AFHS during their routine clinic hours and through the outreach activities. ARSH services were not available below district/subdistrict hospital level.

METHODS

Ethical approval was obtained from Institutional Ethics Committee before initiation of the study. The protocol, questionnaires, participant information sheet and the informed consent/assent forms were approved by the Ethics Committee.

Quality assessment (QA) survey of the health facilities in the block was conducted every year for four consecutive years using tools such as facility checklist, interviews of service providers and interviews of adolescent clients developed by the authors jointly with WHO (SEARO). The key issues covered are depicted in Table 1. At each health facility, two Medical Superintendents/Medical Officers and two staff nurses/auxiliary nurse midwives (ANMs) were interviewed. Six adolescent clients were interviewed at each facility except the SCs.

During the baseline survey in the year 2009, Adolescent Reproductive Health Clinics (AFHCs) were not established at the health facilities in the block. The SDH was expected to have a functional AFHC, but was not yet operational. Ten health facilities representing the block were selected randomly. These included one SDH, three PHCs and six SCs. During the second year of assessment

(2010-2011), SCs were not surveyed. This second phase prioritized the strengthening of PHCs to function as AFHCs. After this, ARSH services were operationalized at all the levels of the health system including the SCs in the block. During the subsequent years i.e. 2011-12, 2012-13 and 2013-14, the survey was conducted in SDH, RH, all the six PHCs and 12 SCs. (Two SCs from each PHC were surveyed to represent all the SCs).

Table 1: Data collection tools and key issues covered.

Tools	Data collection method	Key issues covered
Facility and inventory assessment	Observation checklist/ verifying documents (stocks, MIS and outreach activity details)	1. Infrastructure and supplies a. Physical environment b. Privacy & confidentiality c. Inventory 2. Human resources, training 3. Health services a. Services provided b. Counseling c. IEC d. Referral and follow-up 4. Policies and procedures 5. Health information system 6. Service utilization
Staff interview (Taluka Health Officer, Medical Officer and ANM)	Interviewer administered using structured questionnaire	1. Target population characteristics 2. Perceived friendliness of services 3. Consent, confidentiality and privacy 4. Referral linkages 5. Technical competence, training needs 6. Supply and equipment 7. Written policies and procedures 8. Information management
Client exit questionnaire	Questionnaire to be administered to clients upon exit (after receiving services)	1. Accessibility of services 2. Physical environment of the facility 3. Respect / Treatment by staff 4. Privacy and confidentiality 5. Services and referral

The QA survey was conducted every year by external evaluators who were not part of the program using the set of tools as shown in Table 1. Written informed consent was taken from health care providers before conducting the interview. For the interviews with adolescent clients, the purpose, objectives and methodology of the study was explained, and written assent was taken in addition to parental consent.

Data analysis was done using Excel scoring template developed jointly with WHO. Data entry of the responses obtained from each tool was entered in a manner that every health facility had a separate excel file which consisted of seven separate sheets for each of the seven standards. A set of scores for questions from each tool addressed each standard comprehensively and assessed each facility separately. The questions related to 'input' criteria measured the readiness of the system, the 'process' related questions assessed adherence to the implementation guide and 'output' related questions revealed the nature of service delivery environment at the health facilities and if services were comprehensive and adequate to meet the needs of the adolescents. Scores were binomially assigned; '1' for every 'yes' and '0' for every 'no' response. All the 1s per tool were added up and was divided by the total responses for that tool and similarly for other tools. This total was divided by the total number of tools to give an equal weightage. We got the relative score as percentage for each input and process criteria by multiplying by 100. The relative scores in seven excel sheets for each input and process criteria were linked to the the final summary sheet, called the "Results Table", which gave the score for each facility. Average scores for each of the seven standards were also calculated based on the standard wise scores of each facility. The results table was colour coded with green for criteria met (if the average score was ≥90%), yellow for criteria Partially Met", if the average score was 20-90% and red for not yet met if the average score was less than 10% indicating that the dire need for improvement. Unscored questions were also included to gauge the attitudes of service providers regarding adolescent health issues. Data of unscored questions was entered in an excel sheet standard wise and for each facility and analyzed.

The final data analysis was based on two sets of composite scores - Overall standard wise and Facility wise score. This helped to both, identify gaps common across all centres and detect specific gaps in a particular

centre. Average score for each of the seven Standards was derived and performance of the facility was estimated accordingly. The overall scores indicated how well the facility was performing on the characteristic being measured and helped track the gaps in the delivery of AFHS. The analysis compared the standard wise and facility wise scores of the survey at baseline (2009), operational phase (2010-11), intervention phase (2011-13) and end line (2013-14) to monitor the improvements that had taken place due to the interventions. The time-series nature of this study allows the analysis of pre-intervention and post-intervention observations and thus permitting us to separate intervention effects from other long-term trends in a time series.

RESULTS

Composite scores combined the individual measures of quality into an amalgamated assessment which provides a good insight into the performance of both the facility itself and also how each facility fares against the individual ARHS quality standard. This ensures consistency across evaluation for measurement of the quality of services provided over a period five years (including the baseline assessment) at each of the eight health facilities during the implementation of QA Survey. The overall performance of AFHS in Karjat block conducted over five years of AFHS intervention was quite successful with the average facility score of 83% in the end line assessment compared to only 27% at baseline (Figure 2). Even though the services provided at all the health facilities met the WHO criteria only partially initially, they came very close to the target of 90% at the end of the five year period. The score for SDH Karjat was lower than the average as well as other the PHC scores.

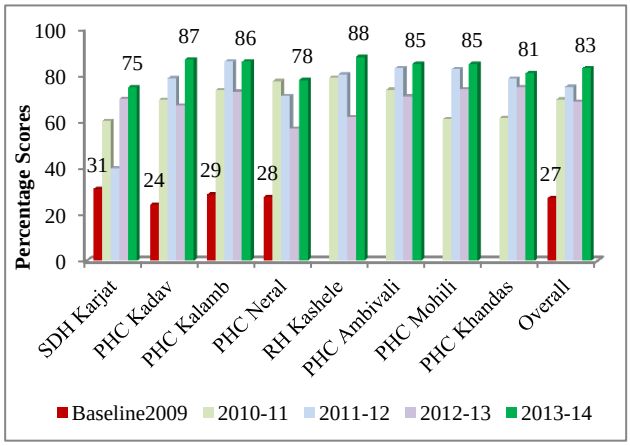

Figure 2: Composite scores of overall performance by facility using WHO- quality assessment survey in 8 health centers in rural Maharashtra.

The overall standard wise average score was 81% in the end line survey compared to 28% in the baseline which improved consistently over five years, except in the fourth year (Figure 3). Four out of seven standards related to service provider and supply side indicators (I, III, IV and VII) almost reached the score of 90% and hence the quality of services as per WHO criteria were met; except for Standard II, which indicated an average score of 73%. Though the remaining standards (V and VI) showed some improvement, there was scope to further enhancement. Their success would depend largely on community participation.

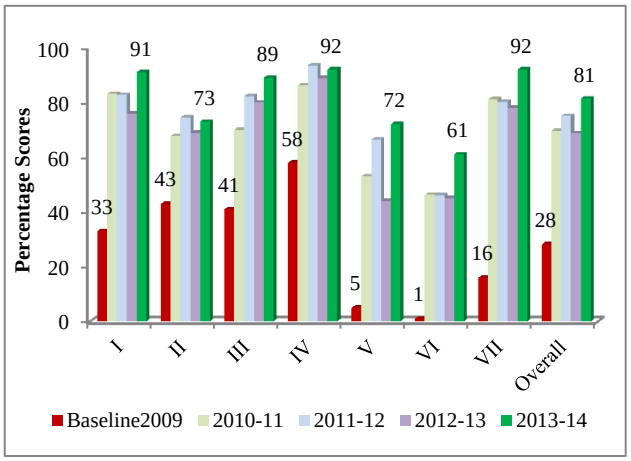

Figure 3: Composite scores by standard of service provision in 8 health centers*using WHO- quality assessment survey in 8 health centers in rural Maharashtra 2009 (baseline)-2014 (endline).

*Baseline survey (2009) includes only 4 health facilities – SDH and 3 PHCs. Figure 1 & 2 does not include sub-centre scores.

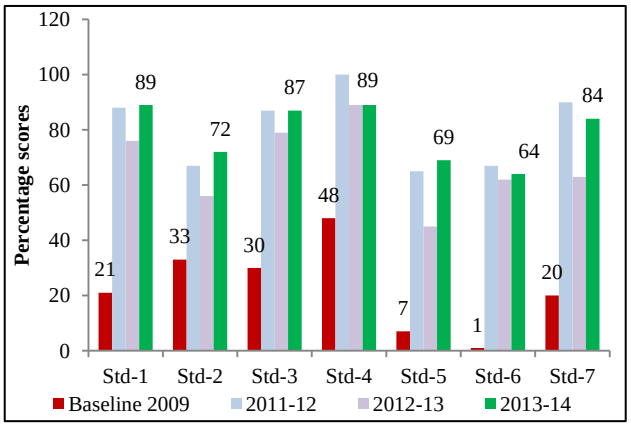

Figure 4: Average scores by standard for the 12 sub-centres*under each individual PHCs to measure ARSH performance upon program implementation.

***Baseline survey (2009) included only 6 sub-centers; QA was not conducted at subcentres for the year 2010-11.

Adolescent health services performance of SCs after the implementation of ARSH program indicated a rise in the SC performance as four of the six PHCs scored above 80% and the overall score was 79%. The standard wise score indicates that most of the standards showed considerable improvement as compared to the previous year (Figure 4). Four out of seven standards related to service provider and supply side indicators (I, III, IV and VII) almost reached the score of 90% and hence the

quality of services as per WHO criteria were met. Standard II indicated an average score of 72% while standards V and VI had score of 69% and 64% respectively.

After the completion of the WHO-QA survey every year, gaps were identified and measures were taken to address these gaps. This constant evaluation and quality check led to an impressive improvement in the scores for each standard as shown in Table 2.

Table 2 Gaps identified and addressed during quality assessments.

Std. no.	Standard	Gaps identified	Gaps addressed	Improvement (%) (Baseline–Endline scores)
I	Facilities provide the specified package of health services that adolescents need	All health facilities were not designated as AFHS clinics Adolescents were provided health services through general OPD in all the facilities	All health facilities were designated as AFHS clinics. Dedicated clinics on fixed day and time established at all health facilities however not convenient to adolescents hence clinics became operational on all days through OPDs	58 (33-91)
		Referral linkages were available. None of the health facilities were supplied with the referral guidelines	Referral linkages were strengthened Referral guidelines were found in all AFHCs	
		Health facilities did not have routine plans to provide outreach services	Besides regular outreach, all AFHCs conducted outreach activities	
II	Health facilities deliver effective services to adolescents	No dedicated counsellors for ARSH	ICTC counsellors were instructed to involve in ARSH activities	30 (43-73)
		Staff not received training in providing AFHS	Staff trained for providing AFHS	
		No system in place to monitor supply of drugs and equipment's.	System is in position for regular supply of drugs. Each facility was given a date for collection of medicine at DHO	
III	Adolescents find environment at health facilities conducive to seek treatment	No anonymous registration.	Instructions for anonymous registration given during training; and service providers were practicing it.	48 (41-89)
		AFHS implementation guide was not available.	Protocols and guidelines are available in all health facilities.	
IV	Service providers are sensitive to adolescent needs & are motivated to work with them	Only MOs had been trained in communication skills, non – judgmental attitude through RCH project	Majority of service and support staff are trained in ARSH and provide supportive & non-judgmental care for adolescent clients	34 (58-92)
V	An enabling environment exists in the community for adolescents to seek services	Staff had not been conducting activities for promotion of AFHS with village elders, gatekeepers, village health and sanitation committee	Village elders, gatekeepers, self-help groups, school teachers were sensitized on ARSH issues and availability of AFHS. Peer Volunteers and NGOs were involved in some areas for conducting activities for promotion of AFHS	67 (05 -72)
		Anganwadi, women's groups and youth clubs had been involved only in health awareness campaign for girls	Linkages were established with AWW, ASHA, PADA worker and school teachers by conducting sensitization meetings.	

Continued.

Std. no.	Standard	Gaps identified	Gaps addressed	Improvement (%) (Baseline–Endline scores)
VI	Adolescents are well informed about the health services	None of the health facilities had any signboards on AFHS. There had been no communication or outreach activities involving NGOs, media, self-help groups etc. to promote adolescent health in the communities	All the facilities had Maitri clinic Signboard at the main entrance. Outreach activities were conducted to reach adolescents through AWWs, ANM, MPW SHGs, Peer Volunteers and in some area local NGOs. Folk media was confined to few areas	60 (01 -61)
VII	Management Systems are in place to improve/ sustain the quality of health services	Facilities did not have any reporting format or MIS concerning AFHS. None of the facilities experienced supportive supervision.	HMIS was in place to monitor adolescent health data; Frequent monitoring visits by block and district Officials to PHC are made. General supportive supervision was provided; however, no supervisory checklist was used.	76 (16-92)

The QA survey also had some unscored questions in the service providers and adolescent clients interview section. The findings related to service provider interviews revealed that awareness about adolescent health had improved. Trained Medical Officers were positive in their understanding and acknowledgement of the special needs of adolescents and asserted that they had been striving to provide quality health services to the adolescents. The AFHS trained ANMs also revealed that they had developed a concern for the special health needs of the adolescents and had started establishing community based linkages. Most of the ANMs were willing to provide contraceptives to adolescents irrespective of their marital status.

The views of the health care providers were supported by an adolescent friendly environment observed in almost all selected health facilities. This was reiterated in the responses of adolescent clients in their exit interviews. All young people interviewed were satisfied with the services received by them on the day of the interview. In the end line survey, it was observed that 90% of the interviewed adolescents were regular clients at these facilities. Assessments also showed that 75% of adolescents were encouraged by family members to seek ARSH services, indicating increased acceptance and awareness of ARSH not only among the target population but also among gatekeepers. Adolescent clients were aware of health camps, exhibitions and campaigns conducted by PHCs. However activities at the subcentre/village level needed further advocacy and awareness efforts as some of the adolescents were not aware of the activities; which were theoretically conducted by all Accredited Social Health Activist (ASHA) and Anganwadi Workers.

DISCUSSION

The findings of QA surveys indicate that the AFHS intervention has contributed substantially to improving the effectiveness adolescent friendly services in all the health facilities overtime. However, the fourth year showed a decline as compared to previous years mainly due to unavailability of the guidelines at the health facility and poor record keeping of outreach activities. Also unlike the second and third year, where the research investigators were actively involved in conducting IEC/BCC activities in the community, the fourth year encouraged the health centers to conduct these activities independently with mentoring support from the investigator institute. During the fifth year, the shortcomings of fourth year assessment were modified and health facilities made efforts to get required protocols /guidelines and outreach activity records in place at all health facilities.

The overall score (83% for all the facilities and 81% for standards) during the last year was quite satisfactory and indicated an improvement in the quality of services over the intervention period. Some of the facilities secured more than 90% scores in some standards indicating that with adequate and timely training and backup support, many of these health facilities in the block were able to adhere to the National Guidelines. The overall score (79% for SCs and 84% for standards) for last year indicated that the necessary efforts had been taken at SCs where the baseline scores were just 23% and 20%. The overall standard score for SDH Karjat was lowest among all the facilities due to a complex interplay of factors such as frequent staff change, low motivation among the existing staff, poor services being offered despite attachment to a referral centre and no designated staff for

conducting community based interventions as compared to the other PHCs where ANMs conducted these activities.

The score for standard II related to delivery of effective services at the AFHCs could be improved through ensuring regular supply of drugs (Oral contraceptive pills, RTI /STI kits, Emergency Contraceptive Pills) which was reported to be irregular during the study. The scores for Standard V and VI focusing on demand generation indicates that it can be improved further through consistent ARSH specific community based interventions by providing take home IEC material and introducing newer IEC techniques. Similar issues regarding strengthening the community based activities emerged from adolescent client interviews. For the service providers, we found that change in attitude towards adolescent health needs was an outstanding contribution of AFHS intervention.

Studies on assessing quality of adolescent friendly services have been conducted in India and globally. [3-8] However, majority of these studies are hospital/clinic based and are at tertiary level or in urban areas. There are very few published studies reporting utilization of serial Quality assessments for improvement of adolescent or youth friendly health services. Evidence from India is mainly based on assessment of quality component at the health facility level and lacks the approach to assess the quality of services through defined standards on both the supply and the demand side.[3,4]

Some studies in Eastern Europe and African region have also attempted such program improvement.[5-7]

The Ministry of Health, Republic of Moldova established youth friendly health services (YFHS) in both public and in NGO setups. The quality of health service provision was assessed in 20 health facilities - 12 YFHS youth friendly health centres, two women's health centres and six reproductive health offices. The results of external evaluation were used to improve programming and ultimately the quality of services for young people. The scaling up strategy developed by the Ministry of Health set out a stepwise approach which took youth friendly health service provision from 12 centres in urban areas to across the country.[5]

A study conducted in Tanzania describes the challenges that the Ministry of Health and Social Welfare (MOHSW) Tanzania identified and the way in which it addressed them with the support of WHO, UNFPA and other partners. Use of measurable indicators of the seven AFHS standards developed by the MOHSW Tanzania has allowed identification of good performing health facilities and also those that need support in improving services. The study indicates that the development and implementation of quality standards is a useful means of ensuring efforts to make health services adolescent friendly.[6] Similar observations are noted in the present study in which the utilization of QA survey findings provided gaps which were addressed to improve the ARSH services. In the present study the QA tools were developed based on the seven WHO standards which are almost similar to the standards developed by Tanzania.

A study conducted in Lusaka, Zambia reported evaluation of three youth-friendly service (YFS) projects with regard to reproductive health information and services of adolescents. Specific indicators of youth-friendliness and community acceptance were developed and measured. Although the projects appear to have improved the clinic experience for adolescent clients and to have increased service use levels at some clinics, the findings suggest that community acceptance of reproductive health services for youth may have a larger impact on the health-seeking behaviours of adolescents.[7]

WHO developed eight global standards to improve quality of health care services for adolescents. These standards were developed on the basis of needs assessment along with analysis of 26 national standards from 25 countries and subsequently tested in Benin and in a regional expert consultation of Latin America and Caribean countries for their usability. The eight standards of WHO can be utilized by the health care services as part of their quality control mechanism to improve adolescent health services.[8]

The present paper has utilized seven WHO QA standards to assess the quality of ARSH services and utilized them as a part of quality assurance mechanism to improve ARSH services in a block in Maharashtra. The present QA survey conducted for five years in a rural block of Maharashtra, India reveals that utilization of the QA findings was useful to improve ARSH services and in creating a platform to carry out a sustained ARSH program. All the AFHCs in the selected block were included in state Program Implementation Plans and would receive grants from state Government for sustenance. The author's institute provided the initial support, technical expertise and implemented the program for four years in the block which could then be taken forward by the block and the PHC officials. The assessment has indicated huge potential and high feasibility of using the QA tools periodically by the State to monitor the quality of health services in AFHS centers.

Utilization of periodic QA as done in our study to improve ARSH services could be scaled up in the health system. The concept of QA could also be applied for other health programmes. The tools and process have been shared with the Government Health authorities for use in the health system.

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