



CASE STUDY

Improving antenatal services with limited human resources in selected facilities of Kinnaur District, Himachal Pradesh, India

Summary

In December 2013, the USAID ASSIST Project started work in Kinnaur District with staff in six facilities to improve care along the Reproductive, Maternal, Newborn, and Child Health and Adolescent (RMNCH+A) continuum. Identifying numerous challenges to providing good antenatal care (ANC), staff in Kinnaur proposed changes in the functioning of ANC services in their respective facilities. Through June 2014, the staff has improved ANC services at six facilities and identified 48 women with high risk pregnancies (13%) within five months of starting improvement activities.

Introduction:

Kinnaur is a high priority district under the Government of India's RMNCH+A initiative. The district has a population of 84,000 and has many challenges including geography, scattered population, snow-bound areas, poor road network (most facilities are not connected to roads) and logistics. In addition, there is a shortage of all key cadre including doctors, staff nurses and paramedical staff (table 1).

The USAID ASSIST Project started work in December 2013 helping Kinnaur staff to use quality improvement approaches to provide better care along the RMNCH+A continuum. The services were started in six facilities, which accounted for 30% of all deliveries in the district and 43% of institutional deliveries (31% occurred at home).

ASSIST staff worked with staff to form quality improvement teams in these facilities to work on addressing key issues related to maternal and child survival. In the previous year, two maternal deaths had occurred in Kinnaur where deliveries happened at home. They were both due to post partum hemorrhage and anemia. Both had received antenatal care (ANC) but had not been managed appropriately. Based on

Table 1: Staff Position in Kinnaur District

Category	Sanctioned	In-Position	% Filled
Gynecologist	1	1	100%
Pediatrician	1	0	0%
Medical Officers	60	48	80%
Senior Lab Technician	31	6	19%
Pharmacist	30	7	33%
Male Health Worker	35	26	74%
Female Health Worker/ANM	54	32	59%
Female Health Supervisor	10	6	60%
Ward Sister	7	0	0%
Staff Nurse	45	20	34%

Table 2: ANC Load of Six Facilities in Kinnaur District

Facility	ANC Load/month
RH, Reckongpeo	50-60
CHC Sangla	15-20
PHC Kalpa	5-8
PHC Kilba	2-5
S/C Shong	2-5
S/C Pangri	5-8

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these findings, the health workers decided that their first improvement project would be to improve ANC to detect high risk pregnancies so the timely management and referral can be done.

Improving the detection of high risk pregnancies

The District Improvement Coordinator of the USAID ASSIST Project trained the members of the improvement teams in six basic steps of quality improvement and helped them review the barriers they faced in identifying and managing women with high risk conditions. The teams identified the problems they were having with ANC and developed possible solutions to those problems. They started work to improve ANC in February 2014. Table 3 shows the challenges and proposed solutions for each facility.

Facility	Challenge	Proposed Solution
RH Reckongpeo	<ul style="list-style-type: none"> Different components of ANC visit were done in different buildings and women did not always know where to go so they did not get complete care ANM's provided most care in ANC visits after visit 1 but did not have access to haemoglobinometer or blood pressure (BP) equipment ANM did not know what care to provide 	<ul style="list-style-type: none"> Move staff so that all steps of ANC care happened in the same location Purchase equipment for ANM Train ANM on the specifics of good ANC care
CHC Sangla	<ul style="list-style-type: none"> ANC visits were not on fixed days Lack of knowledge of good ANC care Lack of haemoglobinometer and BP equipment 	<ul style="list-style-type: none"> Fix ANC day and advertise this to clients Training of health workers regarding ANC, BP and hemoglobin (Hb%) check-up. Provision of checklist regarding history taking, counseling and detection of high risk pregnancies. Provision of ANC format. Procurement of BP apparatus for MCH centre.
PHC Kalpa, PHC Kilba, S/C Shong, S/C Pangi	<ul style="list-style-type: none"> Lack of knowledge of good ANC care Lack of haemoglobinometer and BP equipment 	<ul style="list-style-type: none"> Training of health workers regarding ANC, BP and Hb% check-up. Provision of checklist regarding history taking, counseling and detection of high risk pregnancies. Provision of ANC format. Procurement of BP apparatus for MCH centre.

Changing patient flow at Reckongpeo:

The previous system of ANC in Reckongpeo was confusing. Women went to the outpatient department where a doctor measured their blood pressure and ordered laboratory tests. They were then supposed to go to the maternal and child health (MCH) clinic for the rest of the ANC visit but most women did not go. This system led to the majority of women not receiving full ANC and was also a burden on the medical officers. The team changed the system so that all ANC services were provided in the MCH clinic. They also purchased new equipment to facilitate care in MCH, and the health workers are now expected to categorize women as high risk or not before discharge and develop a plan to bring the high risk women to the obstetrician.

Results:

Improvement in processes of care was achieved between December 2013 and June 2014. History taking of pregnant women increased from 0% to 100%, hemoglobin and BP measurement has increased from 27% to 100% and 17% to 100%, respectively. History taking and counseling were also dramatically improved in a short span of time. These improvements in processes of care also led to improved

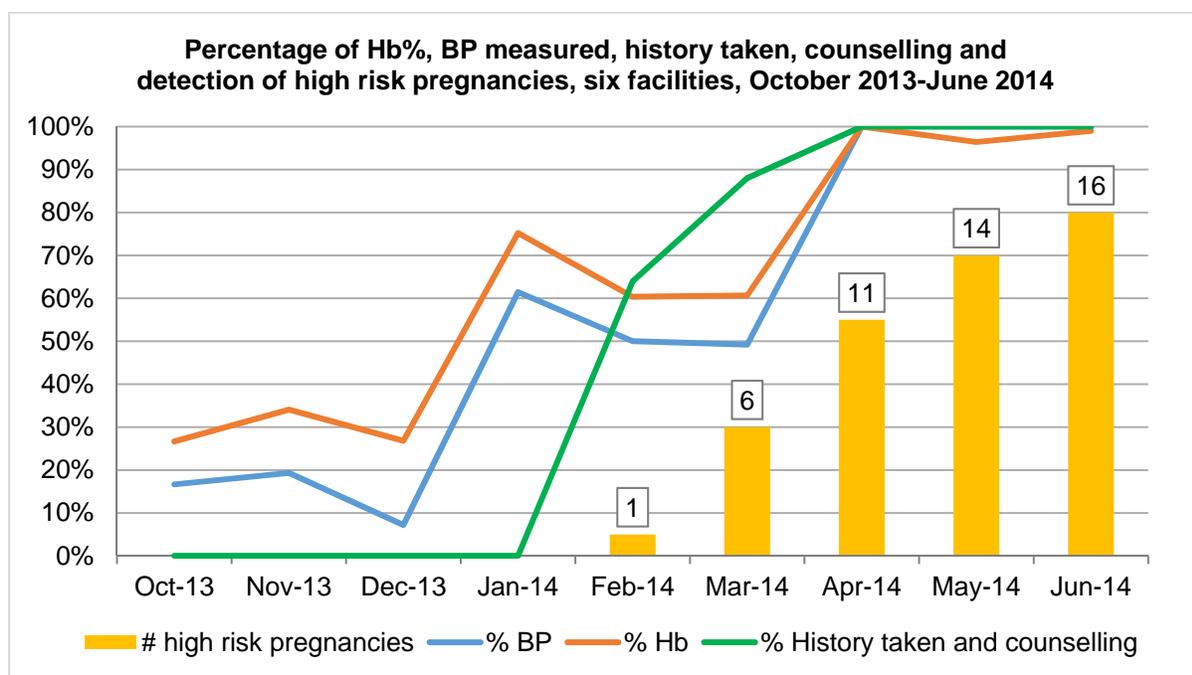
detection of high risk pregnancies. No women with high risk conditions were identified in the 4 months preceding the start of this work, while 48 women with high risk pregnancies were identified in the first five months. These women were then referred to the gynecologist in RH Reckongpeo for further management. Forty-four of the women were managed at RH Reckongpeo while four were referred to another district because Kinnaur did not have the facilities to manage these cases. Two women with severe anemia and one with antepartum hemorrhage were referred for transfusion (Kinnaur has no blood storage unit), and another woman was referred because no fetal movements were felt (Kinnaur has no ultrasound machine).

Sixteen women with anemia were identified in the ANC clinics between February and June. Eleven of these women have had follow up visits and have seen a mean increase in Hb of 1.3 g/dL. Two of the 11 now have hemoglobin above 11 g/dL.

Table 4: High risk pregnancies of six facilities in Kinnaur District

High risk condition	No. of high risk cases
Bad obstetric history	27
Short stature	7
Hypertension	3
Previous C- section	3
Elderly primi	2
Multigravida	2
Severe Anaemia	2
Ante partum haemorrhage	1
No fetal movements	1

Figure 1: Improving ANC services and identifying women with high risk conditions



Conclusion

By using six steps to identify and solve problems, six facilities in Kinnaur District were able to rapidly improve identification and management of women with high risk pregnancies. The teams are now moving on to address new aims along the RMNCH+A continuum. An important next step will be to improve anemia management.