

UNDERUTILIZATION OF MATERNAL DIAGNOSTICS: A MISSED OPPORTUNITY FOR QUALITY ANTENATAL CARE FINDINGS FROM THE SOCIALAB ANTHROPOLOGY STUDY IN SENEGAL



BACKGROUND

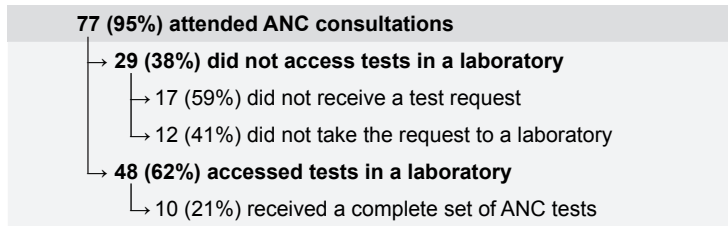
Problem definition: Diagnostic antenatal screening tests can identify medical conditions threatening mother and child health during pregnancy and delivery. Underutilization of these tests would represent a missed opportunity to reduce maternal and child mortality and morbidity.

National guidelines: The Directorate of Reproductive Health (DRH) recommends six maternal screening tests for uncomplicated pregnancy. These include: 1) Blood group/Rhesus factor determination (BGRH); 2) screening for sickle cell anemia (SC); 3) HIV and 4) syphilis serology (SS); 5) hemoglobin concentration (Hb) and 6) determination of proteinuria (PU).

Delivery of ANC screening tests: During ANC consultations, midwives or assistants do rapid point-of-care (POC) tests (HIV and PU). The rest of the complete set has to be done in a medical laboratory. The laboratory facilities in public and private hospitals/clinics and health centers are expected to be equipped to execute the complete set of six tests. However in health posts, which do not host laboratory facilities, only the POC tests can be done. Thus, to receive the complete set of ANC tests it requires a visit to a health center or hospital laboratory.

QUANTITATIVE RESULTS: UPTAKE OF ANC SCREENING TESTS

Among 81 pregnant/recently delivered women interviewed in the community:



Result: Almost all women interviewed in the community attended ANC (77/81), but only 13% of those with ANC got a complete set of ANC tests (10/77).



Among 283 pregnant women who came for testing to a laboratory:

| Place of ANC | N | Maternal screening tests received (%) | | | | | | |
|------------------|------------|---------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | BGRH | SC | SS | HIV | HB | PU | Complete |
| Health center | 148 | 83 | 82 | 95 | 83 | 49 | 68 | 28 |
| Health post | 83 | 95 | 88 | 96 | 59 | 62 | 60 | 16 |
| Public hospital | 39 | 77 | 74 | 74 | 89 | 80 | 40 | 13 |
| Private hospital | 13 | 69 | 69 | 92 | 69 | 77 | 57 | 15 |
| All | 283 | 85 | 82 | 92 | 76 | 57 | 63 | 22 |

Result: Only 22% of pregnant women who accessed the laboratory for tests got a complete set. Figures varied by place where a woman received ANC: relatively more women who attended ANC at health centers got a complete set. In hospitals relatively fewer women received PU screening; in public hospitals, fewer received SS; in health posts the lower level was related to relatively fewer women receiving HIV screening.



STUDY METHODOLOGY

The SocialLab research project, 2012 - 2015
<http://aighd.org/projects/sociallab>

Approach

Interdisciplinary, combining biomedical sciences and anthropology.

Objectives

Anthropology study: To identify and understand the barriers to access diagnostic maternal screening tests for ANC delivery and give recommendations to increase uptake.

Partners

Directorate of Laboratories (DL), Senegal; Fondation Mérieux, France; Amsterdam Institute for Global Health and Development (AIGHD) and Center for Social Science and Global Health (SSGH), Netherlands; Netherlands Organisation for Scientific Research (NWO/WOTRO) (funder).

Study methods

Mixed methods, including ethnography (observations, informal interviews), in-depth interviews (IDI), structured interviews (SI), workshops.

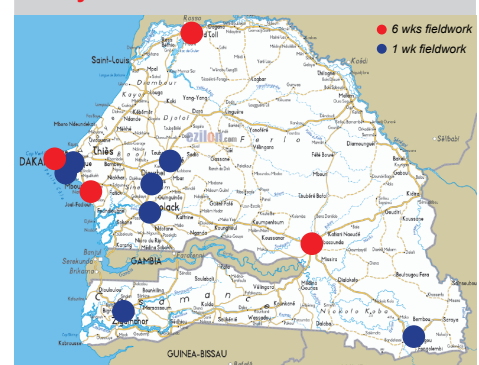
Study sites and sampling

Three hospitals and eight health centers and surrounding communities; purposeful sampling out of 96 public health facilities with laboratories, based on regional and facility-level representation.

Study populations and sampling

- 81 pregnant/recently delivered women in communities, purposeful sampling in communities around the 4 'red' facilities; IDIs
- 283 pregnant women who came to have tests in the laboratories of all 11 facilities; sampled as many as possible; SIs
- All ANC and laboratory staff in the 11 facilities ethnography, workshop, IDIs.

Study sites



QUALITATIVE RESULTS: MULTI-LEVEL EXPLANATIONS FOR LOW UPTAKE OF ANC MATERNAL SCREENING

Community level



Socio-economic conditions

- Absolute poverty and financial difficulties (of 81 households in community: 30% lived in poverty and 30% with financial difficulty)
- Gender norms dictate that wives (living in extended households of husband's family) are financially and in decision-making dependent on husbands and in-laws
- Extremely low literacy level (41% of women in the community had no schooling, 33% only (few years) primary school; these figures for women interviewed in the lab were 45% and 21%)

"In this area, wives do not have decision making. They need to have the permission of mother-in-law or husband to follow certain advice and prescriptions of the midwife – if they do not give, difficult to follow" (woman in Tambacounda)

Why women do not access the lab

- Costs for testing and transportation due to multiple travels are prohibitive for many households. (Price of complete set of tests is 10 to 35% of an average monthly income)
- Lack of awareness of importance of tests results in low demand for ANC screening
- Geographical isolation makes laboratory services poorly accessible (especially for women having ANC in health posts)

ANC clinic level



Work context and routines

- Unstable employment conditions – low wages; 22% of midwives participating in the workshops worked without a salary
- National and institutional guidelines are not harmonized and not accessible
- High workload for midwives (ANC is just one of the services in the outpatient reproductive health clinics)
- Insufficient (qualified) staff
- Lack of basic equipment in most facilities
- Focus on ultrasound diverts attention from supervising head-midwives
- Extreme working conditions (heat, small consultation space – for half of the midwives in the study)
- Poor communication by midwives with women on all procedures (due to: lack of time; language-barrier; assuming illiterate women cannot understand)
- POC HIV test normally done in 8/11 facilities; POC PU supposed to be done in 7, but routinely done in only 3 facilities

Why midwives do not request (all) tests

- Assume women's financial problems
- Lack of awareness of current national or institutional guidelines on ANC tests
- Know that reagents are not available in the facility's laboratory
- Rely on own clinical diagnosis and on prophylactic treatments against anemia
- Forget (tired, heavy workload)

Laboratory level



Work context and routines

- Prices for complete set of ANC tests differ per facility; prices ranged between 6,500 and 11,500 FCFA (9.75-17.25 €); lowest prices were in 3 facilities that made a special ANC-test-package price.
- Price for tests are set by the facility's management within minimum and maximum limits set by the Ministry of Health (MoH)
- Revenue from the laboratory is an important source of income for health facilities
- Shortage of (qualified) staff
- Unstable employment conditions – low wages; 10% of staff worked without salary
- Opening hours (8-10 or 11 am) not coordinated with ANC clinic hours (9-15) and delivery of test results next-day: implying extra travel days for women
- Generally, equipment for ANC tests is available

Why labs do not execute (all) tests

- Although generally equipped, regular reagent stock outs and broken down equipment in 8/11 facilities; mostly related to the blood count machine (for Hb)
- Send women away who come outside opening hours
- Select tests from the request if women did not bring enough money for all tests

CONCLUSIONS

Maternal screening tests in Senegal are underutilized. A main barrier to access tests relates to households' financial difficulties combined with high prices for tests and need for multiple travels to laboratories. Because midwives often do not explain the importance of tests, women cannot use this argument when asking money from their husbands who normally pay for health care. Midwives appeared to under-request tests: They rely on their clinical diagnosis, assume women cannot pay, and lack guidelines. In summary, midwives and husbands/in-laws are the main gate keepers to the laboratory.

HEALTH SYSTEM RECOMMENDATIONS TO INCREASE TEST UPTAKE

| | |
|--------------------------------------|---|
| Workforce | <ul style="list-style-type: none"> • Train midwives on importance of tests, communication/counseling and national guidelines • Recruit and remunerate staff, especially in health facilities outside Dakar |
| Technology and infrastructure | <ul style="list-style-type: none"> • Secure availability of reagents and equipment • Improve work environment for health staff |
| Service delivery | <ul style="list-style-type: none"> • Simplify the delivery of ANC testing through client-friendly opening hours of the laboratory and standardized test request forms for midwives. • Increase the demand for tests through information sessions on tests in communities to all community members – including men • Decentralize the complete set of ANC testing to peripheral health posts by offering them as POC tests • Involve facility's social assistant if women cannot pay |
| Leadership and governance | <ul style="list-style-type: none"> • Develop final guidelines on ANC tests through a collaborative effort between different MoH departments (DL, DRH, HIV Division) and make them accessible to all staff |
| Health care financing | <ul style="list-style-type: none"> • Reduce price of tests by facilities introducing an ANC package-price and/or cover tests through health insurance |