

# STRENGTHENING HEALTH PROVIDER COMPETENCIES THROUGH CLINICAL MENTORSHIP

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## BACKGROUND

Insufficient clinical knowledge and skills among health providers contributes to poor health outcomes in low- and middle-income countries (Lawn et al. 2016). However, training health workers as a one-off activity does not necessarily improve their clinical competency or lead to significantly improved health outcomes (Leslie et al. 2016). One proven approach to enhancing trainings is through multidisciplinary collaborations involving highly experienced health workers—mentors—who offer professional guidance and pass on knowledge and skills they have attained to less experienced providers (Fredrick et al. 2021).

Mentorship is vital in equipping health providers not only with clinical knowledge and competencies but also other necessary skills such as critical thinking, creative problem-solving, and effective communication to increase their ability to handle clinical challenges (Amri et al. 2020). Mentoring is an interactive process with mentors and mentees working together to identify and address health system gaps through continuous quality improvement that ultimately creates an enabling environment to bring about a culture of positive changes in health care delivery and competency in health facilities (Ajeani et al. 2017). Mentorship is relationship-oriented, based on mutual respect between mentors and mentees that if properly implemented strengthens the confidence of both

parties by offering opportunities for professional and personal growth (Belrhiti et al. 2016). The mentee benefits through increased clinical competency, confidence, job satisfaction, and work productivity while mentors receive immense satisfaction from steering their proteges into becoming better health providers (Mijares and Radovich 2020). Through this guidance, mentors also become more attuned to their own strengths, weaknesses, skills, and work practices, which can improve their clinical mastery (Burgess, van Diggele, and Mellis 2018).

Capacity building of health providers through targeted on-site simulated trainings followed by clinical mentorship is a critical approach used by the USAID Ingobyi Activity to improve the skills and competency of health workers to deliver critical lifesaving interventions. Ingobyi is a five-year cooperative agreement led by IntraHealth International to improve the availability, quality, and utilization of reproductive, maternal, newborn, and child health (RMNCH) and malaria services, building upon the tremendous gains Rwanda has made in the health sector as well as previous USAID investments. Training and clinical mentorship are part of Ingobyi's broader strategy to strengthen the capacity of health care providers, which also includes routine data analysis and use to identify critical gaps in knowledge, skills, and service delivery.



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# INGOBYI ACTIVITY'S MENTORSHIP APPROACH

## SELECTION OF MENTORS

Ingobyi Activity has partnerships with three Rwandan professional medical associations—the Rwanda Society of Obstetricians and Gynecologists (RSOG), Rwanda Association of Midwives (RAM), and Rwanda Pediatric Association (RPA)—to conduct continuous mentorship in 26 hospitals and two upgraded health centers from 20 districts.

The selection of mentors is based on a set of criteria, including their qualifications, familiarity with clinical standards, clinical experience, availability and willingness to offer mentorship services in a given technical area, possession of good leadership and communication skills, and ability to collect, analyze, and use health data to strengthen provider capacity and improve quality of care. Each of the three professional associations provides one mentor per hospital to form joint teams of three mentors that provide integrated mentorship over three consecutive days every month.

To mentor the 325 health centers within its 20 supported districts, Ingobyi collaborated with the Ministry of Health (MOH), Rwanda Biomedical Centre (RBC), and district hospital leaders to select district-based mentors, starting with those who were high performing mentees validated by the previous USAID Maternal and Child Survival Program, and adding others who had been trained in respective technical areas and had served as peer mentors in their health facilities.

## ORIENTATION OF SELECTED CLINICAL MENTORS

Ingobyi Activity conducts orientation training of the selected mentors to equip them with the skills and confidence required. Training topics include adult teaching principles and methodologies; leadership, mentorship, and coaching skills; low-dose, high-frequency (LDHF) training principles, communication skills, data analysis, and quality improvement (QI) project implementation. The mentors are also oriented on the different mentorship evaluation tools, including checklists, reporting tools, and mentorship tracking tools. At the end of orientation sessions, theoretical and practical evaluations are conducted to identify the best performing candidates who will be able to effectively mentor health providers at district hospitals and health centers.

## SELECTION OF MENTEES AND FACILITY BASELINE ASSESSMENT

Prior to commencing mentorship, mentors conduct meetings with the hospital and health center management to present mentorship objectives and approaches, agree on needed facilitation, and select mentees. Selected mentees from the district hospitals often include nurses, medical doctors, midwives, and in some instances intern doctors (in facilities with shortages of staff). Mentees from health centers are usually nurses and midwives. The selected mentees take a pre-test assessment to gauge their knowledge and skills in various technical areas, which enables mentors to tailor their mentorship based on the identified needs and gaps of each mentee.

In addition to mentee assessments, mentors also conduct a baseline assessment to determine strengths and weaknesses at facility level and how they might affect mentorship. This includes a review of health data; service organization; availability of functional infrastructure and equipment; and availability of national clinical guidelines and protocols.

For effective mentorship, there has to be good coordination and communication among mentees, mentors, and facility administration. A detailed mentorship plan is communicated to mentees and facility leadership prior to mentorship visits to harmonize schedules so that mentors and mentees are available at the scheduled mentorship dates. This helps health facility management properly allocate staff and any needed resources.

## MENTORSHIP ACTIVITIES

The mentor carries out entry meetings with the mentees and health facility leadership to discuss the objectives and activities planned for the given visit. Some of the activities involved in mentorship include:

- **Review of health facility indicators and patient data**

A review of health facility data is carried out to assess trends in patient outcomes and the current efforts to address gaps. The data can be used to identify problem areas needing QI and monitoring as well as the technical clinical areas that need to be strengthened by the mentor. The role of accurate recording and use of service data for decision-making and performance monitoring

is reinforced by the mentors, who assess data management skills of mentees including data entry, data cleaning, and analysis to identify any critical data handling gaps that need rectifying.

- **Training of mentees**

Training, tailored to the identified needs of providers, is carried out using the LDHF approach. LDHF involves a series of highly simulated targeted trainings offered in smaller content packages spread over short time intervals (Willcox et al. 2017). Mentors ensure that the learning environment is highly participatory, allowing mentees and mentors to discuss and troubleshoot the clinical cases from the simulations to build their confidence and boost decision-making and teamwork with other health workers. These trainings involve clinical simulations, case-based learning, and hands-on practice with anatomic models that mimic real-life case scenarios.

Training topics taught by pediatricians from RPA include stabilization of high-risk newborns, triage in the emergency ward, life support for infants and children, premature/low birth weight babies, respiratory distress and use of the Pumani machine, and acute febrile illness with altered state of consciousness, including severe malaria cases.



*Photo 1. A mentee practicing suture of cervical tears during a LDHF session at Remera Rukoma District Hospital*

Topics taught by nurse and midwife mentors from RAM include Helping Babies Breathe (HBB), Essential Care for Every Baby (ECEB),

pre-eclampsia and eclampsia, postpartum hemorrhage due to uterine atony, respectful maternity care, advanced preparation for births/delivery, newborn resuscitation through baby back stimulation and ventilation using ambu bags, intrapartum surveillance, improved triage systems, and administration of prophylactic antibiotics.

Obstetricians and gynecologists from RSOG conduct LDHF trainings on the following areas: safe cesarean delivery and management of obstetrical complications, use of antibiotic prophylaxis before cesarean delivery, regular use of surgical checklists, use of ultrasound and cardiotocography, support to providers to analyze and use service/clinical data to improve quality of care, ECEB and Essential Care for Small Babies (ECSB), and HBB.

Topics covered by district-based mentors include basics of antenatal care (ANC) service delivery, intrapartum surveillance, preparation for births/delivery, HBB, ECEB, ECSB, severe pre-eclampsia and eclampsia, postpartum hemorrhage due to uterine atony, manual removal of placenta, respectful maternity care, postnatal care (PNC), and support to providers to analyze and use service/clinical data to improve quality of care.

- **Case management observation**

Mentors observe mentees during clinical management of patients, with the explicit consent of the patient who is informed of the rationale for it prior to the observation. The mentor reviews patient record charts and references checklists developed by Ingobyi Activity and the MOH to gauge whether the mentee is following all national clinical guidelines from receiving the patients through diagnosis and subsequent treatment. Feedback from the observation is recorded and given back to the mentee. This is done in a respectful and non-confrontational manner, reinforcing the positives before discussing any improvements needed in case management.

- **Ward rounds and bedside teaching**

Mentors along with mentees, and sometimes with health facility management, conduct ward rounds to identify any operational issues affecting service delivery in the different facility units and troubleshoot ways of solving them to ensure quality care. These are opportunities for mentors to conduct bedside teachings, which allow them to observe mentee-patient interactions and conduct



*Photo 2. A mentor and mentee practicing feeding and hydration using a syringe pump at Murunda District Hospital*

practical real-life case demonstrations to reinforce the LDHF trainings on case management as well provide mentees a chance to showcase their newly acquired skills. These sessions also provide an opportunity for the team to review a patient's condition and develop a coordinated plan of care, while facilitating full engagement of the patient and/or caregivers in making shared decisions about care.

- **Debriefing meetings**

At the end of the mentorship visits, the mentors meet with the mentees, health facility leadership, and members of the QI team to discuss findings including the strengths and weaknesses of the mentees and the health facility as a whole. QI projects are initiated and implemented at this stage to solve the identified gaps. Continuous QI is a key component of Ingobyi Activity's mentorship approach, allowing mentors, mentees, and health facility administrators to determine the most probable causes for each service delivery gap through root cause analysis, finding solutions, and developing time-bound action plans.

- **Follow-up of mentees**

Following the mentorship visits (typically two visits per month for district-based mentorship and a three-day visit for professional association mentors), mentors stay in touch with mentees to offer further consultation on difficult cases and ensure that they are applying recommendations from prior visits and following clinical standards in their routine clinical practice.

## ASSESSMENT AND VALIDATION OF MENTEES

The mentor uses a checklist and mentorship guidelines designed by the Ingobyi Activity and the MOH to assess the mentee's knowledge and skills. The checklist helps the mentor establish the baseline and track progress until the mentee is validated for a given competency or fully validated on all competencies. The mentor develops and uses a coaching plan to coach the mentee on identified competences. Mentorship on a single competency is repeated until a mentee achieves the required competency level. Mentee scores on assessments are recorded in a mentee progress tracker. The number of evaluations for a given competency depends on the baseline score and ability of the mentee to acquire the skills. The mentee is validated when they properly perform a technique and score at least 85% in the post-mentorship assessment.



*Photo 3. A mentee being validated on Helping Babies Breathe by her mentor*

## CASCADING MENTORSHIP TO THE LOWER LEVELS OF THE HEALTH SYSTEM AND COMMUNITY LEVEL

Ingobyi Activity implements a mentorship cascade model whereby a high performing validated mentee is required to pass on the knowledge and skills they have acquired to other health workers in their facilities or catchment areas. This cascade model is designed to increase ownership of clinical competency and sustainably enable transfer of skills and knowledge among health workers nationwide long after completion of the Ingobyi project cycle.

The validated mentees from the hospitals who are mentored by the highly experienced mentors from the three professional bodies are expected to become district-based mentors and also replace

current mentors who may no longer be available due to attrition and transfers of health providers from one hospital to another. Each district-based mentor is assigned two health centers within their catchment area, and performs two-day monthly visits to each health center to mentor health workers.

The mentored providers from the health centers are then assigned to train and mentor health providers from one health post near their duty stations. To bring primary health care closer to the people, especially in rural hard-to-reach areas, the Rwandan government utilizes health posts, which are smaller, less specialized health facilities, at the cell level (the country's lowest administrative level), to deliver health services to communities, significantly reducing the distance and costs these often-poor people incur to access health care at district hospitals and health centers. Ingobyi supports Rwanda's efforts to achieve universal health coverage by facilitating mentorship for these lower-level health providers in areas including ANC; PNC; identification of danger signs of pregnancy; patient referral guidelines; newborn physical examinations; and education on postpartum family planning (FP), among others. The mentors at health posts follow the same approach to assess and validate their mentees.

Ingobyi also facilitates mentorship of community health workers (CHWs), who are volunteers without formal medical training but provide crucial primary health care to their communities. Mentors in the Community Health Program are community environmental health officers (CEHOs), who are the CHWs' supervisors, and nurses or midwives from health centers who are validated mentees in maternal and newborn health, FP, or child health competences.

Mentors support CHWs in technical areas such as:

1. Community-based maternal and newborn health (CBMNH)—e.g., identifying danger signs in pregnant women, mothers and newborns; counseling and education of pregnant and postpartum women.
2. The community-based program on family planning (CBP-FP)—e.g., provision of methods and appropriate counseling.
3. Integrated community case management of malaria (ICCM)—e.g., identifying danger signs, adherence to treatment protocols.

Mentors are trained on the community mentorship approach and tools. Community mentorship is

conducted by technical area, with each group of 5-9 CHWs reached once a quarter. Mentorship is conducted at convenient locations, including at the health center or at the home of a volunteer member of the group. Mentors use a mentorship assessment tool to evaluate the competence of the CHWs. Following each assessment, feedback is provided to the group. All mentorship visits are supervised by the hospital supervisors.

## **SUPERVISION OF MENTORSHIP ACTIVITIES**

On a quarterly basis, findings from the mentorship sessions are discussed during district-level mentorship coordination meetings where district and facility leaders and mentors go over implementation progress, share experiences and best practices, and discuss performance against RMNCH and malaria indicators and key challenges hindering the delivery of quality community health services.

As part of the project's overall supportive supervision approach, mentorship activities are closely and regularly supervised by Ingobyi Activity staff, MOH/RBC staff, and senior clinicians from the professional associations to assure continuous improvement of mentorship quality and support problem-solving. Joint visits are conducted once a quarter at each hospital, using a tool developed by Ingobyi and RBC/Maternal Child and Community Health (MCCH) Division to review progress of mentorship activities, supervise mentors, discuss emerging issues and challenges with hospital management and district health management teams, and support facilities to identify and implement solutions in a timely manner. Reports from supervision visits are presented at quarterly coordination meetings with key stakeholders.

## **COORDINATION MEETINGS AND ADVOCACY**

To ensure effective implementation of mentorship efforts, Ingobyi Activity regularly meets with mentors to provide them an opportunity to share experiences and learn from each other. This facilitates shared understanding of the principles of mentorship, how it is implemented, and how to resolve emerging challenges through a collaborative approach. During the meetings, Ingobyi also provides feedback to the mentors based on their reports that are submitted each month. Some of the challenges faced by mentors

may fall out of the scope of Ingobyi or the health facilities and thereby require higher-level intervention by stakeholders such as district leaders and MOH/RBC who have the power and resources to resolve them.

Ingobyi has successfully advocated for resolution of critical gaps with these stakeholders, which has led to changes at different facilities including hiring of new staff—an anesthetist at Ruhengeri Hospital and two additional midwives at Munini and Rwamagana hospitals—and creation of a recovery room at Kibungo Hospital, among others.

## RESULTS

### VALIDATION OF MENTEES

Ingobyi Activity's mentorship initiative has reached providers from 26 district hospitals and 325 health centers in 20 supported districts. *Tables 1 and 2 show the numbers of validated mentees.*

Ingobyi Activity has so far trained over 650 mentors (including 325 CEHOs and 325 maternal health nurses/midwives) and at least 8,964 CHWs on CBMNH competencies; 14,877 CHWs on CBP-FP competencies, and 19,617 CHWs on improved ICCM skills.

**Table 1. Number and percentage of validated mentees from 26 district hospitals and 2 upgraded health centers supported by Ingobyi Activity**

Professional association	FY19		FY20		FY21	
	Number of total mentees	Number (and %) validated mentees	Number of total mentees	Number (and %) validated mentees	Number of total mentees	Number (and %) validated mentees
RPA	137	80 (58%)	84	71 (85%)	201	174 (87%)
RAM	155	143 (92%)	139	124 (89%)	266	79 (27%)
RSOG	85	47 (55%)	73	39 (53%)	130	70 (54%)

**Table 2. Number of mentees reached and number and percentage validated in 323 supported health centers, FY 2021**

Technical area	Number of mentors	Number of mentees reached	Number (and %) of mentees validated in at least 1 competency
MNH	183	1,008	739 (73%)
IMCI	164	2,392	1,277 (53%)
FP	214	1,239	1,007 (81%)
Neonatal health	173	2,057	1,057 (51%)

### IMPROVED CLINICAL SKILLS AND COMPETENCY

Mentorship has helped to equip health workers with skills and knowledge to improve case management. An example of improved competency is the number of maternal near-misses that have been prevented through skills acquired from mentorship. Since Ingobyi Activity's inception in 2018, at least 292 near-misses have been successfully identified and managed including cases due to postpartum hemorrhage with shock, ruptured ectopic pregnancies,

uterine ruptures, post-cesarean-section sepsis, postabortion sepsis, and eclampsia.

Both mentees and mentors have reported increased skills due to mentorship including respectful maternity care, improved follow-up of women in need of ANC, improved use of the partograph for labor monitoring, increased capacity to manage pregnancy complications, improved adherence to infection prevention and control guidelines, and increased data management for informed decision-making.



*When I started mentorship, many women were admitted for incomplete abortion waiting for manual vacuum aspiration (MVA), which was only performed by doctors and women had to spend a whole week waiting for doctors. Through mentorship, all nurses and midwives working in labor ward were trained to perform MVA. Since then, there hasn't been any client delays in hospitalization due to lack of enough personnel to perform MVA. A client benefits [from] MVA services and can go home within 24 hours.*

—RAM mentor, Byumba District Hospital

## IMPROVED MATERNAL, NEWBORN, CHILD, AND ADOLESCENT HEALTH OUTCOMES

Data and health trends from the supported health facilities have shown an overall improvement in health outcomes since the start of Ingobyi Activity's mentorship initiative in 2018:

- Successful resuscitations increased from 60.5% to 71.9%.
- Postnatal care increased from 82.1% to 94.3%.
- Neonatal mortality for newborns under 12 months reduced from 10% to 8.7%.
- Child institutional mortality declined from 13.1% to 11.8%.
- Proportion of newborns admitted into neonatal units with hypothermia decreased from 56% to 36%.
- Proportion of children dying 24 hours after admission to pediatric units declined from 5% to 1%.
- Proportion of sick and underweight newborns in neonatal unit for whom feeding/fluid treatment was prescribed for cases reviewed on the day of the visit according to national protocol increased from 50% to 81%.

## LESSONS LEARNED

- Facility ownership and leadership support is key to the success and sustainability of mentorship activities. Mentors report that when facility administrators are actively involved in facilitation of the mentorship activities and ensuring that there is a conducive environment for mentees to continuously practice and improve their skills, mentorship is more effective in those facilities.
- Professional associations play a key role in strengthening capacity of health providers and the health system. Partnering with professional associations provides the opportunity to support the health system at scale and

consistently. The associations have members across the country who can easily travel to health facilities to support training, mentorship, and coaching, which makes this approach sustainable.



- The use of data to establish a baseline, identify and prioritize critical gaps, and track continuous improvement in service delivery is vital in clinical mentorship. Accurate data serve as a tool for advocacy by highlighting to high-level stakeholders the critical gaps needed to be addressed to improve service delivery in different health centers.
- Proper communication and coordination among mentors, mentees, and hospitals is vital to ensure scheduling and smooth facilitation of the mentorship activities.

## IMPLEMENTATION CHALLENGES

- Shortage of staff at mentored health facilities impacts availability of mentees. Maintaining the same mentees from start-up to validation is difficult due to staff rotations to different facilities and attrition.
- Shortage of some essential drugs, supplies, and equipment hinders the mentees from applying knowledge and skills to provide lifesaving interventions and quality care and frustrates both mentees and mentors. Ingobyi Activity continues to advocate with the RBC, MOH, and district leadership to address these issues.
- The COVID-19 pandemic and different lockdown periods hampered travel of mentees and mentors to health facilities. Even though health workers were allowed to move during the pandemic, suspension of public transportation meant they had to use private means of transport, which a good number of them lacked. Mentors had to adapt to the new context by using phone calls, WhatsApp group calls, and teleconferencing tools like Zoom and Microsoft Teams.

## CONCLUSIONS

For increased knowledge and skill retention, refresher trainings should ideally be carried out at health facilities through short, simulated LDHF sessions and followed-up with clinical mentorship



After I was mentored on management of pre-eclampsia and eclampsia, I am able to diagnose and manage severe pre-eclampsia and eclampsia. I am confident in administering the correct dosage of magnesium sulfate. I have also learned how to monitor toxicity signs and giving antidote (calcium gluconate) where necessary. In addition, I am now mentoring workers at a health center where I have initiated a QI project aimed at ensuring my mentees administer magnesium sulfate in severe pre-eclampsia and eclampsia management, which wasn't practiced prior.



—Mentee, Byumba District Hospital

by experienced health providers. Mentorship reinforces what is learned from the trainings, ensuring that health workers have the knowledge, skills, confidence, and motivation to effectively manage clinical cases. This should be done in a non-confrontational, interactive manner where mentors and mentees work hand-in-hand to solve issues affecting service delivery. Successful mentorship should be highly collaborative, requiring the buy-in of mentors, mentees, and health facility management to identify and improve gaps through continuous quality improvement.

## REFERENCES

Ajeani J et al. 2017 "A cascade model of mentorship for frontline health workers in rural health facilities in Eastern Uganda: processes, achievements and lessons." *Global Health Action* 10(sup4):1345497. doi: 10.1080/16549716.2017.1345497

Amri MM, Kocsis E, Dhawan S, Logan D, Angelakis C, Cole DC. 2020. "The utility of a structured mentorship program for enhancing competencies in global health." *Journal of Global Health* 10(1): 010301. doi: 10.7189/jogh.10.010301

Belrhiti Z, Booth A, Marchal B, Verstraeten R. 2016. "To what extent do site-based training, mentoring and operational research improve district health system management and leadership in low- and middle-income countries: a systematic review." *Systematic Reviews* 27;5:70. doi: 10.1186/s13643-016-0239-z

Burgess A, van Diggele C, Mellis C. 2018. "Mentorship in the health professions: a review." *The Clinical Teacher* 15(3):197-202. doi: 10.1111/tct.12756

Fredrick M et al. 2021. "Are mentorship and training the key in provision of emergency obstetric and new-born care (EmONC) services? A formative evaluation of pre and post training in Samburu County, Kenya." *Open Journal of Clinical Diagnostics* 11(4). doi: 10.4236/ojcd.2021.114008

Lawn JE et al. 2016. "Stillbirths: rates, risk factors, and acceleration towards 2030." *The Lancet* 387(10018):587-603. [https://doi.org/10.1016/S0140-6736\(15\)00837-5](https://doi.org/10.1016/S0140-6736(15)00837-5)

Leslie HH, Gage A, Nsona H, Hirschhorn LR, Kruk ME. "Training and supervision did not meaningfully improve quality of care for pregnant women or sick children in sub-Saharan Africa." *Health Affairs* 35(9):1716-24. <https://doi.org/10.1377/hlthaff.2016.0261>

Mijares AH, Radovich P. 2020 "Structured mentorship and the nursing clinical ladder." *Clinical Nurse Specialist* 34(6): 276-81. <https://doi.org/10.1097/NUR.0000000000000558>

Willcox M, Harrison H, Asiedu A, Nelson A, Gomez P, LeFevre A. 2017. "Incremental cost and cost-effectiveness of low-dose, high-frequency training in basic emergency obstetric and newborn care as compared to status quo: Part of a cluster-randomized training intervention evaluation in Ghana." *Global Health* 13(1): 88. doi: 10.1186/s12992-017-0313-x

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