HEALTH WORKFORCE IMPROVEMENT PROGRAM (HWIP)

Newsletter Number 1
March 2023

Generating Research Evidence to Inform Health Workforce Planning, Development and Management

The USAID Health Workforce Improvement Program (HWIP), with Cooperative Agreement No. 72066320CA00008, is a 5-year project designed to address critical human resources challenges in Ethiopia's health sector and to ensure the health workforce will be better qualified, better managed and more motivated to provide effective healthcare services to all segments of the Ethiopian population. The program is led by Jhpiego with consortium partners Amref Health Africa, and four professional associations (Ethiopian Midwives Association [EMwA], Ethiopian Association of Anesthetists [EAA], Ethiopian Medical Association [EMA], and Ethiopian Nurses Association [ENA]).

One of HWIP's objectives is to improve availability of human resources for health (HRH) evidence to guide HRH policy, planning, education and management. In this newsletter, we highlight key findings of HRH researches produced on health workers motivation and retention, graduating medical students' clinical competence, nurse educators' competence and impact of anesthetist licensing examination on quality of pre-service education.

1. Assessment of Motivation, Job Satisfaction and Associated Factors Among Health Professionals in the Public Health Sector of Ethiopia

Background

Improving the motivation and retention of health professionals is core to improving health systems performance and quality and client experience of healthcare. Since 2016, the Government of Ethiopia has implemented interventions to improve health workers' job satisfaction, motivation and retention as part of a ten-year HRH strategic plan. The objective of this study was to assess improvements and gaps in job satisfaction, motivation and retention of health professionals serving in the public health sector of Ethiopia.

Method

A national cross-sectional study was conducted from June to July 2022 with 1655 health professionals from 82 hospitals and 94 health centers. The study participants were medical doctors, nurses, midwives, health officers, anesthetists, laboratory professionals, and pharmacy personnel and HR managers.

Result

Job satisfaction

- Increased from 51.3% in 2014 to 67.5% in 2022
- Differences by region, cadre and sex

Figure 1: Job satisfaction of health professionals by region (%), 2022

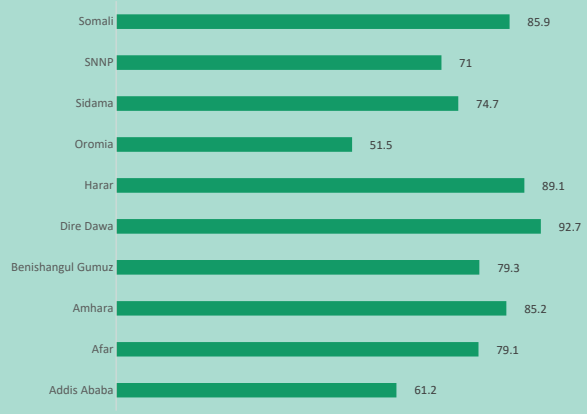
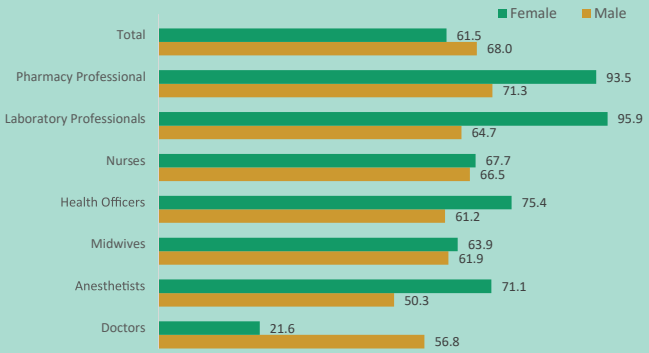


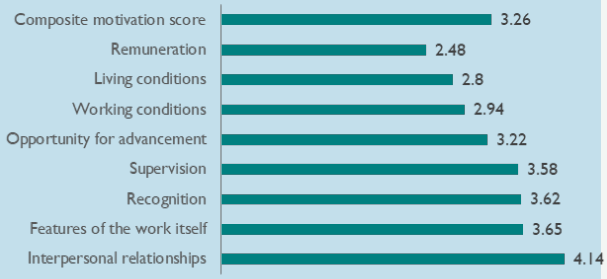
Figure 2: Job Satisfaction of health professionals by profession and sex (%), 2022



Motivation

- Health professionals were happy with interpersonal relationships but were least satisfied with the renumeration, living conditions and working environment.

Figure 3. Mean score of motivational factors (Scale: 1 to 5)



Attrition

- Annual attrition decreased from 4.5% in 2014 to 4.1% in 2022
- Variation by region and cadre, with highest rate in Afar (12%) and among doctors (7.5%)

Figure 4. Annual health professionals attrition by region (%), 2022

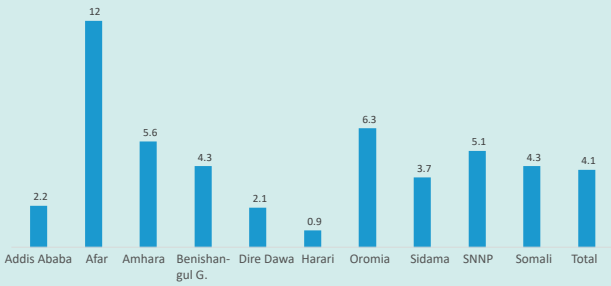
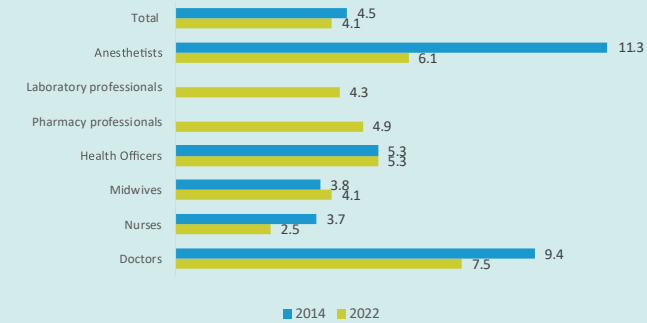


Figure 5. Annual attrition rate (%) of health professionals by cadre 2022 Vs 2014



Note: Pharmacy and Laboratory professionals were not part of the 2014 study.

Intention to leave

- Intention to leave a facility within a year fell from 49% in 2014 to 18.5 % in 2022
- Leading reasons for planning to leave
  - low pay
  - high cost of living
  - poor access to higher education.

Perceived Improvements in Motivational Factors

- Health professionals reported improvements in motivation factors
- Highest improvement in work environment, compensation, supervision and training

Figure 6. Percent of health professionals who acknowledged improvements in motivational factors over the past six years

Factors associated with Job Satisfaction, Motivation, and Intention to Leave

- Health professionals who have higher scores on recognition, opportunity for advancement, features of the work, remuneration, supervision, and interpersonal relationships have higher odds of being satisfied with their current job. (Table 1)

Table 1. Factors associated with job satisfaction of health professionals: findings from multilevel logistic regression

Characteristics of respondents		Health center		Hospital		Total	
		AOR	95% CI	AOR	95% CI	AOR	95% CI
Gender	Male	1		1		1	
	Female	1.64	0.80, 3.35	1.49*	1.00, 2.17	1.46*	1.06, 2.01
Age in years	20–29	1		1		1	
	30–39	0.62	0.26, 1.48	2.17***	1.38, 3.41	1.56*	1.08, 2.26
	40+	0.17	0.03, 1.08	2.26	0.81, 6.27	1.12	0.50, 2.50
Place of birth	Urban	1		1		1	
	Rural	0.87	0.44, 1.72	0.99	0.67, 1.46	0.96	0.70, 1.34
Current marital status	Unmarried	1		1		1	
	Married	1.80	0.82, 3.94	1.27	0.88, 1.83	1.29	0.95, 1.77
Status of residential house	Own	1		1		1	
	Rent from public	0.34	0.04, 2.53	0.82	0.30, 2.21	0.73	0.32, 1.69
	Rent from private	0.67	0.26, 1.68	0.56	0.31, 1.01	0.61	0.38, 0.97
	Provided by health facility	1.55	0.36, 6.70	0.39*	0.18, 0.83	0.54	0.29, 1.00
	Lives with parents	1.53	0.28, 8.33	0.63	0.25, 1.58	0.76	0.36, 1.64
Duration of service years in the health system	<5 years	0.54	0.09, 3.13	1.77	0.62, 5.09	1.19	0.51, 2.79
	5–9 years	0.74	0.14, 3.88	1.07	0.40, 2.84	0.91	0.41, 2.03
	10–14 years	0.66	0.13, 3.28	0.90	0.35, 2.37	0.81	0.37, 1.77
	15–19 years	1		1		1	
Domains of satisfaction and motivation*	Recognition	1.45	0.79, 2.66	1.68***	1.23, 2.29	1.62***	1.25, 2.11
	Opportunity for advancement	1.47	0.84, 2.59	1.22	0.95, 1.58	1.25	1.00, 1.56
	Features of the work itself	2.09	0.93, 4.70	1.39	0.93, 2.09	1.55*	1.11, 2.18
	Remuneration	2.53*	1.25, 5.10	2.07***	1.61, 2.66	2.12***	1.70, 2.64
	Supervision	1.97*	1.01, 3.81	1.33	0.98, 1.82	1.42**	1.09, 1.85
	Interpersonal relationships	0.86	0.42, 1.77	1.72**	1.19, 2.48	1.45*	1.06, 1.98
	Working conditions	0.77	0.34, 1.72	1.16	0.76, 1.77	1.05	0.74, 1.51
	Living conditions	0.97	0.57, 1.66	0.82	0.61, 1.10	0.85	0.67, 1.09
Facility	Health center					1	
	Hospital					0.70	0.45, 1.18

*p<05x, **p<0.01, and ***p<0.001
AOR = Adjusted odds ratio; CI = Confidence interval

- Rural background and higher scores on remuneration and supervision domains were inversely associated with intention to leave one's job. (Table 2)

Table 2: Factors associated with health professionals' intention to leave their job: findings from multilevel logistic regression

Variable	Categories	Health center		Hospital		Total	
		AOR	95% CI	AOR	95% CI	AOR	95% CI
Gender	Male	1		1		1	
	Female	0.42	0.17, 1.06	0.90	0.59, 1.37	0.75	0.52, 1.06
Age in years	20–29	1		1		1	
	30–39	1.04	0.41, 2.65	0.91	0.56, 1.48	0.90	0.60, 1.35
	40+	1.61	0.17, 14.80	1.44	0.47, 4.39	1.29	0.50, 3.33
Place of birth	Urban	1		1		1	
	Rural	0.56	0.24, 1.33	0.58*	0.37, 0.91	0.56**	0.39, 0.81
Current marital status	Unmarried	1		1		1	
	Married	2.25	0.92, 5.49	0.84	0.56, 1.26	1.03	0.72, 1.45

Status of residential house	Own	1				1	
	Rent from public	4.38	0.43, 44.96	1.85	0.62, 5.44	2.32	0.92, 5.94
	Rent from private	2.73	0.76, 9.79	0.92	0.48, 1.77	1.31	0.75, 2.28
	Provided by health facility	8.51*	1.38, 52.29	2.03	0.91, 4.53	2.87**	1.45, 5.71
	Lives with parents	2.92	0.43, 19.78	1.72	0.67, 4.40	1.96	0.88, 4.36
Duration of service in the health system	<5 years	11.38	0.32, 410.14	1.60	0.48, 5.37	1.94	0.67, 5.63
	5–9 years	17.84	0.48, 658.59	2.24	0.72, 6.92	2.69	0.97, 7.45
	10–14 years	15.96	0.46. 544.76	1.25	0.41, 3.82	1.83	0.68, 4.94
	15–19 years	1		1		1	
Domains of satisfaction and motivation	Recognition	0.68	0.35, 1.31	0.84	0.60, 1.17	0.99	0.64, 1.52
	Opportunity for advancement	0.60	0.31, 1.16	0.92	0.69, 1.23	0.76	0.57, 1.02
	Features of the work itself	1.09	0.49, 2.46	0.85	0.55, 1.31	0.94	0.65, 1.35
	Remuneration	0.75	0.44, 1.30	0.75*	0.57, 0.98	0.75*	0.59, 0.94
	Supervision	0.41*	0.20, 0.85	0.79	0.56, 1.11	0.68**	0.51, 0.90
	Interpersonal relationships	4.07**	1.46, 11.38	0.81	0.54, 1.19	1.22	0.87, 1.71
	Working conditions	1.20	0.50, 2.88	0.89	0.57, 1.40	0.97	0.66, 1.44
	Living conditions	0.86	0.47, 1.59	0.97	0.71, 1.33	0.91	0.69, 1.20
Facility	Health center					1	
	Hospital					0.99	0.64, 1.52

*p<05x, **p<0.01, and ***p<0.001
AOR = Adjusted odds ratio; CI = Confidence interval

Conclusion

Job satisfaction, motivation and retention of health workers have significantly improved in the last six to eight years. Financial and non-financial factors are associated with job satisfaction and motivation. Interventions implemented as part of the national HRH strategic plan have likely contributed to the improvements in health worker satisfaction, motivation and retention.

Recommendation

- Improving health worker satisfaction, motivation and retention through both financial and non-financial mechanisms should continue to be a major HRH policy priority.
- It is necessary to consistently implement the existing HRM policies, procedures and strategies across all regions and facilities.
- Salary raise is necessary and should consider the rising cost of living.
- Conduct further research on the broad impacts of low satisfaction, motivation and retention on the healthcare system and health outcomes.

2. Assessing the clinical competence of medical graduates in Ethiopia

Background

Ethiopia scaled up medical education over the past two decades to address the severe health workforce shortage it faced. This, however, overstretched the capacity of medical schools to assure the quality of education. The aim of this study was to assess the clinical competence of medical graduates and identify factors affecting the attainment of competence.

Method

Clinical skills of 218 graduates from ten medical schools (8 public and 2 private) were assessed using 12-station objective structured clinical exam (OSCE). The exam comprised three communication skills, two physical examination skills, five procedural skills, one diagnostic test interpretation, and one drug prescribing stations. The graduates also filled out a clinical learning environment questionnaire to assess the quality of clinical learning experiences.

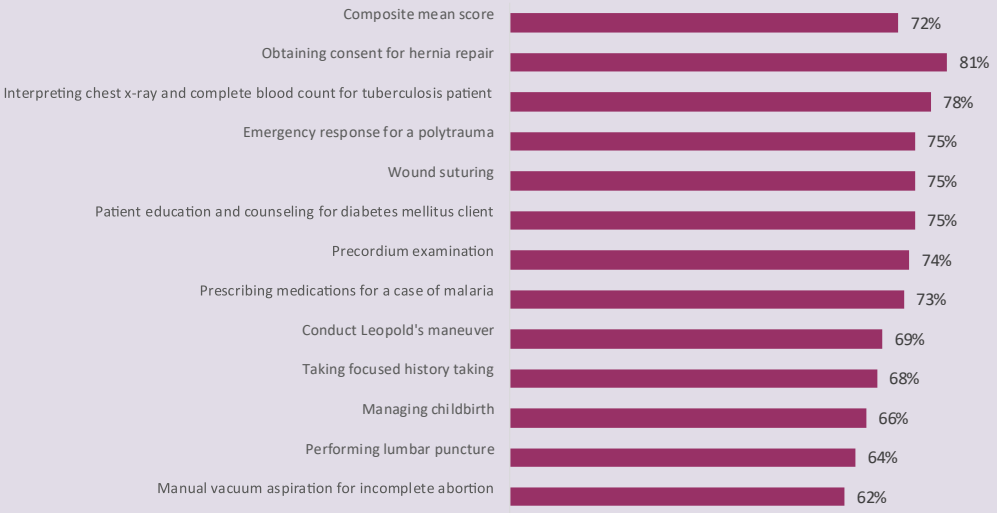
Result

Clinical competence

- Mean clinical competence score was 72%
- Highest performance in obtaining informed consent and lowest score in performing MVA for incomplete abortion
- Female graduates scored higher than males (p-value=0.04)
- No statistically significant difference in clinical competence between public and private medical schools and between direct and graduate entry programs
- Clinical competence score was associated with quality of clinical learning experience and volume of clinical practice

Figure 7: Competece Score of Medical Graduates

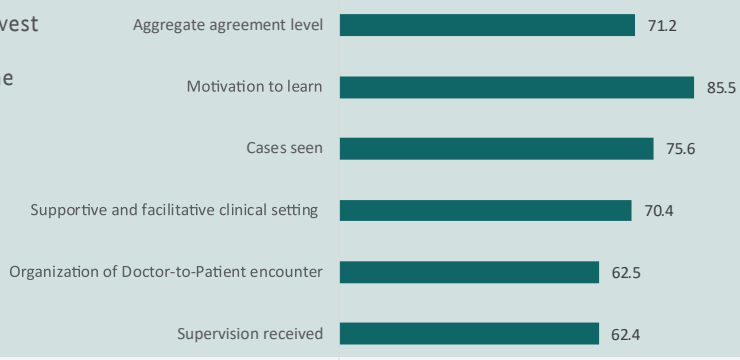
Figure 8: Mean Competence Score by Clinical Competence Area



Quality of clinical learning environment

- 71.2% of students were satisfied with quality of the clinical learning environment
- Motivation to learn received the highest appraisal while supervision received the lowest score
- Only 51% of students were satisfied with the quality of clinical simulation training

Figure 9. Percentage of students who agreed on quality of clinical learning environment by domain



Conclusion

The competence of graduating medical students was acceptable. However, substantial gaps remain in the quality of clinical learning experiences and attainment of essential clinical competencies.

Recommendation

- Improving training quality should be a priority for medical schools.
- Medical schools should develop institutional capacity for effective implementation of competency-based curricula.
- Continuous formative assessments of clinical practice should be strengthened to ensure students have sufficient clinical experience.
- Medical schools should expand clinical education sites and improve collaboration with health facilities.
- Medical students should be encouraged to develop procedural skills through repeated simulation practice.

3. Clinical skill competence: a cross-sectional observational study of nurse educators working in public universities in Ethiopia

Background

Educator's competence has a direct effect on the quality of student learning. Clinical skills of nurse educators in Ethiopia is a least researched subject. This study aimed to assess the clinical competence of nurse educators in Ethiopian public universities.

Method

A 10-station objective structured clinical examination (OSCE) was used to assess competence of 207 nurse educators chosen randomly from 13 higher education institutions in the country. Both global rating and checklists were used to score performance, and the Borderline Regression Method (BRM) was applied to determine the competence level.

Result

- 32.36% had no clinical work experience before assuming the educator role.
- Only 26.57% nurse educators were competent in the overall skill assessment.
- Participants were least competent in maintenance fluid calculation and progressive assessment tasks.
- Prior clinical practice before assuming the educator role showed a statistically significant and positive correlation with clinical skill competence ($p<0.005$).

Figure 10: Competent Nurse Educators (%)

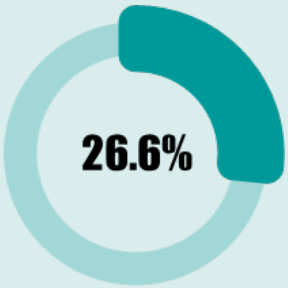
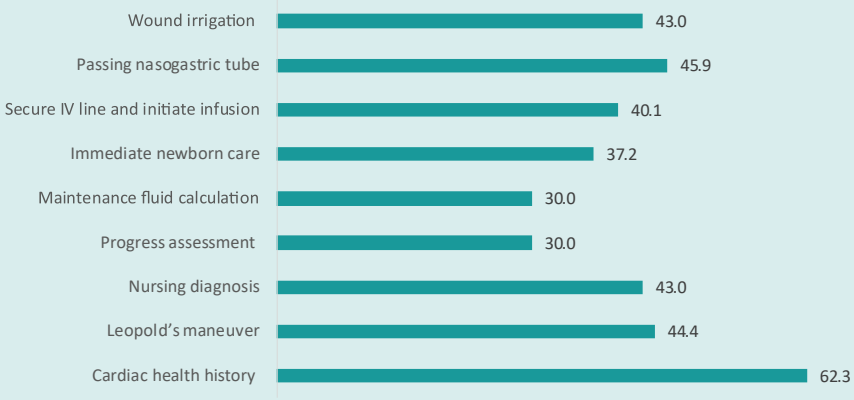


Figure 11. Educators competent at station level (%)



Conclusion

The clinical competence of nurse educators was found to be very low, posing serious challenges to the quality of nursing education. There is an urgent need to build the clinical skills of nurse educators. Moreover, policy support is needed to ensure mandatory prior and ongoing clinical practice.

Recommendation

- Capacity-building interventions are recommended to improve clinical skills of nurse educators.
- Integrate mandatory clinical engagement of nurse educators to maintain and enhance their clinical skill competence.
- The effect of low educators' clinical competency on clinical teaching effectiveness needs to be investigated to give more meaning to the identified gaps.

4. Impact of anesthetist licensing examination on quality of education in Ethiopia: a qualitative study of faculty and student perceptions

Background

Ethiopia increased the anesthesia workforce by training anesthetists as a task-shifting/sharing strategy. This expansion was followed by establishing an anesthetist licensing examination as a requirement for entry into anesthesia practice to ensure patient safety. However, empirical evidence is scarce to support or refute the overall impact of licensing exams, which are relatively costly for low- and middle-income settings. Therefore, this study aimed to explore the impact of introducing licensing exams on anesthesia education in Ethiopia.

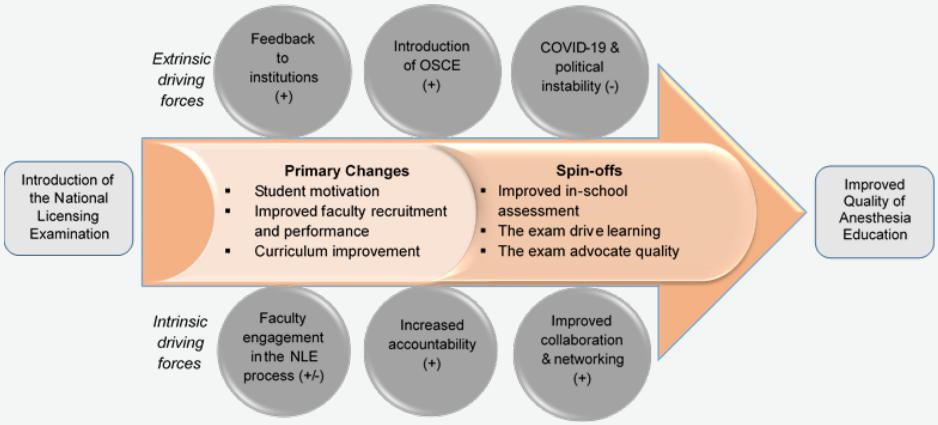
Method

A qualitative study was conducted using a constructivist grounded theory approach. Data were prospectively collected from ten anesthesia teaching institutions. Fifteen in-depth interviews were conducted with instructors and academic leaders. Six focus groups were also held with students and graduates who took the exam recently. Additional data were gathered by analyzing relevant documents including curricula, academic committee minutes, program quality review reports, and faculty appraisal reports.

Result

Student motivation, faculty performance, and curriculum strengthening were the three primary changes that emerged, resulting in three subsequent spin-offs on assessment, learning, and quality management practices. Both faculty and students demonstrated positive attitudes toward the exam. Academic leaders' dedication to evaluating licensing exam data and turning these into action led to changes that improved education quality. Increased accountability, engagement, and collaboration were predominant factors facilitating change (Figure 12).

Figure 12: Effect model explaining the overall change process in anesthesia education due to the anesthetist licensing exam



Note: Symbols: +, Positive driving force; -, Negative driving force; +/-, Both positive & negative driving effects

Conclusion

This study indicates that the Ethiopian anesthetist licensing exam has prompted anesthesia teaching institutions to improve their teaching, learning, and assessment practices. However, more work is required to improve exam acceptability among stakeholders and drive broader changes.

Recommendation

- Academic leaders' commitment is key to establishing a structure where national licensing exam (NLE) data can be effectively used to inform educational interventions.
- To get the most out of the NLE, the MOH and teaching institutions should collaborate on NLE activities, thus ensuring that the exam matches the practice context.
- To sustain educational reforms brought by the NLE, programs will benefit from strengthening their continuous education quality review systems.
- Introducing a student-centered communication strategy by engaging student associations throughout the NLE process can improve NLE acceptability.
- By establishing an assessment system that can create alignment between what is taught, practiced, and assessed, programs can lay the groundwork to address concerns about student exam-centeredness that may drive learning in an undesirable direction, particularly when the areas assessed in NLE do not reflect actual current practice.

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A link to a brief description of our project is found