

Emergency Obstetric Intervention by Trained Health Officers: Experience of Task Shifting in Tigray, Ethiopia

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Introduction

- Need practical approaches to reduce maternal mortality
- Tigray Health Bureau's approach:
 - Prevention of PPH at home level
 - Community provision of FP including injectables and implants
 - Comprehensive abortion care at health centers
 - Training of non-physicians in emergency surgery



Background of the NPC

- Tigray People's Liberation front trained 40 nurses as Field Surgeons, to work in teams
- Since 1999, Tigray Health Bureau has trained non-physicians in emergency surgery and obstetrics
- Training done by Ethiopian surgeons and obstetricians, supported by WHO, UNFPA and MDM
- The sites of training were-Lemlem Karl, Mekele, Adigrat and Axum Hospitals

Availability of EmOC Facilities

- The international standard for comprehensive obstetric service is 1:500,000 population
- Tigray has 1:346,153 population

Objectives of presentation

1. Describe the opportunities and challenges in implementing the in-service NPC program
2. Compare procedures performed and quality of care of physicians and non-physicians (trained Health Officers) over the last 3 years

In-service program description

- Total number of trainees: 40
- Duration of training: 6 to 9 months in-service
- Team training: Surgeon, anaesthesia nurse and surgical nurse

Program review methods

- Document review of all 11 hospitals and 2 health centres where physicians and non physicians performed Caesarean sections
- In depth interview with policy makers and managers of the health service system in Tigray
- Study duration: January 2006 to December 2008

Program review results

- Of 40 Health Officers trained, only 11 practiced emergency surgery
- Those 11 performed very well in comparison to physicians

Trained HOs do life-saving procedures

Type	Total	Done by trained HO
Total deliveries	28,555	
C/S	2,835	56%
Laparotomy (ruptured uterus)	276	45%
Instrumental deliveries	1,584	49%
Destructive deliveries	51	45%
Other procedures		
Manual removal of placenta	1,921	52%
MVA or E&C	4,724	72%

Maternal death rates comparable for trained HOs and physicians

	Trained HO	Rate per 1000	Physician	Rate per 1000
Total surgeries	1,698	4.7 (n=8)	1,413	5.6 (n=8)
C/S	1,574	1.9 (n=3)	1,261	0.8 (n=1)
Laparotomy	124	40 (n=5)	152	46 (n=7)

Trained HOs have good diagnostic ability

Diagnosis	Trained HO	%	Physician	%
Obstructed labour	563	36%	341	27%
Foetal distress	194	12%	157	13%
Malpresentation	274	17%	212	17%
Bleeding	112	7%	70	6%
Previous C/S	89	6%	150	12%
Other	332	21%	331	26%

Trained HOs can manage ruptured uterus when needed

Type of Surgery	Trained HOs	%	Physicians	%
Total hysterectomy	13	12%	33	22%
Sub total hysterectomy	9	8%	24	16%
Repair	87	80%	92	62%

Quality of care comparable for trained HOs and physicians like teacher like student

	Trained HOs	Physicians
Mean duration of surgery (minutes)	49	49
Mean hospital stay (days)	7.3	7.3

Trained HOs improve access in rural areas

Residence	Trained HOs	%	Physicians	%
Urban	552	36%	659	52%
Rural	992	64%	602	48%

In summary

- 56% of all C/S in Tigray done by trained HOs
- 53% of all emergency obstetrics is covered by the HOs
- 64% of patients from rural areas done by trained HOs
- Obstructed labour was the commonest indication for C/S and (36%) was handled by the trained HOs while 27% was done by physicians

Conclusion: Trained HOs provide comparable quality care to physicians

- No difference in maternal mortality
- Foetal death rates somewhat higher
- Trained HOs have good diagnostic ability
- Trained HOs can manage ruptured uterus when needed
- Mean duration of surgery and mean hospital stay of both professionals is comparable

Recommendations

- The strategy of task shifting should be vigorously and aggressively pursued
- Development partners must support the strategy technically and financially
- Health facilities must be well-equipped to provide EmOC
- Factors that led to only 11 of 40 teams functioning must be addressed
- NPC experience should be scaled up to other medical disciplines including child health, infectious diseases and nutritional problems

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