BEYOND THE NUMBERS: CONFIDENTIAL ENQUIRIES INTO MATERNAL DEATHS IN ACCRA-GHANA

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INTRODUCTION

Objective

- To identify and correct weaknesses in the Ghanaian maternal care system leading to an improvement in the delivery of services and a reduction in maternal deaths.

Materials and Methods

- Confidential enquiry into maternal deaths in Accra
- Period: 1st January 2002-31st December 2002 inclusive
- Firstly, a prospective reporting system was put in place to capture maternal deaths that occurred within the study year
- Active reporting of maternal death took place in all ten major health facilities in the city covering maternal care
- At the end of the year, a retrospective review of all available sources of information was carried out for possible maternal deaths

Sources of information

- Case notes
- delivery book
- Theatre books
- admission and discharge books
- death certificate books were reviewed for information pertaining to individual cases
- post mortem reports of women who had been captured by the system was also part of the task of the team
- Verbal autopsies were also done when necessary
- Cases from outside and within the health facilities were also checked for periodically using the mortuary logbooks

Criteria for inclusion

- This Enquiry included deaths:
  - directly due to pregnancy and delivery (Direct)
  - those due to pre-existing disease aggravated by pregnancy (Indirect)
  - those in which the cause was unrelated to pregnancy (Incidental)
  - and those occurring after the internationally defined time limit of six weeks but before one year from delivery (Late deaths)

Expert Committee of Enquiry

- An International Expert Committee of Enquiry was formed
  - Consultants Obstetricians/Gynaecologists and Public Health Specialists
- Terms of reference were to:
  - assign cause of death
  - classify the deaths
  - outline substandard care
  - suggest an alternative care which should have been given to the assessed cases

Assessment of data

- The data was assessed as follows:
  - The deaths were randomly selected and assigned to the four Experts
  - Each Assessor assessed half (36-37 of the cases) of the total number of cases
  - This implies that each case was analysed by two of the four assessors but independently
  - Only a single underlying cause of death (disease or complication which initiated the chain of events, leading directly to death) was assigned to each case
  - Where there was no agreement between the Assessors on the cause of death of a case after the first analysis, the Assessors were asked to re-assess the non-agreement cases until a consensus was reached on the cause of death.

Assessment of data cont.

- We assessed avoidable factors for all 73 pregnancy related deaths in order to identify avoidable factors and improve on the care of such patients

- The assessment was done on these three structures:

  - The woman and her environment

  - The administrative circumstances surrounding the care and

  - The quality of health care. Avoidable factor (Sub-standard care) was considered present when any of the Assessors scored a case positive or doubtful for sub-standard care.

Assessment of Avoidable Factors using the three delays

- Delay in seeking help at a critical moment
- Delay in reaching a health facility
- Delay in diagnosing and treatment

Results

- A total of 179 possible maternal deaths were identified
- 73 (41%) out of the 179 deaths had sufficient information to be included in the enquiry
- The Assessors reached a consensus in assigning cause of death for 72/73 (98.6 %) of the cases
- Avoidable factors were found to be present in 94.5% of the cases
  - Patient and family being responsible for 61.6% (N=45) of causes of avoidable maternal deaths in the enquiry,
  - Obstetricians/Health personnel contributed to 54.8% (N=40),
  - Organization of health care delivery 28.8 % (N=21)
  - while hospital care accounted for 20.5% (N=15)

Classification of deaths

- The 72 cases with agreed cause of death were classified identical into:
  - direct maternal deaths (N=53)
  - indirect maternal deaths (N=14)
  - incidental deaths (N=4)
  - unknown (N=1)

- The Assessors could not come to a consensus on the classification of one case as well as assigning cause of death for the case

Causes of maternal deaths

- Hypertensive disease was the most frequent cause of death accounting for 23.3 % (N=17) of the deaths
- Obstetric Haemorrhage 21.9 % (N=16)
- Pregnancies with abortive outcome 10.9% (N=8)
- sepsis 8.2 % (N=6)
- Other direct maternal causes accounted for 12.3 %(N=7) of the cases
  - The indirect maternal causes are made up of 7 (9.6%) cases of Sickle cell anaemia,
  - Severe anaemia in pregnancy 2 (2.7%)
  - other indirect causes 4+1 unknown case (N=5 (6.8 %))

Other indirect causes 4

- The incidental causes were as a result of:
  - liver tumour (N=1)
  - Road traffic accident (N=1)
  - Carcinoma of the lung (N=1)
  - Renal failure with multiple organ failure (N=1)

Assigning cause of death

- Of the 73 cases audited for avoidable factors (substandard care), there was agreement between the assessors in assigning cause of death for 72 (98.6 %) of them and non-agreement on 1 case (1.4 %).

Avoidable factors

Avoidable factors	N	%
Doubtful	5	6.8
Insufficient data	2	2.7
No Avoidable factors	2	2.7
Yes, there are avoidable factors	64	87.7
Total	73	100.0

The Assessors scored yes, there are avoidable factors for 64 out of the 73 cases (87.7%), doubtful for 5 cases, no avoidable factors found in 2 cases (2.7%), and the data of two of the cases were considered insufficient to enable them assess avoidable factors. The total score for substandard care stands at 69 cares (positive score doubtful)

Level of Substandard care

Level of Substandard care	Substandard care		Total
	Yes	No	
Patient and family Level	45	28	73
Health Assistant level/Traditional birth attendant	6	67	73
General Practitioner level	10	63	73
Midwife level	11	62	73
Obstetrician level	40	33	73
Other Doctors in hospital" level	11	62	73
Hospital care level	15	58	73
Organization of Health care level	21	52	73

Causes of delays

- These mortalities were as a result of non-use or inadequate use of ante-natal and post natal services
- lack of cooperation with medical advice by Patient and family
- delay in seeking care at a critical moment
- transport delay/non availability of ambulance
- delayed diagnosis and treatment
- missed diagnosis
- delayed referral
- professional errors
- inadequate management
- non-availability of blood and blood facilities in health facility
- laboratory delay and insufficient maternity services in community

Results cont.

- First delay:
  - *Sixty percent (N=44) of the cases delayed in seeking care at a critical moment*
- Second delay:
  - *61.6% (N=45) of them delayed in reaching health facility*
- Third delay:
  - *There was a delay in diagnosing and receiving appropriate care in 58.9% (N=43) of the cases*

conclusion

- To improve healthcare and organization of healthcare of obstetric and gynaecological patients in the country, standard diagnostic and treatment procedures should be written for care providers
- adequate health education of the population on the risk factors of pregnancy and the need to seek early medical attention,
- blood and blood facilities should be made readily available in health facilities and to remove all delays from Patient and family to organization of healthcare level
- “Confidential inquiries are needed to complete standard epidemiology surveys in evaluating healthcare and healthcare organization” and should be carried out nationwide

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THANK YOU!