Maternal Mortality Analysis – Indian Scenario

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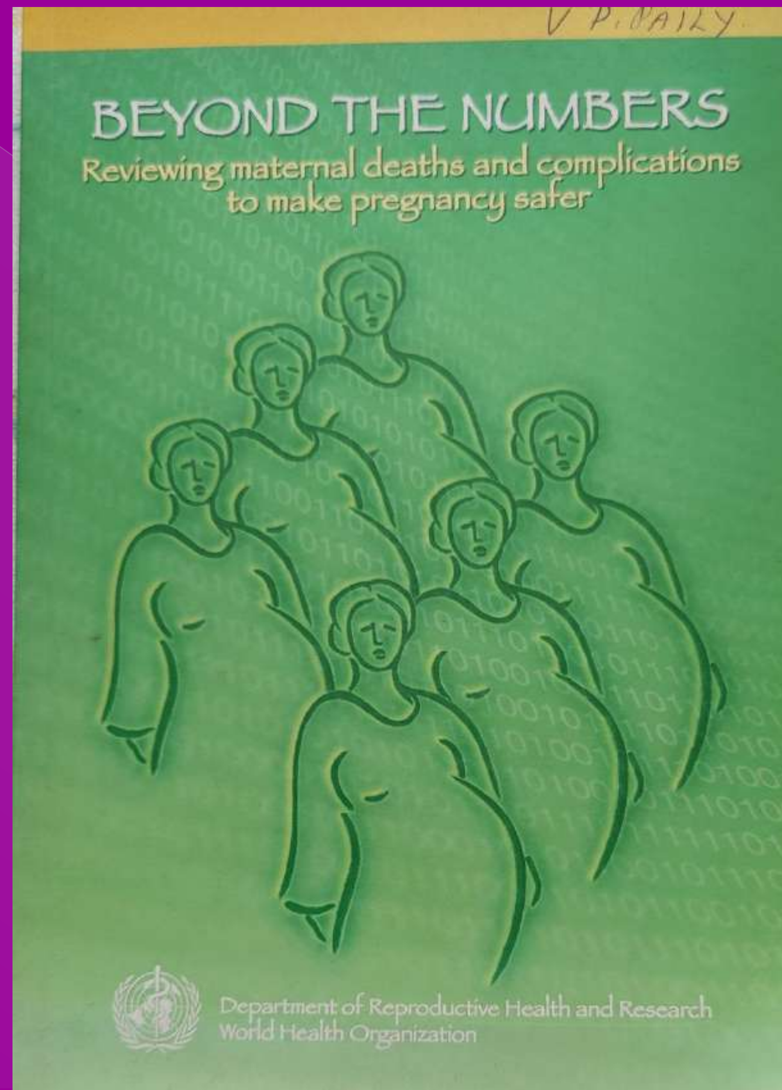
- We cannot talk about Maternal Mortality analysis without referring to ***"Beyond the numbers"*** *the* WHO book edited by ***Gwyneth Lewis***

BEYOND THE NUMBERS
Gwyneth Lewis



Four Methods of Audit

- Verbal autopsy
- Facility Based audit
- Near Miss Audit
- Confidential Review

These are mostly external audits

We would add two internal audits.

- Morning Report
- Departmental / institutional audit

One has to choose the appropriate type of audit

Verbal autopsy

- Suitable for home births and events in the community.
- Specially trained teams are required .
- It is a very sensitive procedure.
- If, even part of the treatment was in the hospital and there was any complaint regarding treatment received, the relatives will be hostile.

Verbal autopsy

- Helps to extract family and social factors which may not be revealed in the case records.
- The local health worker should be part of the team.
- Information can be gathered from neighbours also.

Facility based audit

- Suitable only for institutional deliveries.
- Can have internal and external audit.
- In Kerala, the team from district medical office comes to audit.
- Specialist auditors from other specialties also present.
- Needs sensitive handling, the presence of district authorities can be intimidating.

Near miss audit – Kerala experience.

- Actually not a maternal death audit.
- But, is more pleasant than death audit.
- Can be done as a confidential near miss audit by anonymising the case records

Near miss audit – Kerala experience.

- We did in the five government medical colleges.
- Format same as in confidential review of maternal deaths.
- Should have a local coordinator.
- Should do departmental audit first.
- Results compiled by state coordinator.

Near miss audit – Kerala experience.

- Results same as in CRMD.
- Near miss audit can act as a substitute for death audit.

Confidential review of maternal deaths, Kerala

- Kerala has been doing since 2004.
- Principle of no name no blame.
- Anonymised case records

Crmd kerala, planning meeting with WHO support

Participants of the workshop at Thiruvananthapuram
that started off the CRMD

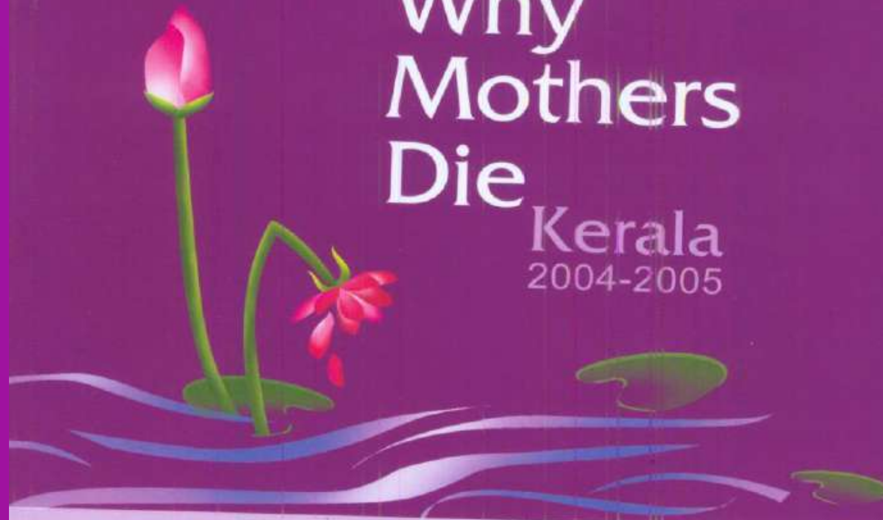
Confidential review of maternal deaths, Kerala

- Assessors not aware of the identity of the cases.
- Non obstetrician assessors also involved
- Meeting every 3 months.
- State coordinator compiles data

Confidential review of maternal deaths, Kerala

Results published with recommendations on management strategies.

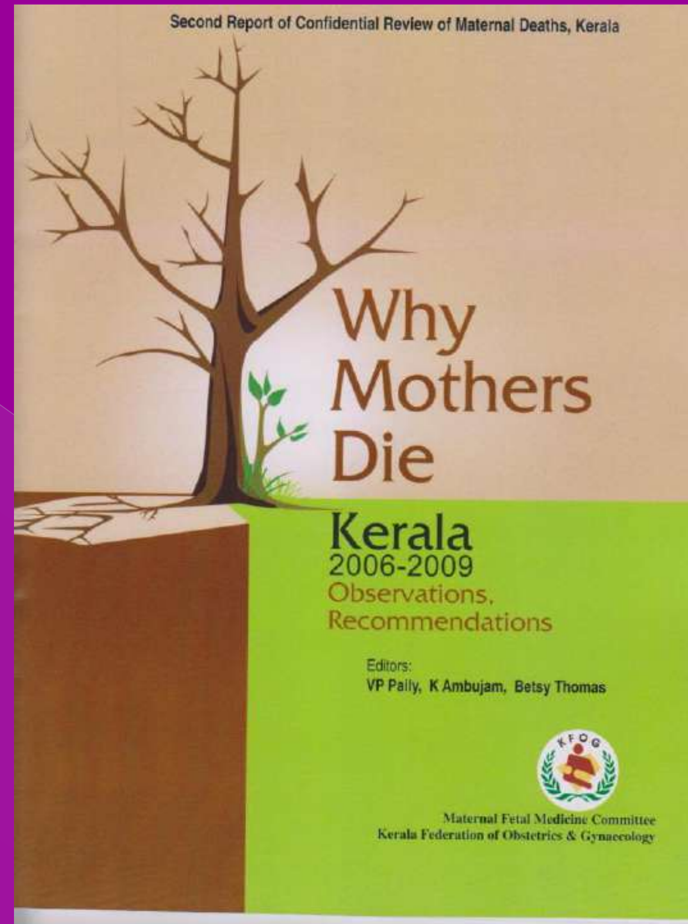
First Report of Confidential Review of Maternal Deaths, Kerala



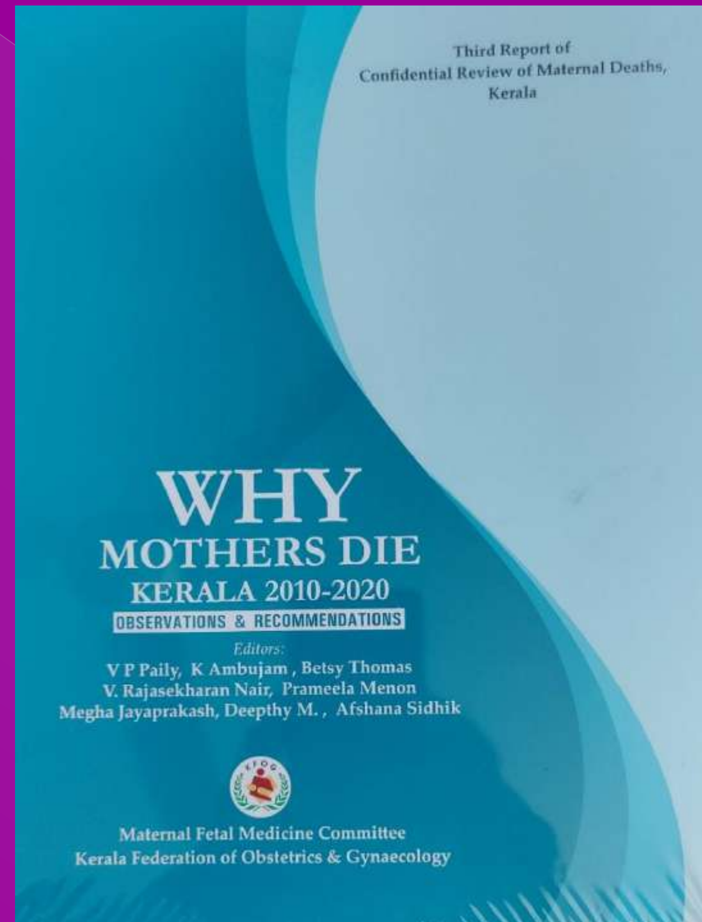
Maternal Fetal Medicine Committee
Kerala Federation of Obstetrics & Gynaecology

Edited by V P Paily

CRMD report of 2006, 07, 08 and 09



Why mothers die, kerala, 2010-20



Causes of death	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	19/20	Total
Hemorrhage	**23 (20.3)**	**20 (23.5)**	**24 (23.7)**	**17 (15.1)**	**19 (16.2)**	**10 (9.4)**	**14 (16.3)**	**24 (17.3)**	**21 (17.2)**	**17 (16.6)**	**189**
Hypertension	**16 (14.1)**	**14 (16.4)**	**14 (13.8)**	**8 (7.1)**	**8 (6.8)**	13 (12.3)	9 (11.2)	12 (8.7)	7 (5.7)	5 (4.9)	106
Sepsis	6	8	9	17	10	5	10	13	13	5	96
Heart diseases	8	6	5	9	7	5	6	13	12	5	76
AFE	7	4	5	4	9	10	4	10	5		58
Pul. embolism	4	6	2	7	11	10	3	3	7		54

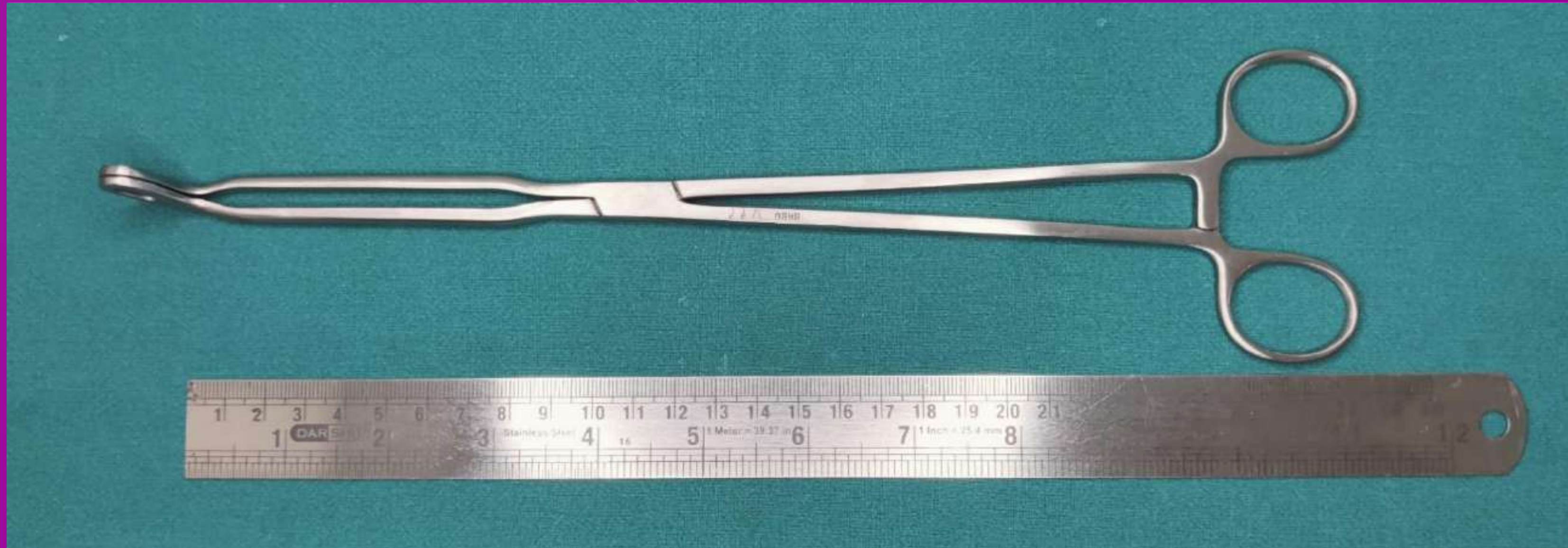
Causes of death	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016 - 17	2017-18	2018 -19	19/20	Total
Liver diseases	1	3	5	4	5	2	2	4	9	5	40
Neurological causes	9	8	9	8	9	14	6	6	7		76
suicide	3	2	8	8	12	7	8	7	5	19	79
Anesthesia related								3	5		8
Other causes	16	11	17	19	20	13	13	24	27		160
Total	**113**	**85**	**101**	**112**	**117**	**106**	**80**	**138**	**122**	**102**	**1076**
Not reported to/analysed by CRMD	73	53	47	65	37	48	46	48	46+20	31	
Total deaths	**186**	**138**	**148**	**177**	**154**	**154**	**126**	**186**	**163**		

Confidential review of maternal deaths, Kerala

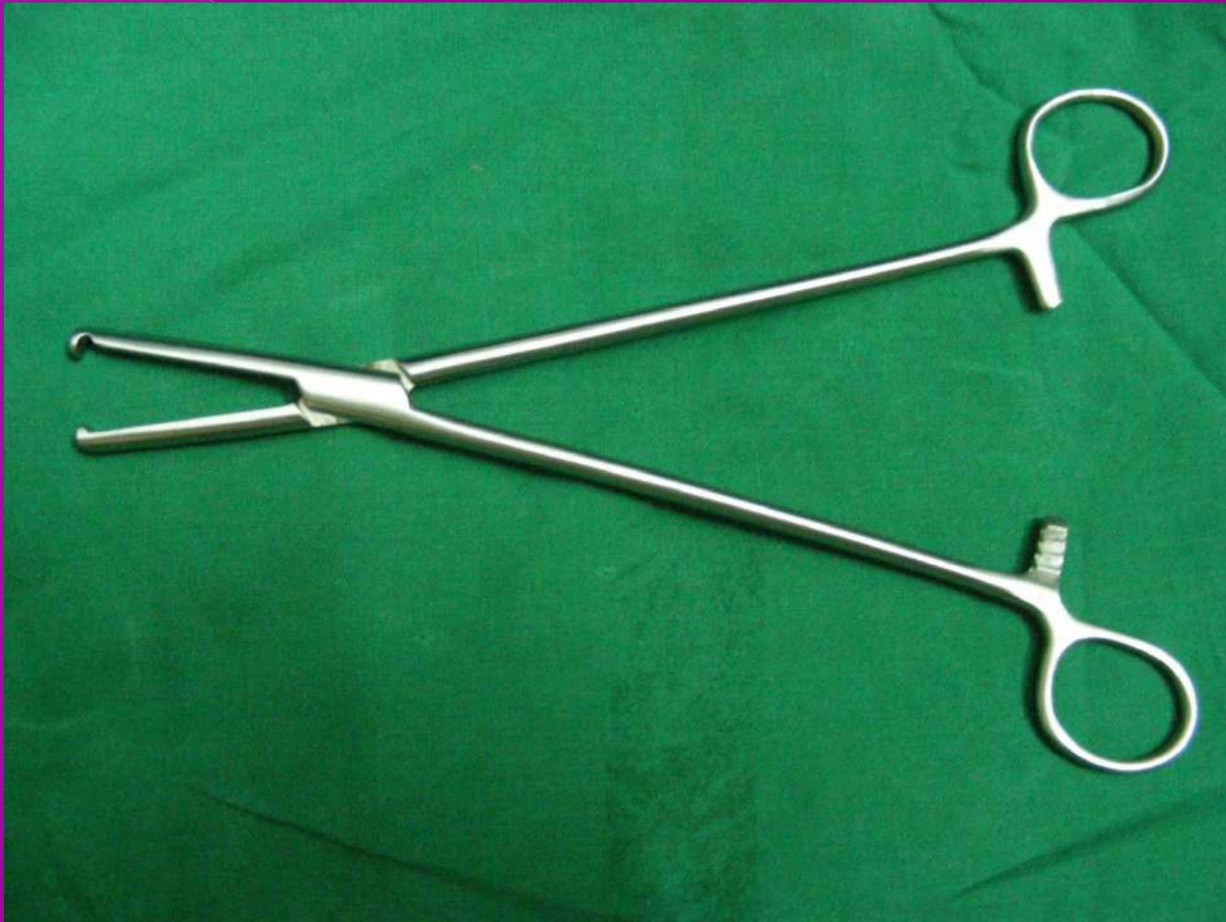
Based on observations new strategies developed.

Samartha Ram's suction cannula to tackle PPH

Transvaginal ut. Artery clamp devised by Paily to tackle lower segment PPH



Paily aorta clamp to tackle placenta accreta spectrum.



Confidential review of maternal deaths, Kerala

There are some drawbacks for CRMD:

No way to correct errors directly.

Some doctors resist corrective measures.

Morning report.

Have been practising since 1984.

The most useful type of analysis because events are fresh in the mind.

Mutual respect is the key.

To be tactfully handled.

Departmental/institutional audit of maternal deaths.

- Mandatory
- Head of institution to chair.
- Easy to correct deficiencies.
- Punitive nature should be avoided.
- Concerned people should take it as a learning opportunity.

MDNMSR (Maternal Death and Near Miss surveillance and response)

- Introduced in Kerala in 2019
- Decentralisation of state level audit.
- Primarily for near miss cases but mortality also considered without revealing identity.
- Occasion to learn lessons on the basis of problem cases managed.

Conclusions

There are different types of audit.

One has to choose the ones suitable to the set up

No use in audit without taking follow up action.

Conclusions

Surveillance (analysis or audit) is useless unless followed by corrective action.

Thank you