UPDATE NATIONAL PROTOCOL ON MATERNAL PERINATAL DEATH SURVEILLANCE AND RESPONSE(MPDSR)

FTIRM 2025-2030 and MPDSR Launching

Fairfield by Marriot , 25 Aug- 2025

Presented by **Dr.ROS Saphath,** Vice director of NMCHC

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I- PROGRESS OF MPDSR

1- Introduction

What's MPDSR?

☞ Maternal and Perinatal Death Surveillance and Response: Is a form of continuous surveillance liking a heath information system and QI process from local to national level for reducing preventable maternal death, stillbirth and neonatal death.

Background:

2004: 1st Publish MDA protocol

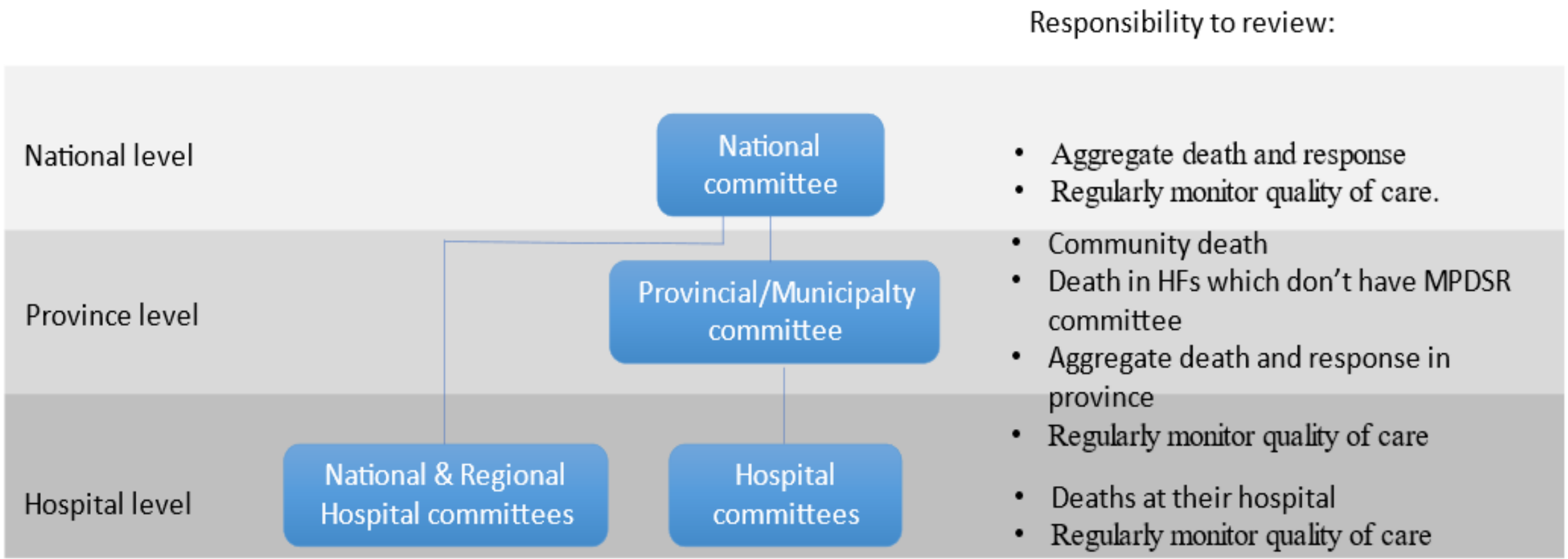
2014: 2nd Publish MDA protocol

2025: New National protocol on MPDSR: Need to improve the quality of care to reduce preventable maternal death and reduce stillbirth and neonatal mortality.

2-Update MPDSR

2004	2021	2025
MDA  **Process:** 1- Identification of maternal death 2- Investigation of maternal death(data collection by verbal autopsy) 3- Review of maternal death by committee. 4- Recommendation by committee. COMMITTEE: National MDA Provincial MDA	MDSR **Process:** 1- Identification maternal death 2- Collect information 3-Analyse result and make recommendation. 4- Recommendation implementation 5-Monitoring COMMITTEE: National MDSAR Provincial MDSR	MPDSR  **Process:** 1. រចនាសម្ព័ន្ធក្រុមការងារ : MPDSR ជាតិ MPDSR ថ្នាក់ខេត្ត និង MPDSR មន្ទីរពេទ្យ 2. ពង្រីកវិសាលភាព: រួមបញ្ចូលការពិនិត្យមរណភាពទារកជុំវិញកំណើត 3. បន្ថែមវិសាលភាពការពិនិត្យមរណភាពមាតានិងទារកជុំវិញកំណើត៖ រដ្ឋ និង ឯកជន 4. ការកែលម្អគុណភាពសេវាថែទាំព្យាបាល មាតានិងទារក ផ្តល់អនុសាសន៍គាំទ្រ និងសកម្មភាពអនុវត្តនៅគ្រប់កម្រិតមូលដ្ឋានសុខាភិបាលខេត្ត និងនៅថ្នាក់ជាតិ COMMITTEE: National MPDSR Provincial MPDSR Hospital MPDSR

3- MPDSR Organizational Structure



4- DEFINITIONS

Maternal death

The death of a woman while pregnant or within 42 days of the termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

4- DEFINITIONS

Stillbirth: Is the complete expulsion or extraction from a woman of a fetus, following its death prior to the complete expulsion or extraction at 28Weeks of gestation.

Neonatal death: Death after birth and within the first 28 days of life.

Perinatal mortality: The number of fetal deaths of at least 28 weeks of gestation and/or 1000g in weight and newborn deaths (up to and including the first 7 days after birth).

5- PRINCIPAL of MPDSR

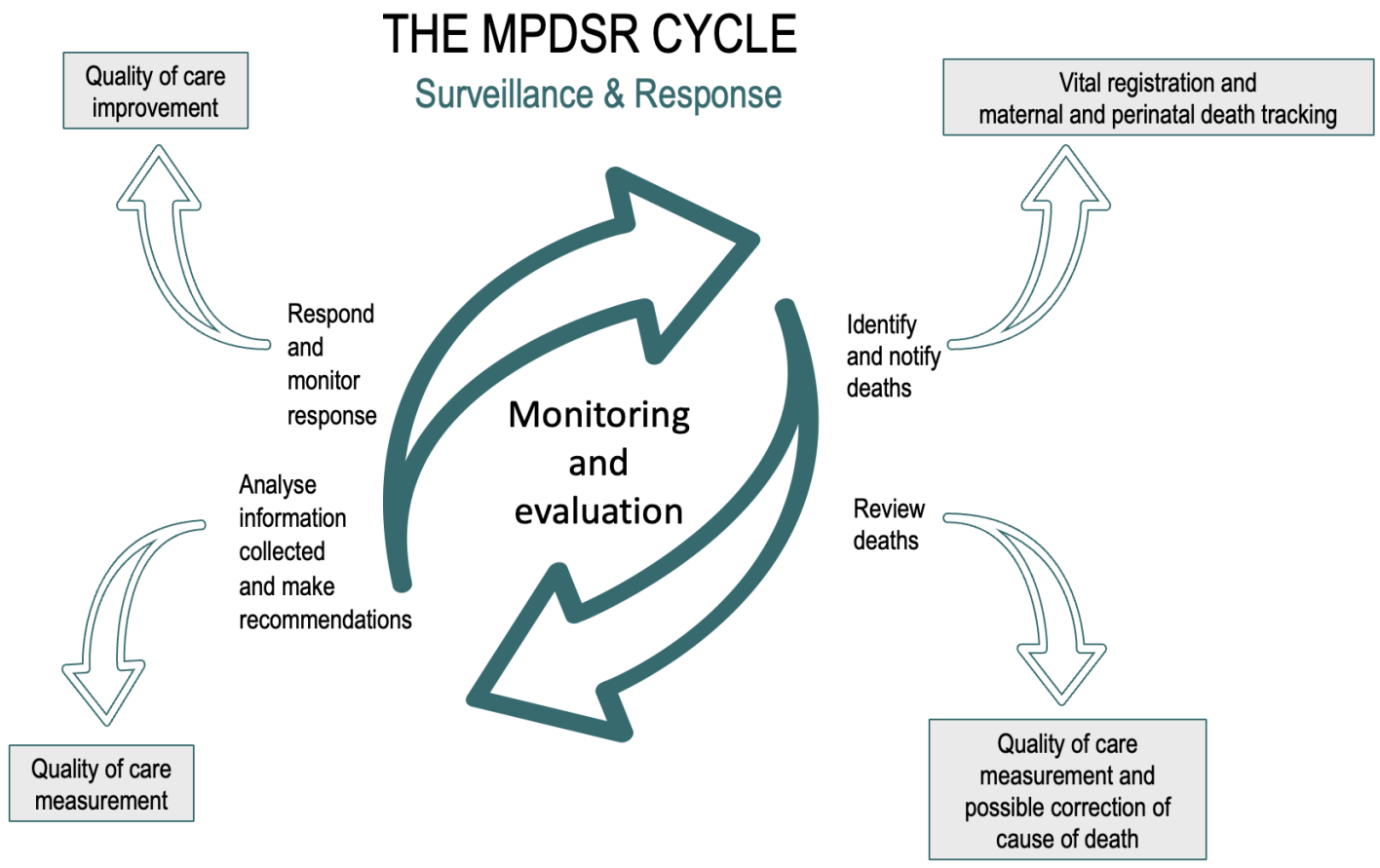
"**No Name, No blame**" environment

No **Name** = Protect confidentiality of client and providers.

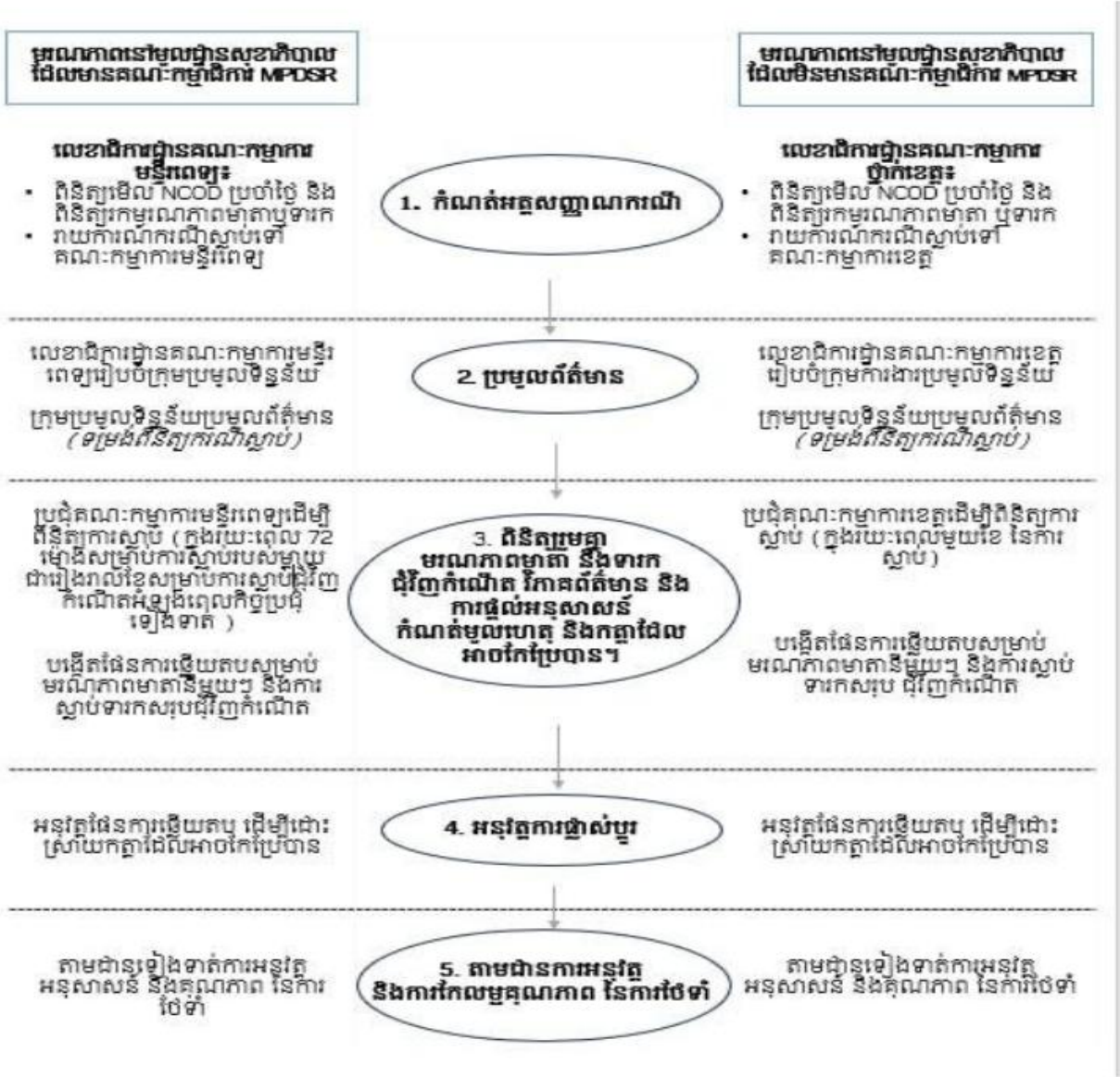
No **Blame =** Promote a constructive, non punitive response to maternal deaths.

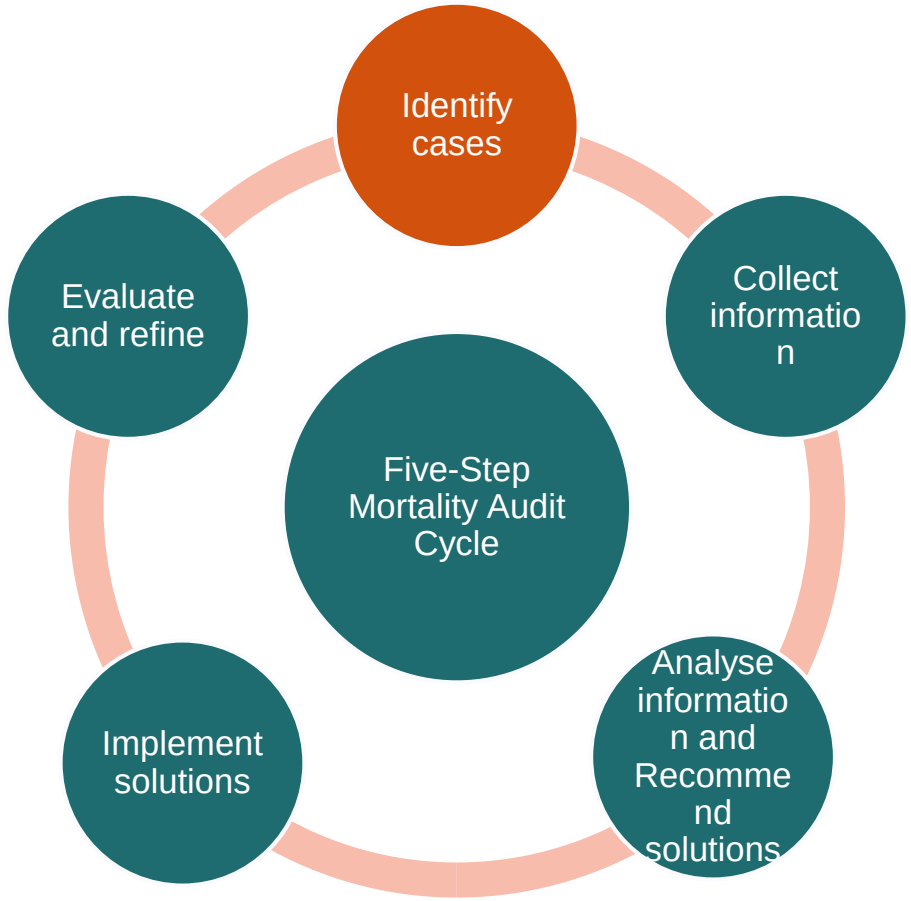
But accountability

6- MPDSR CYCLE



Five-Step Mortality Audit Cycle





7- System improvement for quality of care

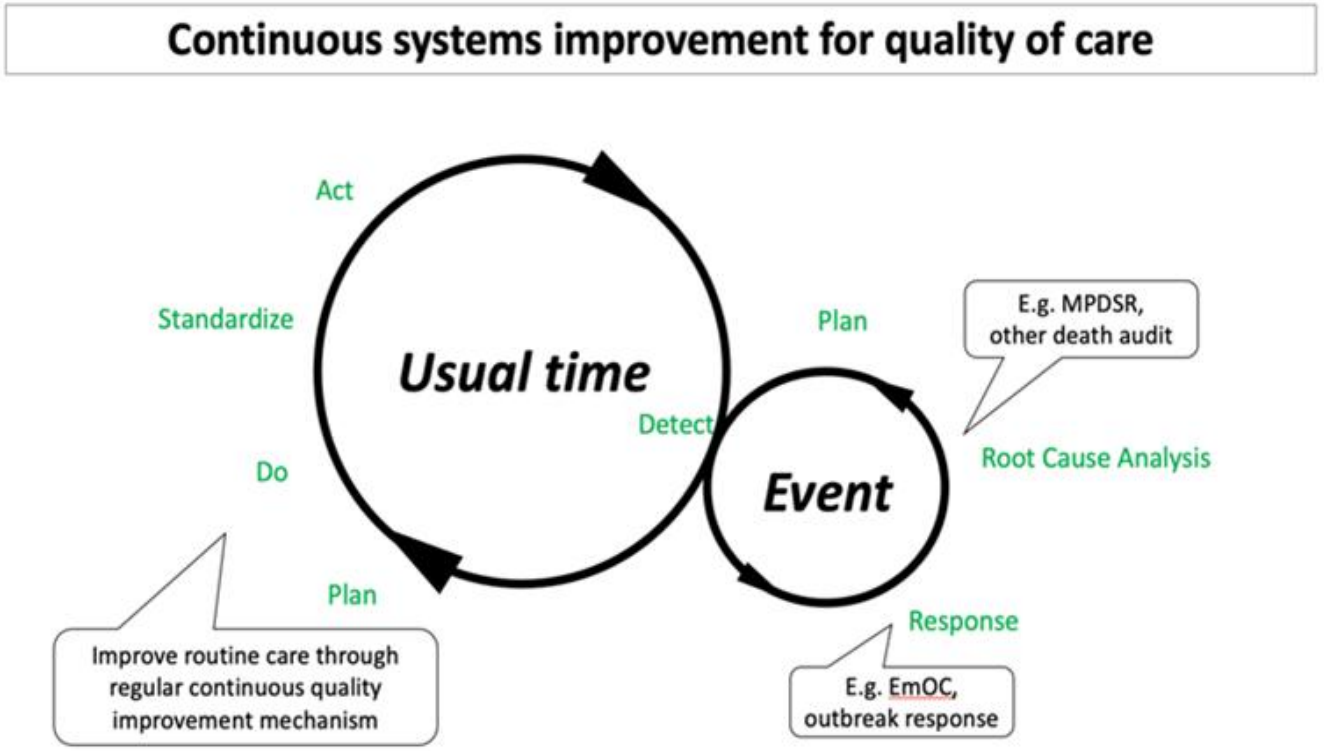
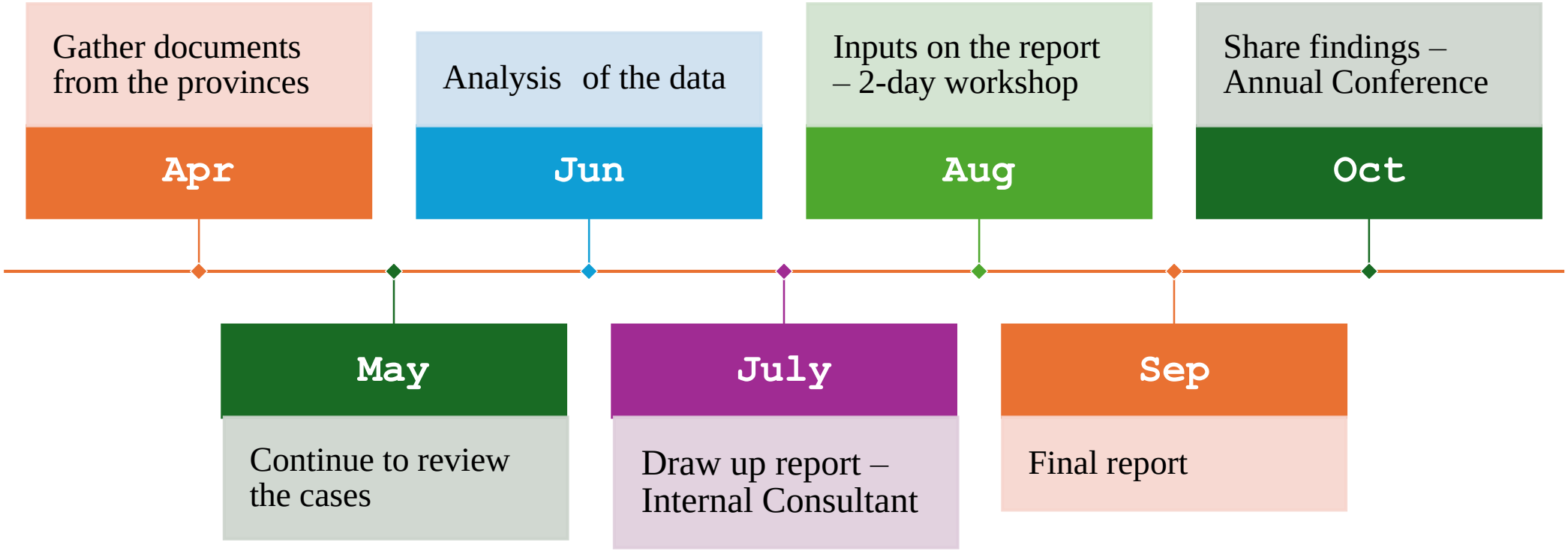


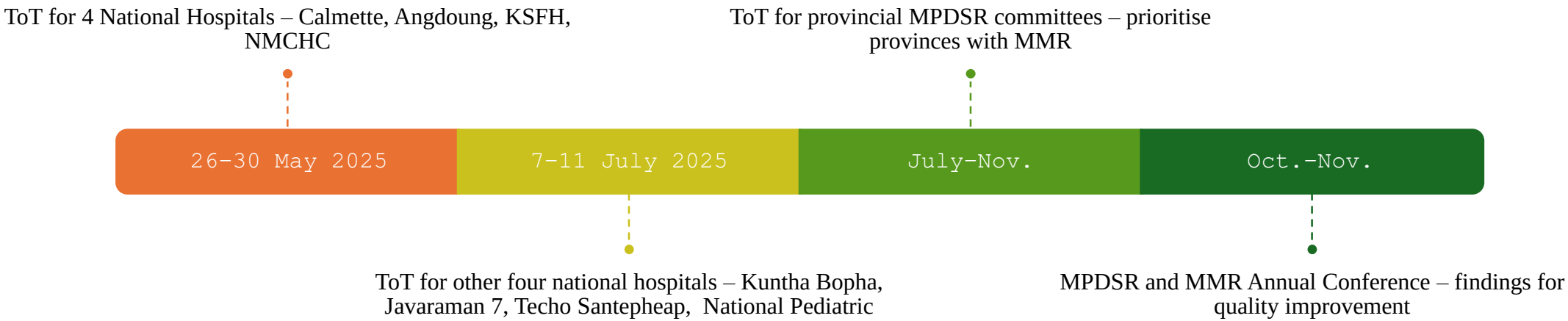
Figure 2. Continuous systems improvement for quality of care: double-loop model

II- RESULTS OF MATERNAL and PERINATAL DEATH CASE REVIEW

1- PROGRESS AND NEXT STEPS



MPDSR Cascade ToT



* 1st MPDSR training for National committee : 17 participant , 10 Trainer MPDSR (12-14 March 2025 & 17-21 March 2025, Calmette Hospital)

* 2nd MPDSR training for 4 National hospital: Participant=26 (26-30 may 2025 Calmette hospital)

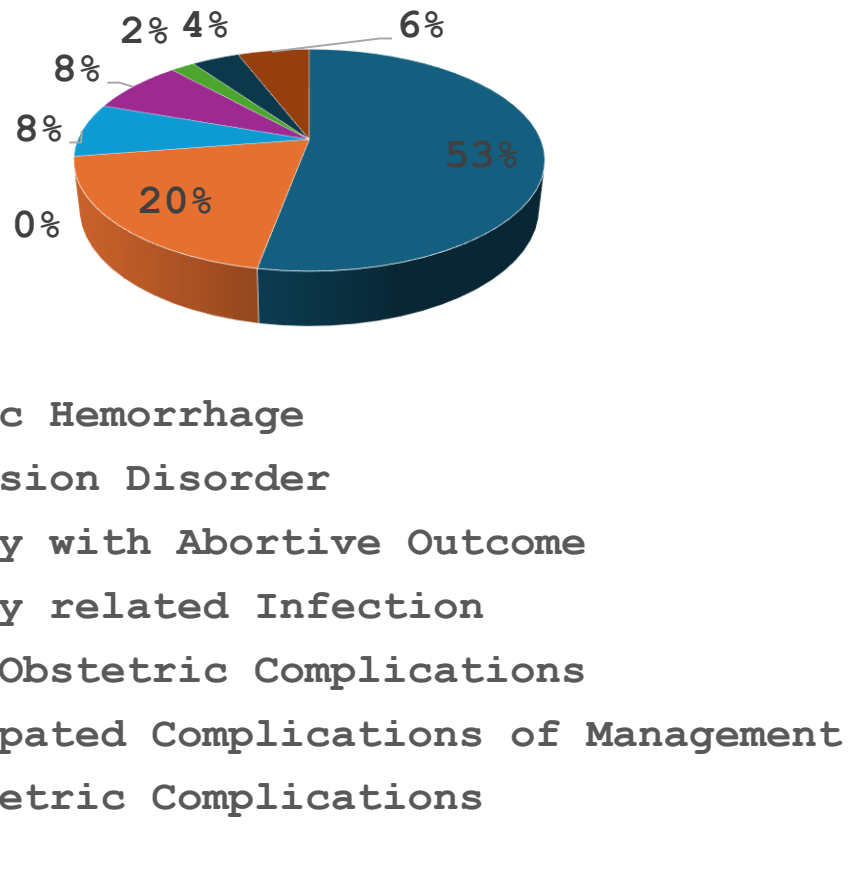
* 3rd MPDSR training for 4 National hospital: participant=33 (7-11 July 2025, Ang Duong hospital)

2- Key Findings – Maternal Mortality Review 2023-2024

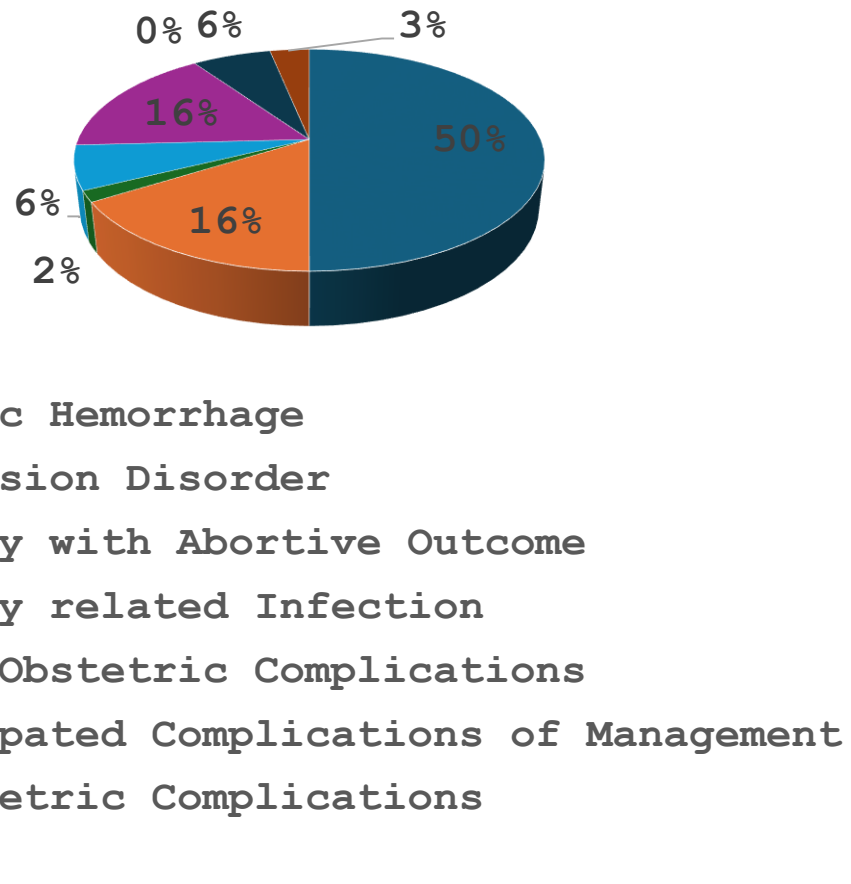
Number of Cases Reviewed: 113 (Complete: 54 & Incomplete: 60)
Number of national hospital: (4) National Hospitals
Number of provinces: 17 provinces

1. 19-21 March 2025 (95 Cases)
2. 26-30 May 2025 (103 Cases)
3. 7-11 Jul 2025 (113 Cases)

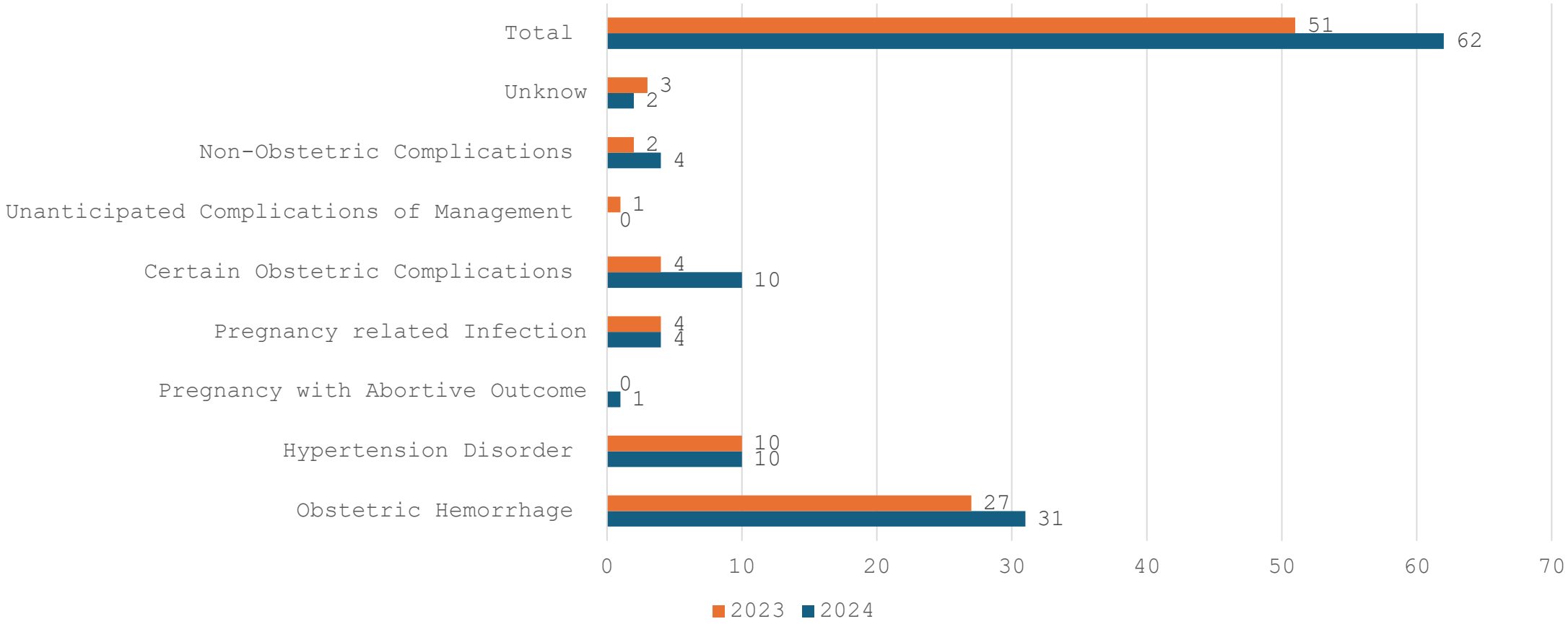
Causes of Maternal Death 2023 (51 cases)



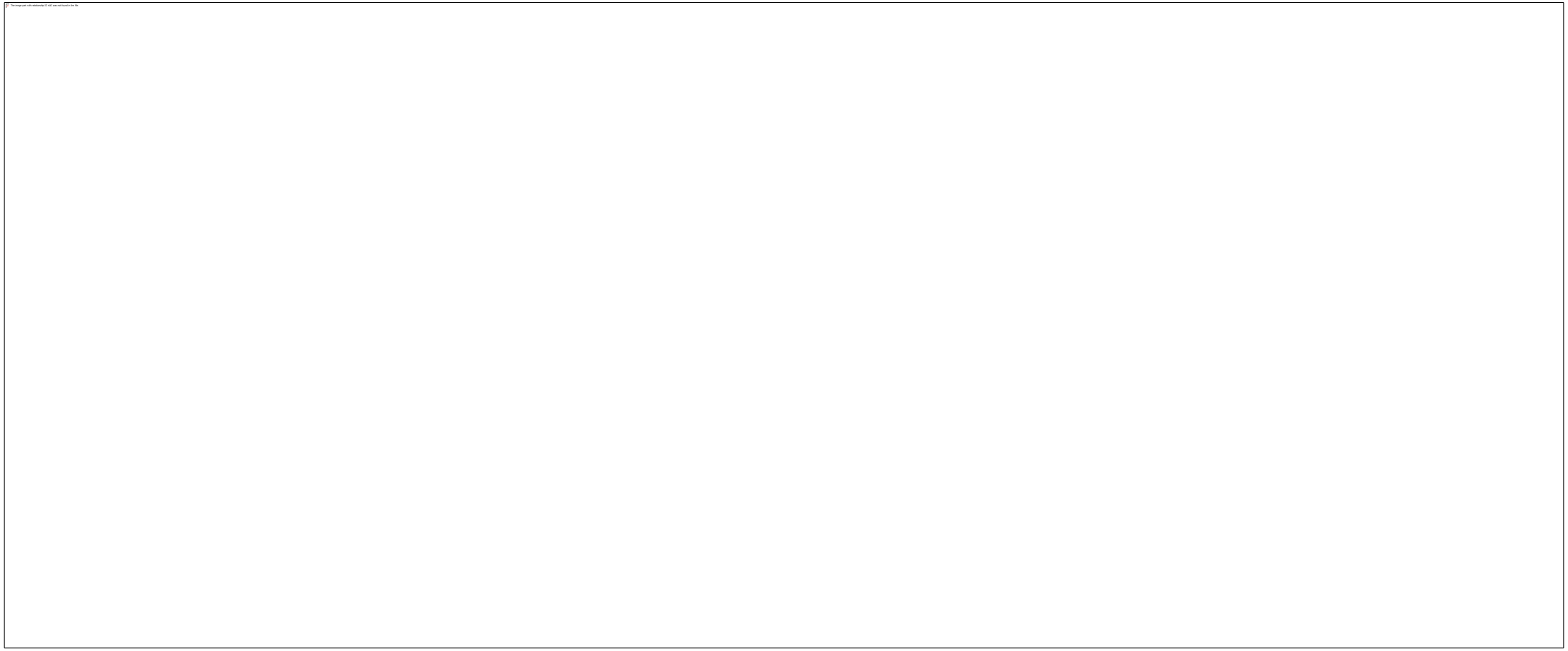
Causes of Maternal Death 2024 (62 cases)



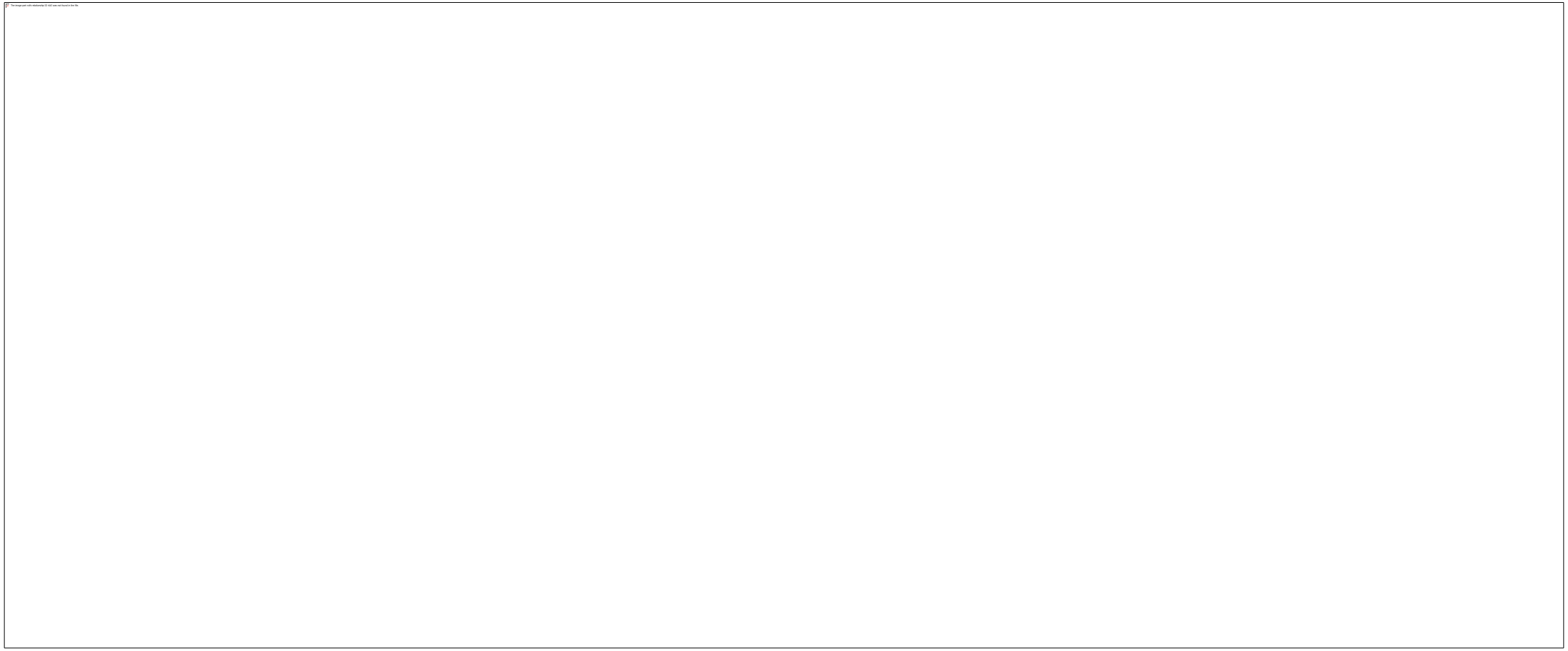
Causes of Maternal Death 2023-2024 (113 cases)



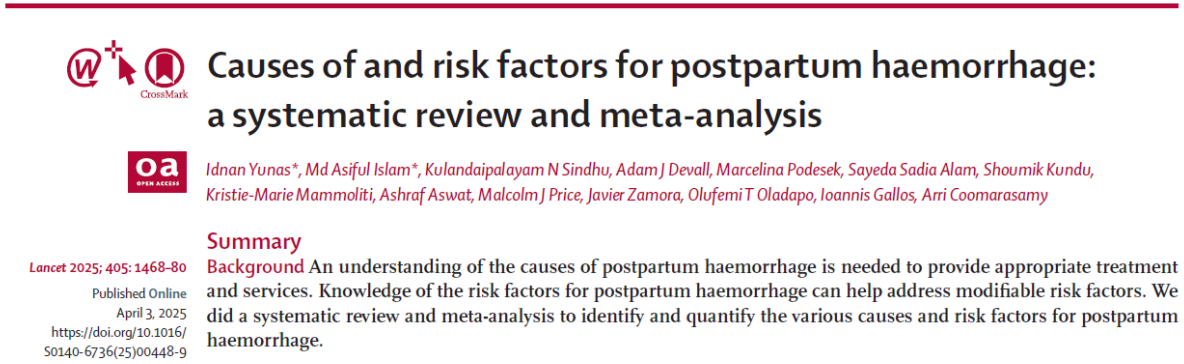
Underlying Causes of Maternal Death 2023 (51 Cases)



Underlying Causes of Maternal Death 2024 (62 Cases)



Global evidence - PPH



Causes of and risk factors for postpartum haemorrhage: a systematic review and meta-analysis

Idnan Yunas*, Md Asiful Islam*, Kulandaipalayam N Sindhu, Adam J Devall, Marcelina Podesek, Sayeda Sadia Alam, Shoumik Kundu, Kristie-Marie Mammoliti, Ashraf Aswat, Malcolm J Price, Javier Zamora, Olufemi T Oladapo, Ioannis Gallos, Arri Coomarasamy

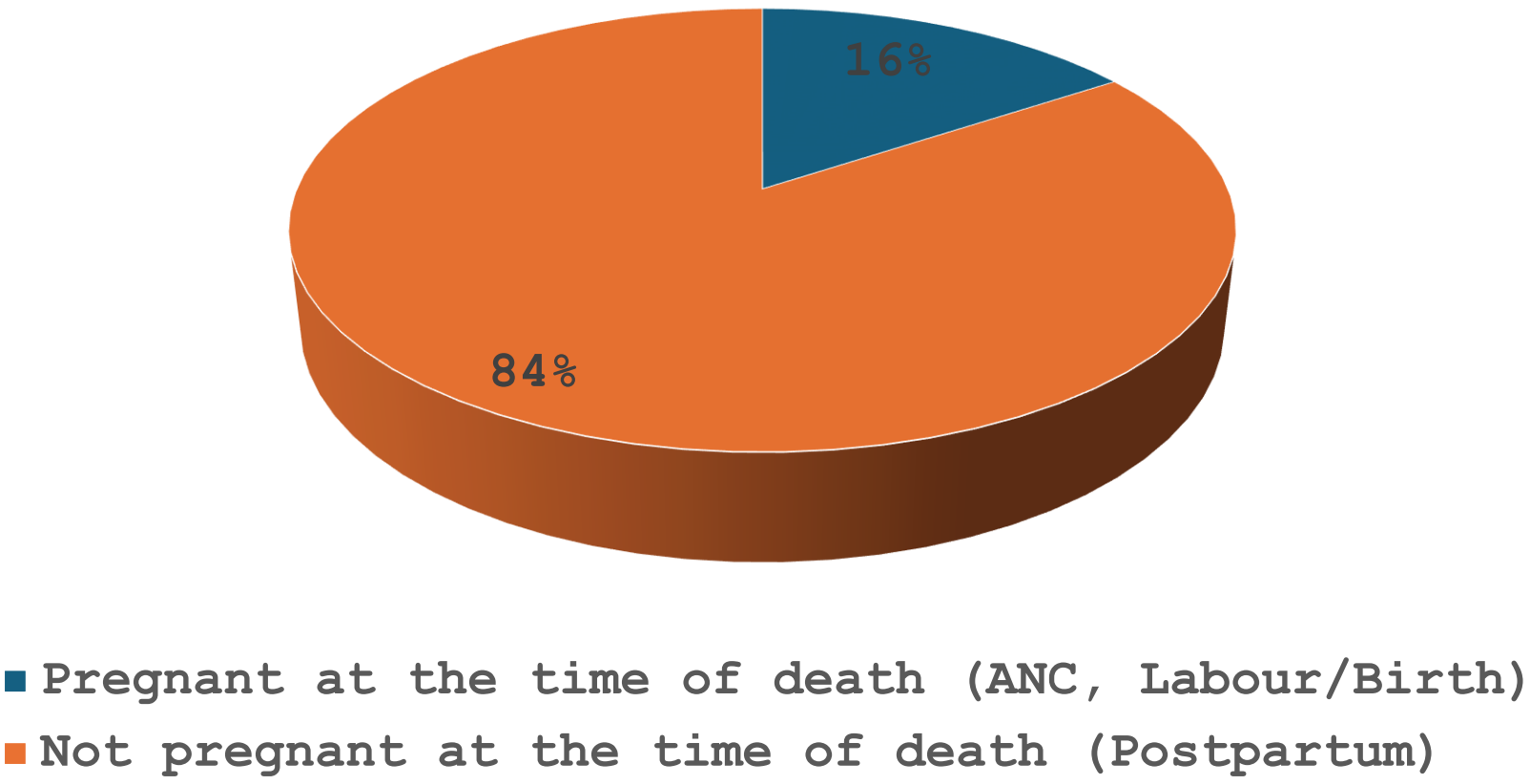
Lancet 2025; 405: 1468–80
Published Online April 3, 2025
https://doi.org/10.1016/S0140-6736(25)00448-9

Summary

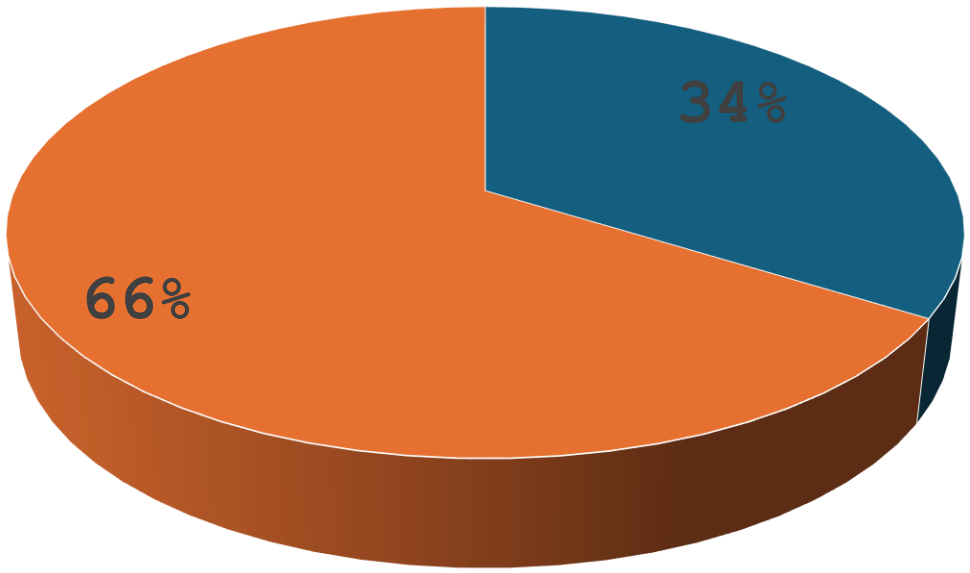
Background An understanding of the causes of postpartum haemorrhage is needed to provide appropriate treatment and services. Knowledge of the risk factors for postpartum haemorrhage can help address modifiable risk factors. We did a systematic review and meta-analysis to identify and quantify the various causes and risk factors for postpartum haemorrhage.

- We synthesised data from 327 studies, including 847 413 451 women.
- The pooled rates of the five commonly reported causes of postpartum haemorrhage were **uterine atony**
- Risk factors with **a strong association with postpartum haemorrhage** included **anaemia, previous postpartum haemorrhage, caesarean birth, female genital mutilation, sepsis, no antenatal care, multiple pregnancy, placenta praevia, assisted reproductive technology use, macrosomia with a birthweight of more than 4500 g, and shoulder dystocia.**
- Interpretation **Knowledge of risk factors with a strong association with postpartum haemorrhage** can help to identify women at high risk of postpartum haemorrhage who could benefit from enhanced prophylaxis and treatment.

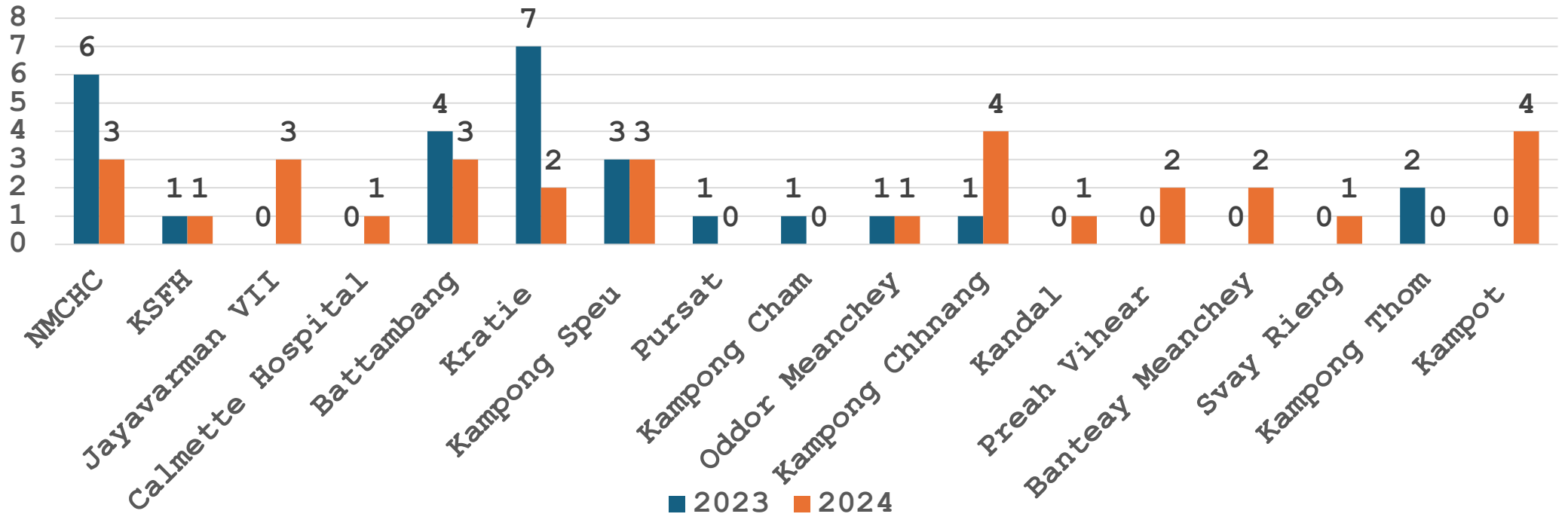
Maternal Death by Period of Death 2023 (51 Cases)



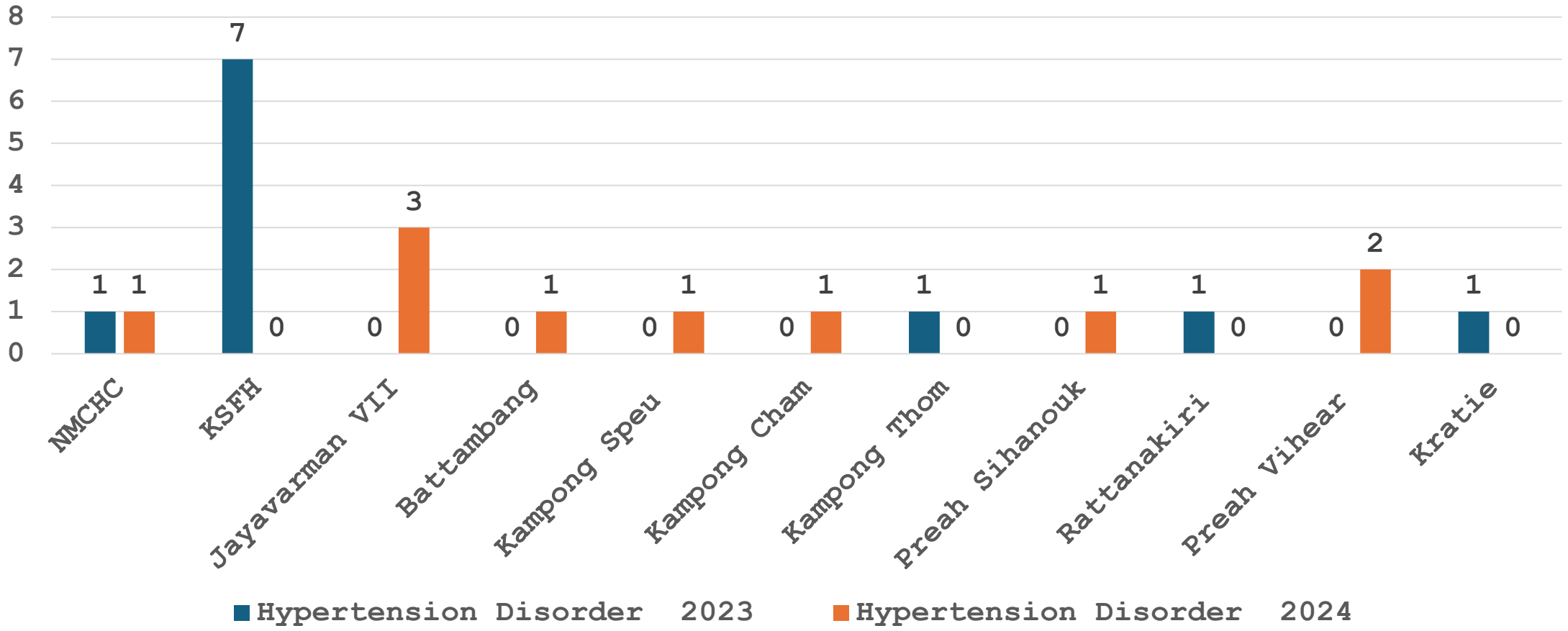
Maternal Death by Period of Death 2024 (62 Cases)



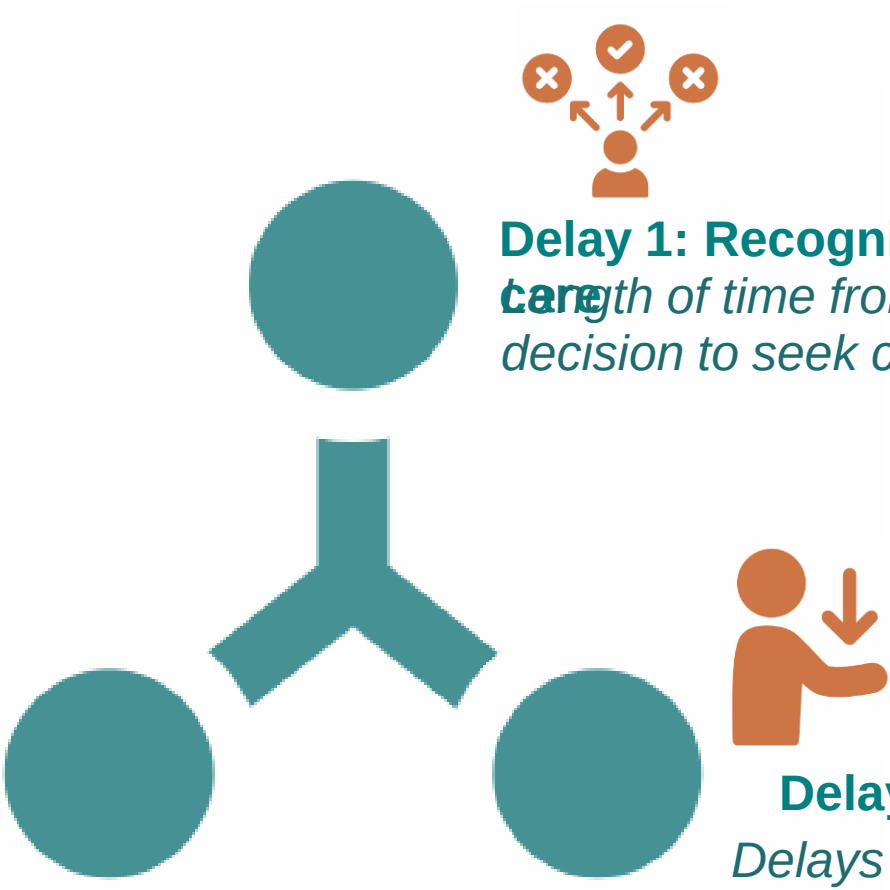
Obstetric Hemorrhage for Maternal Death 2023-2024 (58 Cases)



Hypertension Disorder for Maternal Death 2023-2024 (21 Cases)



The Three Delays Model



Delay 1: Recognition and decision to seek care

Length of time from onset of a complication to decision to seek care

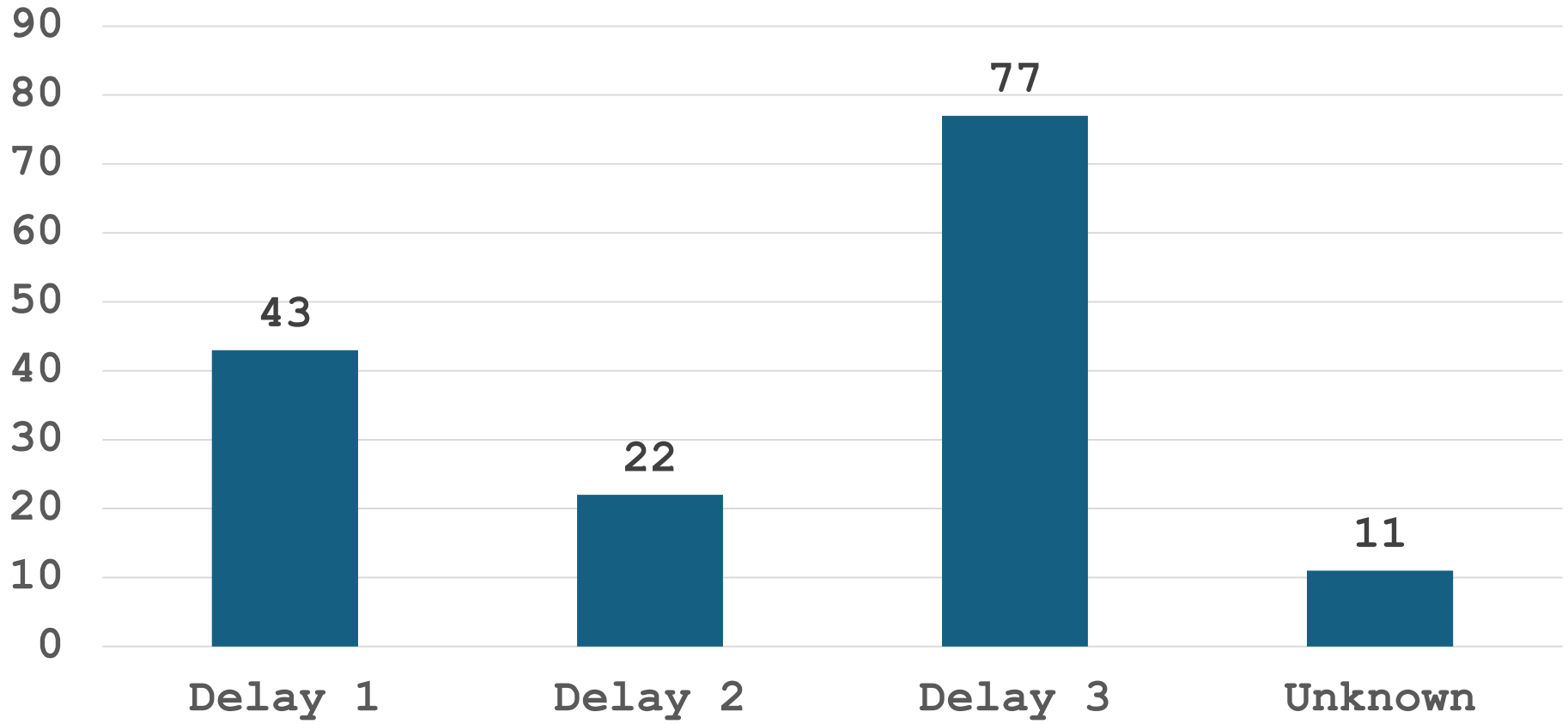
Delay 2: Transport to care

Once decision to seek care is made, there can be delays in reaching it

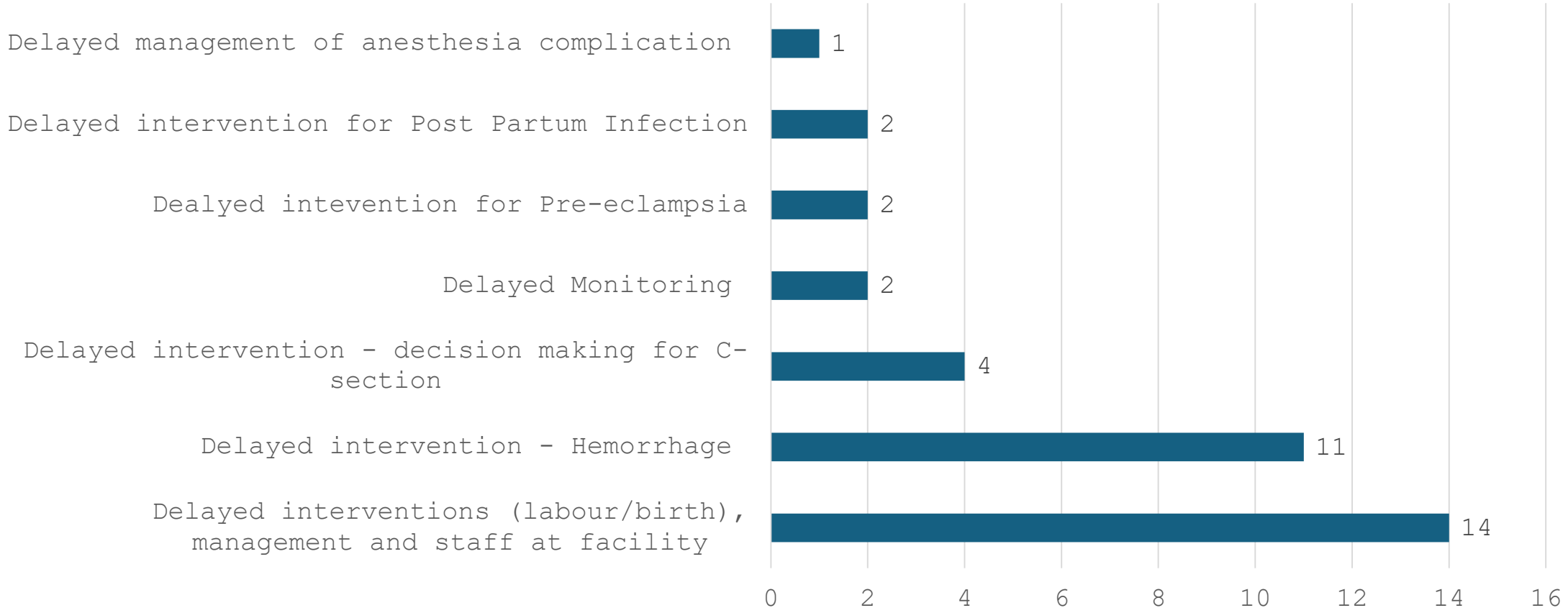
Delay 3: Receiving quality care

Delays 1&2 can lead to a women never reaching a facility or arriving in critical condition. Delays within a facility also contribute to maternal deaths

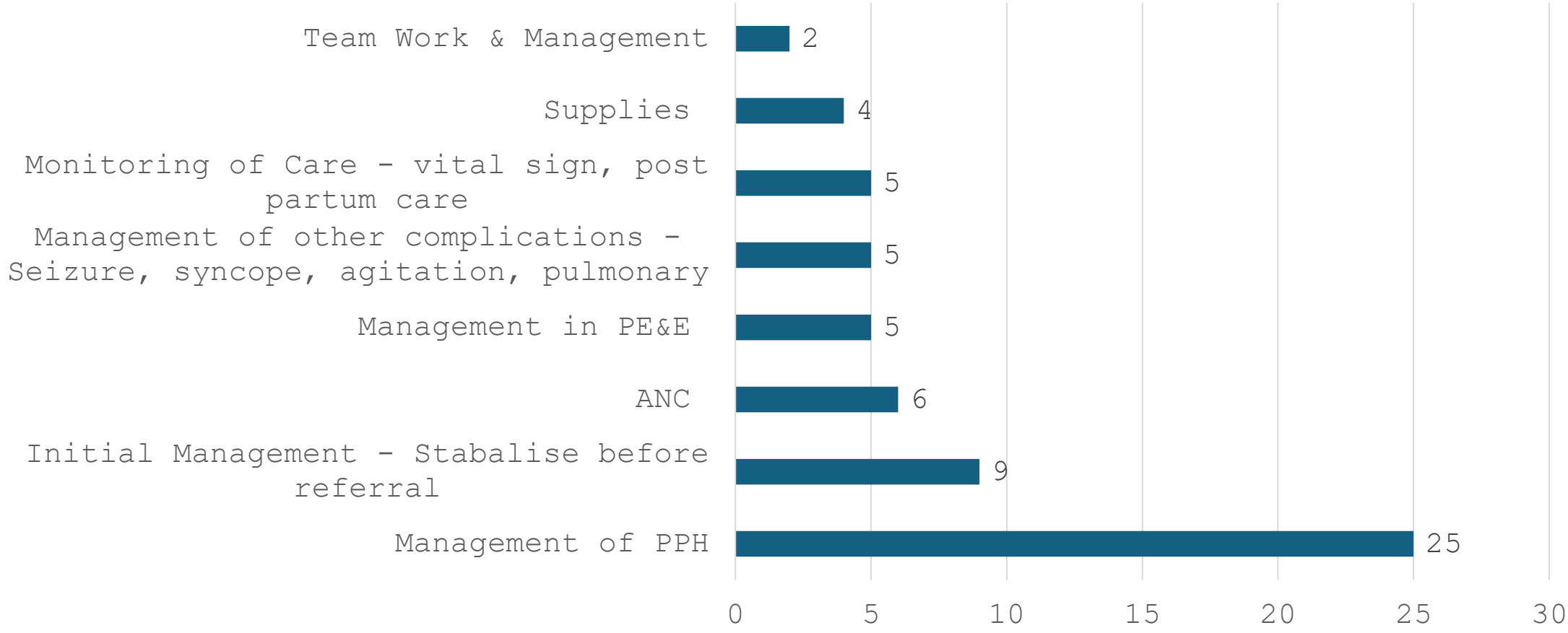
Types of Delay for Maternal Death 2023-2024



Components of Delay 3 for Maternal Death 2023-2024



Limited Quality of Care - Maternal Death 2023-2024



3- Result of MPDSR Review : January-June 2025

ចំនួនមរណភាពមាតា និងទារក ពីខែមករា ដល់ ខែមិថុនា ឆ្នាំ២០២៥

ខេត្ត	មរណភាពមាតា	មរណភាពទារក
កំពត	2	2
ពោធិ៍សាត់	3	1
កំពង់ធំ	2	1
បាត់ដំបង	2	1
ស្វាយរៀង	2	0
ព្រៃវែង	1	1
បន្ទាយមានជ័យ	1	0
Kg.Cham	2	0
KSFH	2	2
NMCHC	1	2
Krati	1	0
Total	19	10

*** Maternal death review:**

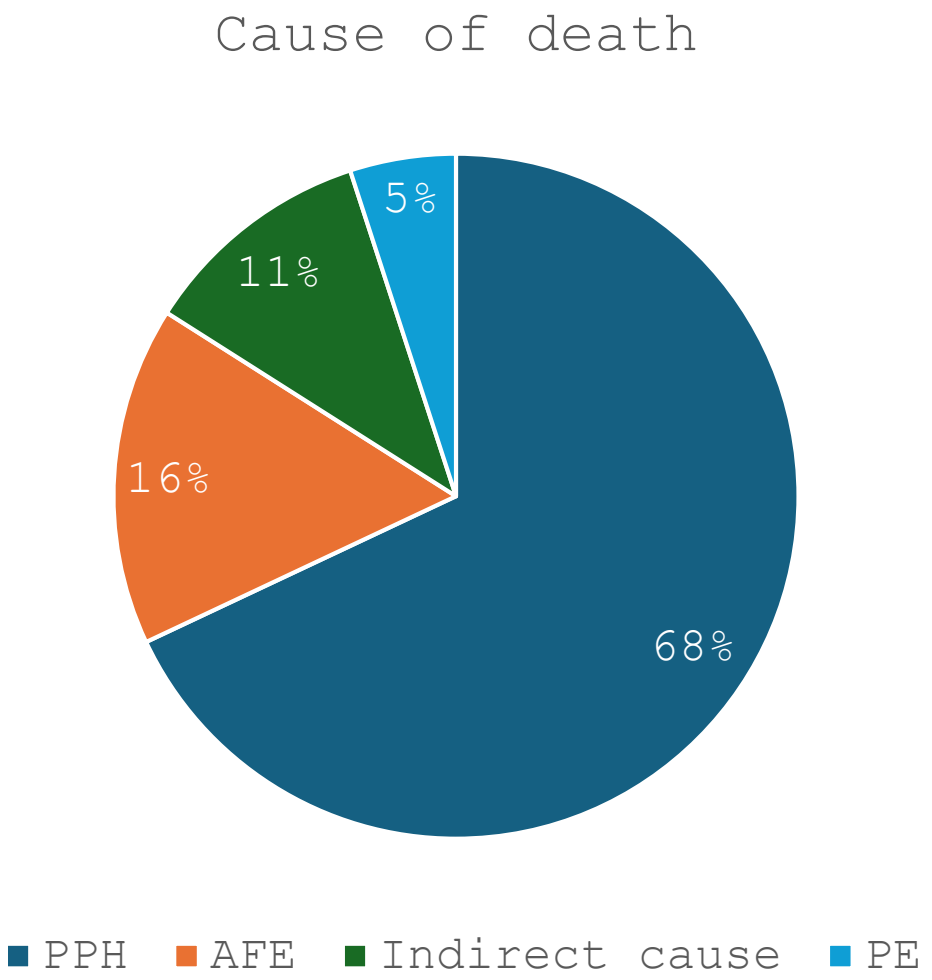
1- National MPDSR review= 11
2-MDSR provincial review=06
3-Nation Hospital review= 02

*** Perinatal death review:**

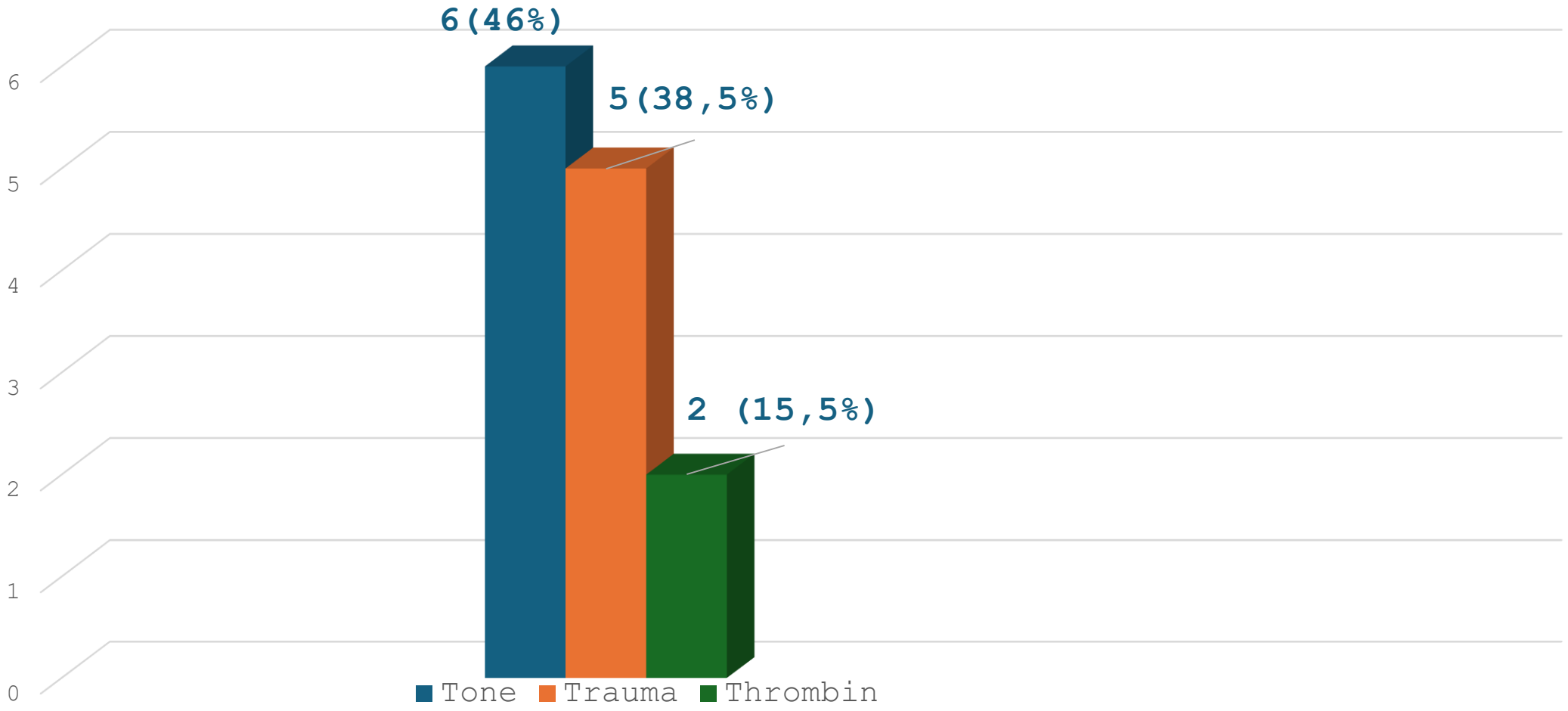
1-National MPDSR review= 02
2-National hospital review=03

*** Perinatal death: 10Cases**

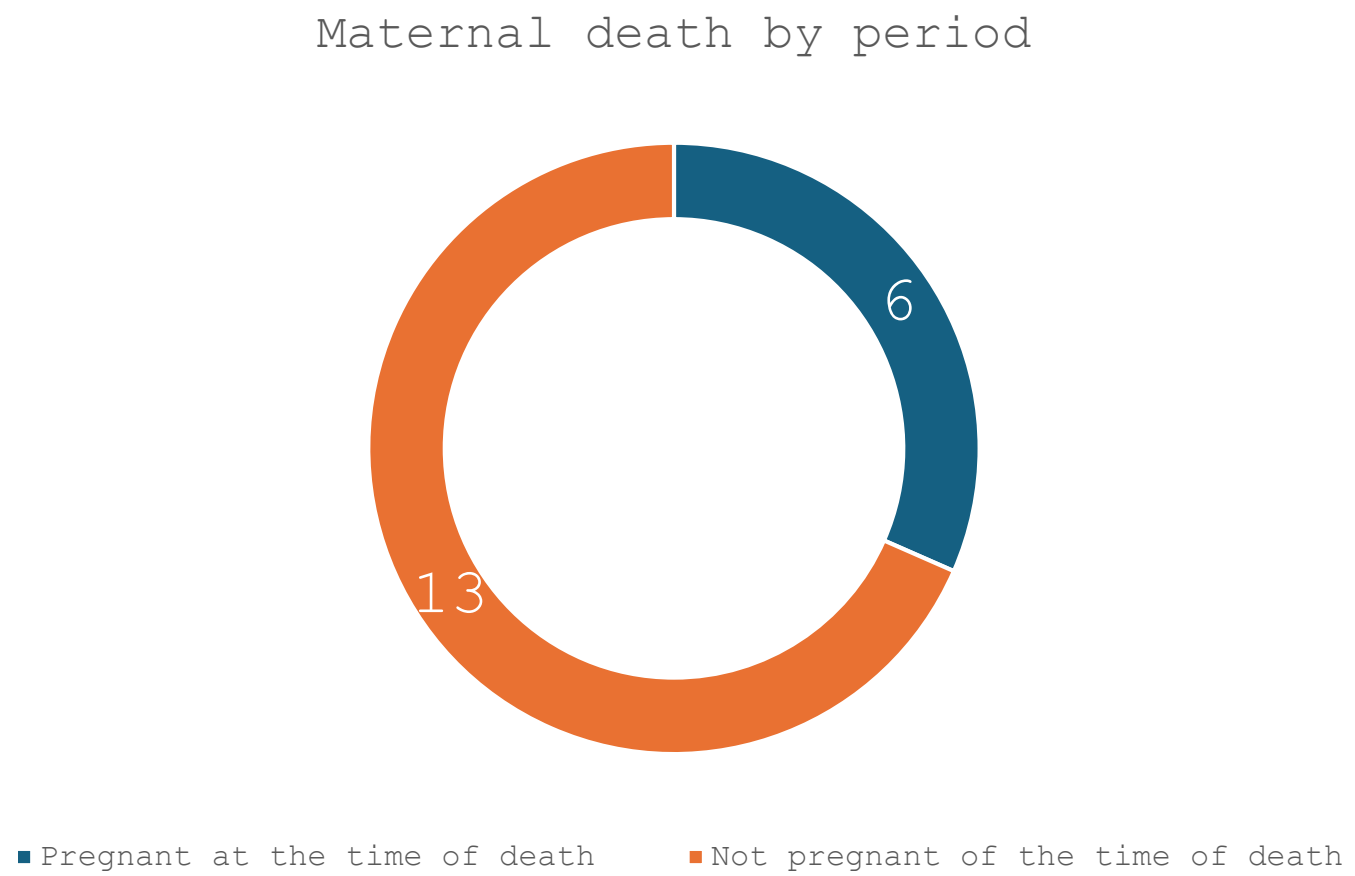
- Early neonatal death=04
- Fetal intra-partum death=06


Cause of death
5%
11%
16%
68%
PPH
AFE
Indirect cause
PE

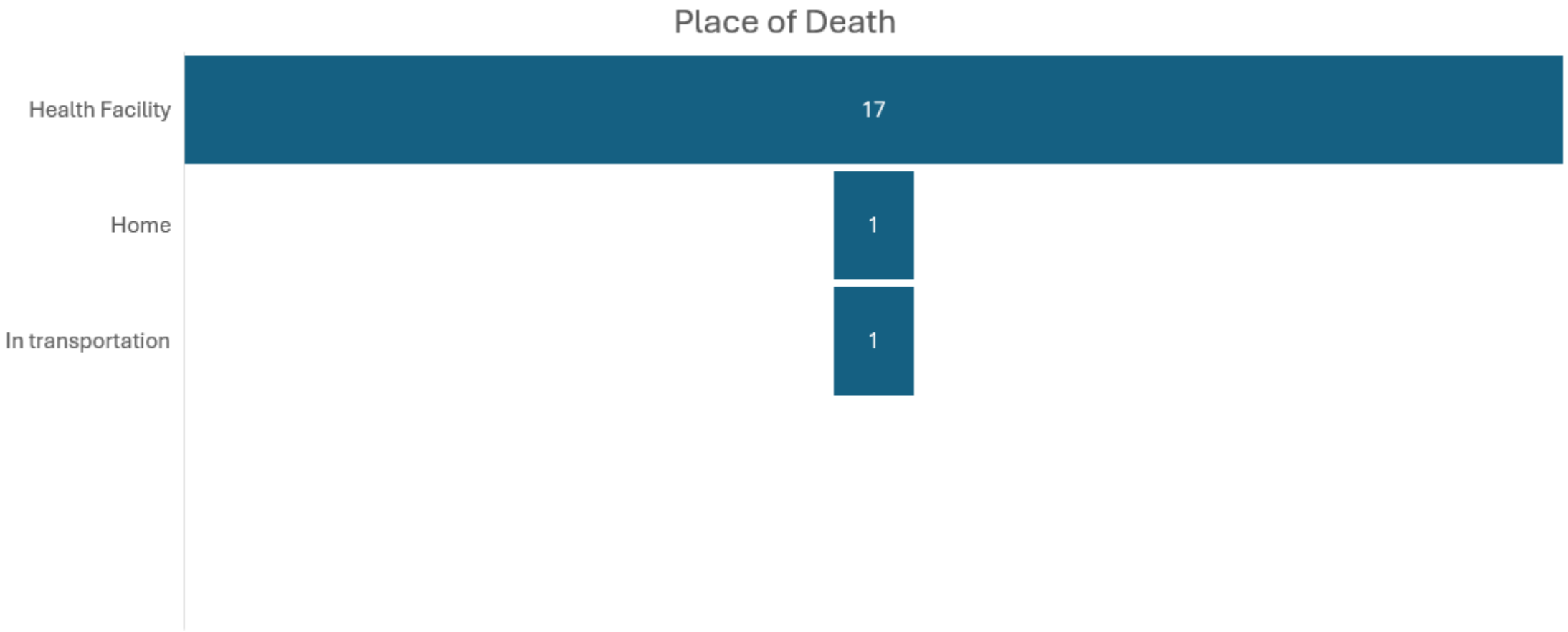
Cause of PPH



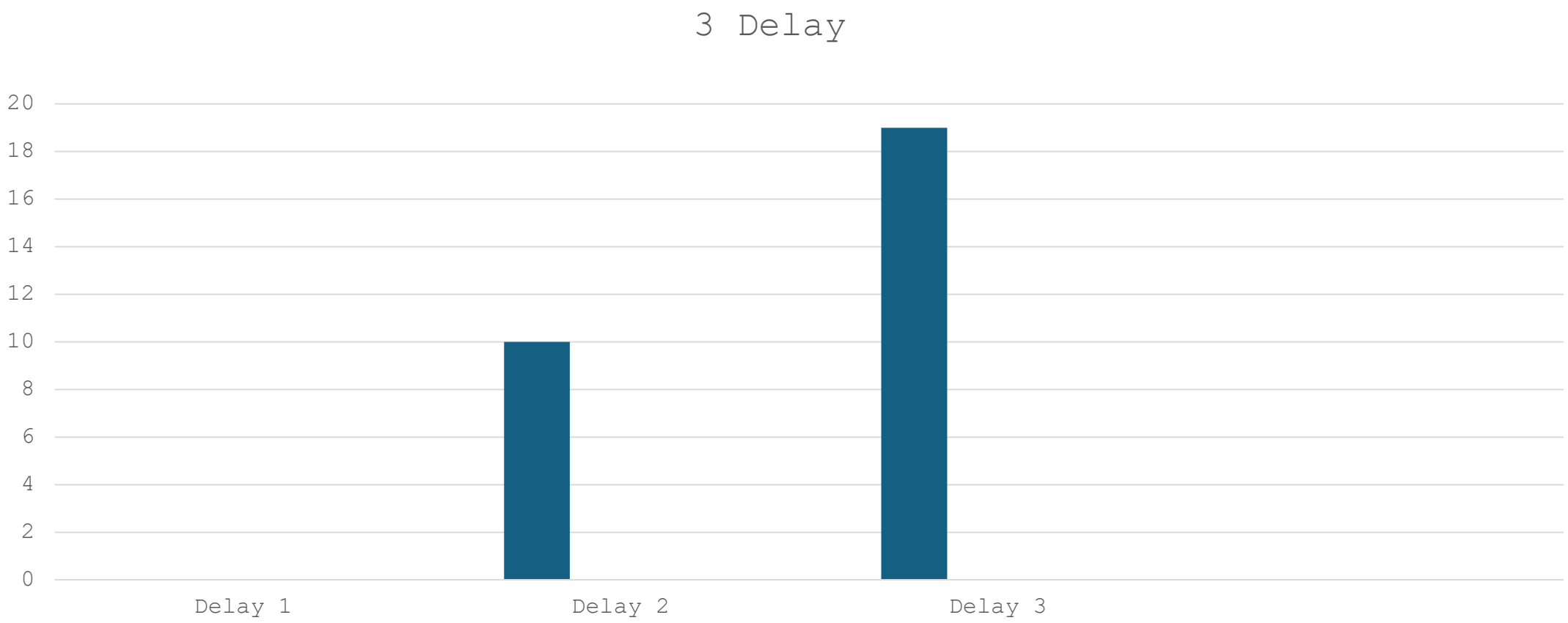
Maternal Death by Period of Death



Place of Death



Types of Delay for Maternal Death 2025



Delay 2: Transport to care, delays reaching an appropriate facility

- Insufficiency to stabilize patient before transfer.
- Poor management during transportation
- Lack of recording during transportation
- Lack of competency of midwifery during transportation (e.g, midwife must do message during transportation)
- Poor communication and coordination

Delay 3: Third Delay: Quality of care received in the health facility

1. Low quality of ANC to detect the high-risk pregnancy
2. Poor management of severe pre-eclampsia (Not available parenteral hydralazine in RH)
3. Inadequate patient monitoring after labore + late response treatment
4. Lack of skill for CPR
5. Poor using RBC or whole blood
6. Poor knowledge of PPH assessment and correctly management
7. Late of decision to stop bleeding(Surgical)

Types of delay for perinatal death

Modified contrubuting factors Three Delay Model	
First Delay: Recognition and decision to seek care (Home/family/community)	
Second Delay: Transport to care, delays reaching an appropriate facility	
Third Delay: Quality of care received in the health facility	• Poor management for critical care (e.g., CPR) • Lack of knowledge to detect severity • Late diagnosis • Poor preterm management • Lack of competency to secure baby after birth

4- Forms for review

តារាងទី៩៖ MCCD – ធ្លាក់ឈាមក្រោយសម្រាល (PPH)

មូលហេតុនៃការស្លាប់ *(ជំងឺ ឬស្ថានភាពដែលគិតថាជាមូលហេតុសំខាន់គួរតែបង្ហាញនៅក្នុងបន្ទាត់ដែលបានបំពេញរួច ក្រោមបំផុតនៃផ្នែក I)*		ចន្លោះពេលប្រហាក់ប្រហែលរវាងការចាប់ផ្តើមនិងការស្លាប់
ផ្នែកទី I ជំងឺ ឬស្ថានភាពដែលនាំទៅដល់ការស្លាប់ដោយផ្ទាល់	a)	
មូលហេតុមុនៗ៖ ដោយសារតែ ឬជាលទ្ធផលនៃ	b)	
ដោយសារ ឬជាលទ្ធផលនៃ	c)	
ដោយសារតែ ឬជាលទ្ធផលនៃ	d)	
ផ្នែកទី II ស្ថានភាព សំខាន់ៗ ផ្សេងទៀត **រួមចំណែកដល់ការស្លាប់ ប៉ុន្តែមិនទាក់ទងទៅនឹងជំងឺ ឬស្ថានភាពដែលបណ្តាលឲ្យស្លាប់នោះទេ**		
ស្ត្រីនោះគឺ៖: □ មានផ្ទៃពោះនៅពេលស្លាប់ □ មិនមានផ្ទៃពោះនៅពេលស្លាប់ (ប៉ុន្តែមានផ្ទៃពោះក្នុងរយៈពេល 42 ថ្ងៃ) □ មានផ្ទៃពោះក្នុងឆ្នាំកន្លងមក		

កត្តារួមចំណែកដែលអាចកែប្រែបាន(រៀបចំនៅក្នុងគំរូការពន្យារពេលបី)

ស្រុក :	មូលដ្ឋានសុខាភិបាល :	**កាលបរិច្ឆេទប្រជុំ (ខែ/ថ្ងៃ/ឆ្នាំ)៖**……/……/……
កាលបរិច្ឆេទនៃព្រឹត្តិការណ៍មរណភាពមាតា (ខែ/ថ្ងៃ/ឆ្នាំ):		**អាសយដ្ឋានរបស់អ្នកស្លាប់**
កន្លែងស្លាប់:		**កាលបរិច្ឆេទនៃការបំពេញបែបបទ (ខែ/ថ្ងៃ/ឆ្នាំ)**
ករណីសង្ខេប៖ (អាចត្រូវបានបិទភ្ជាប់ ប្រសិនបើបានបញ្ចប់ក្នុងអំឡុងពេលកិច្ចប្រជុំមុនៗ)		
កត្តារួមចំណែកដែលអាចកែប្រែបាន ***(រៀបចំនៅក្នុងគំរូការពន្យារពេលបី)***		
ការពន្យារពេលដំបូង៖ ការទទួលស្គាល់ និងការសម្រេចចិត្តស្វែងរកការថែទាំ (ផ្ទះ/គ្រួសារ/សហគមន៍)		
ការពន្យារពេលទីពីរ៖ ការដឹកជញ្ជូនទៅកាន់ការថែទាំ ការពន្យារពេលទៅដល់កន្លែងសមស្របមួយ		
ការពន្យារពេលទីបី៖ គុណភាពនៃការថែទាំដែលទទួលបាននៅក្នុងមណ្ឌលសុខភាពឬមន្ទីរពេទ្យ		

4- Forms for review(Cont.)

ទម្រង់ឆ្លើយតប៖ កត្តាដែលអាចកែប្រែបាន និងការឆ្លើយតបជាអាទិភាពរួម ដើម្បីពន្លឿនការកាត់បន្ថយការស្លាប់របស់មាតា

កត្តារួមចំណែកដែលអាចកែប្រែបាន	ការឆ្លើយតប (អ្វីដែលត្រូវធ្វើ)	អ្នកទទួលខុសត្រូវ (ធានាសកម្មភាពត្រូវបានបំពេញ) បញ្ជាក់ទីកន្លែង ឬស្រុក	កាលបរិច្ឆេទបញ្ចប់គោលដៅ	តាមដានកំណត់ចំណាំដំណើរការ (បានបញ្ចប់/កំពុងបន្ត/ចាជ័យ)

Example for response plan PPH

Case	Modifiable Contributing Factors	Response (What to do)	Responsible person (Ensures completion of response) Specify facility and/or district	Target completion date	Follow up Progress Notes (Completed/ Ongoing/Failed)
	Provider did not know how to manage PPH	Ensure that providers know how to manage uterine atony and other causes of PPH	Head of Training and Human Development	Within in month	Ongoing
		Provide PPH's management protocol			
	No uterotonic for prevention and management of PPH in the Labour ward	Developed a log to track availability of oxytocin	Head of Maternity Ward	Within a week	Ongoing
			All Staff in Maternity Ward		
	Lack of blood	Ensure blood and blood product are always available and stored properly at the facility blood bank	Head of Health Facility	Within a week	Ongoing
	Immediate postpartum prophylactic uterotonic not administered	Ensure all the providers are competent and understand importance of providing active management of the third stage labor	Head of Maternity Ward	Within a week	Ongoing
	Delayed identification of PPH in postnatal ward	Introduce systematic written protocol with assigned staff, to monitor all women for bleeding and other danger signs after birth	Head of Maternity Ward	Within a week	Ongoing

Strategies for Follow-up

- Include review of previous recommendations during each MPDSR committee meeting
- Create a sub-committee to track implementation of recommendations and report back at each MPDSR committee meeting
- Develop a follow-up schedule with one person assigned to check in regularly with persons responsible for recommendations
- Display all recommended responses on a board and have one person responsible for tracking implementation of recommendations

5-ពិធីសារទំនាក់ទំនងថ្នាក់ដឹកនាំពាក់ព័ន្ធថ្នាក់ជាតិ ថ្នាក់ក្រោមជាតិអំពីករណីមរណៈភាពមាតា និងទារកជុំវិញកណើត (SOP–Way of communication with all levels of leaders, national and sub-national)

1- Initiated and validated by the head of MPDSR and implemented by team member of the committee through the message of invitation and action to perform.

2-មធ្យោបាយទំនាក់ទំនងបឋម Telegramដើម្បីជូនដំណឹងនិងអញ្ជើញប្រជុំតាមទំហំនៃបញ្ហា,(Decided by the head of the committee)

3-Leader to be involved at the first line: PHD´s director, first line of the contact.

4-Scenarios of problem and source of the information

* Death case report
* Social media sensitive
* Direct or indirect communication

ពិធីសារទំនាក់ទំនងថ្នាក់ដឹកនាំពាក់ព័ន្ធថ្នាក់ជាតិ ថ្នាក់ក្រោមជាតិអំពីករណីមរណៈភាពមាតា និងទារកជុំវិញកំណើត (SOP –Way of communication with all levels of leaders, national and sub-national)

A- Very urgent case report (Social media sensitive, informed by HM or leader involved……):

Message to be sent to PHD for action:

-ជំរាបមក ឯកឧត្តម លោកជំទាវ ប្រធានមន្ទីរសុខាភិបាល អំពីករណីមរណភាពមាតា ទារក តាមរយៈរបាយការណ៍/FB ថ្ងៃទី……នៅ……

-ដោយបានទទួលព័ត៌មានពីក្រុមការងារអធិការកិច្ចក្រសួង

-ដោយបានទទួលចំណារពី ឯកឧត្តមសាស្ត្រាចារ្យរដ្ឋមន្ត្រីពីការត្រូវពិនិត្យ និងចុះបន្ទាន់

-ដោយមានការឯកភាពឱ្យមានការរៀបចំក្រុមចុះពិនិត្យក្នុងនាមគណកម្មការជាតិ MPDSR របស់លោកជំទាវសាស្ត្រាចារ្យ អ៊ឹម សិទ្ធិការ្យ ប្រធានគណៈកម្មាការ

-ក្រុមការងារថ្នាក់ជាតិដែលមានរាយនាមដូចខាងក្រោមត្រូវបានចាត់ឱ្យចុះបន្ទាន់៖

១)ឯកឧត្តម

២)លោកជំទាវ

៣)វេជ្ជបណ្ឌិត

……

យោងកិច្ចការបន្ទាន់ក្រុមការងារកំពុងរៀបចំចុះទៅពិនិត្យ និងស្រាវជ្រាវស្វែងយល់ស៊ីជម្រៅអំពីករណីខាងលើដោយពុំមានពេលវេលាជូនដំណឹងជាមុន។

អាស្រ័យហេតុនេះសូមឯកឧត្តម លោកជំទាវប្រធានមន្ទីរសុខាភិបាលជូនដំណឹងបន្ទាន់ដល់មូលដ្ឋានសុខាភិបាលពាក់ព័ន្ធ និង ផ្តល់ព័ត៌មានមកគណៈកម្មការជាបន្ទាន និងត្រៀមសហការគ្រប់ពេលវេលា។

ចំណាំ ៖ លេខទំនាក់ទំនងក្រុមការងារ……

ពិធីសារទំនាក់ទំនងថ្នាក់ដឹកនាំពាក់ព័ន្ធថ្នាក់ជាតិ ថ្នាក់ក្រោមជាតិអំពីករណីមរណៈភាពមាតា និងទារកជុំវិញកណើត (SOP –Way of communication with all levels of leaders, national and sub-national)

B- Regular death case report, but missed information and highly inappropriate writing:

-គណកម្មការថ្នាក់ជាតិ ផ្តល់ដំណឹងដល់ PHD តាមរយៈ តេឡេក្រាម ដើម្បីអញ្ជើញអ្នកពាក់ព័ន្ធចូលរួមប្រជុំតាម zoom ជាដំបូង និងពិនិត្យផ្ទាល់ជាមួយគ្នាលើរបាយការណ៍ករណីស្លាប់។

គោលបំណងនៃកិច្ចប្រជុំ គឺពិនិត្យវាយតម្លៃឡើងវិញ និងកំណត់ពេលវេលាសម្រាប់គណកម្មការចុះទៅពិនិត្យផ្ទាល់ដល់ HF.

C- Regular death case report with some information missing:

The National committee informs PHD by telegram message to invite people involved.

The meeting is set to be via zoom and to examine together the death case report.

The objective of the meeting is complete the missed information and together validate again the report.

III- Home message

☞ MPDSR committee at all level must be created.

☞ Action plan /Response plan: base on :

-Modifiable factors finding

-Light Assessment Tool(LAT) for EmONC

☞ Communication for report: National Hospital and PHD must be send maternal and perinatal case of death to National MPDSR committee, as soon as possible.

Thank you