POSTPARTUM HEMORRHAGE

PANELIST:

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Giving birth should be about giving life not giving up a life.

- Every day, approximately 810 women die from preventable causes related to pregnancy and childbirth.
- 99% in developing countries
- MMR ; higher in rural areas and among poorer communities
- Young adolescents face a higher risk of complications and death as a result of pregnancy than other women.

- Between 1990 and 2015, maternal mortality worldwide dropped by about 44%.
- Between 2016 and 2030, as part of the Sustainable Development Goals, the target is to reduce the global maternal mortality ratio to less than 70 per 100 000 live births.

SAVING MOTHERS' LIVES

ABOUT 830 WOMEN DIE EACH DAY
due to complications in pregnancy and childbirth.

This is despite a **44%** reduction in maternal deaths between 1990 and 2015:

NO WOMAN SHOULD DIE IN PREGNANCY AND CHILDBIRTH

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MILLENNIUM DEVELOPMENT GOAL 5A:

REDUCE MATERNAL DEATHS BY 3/4 BETWEEN 1990 AND 2015

Of the 95 countries with high levels of maternal mortality in 1990:

9 Countries Achieved MDG 5A

- Bhutan
- Cabo Verde
- Cambodia
- Iran
- Lao People's Democratic Republic
- Maldives
- Mongolia
- Rwanda
- Timor-Leste

Another 39 countries also made significant progress

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SAVING MOTHERS' LIVES

WHERE IS IT **MOST DANGEROUS** TO HAVE A BABY?

IN FRAGILE SETTINGS — Countries experiencing crisis and conflict - where over **1/2** of all maternal deaths take place.

Lifetime risk of dying in pregnancy and childbirth:

Fragile settings	Developed countries
1 IN 54	1 IN 4900

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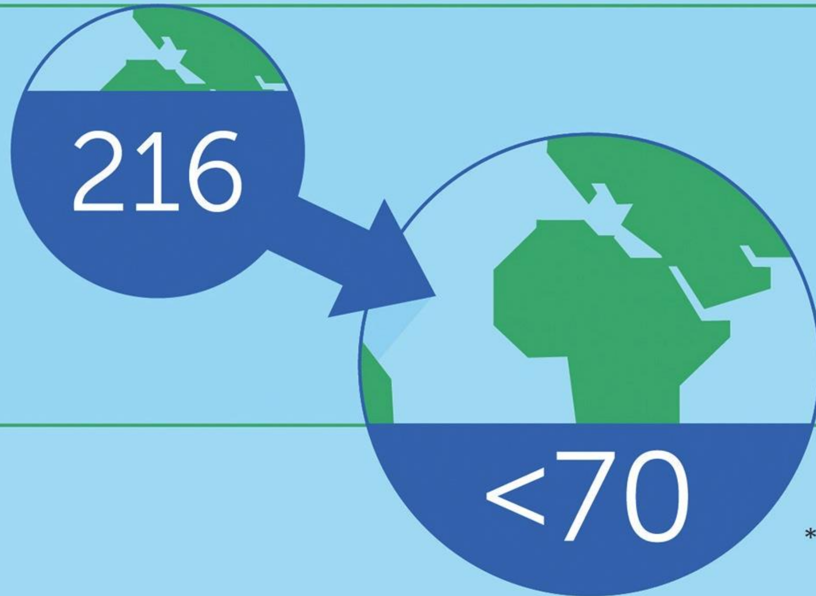
FOR REDUCING MATERNAL DEATHS

216 women died for every 100 000 live births in **2015**



We aim for **<70** deaths for every 100 000 live births by **2030***

*Sustainable Development Goal 3.1

WHAT IS NEEDED?

Political will & commitment

Health & wellbeing: nutrition, education, water sanitation & hygiene

Contraception & safe abortion services

Efforts to **reach everyone, everywhere**

Strong health systems with trained health workers & essential medicines

Improved access to quality care before, during & after childbirth

Accountability: every death must be counted & its cause recorded

NO WOMAN SHOULD DIE IN PREGNANCY AND CHILDBIRTH

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MATERNAL DEATH SURVEILLANCE AND RESPONSE (MDSR)

Country Profile for MDSR Implementation

Demographics*

Iran

Total Population (in thousand)	79109
Total Births (in thousand)	1350
Total Fertility Rate	1.7
Total Maternal Deaths	340

Maternal Mortality Ratio (MMR)
Per 100 000 live births

Year	MMR
1990	123
2000	51
2015	25

National Policy

[illegible]	
National policy to notify all maternal deaths	Yes
Year of adoption	2001
Zero reporting	Yes
Mechanism for reporting maternal deaths	Other Surveillance System (like IDSR - Integrated Disease Surveillance and Response)

Maternal Death Review	
National policy to review all maternal deaths	Yes
Year of adoption	2001
Level of implementation (national/subnational)	Nationally
Involvement of civil society	Yes

Implementation

Existence of a national death review committee	Yes
How often does the national committee meet?	About 2 Months
Production of annual report with recommendations (national)	Yes
Existence of a sub-national committee	Yes
Production of annual report with recommendations (sub-national)	Yes
Community representation in sub-national death review committee	No
Existence of a national MDSR plan	No

Global Estimates of Maternal Deaths

Year	Deaths
1990	532 000
2015	303 000

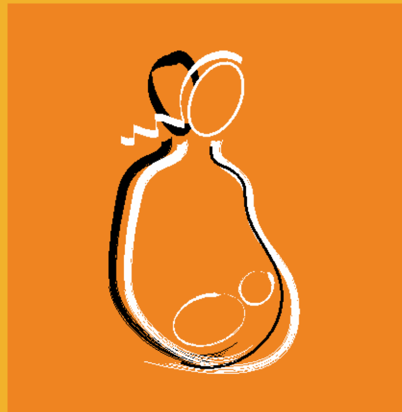
Sources:
United Nations, Department of Economic and Social Affairs, Population Division (2015). World Population Prospects: The 2015 Revision, DVD Edition

World Health

Integrated Management Of Pregnancy And Childbirth

Managing Complications in Pregnancy and Childbirth:

A guide for midwives and doctors



WHO

UNFPA

UNICEF

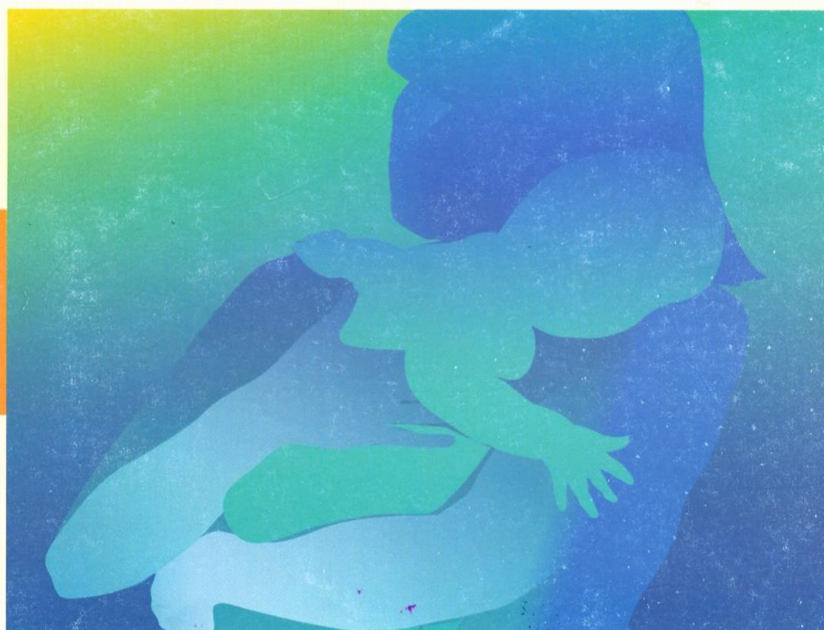
World Bank

Department of Reproductive Health and Research

راهنمای کشوری ارائه خدمات مامائی و زایمان

بیمارستانهای دوستدار مادر

(بازنگری اول)



وزارت بهداشت، درمان و آموزش پزشکی

دفتر سلامت خانواده و جمعیت

اداره سلامت مادران

پروتکل مدیریت خونریزی های مامایی

Obstetric Hemorrhage Management

جهت استفاده متخصصین زنان، بیهوشی و گروه مامایی

وزارت بهداشت، درمان و آموزش پزشکی

دفتر سلامت جمعیت، خانواده و مدارس

اداره سلامت مادران

ویرایش اول ۱۳۹۸

The AWHONN Postpartum Hemorrhage Project

POSTPARTUM HEMORRHAGE (PPH) RISK ASSESSMENT TABLE • 1.0

CLINICIAN GUIDELINES:

- Each box ❑ represents ONE risk factor. Treat patients with 2 or more medium risk factors as high risk.
- Prenatal risk assessment is beyond the scope of this document, however performing a prenatal hemorrhage risk assessment and planning is highly recommended. Early identification and management preparation for patients with special considerations such as placental previa/accreta, bleeding disorder, or those who decline blood products will assist in better outcomes.
- Adjust blood bank orders based on the patient's most recent risk category. When a patient is identified to be at high risk for hemorrhage verify that the blood can be available on the unit within 30 minutes of a medical order.
- Plan appropriately for patient and facility factors that may affect how quickly the blood is delivered to the patient. For example,
  - Patient issues: Pre-existing red cell antibody
  - Facility issues: Any problems at your facility related to the blood supply and obtaining blood

RISK CATEGORY: ADMISSION			
	Low Risk	**Medium Risk** (2 or More Medium Risk Factors Advance Patient to High Risk Status)	**High Risk**
	❑ No previous uterine incision	❑ Induction of labor (with oxytocin) or Cervical ripening	❑ Has 2 or More Medium Risk Factors
	❑ Singleton pregnancy	❑ Multiple gestation	❑ Active bleeding more than "bloody show"
	❑ ≤4 Previous vaginal births	❑ >4 Previous vaginal births	❑ Suspected placenta accreta or percreta
		❑ Prior cesearean birth or prior uterine incision	❑ Placenta previa, low lying placenta
	❑ No known bleeding disorder	❑ Large uterine fibroids	❑ Known coagulopathy
	❑ No history of PPH	❑ History of one previous PPH	❑ History of more than one previous PPH
		❑ Family history in first degree relatives who experienced PPH (known or unknown etiology with possible coagulopathy)	❑ Hematocrit <30 AND other risk factors
		❑ Chorioamnionitis	❑ Platelets <100,000/mm3
		❑ Fetal demise	
		❑ Estimated fetal weight greater than 4 kg	
		❑ Morbid obesity (body mass index [BMI] >35)	
		❑ Polyhydramnios	
Anticipatory Interventions Monitor patient for any change in risk factors at admission and implement anticipatory interventions as indicated.			
❑ **Blood Bank Order:** Change blood bank orders as needed if risk category changes	❑ **Clot Only (Type and Hold)**	❑ **Obtain Type and Screen**	❑ **Obtain Type and Cross (See Clinical Guidelines)**
		❑ Notify appropriate personnel such as the Provider (OB MD/CNM), Anesthesia, Blood Bank, Charge Nurse, Clinical Nurse Specialist	❑ Notify appropriate personnel such as the Provider (OB MD/CNM), Anesthesia, Blood Bank, Charge Nurse, Clinical Nurse Specialist
			❑ Consider delivering at a facility with the appropriate level of care capable of managing a high risk mother

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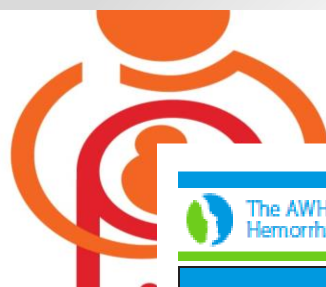
POSTPARTUM HEMORRHAGE (PPH) RISK ASSESSMENT TABLE • 1.0

RISK CATEGORY: PRE-BIRTH
(Approximately 30 to 60 minutes prior to giving birth)

	Low Risk	Medium Risk (2 or More Medium Risk Factors Advance Patient to High Risk Status)	High Risk
	INCLUDE **ADMISSION** LOW RISK FACTORS	INCLUDE **ADMISSION** MEDIUM RISK FACTORS	INCLUDE **ADMISSION** HIGH RISK FACTORS
		❑ Labor greater than 18 hours	❑ Has 2 or more medium risk factors
		❑ Temperature greater than 100.4°F	❑ Active bleeding more than "bloody show"
		❑ Augmentation of labor (with oxytocin)	❑ Suspected abruption
		❑ Magnesium sulfate	
		❑ Prolonged second stage (>2 hours)	
Anticipatory Interventions: Monitor patient for any change in risk factors during labor and implement anticipatory interventions as indicated.			
❑ **Blood Bank Order:** Change blood bank orders as needed if risk category changes	❑ **Clot Only (Type and Hold)**	❑ **Confirm Type and Screen**	❑ **Confirm Type and Cross (See Clinical Guidelines)**
	❑ Ensure the availability of calibrated drapes, scales to weigh and measure blood loss for every birth	❑ Review the hemorrhage protocol	❑ Review the hemorrhage protocol
		❑ Review lab work, e.g., platelets (PLTs), hemoglobin (Hgb)	❑ Review lab work, e.g., PLTs, Hgb
		❑ Notify the Provider and Charge Nurse	❑ Notify the Provider and the Charge Nurse
		❑ Initiate and/or maintain IV access	❑ Insertion of a second large bore IV is optional
		❑ Confirm availability of Anesthesia Provider	❑ Notify Anesthesia Provider to come to the unit
		❑ Ensure uterotonics (oxytocin, Methergine, Hemabate, misoprostol) and supplies for administration (such as syringes, needles, alcohol swabs) are immediately available	❑ Check and ensure uterotonics (oxytocin, Methergine, Hemabate, misoprostol) and supplies for administration (such as syringes, needles, alcohol swabs) are immediately available
		❑ Ensure that the hemorrhage supplies are near the patient's room	❑ Bring the hemorrhage supplies to the bedside
		❑ Transfer from a birthing center to an intrapartum unit	❑ Ensure operating room (OR) and staff available
		❑ Ensure the availability of calibrated drapes, scales to weigh and measure blood loss with every birth	❑ Ensure the availability of calibrated drapes, scales and other equipment to measure and weigh blood loss with every birth



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POSTPARTUM HEMORRHAGE (PPH) RISK ASSESSMENT TABLE • 1.0

RISK CATEGORY: POST-BIRTH
(Within 60 minutes after birth)

	Low Risk	Medium Risk (2 or More Medium Risk Factors Advance Patient to High Risk Status)	High Risk
	INCLUDE **ADMISSION AND PRE-BIRTH** LOW RISK FACTORS	INCLUDE **ADMISSION AND PRE-BIRTH** MEDIUM RISK FACTORS	INCLUDE **ADMISSION AND PRE-BIRTH** HIGH RISK FACTORS
	❑ No known bleeding disorder	❑ Large uterine fibroids	❑ Has 2 or more medium risk factors
	❑ No previous uterine incision	❑ Operative vaginal delivery	❑ Active bleeding
	❑ No history of PPH	❑ 3rd or 4th degree perineal laceration	❑ Difficult placental extraction
		❑ Vaginal or cervical laceration and/or mediolateral episiotomy	❑ Concealed abruption
		❑ Cesarean birth	❑ Uterine inversion
		❑ Precipitous delivery	
		❑ Shoulder dystocia	

Anticipatory Interventions

Continue to monitor patient for any change in risk factors after birth and implement anticipatory interventions as indicated.

❑ **Blood Bank Order:** Change blood bank orders as needed if risk category changes	❑ **Clot Only (Type and Hold)**	❑ **Confirm Type and Screen**	❑ **Confirm Type and Cross (See Clinical Guidelines)** ❑ Notify the blood bank
	❑ Utilize scales and calibrated equipment to weigh and measure maternal blood loss for every birth	❑ Review your hemorrhage protocol	❑ Review your hemorrhage protocol
		❑ Notify the Provider and the Charge Nurse	❑ Notify the Provider, Charge Nurse and obtain additional nursing personnel
		❑ Heightened postpartum assessment surveillance	❑ Heightened postpartum assessment surveillance
		❑ Utilize scales and calibrated equipment to quantify cumulative maternal blood loss for every birth	❑ Utilize scales and calibrated equipment to quantify cumulative maternal blood loss for every birth
		❑ Maintain IV access	❑ Insertion of a second large bore IV is optional
		❑ Confirm availability of Anesthesia Provider	❑ Notify Anesthesia Provider to come to the unit
		❑ Ensure immediate availability of uterotonics (oxytocin, Methergine, Hemabate, misoprostol)	❑ Check and ensure immediate availability of uterotonics (oxytocin, Methergine, Hemabate, misoprostol,) and supplies for administration (such as syringes, needles, alcohol swabs)
		❑ Ensure the hemorrhage cart with supplies is near the patient's room	❑ Bring hemorrhage cart with supplies to the bedside
		❑ Ensure OR and staff available	❑ Consider notifying team to prepare the OR
			❑ Consider notifying Interventional Radiology if available in facility

A Peri pad - 100cc

B Peri pad - 300cc

C Tail sponge - 30cc

D Bed pad - 250cc

E Full kidney basin - 500cc

F 1000cc

G Chux pad - 50cc

H Chux pad - 200cc

پویش قدردانی از کادر پزشکی و
سیمرغ سپید سپاس

Risk assessment (during pregnancy / before delivery)

Diagnose the amount of bleeding according to the symptoms

Classification of bleeding severity	Stage1	Stage2	Stage3	Stage4
amount of blood lost(ml)	<1000	1000-1500	1500-2000	**>2000**
Heart rate	<100	100-119	120-140	**>140**
blood pressure	normal	normal ,orthostatic	Decrease	**Decrease**
Pulse pressure	normal	Decrease	Decrease	**Decrease**
Respiratory Rate	Normal(14-20)	20-30	30-40	**>35**
Urinary output(ml/hr)	Normal(30-50)	20-30	5-15	**Anuria / Very minor**
consciousness	A little anxious	Anxious	Confused	**Confused& Lethargic**
Compensation replacement fluid required	Crystalloid	Crystalloid	Crystalloids and blood	**Crystalloids and blood**

- ✓COMMUNICATE
- ✓CALL FOR HELP
- ✓RESUSCITATE
- ✓ MONITOR / INVESTIGATE
- ✓STOP THE BLEEDIN
- ✓ 2 Large bore IV Line
- ✓ Oxygenation
- ✓ Prepare blood
- ✓ Full blood count
- ✓ Clotting screen
- ✓ Continuous pulse / BP monitoring
- ✓ Foley catheter
- ✓ CVP monitoring
- ✓ Discuss transfer to ITU

Lack of appropriate communication
Lack of multi-disciplinary management
Underestimating the problem
Delay to VISIT
Delay in making decision & doing intervention
Delay in transfer or transferring in inappropriate condition (unstable)
Lack of quality control

- PPH in C/S no response to medical therapy:

  Compression sutures

- Retroperitoneal hemorrhage after delivery and rupture of uterus:

  Hypogastric ligation

- Uncotrolled bleeding in C/S in case of Placenta previa:

  Hemostatic stitches

- Tranexamic acid :

  Equal effect in PPH after NVD and C/S

  Not recommended as prophylaxy

  Decreases laparotomy rate

  Decreases maternal mortality

- Medical management of PPH:
  - Misoprostol: Pyrexia
  - Methyl ergonovin contraindicated in asthma
  - Misoprostol is more effective
- Misoprostol:

The best way is sublingual

❖ Bimanual massage:

- One of main steps in atony
- One hand in anterior fornix
- One hand on fundus
- Continue utertonic agents

❖ Intrauterine balloon:

- Be sure about retained placenta
- Empty bladder

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- P Previa with bleeding

- Discharge the patient at least 48 hrs after stopped bleenig completely
- Couvelaire uterus :
- If there is no excessive bleeding , no need for any extra intervention

- Morbid adherent placenta :
C/S after 34 weeks

- Vulvovaginal hematoma:
Conservative management in mild to moderate cases without more bleeding

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