



PENCEGAHAN PERSALINAN PRETERM

Deviana Soraya Riu
Divisi Fetomaternal OBGIN
FKUH

BORN TOO SOON



- WHO : Kelahiran bayi sebelum usia kehamilan 37 minggu atau 259 hari sejak hari pertama haid terakhir ($\leq 36^{6/7}$ minggu)

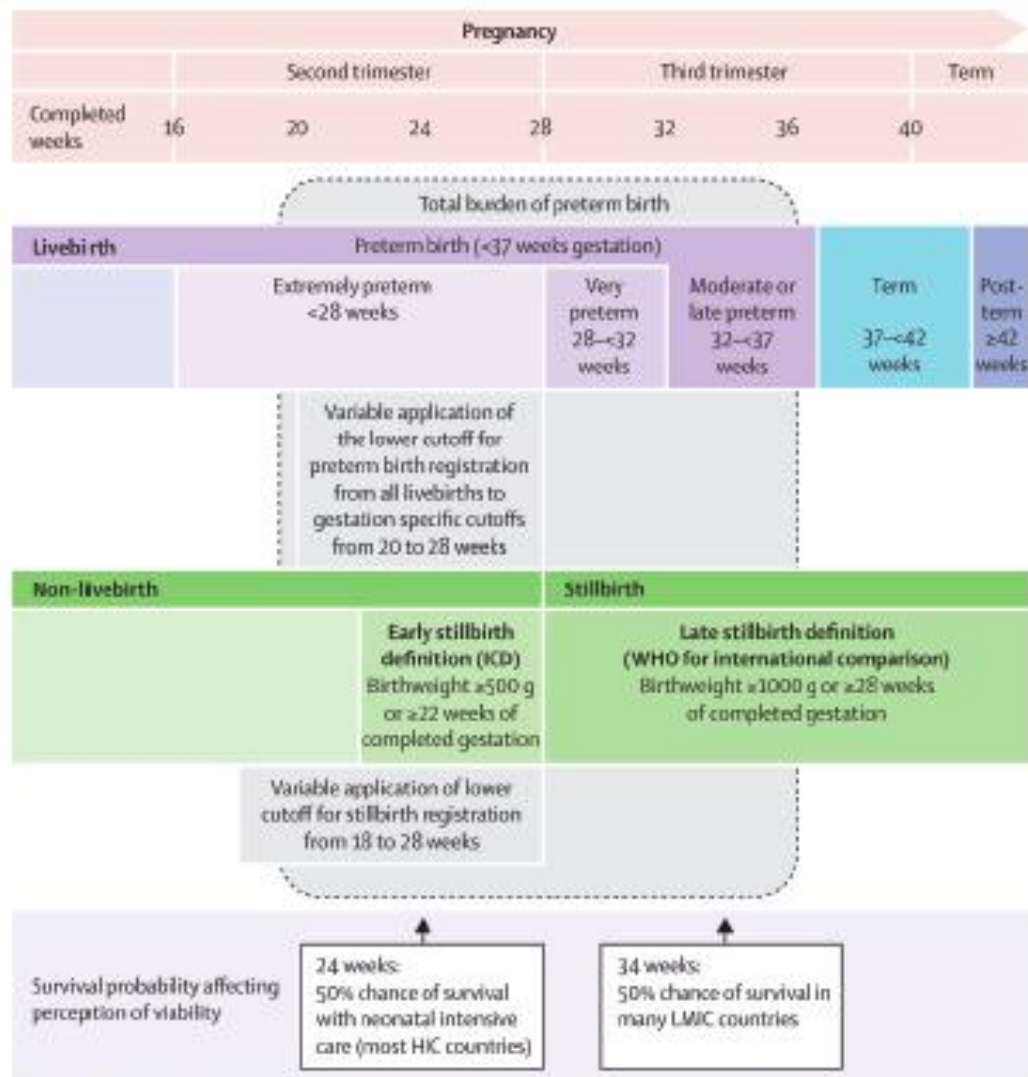
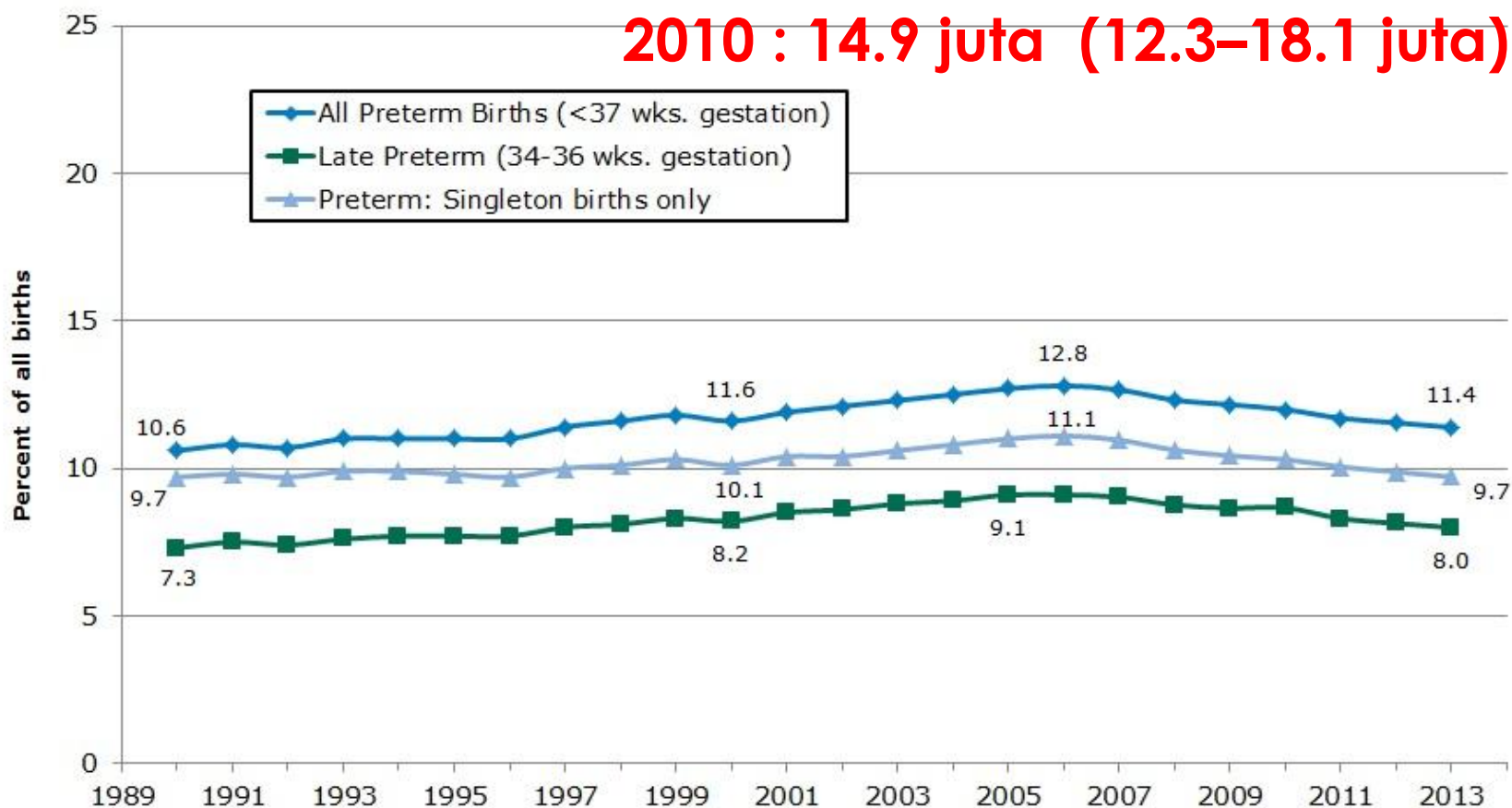


Figure 2. Overview of definitions for preterm birth and related pregnancy outcomes. Source: Reproduced with permission from Blencowe et al. (2012) National, regional and worldwide estimates of preterm birth rates in the year 2010 with time trends since 1990 for selected countries: a systematic analysis and implications. *Lancet* 379(9832): 2162-2172.

Figure 1

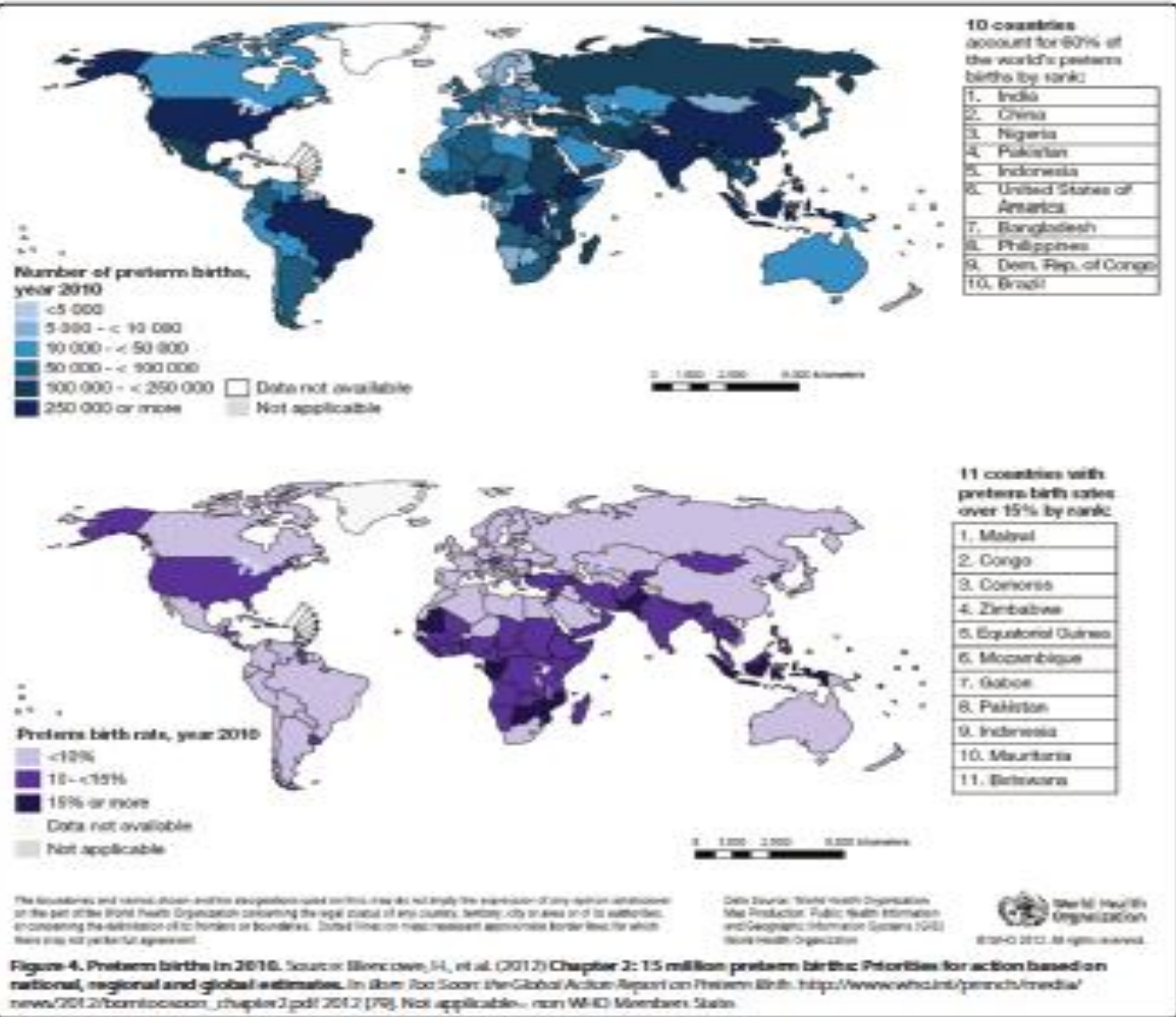
All Preterm and Late Preterm Births, as Percentage of All Births, 1990-2013

2010 : 14.9 juta (12.3–18.1 juta)



Note: Percentage calculations exclude records missing gestation period data.

Data for 1990-1995: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System. *VitalStats* online tool. Available at www.cdc.gov/nchs/data_access/vitalstats/VitalStats_Births.htm. Data for 1995-2013: Centers for Disease Control and Prevention, National Center for Health Statistics, CDC Wonder online database. Available at: <http://wonder.cdc.gov/nativity.html>



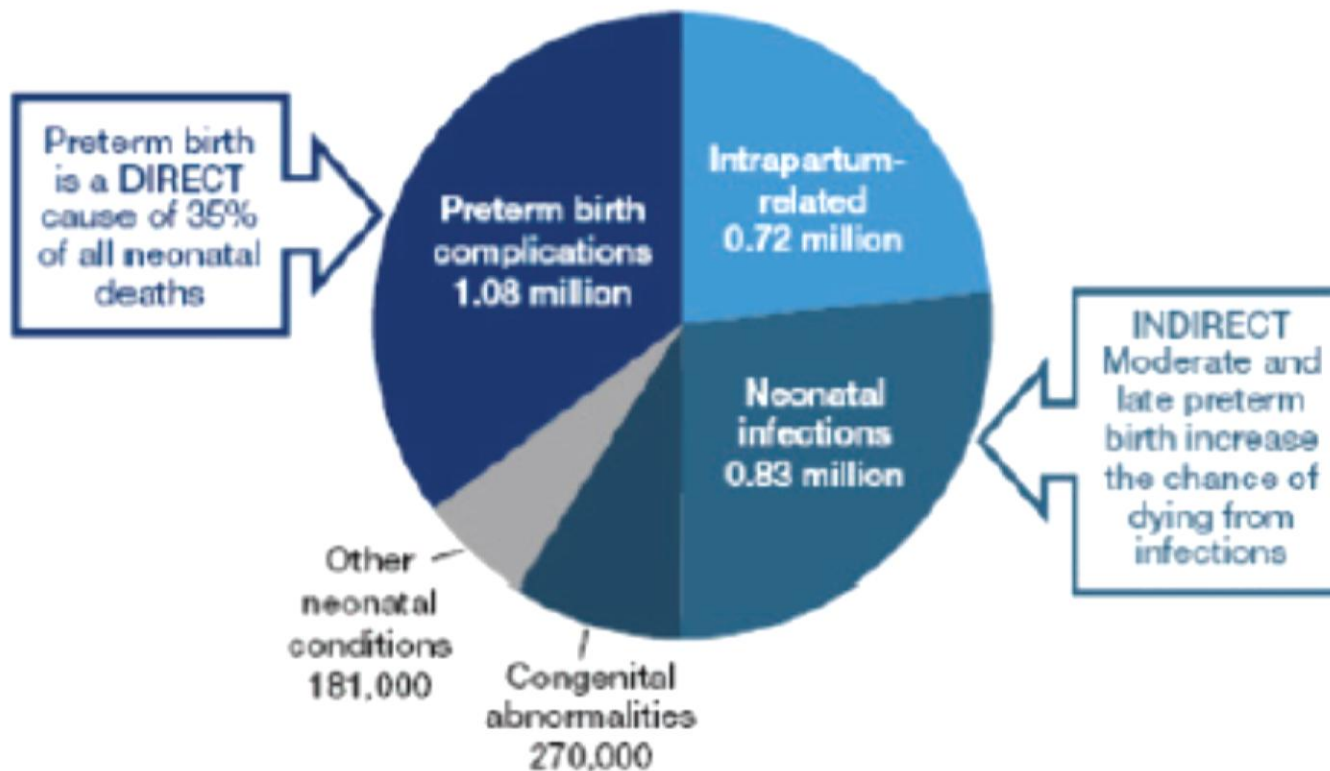
Prevalensi persalinan preterm di Indonesia

The ten countries with the highest numbers of preterm births in 2010

	Rank for number of preterm births	Number of preterm births (% of global total)	Preterm birth rate (% of livebirths)	Number of livebirths (% of global total)
India	1	3 519 118 (23.6%)	13.0%	27 200 000 (20.1%)
China	2	1 172 259 (7.8%)	7.1%	16 600 000 (12.3%)
Nigeria	3	773 597 (5.2%)	12.2%	6 332 251 (4.7%)
Pakistan	4	748 142 (5.0%)	15.8%	4 741 460 (3.5%)
Indonesia	5	675 744 (4.5%)	15.5%	4 371 818 (3.2%)
USA	6	517 443 (3.5%)	12.0%	4 300 620 (3.2%)
Bangladesh	7	424 144 (2.8%)	14.0%	3 037 652 (2.3%)
Philippines	8	348 871 (2.3%)	14.9%	2 344 154 (1.7%)
Democratic Republic of Congo	9	341 421 (2.3%)	11.9%	2 872 606 (2.1%)
Brazil	10	279 256 (1.9%)	9.2%	3 022 823 (2.2%)
Total	..	8.8 million (59%)	..	74.8 million (55%)

National, regional, and worldwide estimates of preterm birth rates in the year 2010 with time trends since 1990 for selected countries: a systematic analysis and implications

Hannah Blencowe, Simon Cousens, Mikkel Z Oestergaard, Doris Chou, Ann-Beth Moller, Rajesh Narwal, Alma Adler, Claudia Vera Garcia, Sarah Rohde, Lale Say, and Joy E Lawn Lancet, The, 2012-06-09, Volume 379, Issue 9832, Pages 2162-2172



Preterm birth is a risk factor for neonatal and postneonatal deaths
At least 50% of all neonatal deaths are preterm

Figure 1. Estimated distribution of causes of 3.1 million neonatal deaths in 193 countries in 2010. Source: Updated from Lawn et al., 2005, using data from 2010 published in Liu L, et al., 2012.

KOMPLIKASI

ORGAN	JANGKA PENDEK	JANGKA PANJANG
Paru-paru	RDS, displasia bronkopulmonary, apnu	Displasia bronkopulmonary, asma, trentan terhadap gangguan pernapasan
Gastrointestinal, nutrisi, sistem imun	Hiperbilirubin, gangguan pencernaan, NEC, defisiensi imun, infkesi perinatal	Gangguan perkembangan, short-bowel syndrome, kolestasis, infeksi virus pada jaringan paru bronkiolitis
Sistem saraf pusat,	IVH, periventrikuler leukomalacia, hidrosefalus	Cerebral palsy, hidrosefalus, atrofi serebral, neurodevelopmental delay, , tuli

ORGAN	JANGKA PENDEK	JANGKA PANJANG
Mata	Retinopati	Buta, ablasio retina, miopia, strabismus
kardiovaskuler	Hipotensi, PDA, hipertensi pulmoner	Hipertensi pulmoner, hipertensi saat dewasa
Ginjal	Gangguan keseimbangan cairan dan elektrolit, gangguan keseimbangan asam-basa	hipertensi
Hematologi	Anemia, transfusi darah	
Endokrin	Hipoglikemia, kadar tiroksin rendah, defisiensi kortisol	Regulasi glukosa terganggu, resistensi insulin meningkat

Persalinan preterm berdampak pada bidang ekonomi

The High Cost of Preterm Birth

- Estimated annual societal economic burden in the United States

>\$26.2 billion = \$51,600 for every infant born preterm

- Average hospital length of stay

Term infant	1.5 days
Preterm infant	13 days

- Average first-year medical costs, including both inpatient and outpatient care

Term infant	\$3325
Preterm infant	\$31,572

IOM. Preterm Birth: Causes, Consequences, and Prevention. 2006. Available at:
<http://www.iom.edu/CMS/3740/25471/35813.aspx>.

<http://www.obgyn.net/pretermbirth/ffn/presentations/Roman/player.html>

ETIOLOGI

PENYEBAB
TERSERING



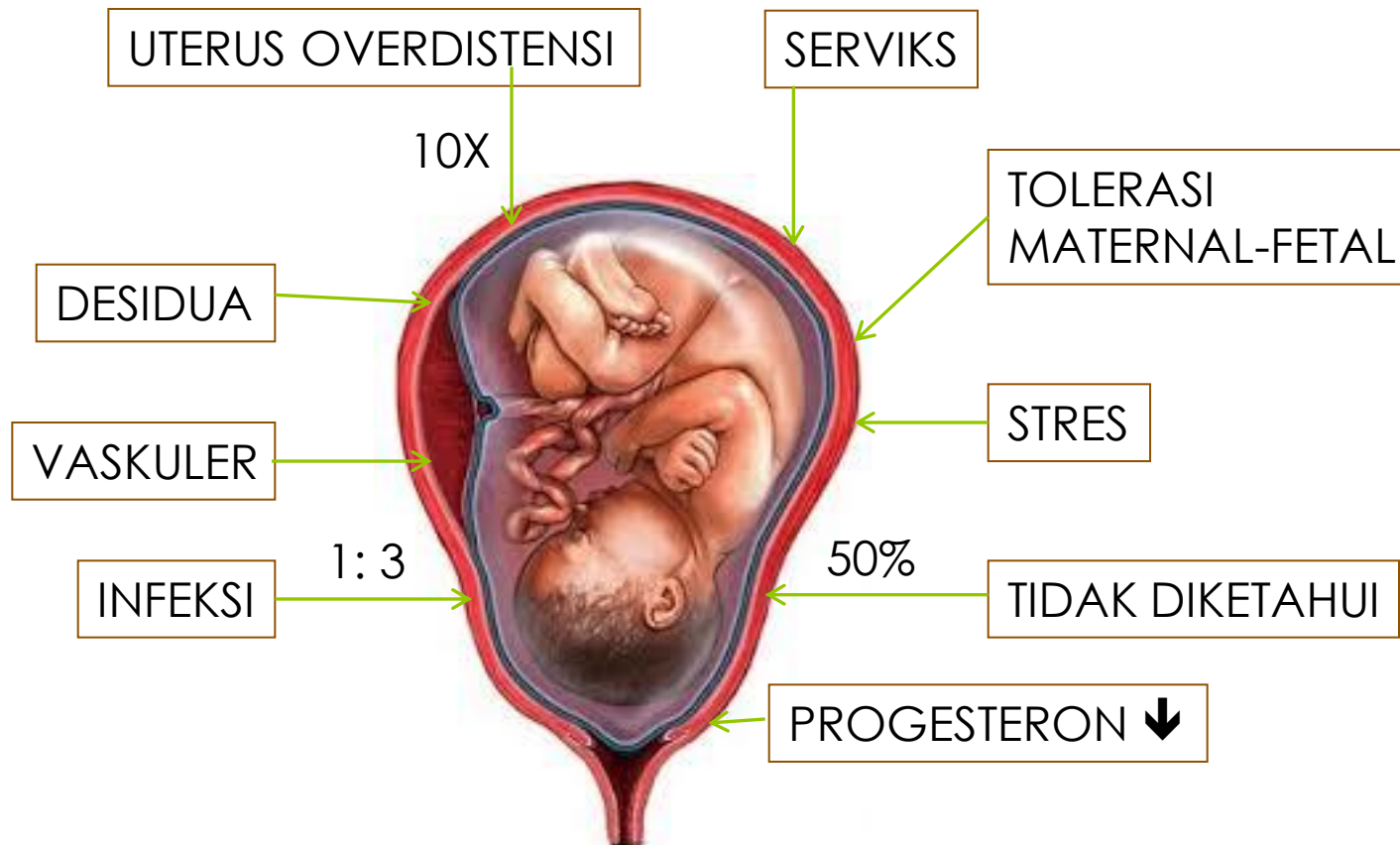
SPONTAN : 40 – 45%

KPD : 30 – 35%

IATROGENIK 30-35%

KEMBAR

ETIOLOGI



SPONTAN → MULTIFAKTOR

Preterm Labor: One Syndrome, Many Causes. Roberto Romero, Sudhansu K. Dey, and Susan J. Fisher Science. 2014 August 15; 345(6198): 760–765. doi:10.1126/science.1251816

INFEKSI ASENDEREN

:

- ISK
- Vaginosis bakteri
- Malaria
- HIV
- PMS

PERIODONTAL
DISEASE

INFEKSI

- Preeklampsia berat, hipertensi dalam kehamilan
- Solusio plasenta
- Plasenta previa
- Gawat janin
- Pertumbuhan janin terhambat
- Kelainan ginjal pada ibu
- Obesitas
- Diabetes
- Malformasi janin

IATROGENIK

- Pola hidup : Malnutrisi dan gizi buruk, merokok (OR 1.7, 95% CI 1.3–2.2), pekerja berat, infeksi gigi dan gusi
- Jarak kehamilan terlalu dekat atau terlalu jauh (<18 bulan dan > 59 bulan)
- Sosioekonomi (pendidikan rendah (OR 1.75, 95% CI 1.65–1.86)
- Riwayat preterm atau keguguran (OR 3.412, 95% CI 1.342–8. 676)
- Malformasi uterus

FAKTOR RISIKO

TERAPI

- PEMBERIAN TOKOLITIK
- KORTIKOSTEROID UNTUK PEMATANGAN PARU
- ANTIBIOTIK UNTUK INFEKSI
- BATASI AKTIVITAS FISIK

PRENATAL CARE

- Identifikasi faktor risiko
- Pemantauan yang lebih ketat pada ibu hamil yang berisiko
 - Support keluarga
 - Home visit
 - Edukasi
 - Menurunkan risiko preterm 19%

- Berhenti merokok (OR 0.84, 95% CI 0.72–0.98)
- Konsul gizi untuk ibu dengan berat badan kurang ataupun obesitas
- Dianjurkan untuk mengurangi beban kerja atau menghentikan sementara untuk mengurangi risiko persalinan preterm
- Promosi pemberian ASI dan perpanjangan interval antara konsepsi.
- Pemberian kortikosteroid pada ibu dengan ancaman persalinan preterm

Bakteriuri asimptomatik :

- Skrining & terapi untuk mencegah pielonefritis
- Menurunkan risiko preterm

Vaginosis bakteri :

- Skrining & terapi tidak bermanfaat untuk mencegah preterm pada kelompok risiko rendah

SKRINING INFEKSI

- Goldenberg dkk (2006) : pemberian regimen antimikroba tidak mengurangi risiko persalinan preterm
- Pemberian antibiotik untuk BV dan Tricomonas vaginalis untuk mencegah persalinan preterm pada wanita asimtomatik tidak bermanfaat
- Lamont dkk : pemberian klindamisin sebelum usia kehamilan 22 mgg pada wanita dengan flora vagina abnormal menurunkan risiko persalinan preterm

ANTIBIOTIK



Faktor host &
lingkungan

DETEKSI

DINI

SKRINING



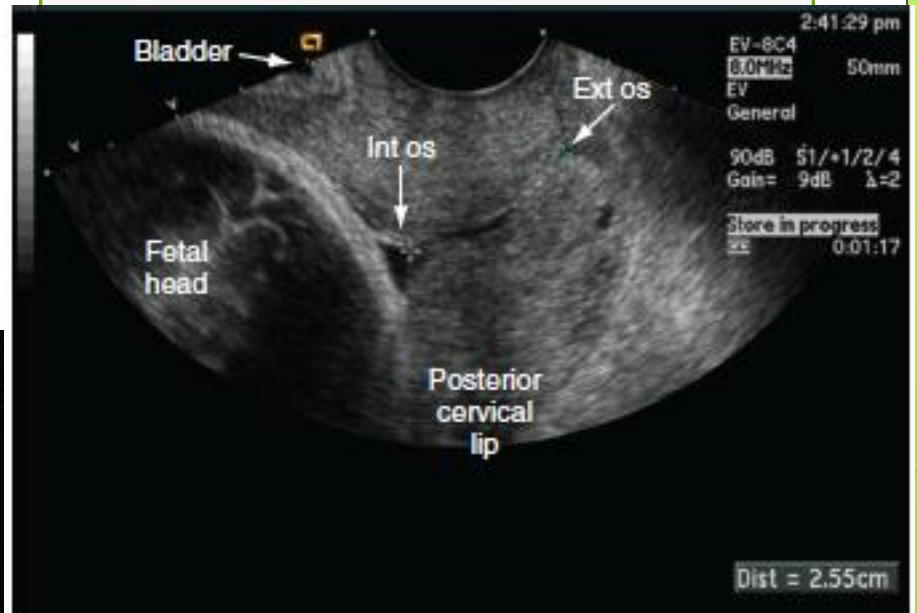
RIWAYAT
PERSALINAN PRETERM

PANJANG SERVIKS
< 25 MM DI TM II

Fibronectin : tidak dianjurkan untuk skrining (ACOG)

Skrining untung vaginosis bakteri tidak berperan dalam menurunkan risiko persalinan preterm baik pada kelompok risiko rendah maupun risiko tinggi

MENGUKUR PANJANG SERVIKS



- Posisi serviks
- Konsistensi
- Penipisan serviks
- Dilatasi



Bishop Score
 ≥ 4
= *pematangan serviks*

**PEMERIKSAAN
DIGITAL**



Pemberian suplemen progesteron sejak
16 - 24 minggu sampai | 34 - 37 minggu

- MIKRONUTRIENT :

- ASAM FOLAT

- OMEGA-3 LONG CHAIN POLYUNSATURATED
FATTY ACID DHA

- PROBIOTIK : MICROBIOTA VAGINA ≈
INFEKSI SUBKLINIK

KESIMPULA

N

- Meningkatkan kesadaran masyarakat yang masih rendah akan pentingnya pencegahan kelahiran preterm sebagai penyebab utama kematian bayi
- Meningkatkan kesehatan ibu, terutama menghindari faktor risiko sebelum maupun selama kehamilan
- Identifikasi ibu hamil yang memiliki risiko untuk melahirkan preterm



A four-day reduction in hospital stay, multiplied by the number of preemies born each year, would result in a \$2.4 billion annual cost savings for the national healthcare system.



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Terima Kasih