Implementing the expanded data model

Euro-Peristat Meeting, 28 March, Rolduc, The Netherlands

New variables on maternal health considered for inclusion

1. Maternal risk factors:

- Body mass index before pregnancy

- Smoking during pregnancy

- Mother's country of birth

2. Maternal morbidities:

- Hysterectomy/embolization associated to obstetric haemorrhage;

- Red blood cells transfusion associated to obstetric haemorrhage;

- Diabetes in pregnancy (pre-existing or gestational);

- Preeclampsia/eclampsia

3. Healthcare services and utilization:

- Women admitted to intensive care unit;

- Length of postpartum stay;

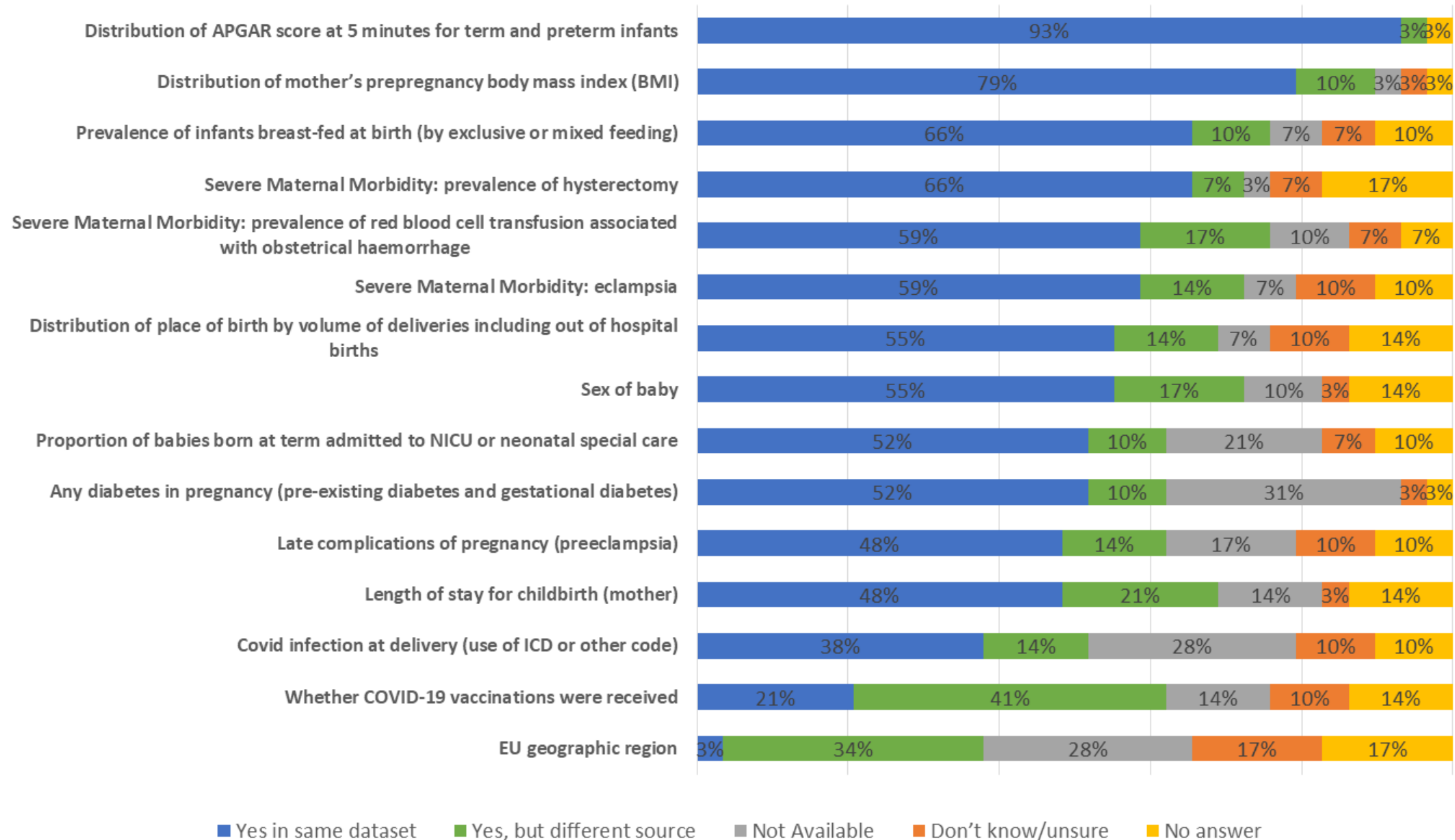- Volume of deliveries of the birth place

Items for the discussion

- Feasibility of data collection for the new indicators

- Development and validation of comparable operational definitions for the new indicators

- Observation period for maternal morbidities indicators (during pregnancy, delivery or up to 42 days postnatal?)

- Validation of the estimated maternal morbidity prevalence through population-based studies?

- Possible collaboration with the INOSS network?

Feasibility of data collection according to Euro Peristat Delphi process

	Yes in same dataset	Yes, but different source	Not Available	Don't know/unsure	No answer
Distribution of APGAR score at 5 minutes for term and preterm infants	93%			3%	3%
Distribution of mother's prepregnancy body mass index (BMI)	79%	10%		3% 3%	3%
Prevalence of infants breast-fed at birth (by exclusive or mixed feeding)	66%	10%	7%	7%	10%
Severe Maternal Morbidity: prevalence of hysterectomy	66%	7%	3%	7%	17%
Severe Maternal Morbidity: prevalence of red blood cell transfusion associated with obstetrical haemorrhage	59%	17%	10%	7%	7%
Severe Maternal Morbidity: eclampsia	59%	14%	7%	10%	10%
Distribution of place of birth by volume of deliveries including out of hospital births	55%	14%	7%	10%	14%
Sex of baby	55%	17%	10%	3%	14%
Proportion of babies born at term admitted to NICU or neonatal special care	52%	10%	21%	7%	10%
Any diabetes in pregnancy (pre-existing diabetes and gestational diabetes)	52%	10%	31%	3%	3%
Late complications of pregnancy (preeclampsia)	48%	14%	17%	10%	10%
Length of stay for childbirth (mother)	48%	21%	14%	3%	14%
Covid infection at delivery (use of ICD or other code)	38%	14%	28%	10%	10%
Whether COVID-19 vaccinations were received	21%	41%	14%	10%	14%
EU geographic region	3%	34%	28%	17%	17%

Feasibility of data collection through European hospital discharge databases

2.826.868 deliveries in 8 European countries (Finland, France, Italy, Portugal, Switzerland, England, Scotland and Wales)

Selected SAMM indicators:

- Eclampsia - over reporting for most countries
- Septicaemia - wide variations across countries, possibly due to different case definition
- Hysterectomy associated with obstetric haemorrhage – rates confirmed by ad hoc population based studies
- RBC transfusion associated with obstetric haemorrhage - lack of information on number of RBC units transfused

ICU admission was not included in the list due to difference in transfer and organisation of care
Among countries

Chantry AA, Berrut S, Donati S, Gissler M, Goldacre R, Knight M, Maraschini A, Monteath K, Morris A, Teixeira C, Wood R, Zeitlin J, Deneux-Tharaux C. Monitoring severe acute maternal morbidity across Europe: A feasibility study. Paediatr Perinat Epidemiol. 2020 Jul;34(4):416-426

The INOSS network

The International Network of Obstetric Survey Systems (INOSS) is a multi-country collaboration formed to facilitate studies of uncommon and severe complications of pregnancy and childbirth.

The use of uniform case definitions, common datasets, specifically collected detailed data and prospectively agreed comparative and combined analyses all add to the validity of studies and their utility to guide policy and clinical practice and hence improve the quality of care.

Knight M; INOSS. The International Network of Obstetric Survey Systems (INOSS): benefits of multi-country studies of severe and uncommon maternal morbidities. Acta Obstet Gynecol Scand. 2014 Feb;93(2):127-31.