Can we reduce stillbirths in Sweden?

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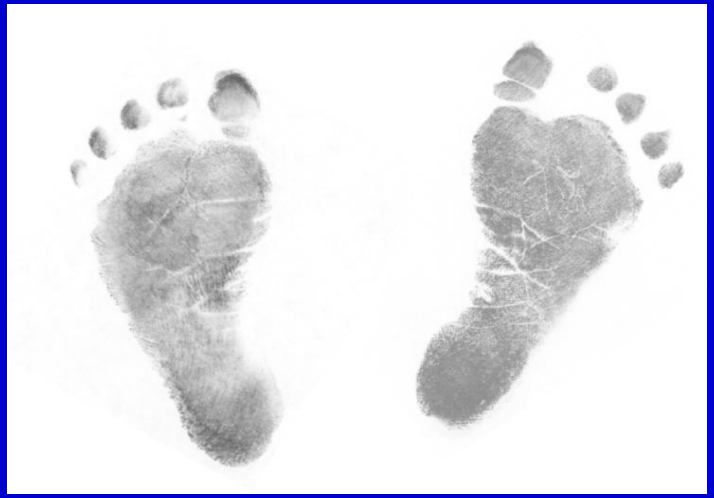
No conflict of interest



Stillbirth in Sweden

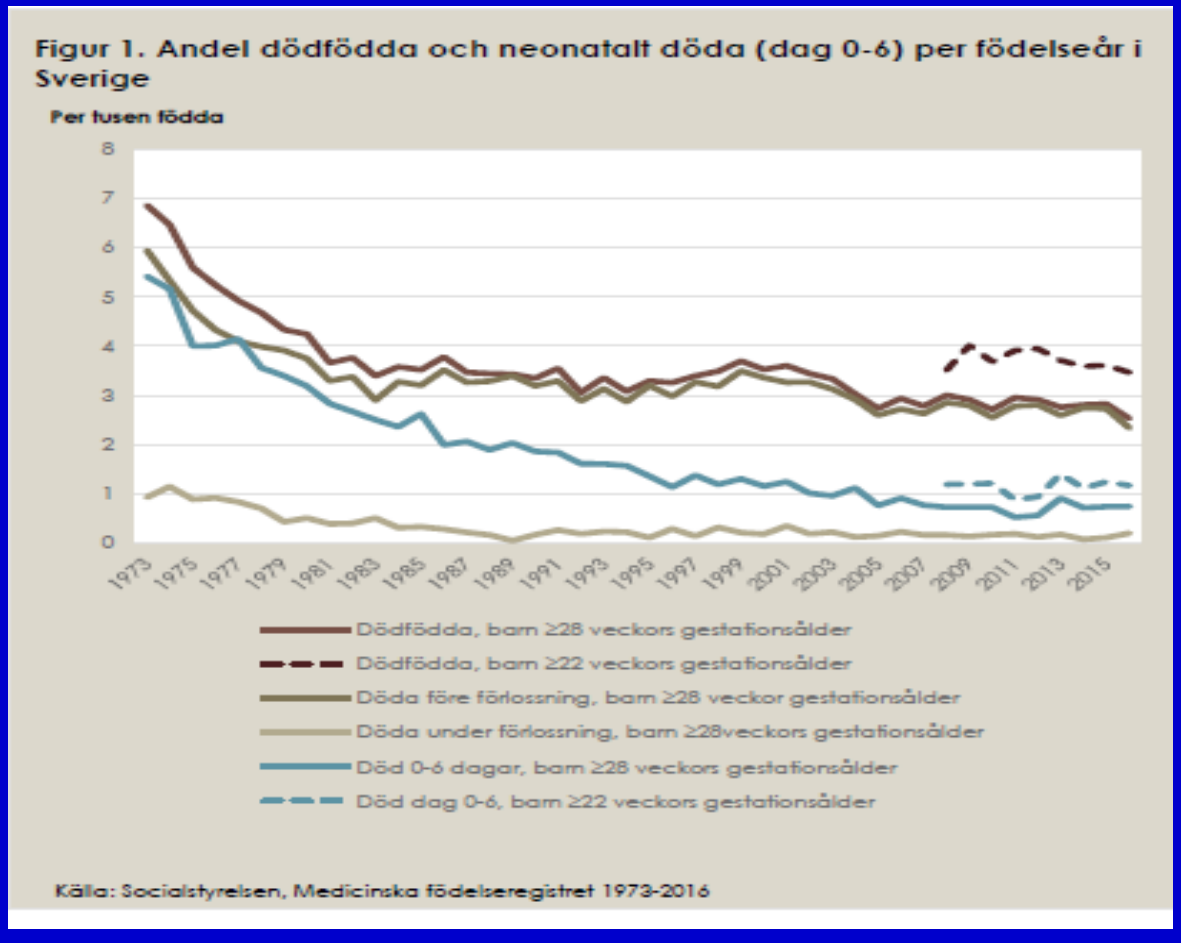
Definition since 2008-07-01; Ante- or intrapartal death from 22+0

Incidence in Sweden approx 400 children/year

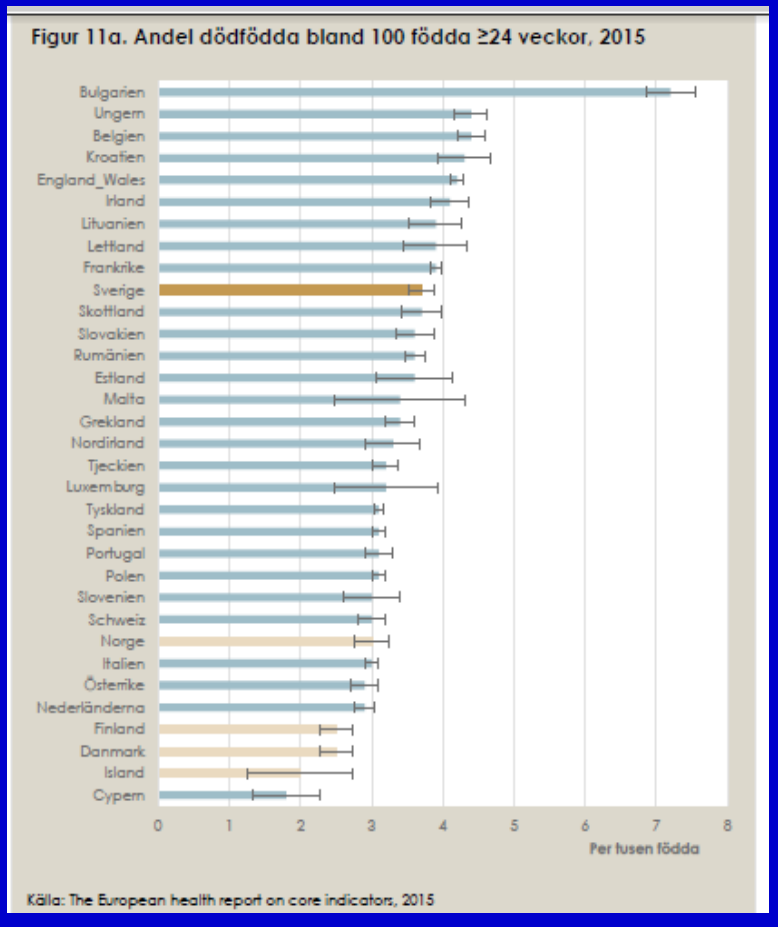
Variation in examination protocol

Variation in classification

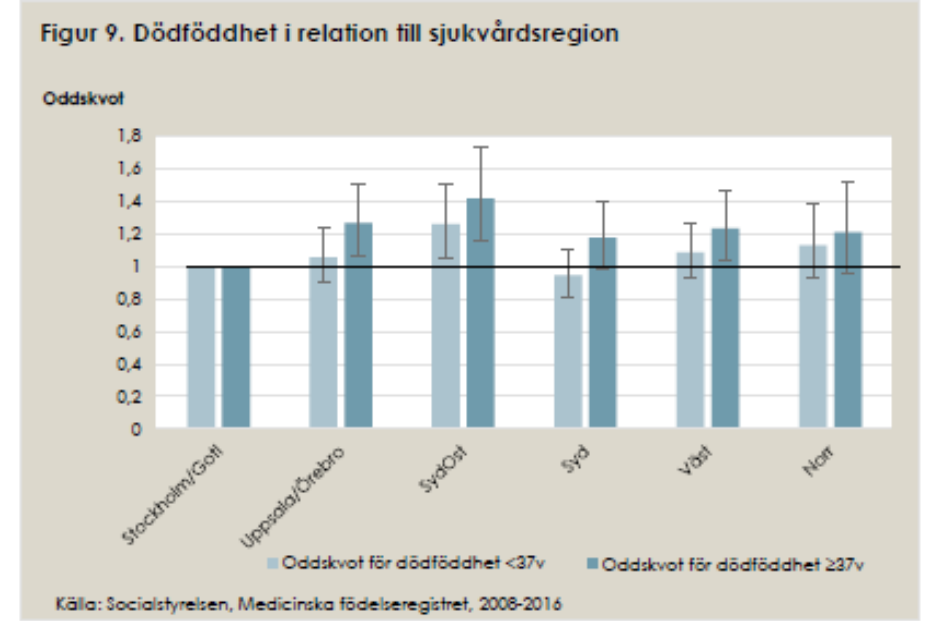
Stillbirth and neonatal death 1973-2016



Stillbirth gw ≥ 24 in Europe 2015



Regional differences in Sweden (adjusted for risk factors)



Maternal risk factors

High maternal age

Primiparity

Tobacco use

Low socio-economic status, ethnicity

High BMI

Previous IUFD, previous SGA/IUGR

Some maternal diseases

Causes of fetal death

Congenital malformation/chromosomal abnormality

Placental abruption

Intrauterine growth retardation/placental insufficiency

Infection

Umbilical cord complication

Twin to twin transfusion

Maternal disorder (coagulation disorder, preeclampsia, diabetes, intrahepatic cholestasis)

Trauma

The IUFD-group in Stockholm

All cases of fetal death (From gest w 22+0) are examined according to an extensive protocol

Test results as well as data from the antenatal records and delivery records was collected in a database until 2015 (iufd.se). The Swedish pregnancy register is used since 2016 (graviditetsregistret.se).

All fetal deaths are reviewed by a group of obstetricians and a perinatal pathologist and a cause of death is assigned by the group by using The Stockholm classification of stillbirth (Acta Obstet Gynecol Scand. 2008;87(11):1202-12.)

Protocol

(Routine investigations performed in all patients with stillbirth)

1. Coagulation disorders
2. Viral and bacterial infections
3. Chromosomal abnormalities
4. Fetal hemoglobin in mothers blood
5. Aminoacids and bile acids
6. Placental examination
7. Autopsy

Stillbirth in Stockholm 1998-2018, n=2469

92 % simplex

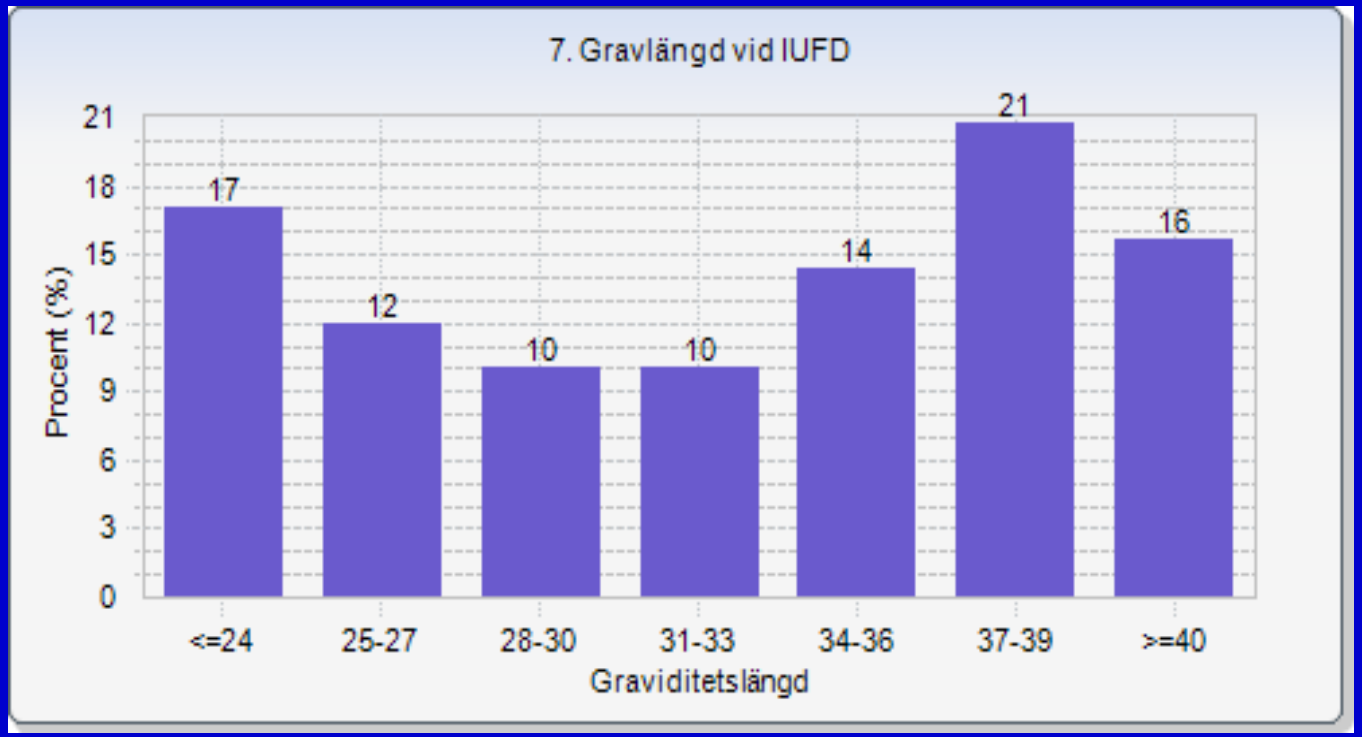
Antepartal death 92% (2016-2018, n=275)

Vaginal delivery 90 %

Placental examination 99%, autopsy 75%

Approx 5 % substandard care (the recommendations have not been followed)

Stillbirth in different gestational weeks

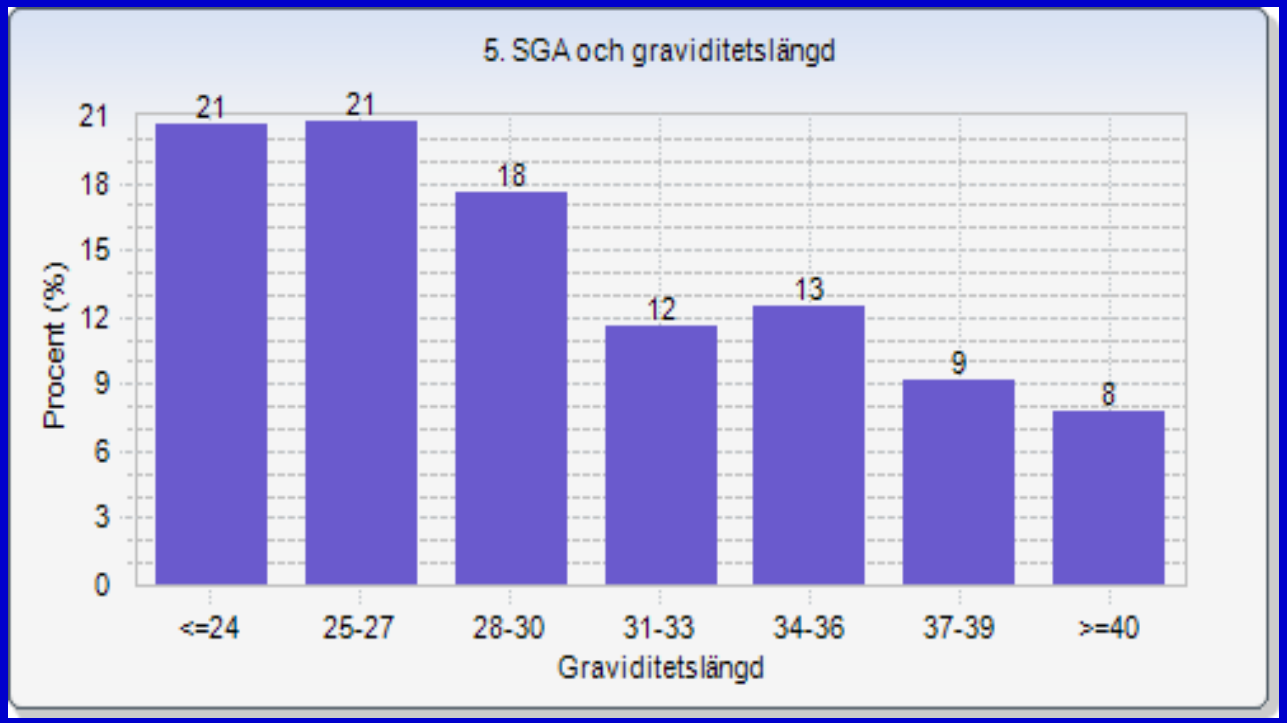


Primary cause of death n=2469

IUGR/placenta insufficiency	(30%)
Infection	(18%)
Unexplained	(12%)
Malformation/ chromosomal abnormalities	(10%)
Umbilical cord complications	(7%)
Placenta abruption	(7%)

Others (alloimmune trombocytopenia, immunization, amnionband, trauma, maternal cardiac arrest, uterine torsion, uterine rupture, coagulation disorder)	(5 %)
Preeclampsia	(4%)
Twin-to-twin transfusion syndrome	(2%)
Fetomaternal bleeding	(2%)
Intrahepatic cholestasis	(2%)
Diabetes	(1%)

SGA in different gestational weeks



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Identification of pregnancies with increased risk

Evidence based recommendations in cases with reduced fetal movements

Evidence based recommendations in complicated pregnancies

Adequate examination protocol in cases of stillbirth

Perinatal audit- Identification of substandard care, increased knowledge of causes of death

Use of classification, register all cases in The Swedish pregnancy register

Induction of labour 41+0 ?

Antenatal detection of growth restriction?

Thanks!