



Total births

Euro-Peristat Meeting
Rolduc Abbey, the Netherlands
9 April 2018

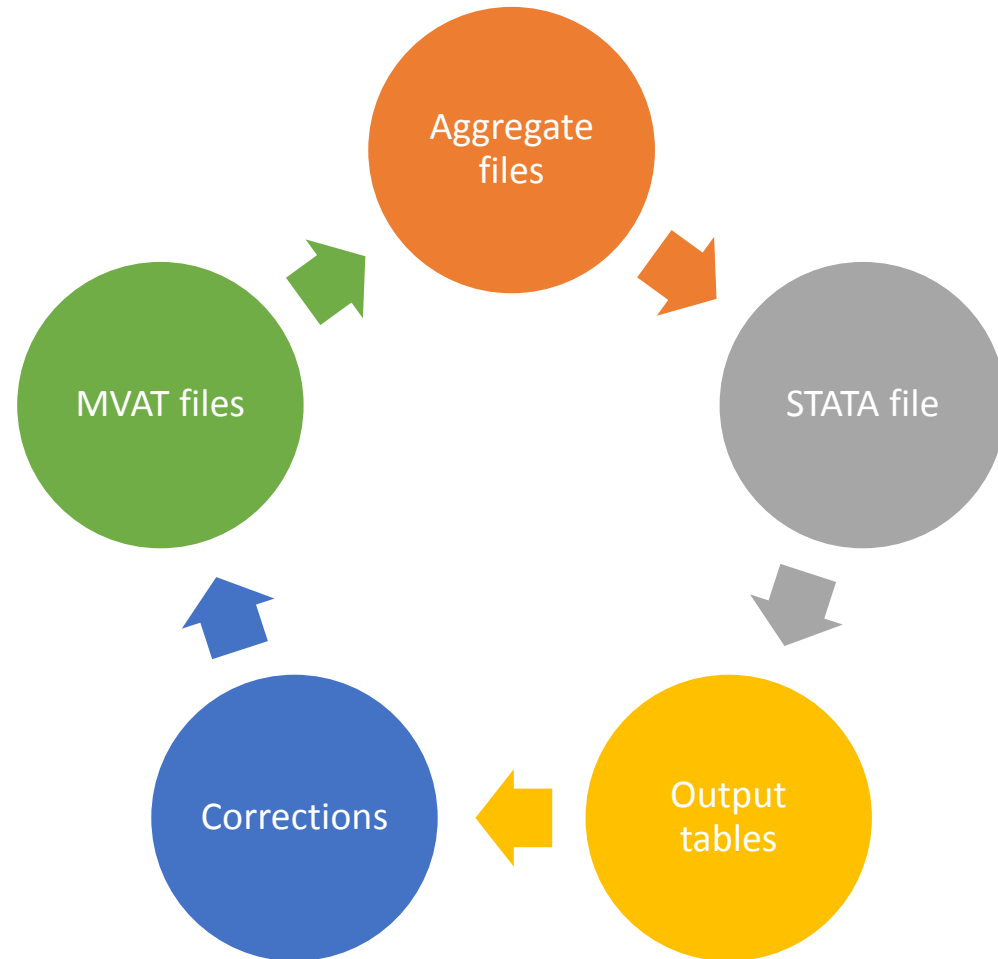
Jennifer Zeitlin



Preliminary DATA

We were not able to
make all changes

Corrections need
to be made on the
ORIGINAL files



Checking data on total births

Methods/quality checks

- Not always the same sources as other international data (Eurostat), assess similarities and differences and understand why
 - Non-nationals? Non-residents? Visitors? Rates of completeness, missing data?
 - Inclusion criteria?
- Check that data the same across Euro-Peristat data collection cycles

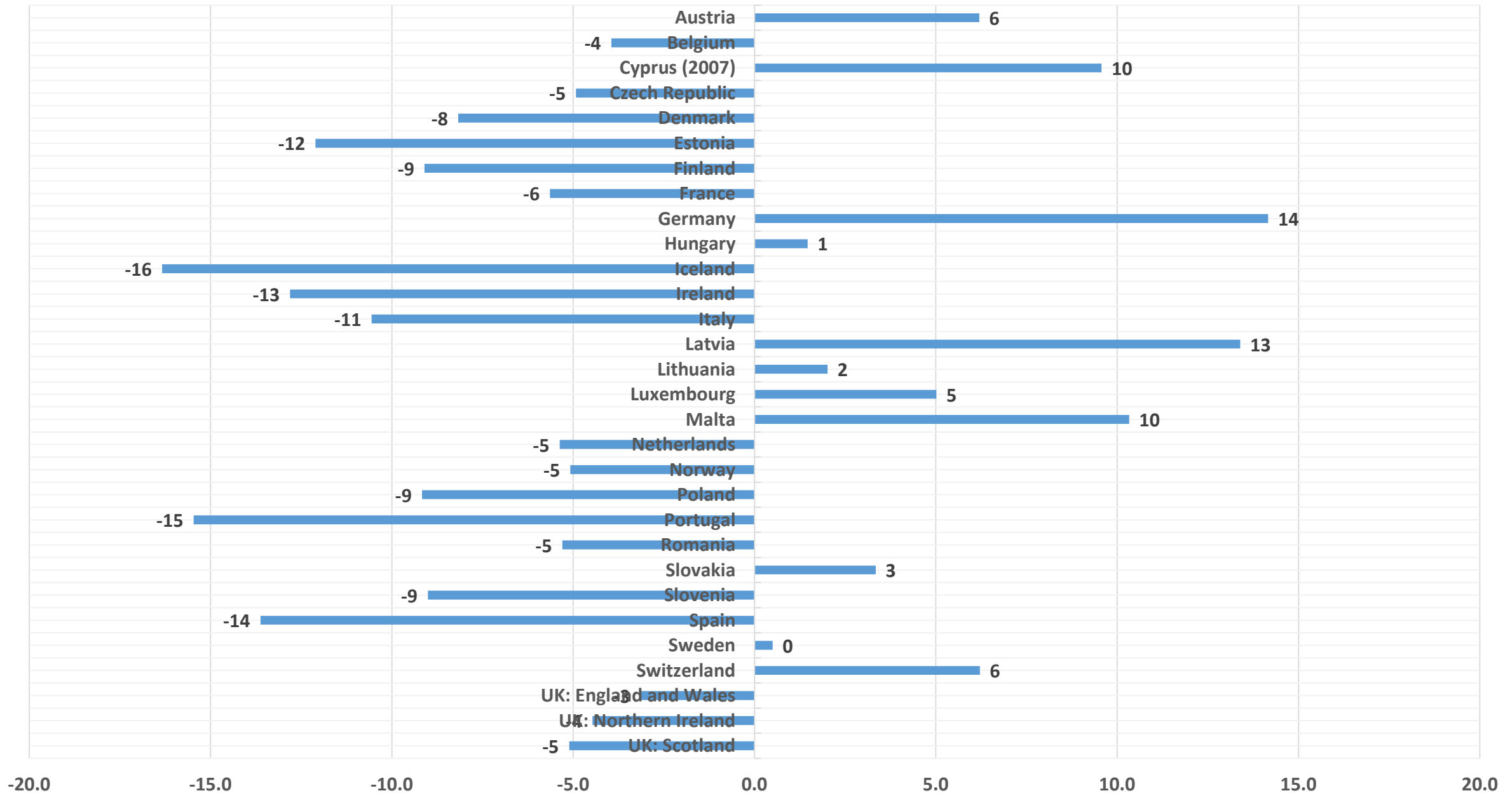
Fertility/changes in underlying population

- Fertility highly variable across Europe
- Migration flows over past years

GEO/TIME	Euro-Peristat _ LB	EUROSTAT LB	Difference
Austria	83 607	84 381	-0.9
Belgium	125 014	122 274	2.2
Bulgaria	67 584	65 950	2.4
Croatia	37 252	37 503	-0.7
Cyprus	9 401	9 170	2.5
Czech Republic	110 771	110 764	0.0
Denmark	58 130	58 205	-0.1
Estonia	13 907	13 907	0.0
Finland	55 589	55 472	0.2
France (metropolitan)	764 567	:	
Germany	725 937	737 575	-1.6
Hungary	91 680	92 135	-0.5
Iceland	4 092	4 129	-0.9
Ireland	65 623	65 536	0.1
Italy	487 496	485 780	0.4
Latvia	21 720	21 979	-1.2
Lithuania	31 475	31 475	0.0
Luxembourg	6 833	6 115	10.5
Malta	4 435	4 325	2.5
Netherlands	168 460	170 510	-1.2
Norway	59 531	58 815	1.2
Poland (2014)	375 650	375 160	0.1
Portugal	85 762	85 500	0.3
Romania	201 025	197 491	1.8
Slovakia	57 179	55 602	2.8
Slovenia	20 273	20 641	-1.8
Spain	420 436	418 432	0.5
Sweden	115 247	114 870	0.3
Switzerland	84 891	86 559	-2.0
United Kingdom	773 874	776 746	-0.4

Austria	78 989	83 884
Belgium	130 837	125 669
Cyprus (2007)	8 602	9 425
Czech Republic	116 920	111 162
Denmark	63 513	58 324
Estonia	15 884	13 961
Finland	61 421	55 832
France	810 413	764 704
Germany	638 126	728 496
Hungary	90 920	92 253
Iceland	4 903	4 102
Ireland	75 595	65 913
Italy	547 568	489 755
Latvia	19 248	21 826
Lithuania	30 977	31 601
Luxembourg	6 560	6 889
Malta	4 036	4 453
Netherlands	178 838	169 234
Norway	62 940	59 744
Poland	415 015	376 968
Portugal	101 790	86 048
Romania	213 055	201 760
Slovakia	55 825	57 691
Slovenia	22 416	20 397
Spain	488 076	421 590
Sweden	115 135	115 710
Switzerland	80 276	85 263
UK: England and Wales	721 925	699 204
UK: Northern Ireland	25 692	24 544
UK: Scotland	57 488	54 550

Change over time
From 2010 to 2015



Summary

- Large variability in trends in annual number of births across Europe, this may be relevant for understanding trends in perinatal health indicators
- Mainly minor differences with Eurostat data, but it would be good to understand why they exist (country level notes?)

C1. Fetal mortality rate

by gestational age, birth weight, and plurality

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Definition

- The number of fetal deaths **at or after 22 completed weeks of gestation** in a given year per 1000 live and stillbirths in the same year calculated by gestational age, birth weight and plurality.
- Fetal deaths are differentiated by whether they are spontaneous fetal deaths or result from a termination of pregnancy.
- Because of differences in ascertainment, only 3rd trimester FDR have been considered comparable, but recent work by Euro-Peristat suggests this should decline to 24 weeks
- WORKSHOP ON TUESDAY MORNING...

Ability to provide Euro-Peristat definition

Yes	Estonia, France, Croatia, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Finland, Sweden, Norway, Iceland, Switzerland Italy* (180 days for fetal deaths; <180 days in spontaneous abortion registry, but can be combined)
500 g	Austria, Belgium, Czech Republic, Germany, Poland, Slovenia
24 weeks	Ireland, UK, Hungary
180 days	Spain
800 g/26 weeks	Bulgaria: 800 g and/or 26 weeks

How comparable is the 500 g threshold

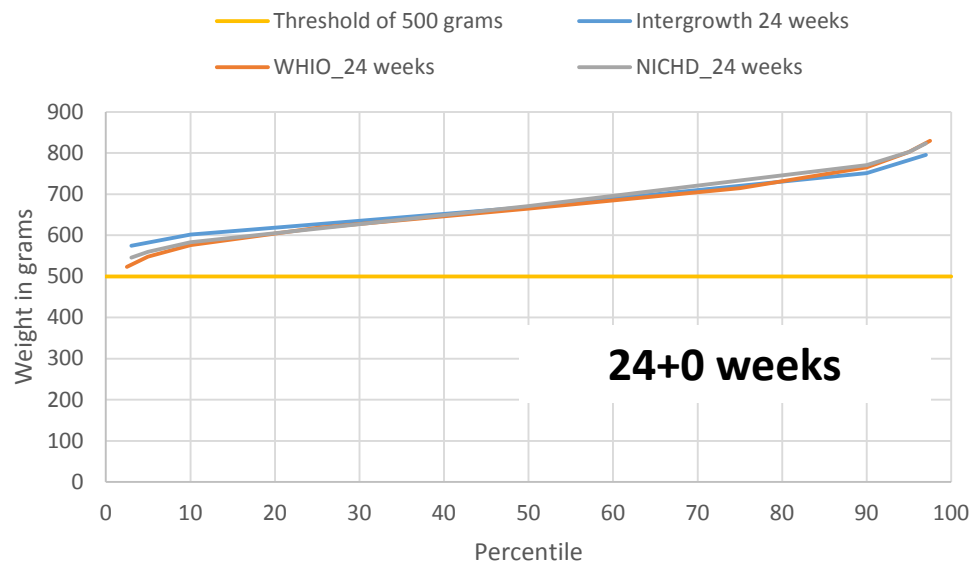
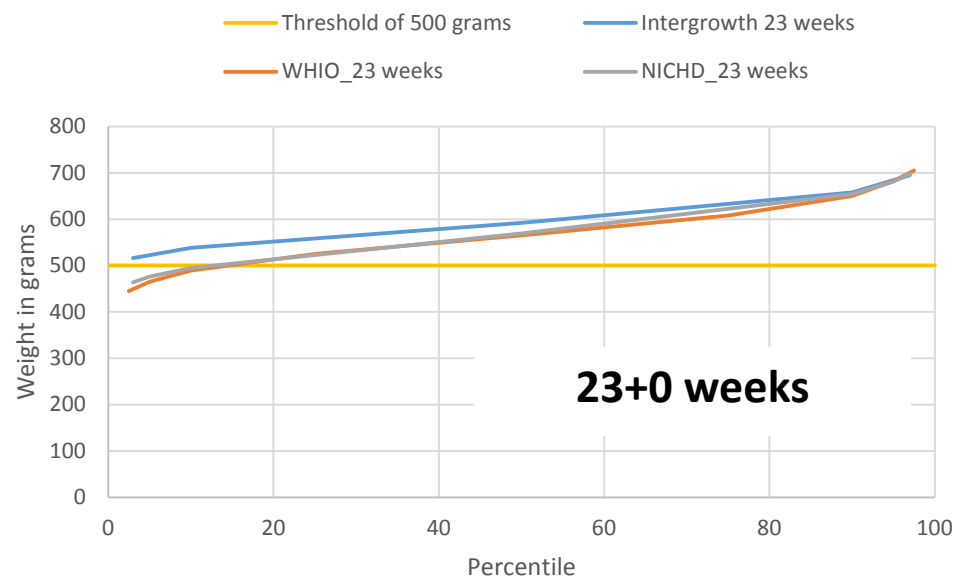
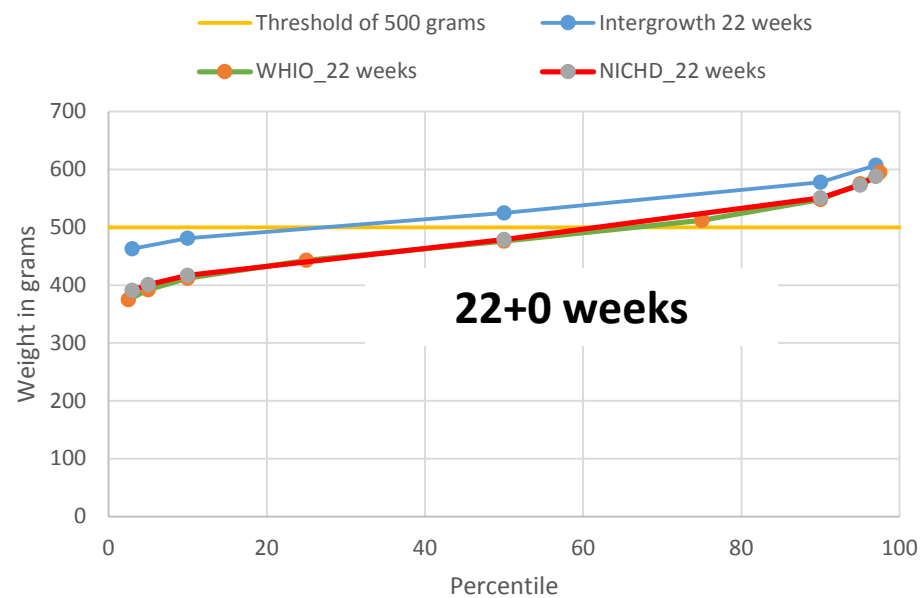
- Look at birthweight charts to see how this 500 gram limit corresponds to gestational age
- Keeping in mind that fetal deaths are often smaller linked with sub-optimal growth, so we would expect them to have lower weights
- In the past 3 years, three new intrauterine growth charts
 - INTERGROWTH – Stirnemann et al. Ultrasound Obstet Gynecol (2017)
 - WHO - Kiserud et al. Plos Med (2016)
 - NICHD – Buck Louis et al. AJOG (2015)

What does 500 grams correspond to?

Intergrowth	3 rd centile	10 th centile	50 th centile	90 th centile	97 th centile
22+ 0	463	481	525	578	607
23+ 0	516	538	592	658	695
24+ 0	575	602	669	751	796

WHO	2.5	5.0	10.0	25.0	50.0	75.0	90.0	95.0	97.5
22+ 0	375	392	412	443	476	512	548	575	595
23+ 0	445	465	489	525	565	608	650	682	705
24+ 0	523	548	576	618	665	715	765	803	830

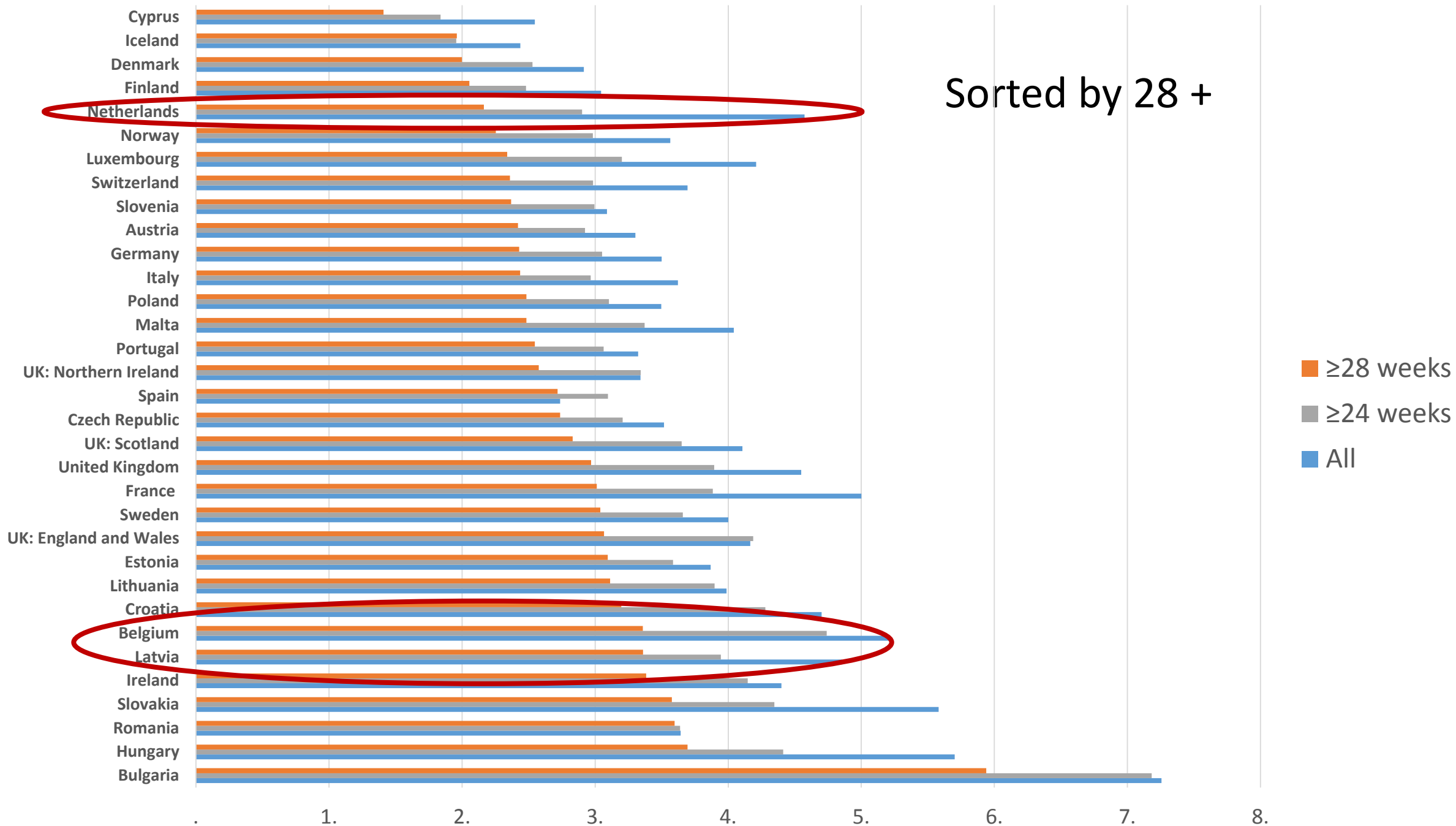
NICHD – White	3	5	10	50	90	95	97
22+ 0	391	401	417	479	551	573	588
23+ 0	464	476	495	569	654	681	698
24+ 0	546	560	583	671	771	803	824



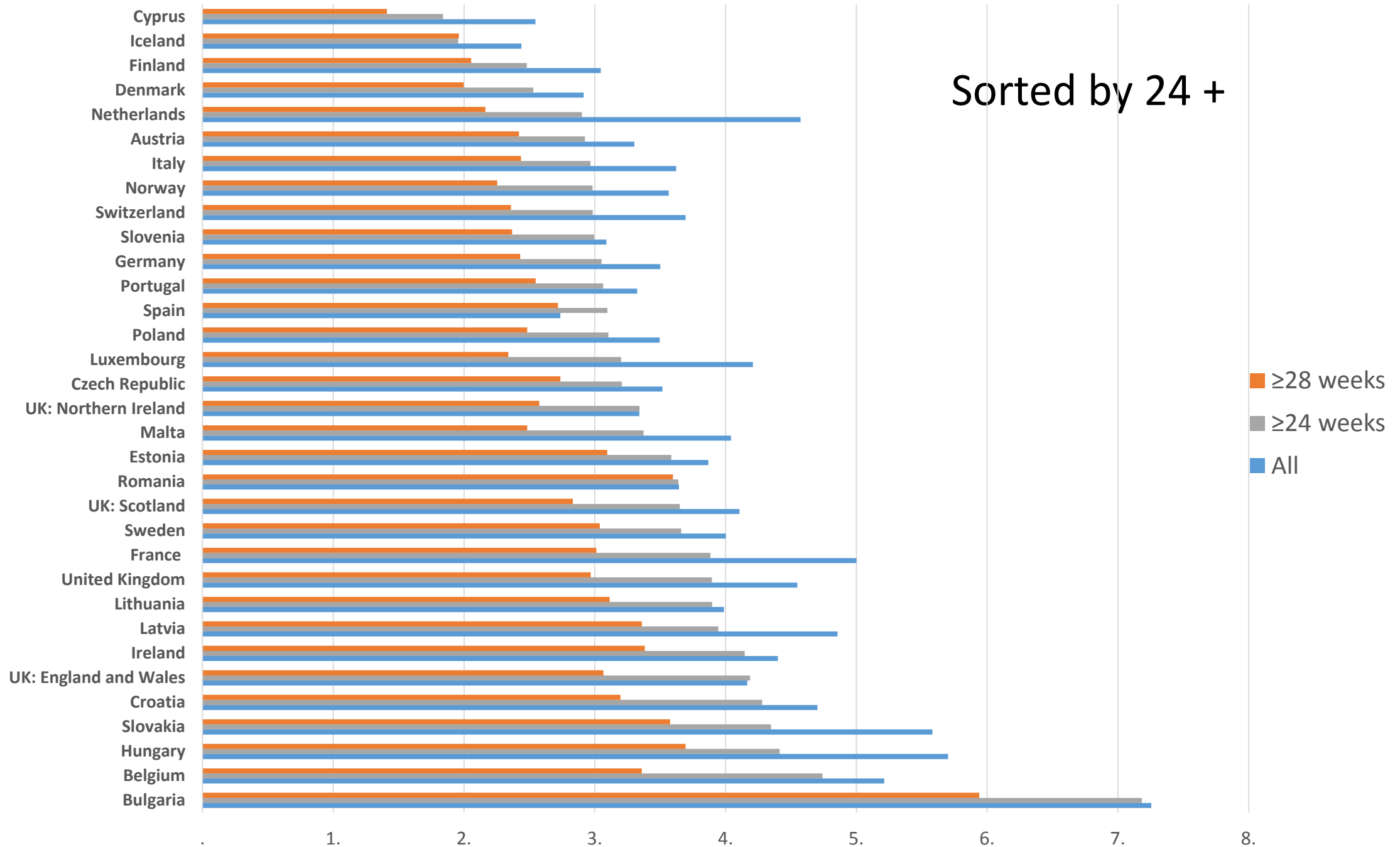
Terminations of pregnancy (also for Tuesday)

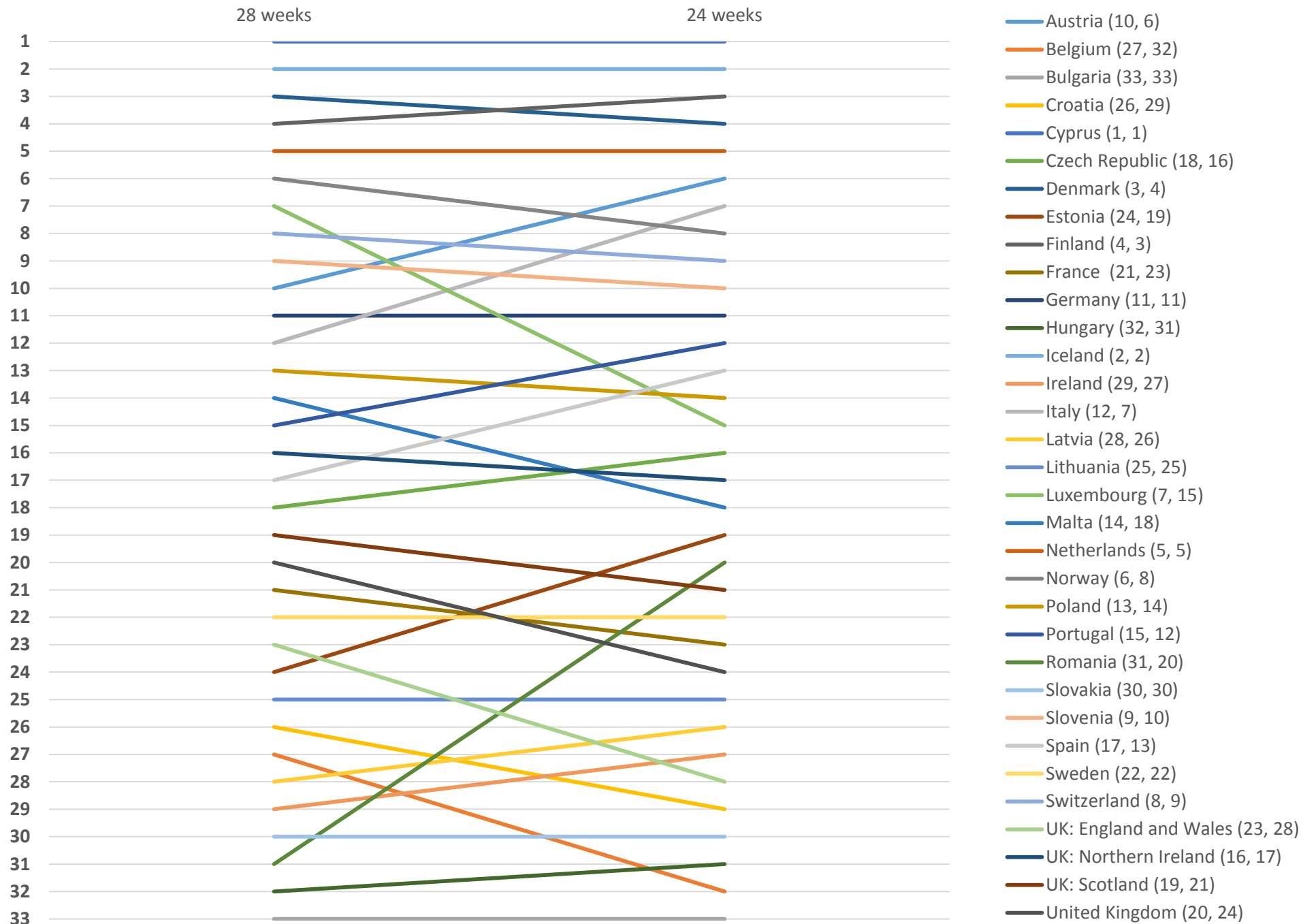
- Euro-Peristat recommendations
 - Present data with and without terminations
 - Analysis of stillbirths without terminations
 - Comparisons should be on indicators constructed in similar manner
 - Should always note if terminations included

	Legislation or practice of termination of pregnancy <u>after 21 weeks of gestational age</u>		
Reporting of terminations <u>after 21 weeks</u>	Terminations	Gestational age limit for terminations	
	after 21 weeks Illegal or very rare	Upper limit in weeks	No limit specified
No terminations or no reporting system	Austria Estonia Ireland Malta Lithuania Poland Slovak Republic	Romania (<24 wks) Greece (<25 wks)	Luxembourg
In abortion registry only	Spain (2) Norway (2,5)	Finland (<24 ⁺⁰ wks) Italy (under viability limit)	Germany
In abortion registry <u>and</u> in stillbirth statistics but not distinguishable		UK: E-W (<24 wks) UK: S (<24 wks) UK: N Ireland Portugal (<24 wks)	Belgium
Included in stillbirth statistics but not distinguishable	Sweden (2)	Latvia (<24⁺⁰ wks) Netherlands (<24 wks)	Slovenia
Included in stillbirth statistics and distinguishable	Denmark (2)	Iceland (<23 wks) Czech Rep (<24 wks)	France, Hungary Switzerland

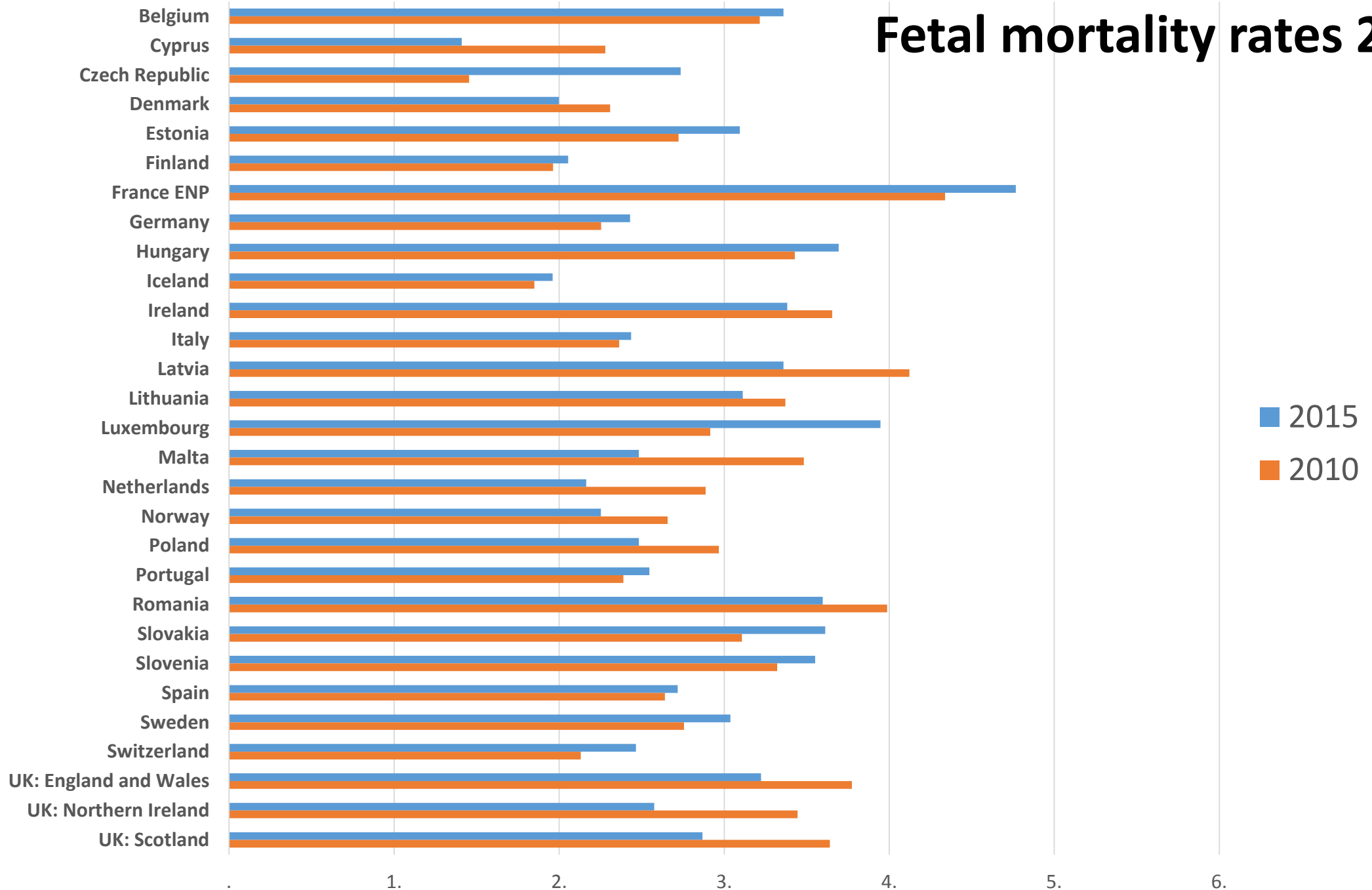


Sorted by 24 +

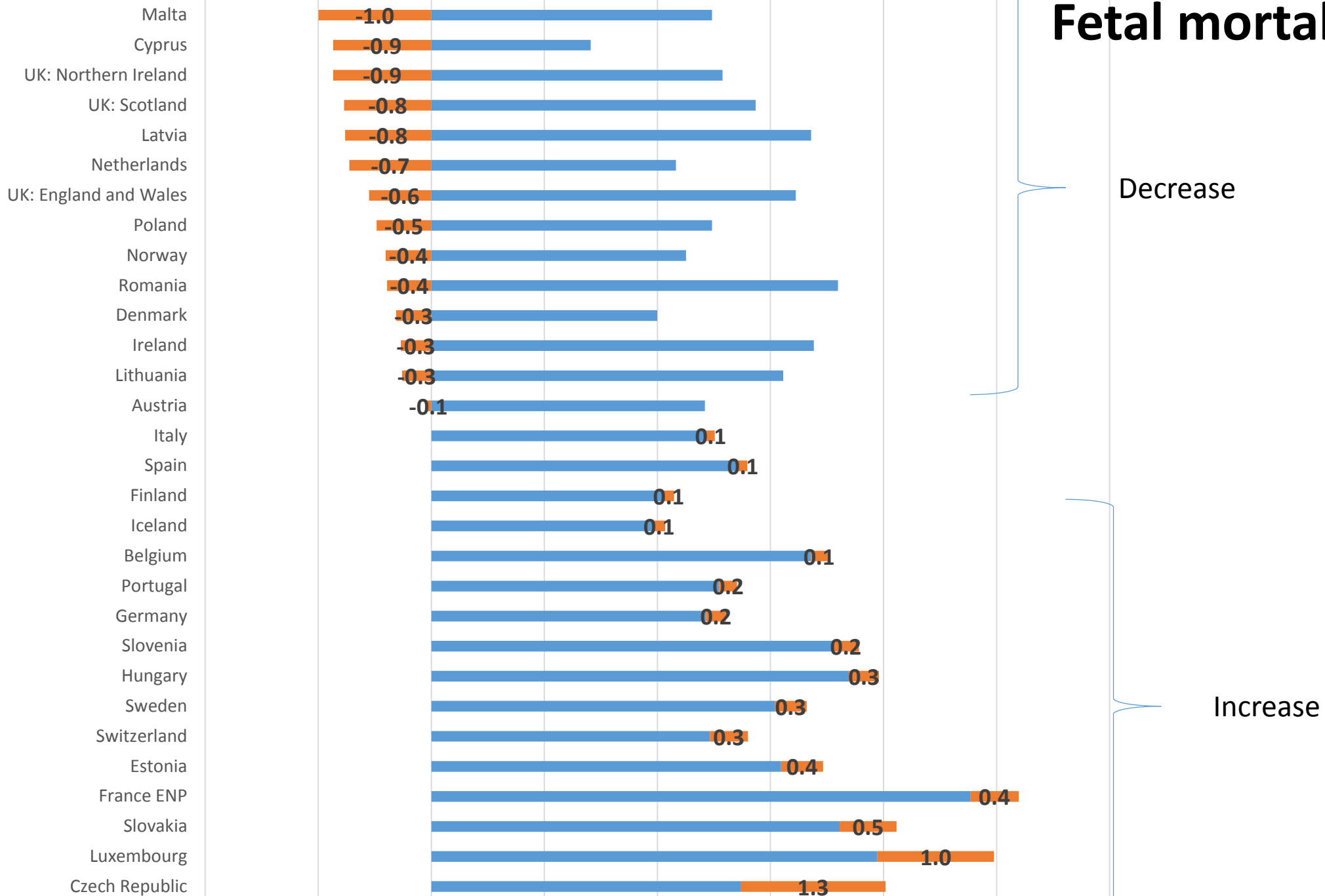




Fetal mortality rates 28 +

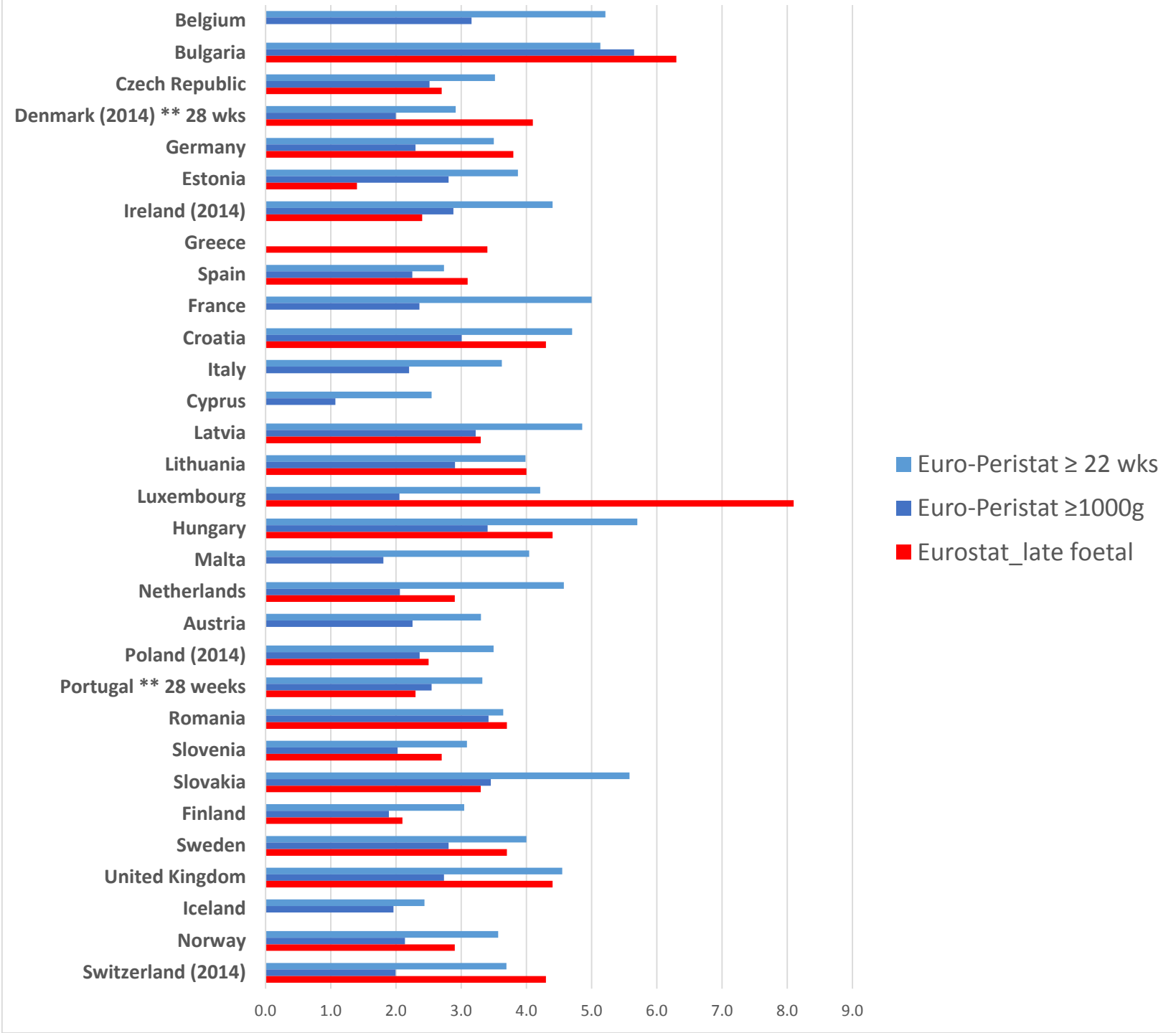


Fetal mortality rates 28 +



Comparison with Eurostat

Late fetal deaths (1000 g)



Summary of findings – quality and reporting

- Good availability of stillbirth indicator
- In this report we should report 24+ as well as 28+
- However, there are issues for some countries regarding TOP that are included
- Under 24 weeks, data should not be used because of existence of non-comparative BW and GA thresholds
- Differences with Eurostat (to be explored) – it seems that thresholds are not consistently applied for Eurostat

➤ *Careful with analyses of ranks, countries with small sample sizes (confidence intervals if n of birth < 20000 ?), and rates close together*

Summary of findings – stillbirth rates in 2015

- Variability from
 - Within range 2 to 4.0 per 1000 for births 28 weeks of GA and over
 - Within range 2 to 5.0 per 1000 for births 24 weeks of GA and over
- Variability in changes over time
 - Some countries experienced declines (UK ,Netherlands, Norway)
 - But as many stable or slightly increased

Discussion

Multivariable aggregate tables

Better data collection & transfer

Provide 12 variables in 2 files for all indicators

- Simplicity
- Quality (fewer errors, cross-checking data)
- Sustainability – routine transfers to Eurostat ?

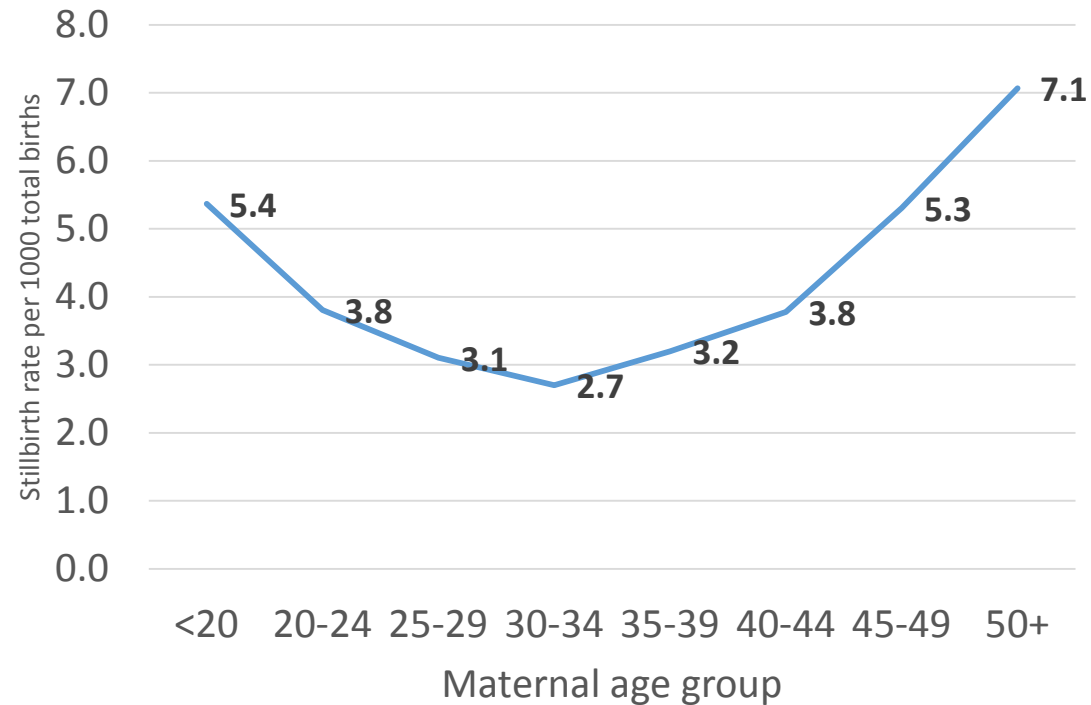
BUT

- Data need to be in one source
- Ethical issues need to be resolved
- Difficulties when data slightly different

More comprehensive Analyses

- Better risk-adjustment (age, parity)
 - Assess impact and trends population-risk factors
 - Evaluate outcome/health care interactions
- a foundation for more impactful research

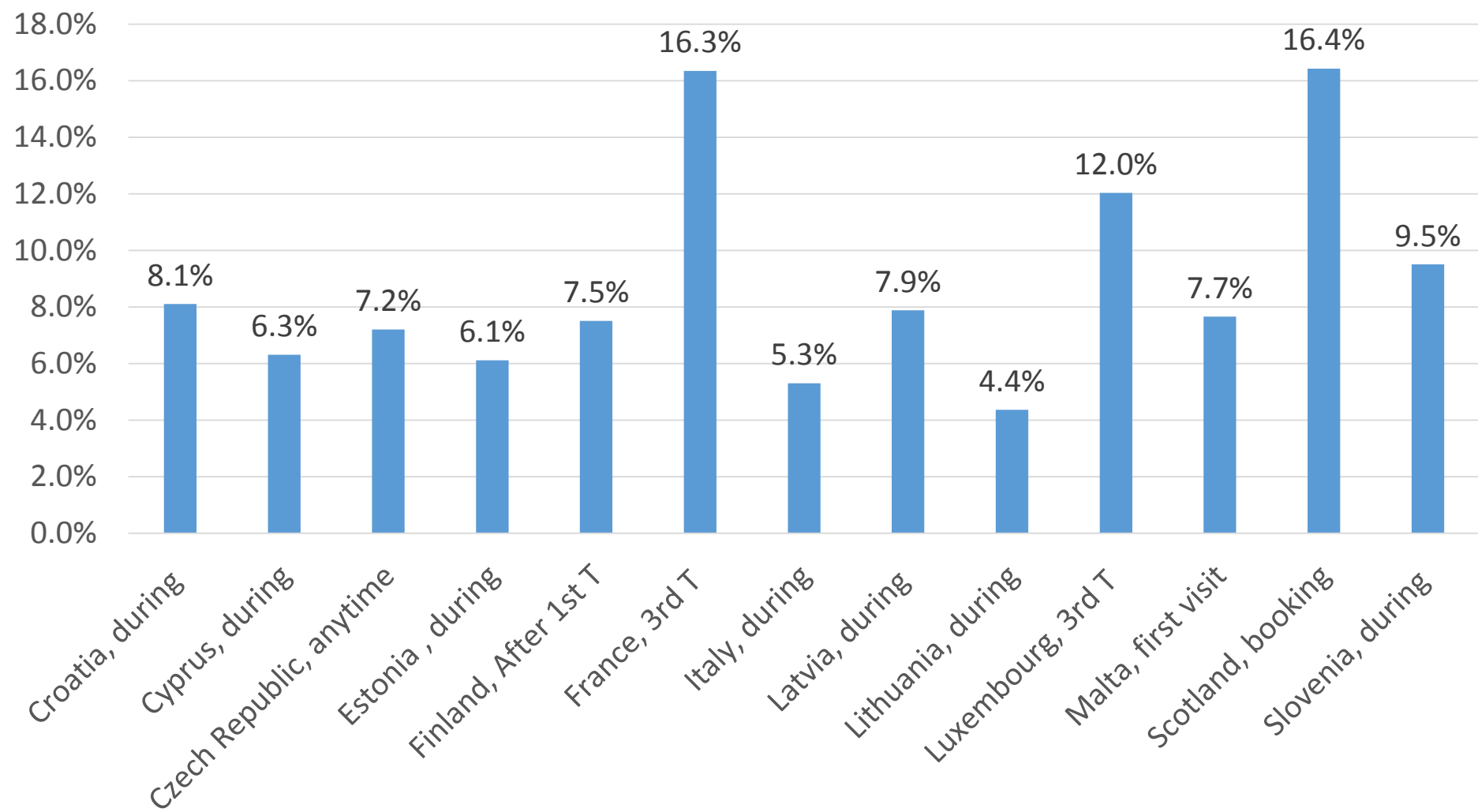
Use of individual data (N=16 countries)



Two recommended indicators

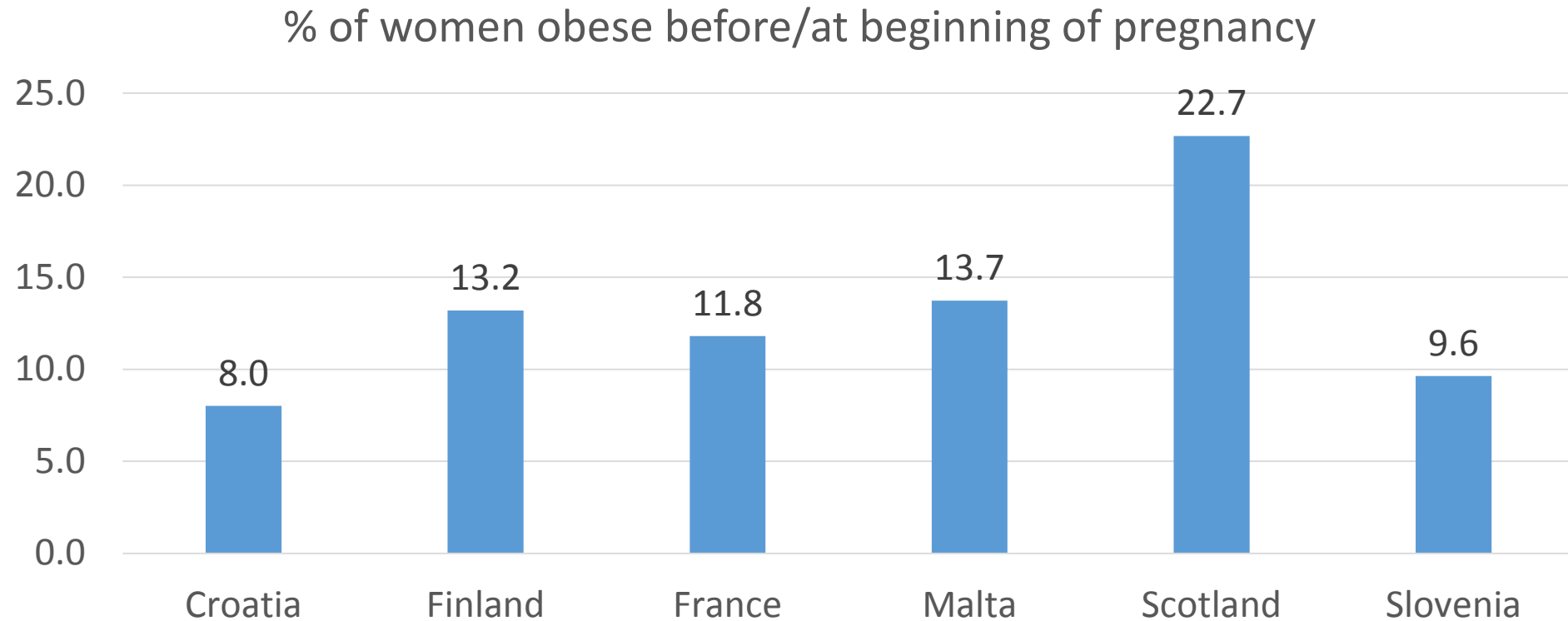
Smoking and BMI

Smoking during pregnancy



Bulgaria
Iceland
Ireland
Switzerland
Slovakia
Romania
Portugal?
Spain other than Valencia? (Valencia=18.3%)

Body Mass Index (few countries)



Croatia, Finland, Scotland (height and weight at first visit/booking), Malta, Slovenia (height at 1st visit, weight is self reported), France (both are self reported)