

Country Summary: Kenya

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1 Intro

These estimates are created using the BB8 model for Admin 1 estimates using a RW1xICAR interaction model with area-specific random slopes.

Kenya has 47 Admin 1 areas and 301 Admin 2 areas.

All uncertainty intervals displayed in subsequent figures are 95% intervals.

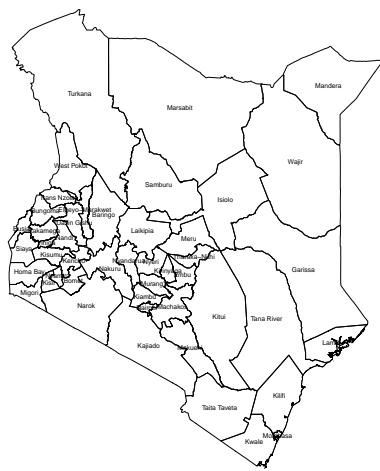
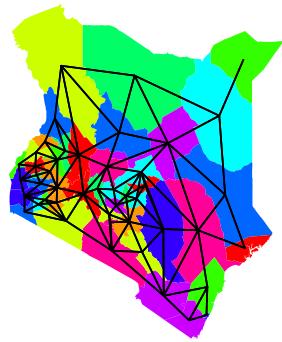


Figure 1: Top: The neighborhood structure of Admin 1 areas. Bottom: The names of Admin 1 areas.

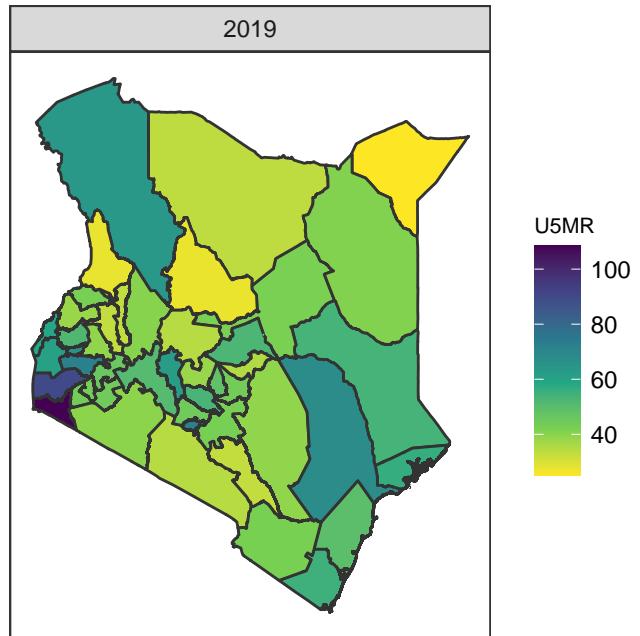


Figure 2: Median estimates of U5MR (deaths per 1000 children) in 2019.

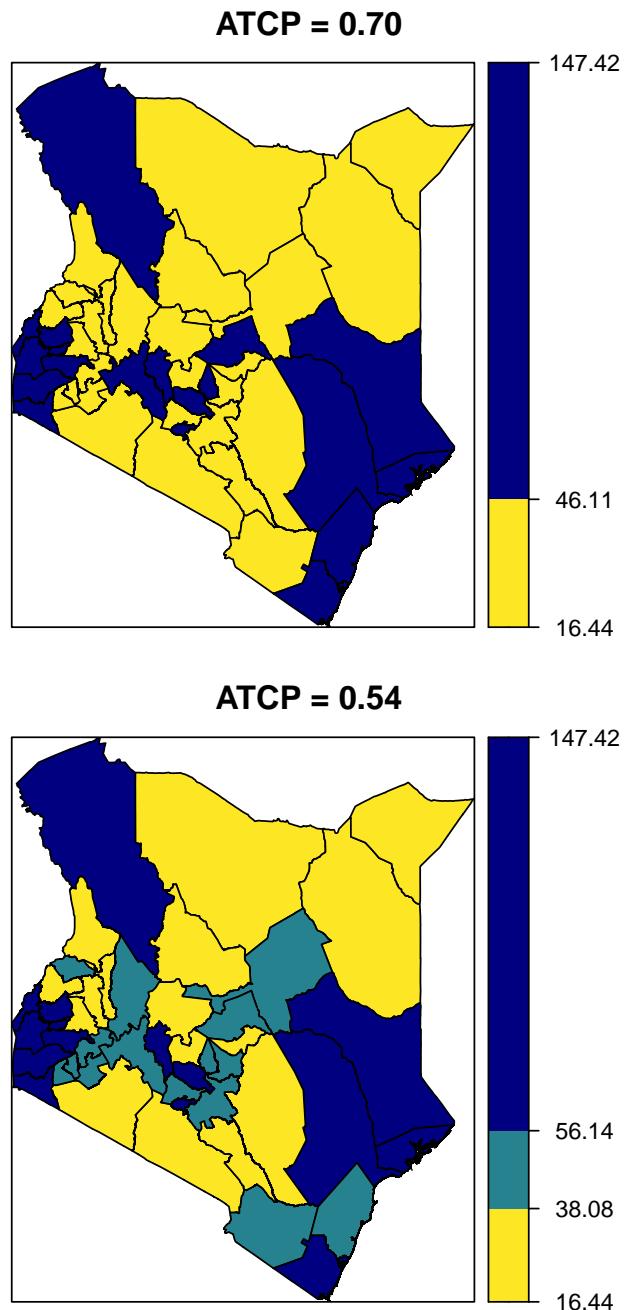


Figure 3: Expression of uncertainty of U5MR (deaths per 1000 children) based on the average true classification probability (ATCP) in 2019.

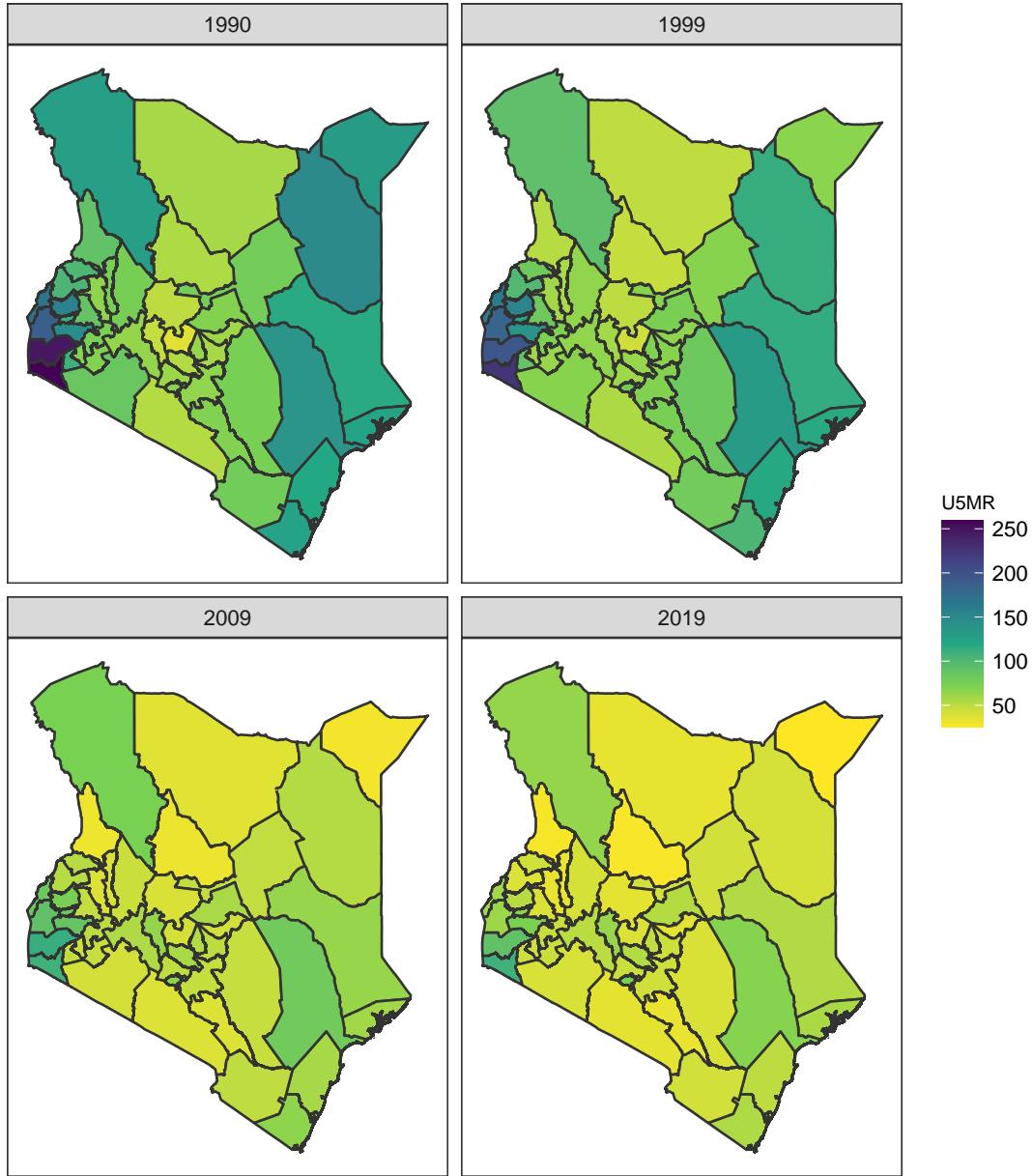
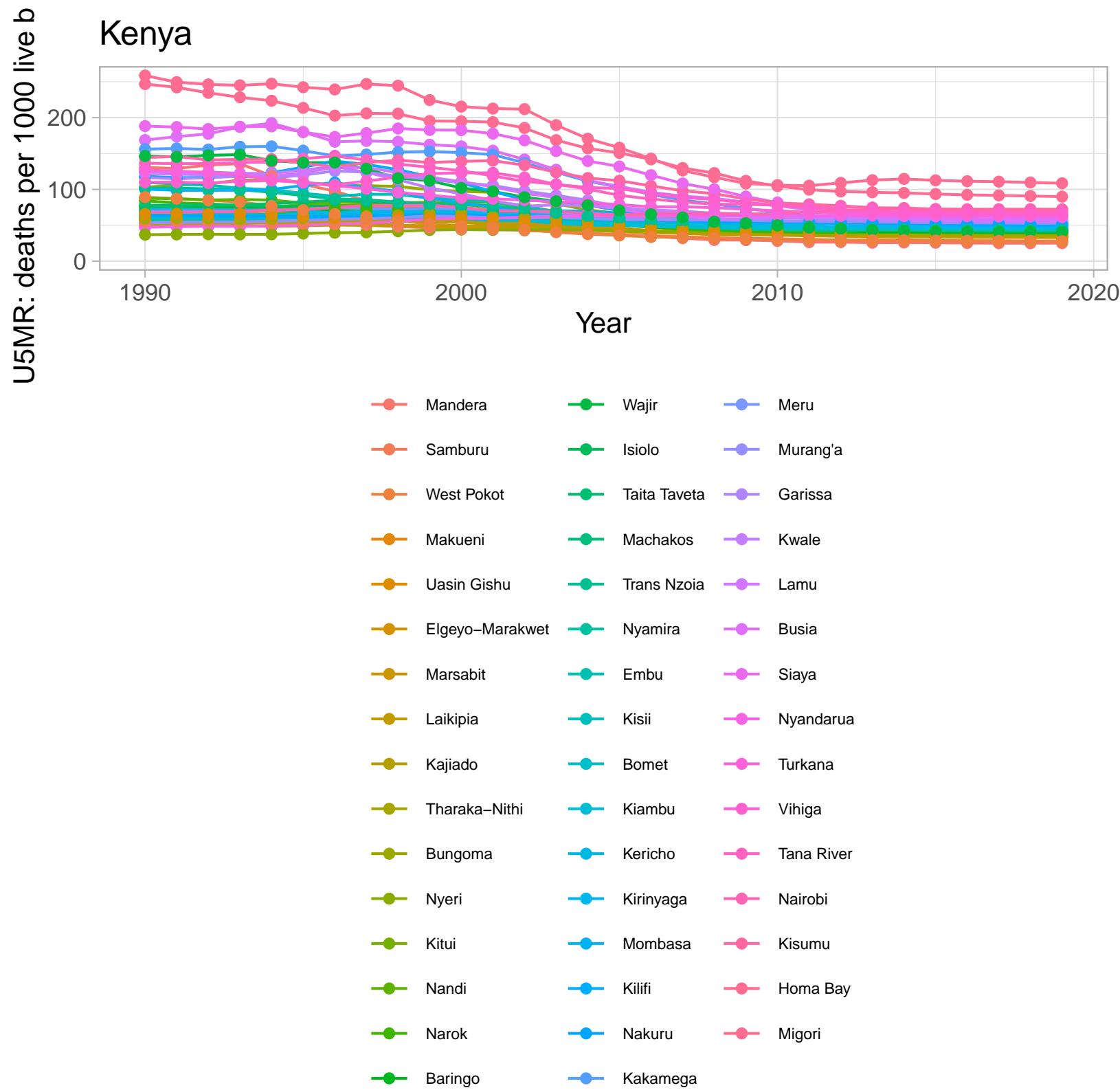


Figure 4: Median estimates for selected years.

Kenya



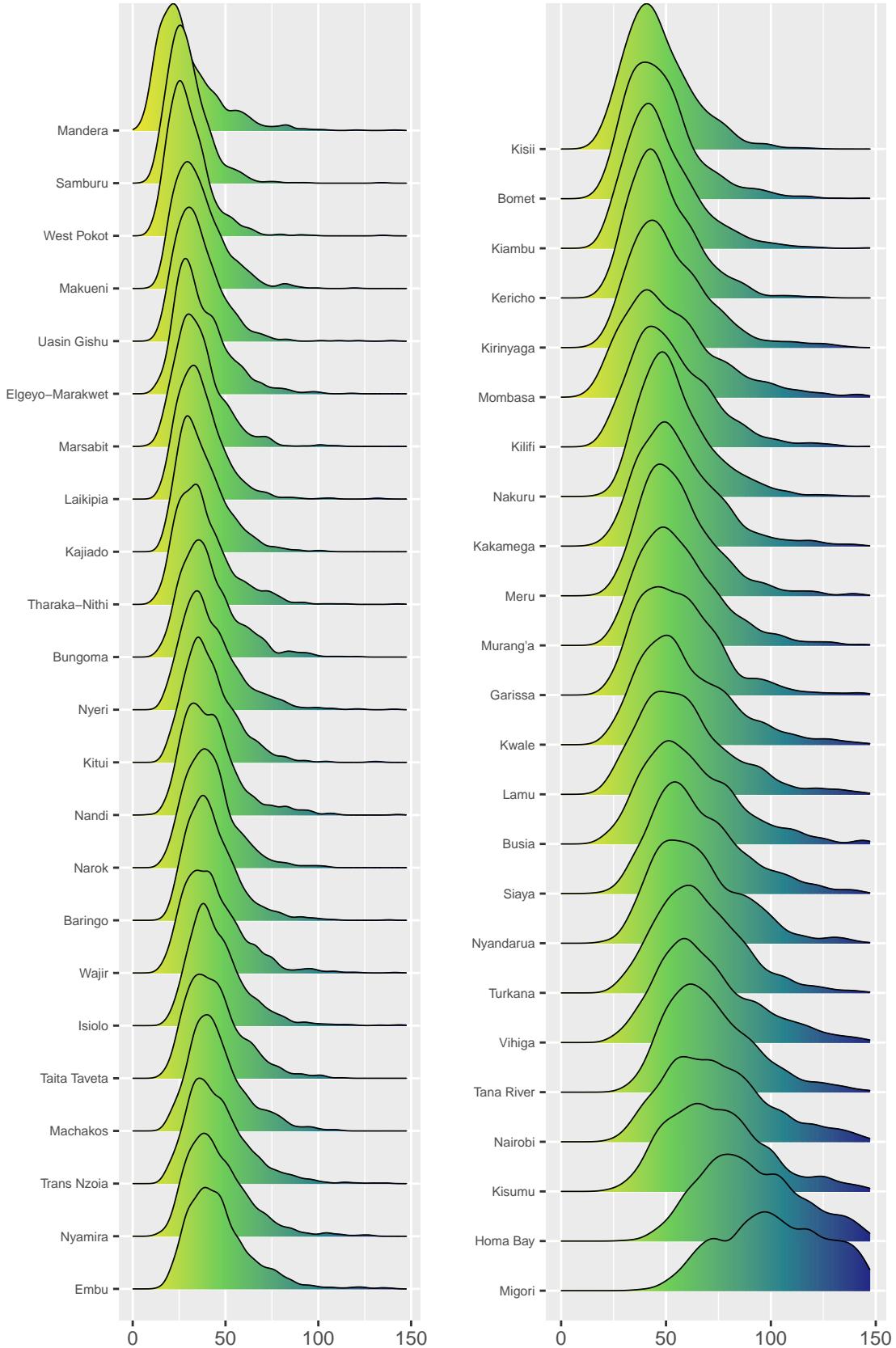


Figure 5: Posterior distributions of U5MR (deaths per 1000 children) in 2019. Areas are ordered by median estimated U5MR in 2019. ⁷

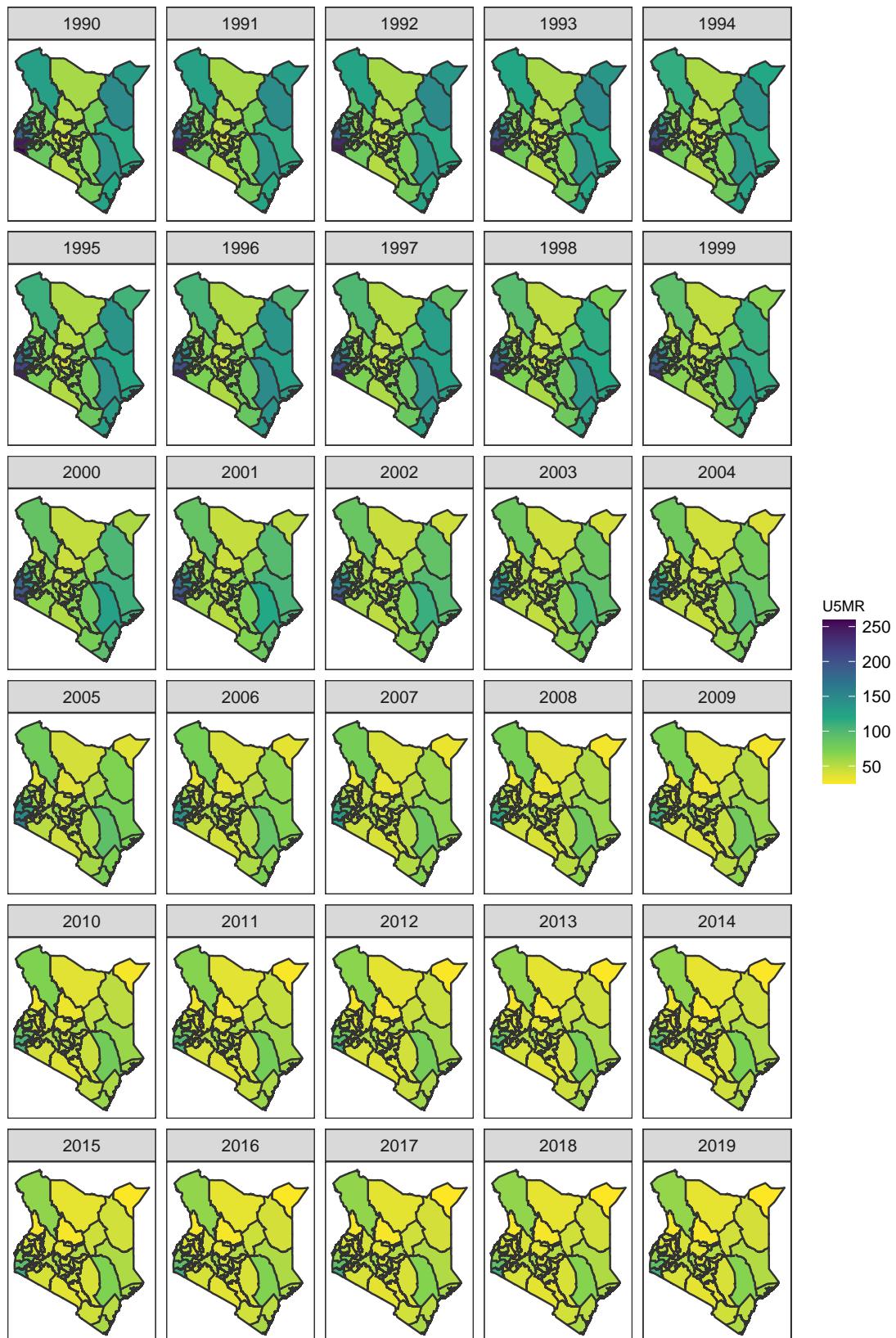


Figure 6: Posterior medians of U5MR (deaths per 1000 births) by Admin 1 area and year.

2 National Survey Data

Survey	Urban	Rural	Total
2003	129	270	399
2008-09	132	265	397
2014	615	969	1584

Table 1: Number of clusters by urban/rural designation by survey for Kenya.

Age	No. Deaths	No. Agemonths
0	1837	78681
1-11	1672	820281
12-23	669	842323
24-35	359	799441
36-47	295	753448
48-59	170	707865

Table 2: Numbers of agemonths and deaths by age for DHS 2014.

Age	No. Deaths	No. Agemonths
0	563	18522
1-11	532	190454
12-23	231	194686
24-35	145	185278
36-47	80	175046
48-59	48	165768

Table 3: Numbers of agemonths and deaths by age for DHS 2008-09.

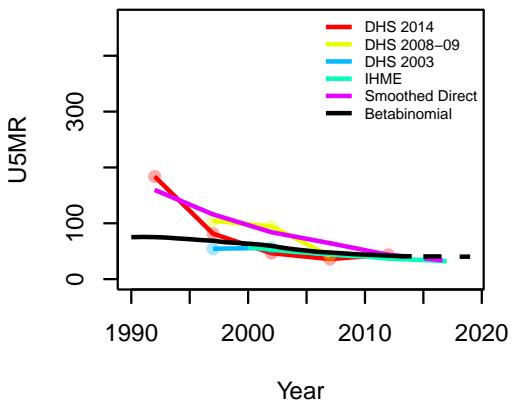
Age	No. Deaths	No. Agemonths
0	483	14190
1-11	547	145852
12-23	211	149168
24-35	129	143252
36-47	83	137051
48-59	43	130652

Table 4: Numbers of agemonths and deaths by age for DHS 2003.

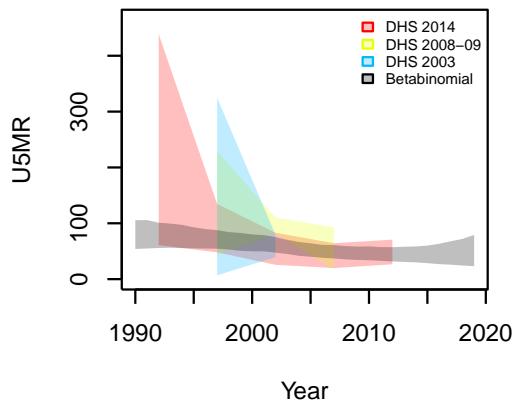
3 Admin 1 Figures

The following few pages have estimates by area across time with underlying data included. There are six admin areas per page. Colored lines with circular points and light grey uncertainty bands are 5-year survey-weighted estimates of U5MR for years 1990–1994 up to 2015–2019 depending on survey timing. For a survey that ends in the middle of a 5-year period, we plot the estimates at the mid-point of the years in that interval for which the survey provides data. Black lines and corresponding intervals represent posterior medians and 95% uncertainty intervals respectively for the betabinomial model.

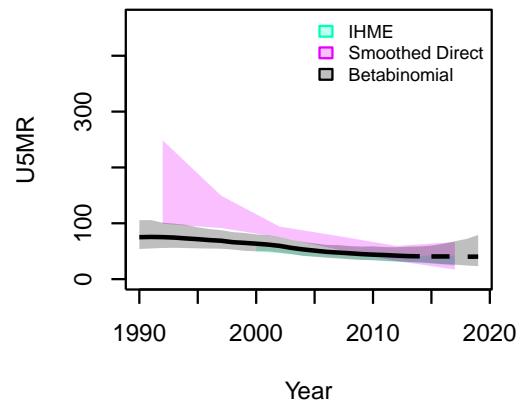
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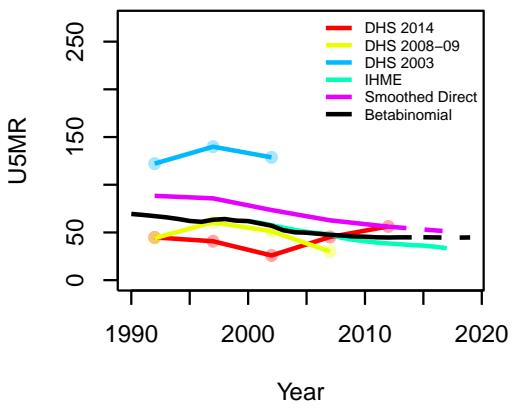
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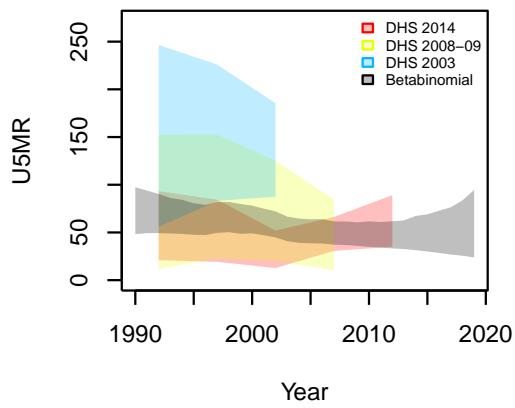
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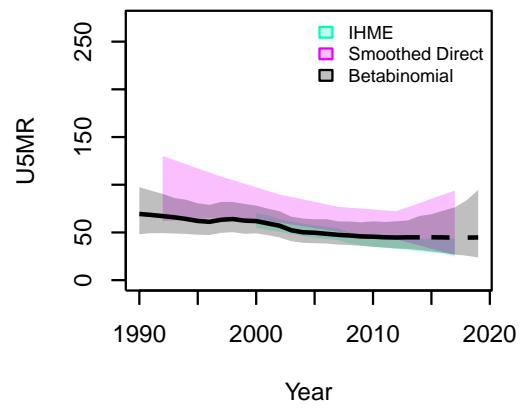
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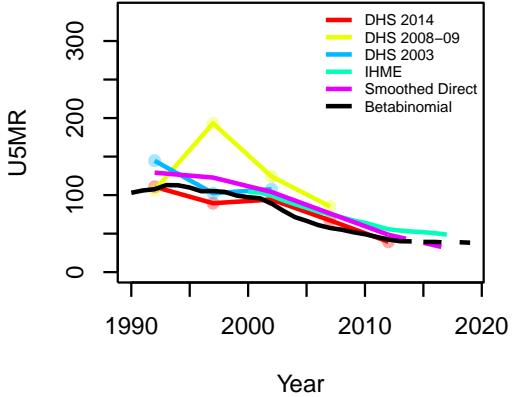
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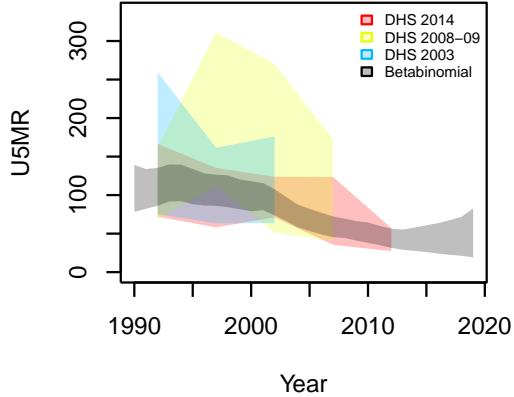
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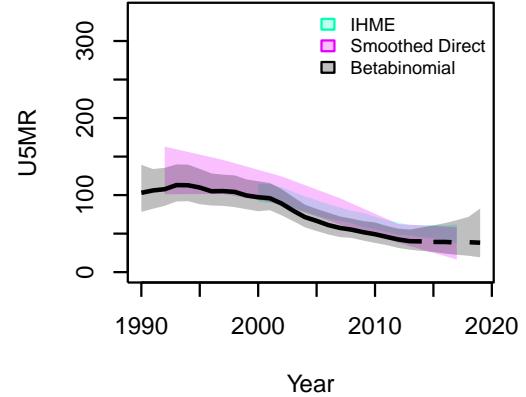
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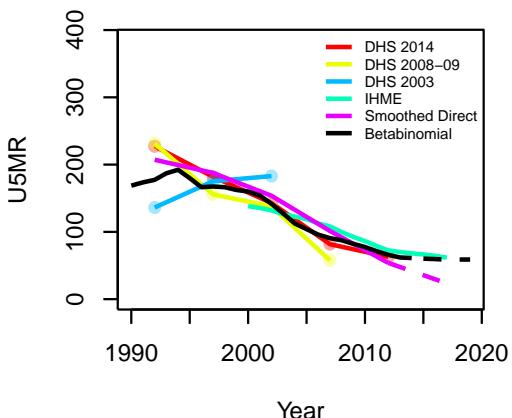
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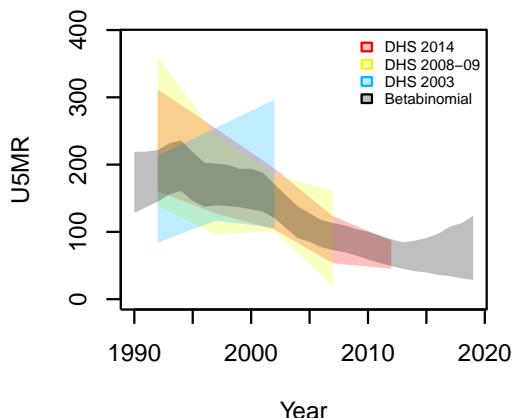
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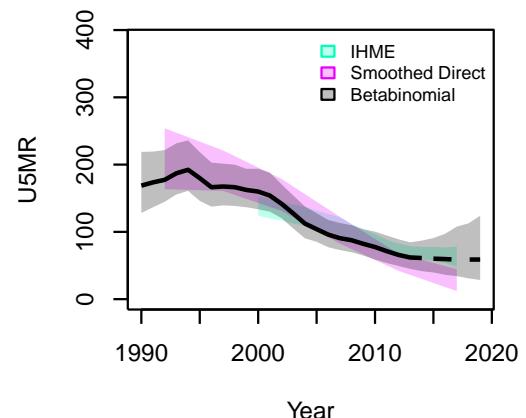
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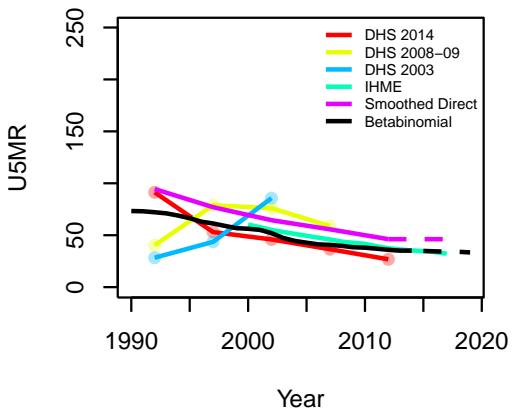
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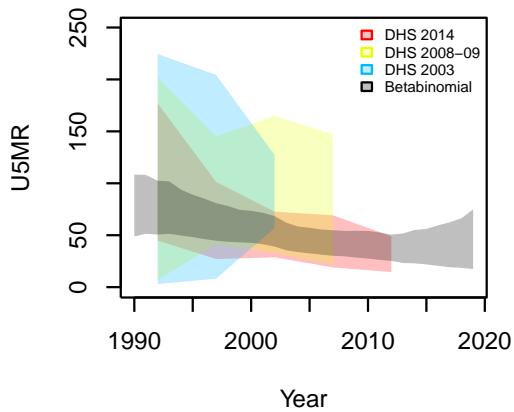
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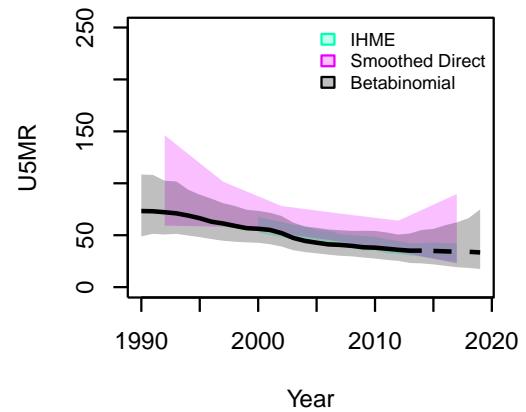
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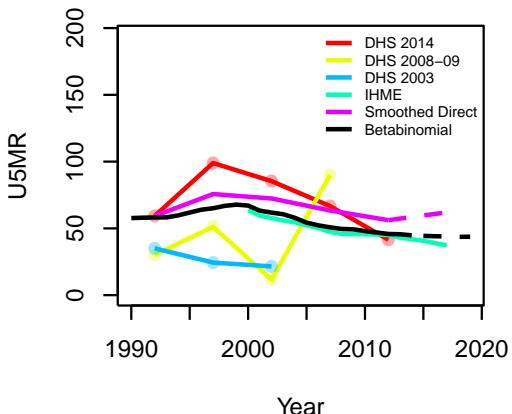
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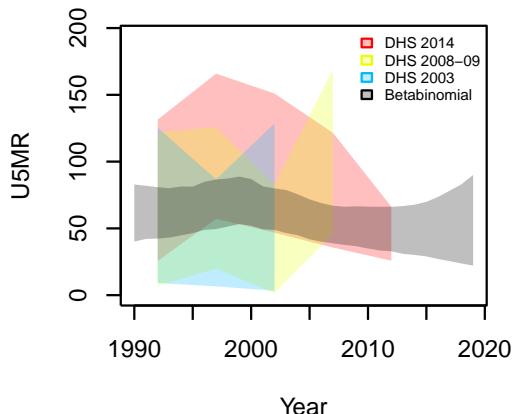
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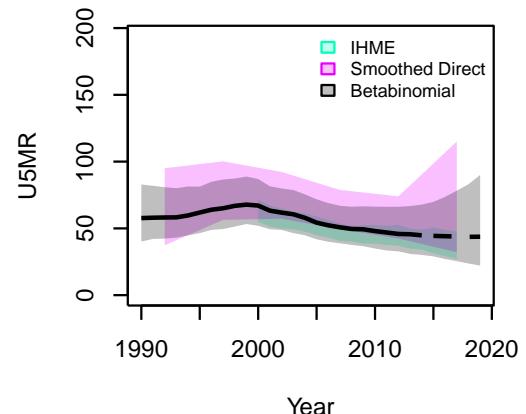
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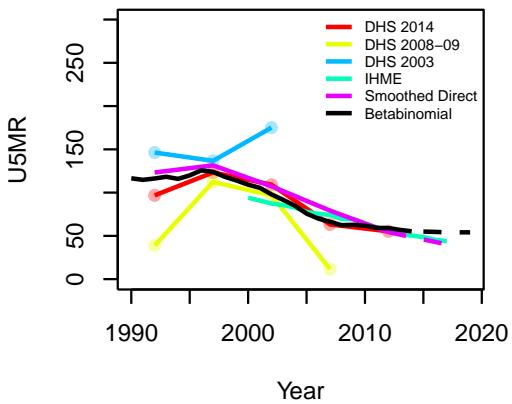
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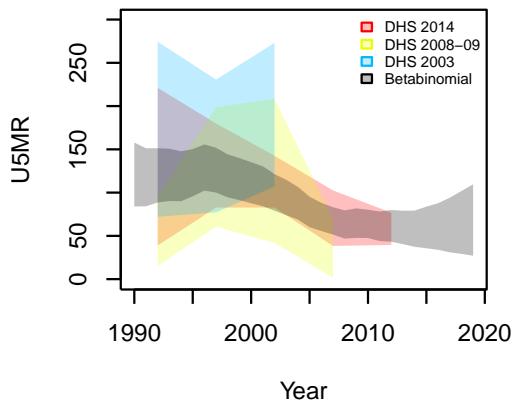
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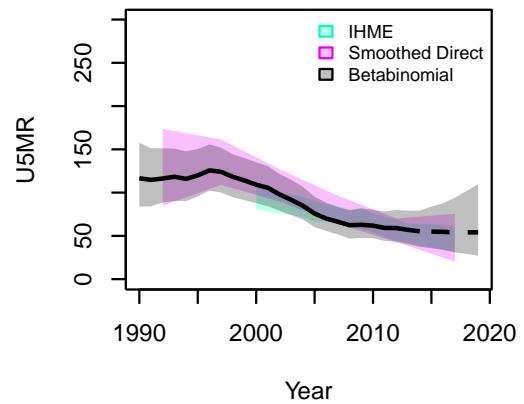
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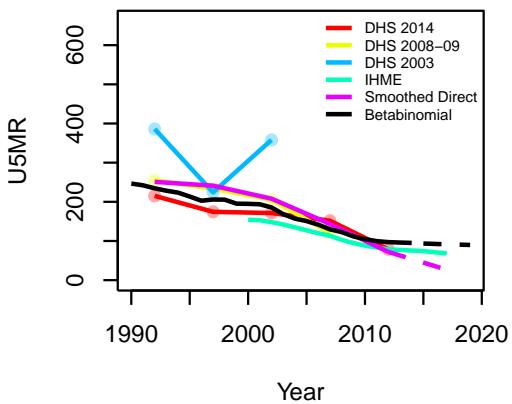
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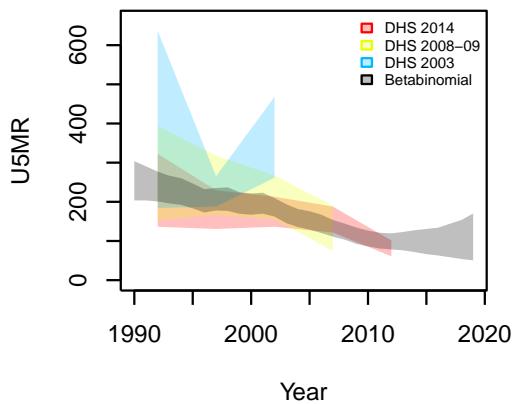
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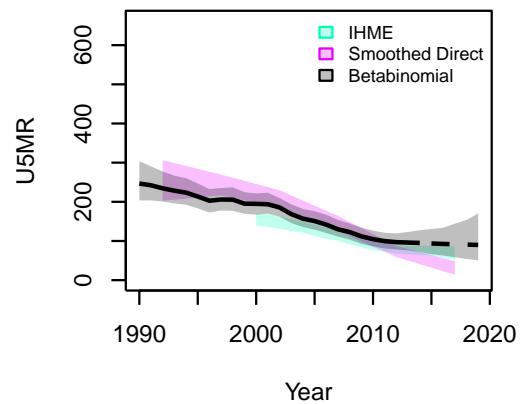
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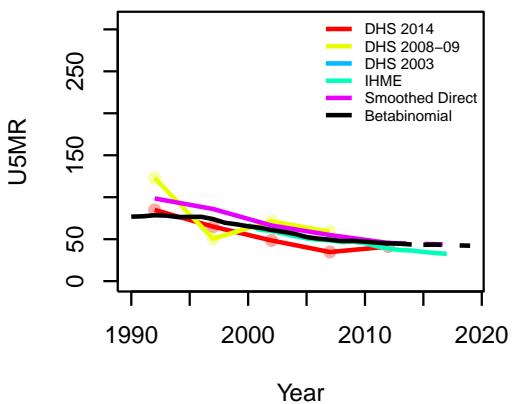
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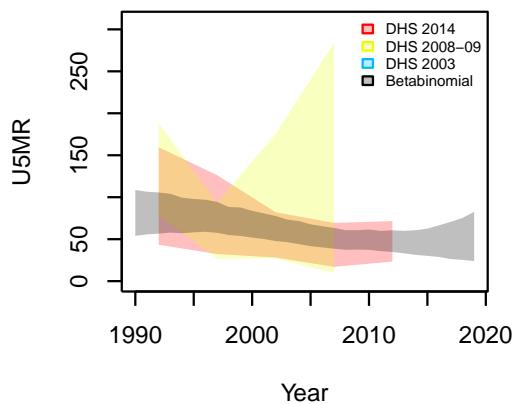
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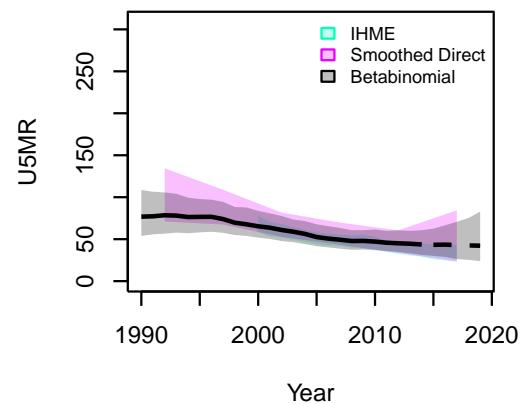
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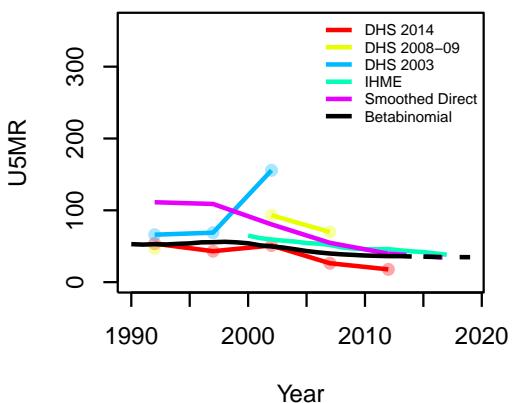
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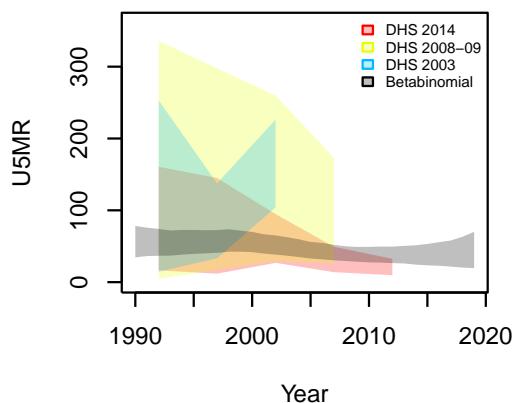
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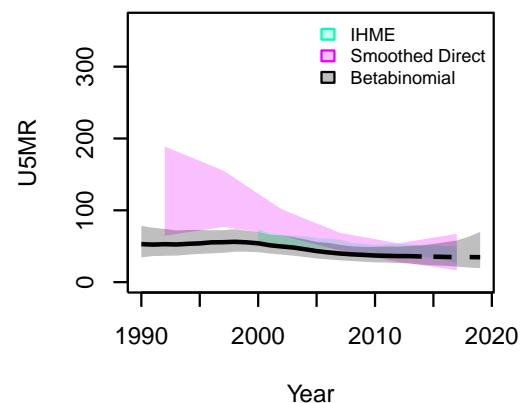
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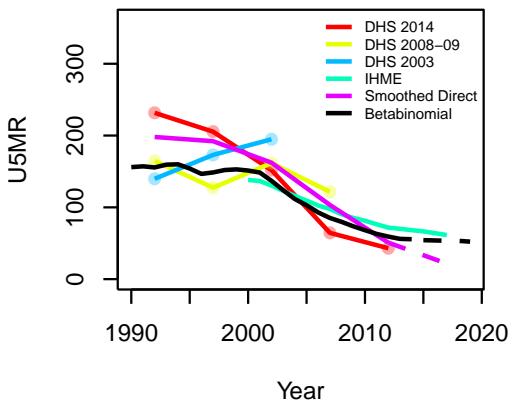
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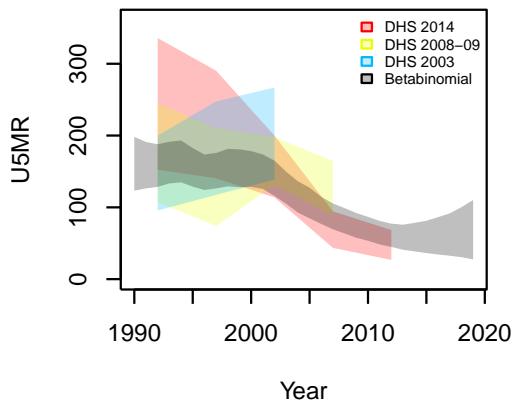
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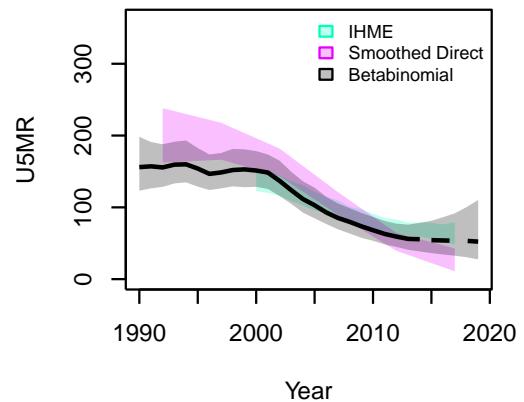
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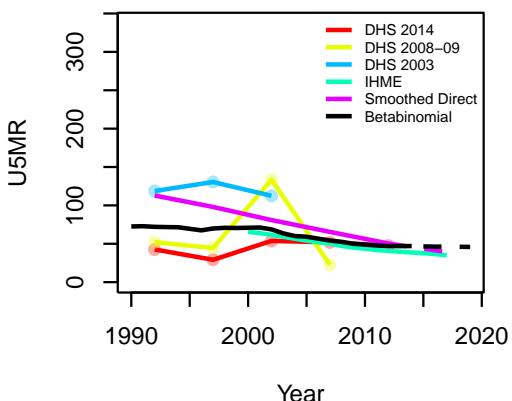
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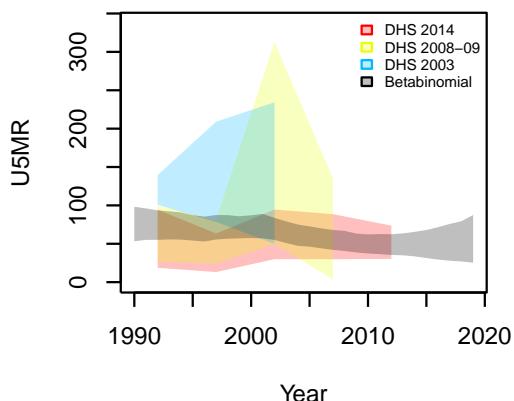
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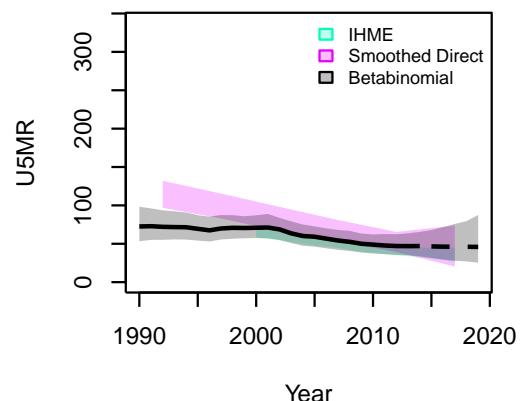
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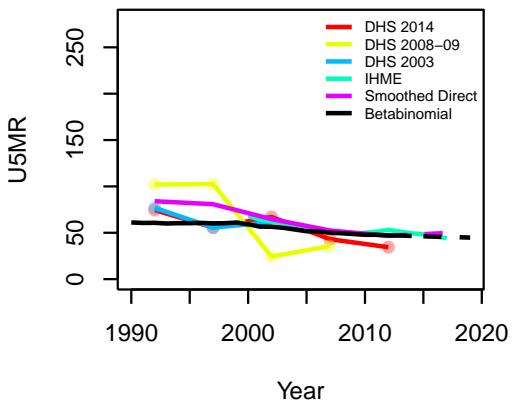
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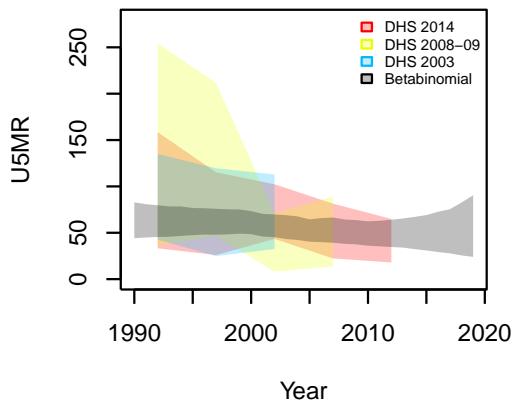
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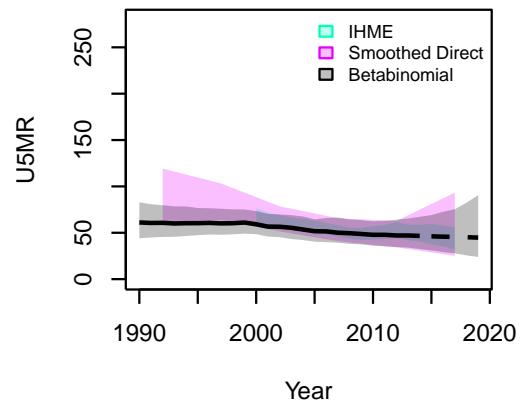
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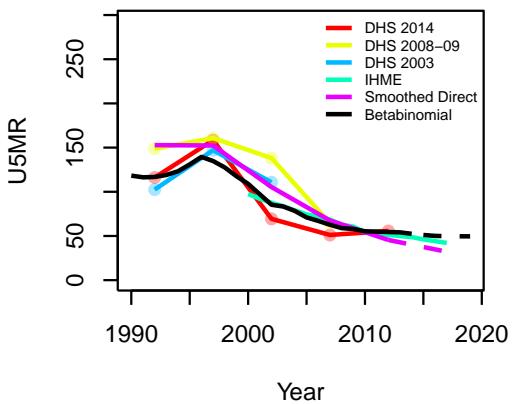
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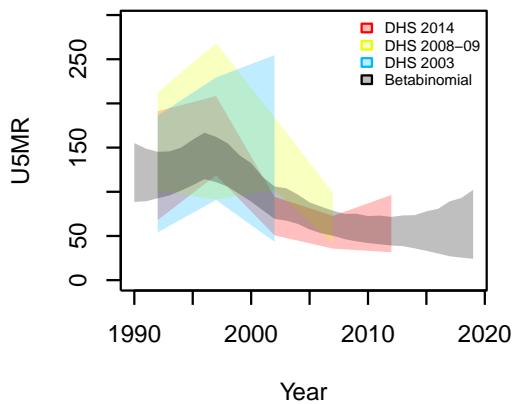
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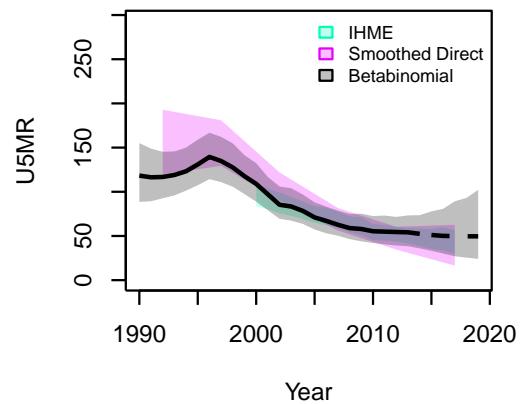
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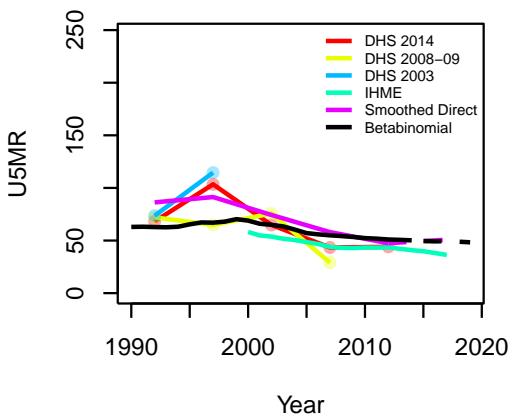
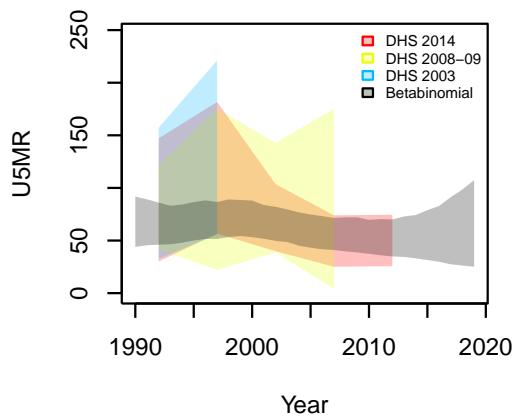
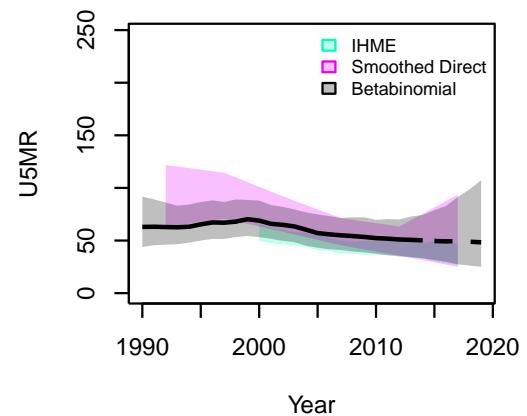
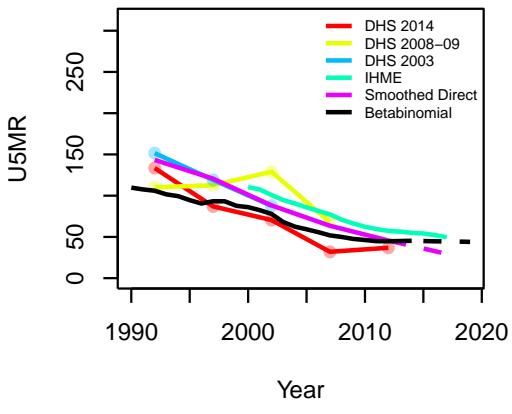
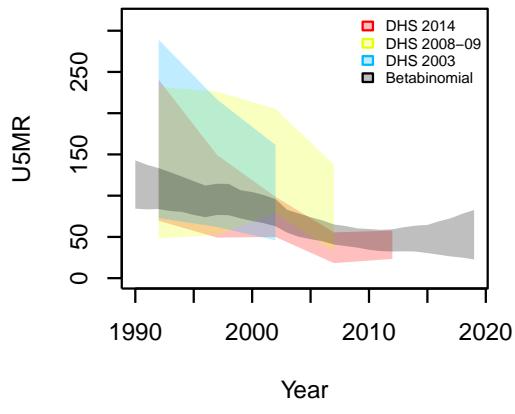
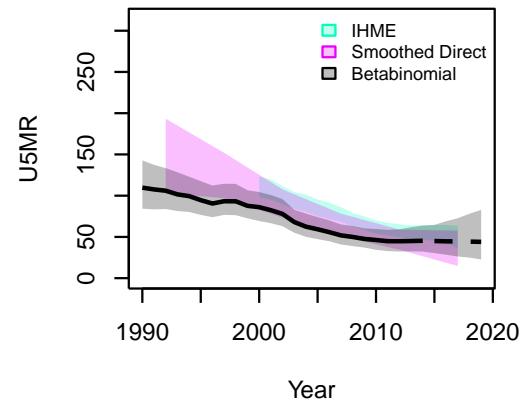


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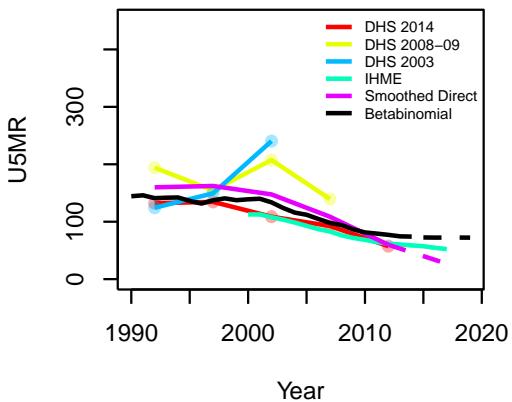


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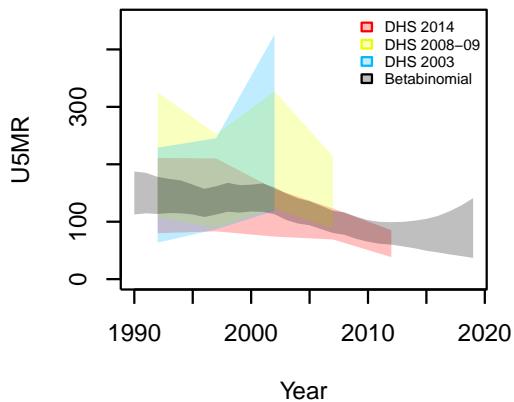


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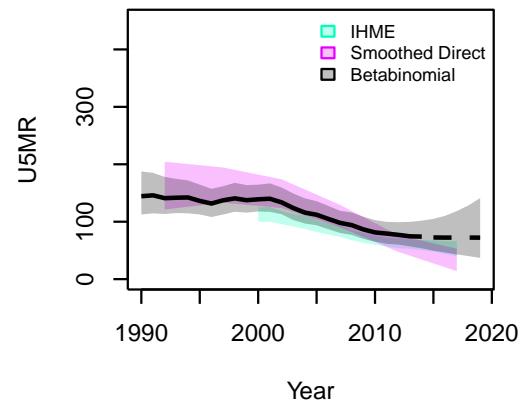
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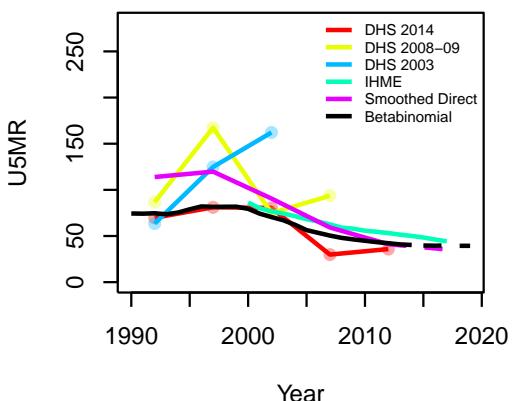
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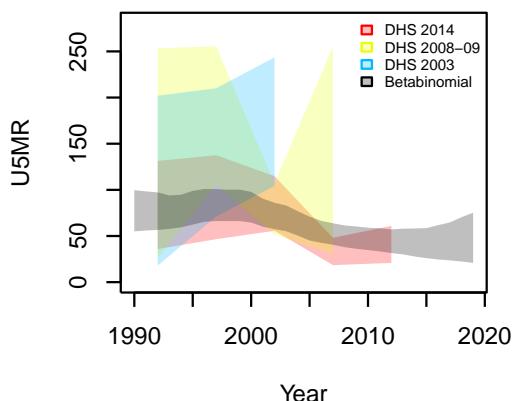
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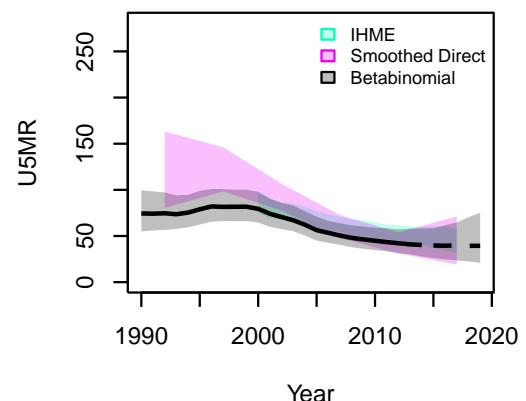
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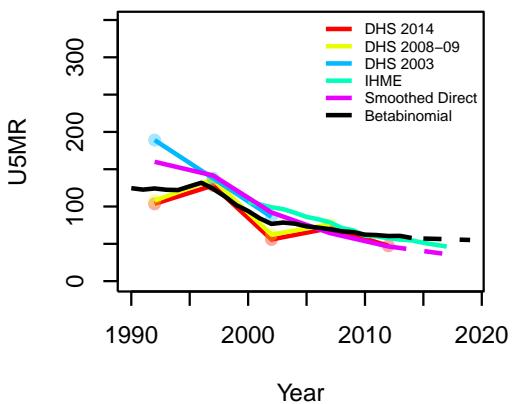
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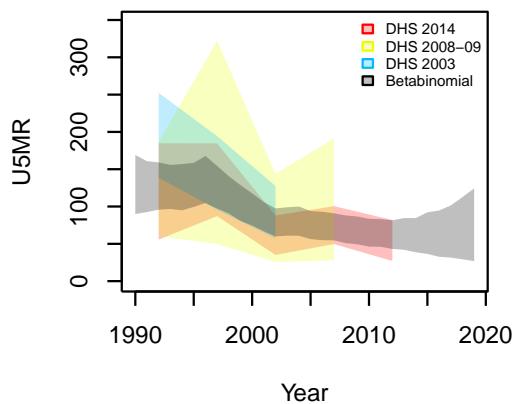
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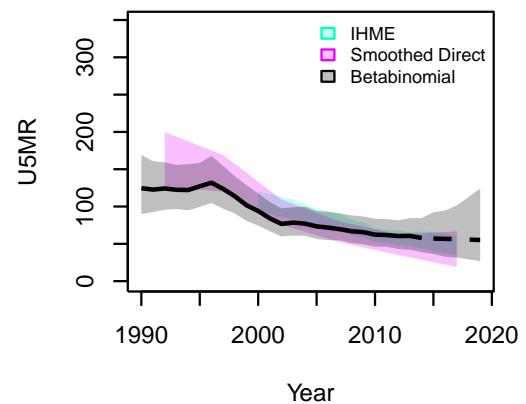
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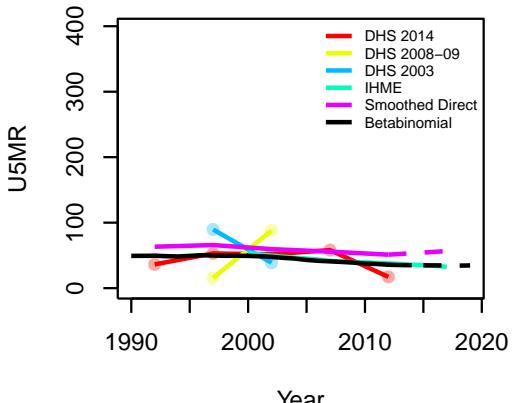
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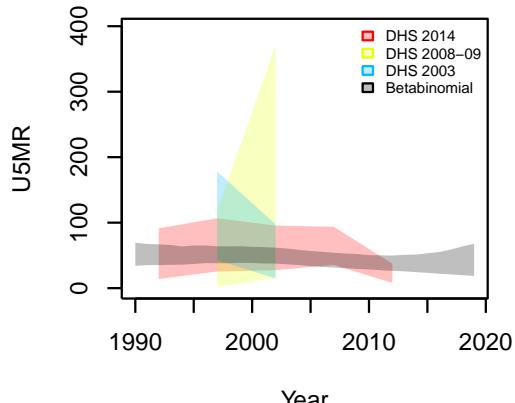
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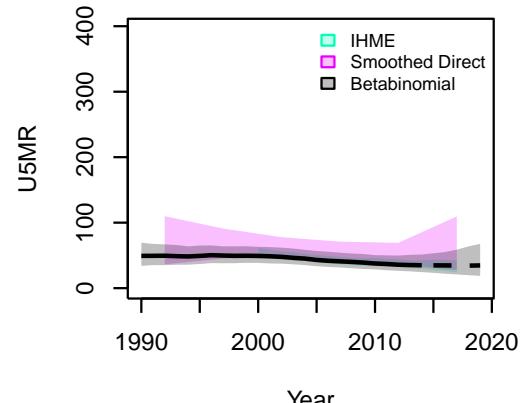
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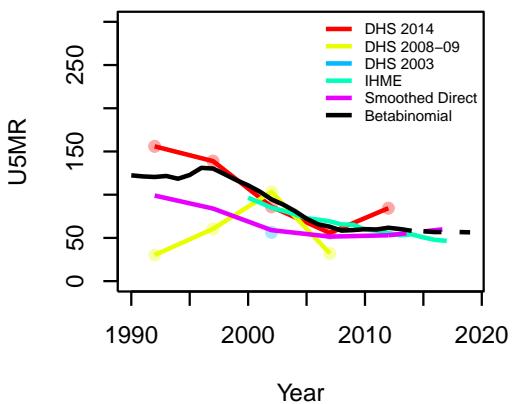
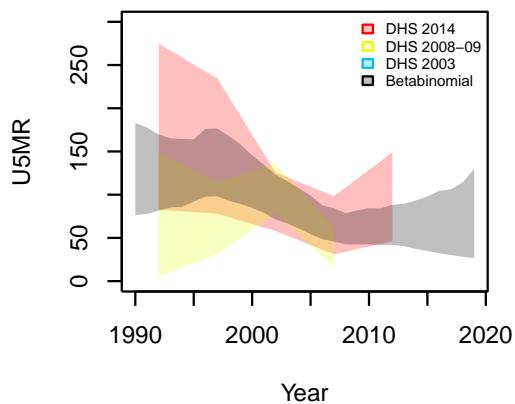
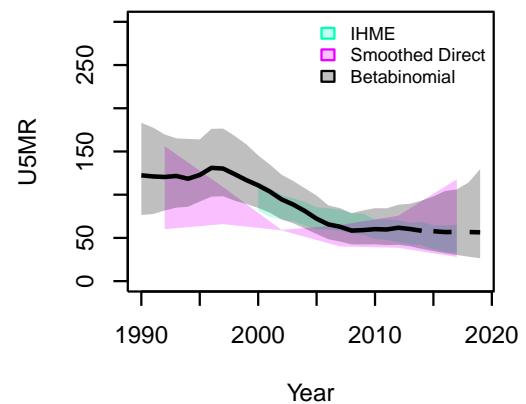
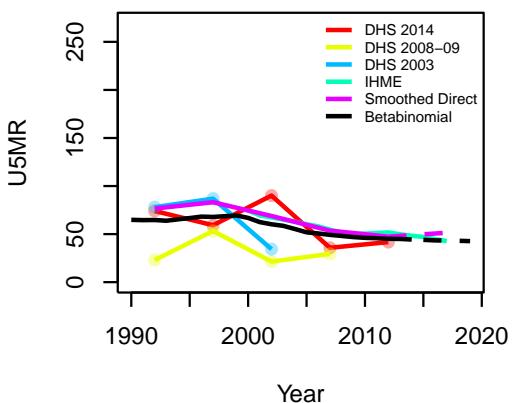
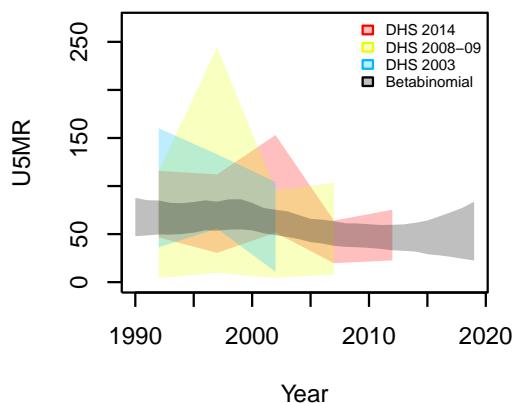
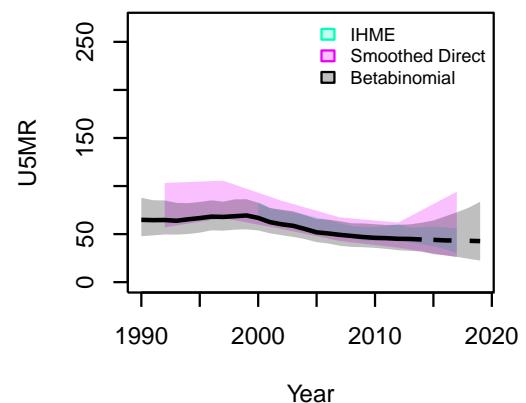


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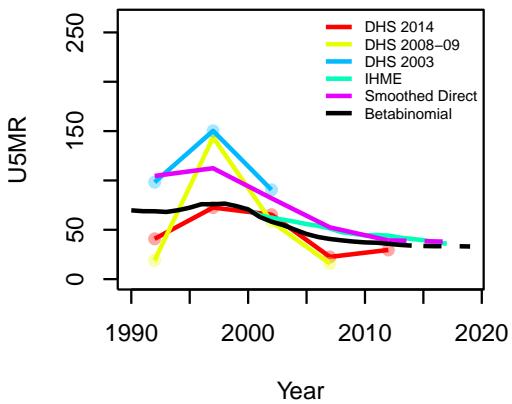


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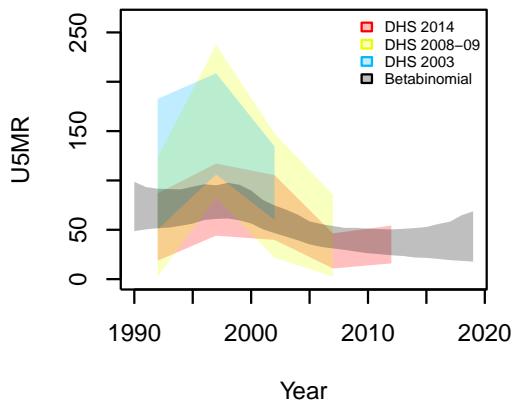


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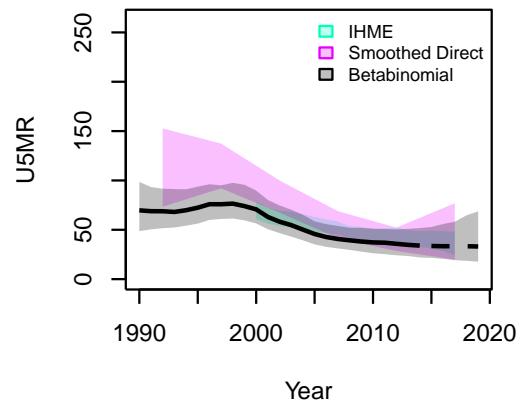
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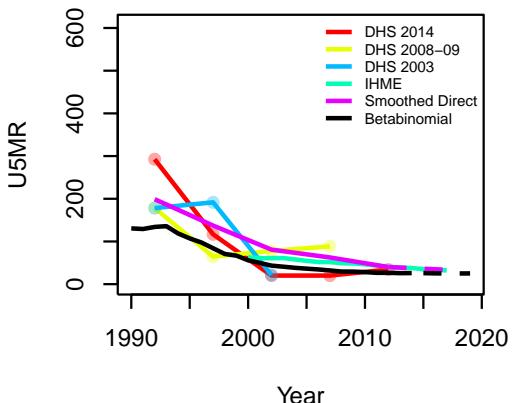
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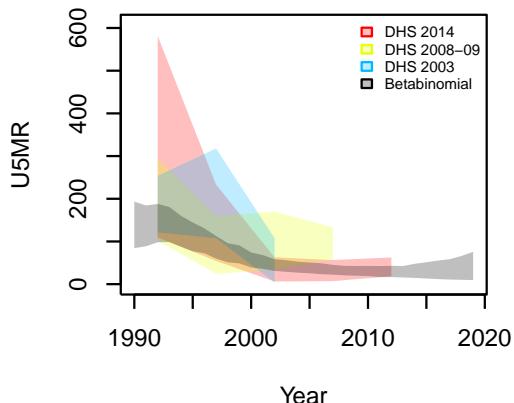
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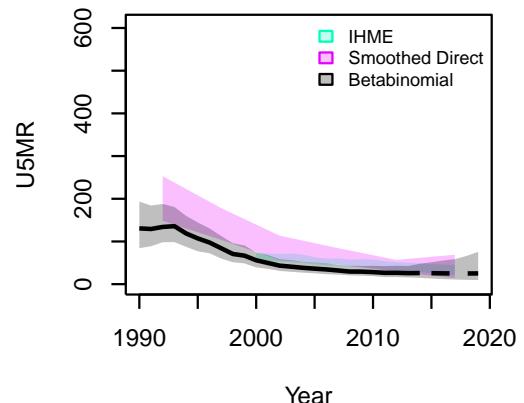
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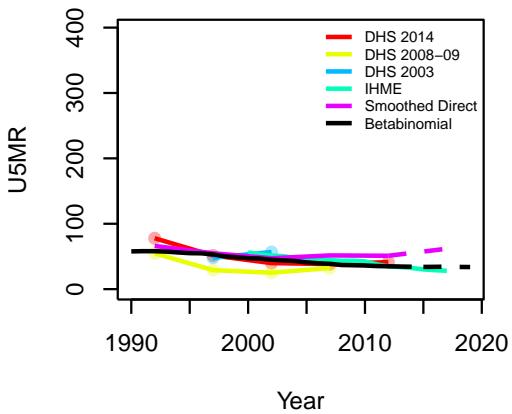
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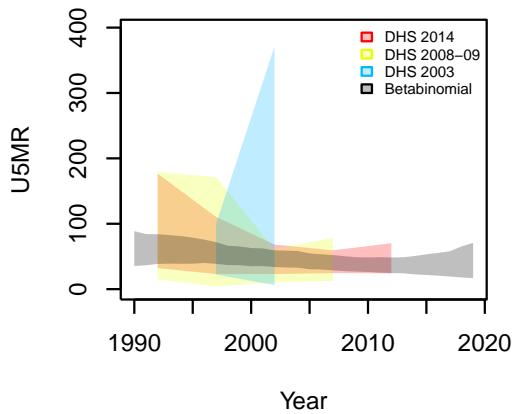
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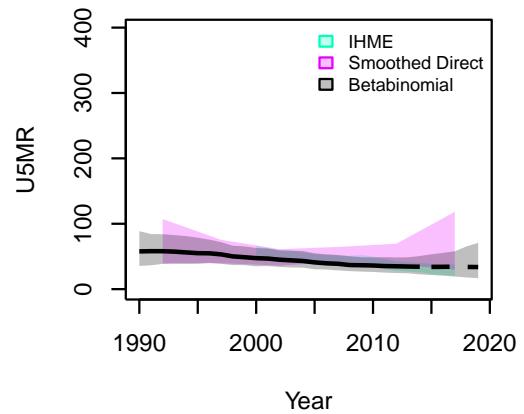
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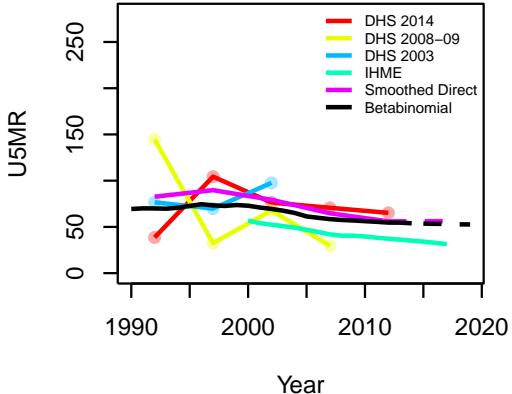
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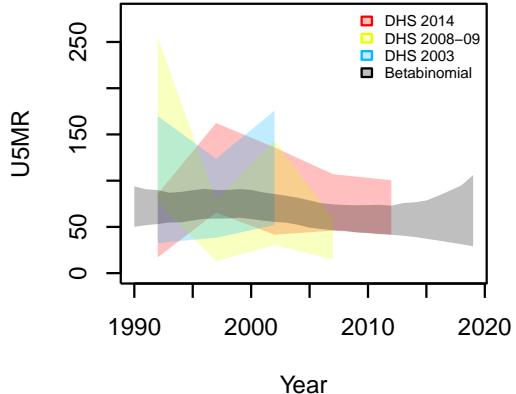
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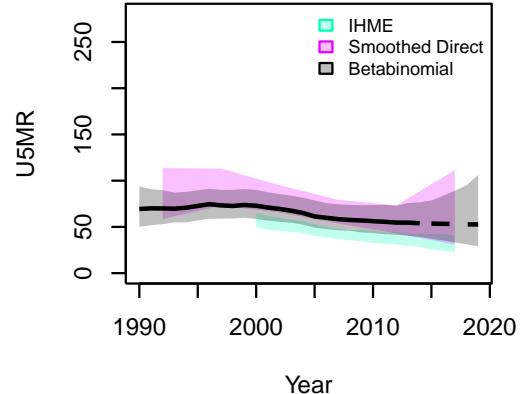
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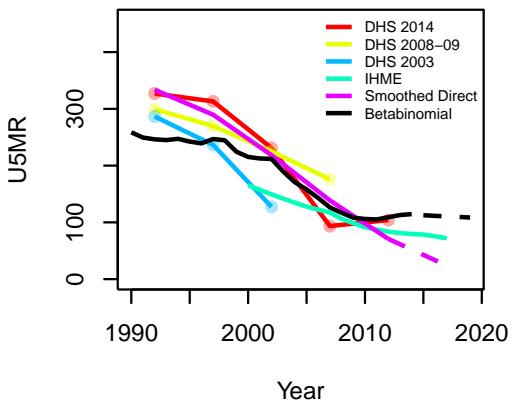
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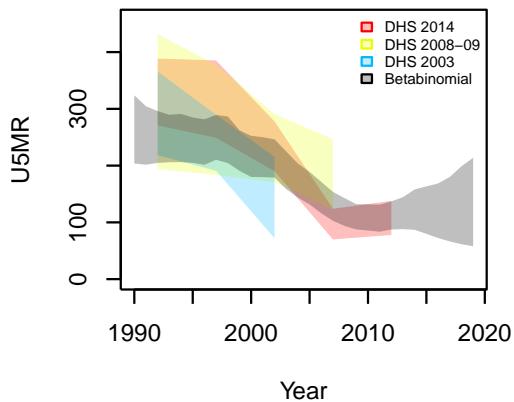
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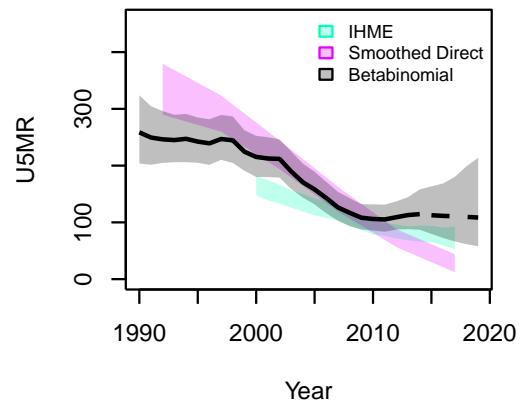
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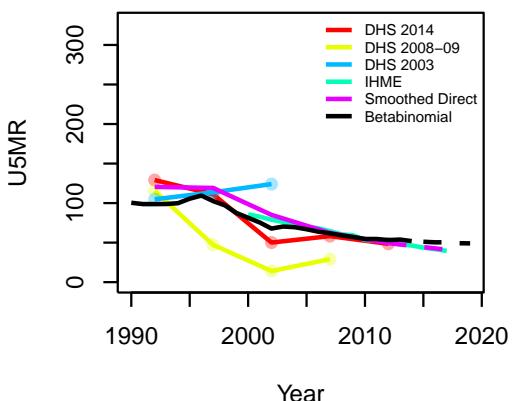
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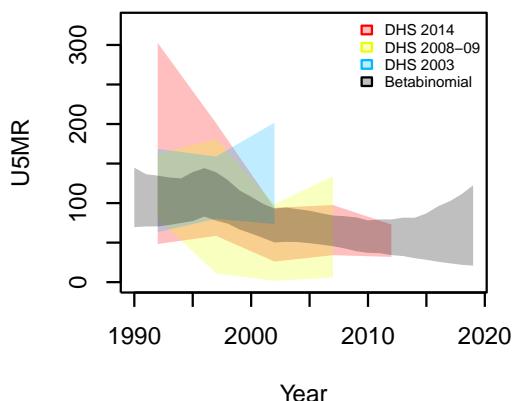
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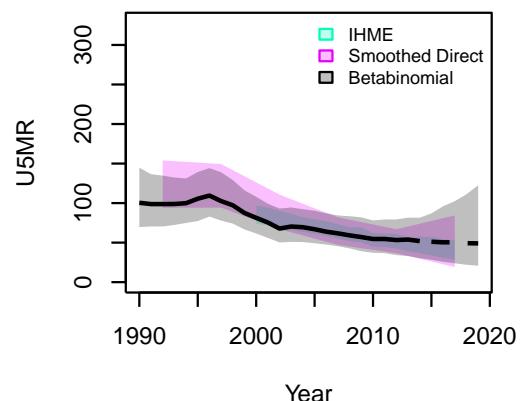
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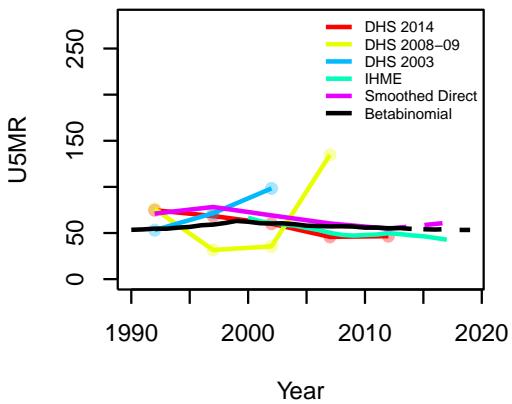
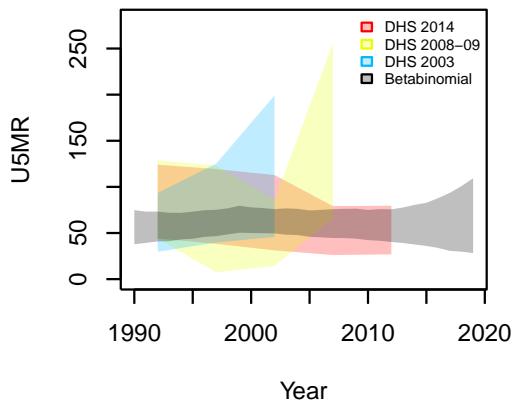
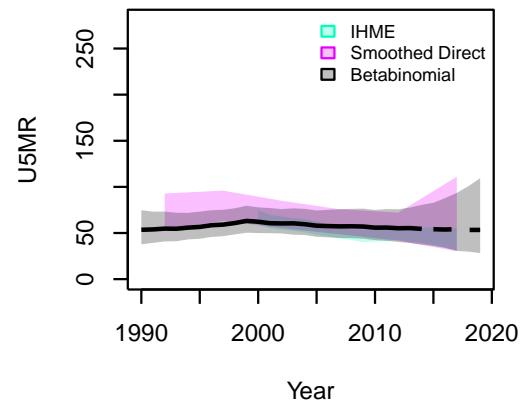
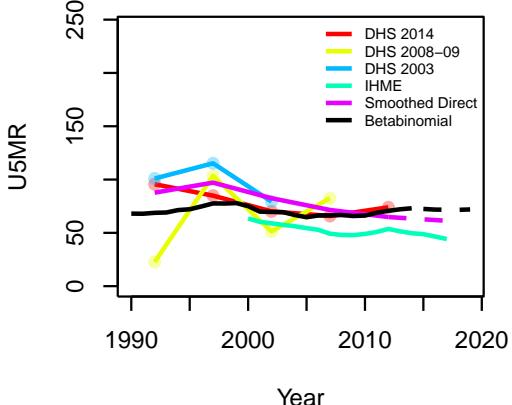
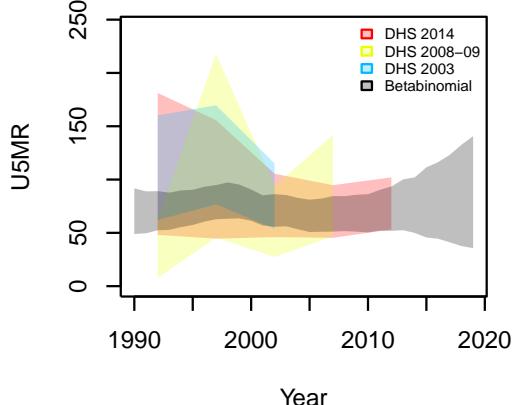
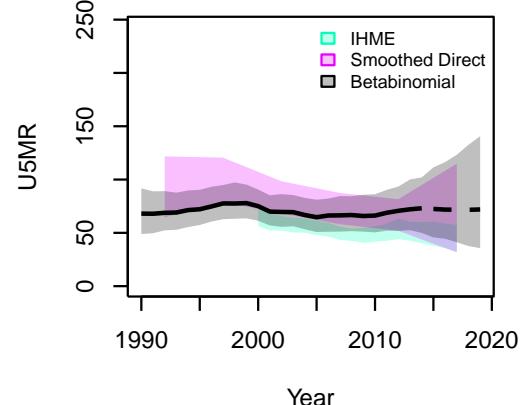


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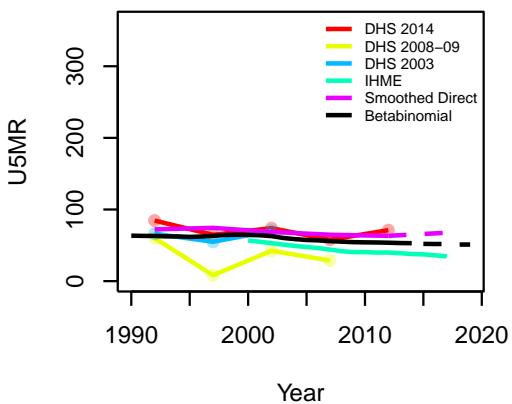


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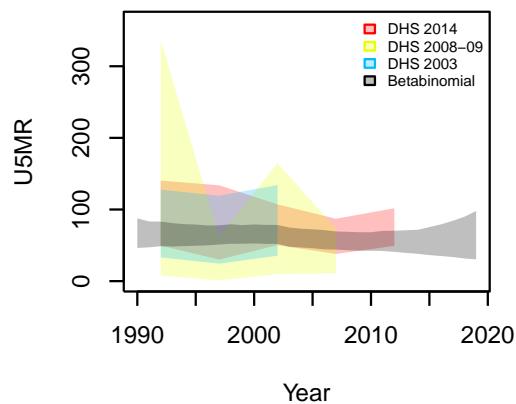


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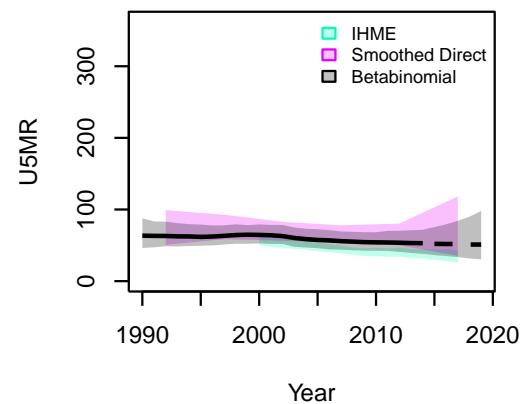
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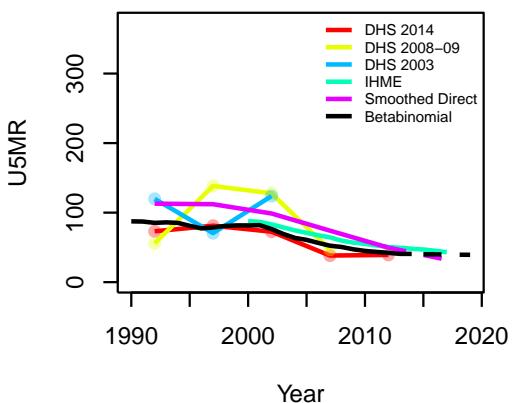
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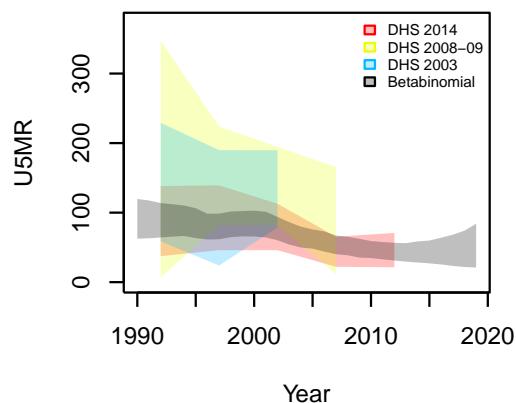
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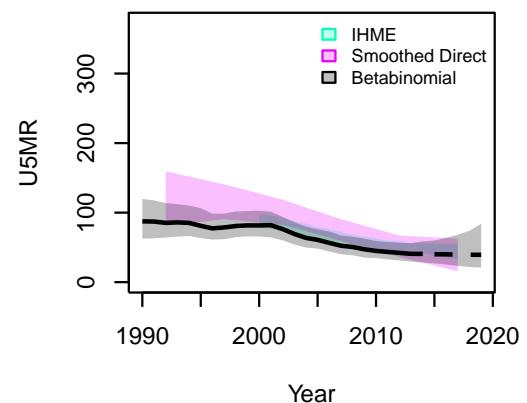
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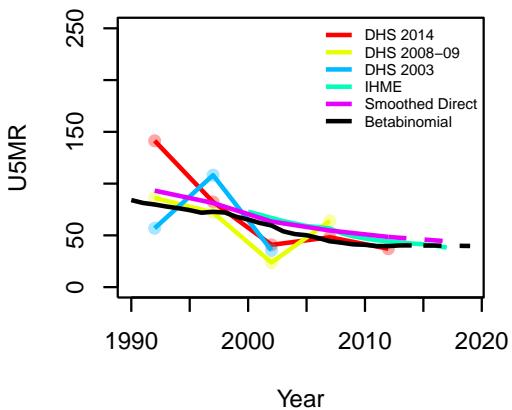
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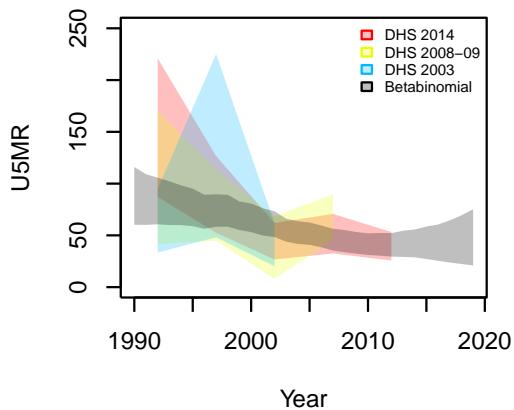
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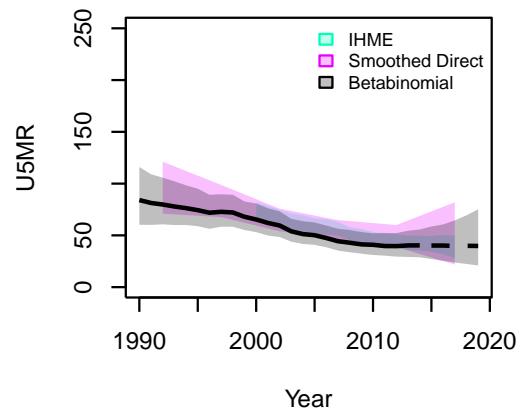
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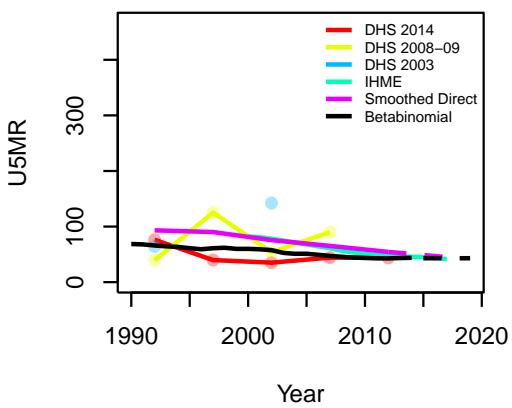
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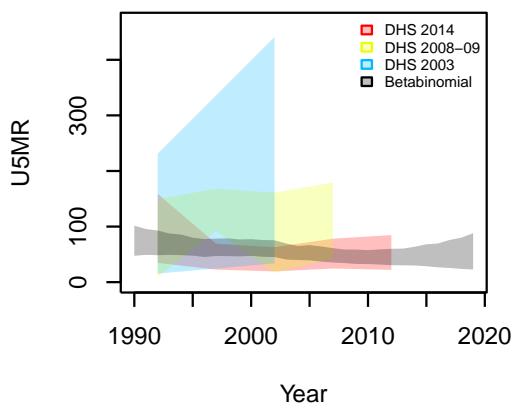
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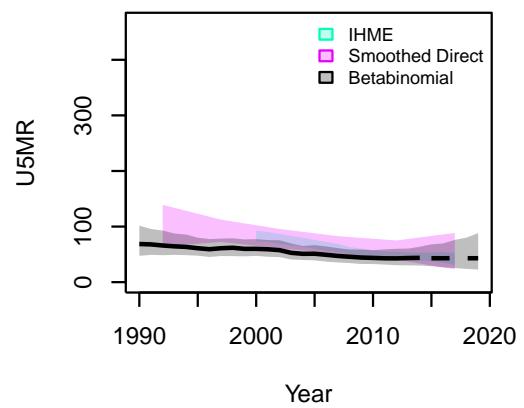
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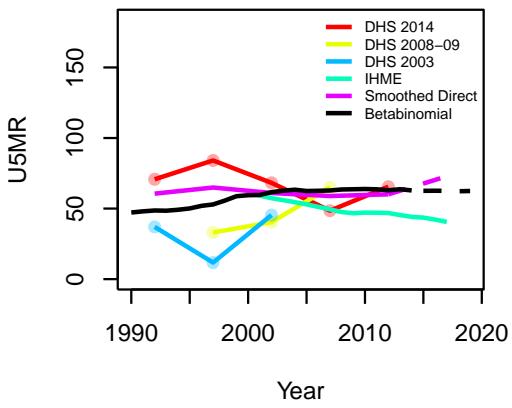
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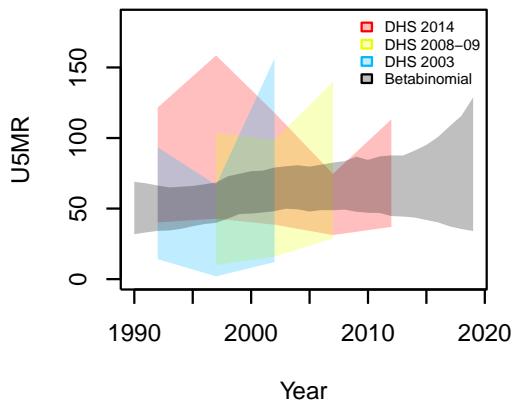
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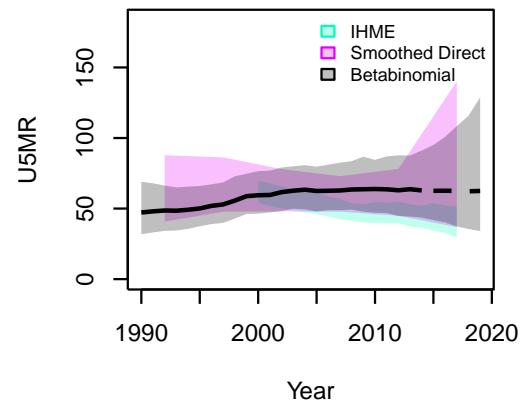
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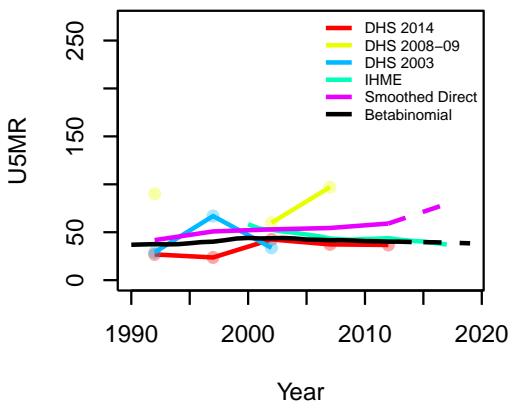
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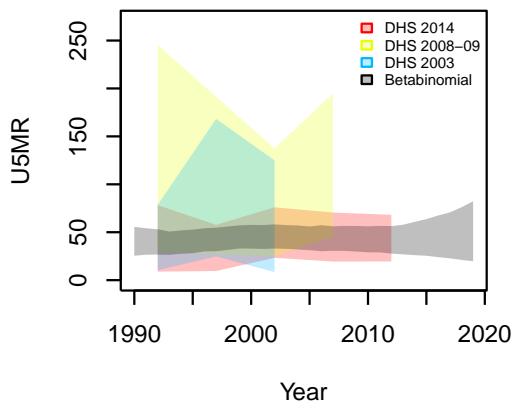
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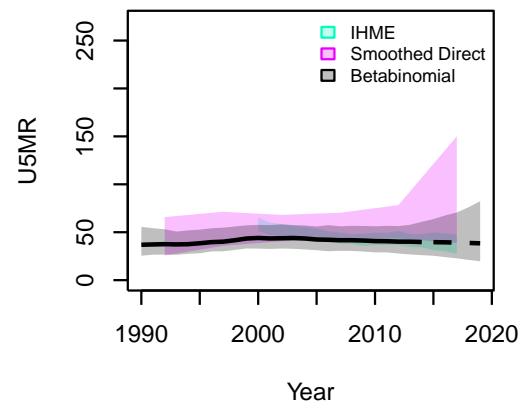
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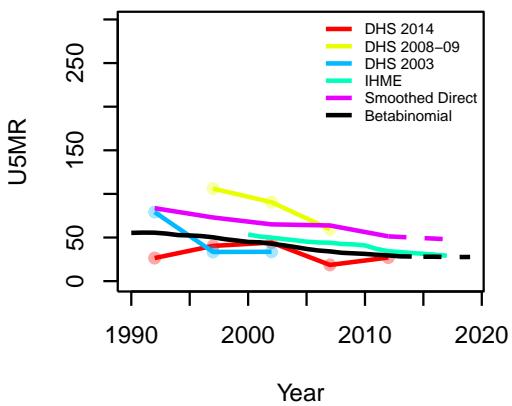
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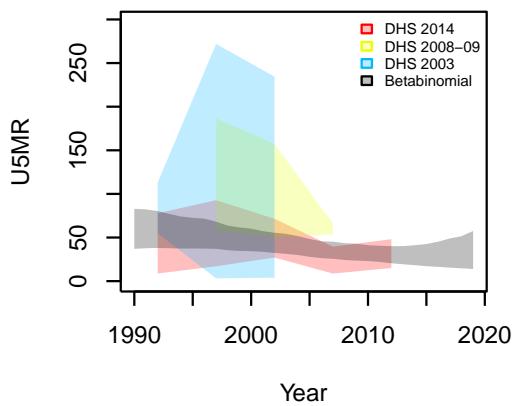
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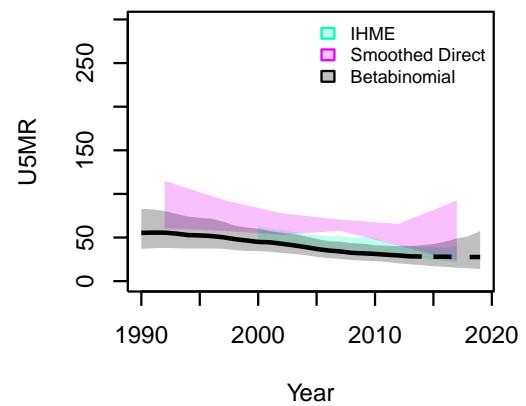
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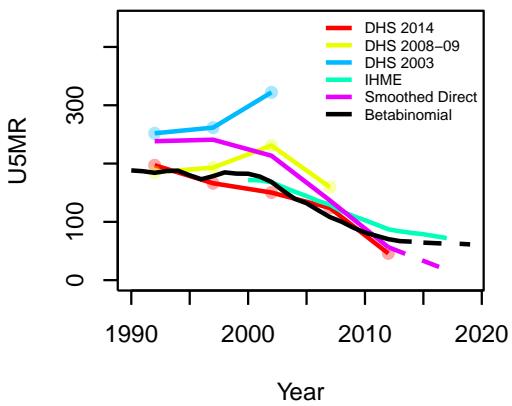
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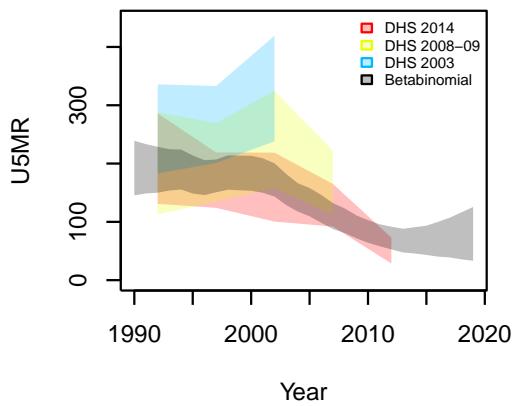
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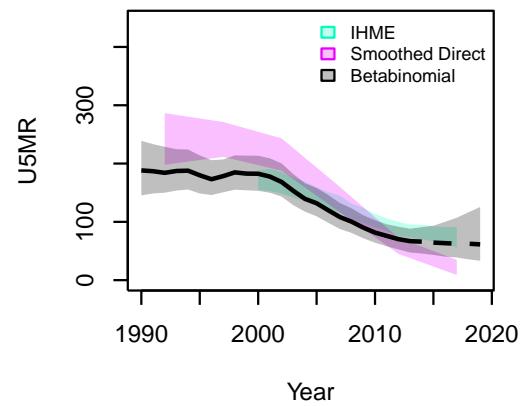
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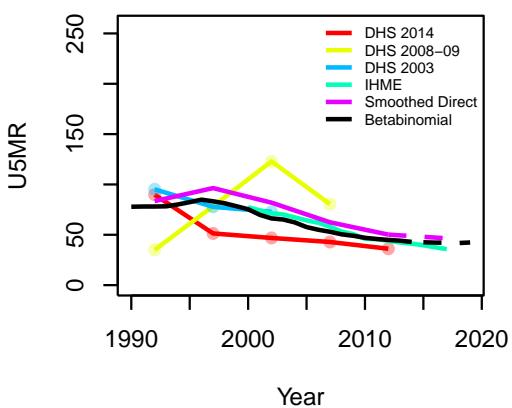
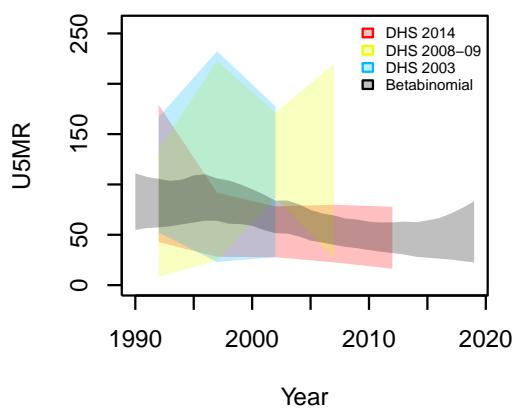
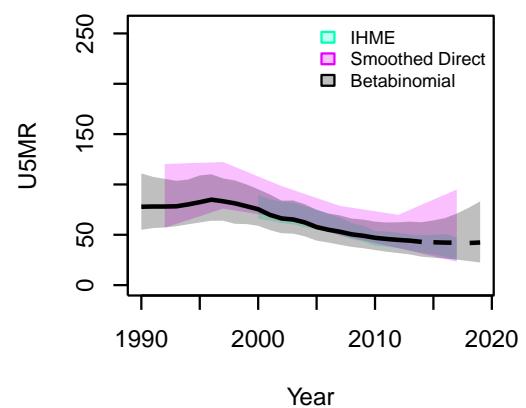
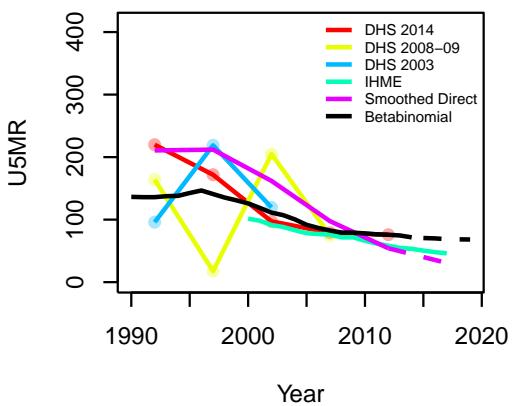
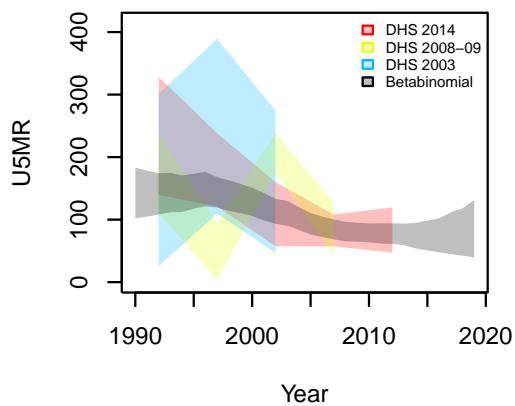
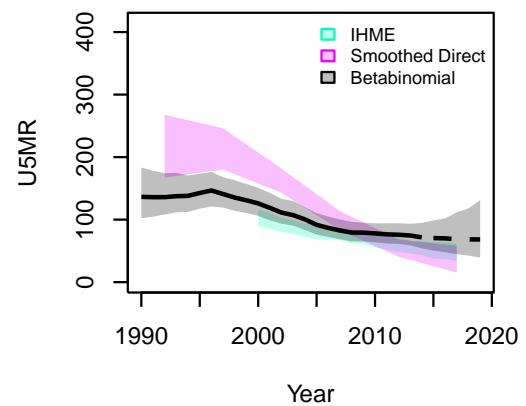


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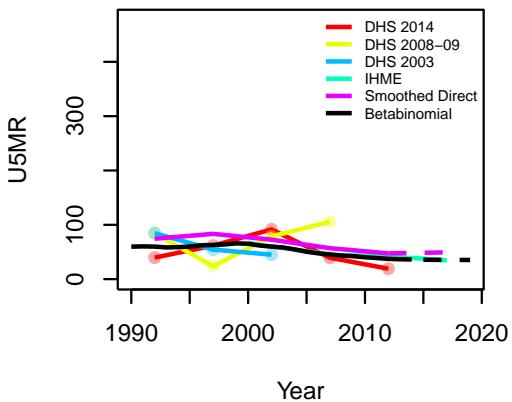


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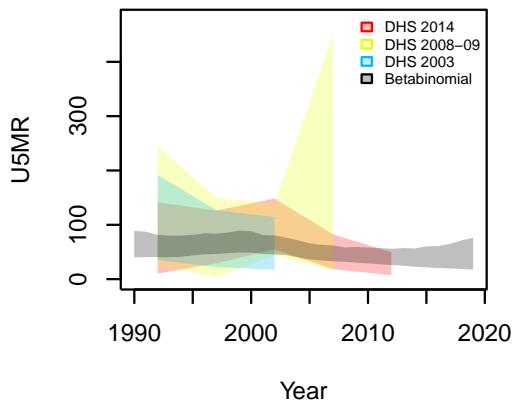


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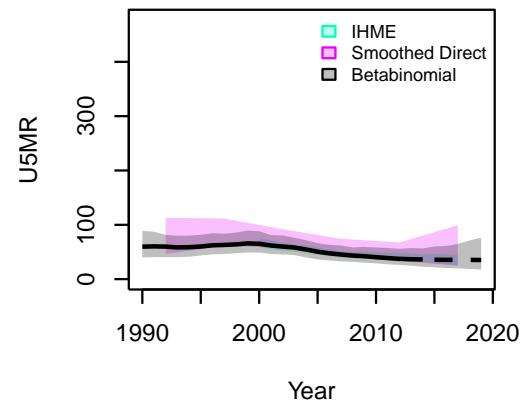
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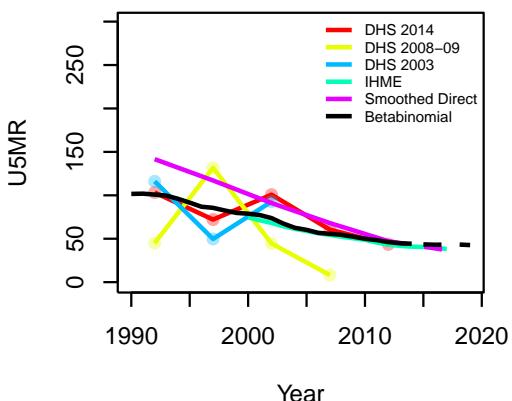
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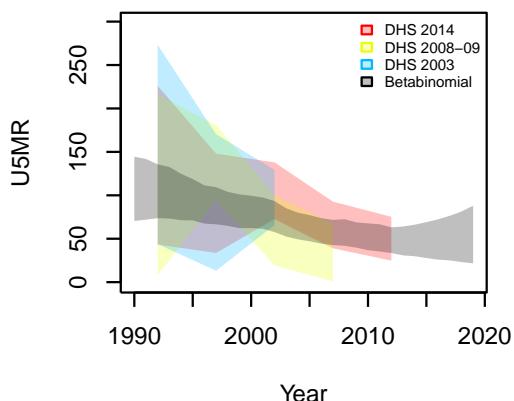
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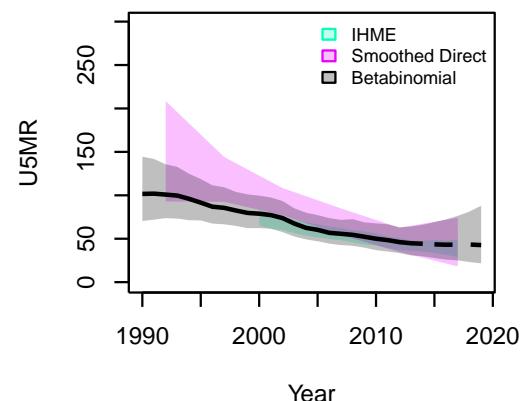
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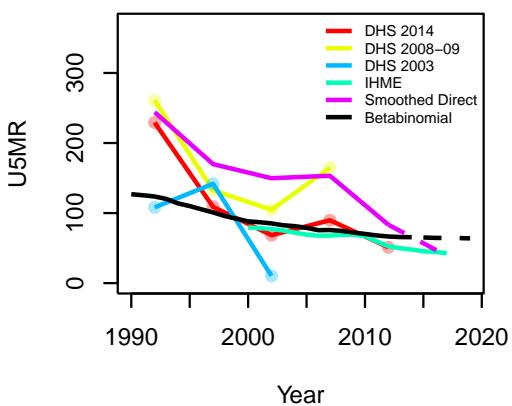
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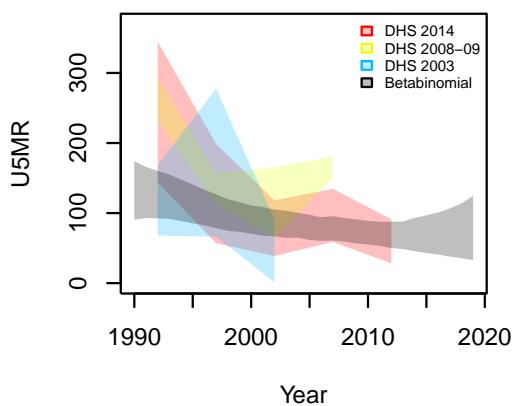
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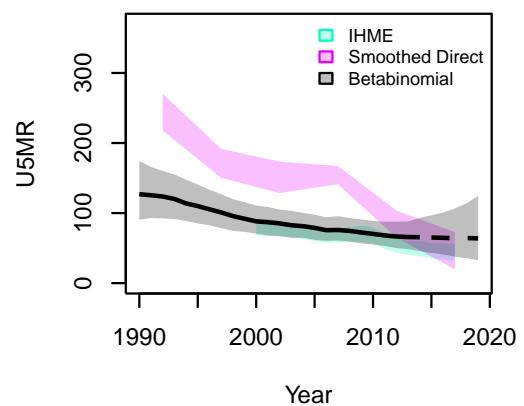
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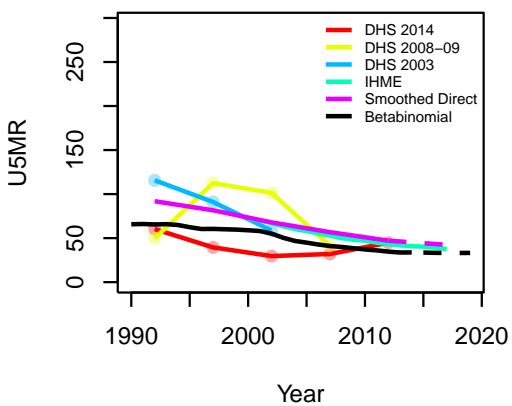
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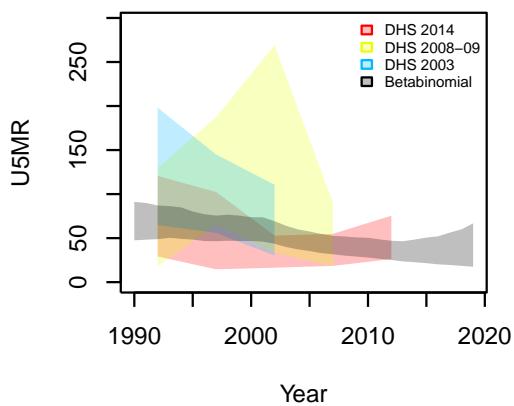
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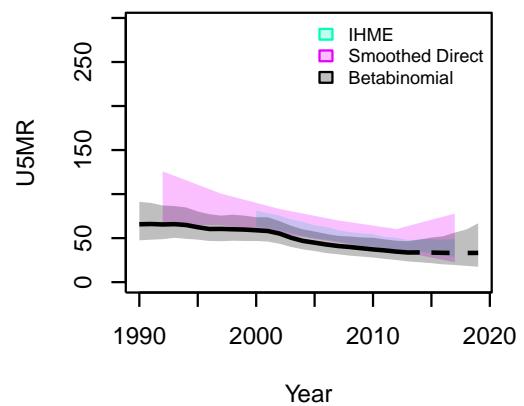
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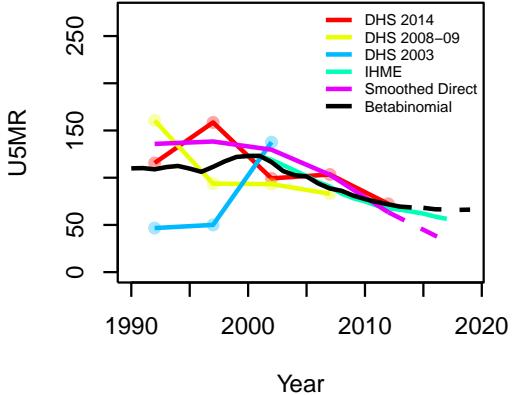
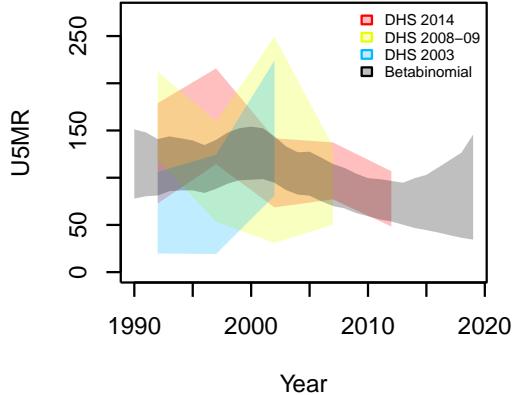
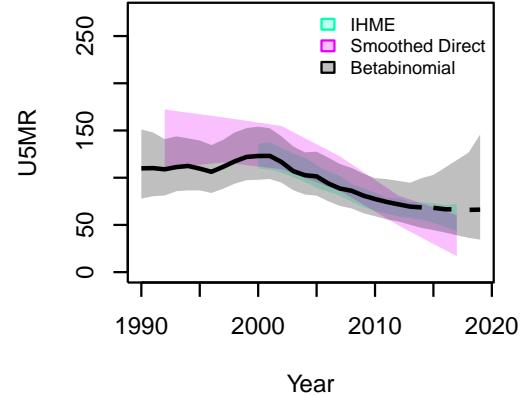
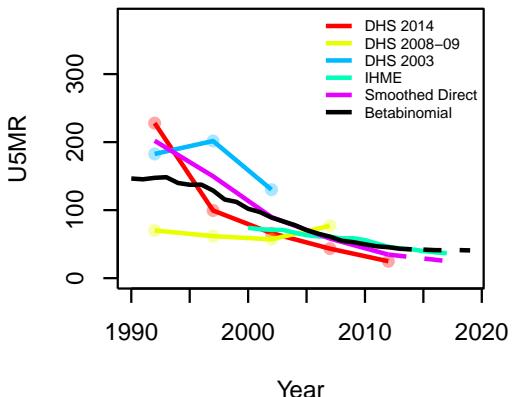
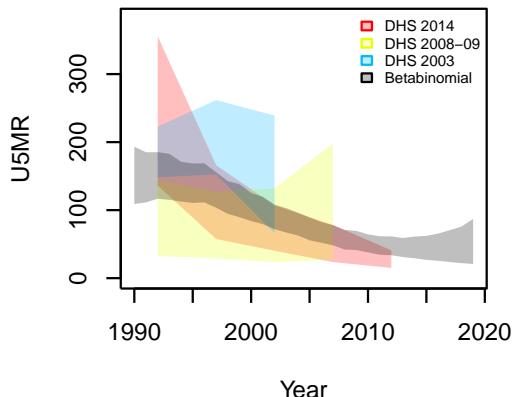
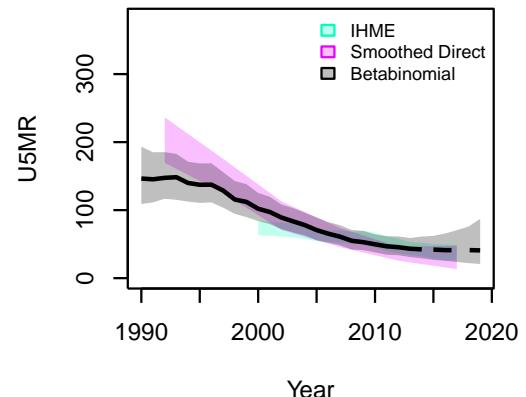


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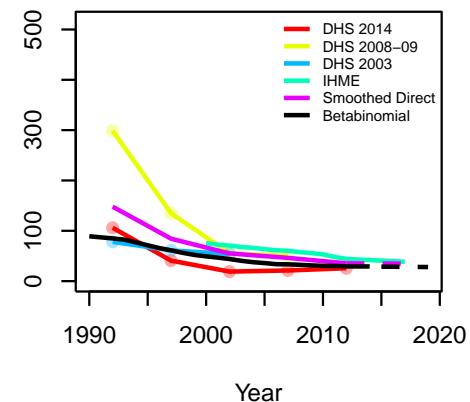


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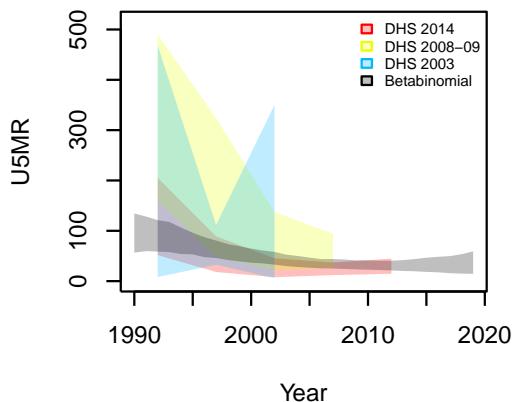


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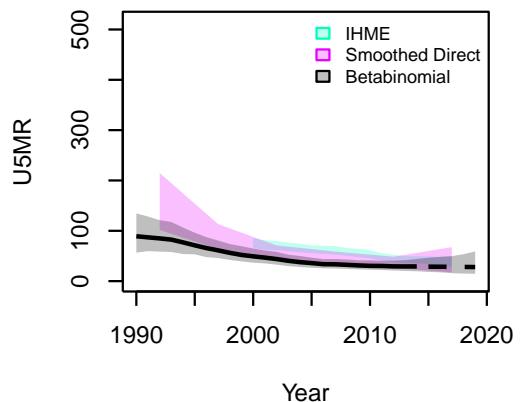
West Pokot



West Pokot



West Pokot



4 National Figures and Results

	Median	Interval	Median-	Bench	Interval
0	27.70	(25.1,30.6)	26.80	(24.4,29.5)	
1-11	2.20	(2,2.5)	2.20	(2,2.4)	
12-23	0.90	(0.8,1.1)	0.90	(0.8,1)	
24-35	0.60	(0.5,0.6)	0.50	(0.5,0.6)	
36-47	0.40	(0.4,0.5)	0.40	(0.4,0.5)	
48-59	0.30	(0.2,0.3)	0.30	(0.2,0.3)	

Table 5: Monthly hazards in terms of 1000 children by age band for national, unstratified model for Kenya.

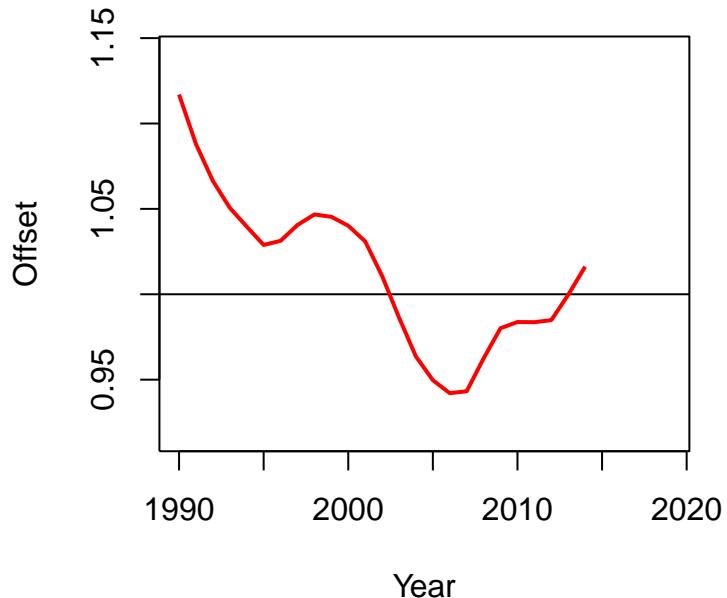


Figure 7: Benchmark offsets: $\text{BENCH}(t) = \text{U5MR}^*(t)/\text{U5MR}(t)$ where $\text{U5MR}^*(t)$ is modeled estimate and $\text{U5MR}(t)$ is UN-IGME estimate.

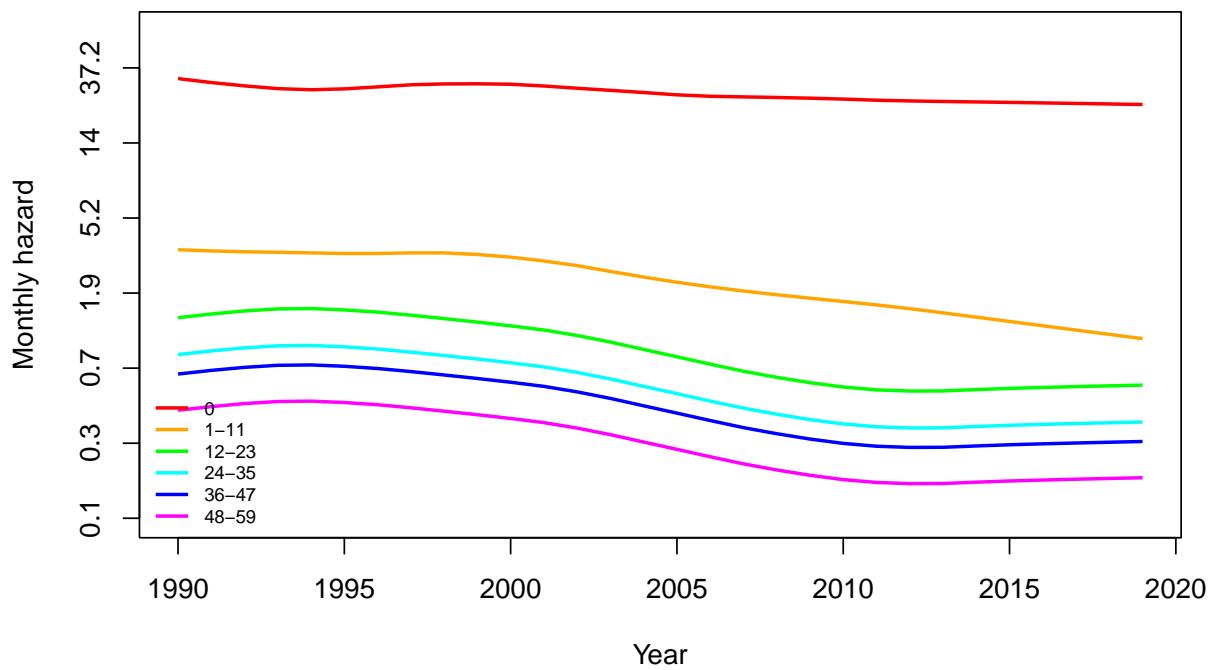


Figure 8: Monthly hazards of death in terms of U5MR (number deaths per 1000 children) by agebands.

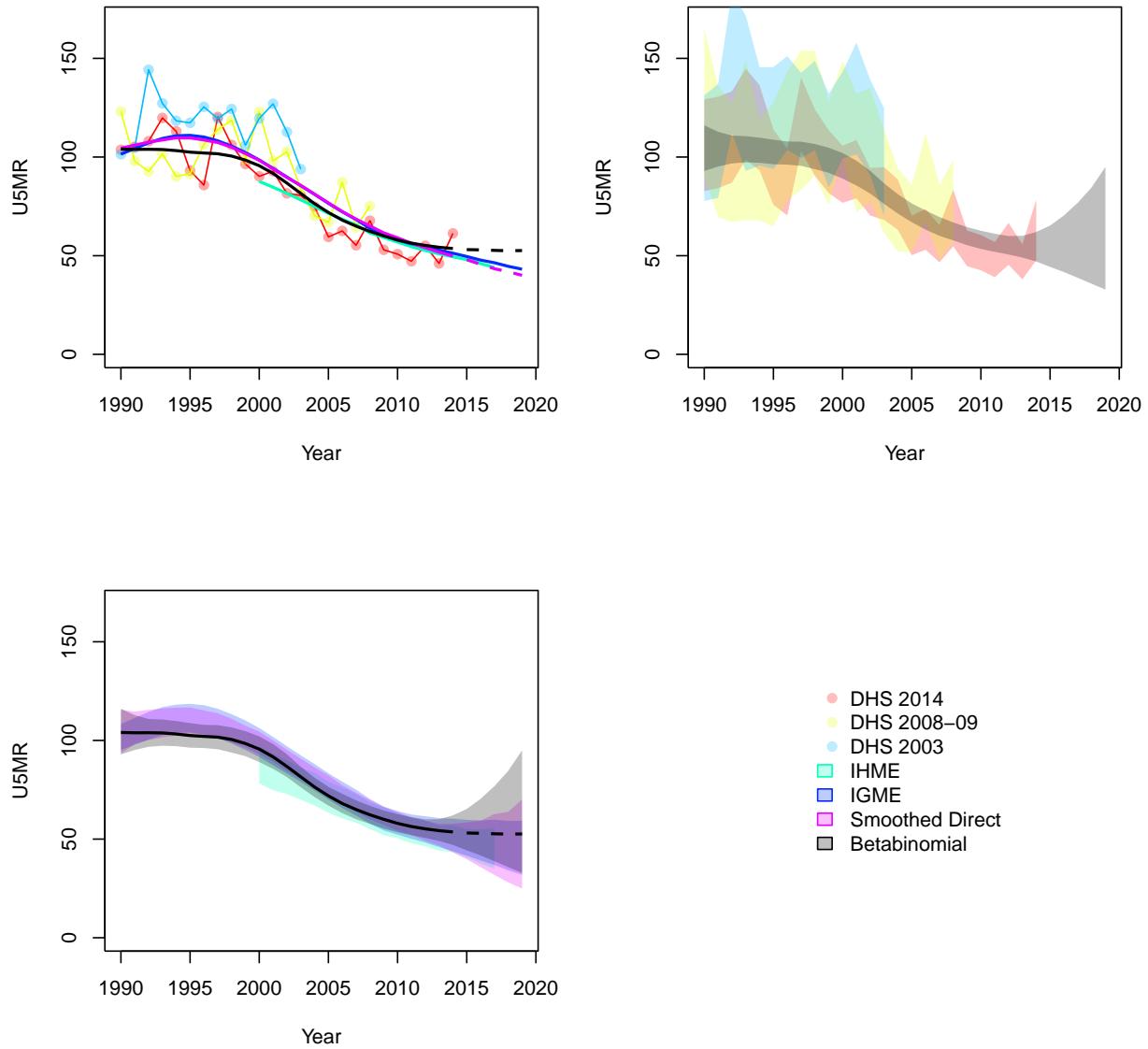


Figure 9: Benchmarked U5MR rates per 1000 live births. Top: DHS direct estimates with national trends from IHME GBD, UN-IGME, Smoothed Direct and Betabinomial estimates. Middle: 95% uncertainty intervals for DHS data. Bottom: IHME GBD, UN-IGME, Smoothed Direct and Betabinomial estimates with for the unstratified model. 95% uncertainty intervals