

Country Summary: Nigeria

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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.

Nigeria has 37 Admin 1 areas and 774 Admin 2 areas.

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

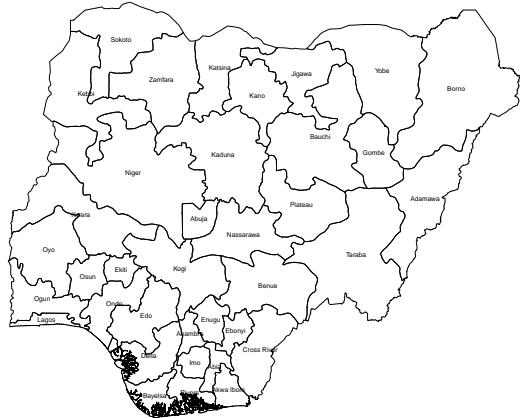
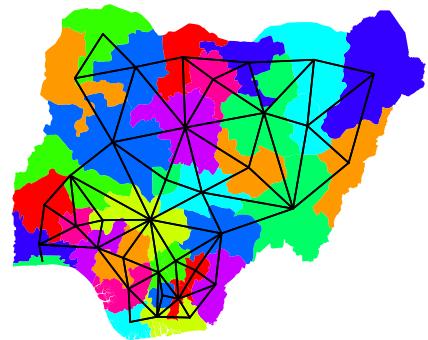


Figure 1: Top: The neighborhood structure of Admin 1 areas. Bottom: The names of Admin 1 areas.

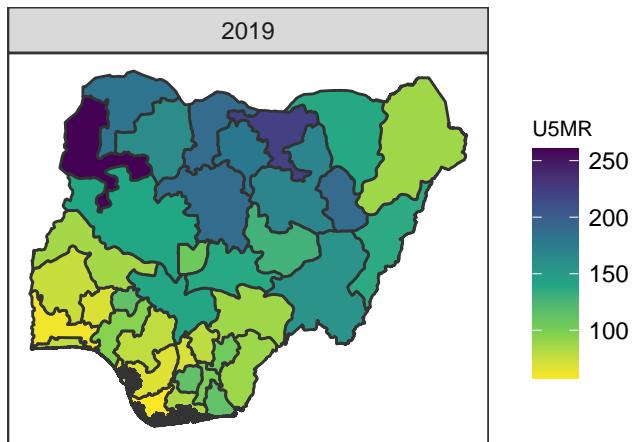
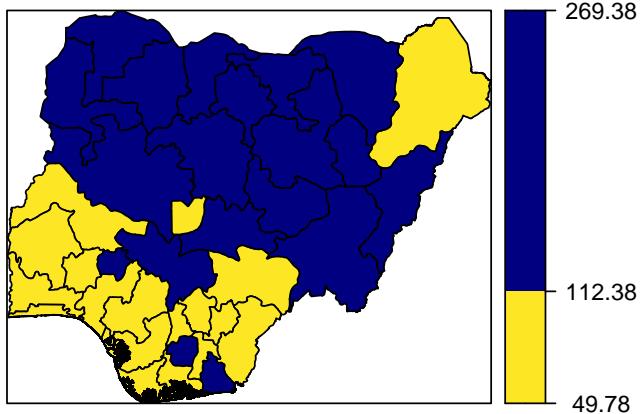


Figure 2: Median estimates of U5MR (deaths per 1000 children) in 2019.

ATCP = 0.91



ATCP = 0.81

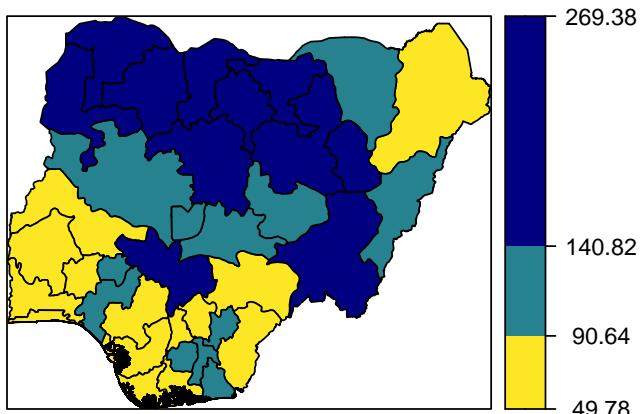


Figure 3: Expression of uncertainty of U5MR (deaths per 1000 children) based on the average true classification probability (ATCP) in 2019.

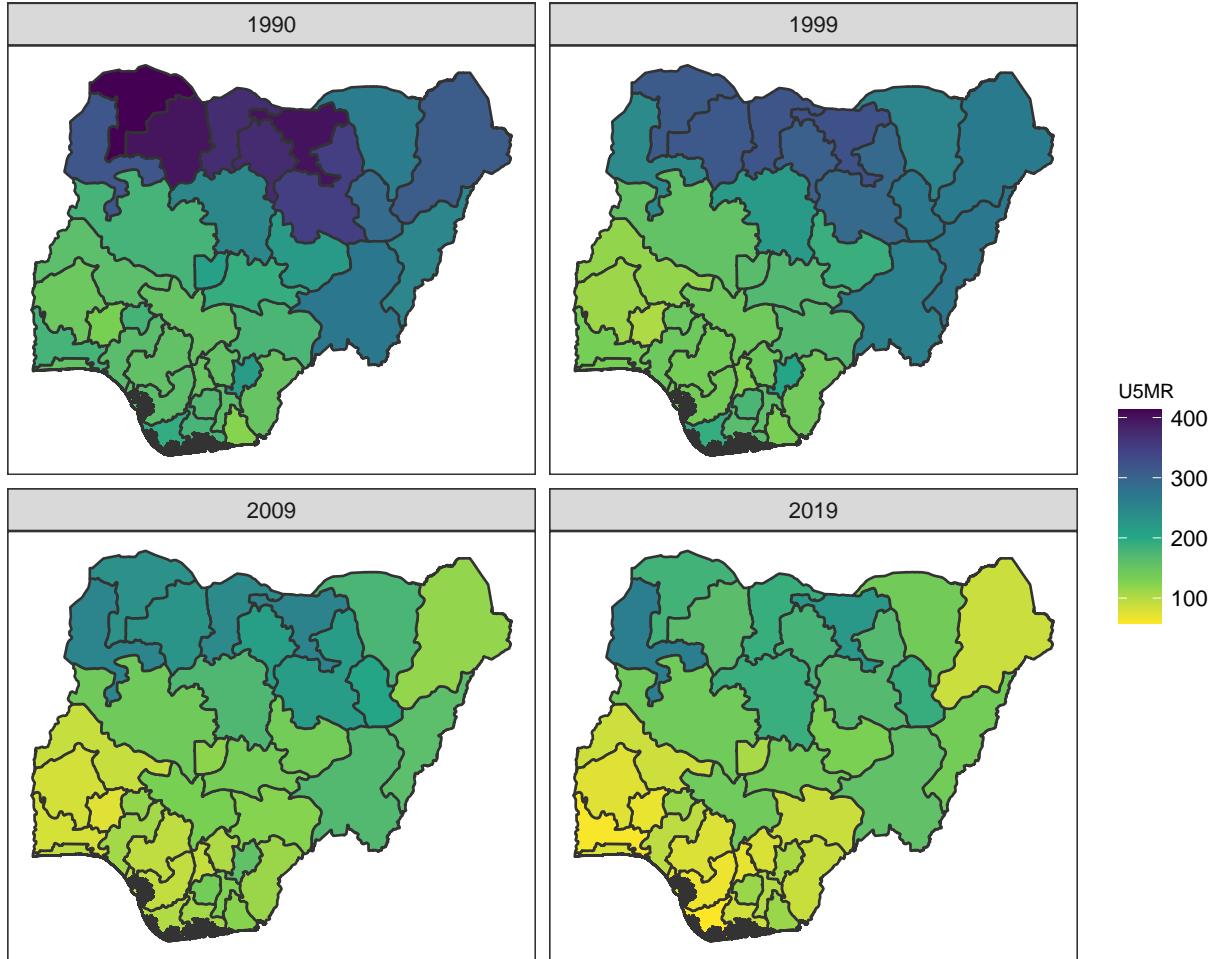
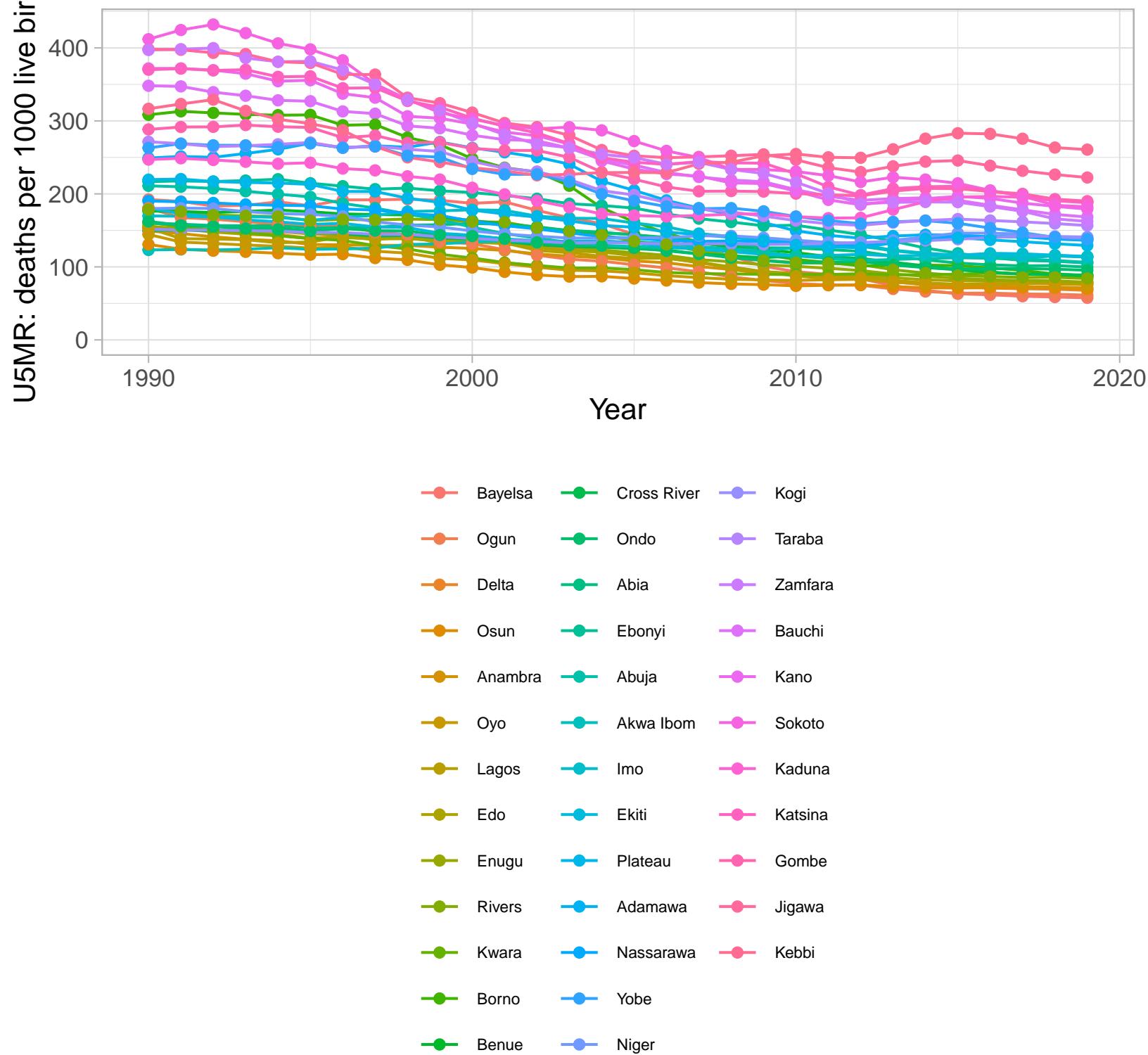


Figure 4: Median estimates for selected years.

Nigeria



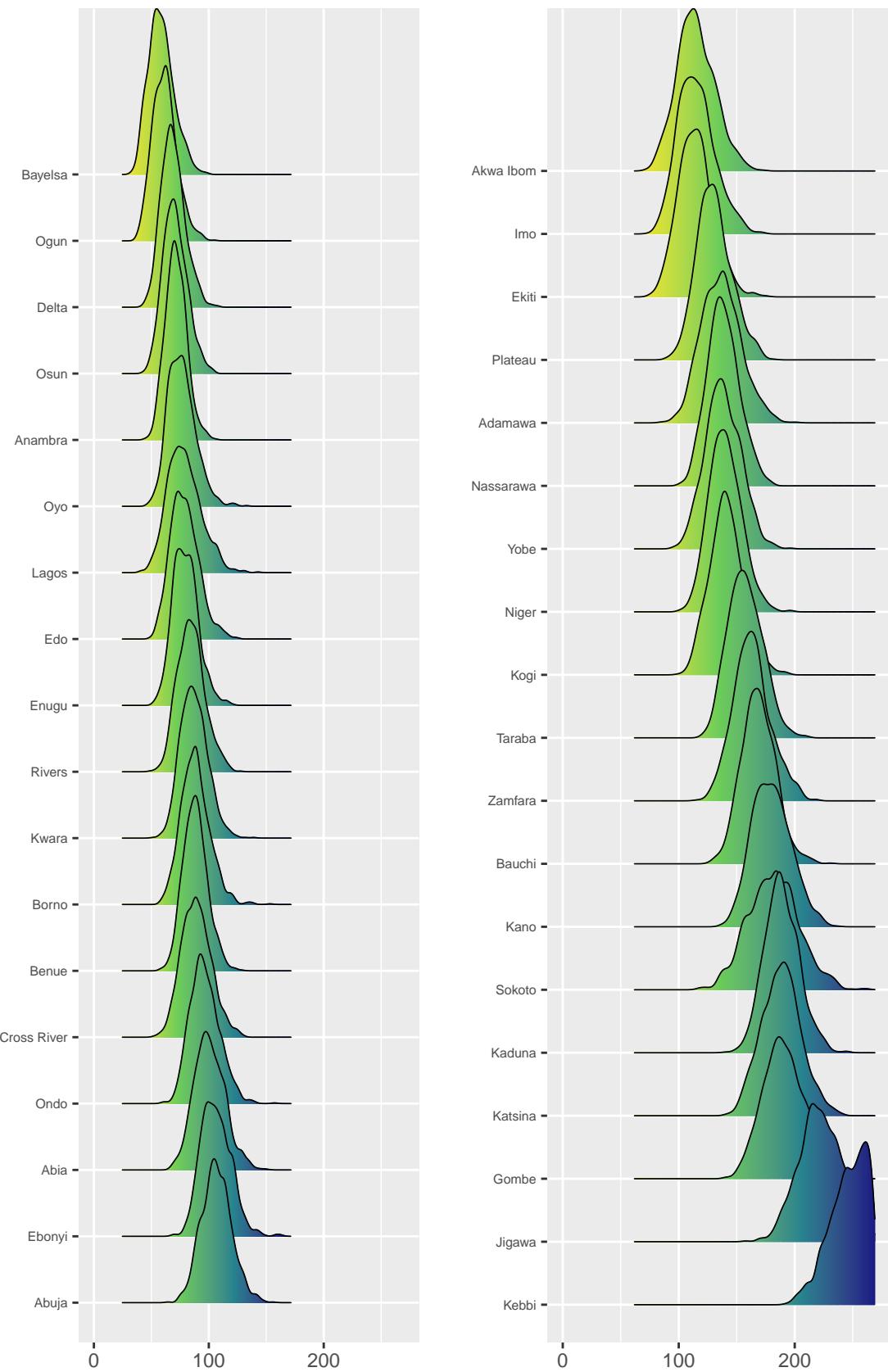


Figure 5: Posterior distributions of U5MR (deaths per 1000 children) in 2019. Areas are ordered by median estimated U5MR in 2019. ⁷

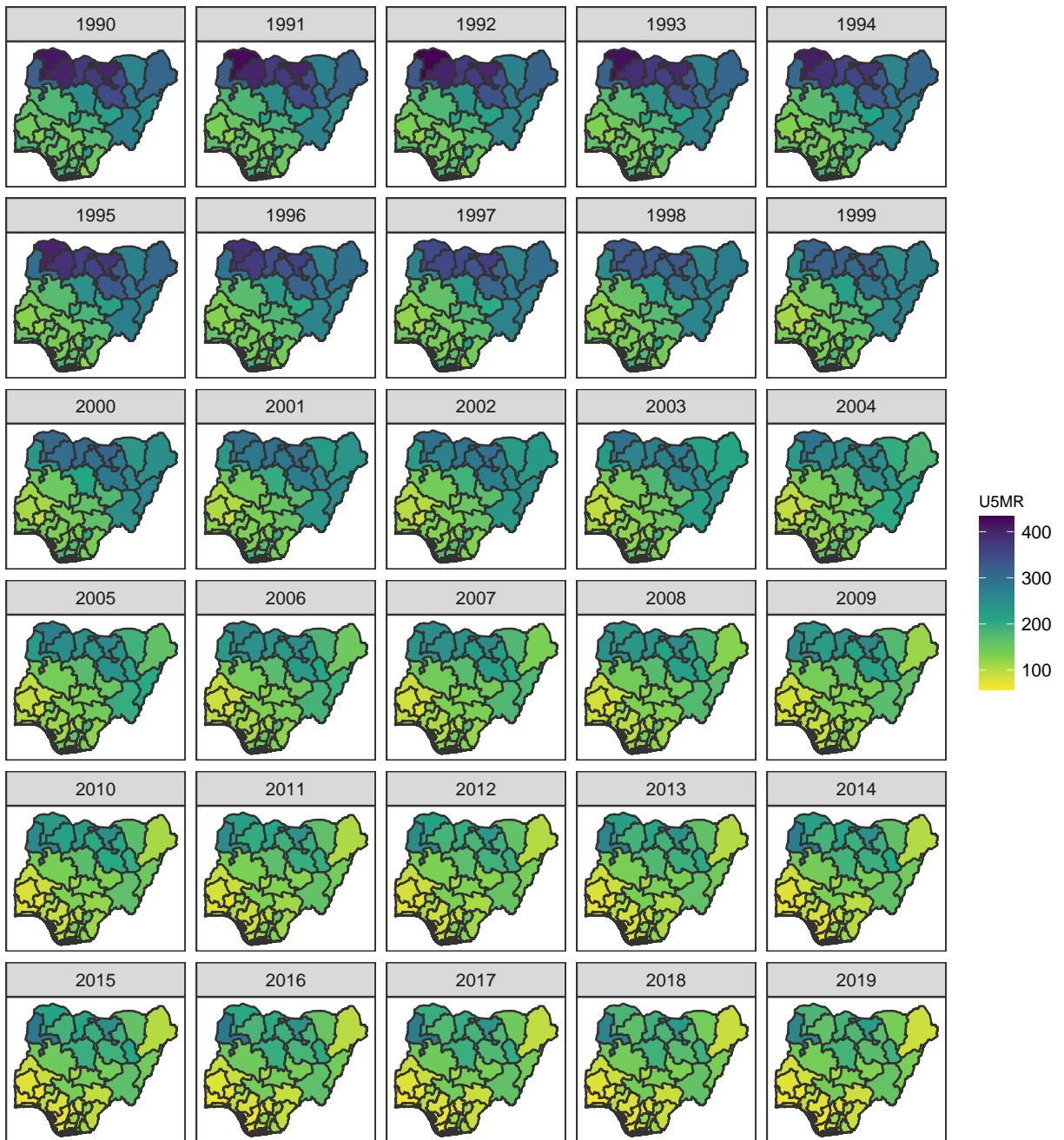


Figure 6: Posterior medians of U5MR (deaths per 1000 births) by Admin 1 area and year.

2 National Survey Data

Survey	Urban	Rural	Total
1990	131	166	297
2003	165	195	360
2008	279	607	886
2013	369	520	889
2018	570	812	1382

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

Age	No. Deaths	No. Agemonths
0	4444	124512
1-11	3955	1269326
12-23	2794	1272220
24-35	2587	1180118
36-47	1294	1088072
48-59	600	1006048

Table 2: Numbers of agemonths and deaths by age for DHS 2018.

Age	No. Deaths	No. Agemonths
0	4763	108339
1-11	4384	1090578
12-23	3338	1080735
24-35	2391	1003024
36-47	1210	927540
48-59	587	862239

Table 3: Numbers of agemonths and deaths by age for DHS 2013.

Age	No. Deaths	No. Agemonths
0	4064	87088
1-11	3804	868731
12-23	2944	853936
24-35	2398	798627
36-47	1131	734104
48-59	544	682323

Table 4: Numbers of agemonths and deaths by age for DHS 2008.

Age	No. Deaths	No. Agemonths
0	779	14630
1-11	780	145194
12-23	599	143118
24-35	420	133960
36-47	223	124432
48-59	111	117085

Table 5: Numbers of agemonths and deaths by age for DHS 2003.

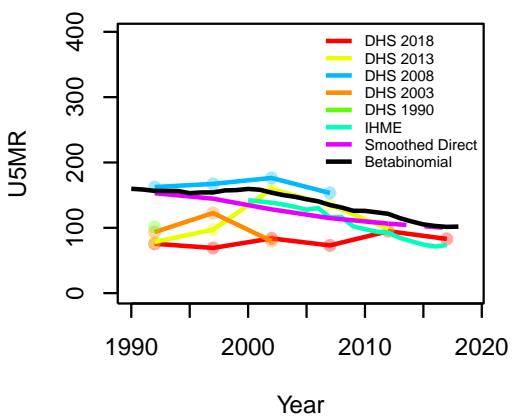
Age	No. Deaths	No. Agemonths
0	42	1022
1-11	53	10306
12-23	28	9136
24-35	32	9207
36-47	26	8999
48-59	8	8327

Table 6: Numbers of agemonths and deaths by age for DHS 1990.

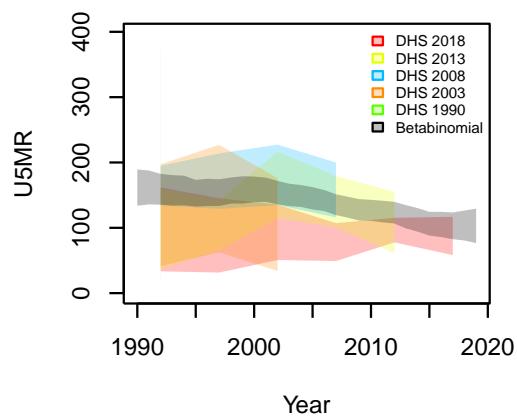
3 Admin 1 Figures

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.

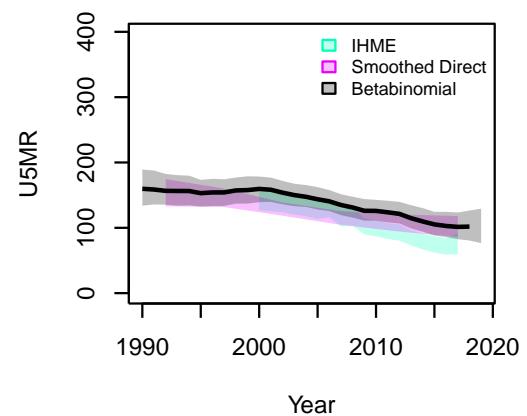
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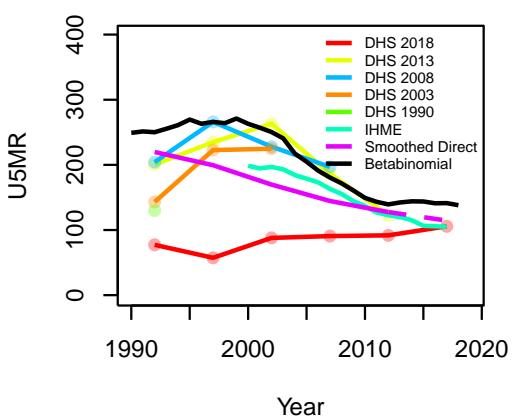
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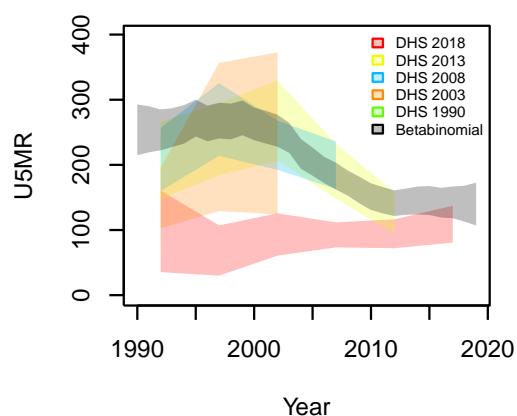
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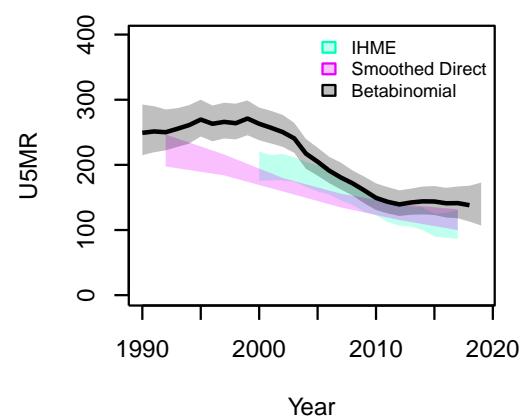
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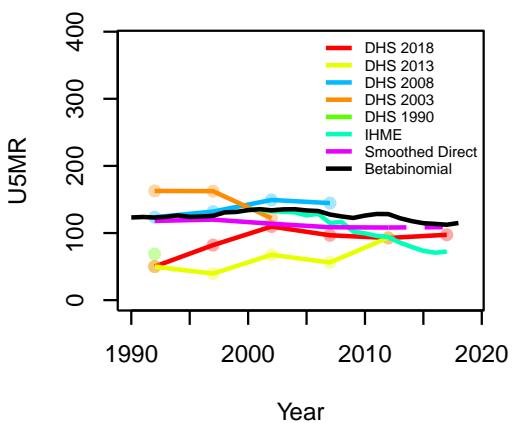
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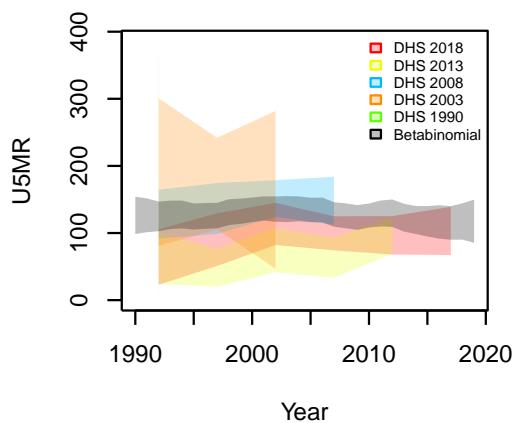
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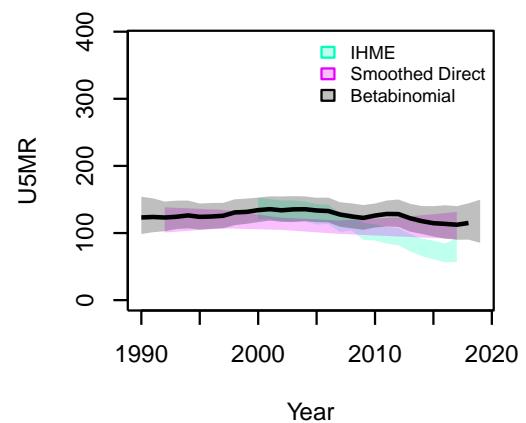
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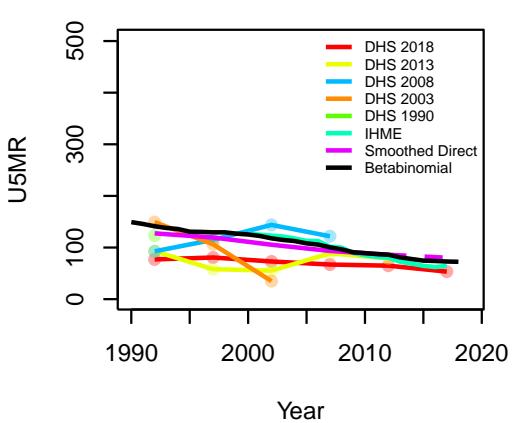
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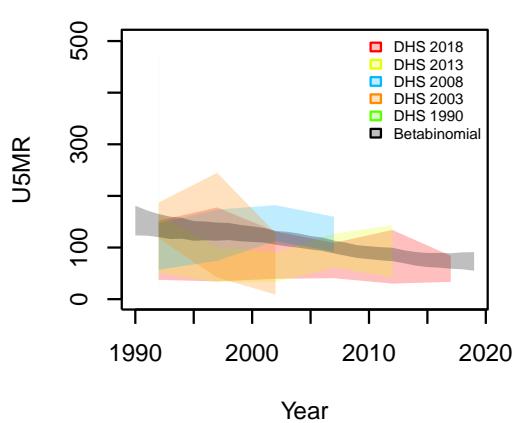
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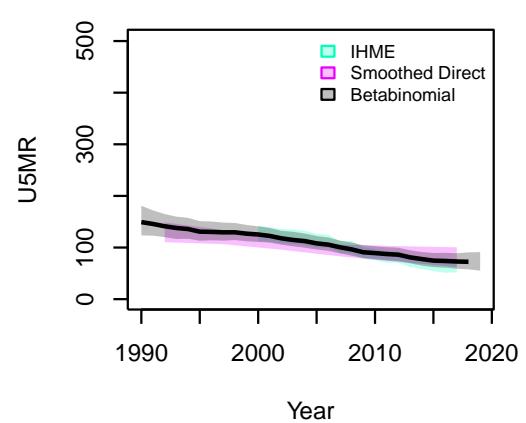
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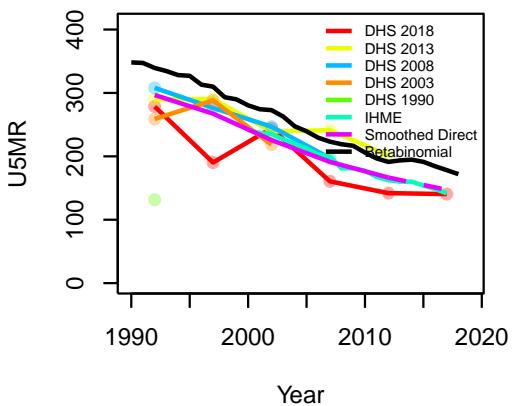
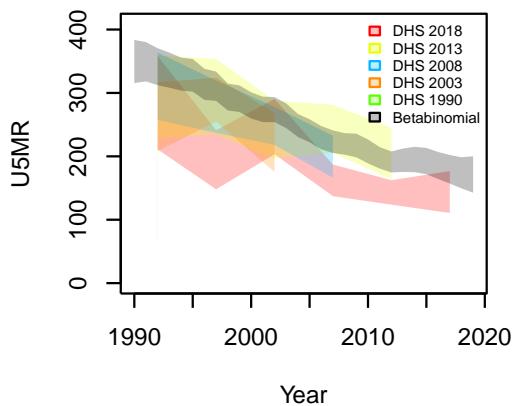
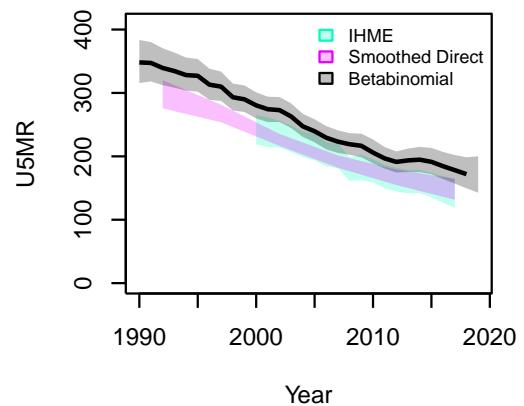
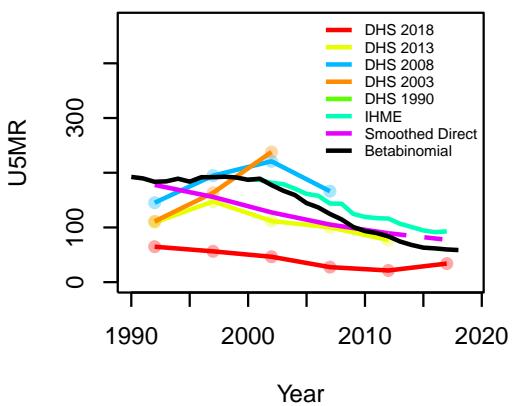
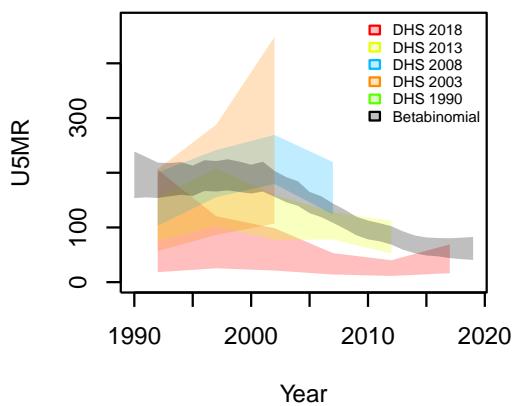
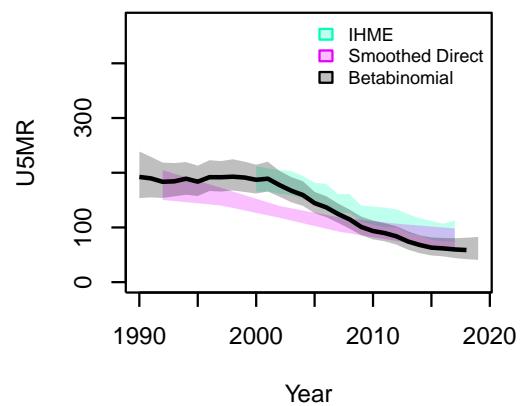


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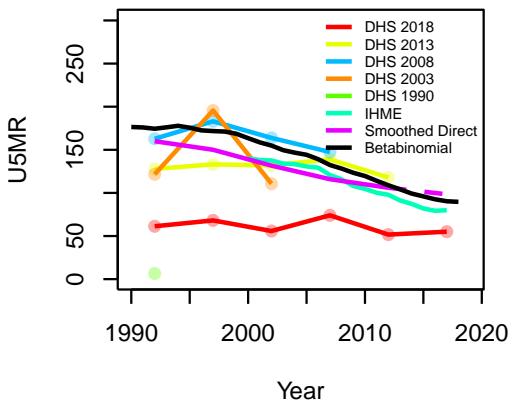


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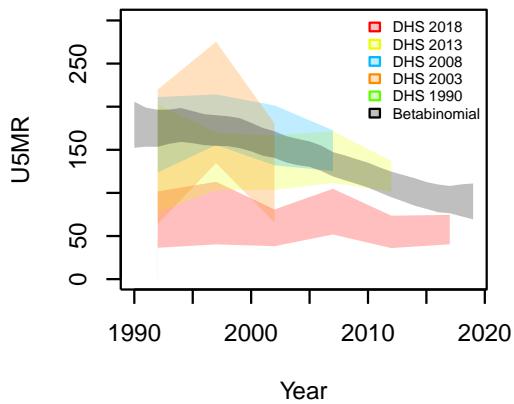


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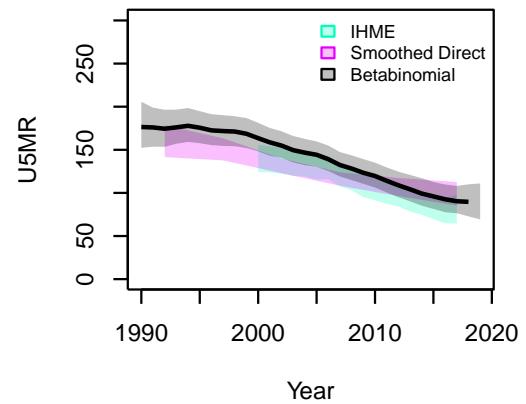
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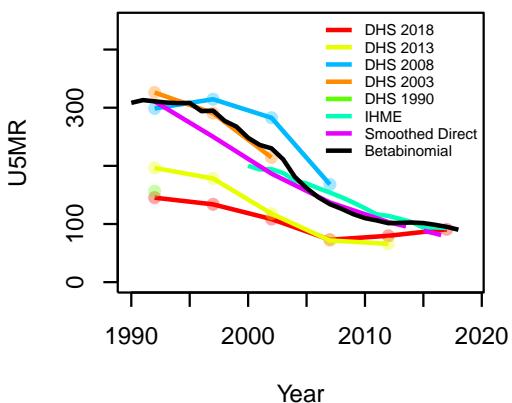
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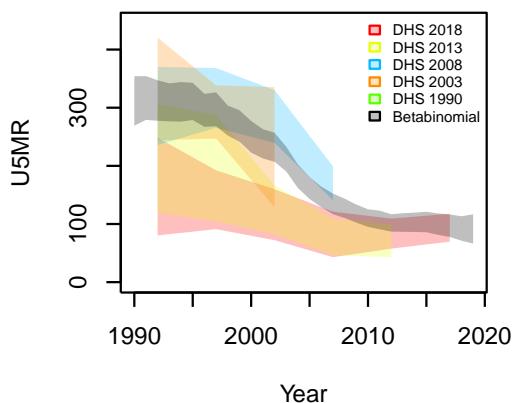
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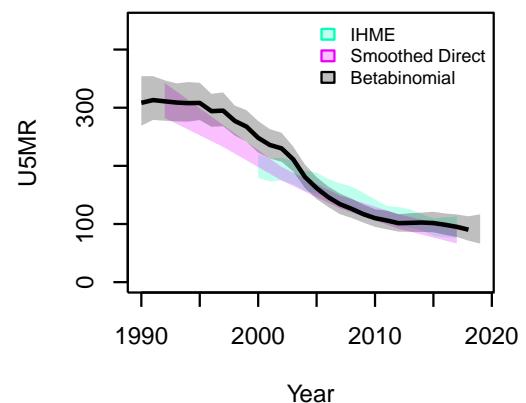
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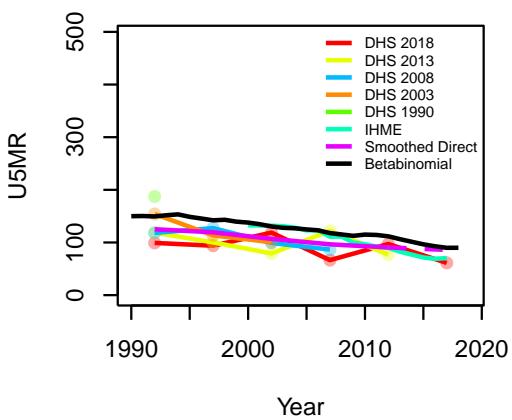
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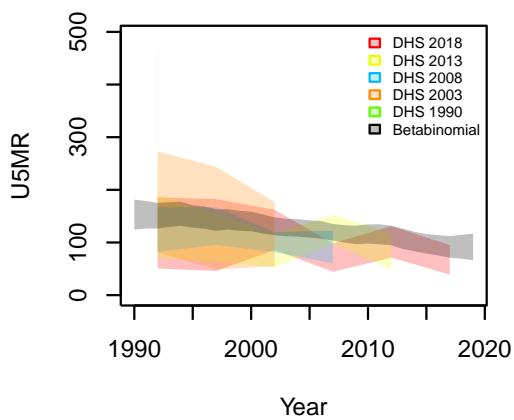
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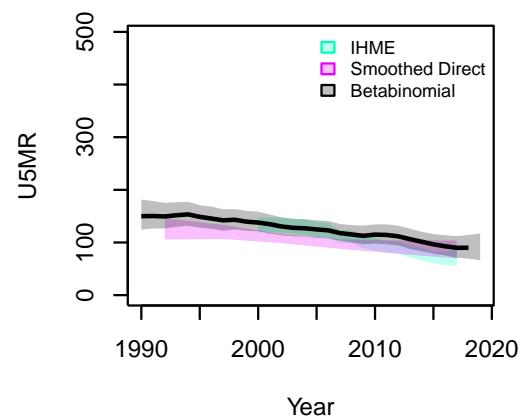
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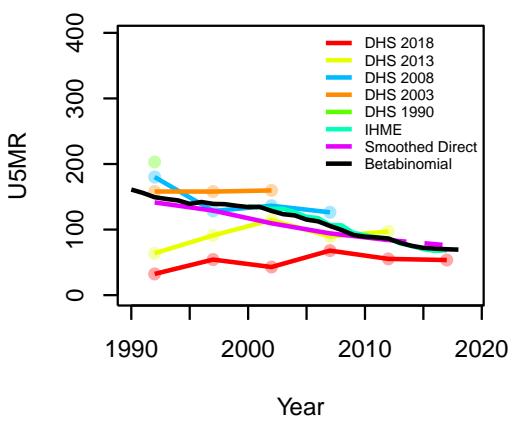
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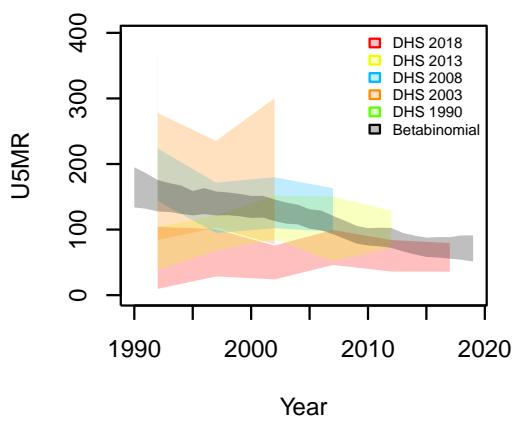
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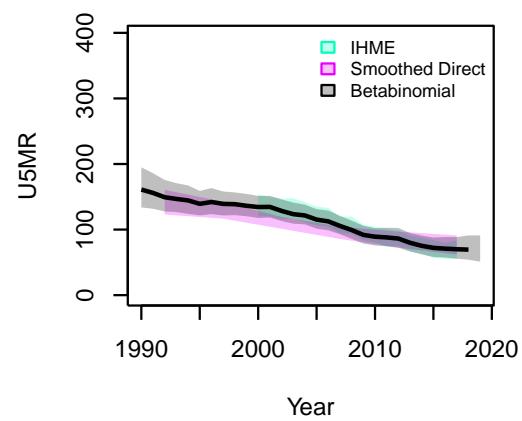
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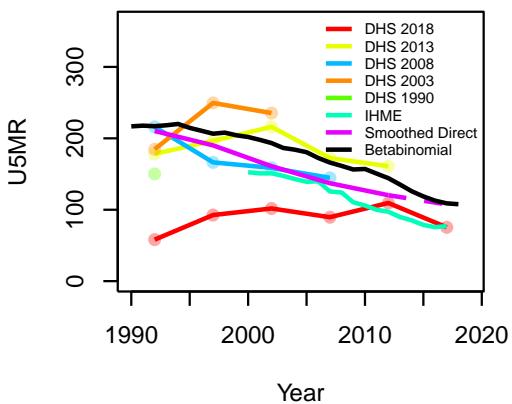
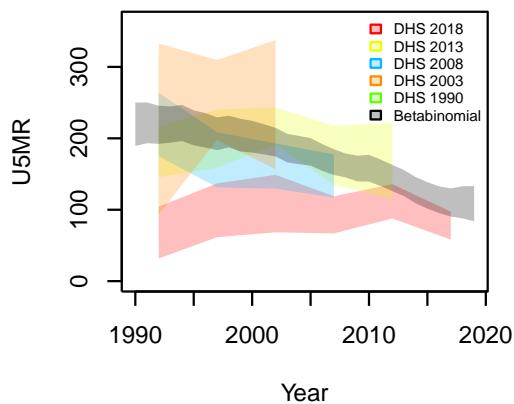
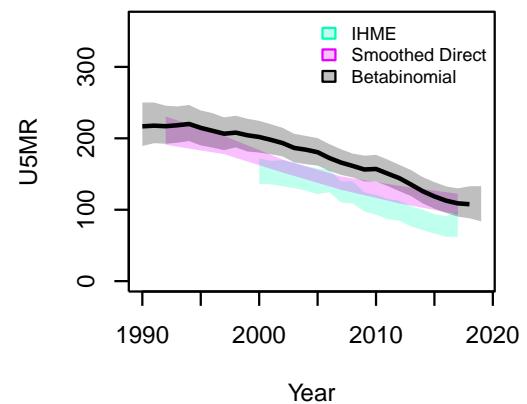
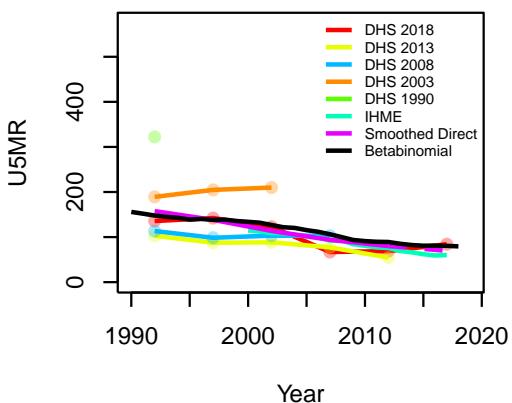
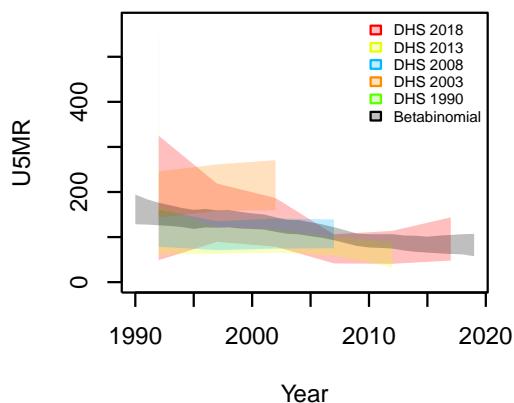
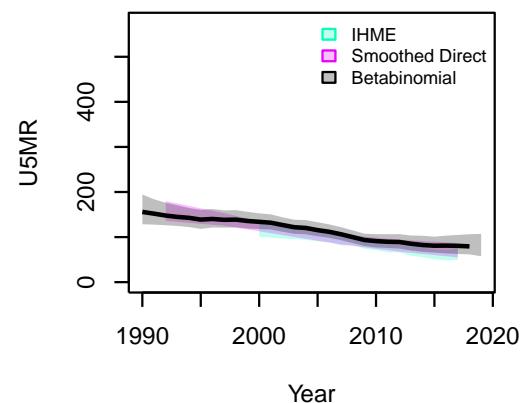


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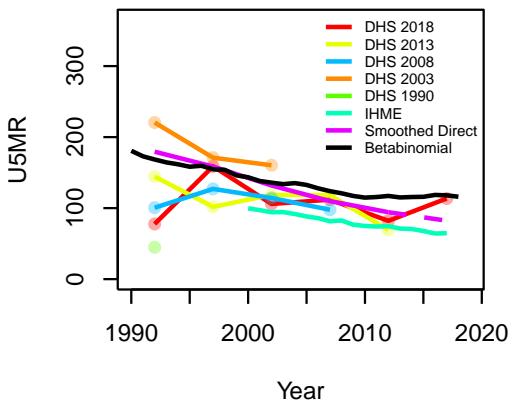


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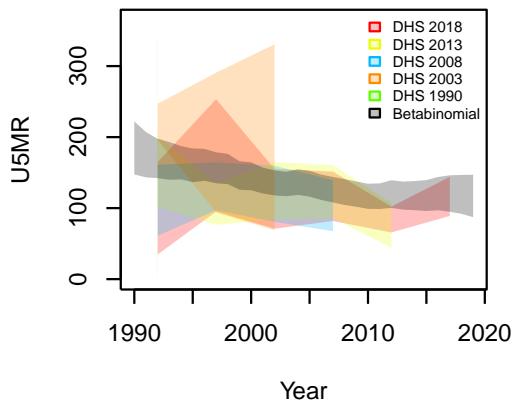


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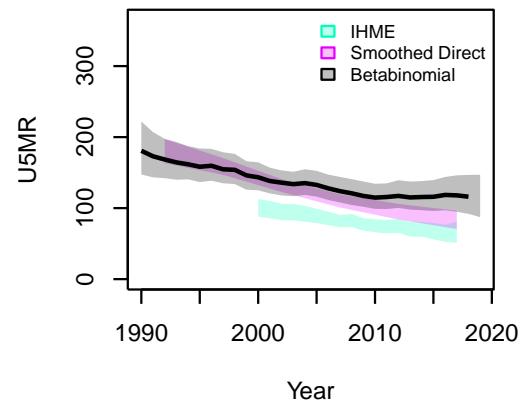
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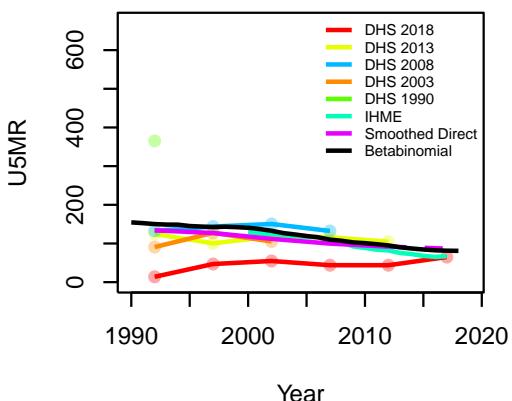
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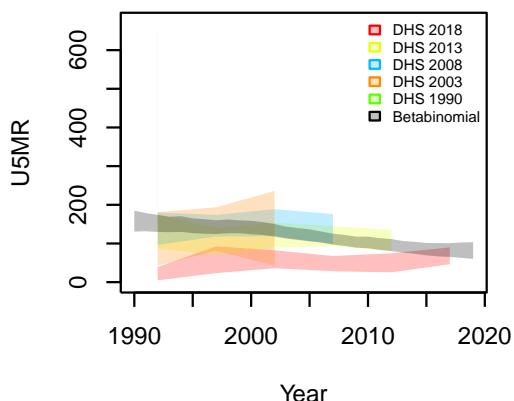
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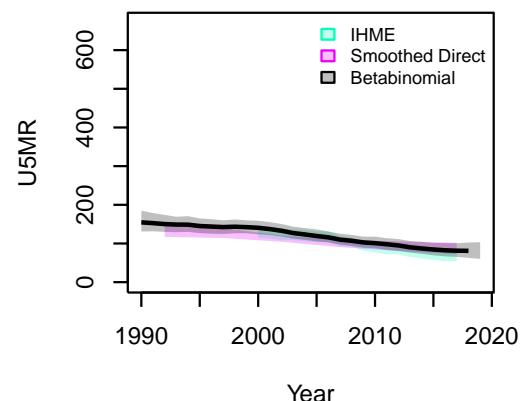
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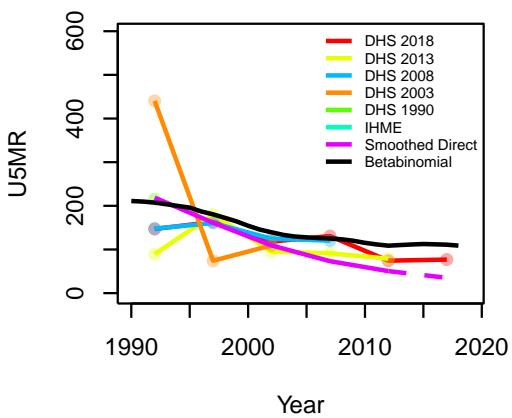
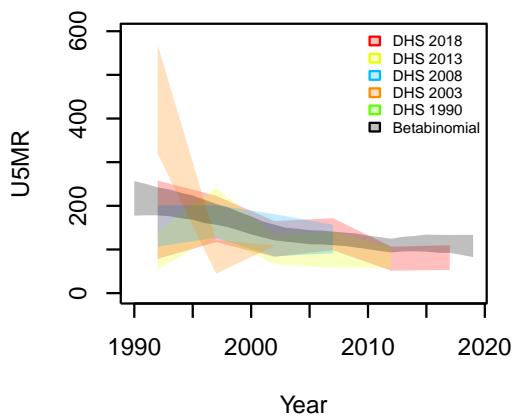
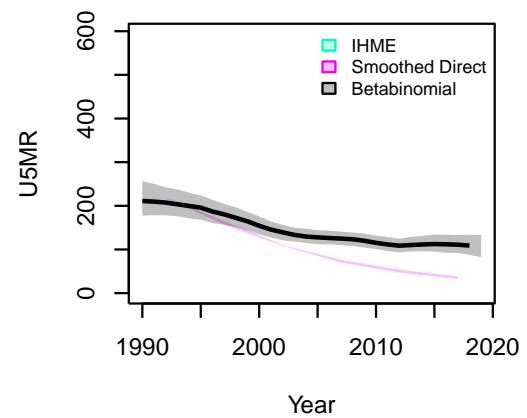
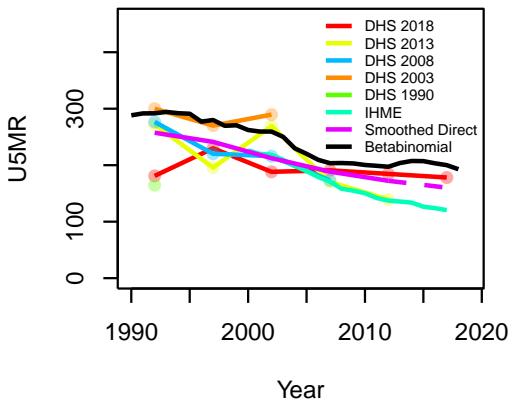
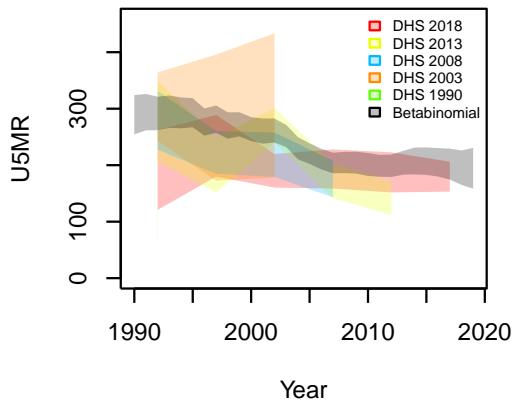
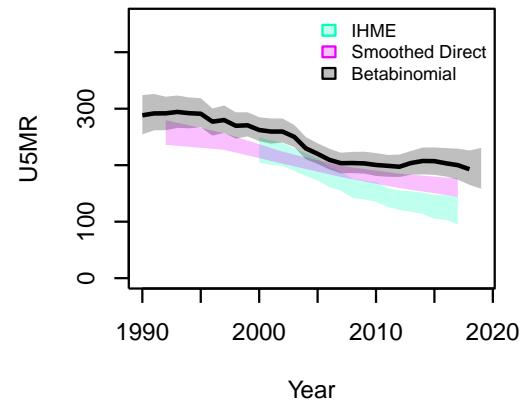


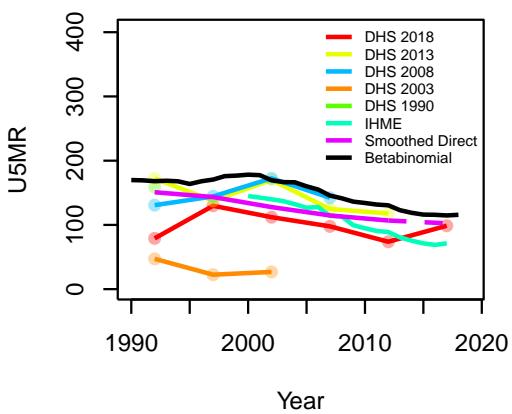
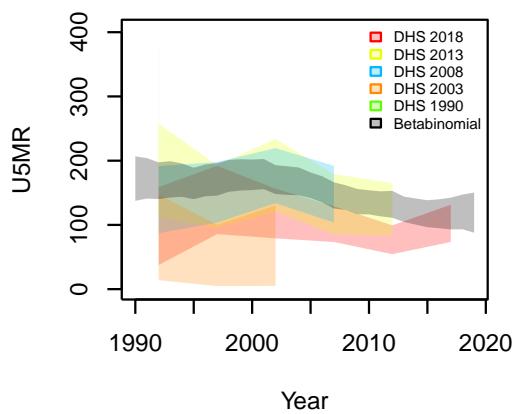
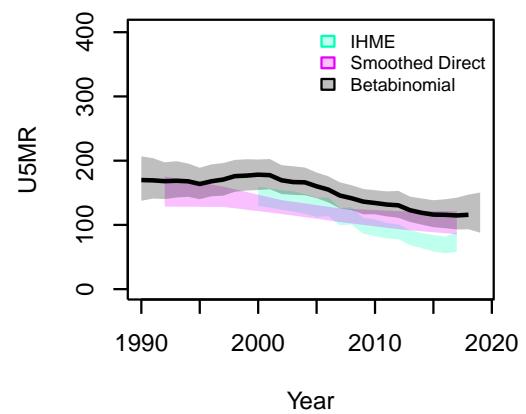
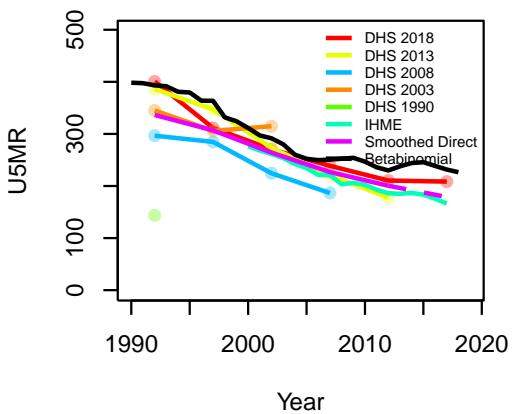
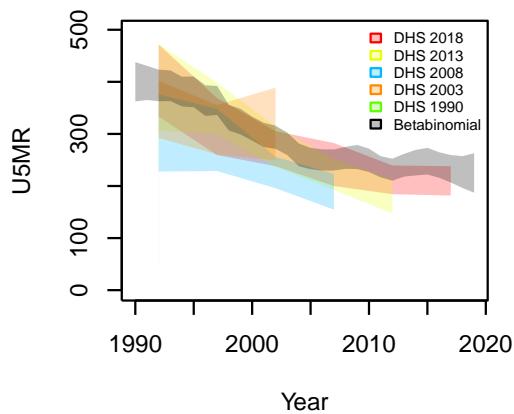
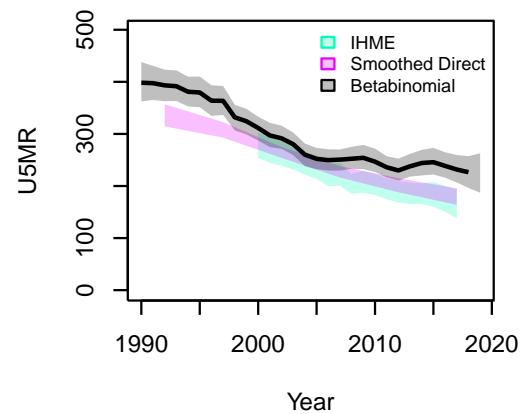
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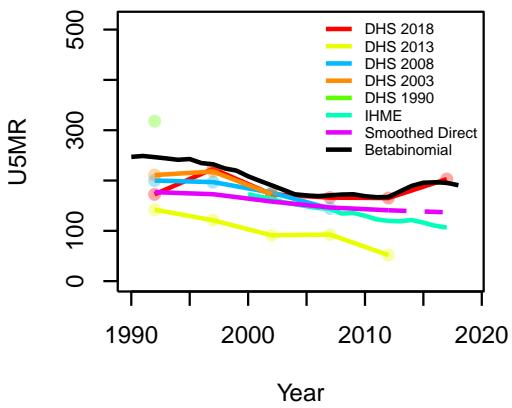
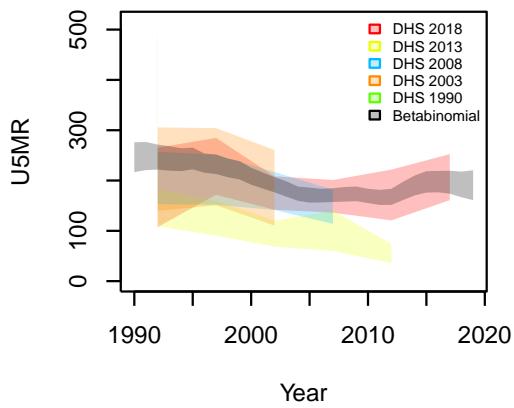
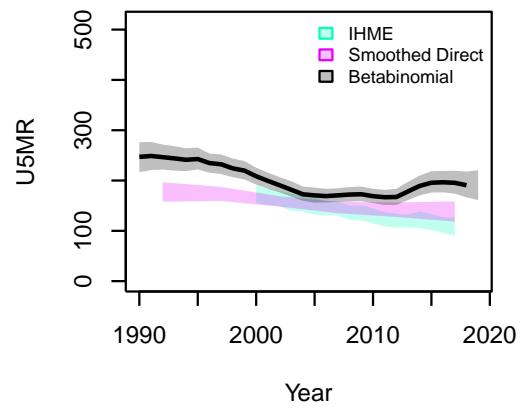
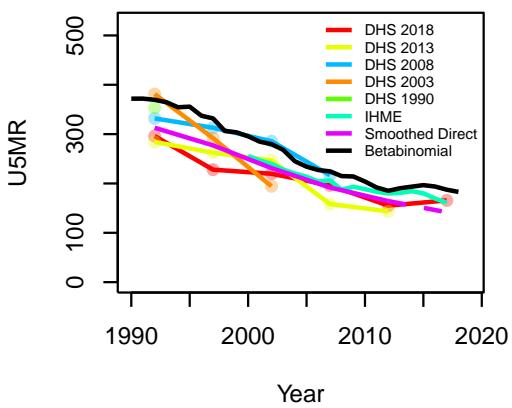
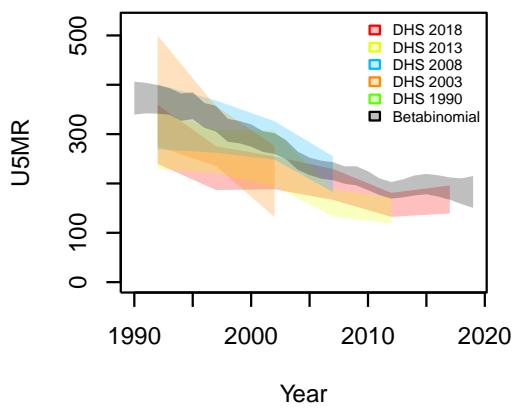
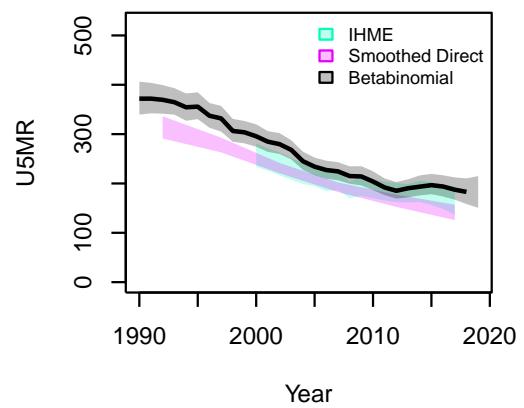


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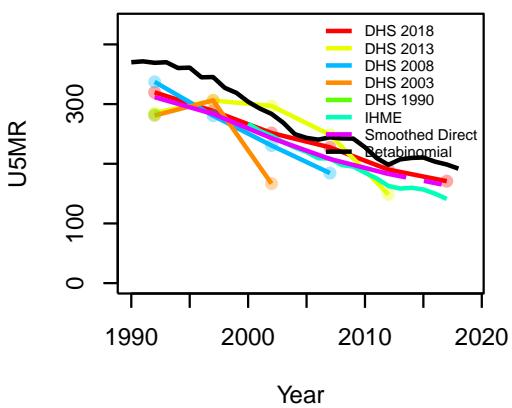


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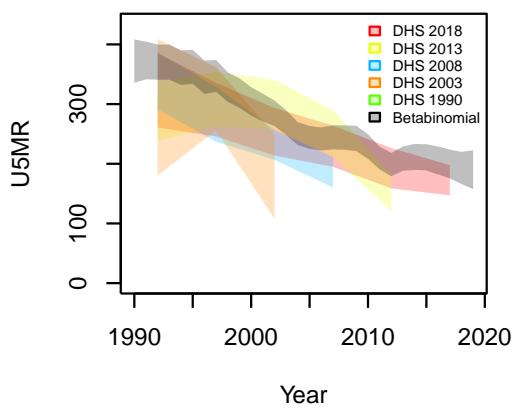
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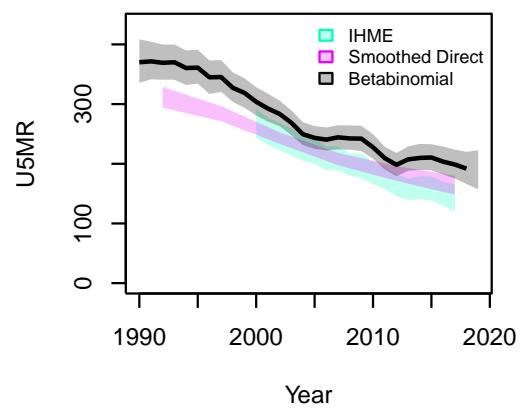
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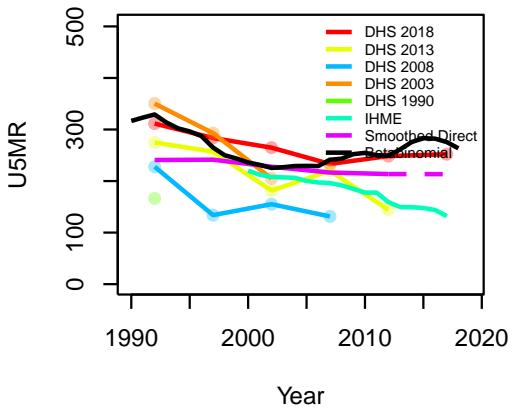
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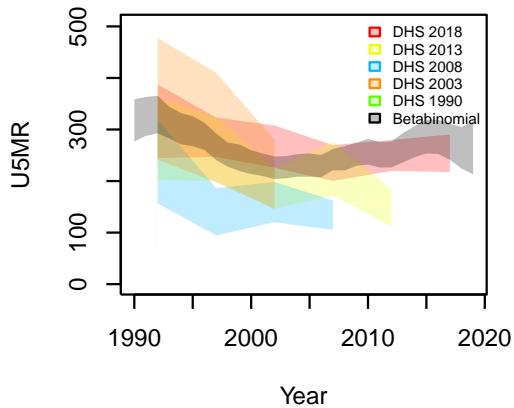
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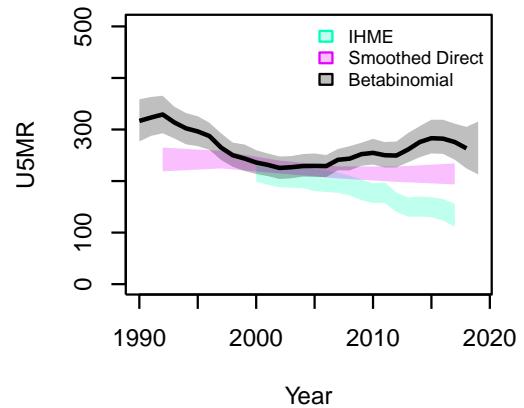
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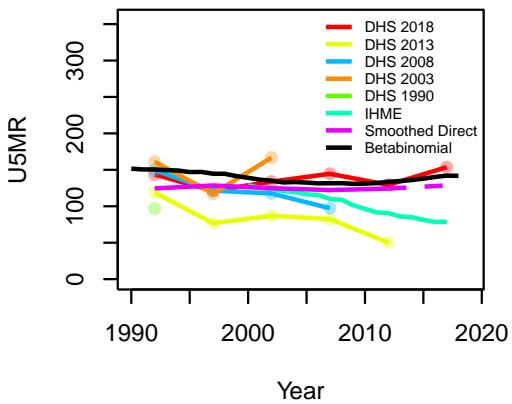
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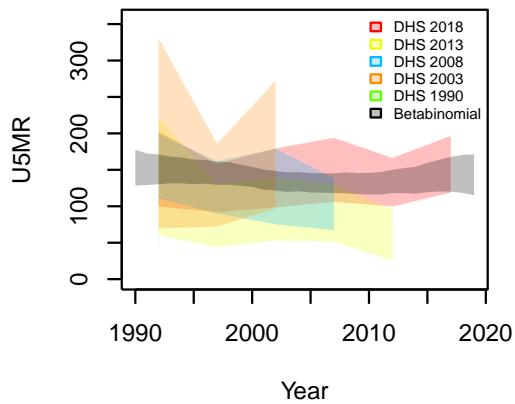
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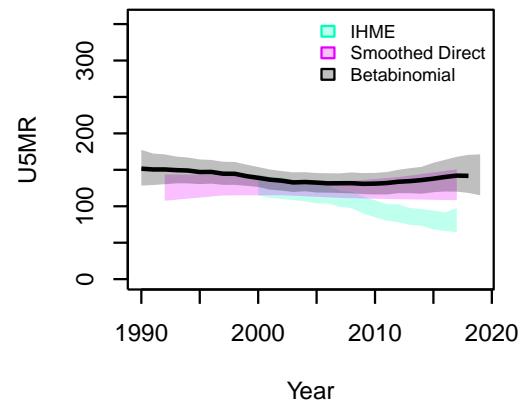
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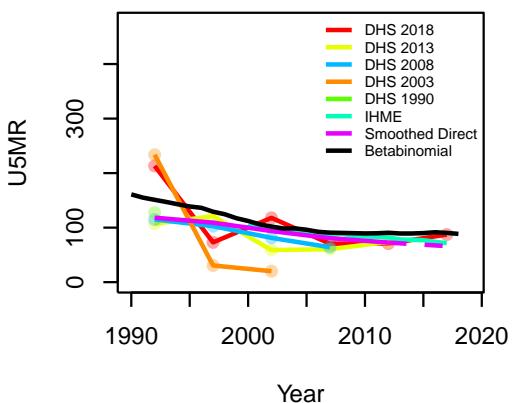
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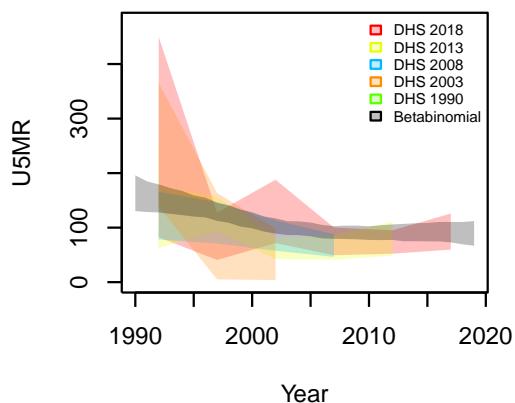
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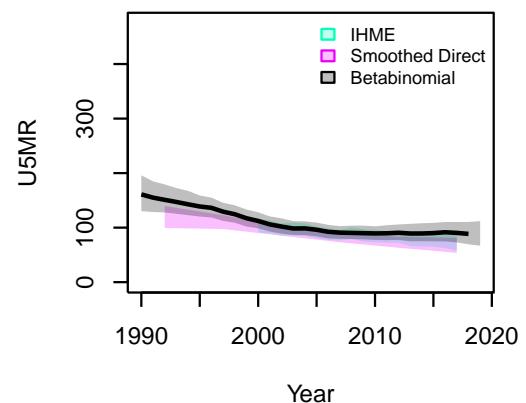
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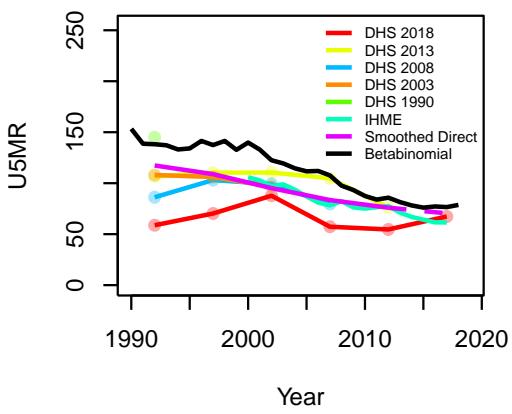
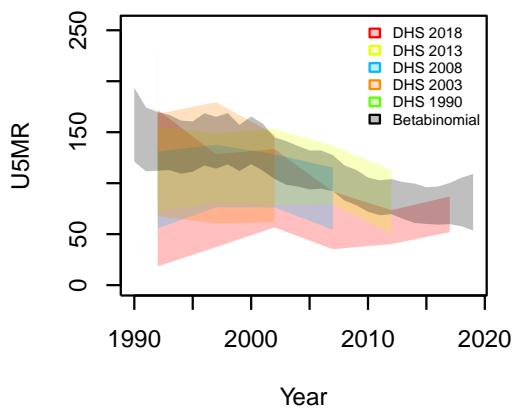
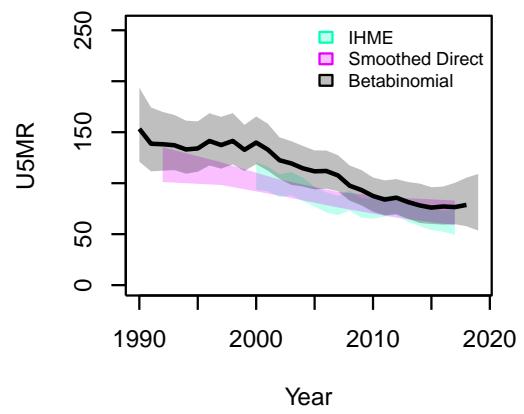
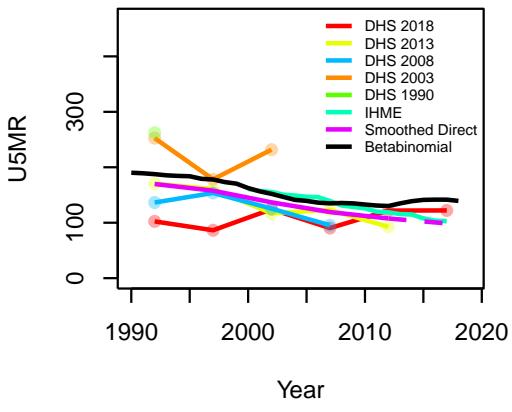
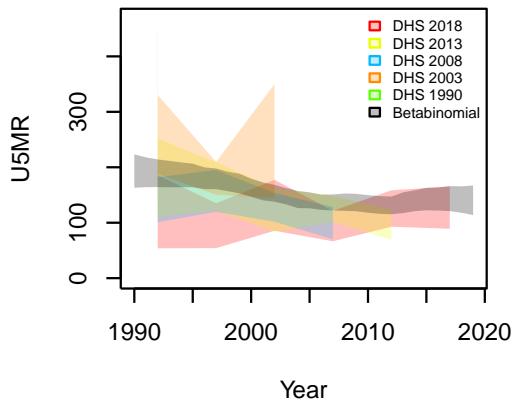
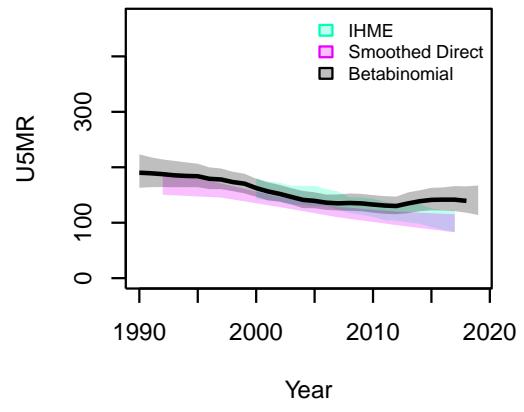


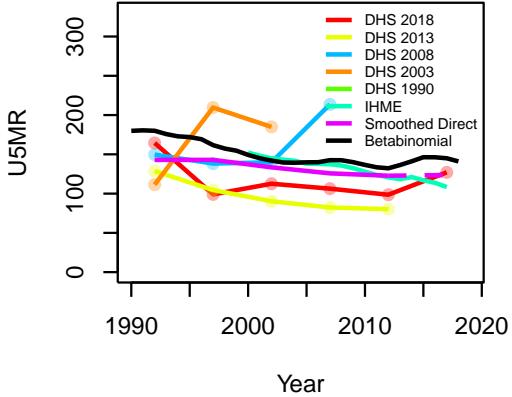
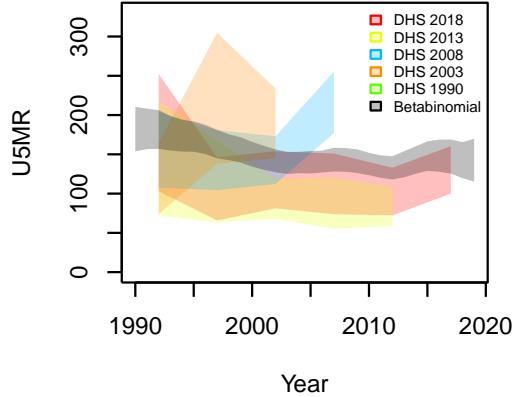
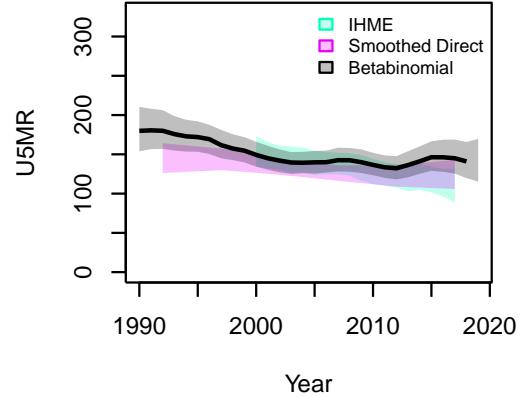
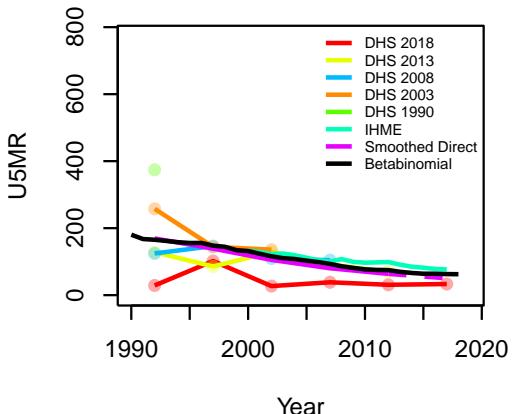
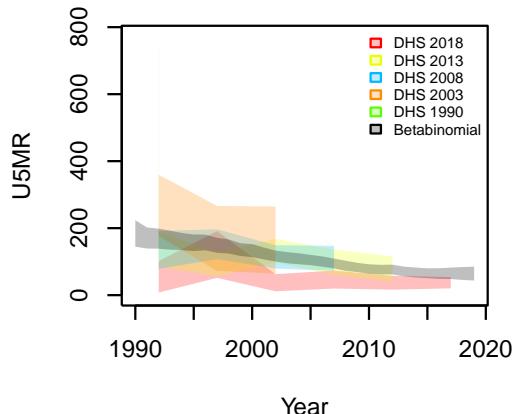
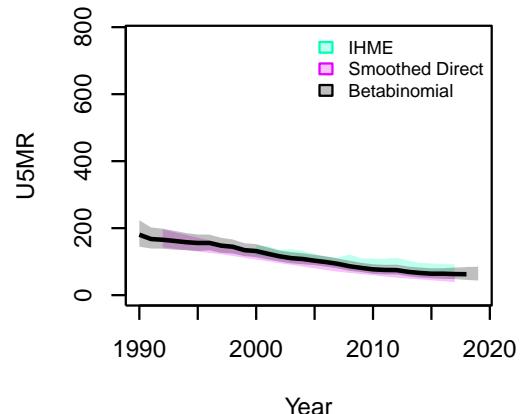
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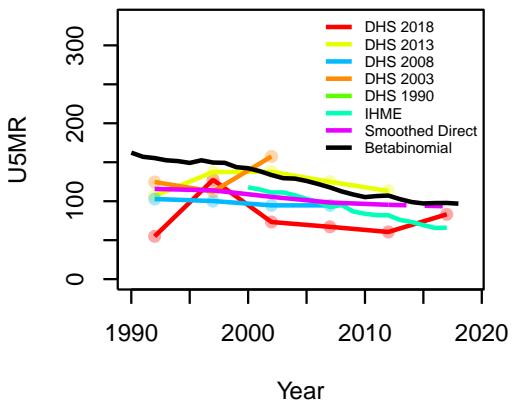
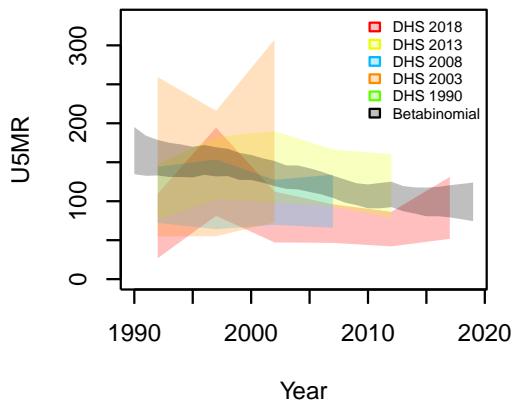
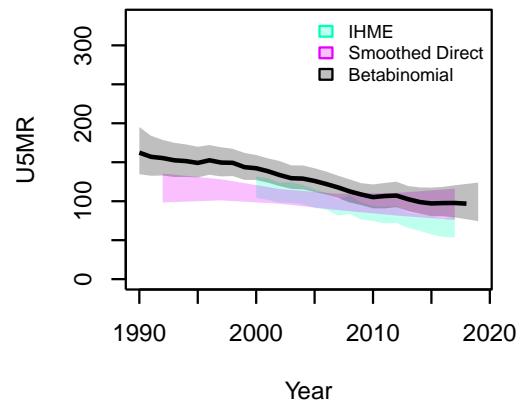
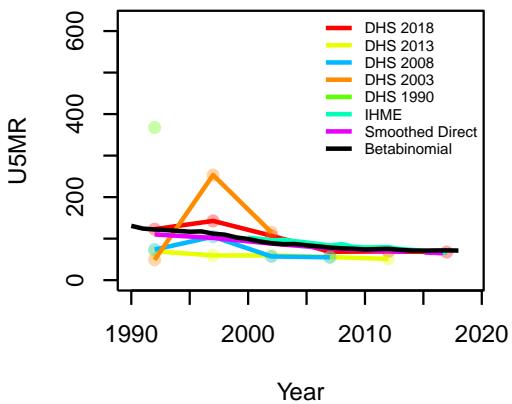
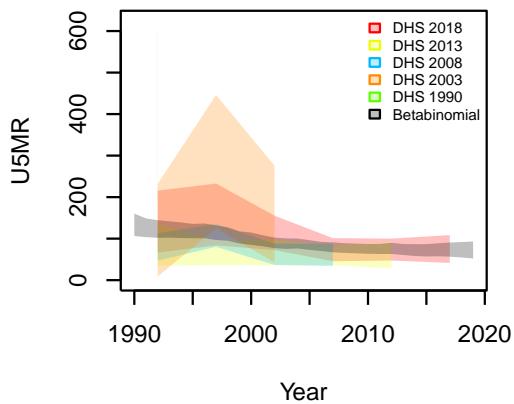
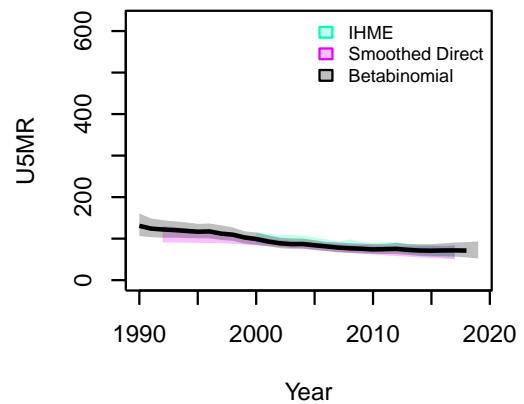


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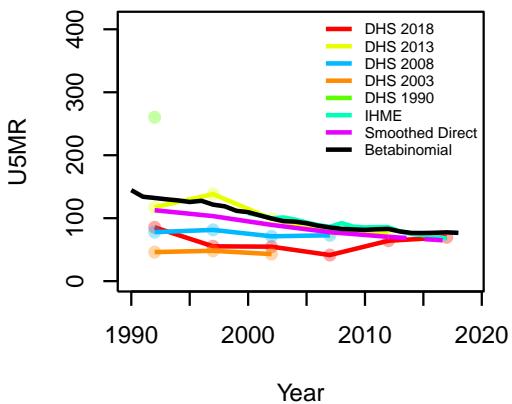


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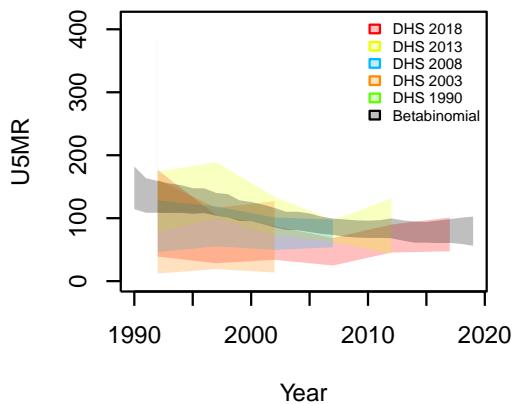
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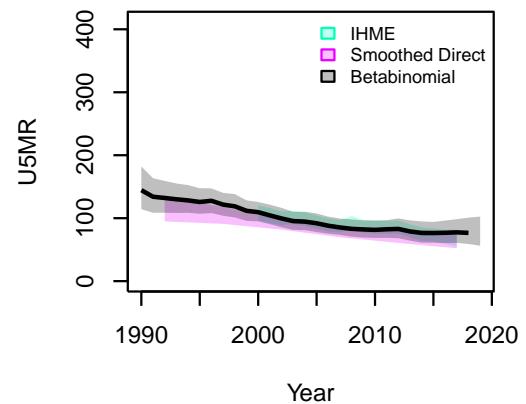
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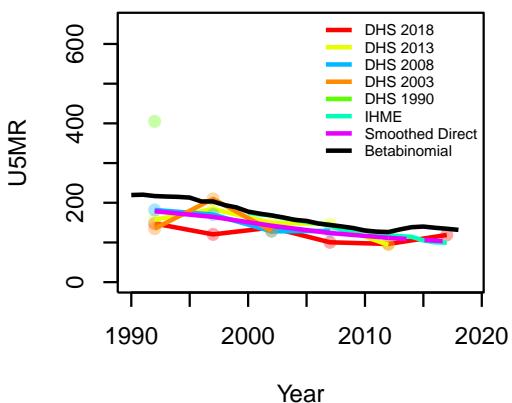
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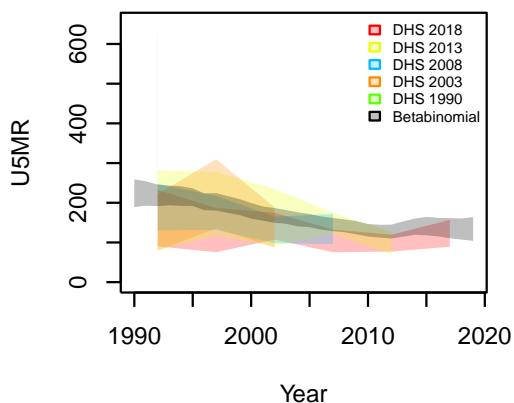
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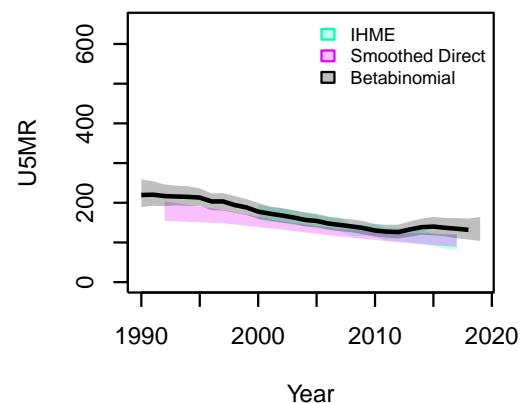
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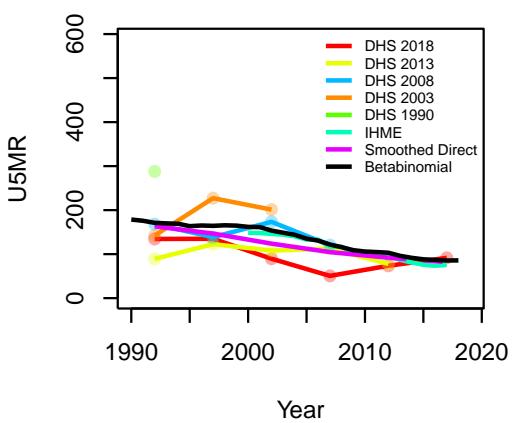
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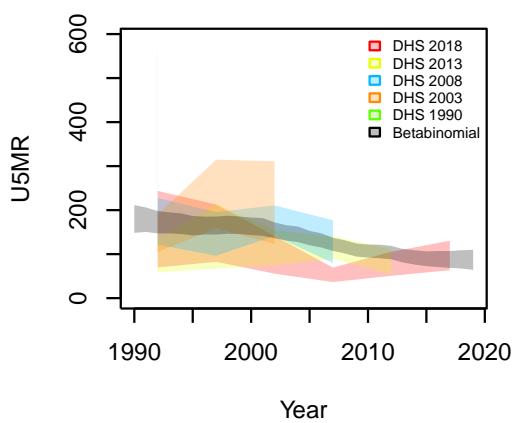
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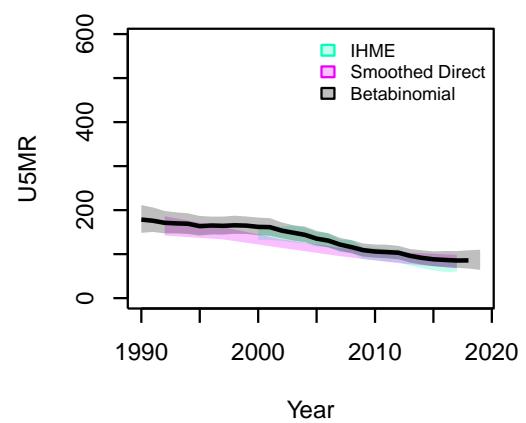
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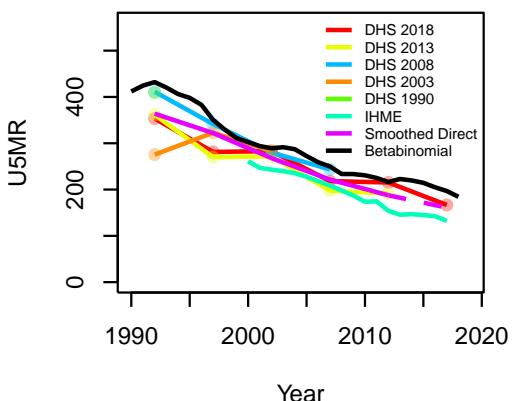
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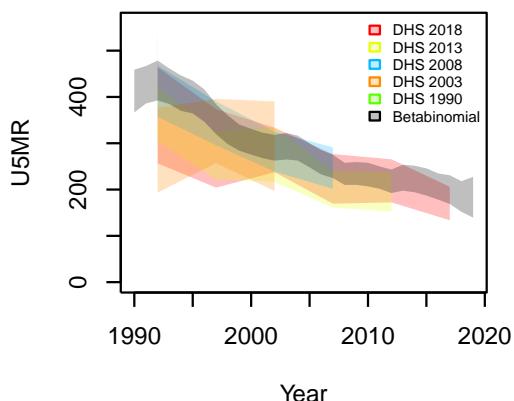
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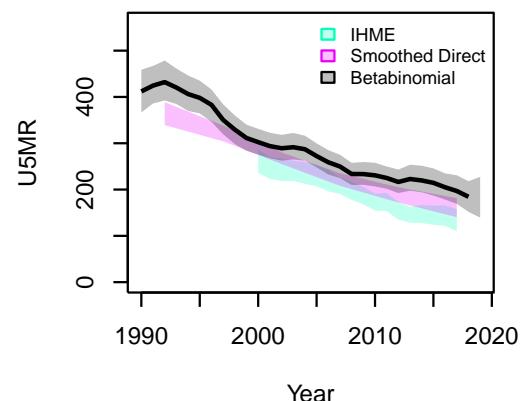
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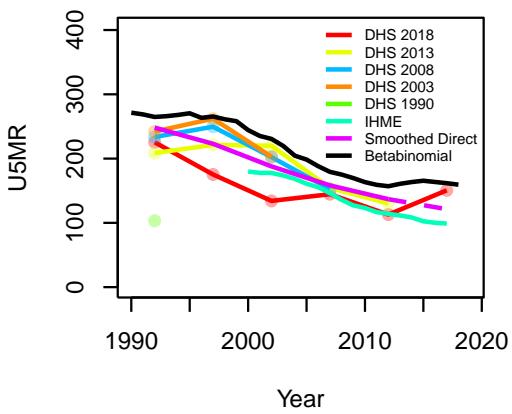
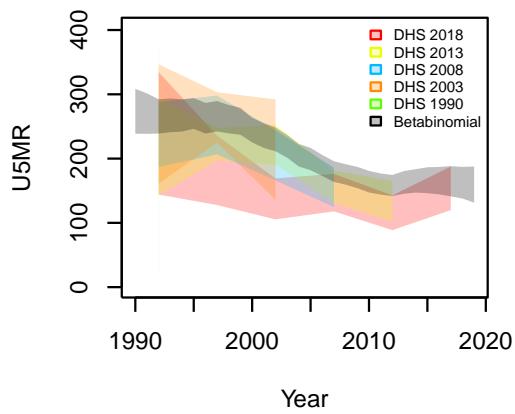
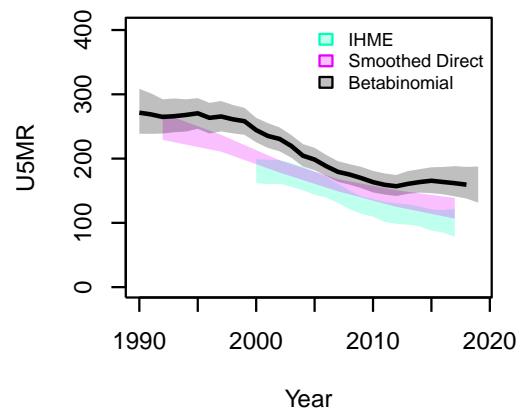
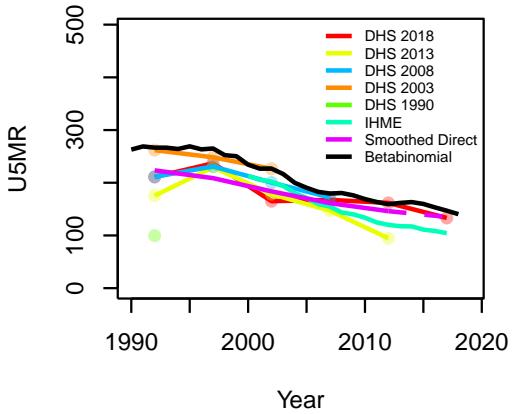
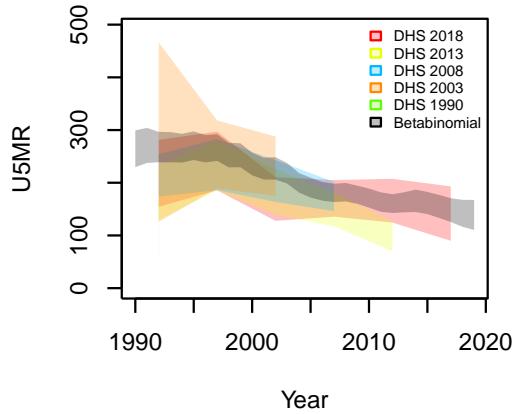
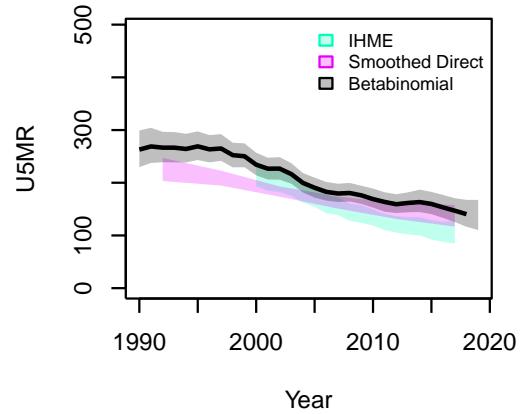


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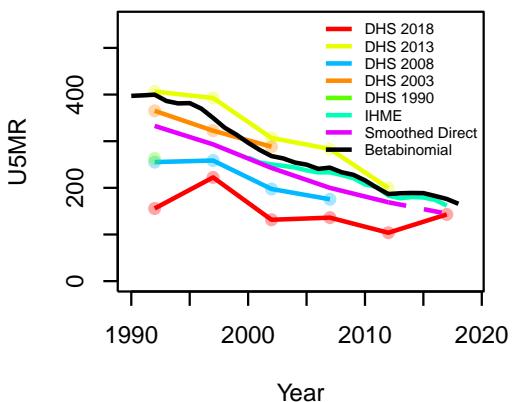


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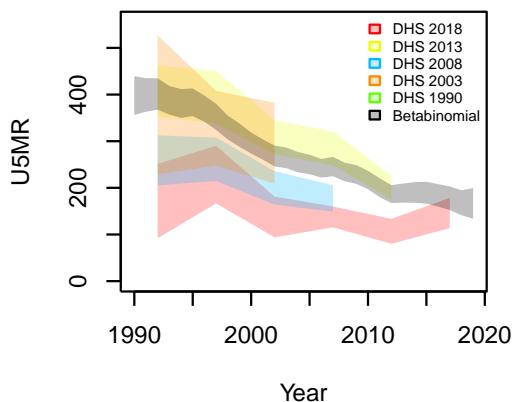


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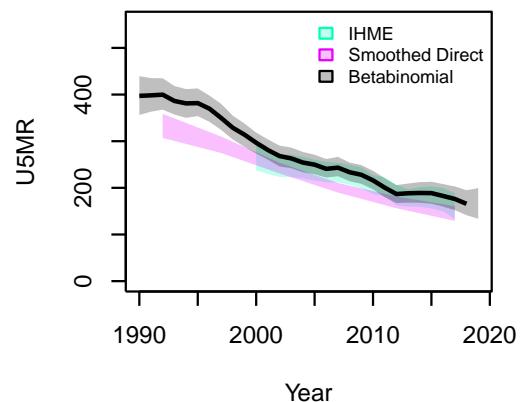
Zamfara



Zamfara



Zamfara



4 National Figures and Results

	Median	Interval	Median-	Bench	Interval
0	42.90	(41.2,44.5)	42.70		(41.1,44.2)
1-11	3.80	(3.6,4)	3.80		(3.6,3.9)
12-23	2.90	(2.7,3)	2.80		(2.7,2.9)
24-35	2.50	(2.4,2.6)	2.50		(2.4,2.6)
36-47	1.40	(1.3,1.4)	1.40		(1.3,1.4)
48-59	0.70	(0.7,0.8)	0.70		(0.7,0.7)

Table 7: Monthly hazards in terms of 1000 children by age band for national, unstratified model for Nigeria.

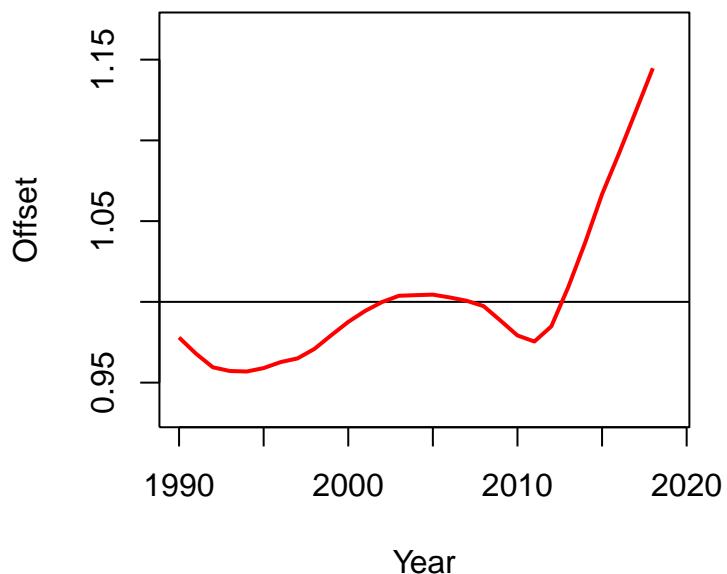


Figure 7: Benchmark offsets: $\text{BENCH}(t) = \text{U5MR}^*(t)/\text{U5MR}(t)$ where $\text{U5MR}^*(t)$ is modeled estimate and $\text{U5MR}(t)$ is UN-IGME estimate.

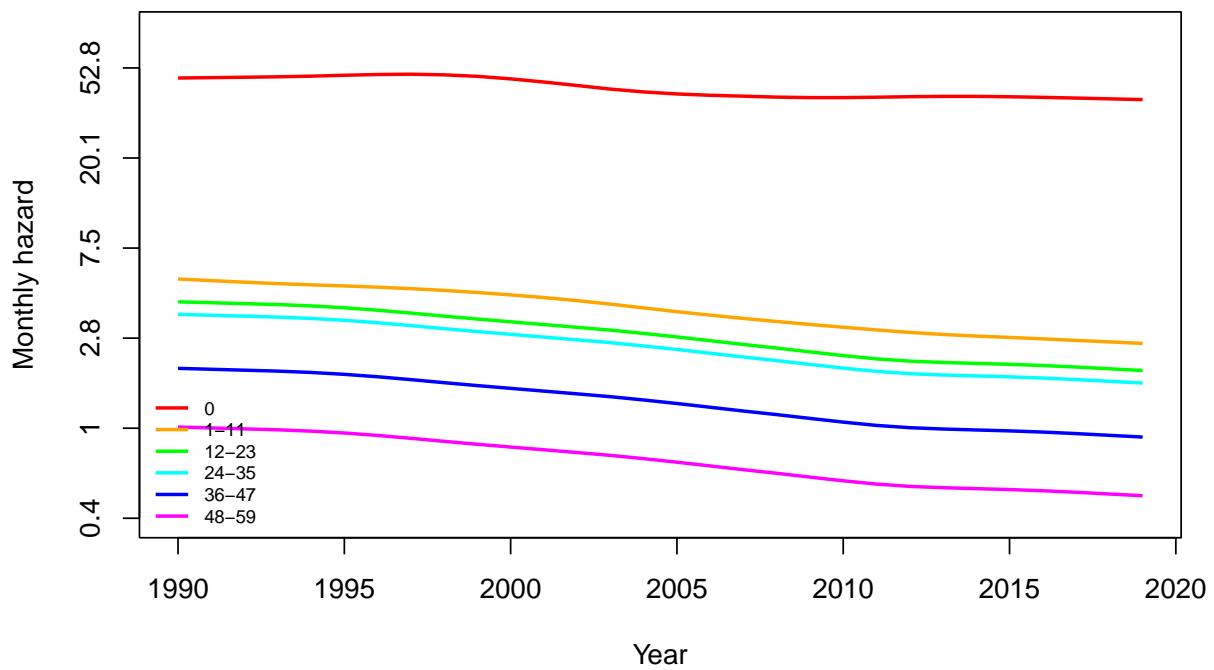


Figure 8: Monthly hazards of death in terms of U5MR (number deaths per 1000 children) by agebands.

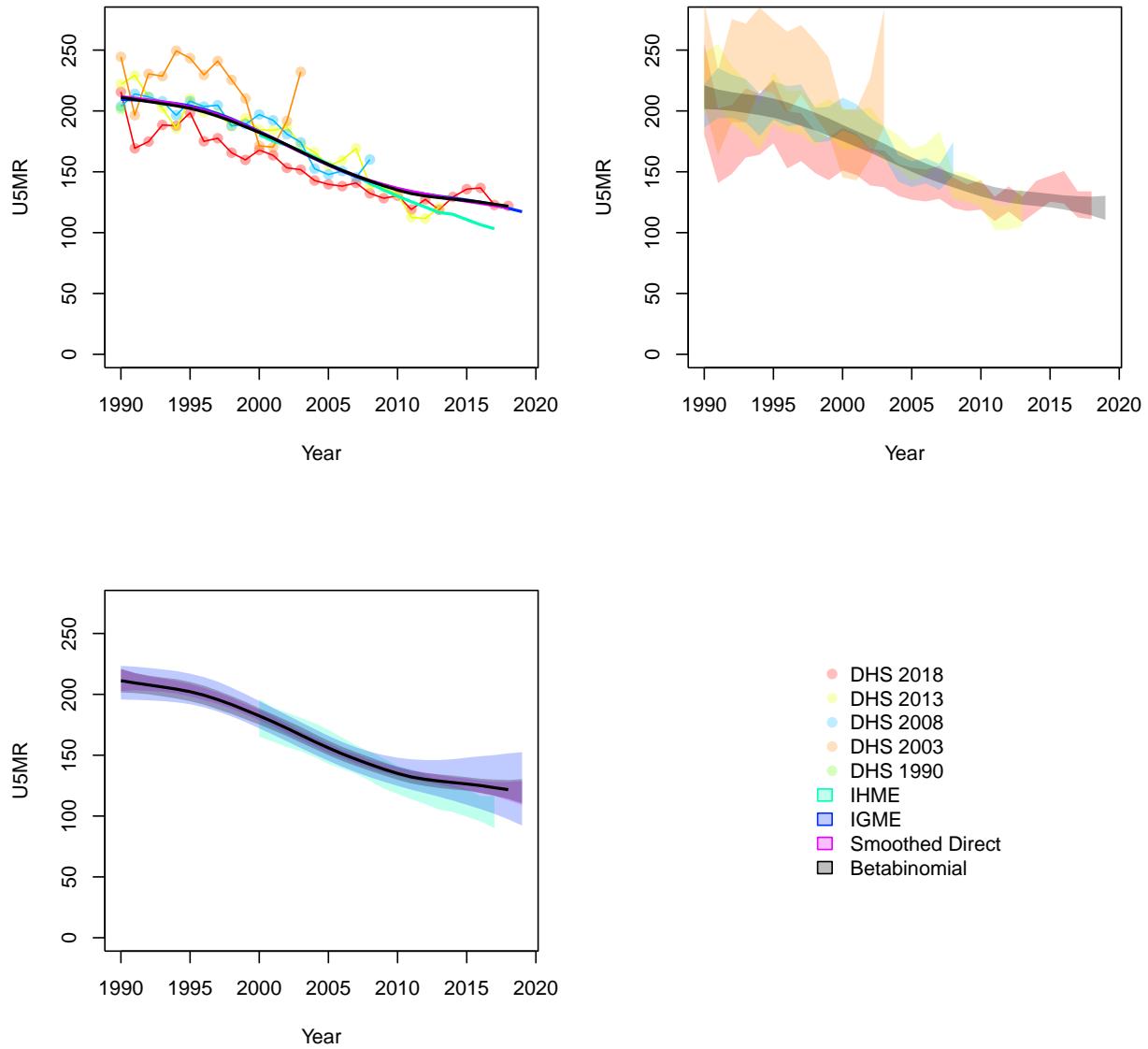


Figure 9: Benchmarked U5MR rates per 1000 live births. Top: DHS direct estimates with national trends from IHME GBD, UN-IGME, Smoothed Direct and Betabinomial estimates. Middle: 95% uncertainty intervals for DHS data. Bottom: IHME GBD, UN-IGME, Smoothed Direct and Betabinomial estimates with for the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