

Country Summary: Senegal

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1 Intro

These estimates are created using the BB8 model with Admin 2 estimates using a RW1xICAR interaction model with area-specific random slopes.

Senegal has 14 Admin 1 areas and 45 Admin 2 areas.

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

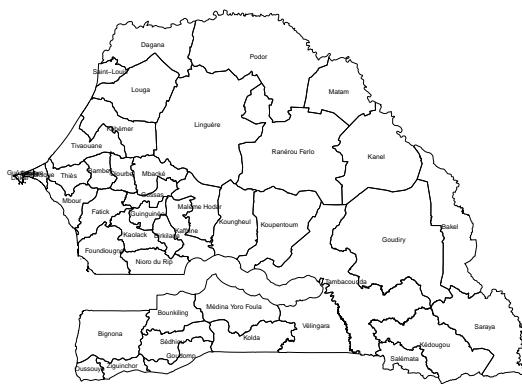
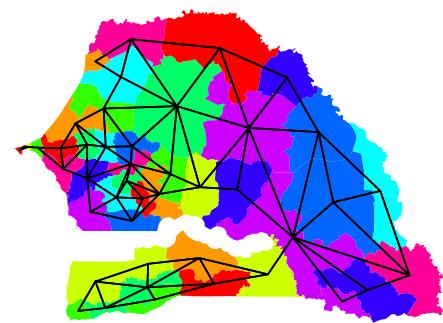


Figure 1: Top: The neighborhood structure of Admin 2 areas. Bottom: The names of Admin 2 areas.

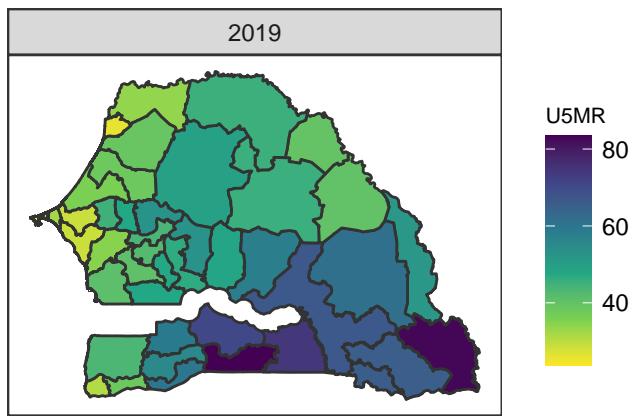
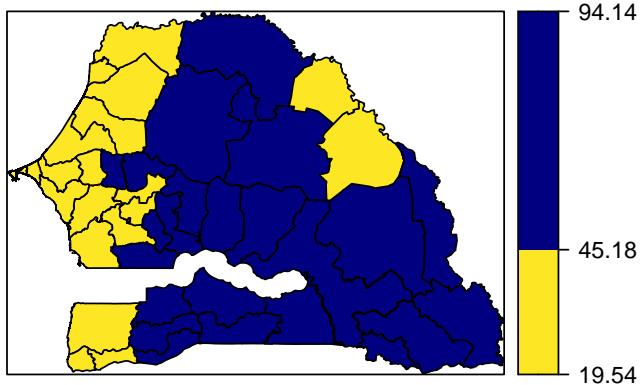


Figure 2: Median estimates of U5MR (deaths per 1000 children) in 2019.

ATCP = 0.82



ATCP = 0.73

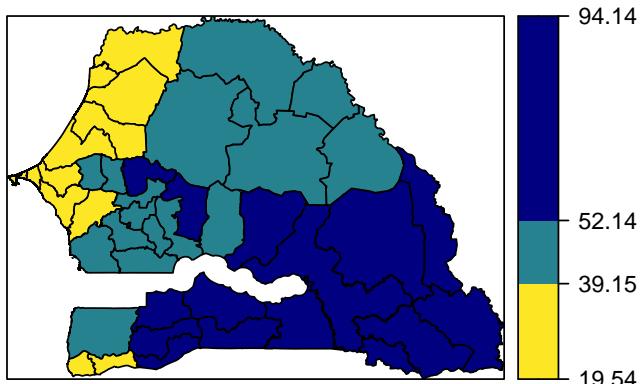


Figure 3: Expression of uncertainty of U5MR (deaths per 1000 children) based on the average true classification probability (ATCP) in 2019.

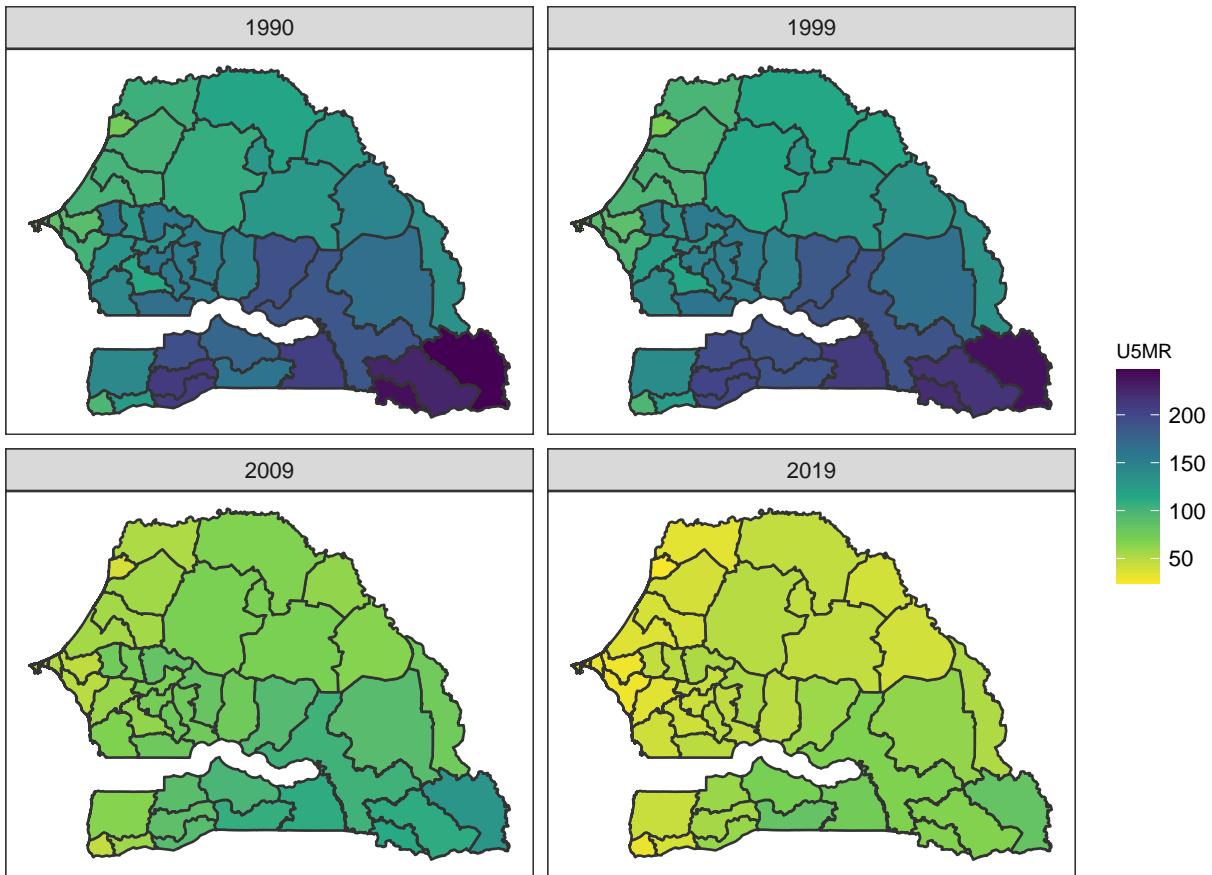
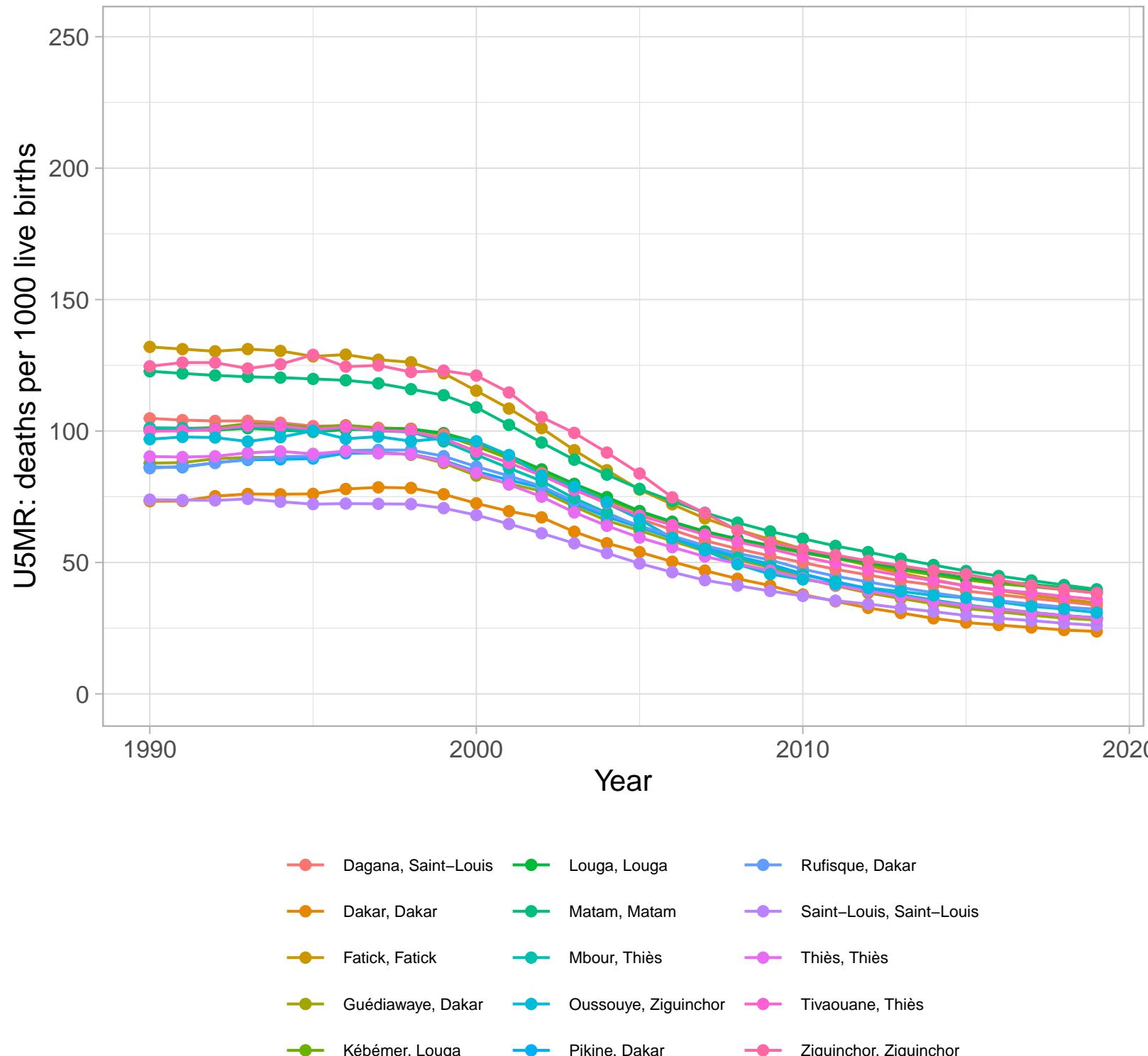
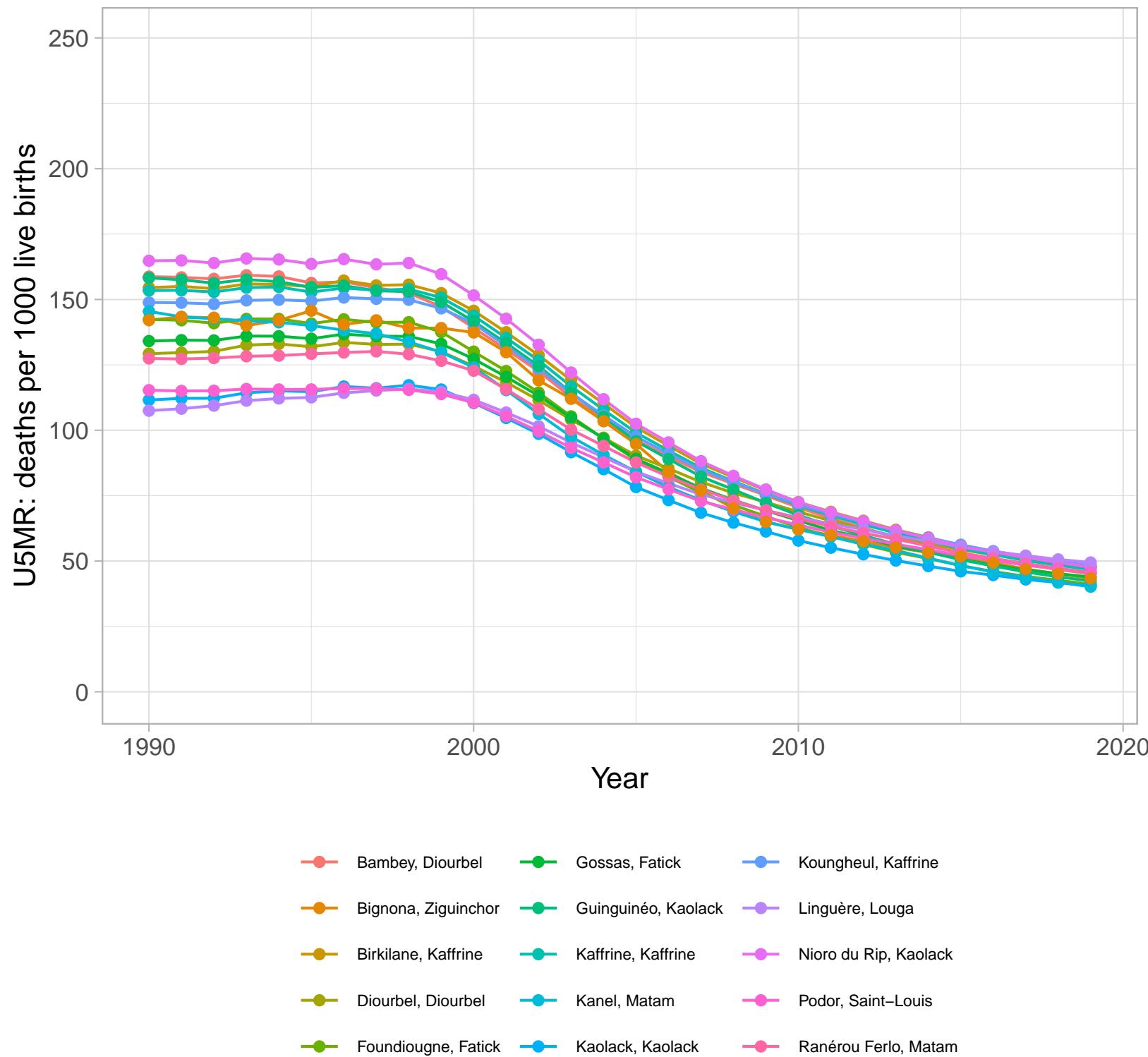


Figure 4: Median estimates for selected years.

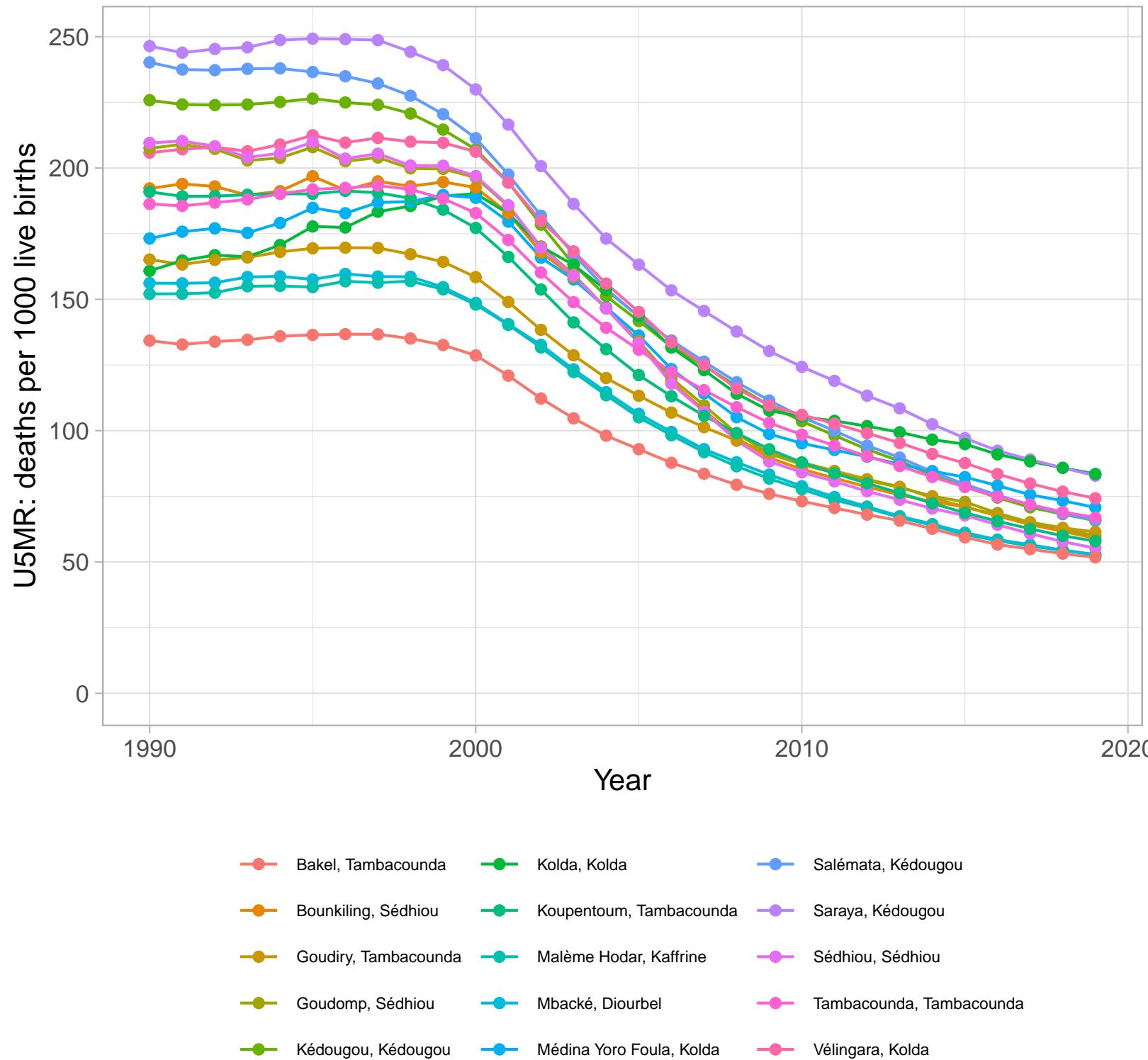
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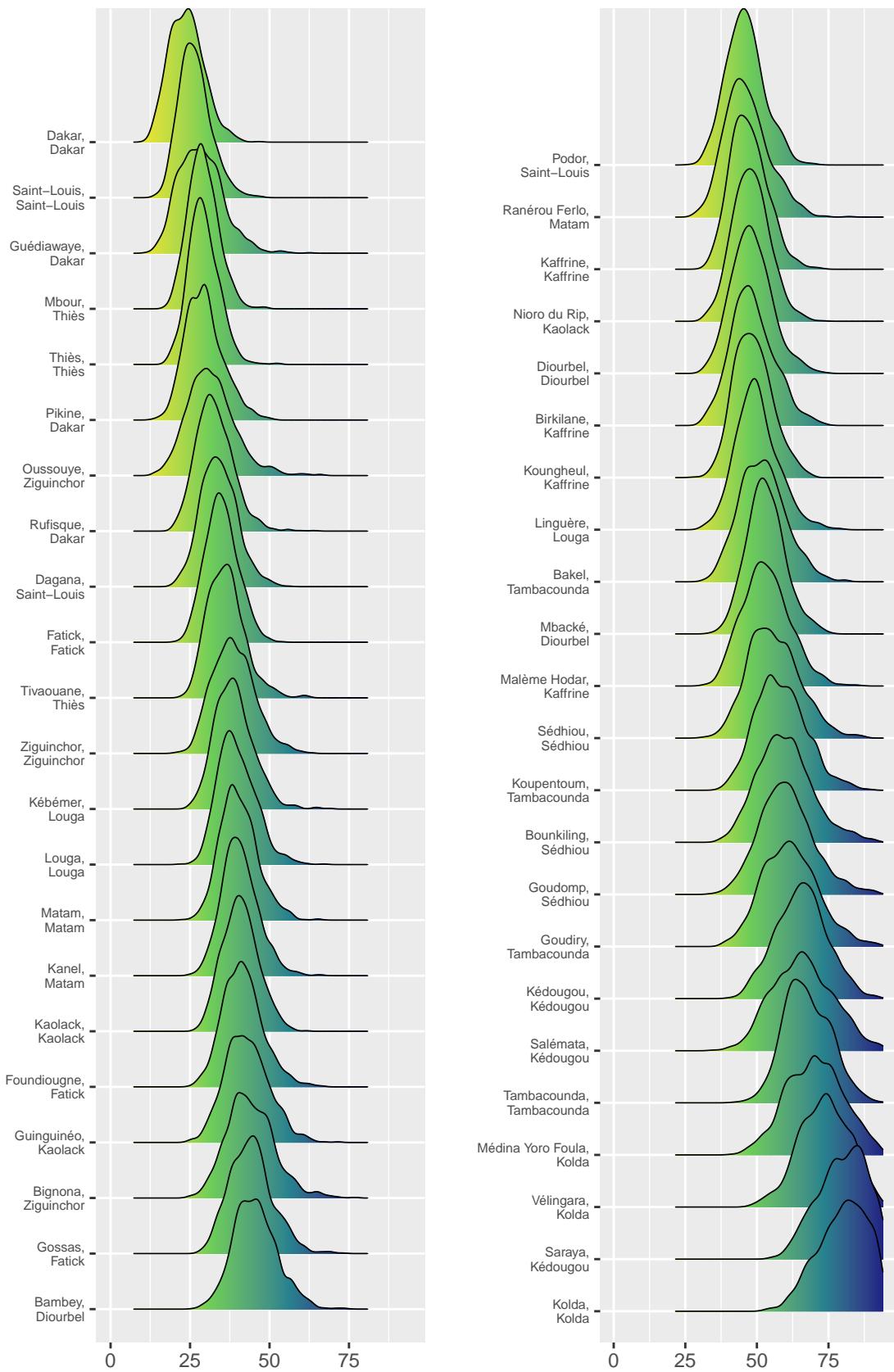


Figure 5: Posterior distributions of U5MR (deaths per 1000 children) in 2019. Areas are ordered by median estimated U5MR in 2019.

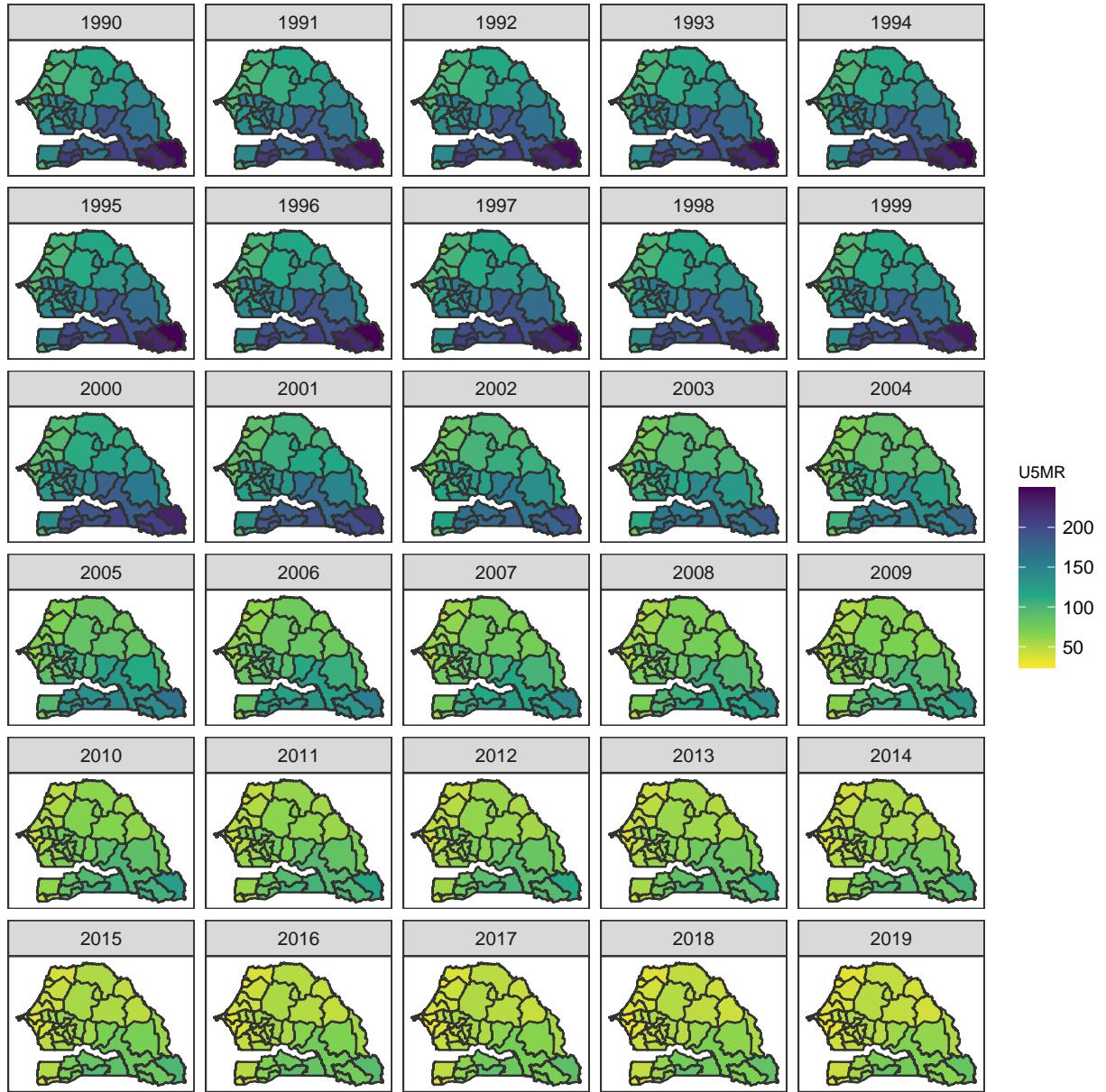


Figure 6: Posterior medians of U5MR (deaths per 1000 births) by Admin 2 area and year.

2 National Survey Data

Survey	Urban	Rural	Total
1992-93	132	126	258
1997	100	219	319
2005	158	208	366
2010-11	147	238	385
2012-13	79	121	200
2014	77	120	197
2015	84	130	214
2016	84	130	214
2019	84	130	214

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

Age	No. Deaths	No. Agemonths
0	598	21450
1-11	444	220289
12-23	194	222926
24-35	141	206730
36-47	87	191594
48-59	51	177638

Table 2: Numbers of agemonths and deaths by age for DHS 2019.

Age	No. Deaths	No. Agemonths
0	629	22228
1-11	495	228534
12-23	267	230880
24-35	227	214101
36-47	147	197067
48-59	78	180813

Table 3: Numbers of agemonths and deaths by age for DHS 2016.

Age	No. Deaths	No. Agemonths
0	685	22586
1-11	631	231246
12-23	364	231992
24-35	215	213981
36-47	151	196501
48-59	81	180655

Table 4: Numbers of agemonths and deaths by age for DHS 2015.

Age	No. Deaths	No. Agemonths
0	605	20981
1-11	527	215711
12-23	283	218157
24-35	200	201490
36-47	136	184941
48-59	90	169923

Table 5: Numbers of agemonths and deaths by age for DHS 2014.

Age	No. Deaths	No. Agemonths
0	657	20818
1-11	535	212574
12-23	261	214269
24-35	241	198537
36-47	153	182392
48-59	82	167610

Table 6: Numbers of agemonths and deaths by age for DHS 2012-13.

Age	No. Deaths	No. Agemonths
0	1375	37186
1-11	878	377463
12-23	609	380377
24-35	569	354607
36-47	307	327946
48-59	179	304909

Table 7: Numbers of agemonths and deaths by age for DHS 2010-11.

Age	No. Deaths	No. Agemonths
0	1156	28433
1-11	853	288627
12-23	616	292801
24-35	553	275203
36-47	312	259479
48-59	182	245065

Table 8: Numbers of agemonths and deaths by age for DHS 2005.

Age	No. Deaths	No. Agemonths
0	404	10702
1-11	347	110513
12-23	276	115474
24-35	246	111543
36-47	152	107689
48-59	82	103014

Table 9: Numbers of agemonths and deaths by age for DHS 1997.

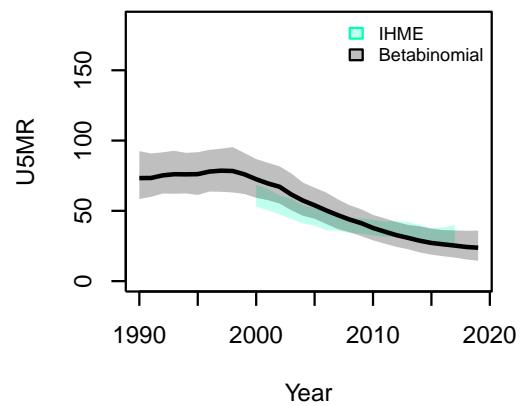
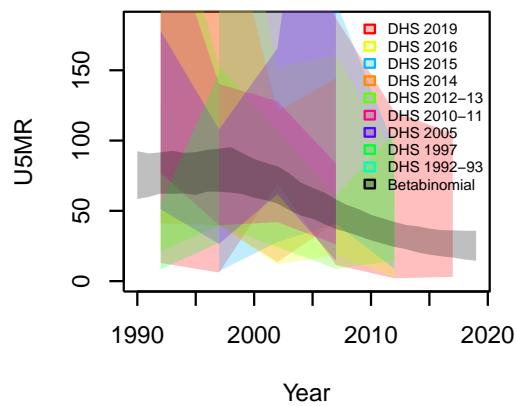
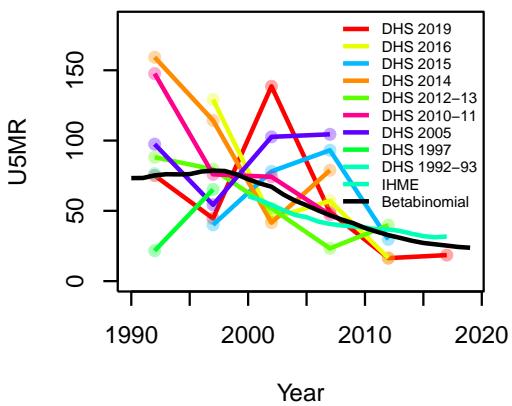
Age	No. Deaths	No. Agemonths
0	114	3518
1-11	120	36289
12-23	70	38166
24-35	64	37413
36-47	45	36237
48-59	20	36034

Table 10: Numbers of agemonths and deaths by age for DHS 1992-93.

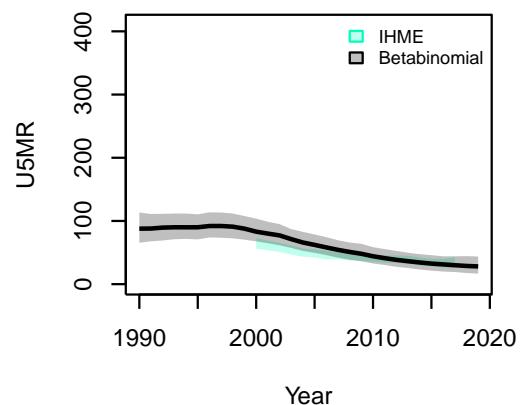
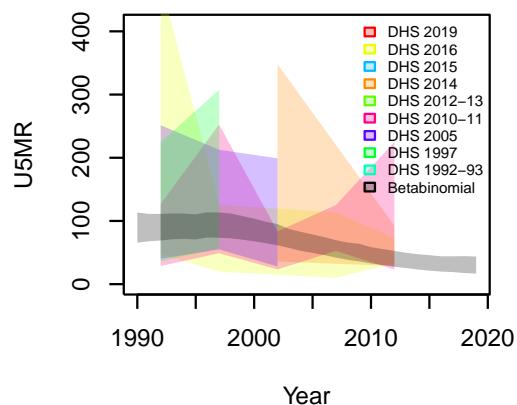
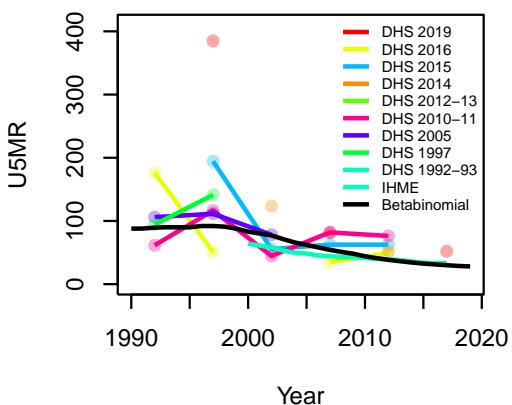
3 Admin 2 Figures

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.

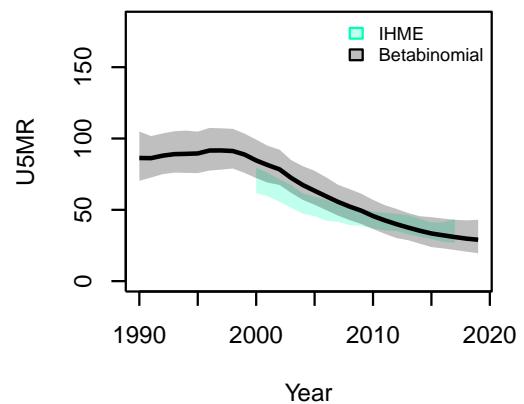
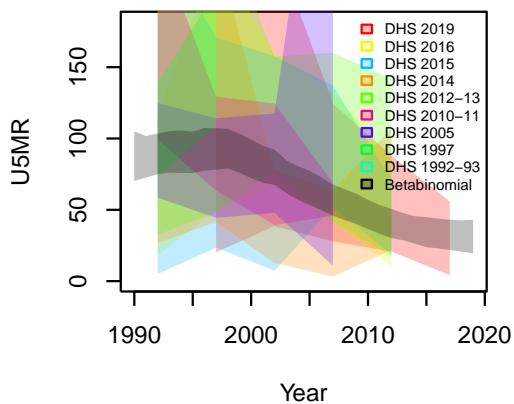
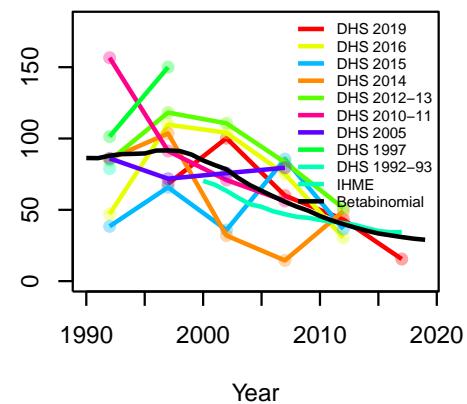
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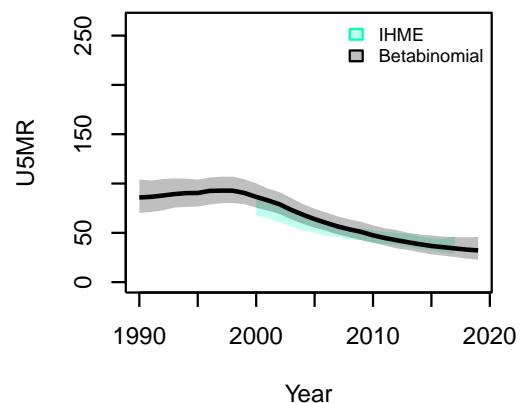
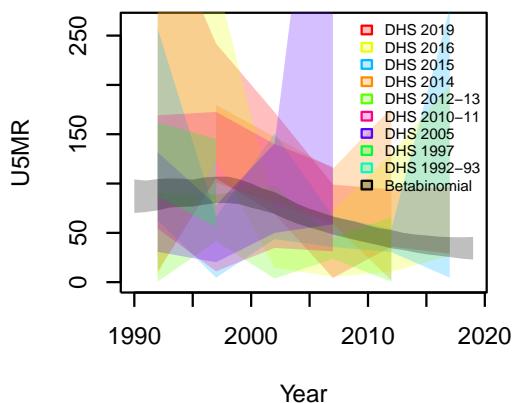
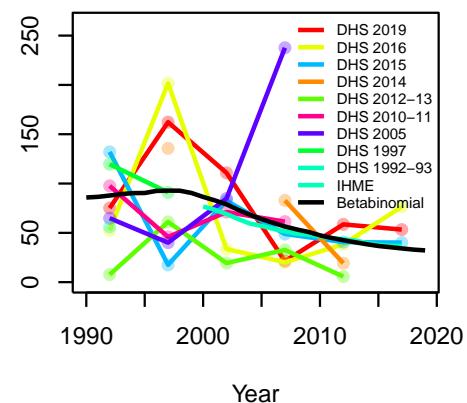
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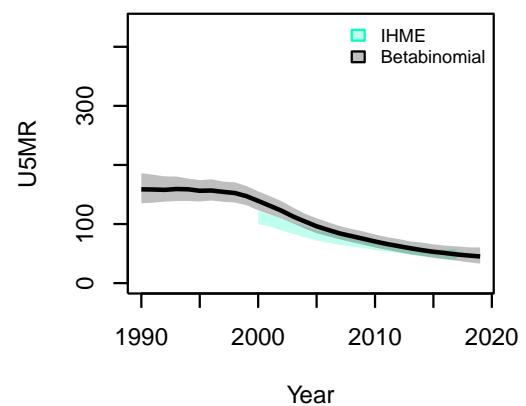
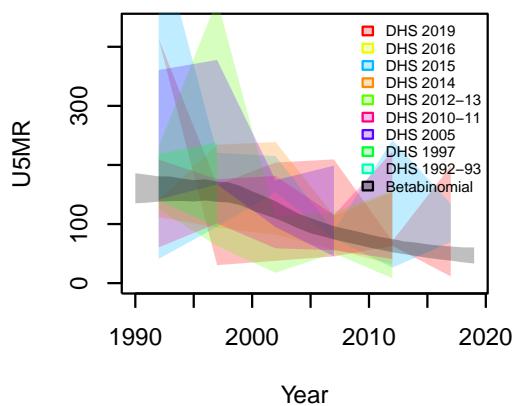
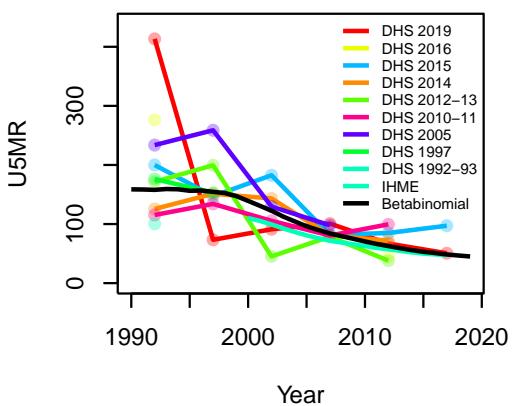
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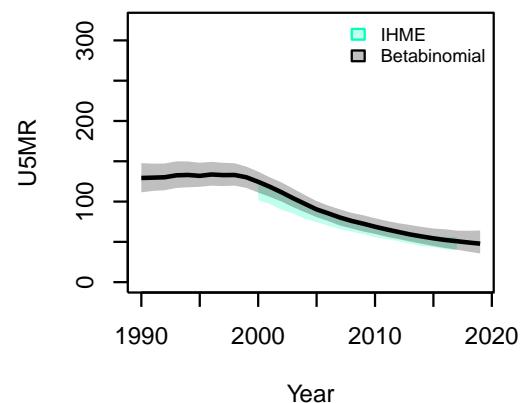
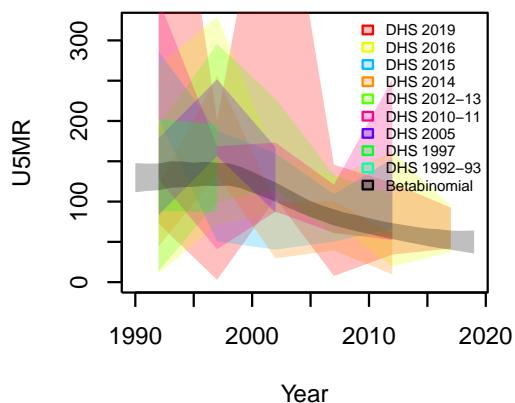
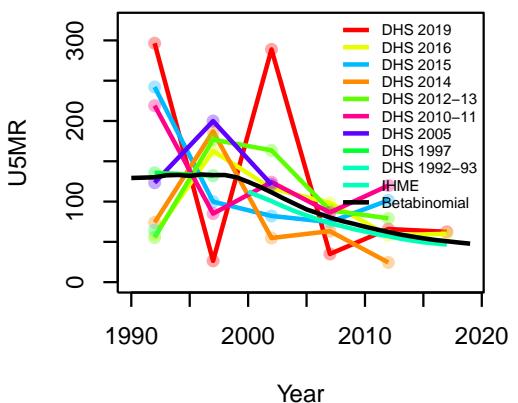
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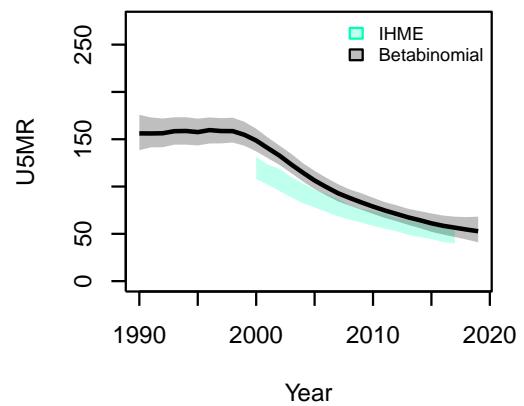
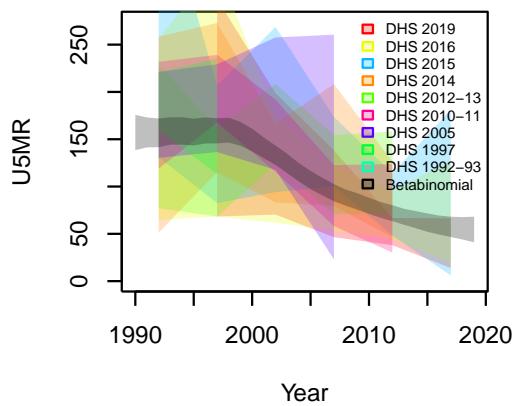
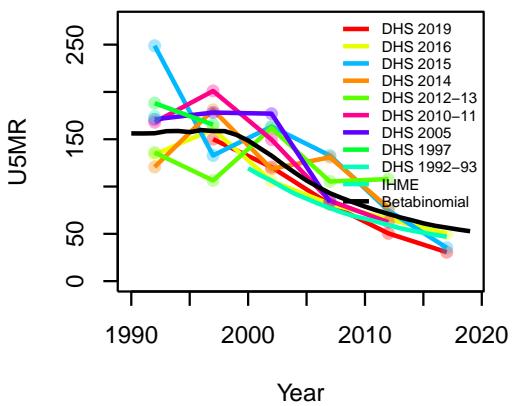
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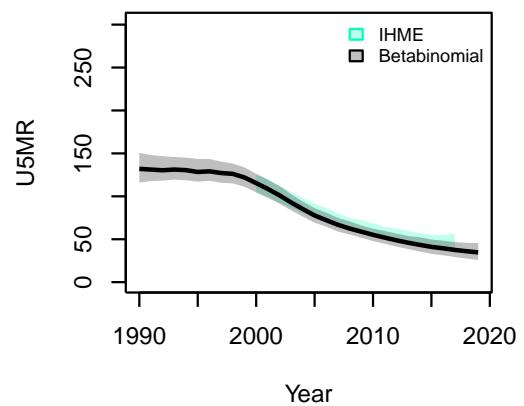
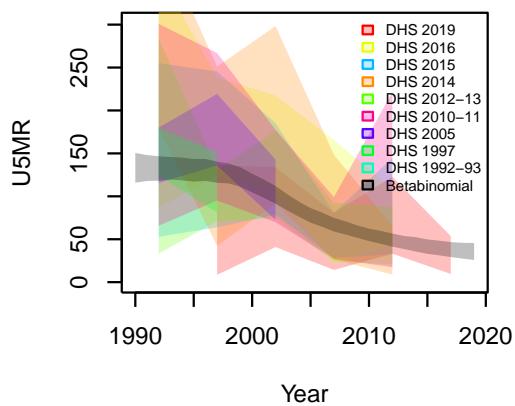
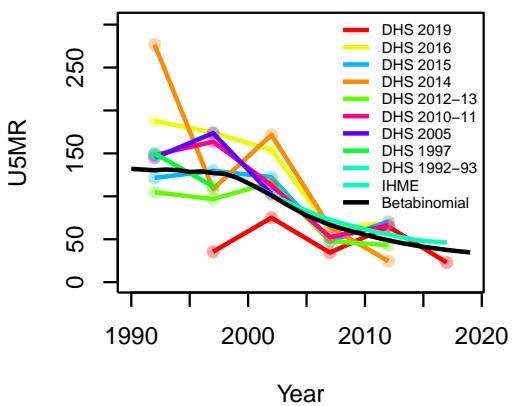
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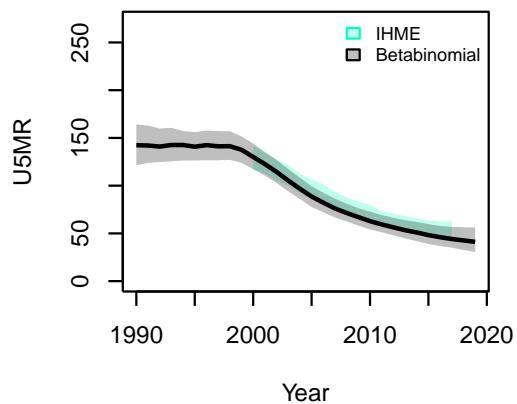
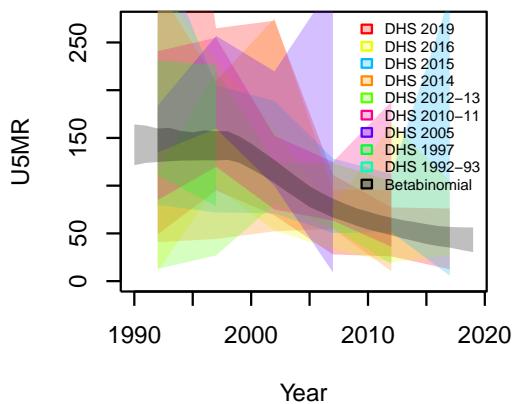
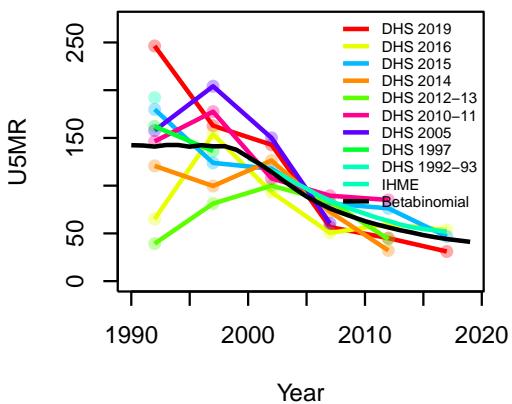
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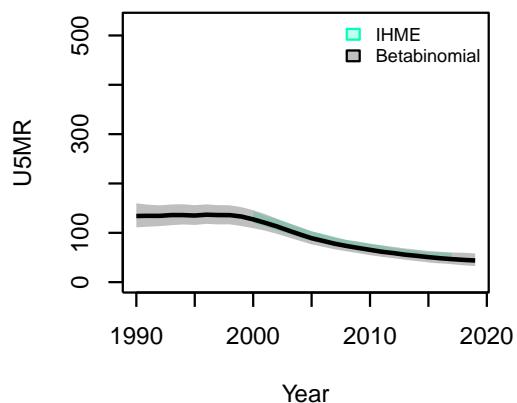
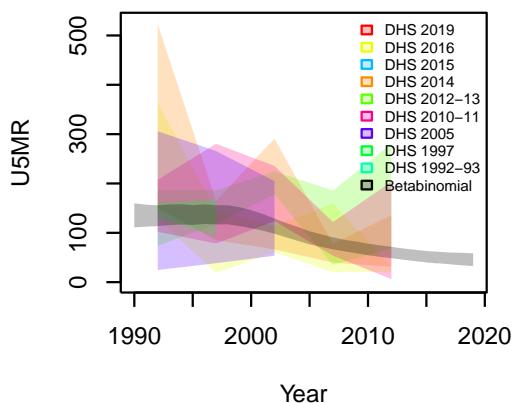
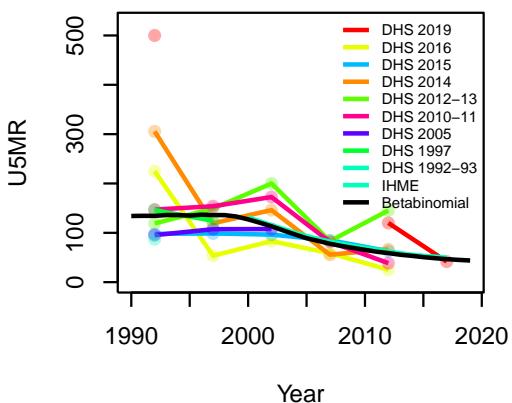
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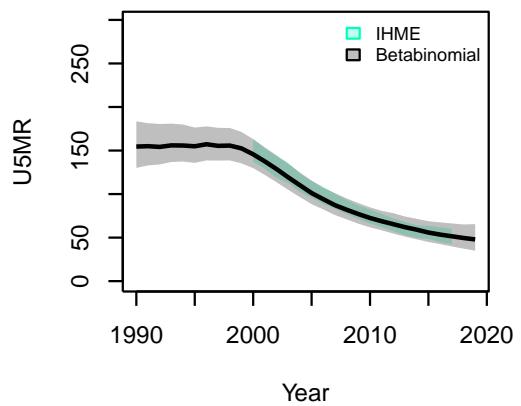
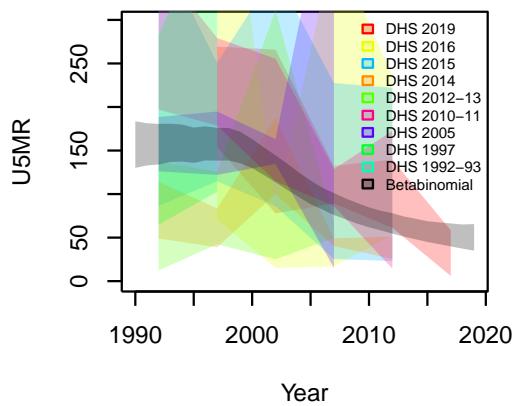
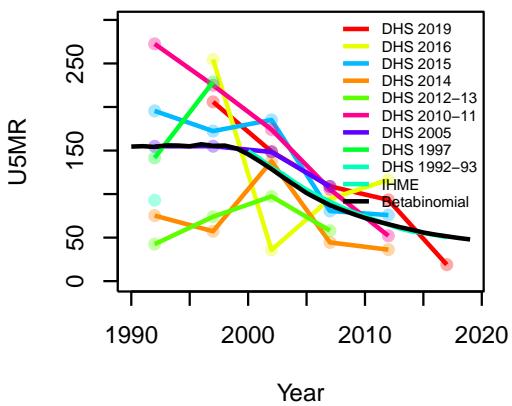
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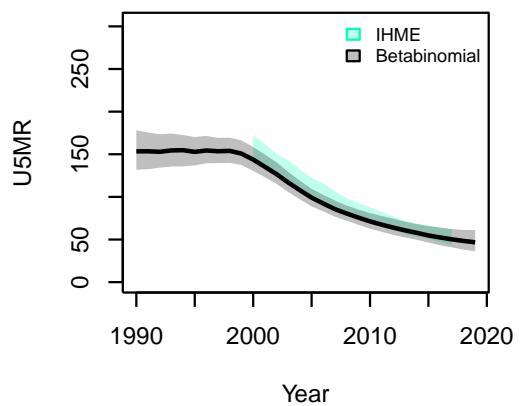
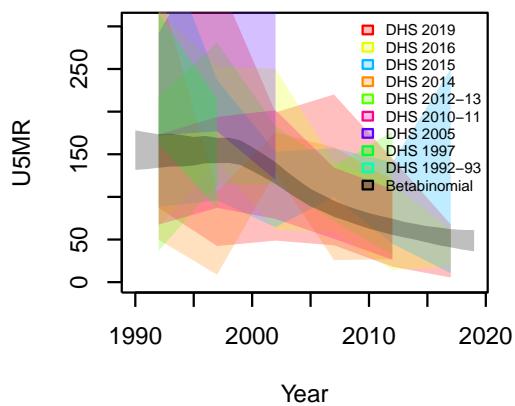
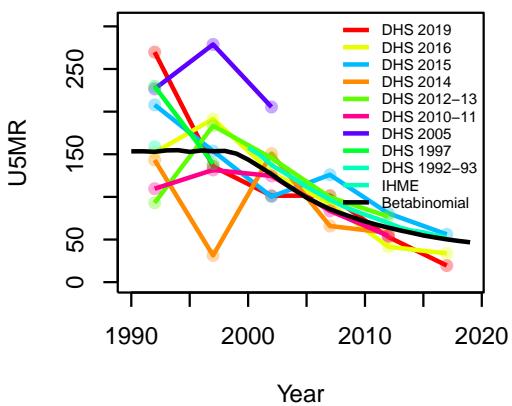
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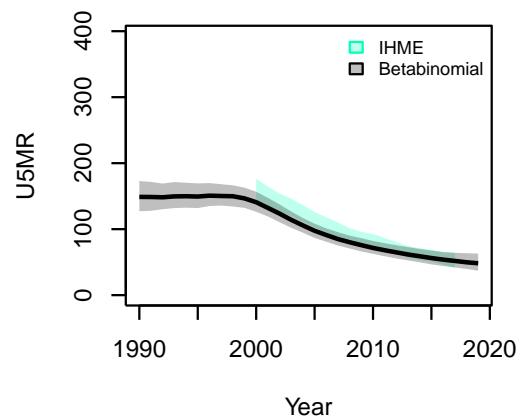
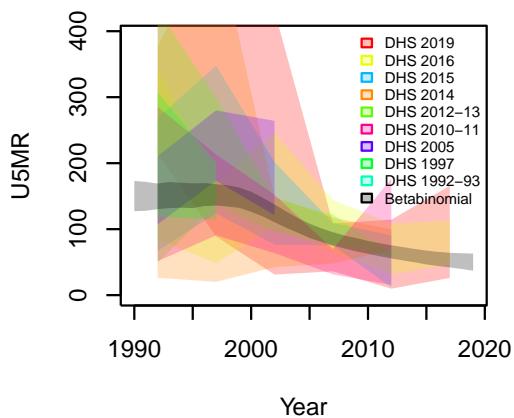
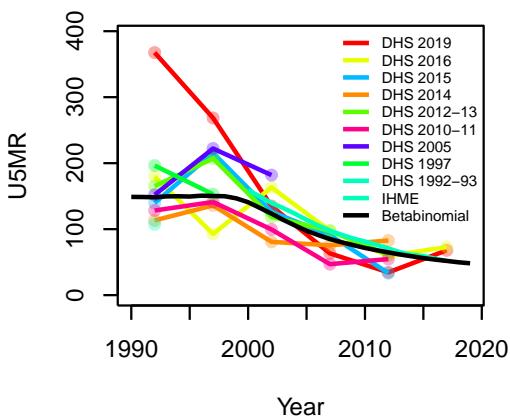
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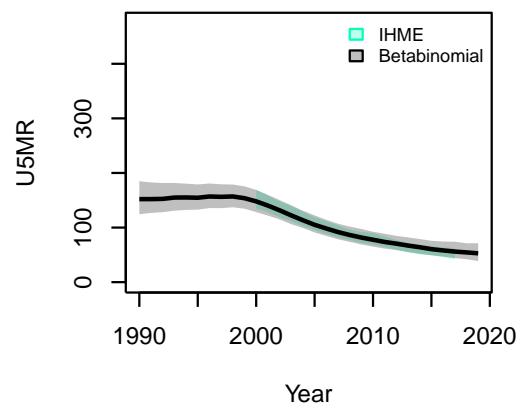
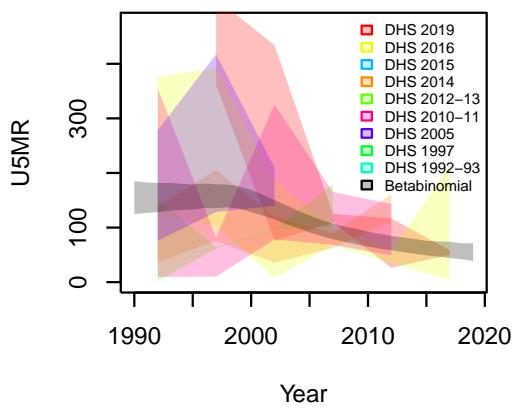
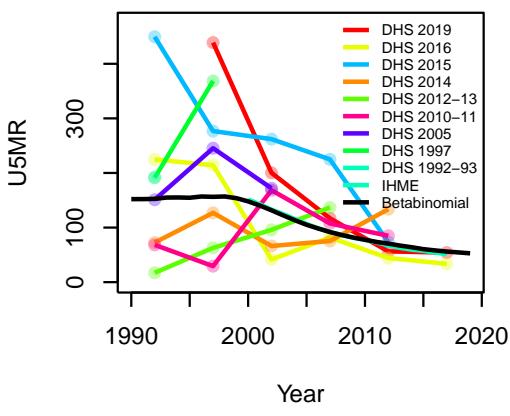
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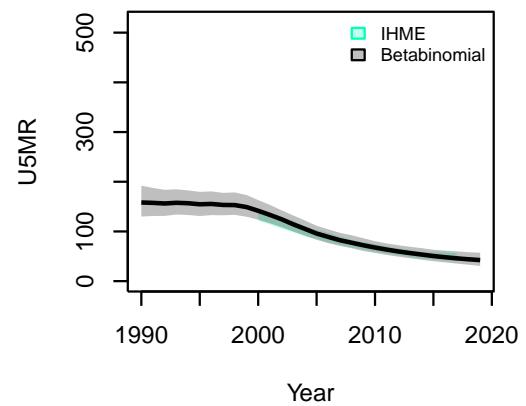
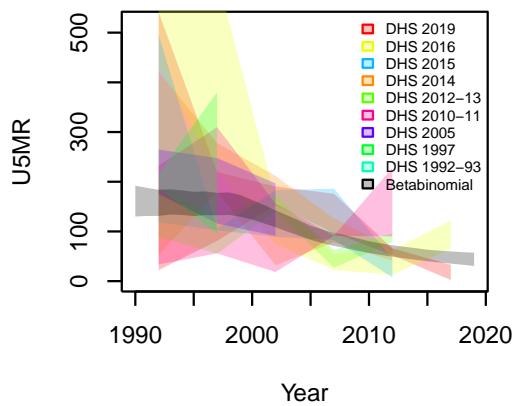
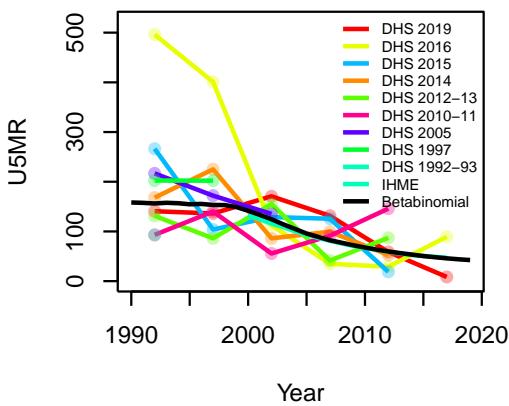
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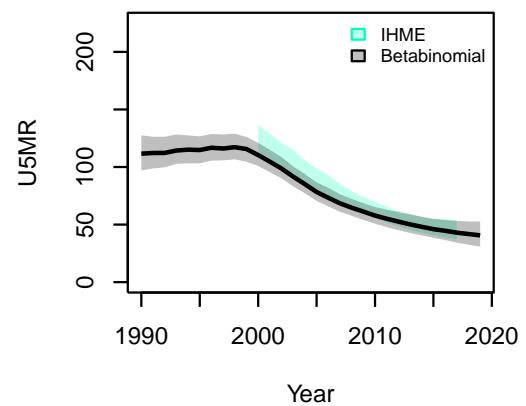
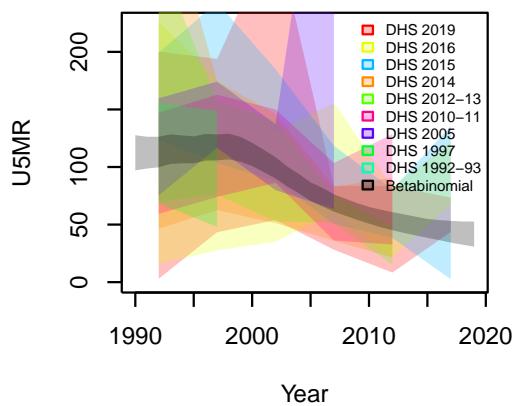
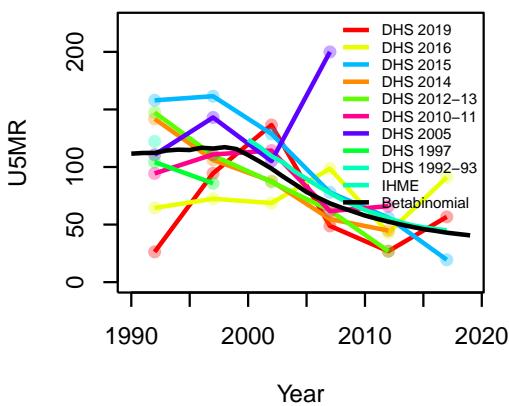
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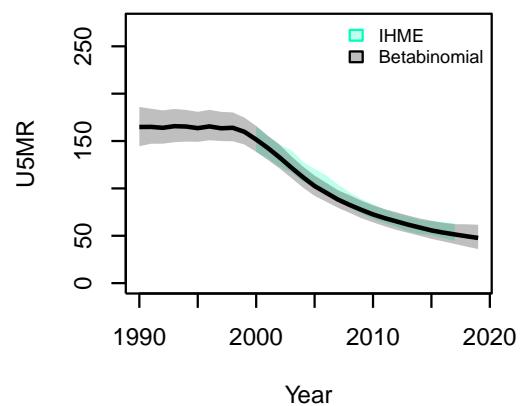
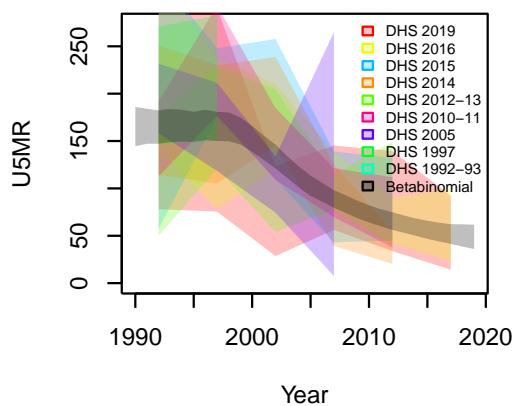
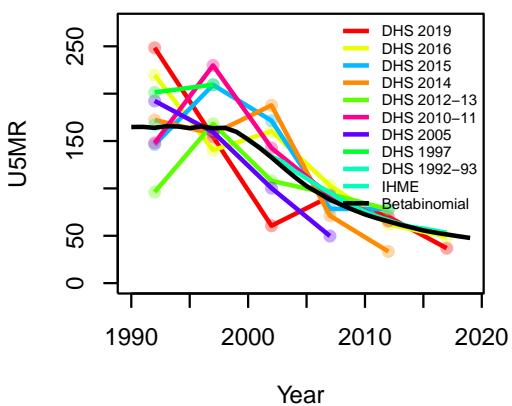
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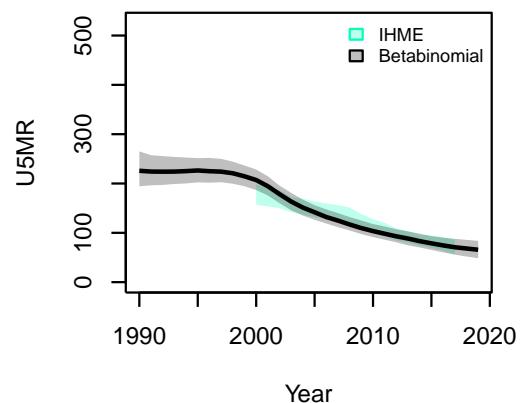
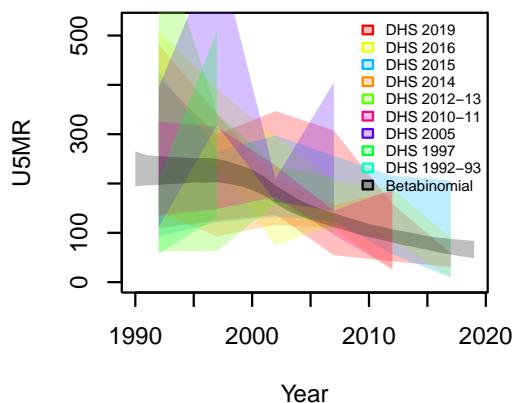
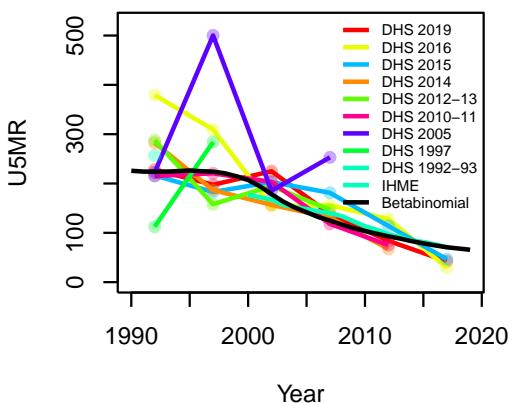
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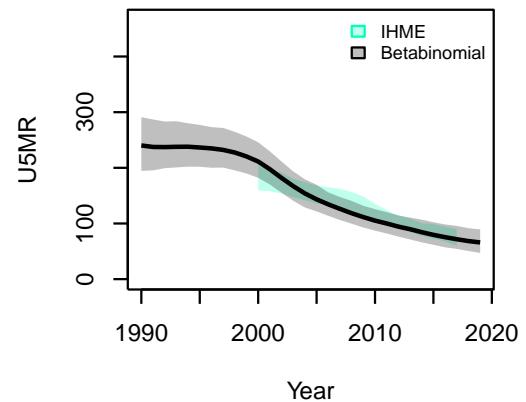
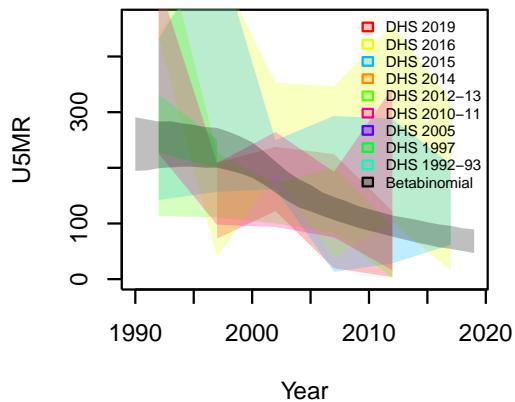
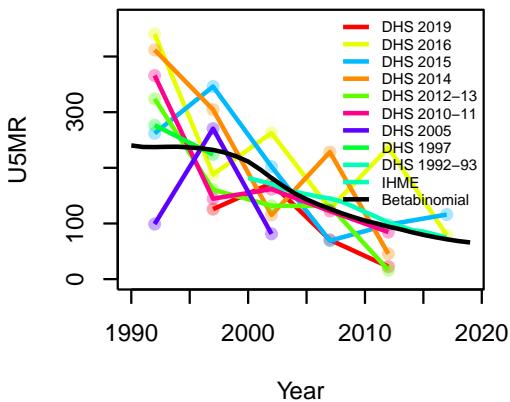
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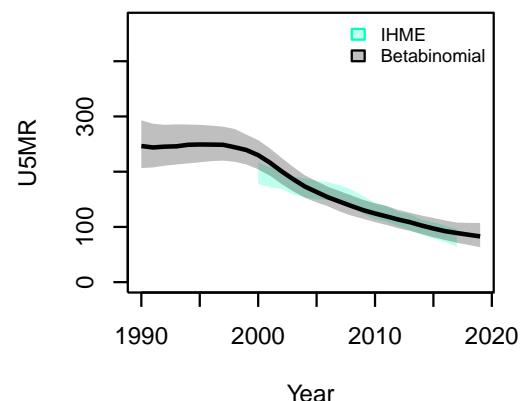
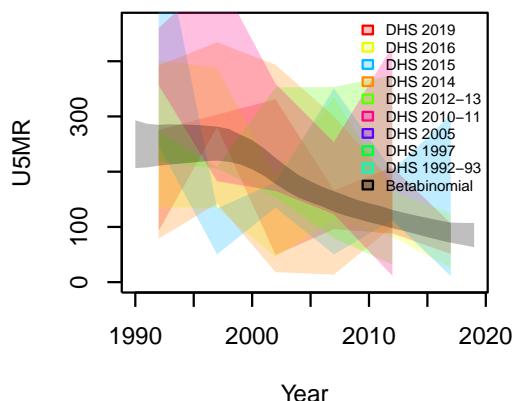
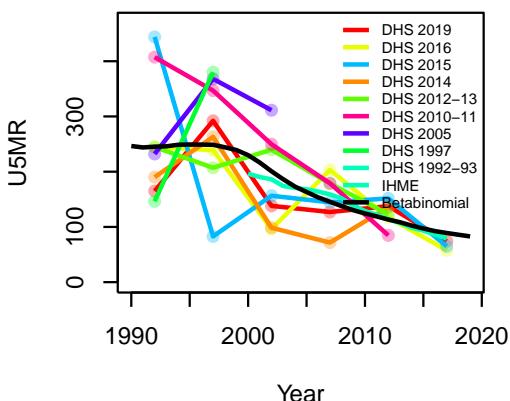
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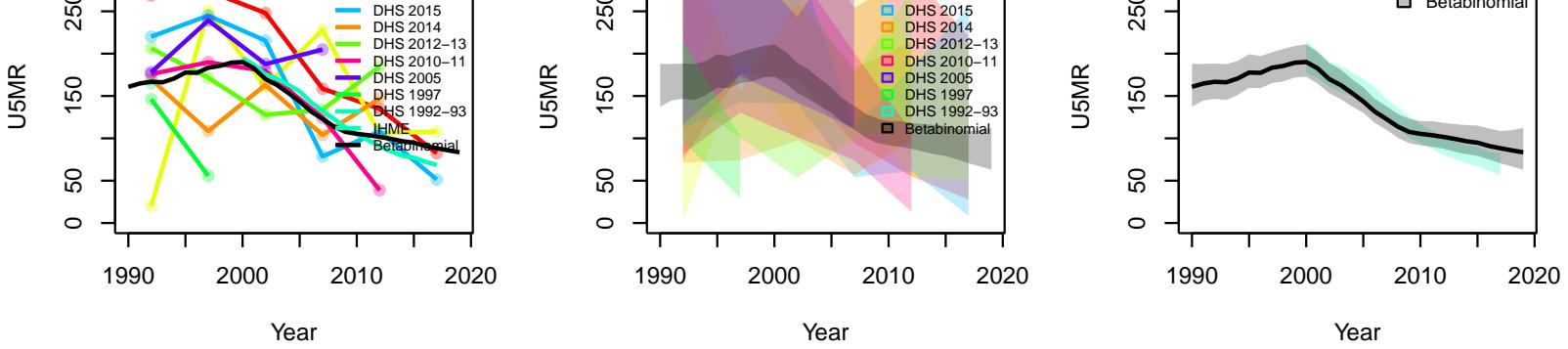
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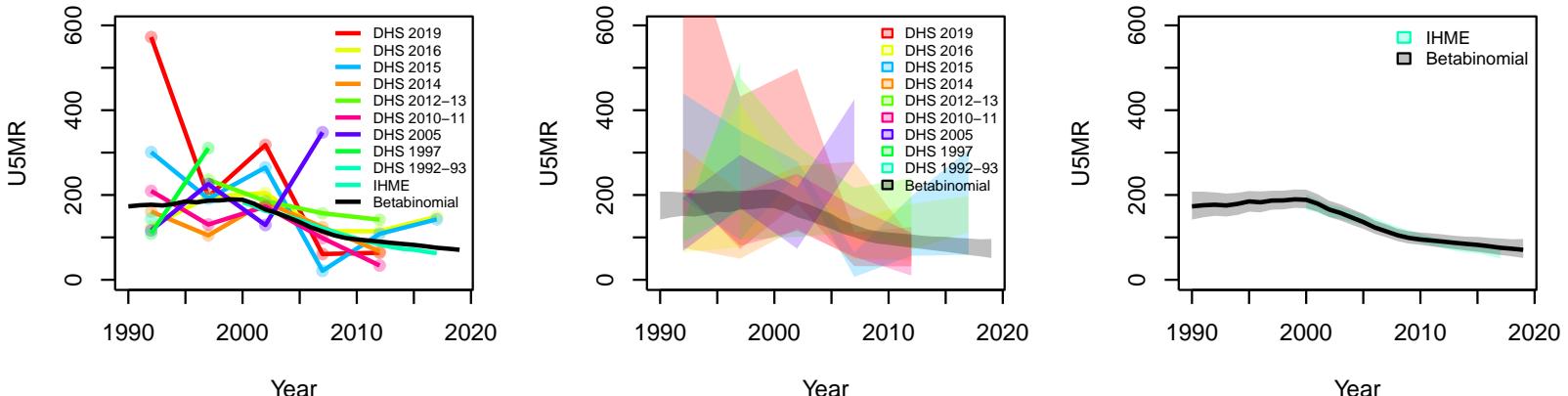
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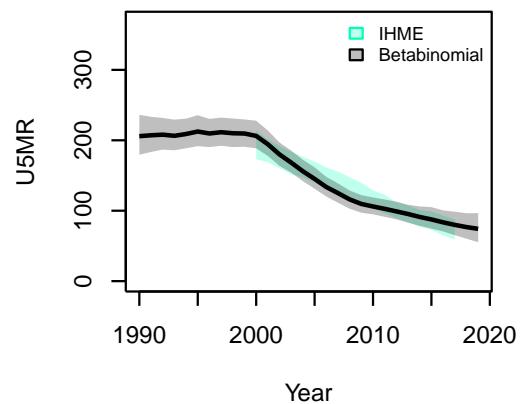
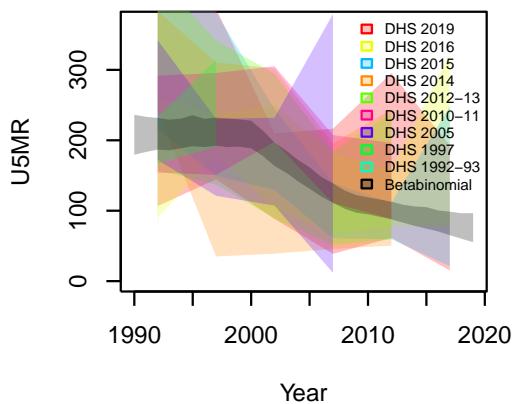
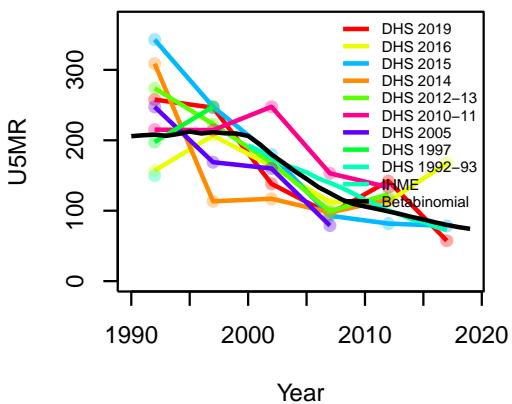
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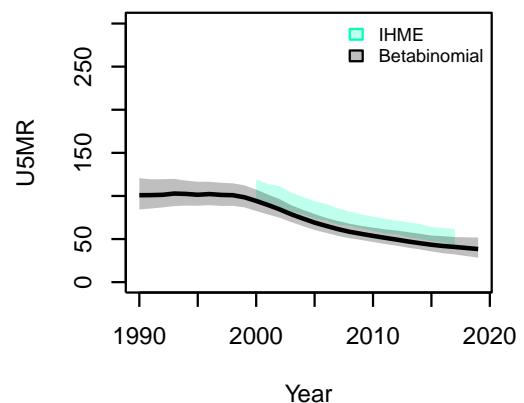
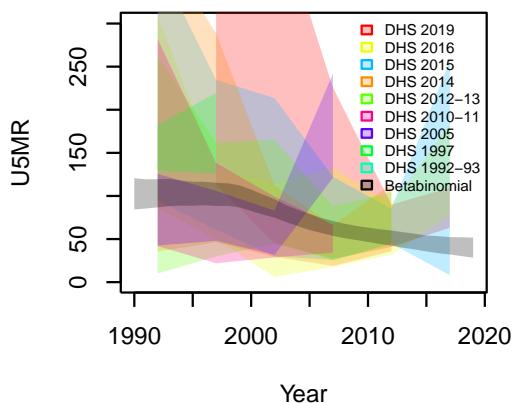
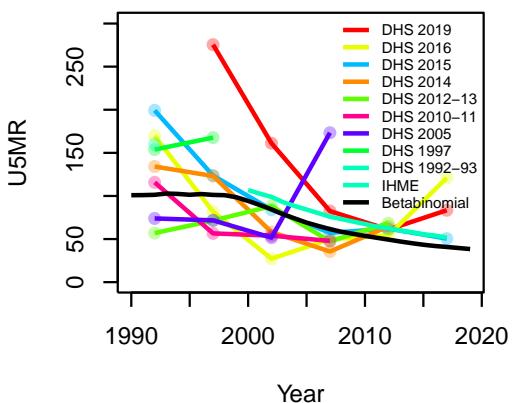
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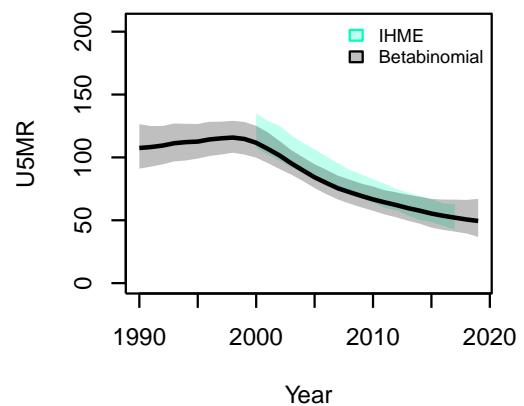
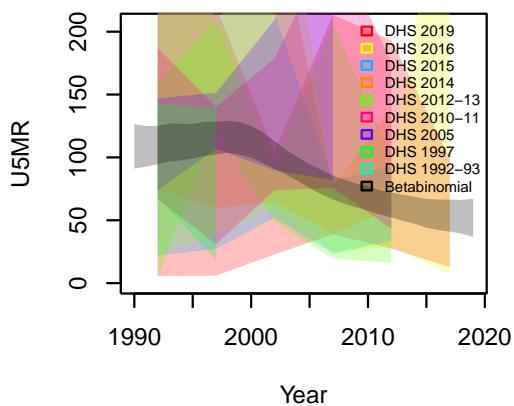
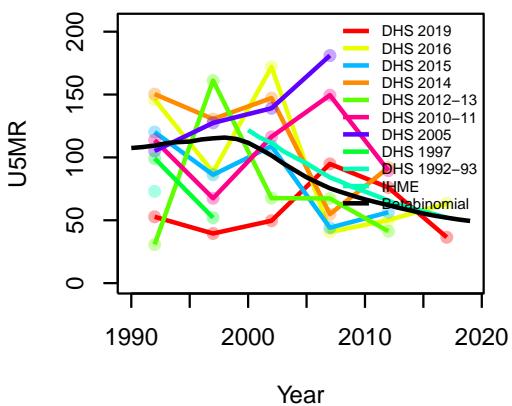
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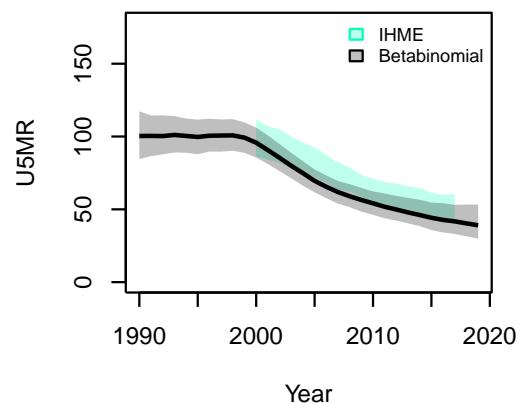
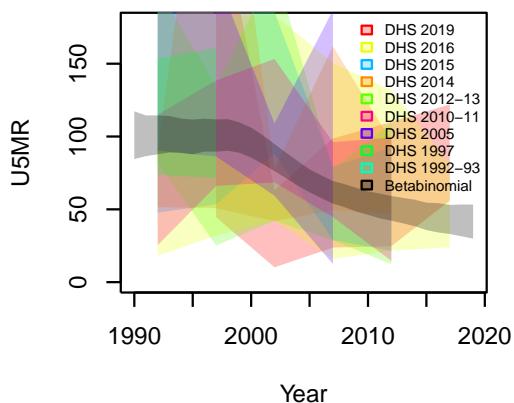
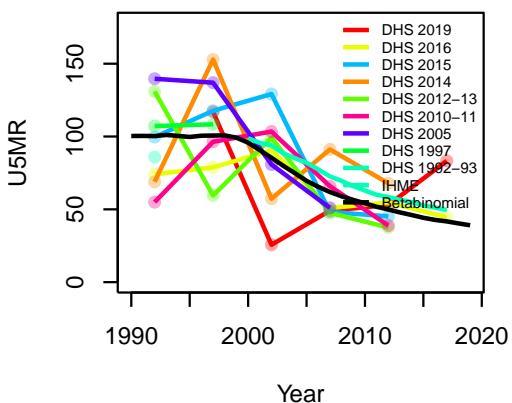
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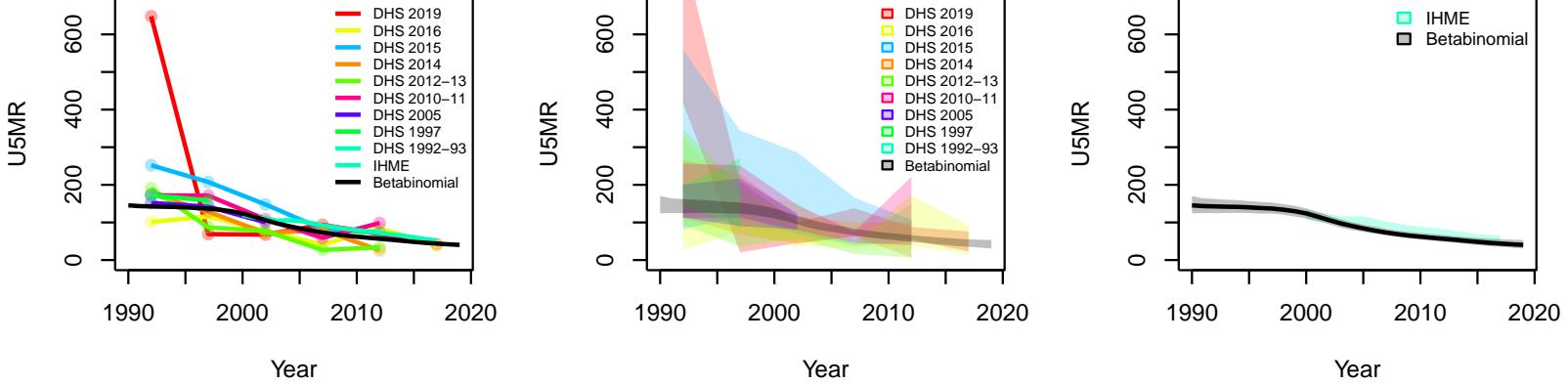
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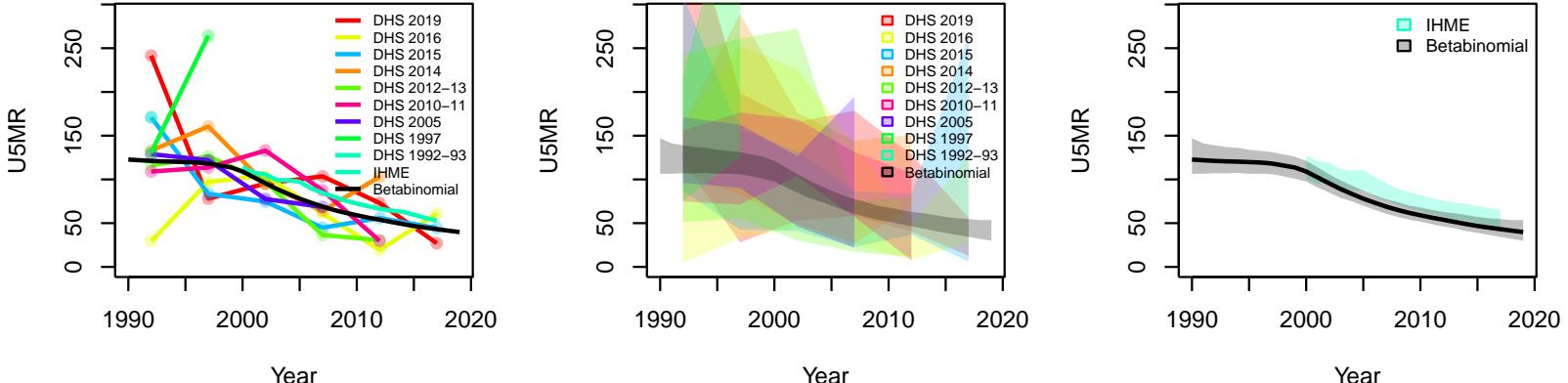
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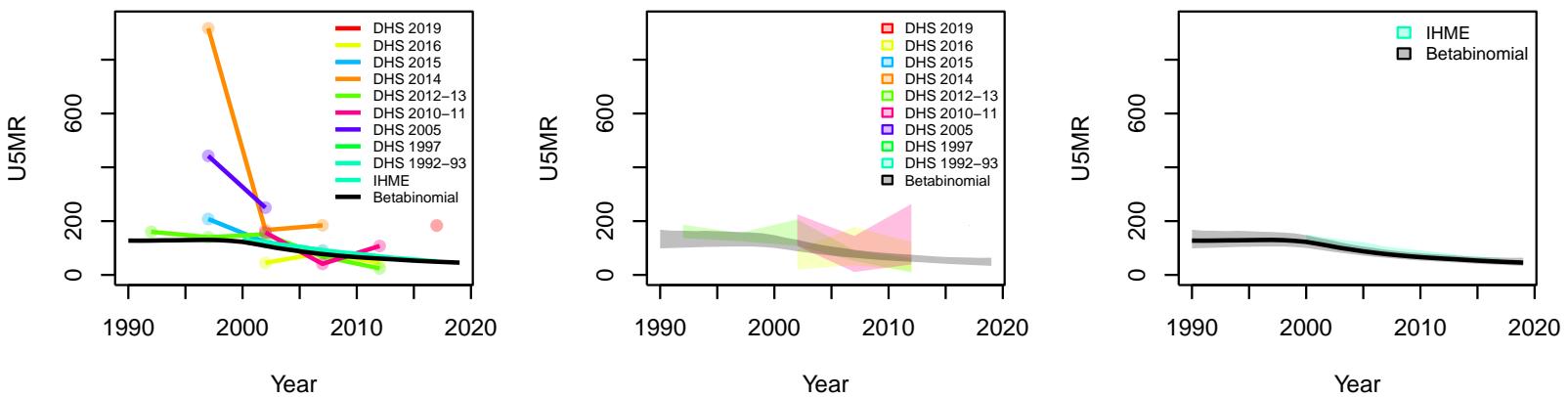
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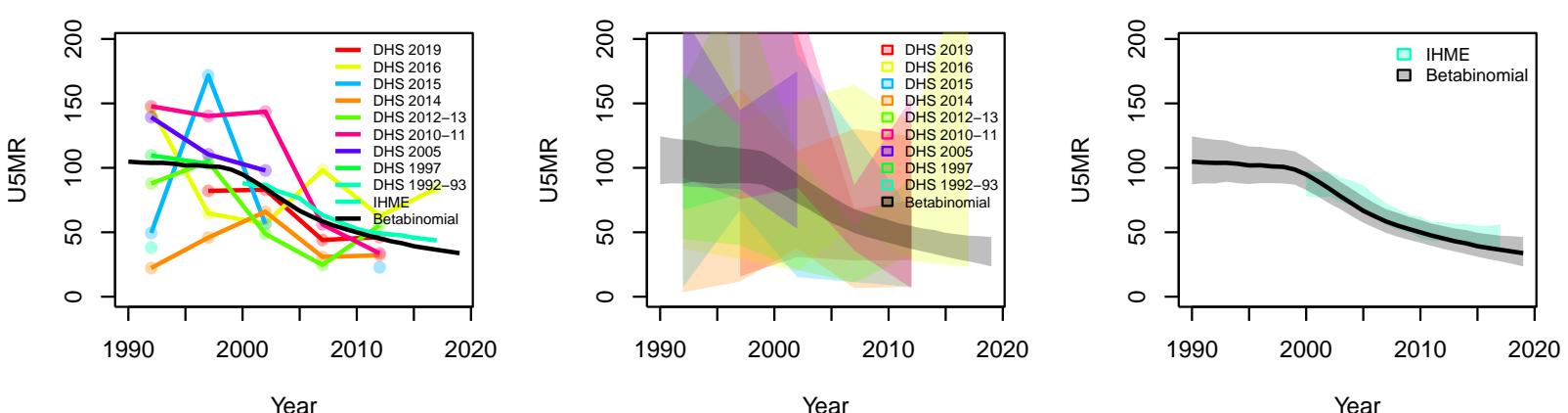
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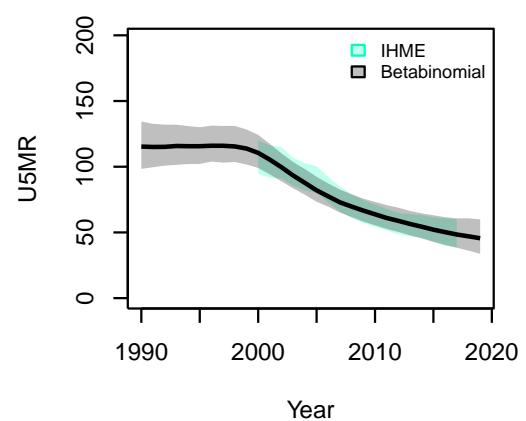
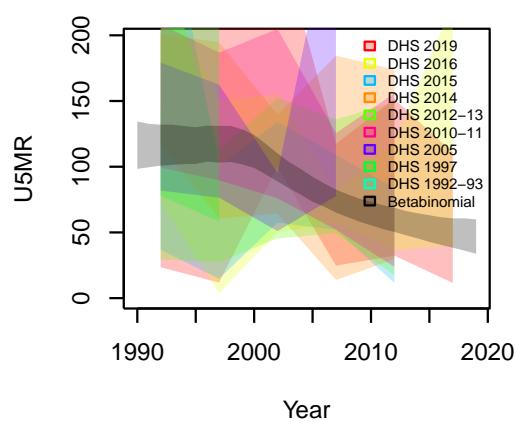
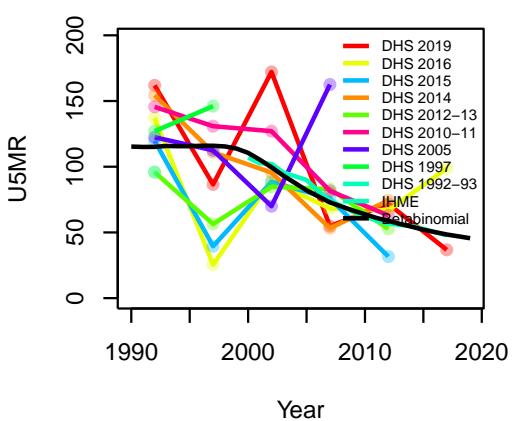
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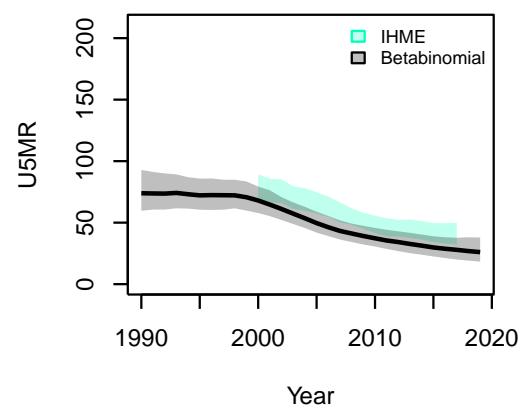
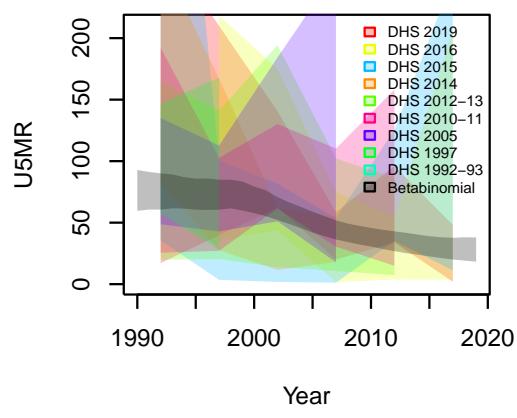
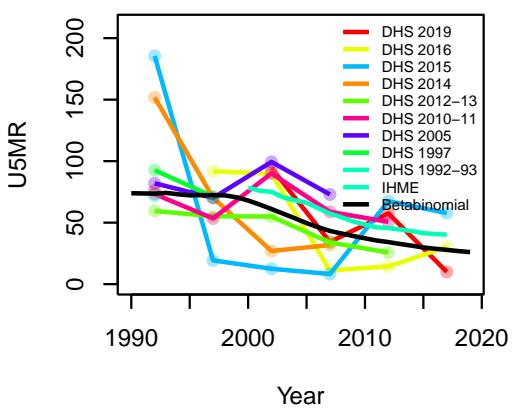
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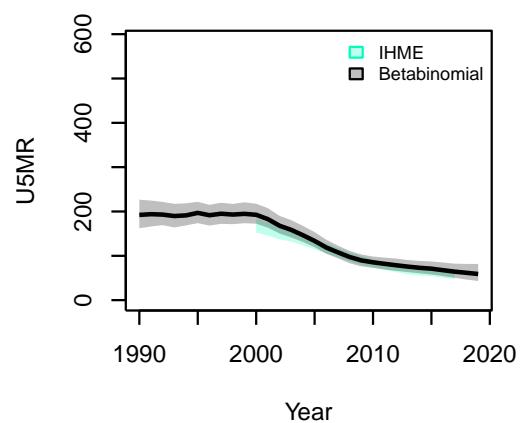
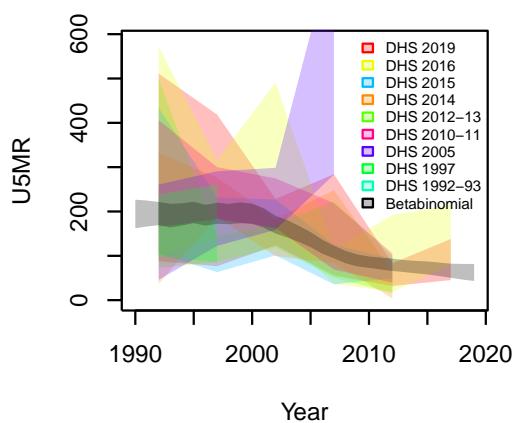
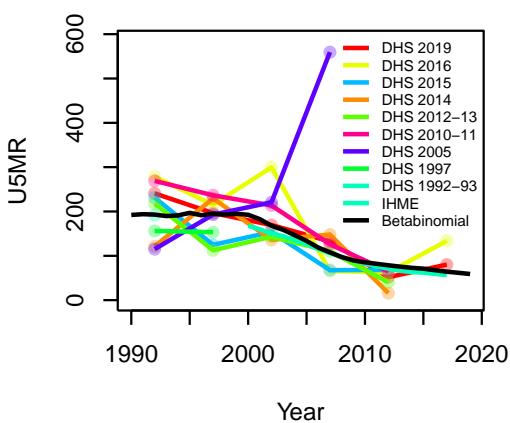
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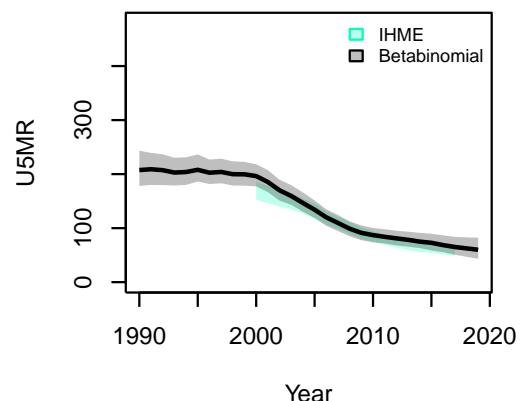
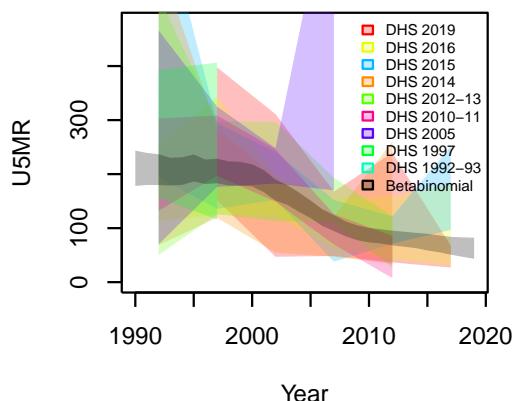
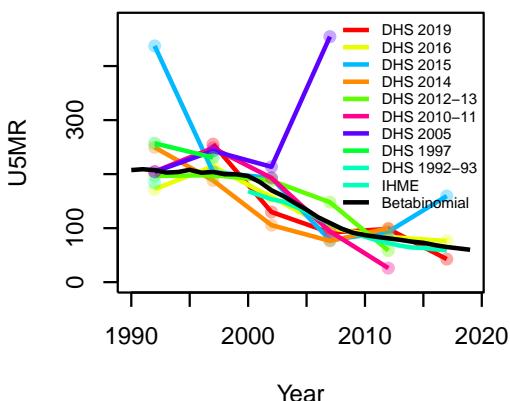
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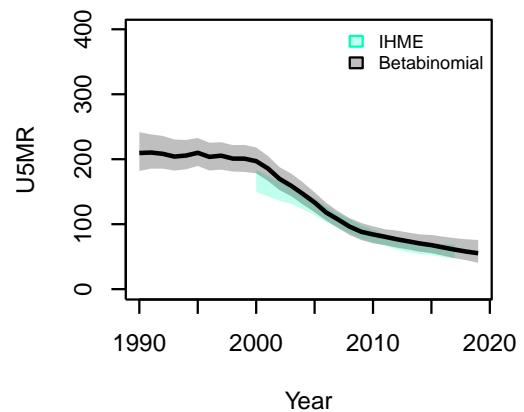
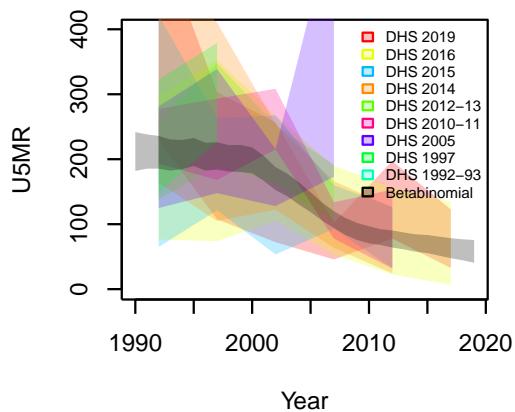
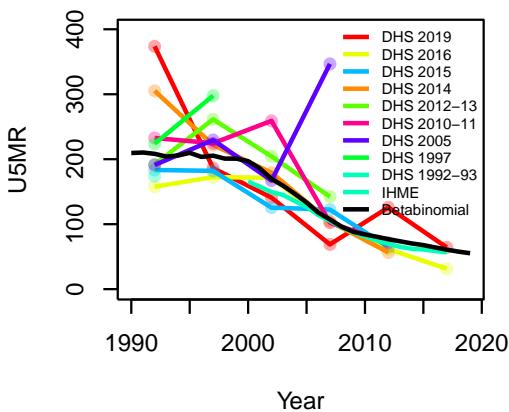
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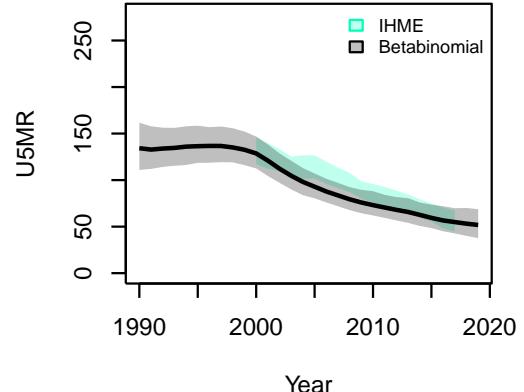
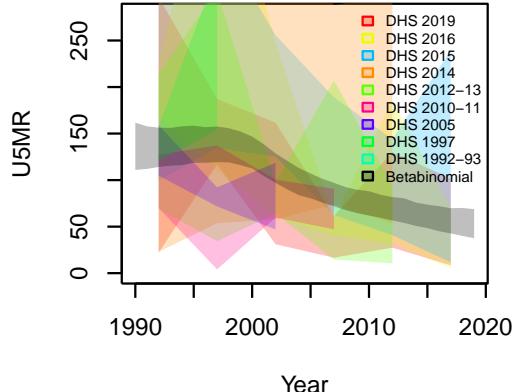
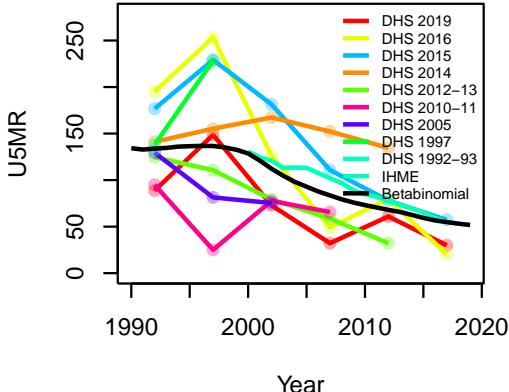
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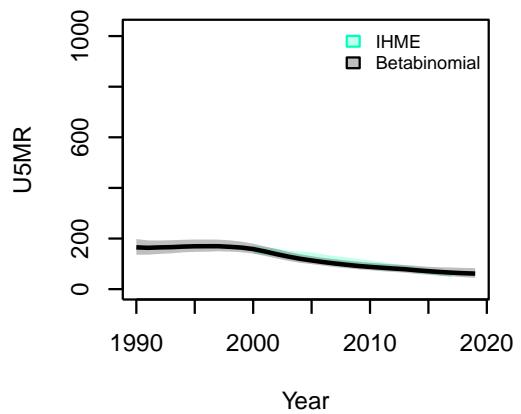
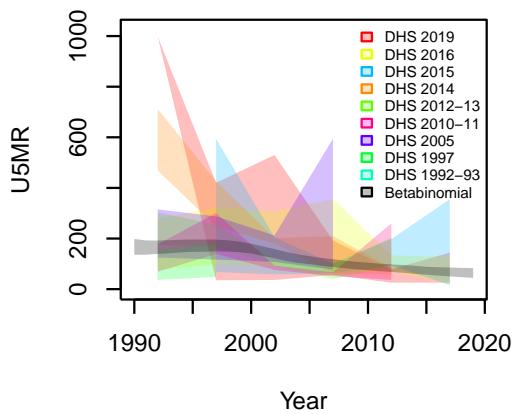
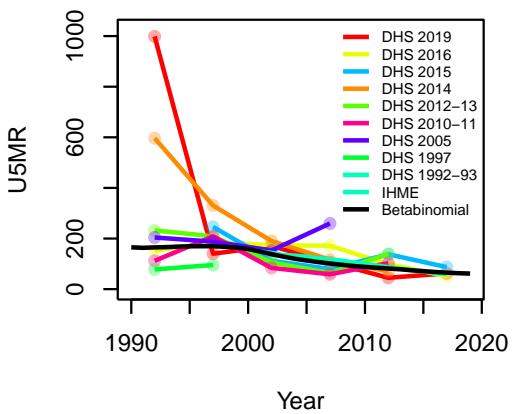
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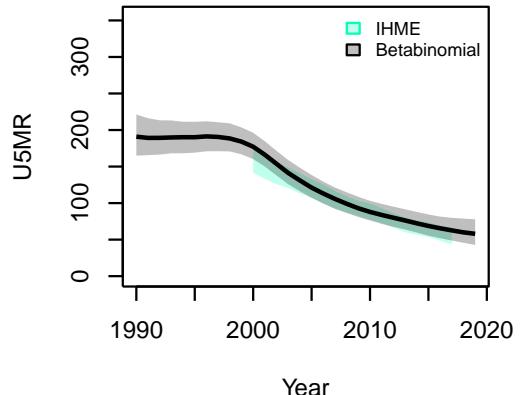
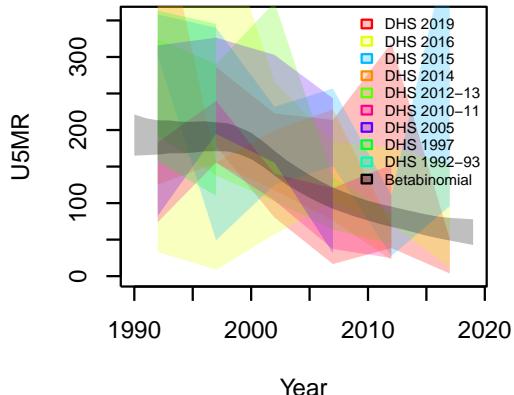
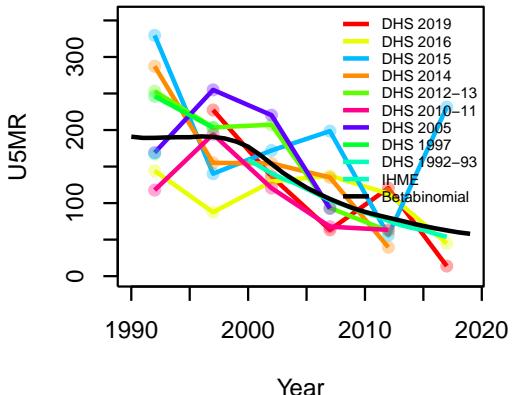
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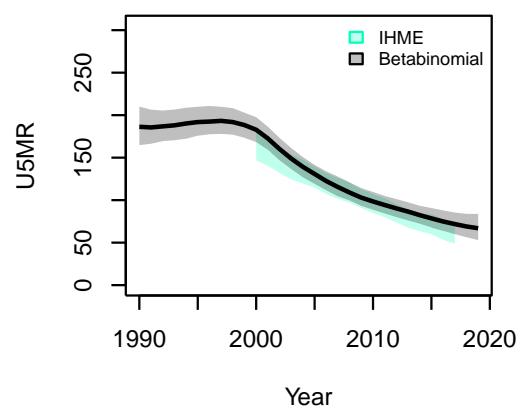
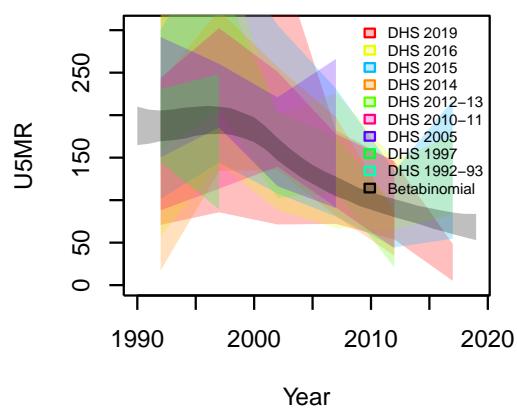
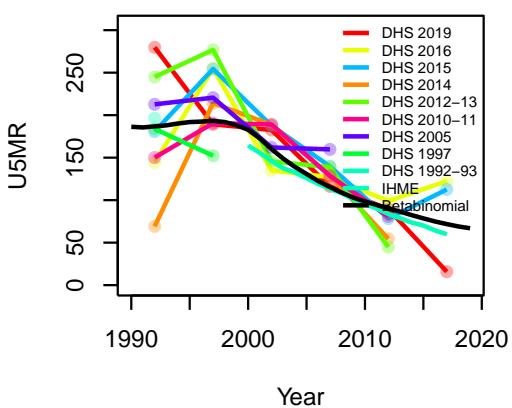
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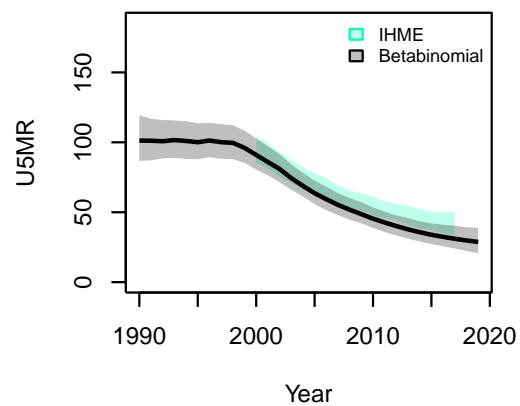
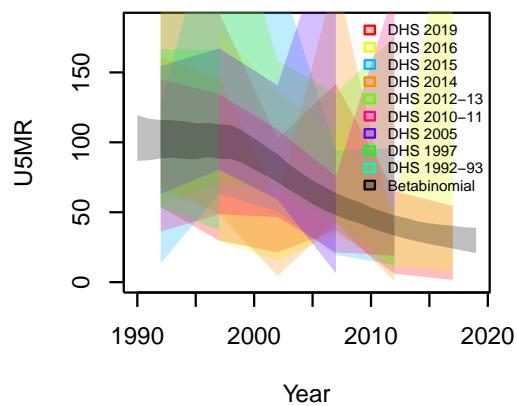
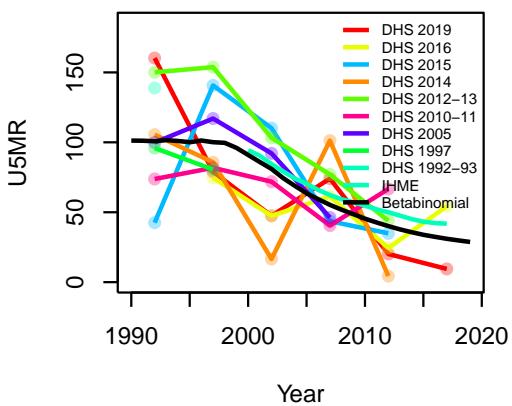
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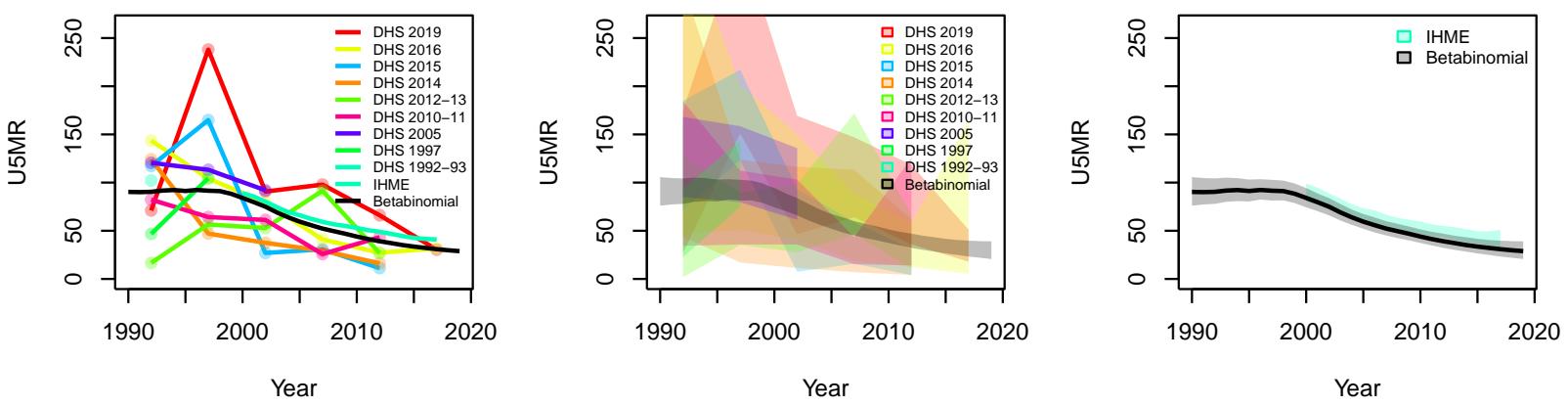
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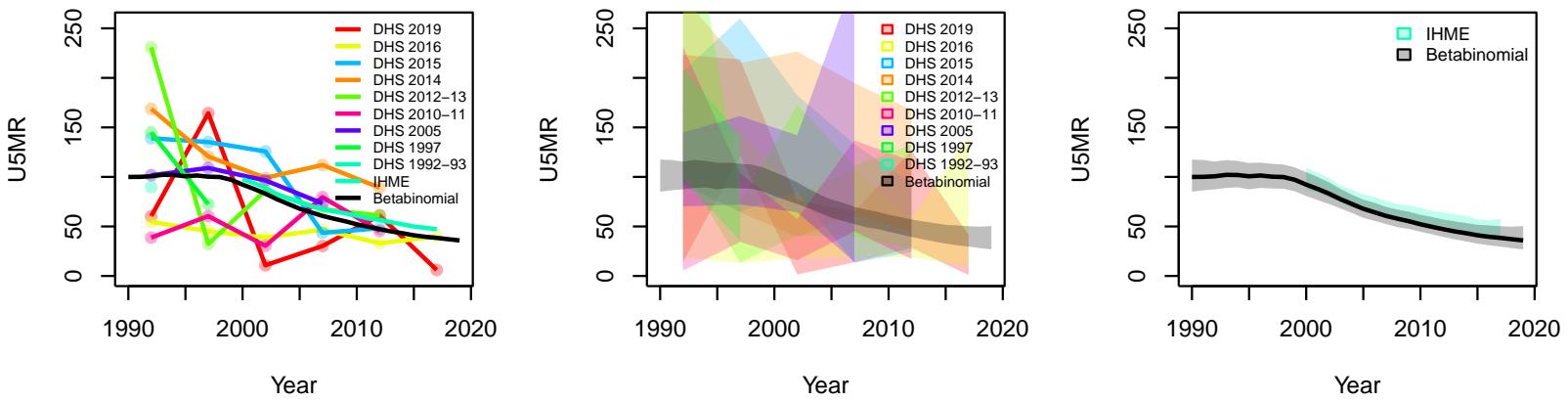
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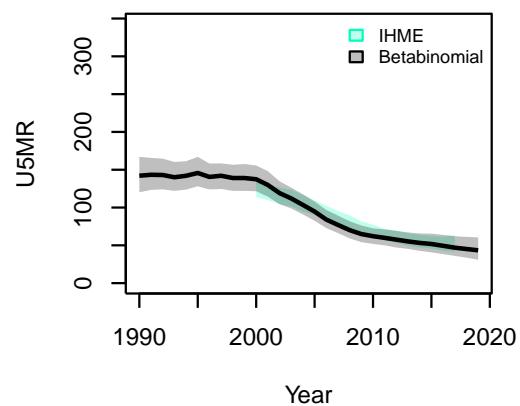
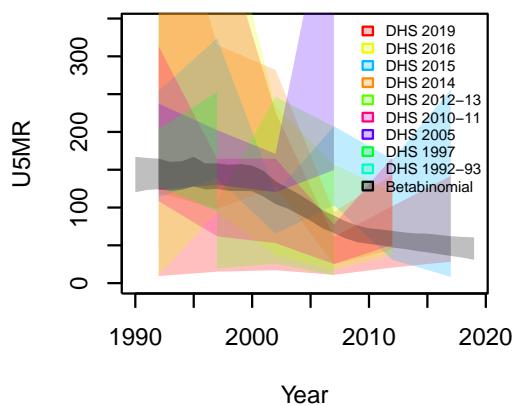
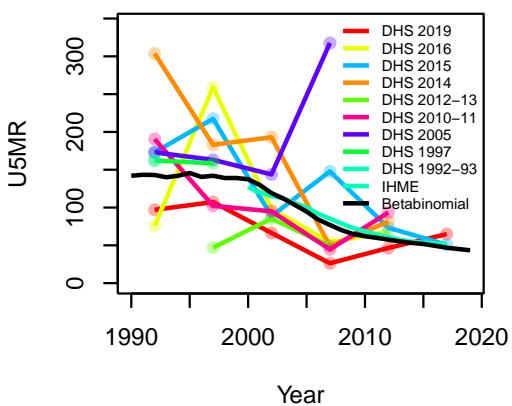
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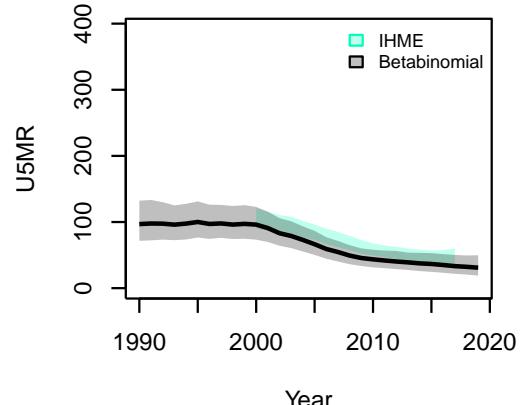
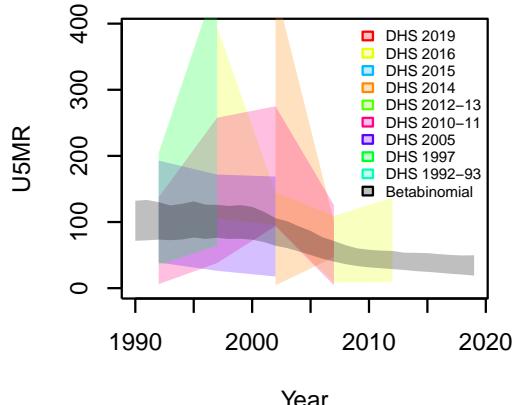
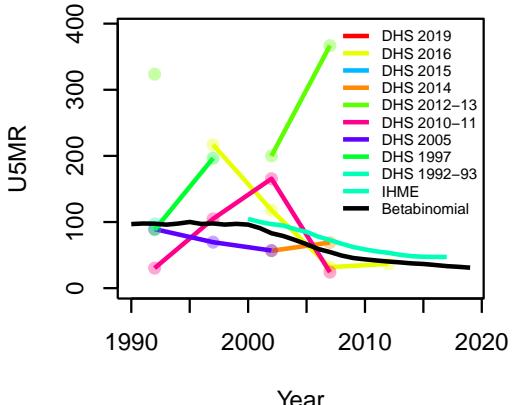
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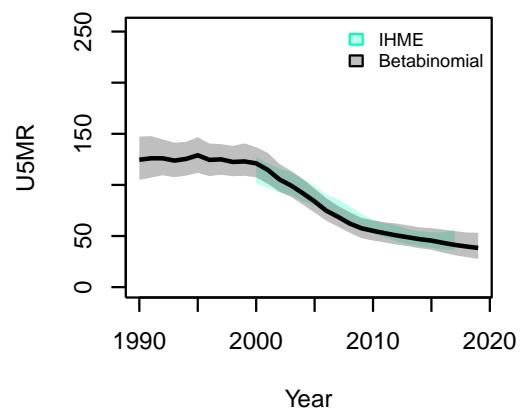
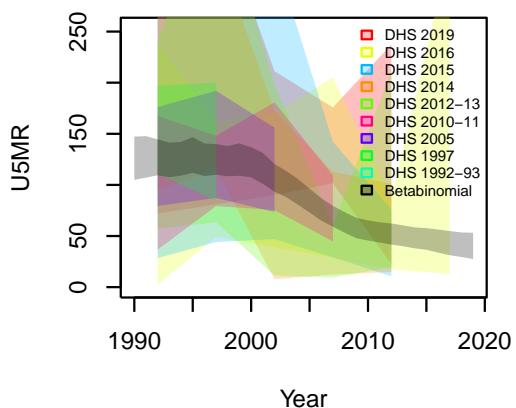
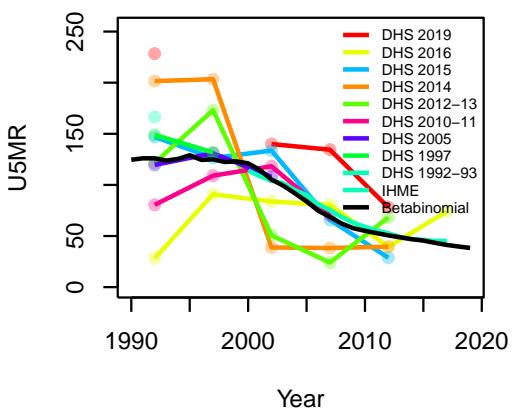
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Oussouye, Ziguinchor



Ziguinchor, Ziguinchor



4 National Figures and Results

	Median	Interval	Median-	Bench	Interval
0	30.50	(29.4,31.6)	30.00		(28.9,31.1)
1-11	2.10	(2,2.2)	2.10		(2,2.2)
12-23	1.10	(1.1,1.2)	1.10		(1,1.2)
24-35	1.00	(1,1.1)	1.00		(0.9,1.1)
36-47	0.70	(0.6,0.7)	0.70		(0.6,0.7)
48-59	0.40	(0.4,0.5)	0.40		(0.4,0.4)

Table 11: Monthly hazards in terms of 1000 children by age band for national, unstratified model for Senegal.

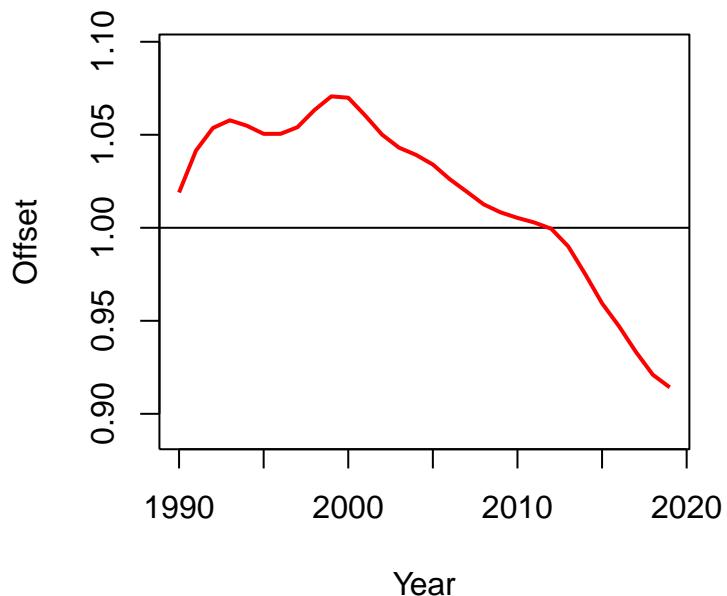


Figure 7: Benchmark offsets: $\text{BENCH}(t) = \text{U5MR}^*(t)/\text{U5MR}(t)$ where $\text{U5MR}^*(t)$ is modeled estimate and $\text{U5MR}(t)$ is UN-IGME estimate.

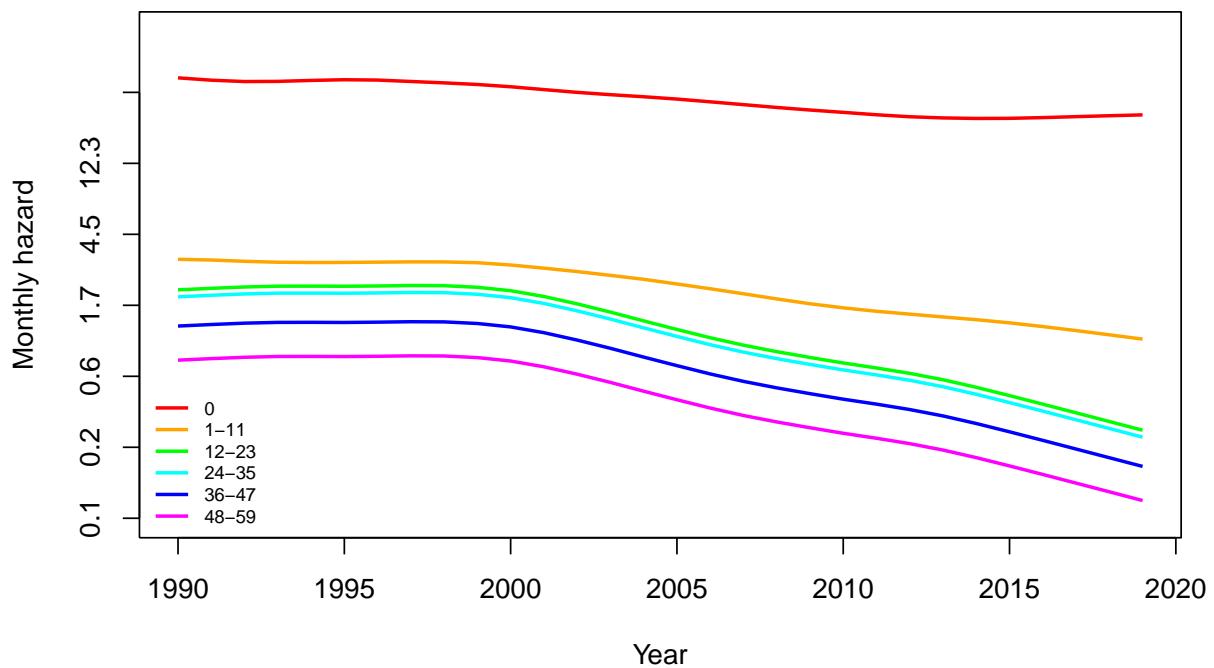


Figure 8: Monthly hazards of death in terms of U5MR (number deaths per 1000 children) by agebands.

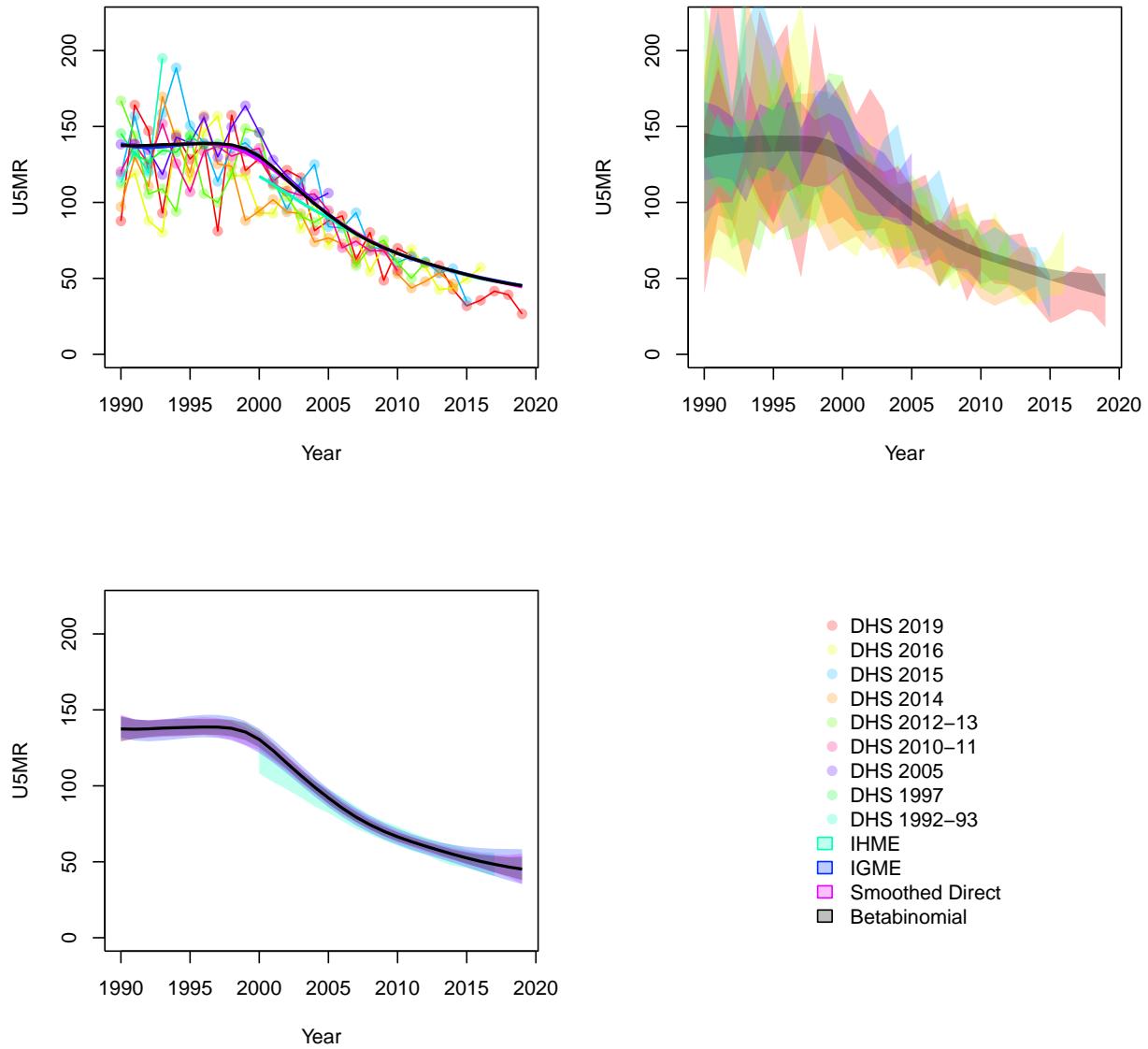
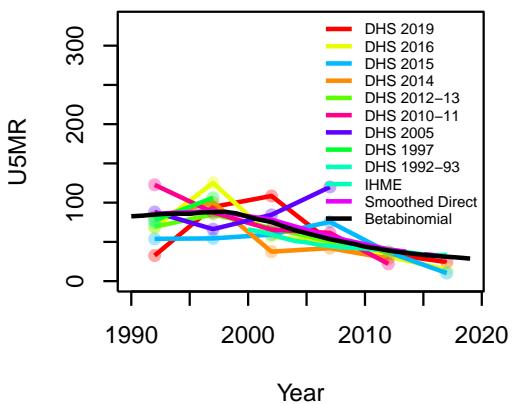
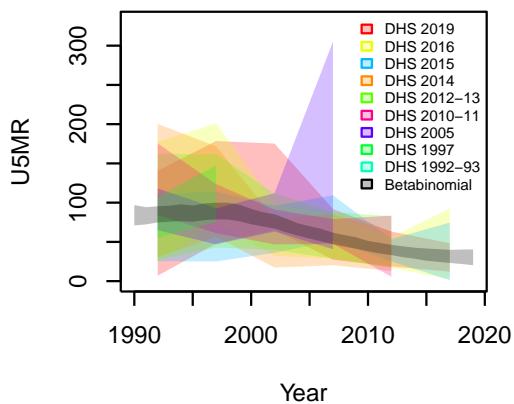
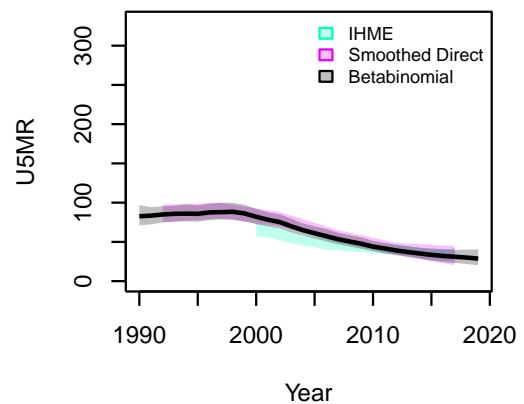
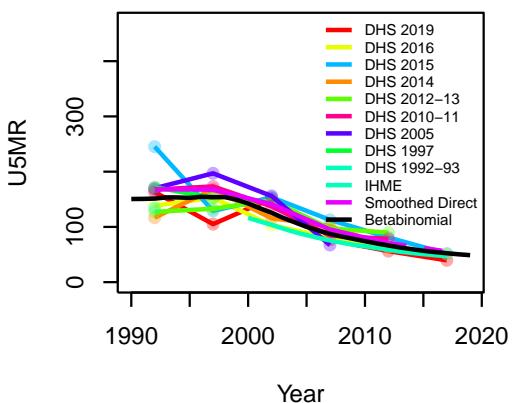
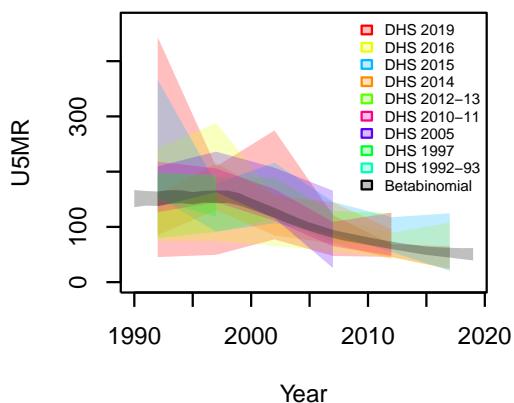
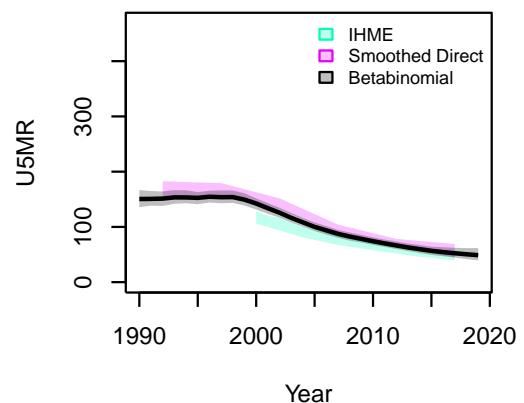
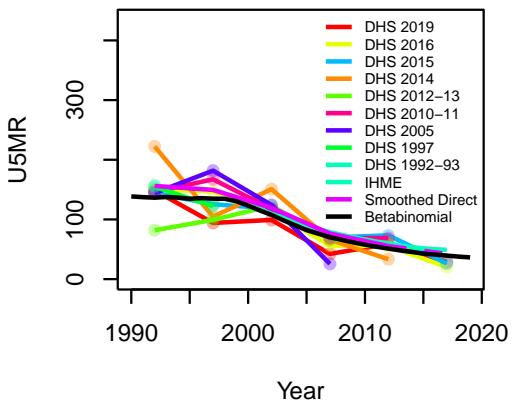


Figure 9: Benchmarked U5MR rates per 1000 live births. Top: DHS direct estimates with national trends from IHME GBD, UN-IGME, Smoothed Direct and Betabinomial estimates. Middle: 95% uncertainty intervals for DHS data. Bottom: IHME GBD, UN-IGME, Smoothed Direct and Betabinomial estimates with for the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

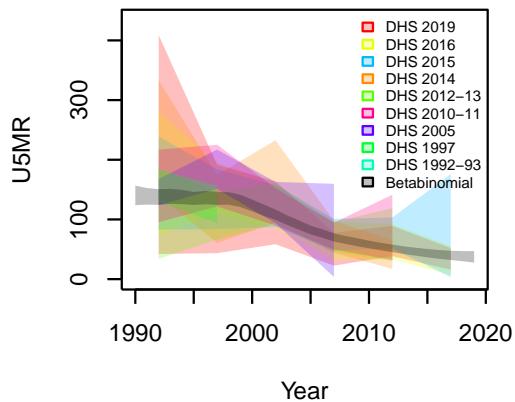
5 Admin 1 Figures

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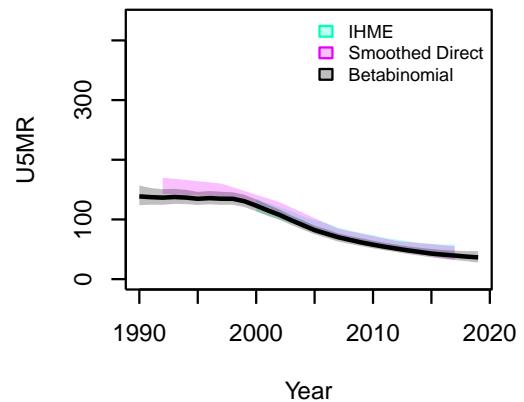
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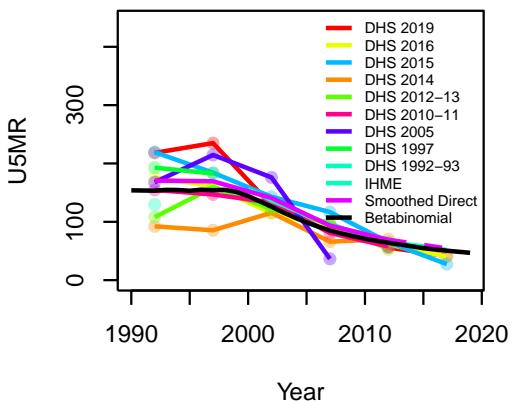
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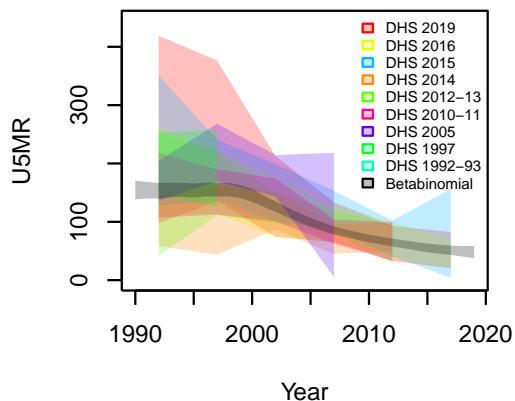
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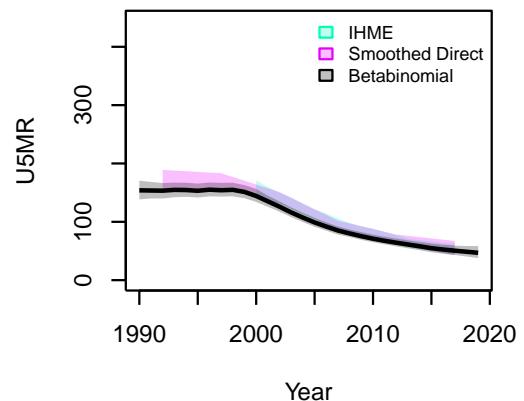
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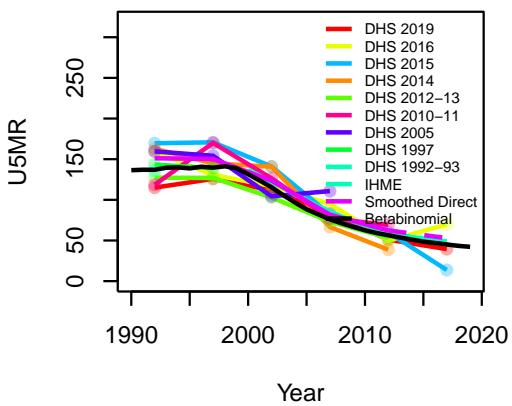
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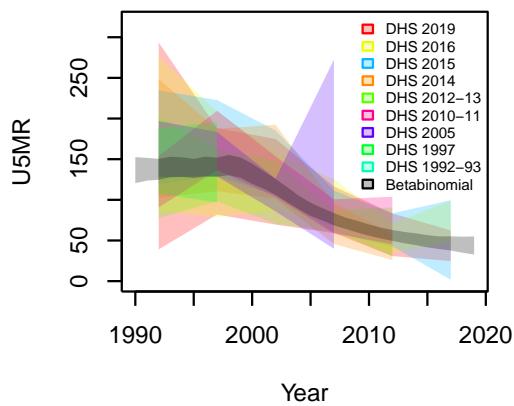
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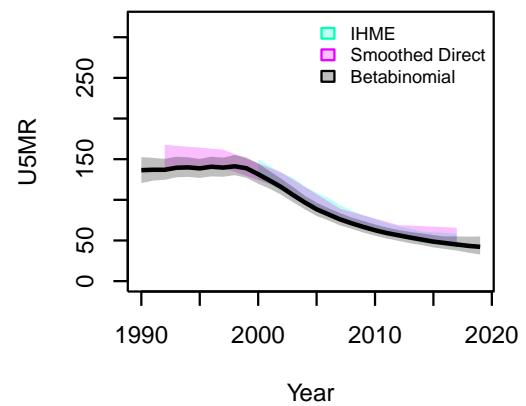
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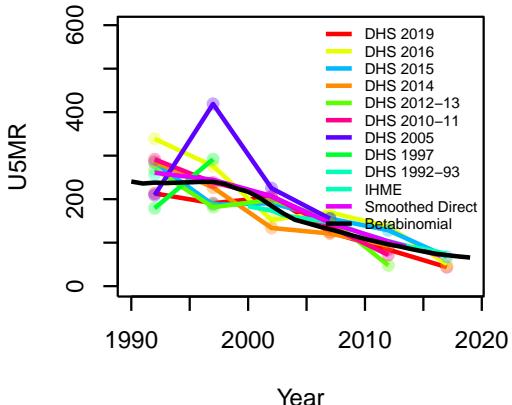
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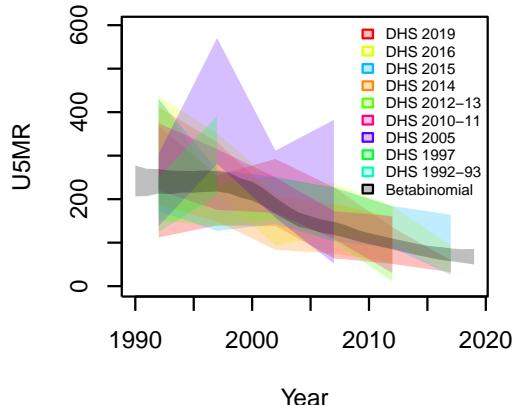
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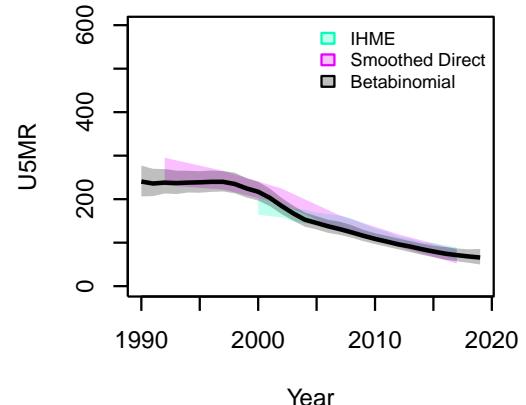
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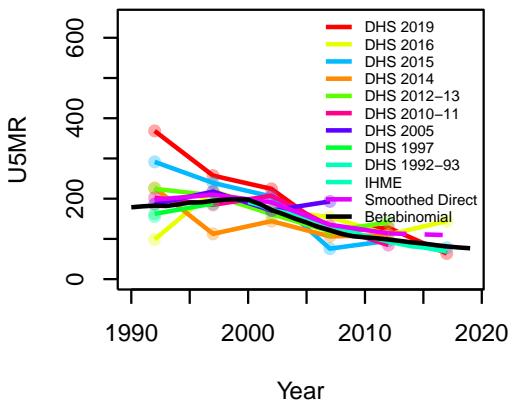
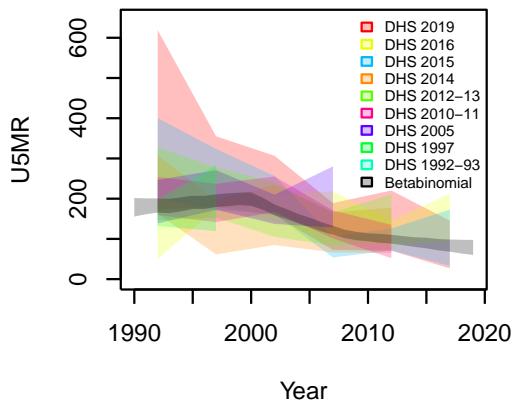
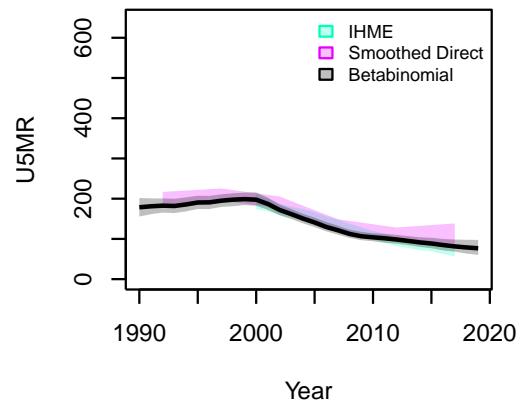
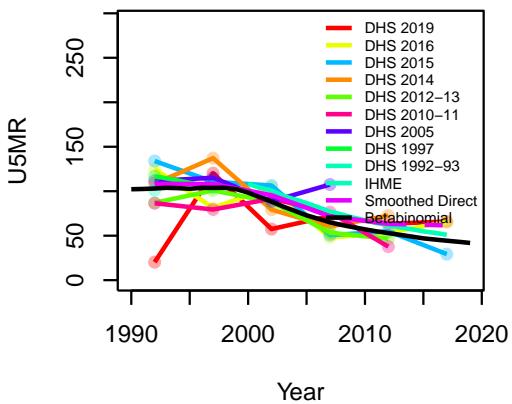
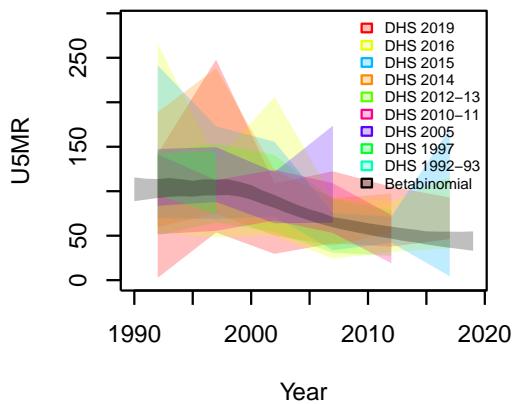
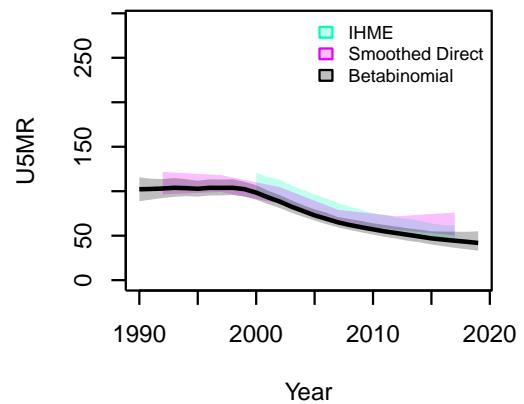


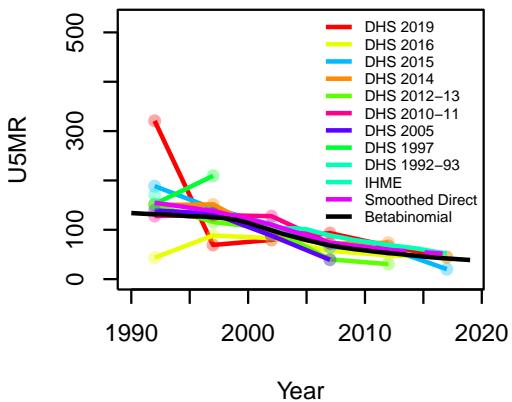
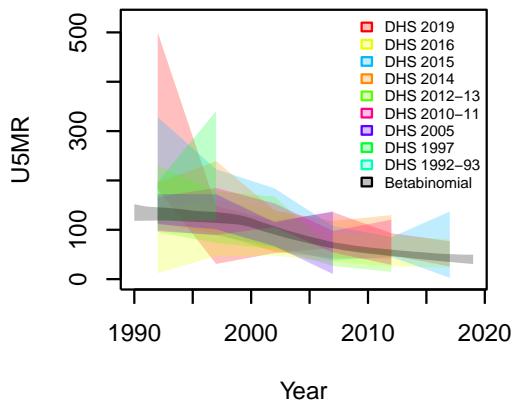
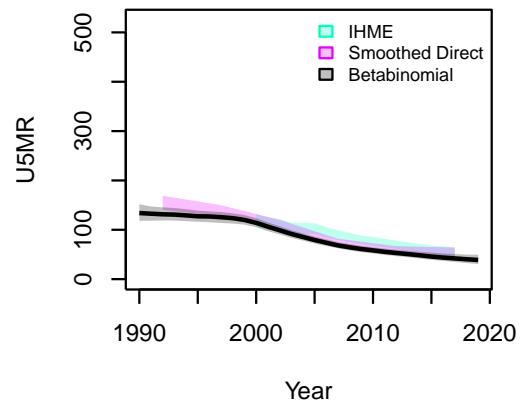
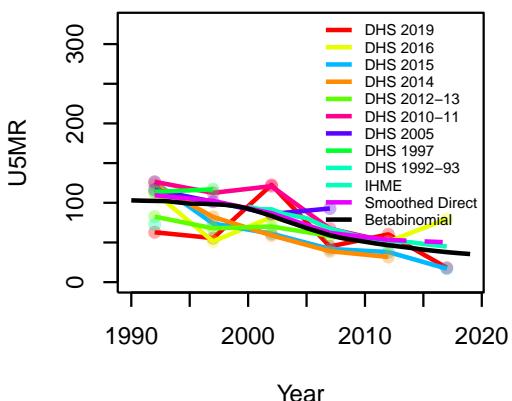
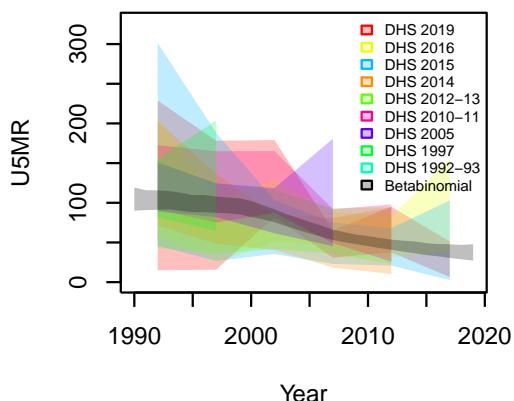
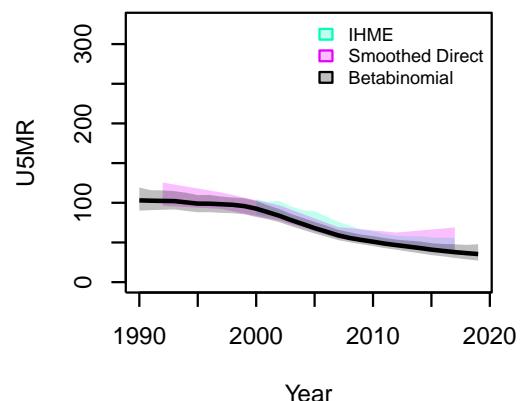
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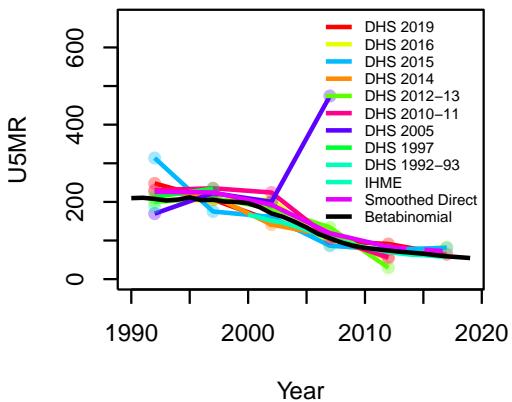
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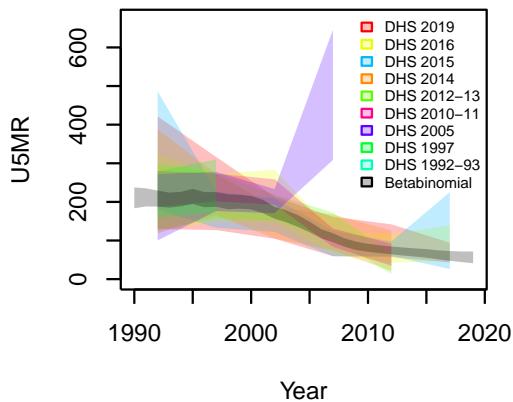
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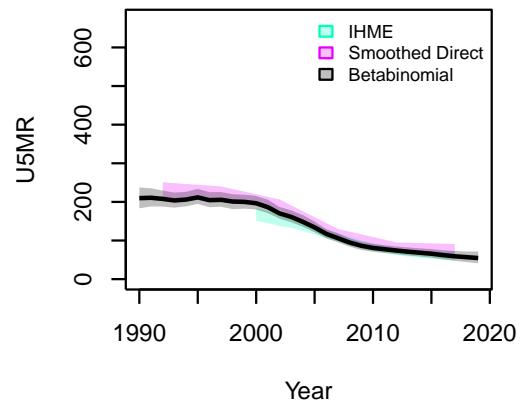
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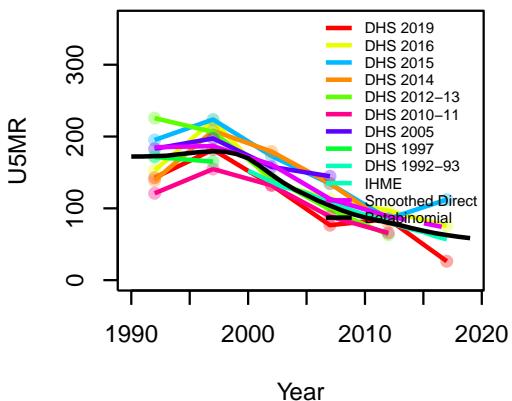
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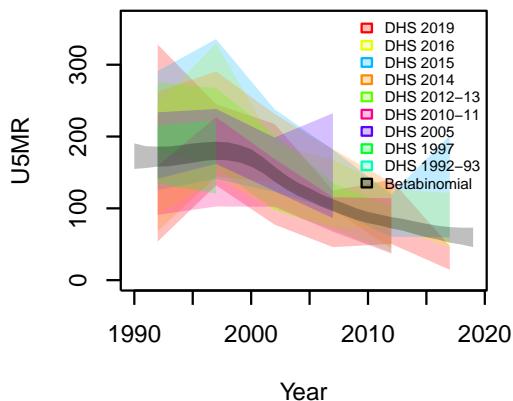
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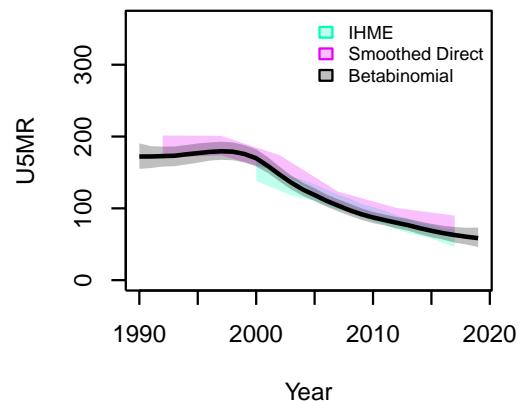
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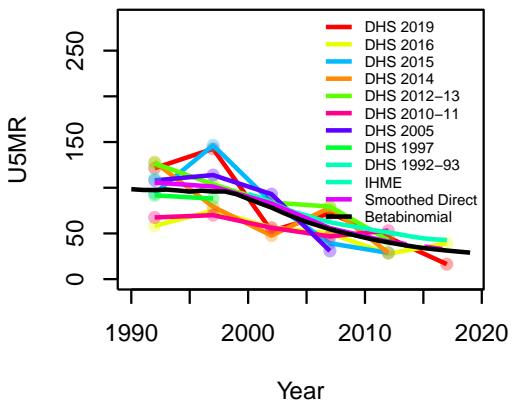
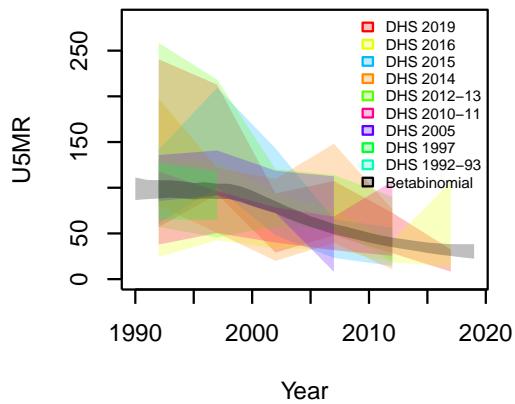
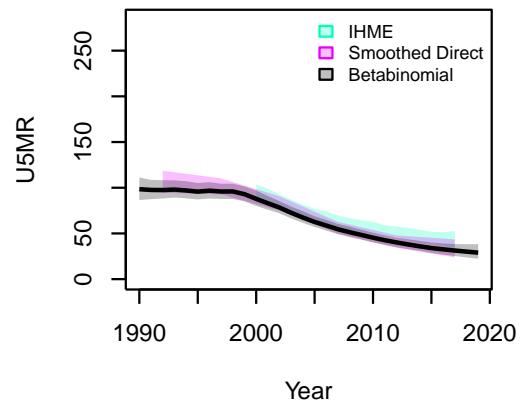
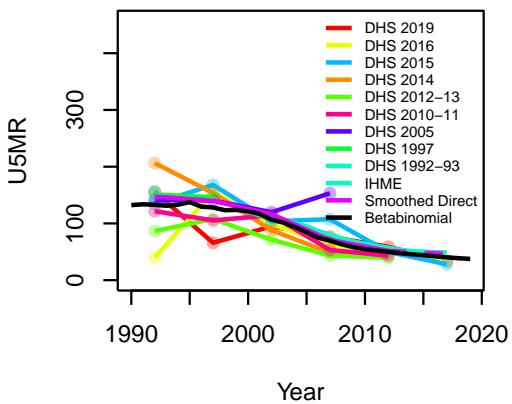
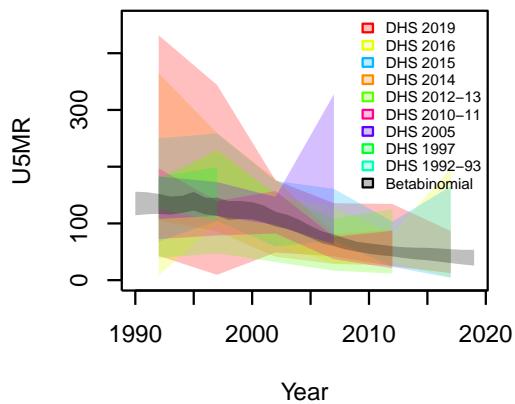


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