**Supplementary**

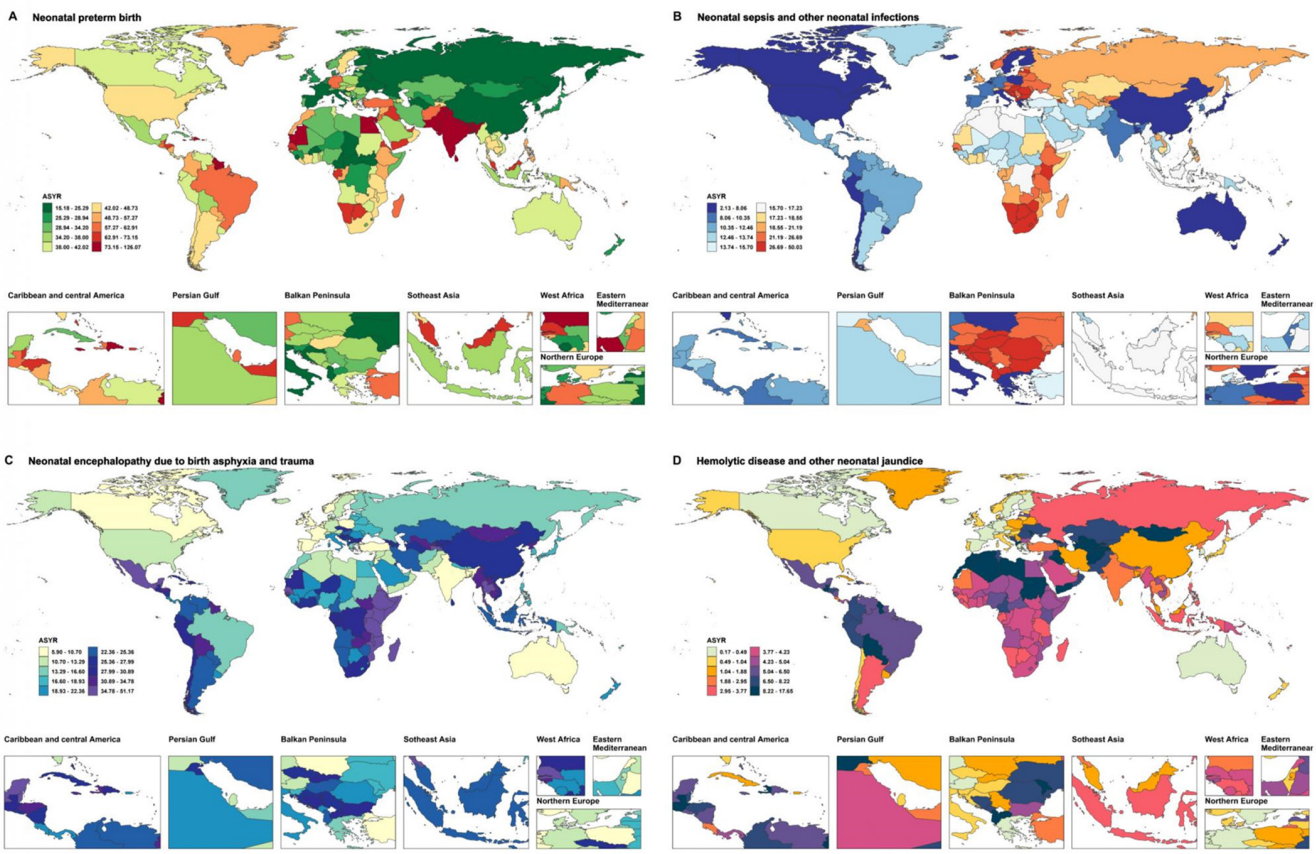


**Figure S1** The global age-standardized YLD rate of neonatal disorders-related secondary epilepsy for both sexes in 204 countries and territories in 2021 (A-D). ASYR, age-standardized years lived with disability rate; YLD, years lived with disability.


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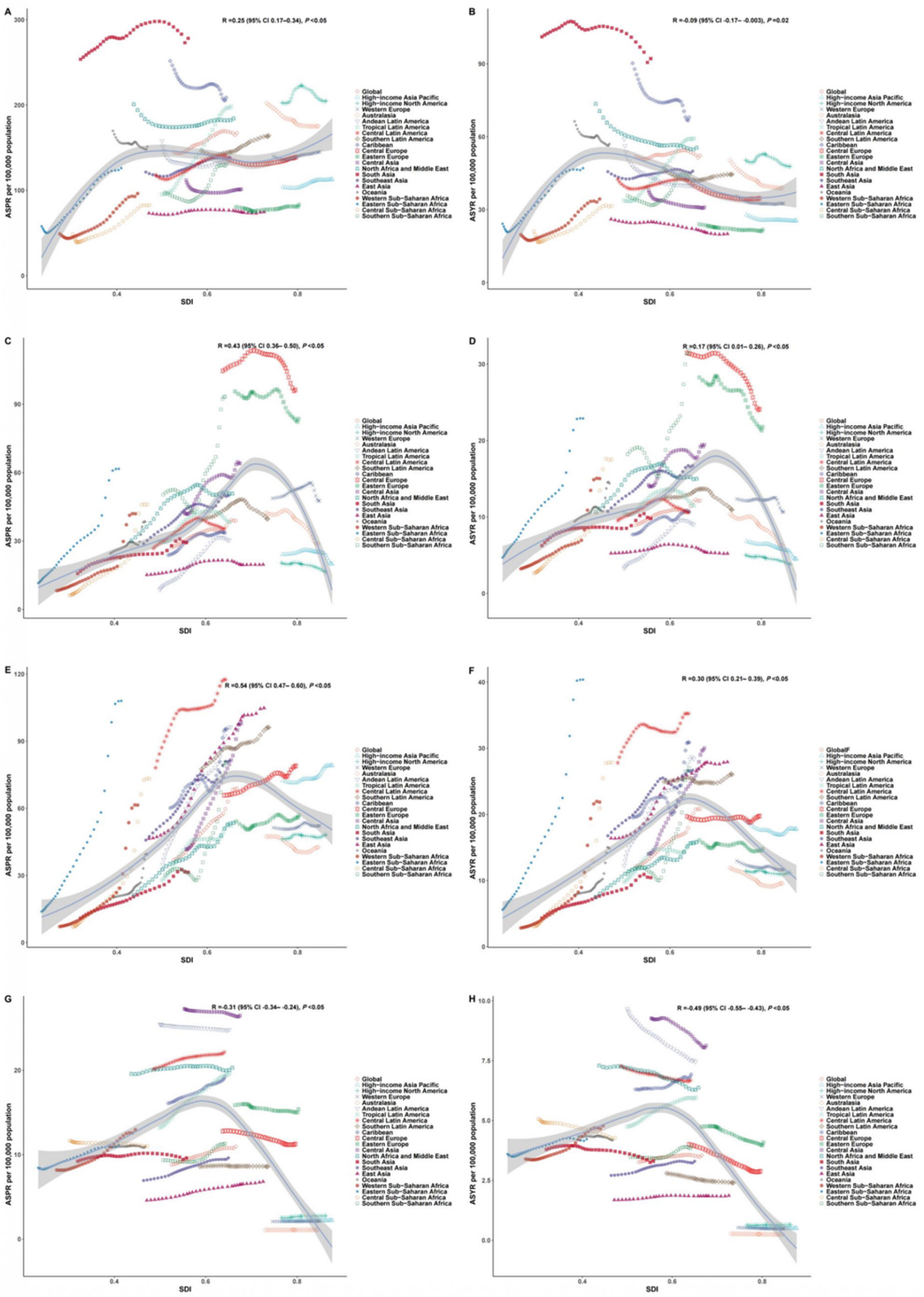


**Figure S2** Analysis of association and trends between ASPR and ASYR of disorders-related secondary epilepsy and SDI, 1990–2021. (A) ASPR of neonatal preterm birth-related secondary epilepsy. (B) ASYR of neonatal preterm birth-related secondary epilepsy. (C) ASPR of neonatal sepsis and other neonatal infections-related secondary epilepsy. (D) ASYR of neonatal sepsis and other neonatal infections-related secondary epilepsy. (E) ASPR of neonatal encephalopathy due to birth asphyxia and trauma-related secondary epilepsy. (F) ASYR of neonatal encephalopathy due to birth asphyxia and trauma-related secondary epilepsy. (G) ASPR of hemolytic disease and other neonatal jaundice-related secondary epilepsy. (H) ASYR of hemolytic disease and other neonatal jaundice-related secondary epilepsy. ASPR, age-standardized prevalence rate; ASYR, age-standardized years lived with disability rate; CI, confidence interval; SDI, Socio-Demographic Index.


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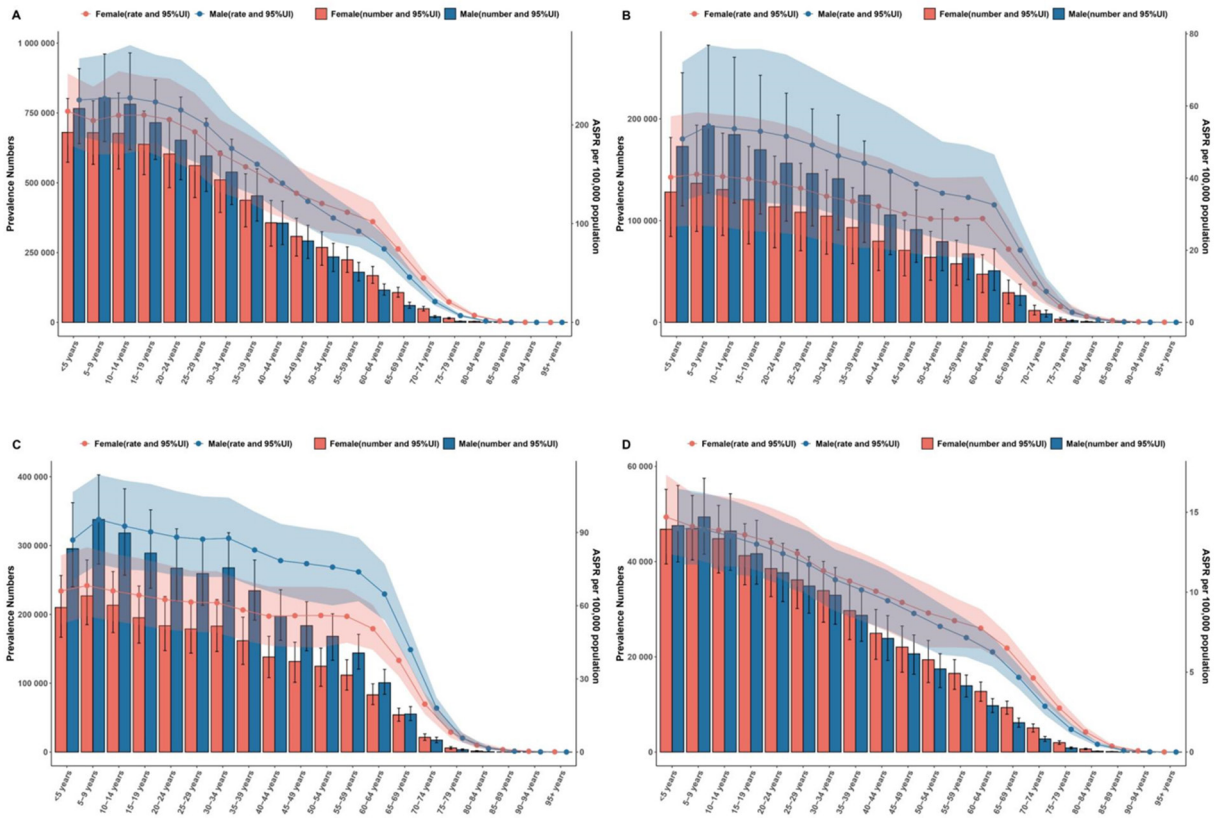


**Figure S3** Age and sex changes of ASPR of neonatal disease-related secondary epilepsy. (A) ASPR of neonatal preterm birth-related secondary epilepsy. (B) ASPR of neonatal sepsis and other neonatal infections-related secondary epilepsy. (C) ASPR of neonatal encephalopathy due to birth asphyxia and trauma -related secondary epilepsy. (D) ASPR of hemolytic disease and other neonatal jaundice-related secondary epilepsy. ASPR, age-standardized prevalence rate; UI, uncertainty interval.


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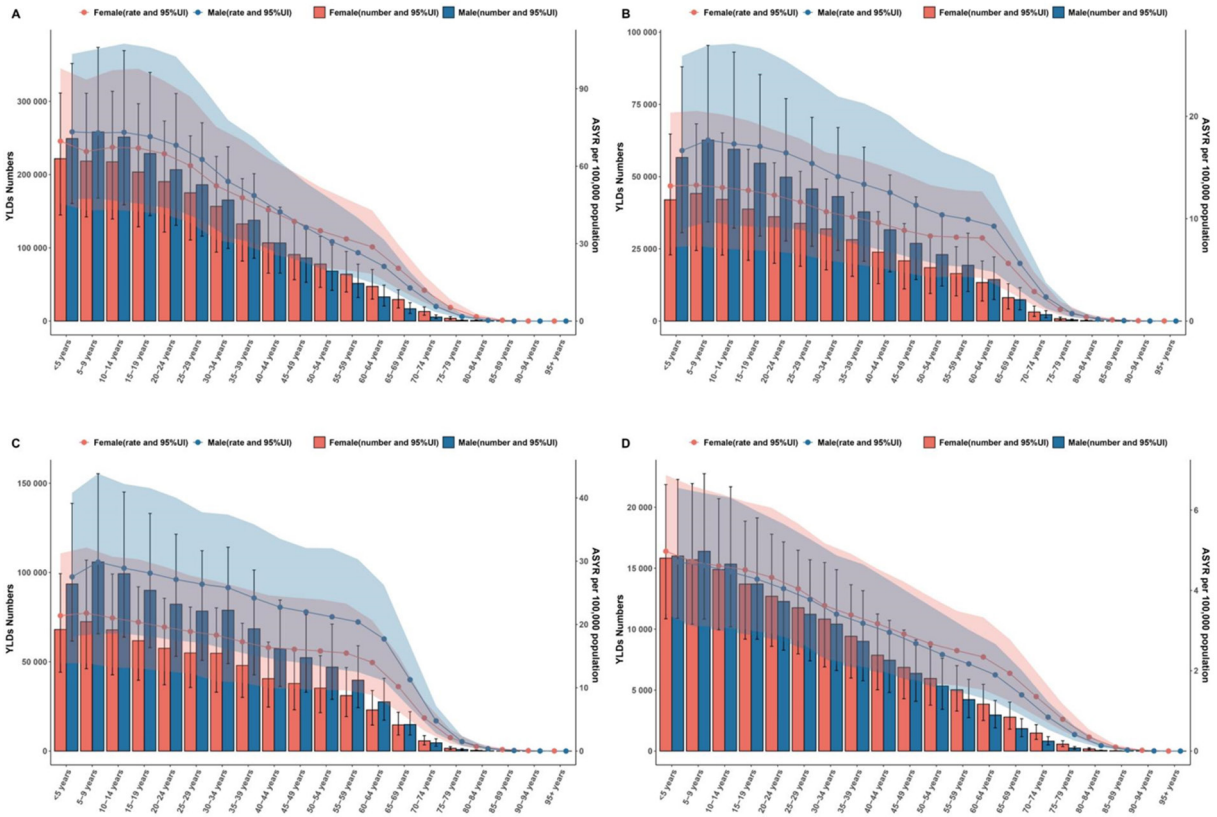


**Figure S4** Age and sex changes of ASYR of neonatal disease-related secondary epilepsy. (A) ASYR of neonatal preterm birth-related secondary epilepsy. (B) ASYR of neonatal sepsis and other neonatal infections-related secondary epilepsy. (C) ASYR of neonatal encephalopathy due to birth asphyxia and trauma -related secondary epilepsy. (D) ASYR of hemolytic disease and other neonatal jaundice-related secondary epilepsy. ASYR, age-standardized years lived with disability rate; UI, uncertainty interval; YLDs, years lived with disability.


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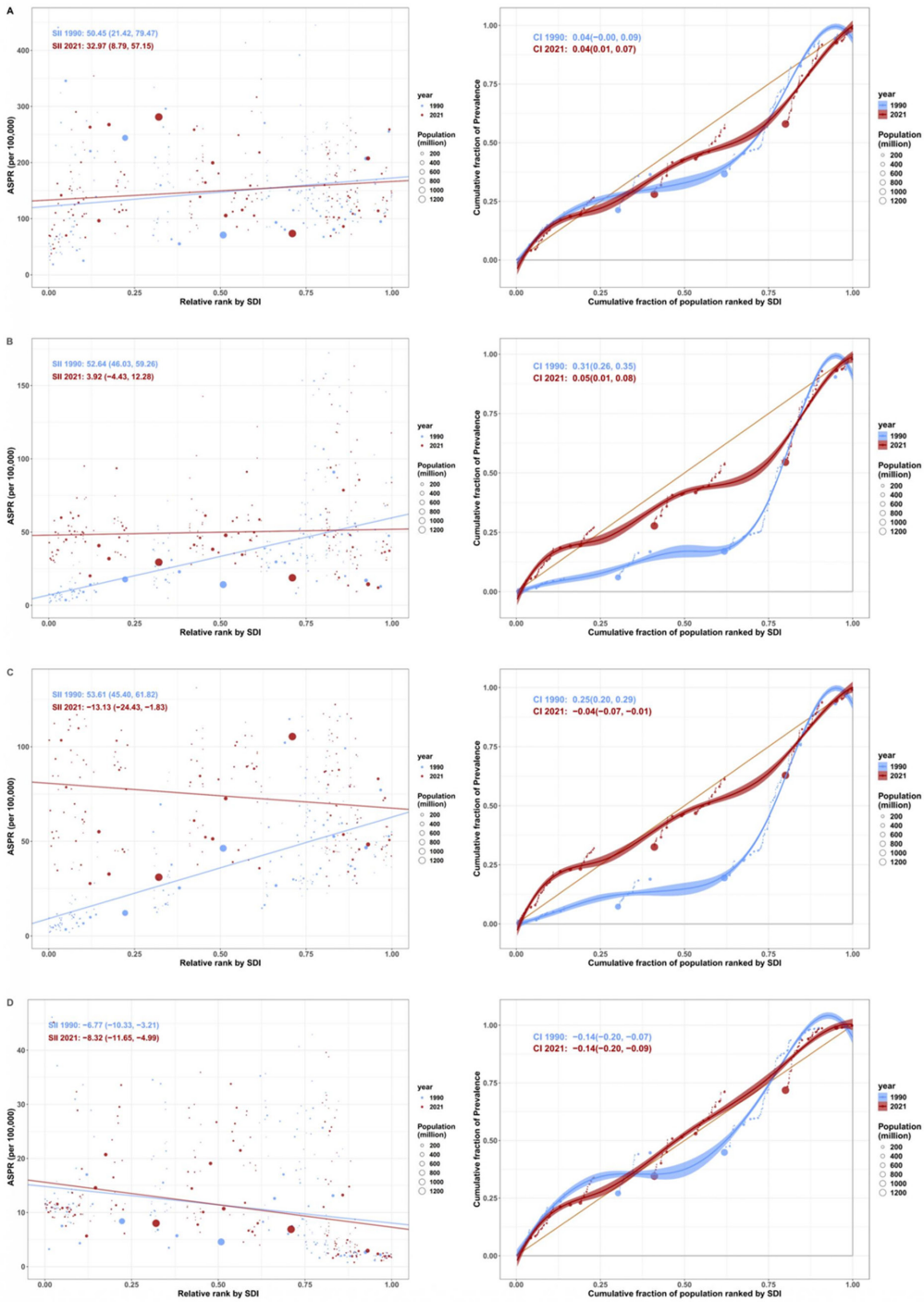


**Figure S5** Health inequality regression curves and concentration curves for the ASPR of neonatal disorders-related secondary epilepsy worldwide from 1990 and 2021. (A) Slope index of inequality and concentration index for ASPR of neonatal preterm birth-related secondary epilepsy. (B) Slope index of inequality and concentration index for ASPR of neonatal sepsis and other neonatal infections-related secondary epilepsy. (C) Slope index of inequality and concentration index for ASPR of neonatal encephalopathy due to birth asphyxia and trauma-related secondary epilepsy. (D) Slope index of inequality and concentration index for ASPR of hemolytic disease and other neonatal jaundice-related secondary epilepsy. ASPR, age-standardized prevalence rate; CI, confidence interval; SDI, Socio-demographic Index; SII, slope index of inequality.


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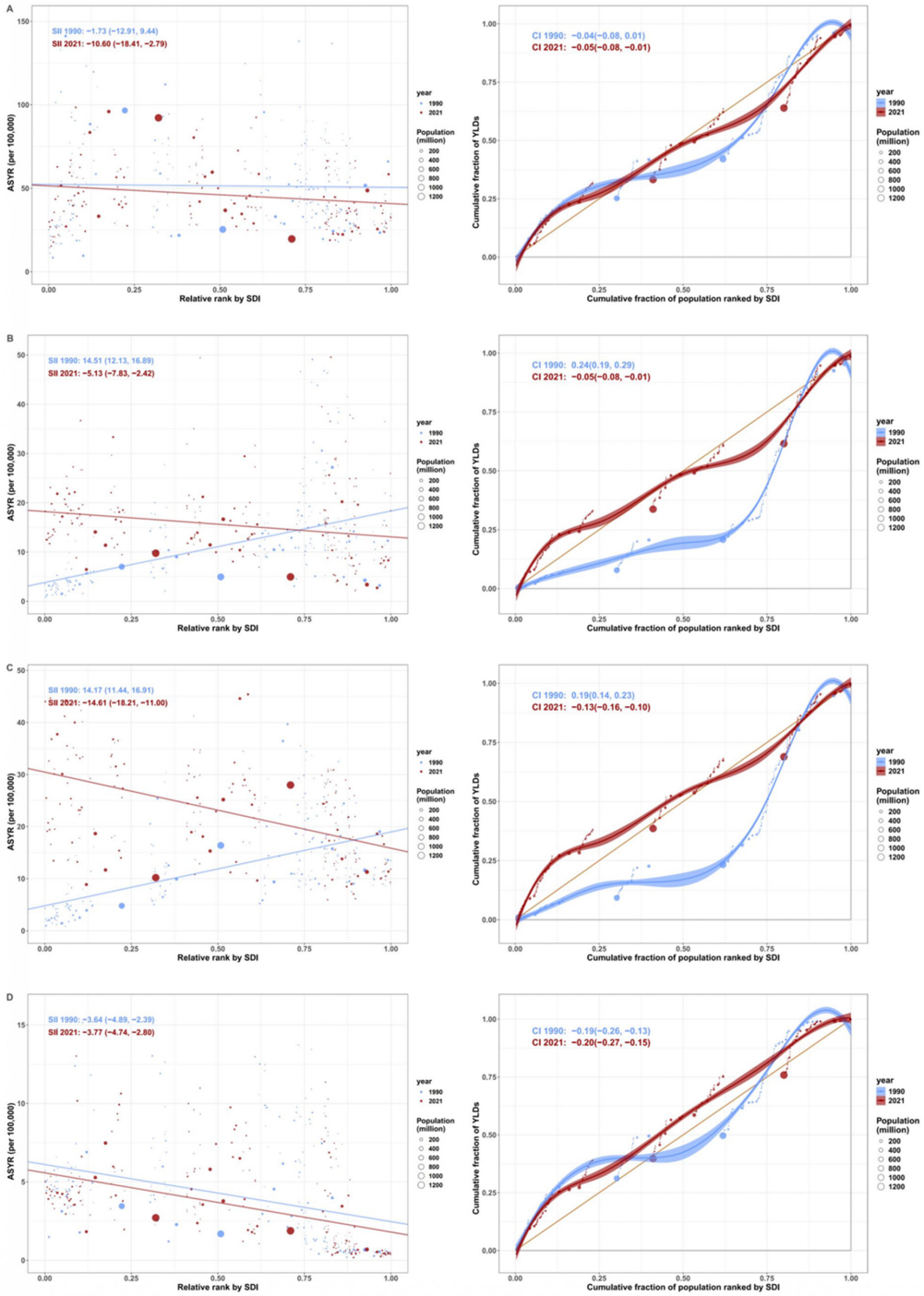


**Figure S6** Health inequality regression curves and concentration curves for the ASYR of neonatal disorders-related secondary epilepsy worldwide from 1990 and 2021. (A) Slope index of inequality and concentration index for ASYR of neonatal preterm birth-related secondary epilepsy. (B) Slope index of inequality and concentration index for ASYR of neonatal sepsis and other neonatal infections-related secondary epilepsy. (C) Slope index of inequality and concentration index for ASYR of neonatal encephalopathy due to birth asphyxia and trauma-related secondary epilepsy. (D) Slope index of inequality and concentration index for ASYR of hemolytic disease and other neonatal jaundice-related secondary epilepsy. ASYR, age-standardized years lived with disability rate; CI, confidence interval; SDI, Socio-demographic Index; SII, slope index of inequality; YLDs, years lived with disability.


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