Supporting information

Supplement to: **Pregnancy outcomes in Italy during COVID- 19 pandemic: a population-based cohort study.**

Figure S1. Forest plot for risks of stillbirths in pandemic vs historical period in the studied Regions. Unadjusted analysis.

Cohort-specific and overall RR and 95% CI are shown; I-squared: percentage of between-studies heterogeneity and relative P value; % Weight: set of weights attributed to each cohort; pandemic and historic events: number of stillbirths over total live births in the 2 periods.

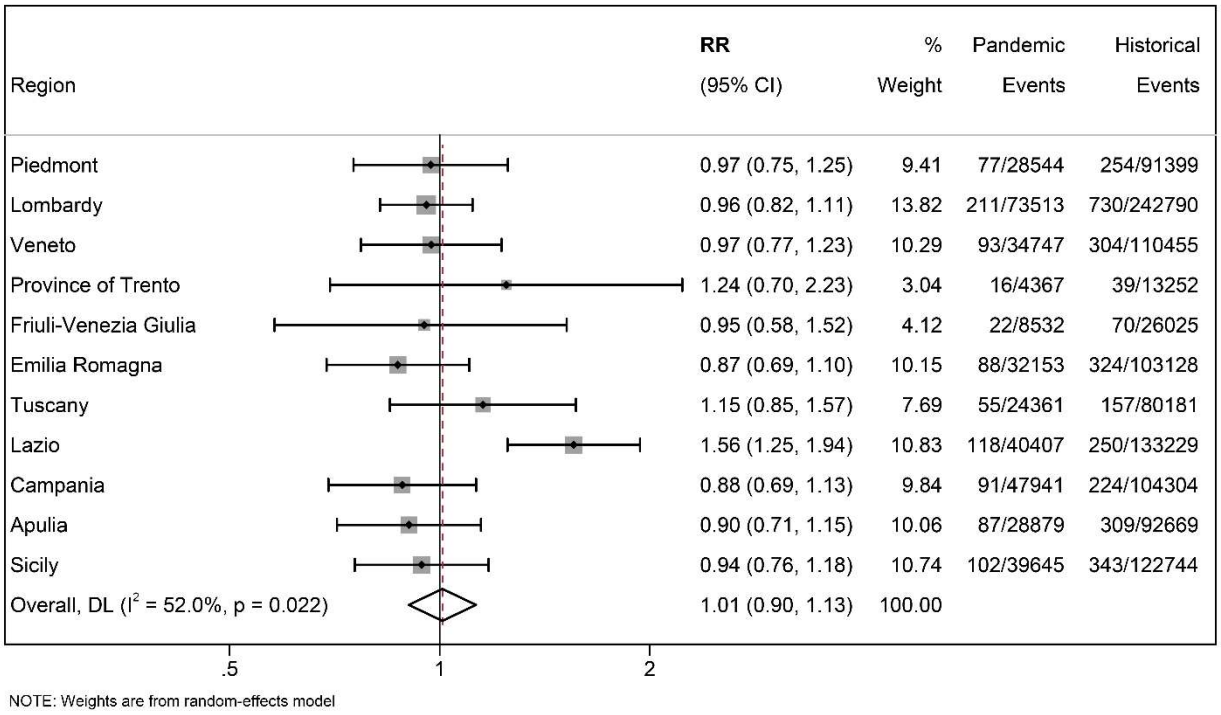
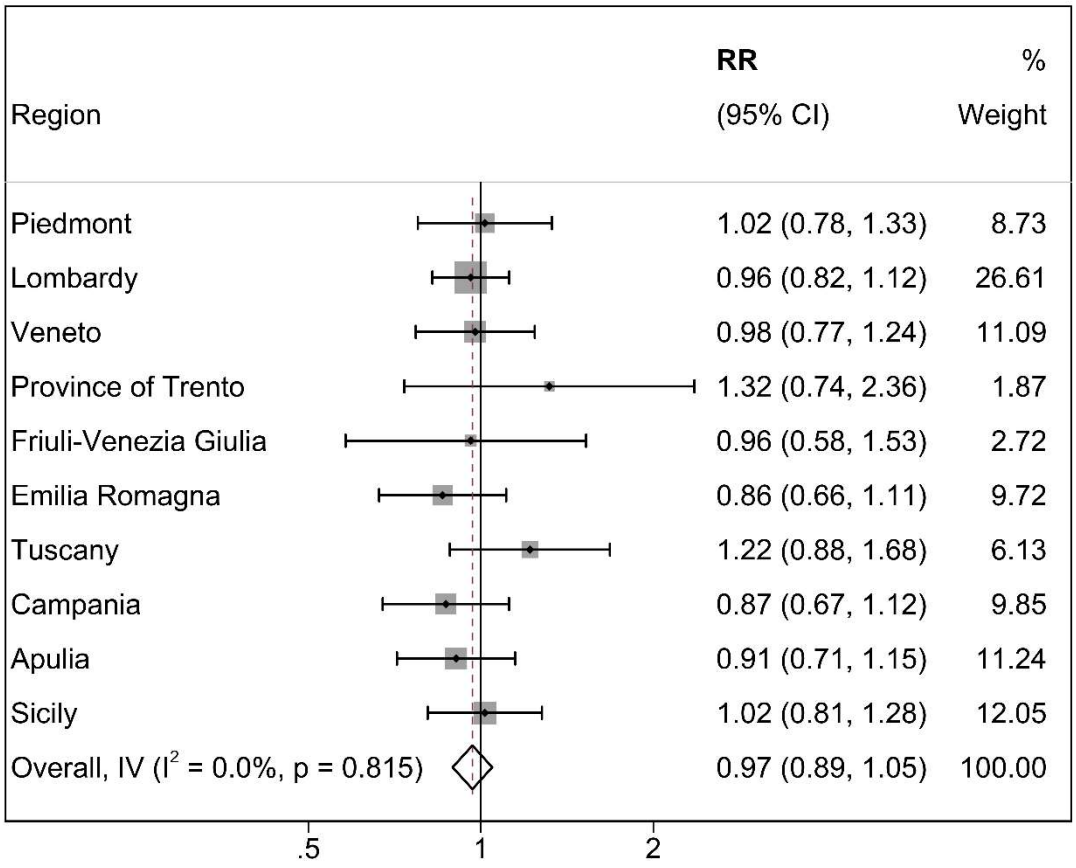
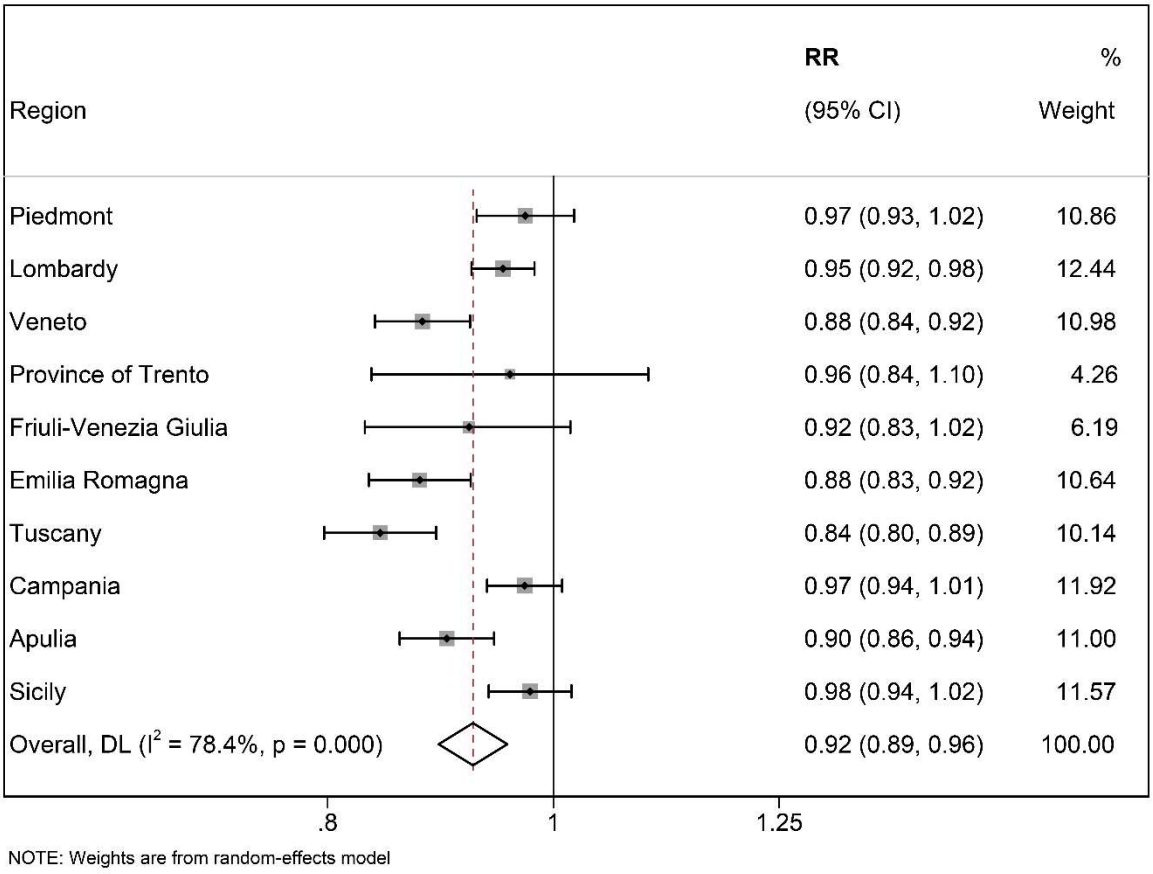


Figure S2. Forest plot for risks of stillbirths in pandemic vs historical period in the studied Regions. Adjusted analysis.



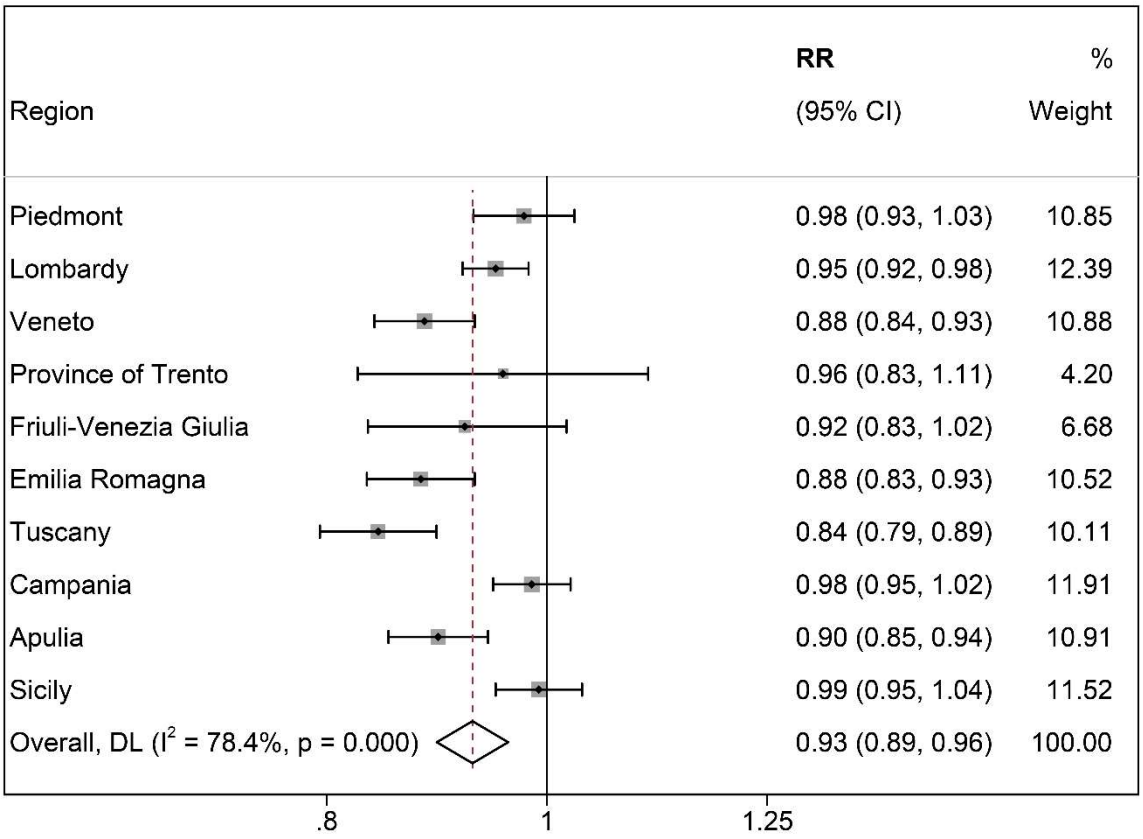
Adjusted analysis included the following variables: maternal country of birth, maternal age at index birth, parity, maternal educational degree, maternal employment, pregnancy conceived with assisted reproductive technology, sex of the child. Observation with missing variables were excluded from the model. The Lazio Region is not included in adjusted analyses.

Figure S3. Forest plot for risks of liveborn preterm birth (<37 weeks' gestational age) in pandemic vs historical period in the studied Regions. Adjusted analysis.



NOTE: Weights are from random-effects model

Figure S4. Forest plot for risks of liveborn late preterm birth (32-36 weeks' gestational age) in pandemic vs historical period in the studied Regions. Adjusted analysis.



NOTE: Weights are from random-effects model

Figure S5. Forest plot for risks of liveborn very preterm birth (<32 weeks' gestational age) in pandemic vs historical period in the studied Regions. Adjusted analysis.

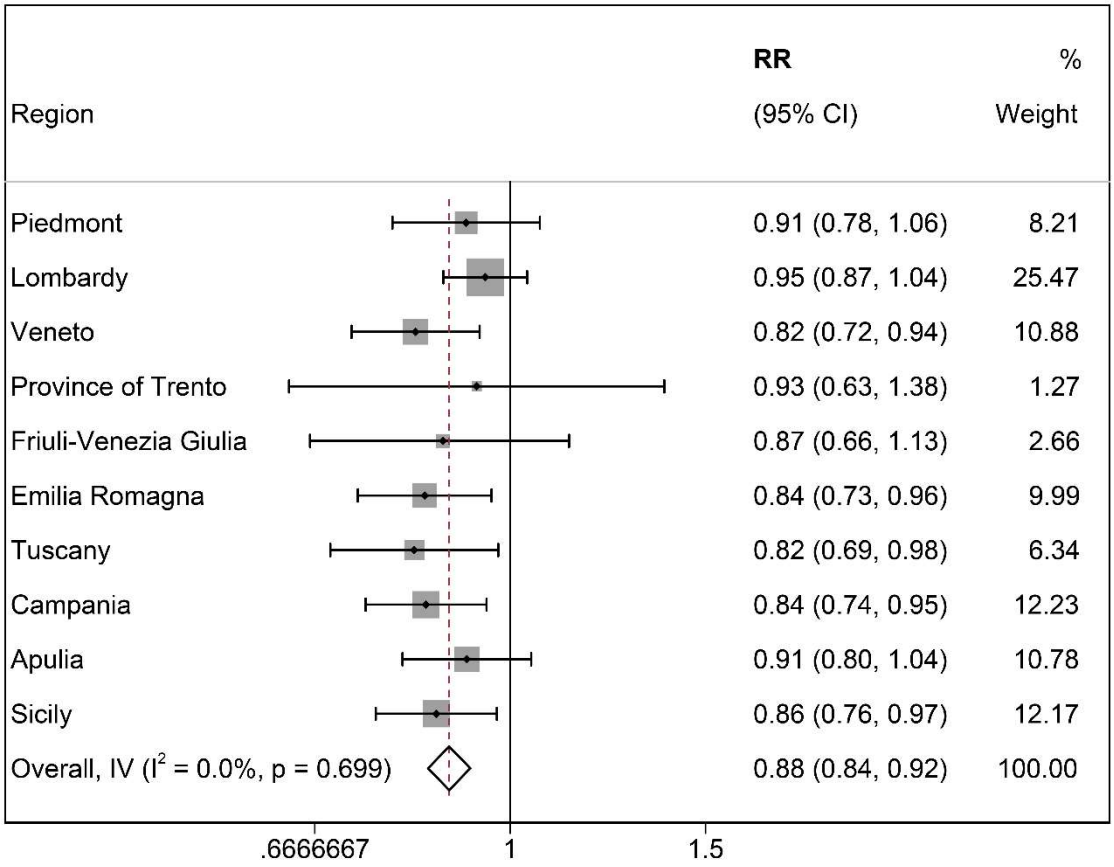


Figure S6. Forest plot for risks of liveborn extremely preterm birth (<28 weeks' gestational age) in pandemic vs historical period in the studied Regions. Adjusted analysis.

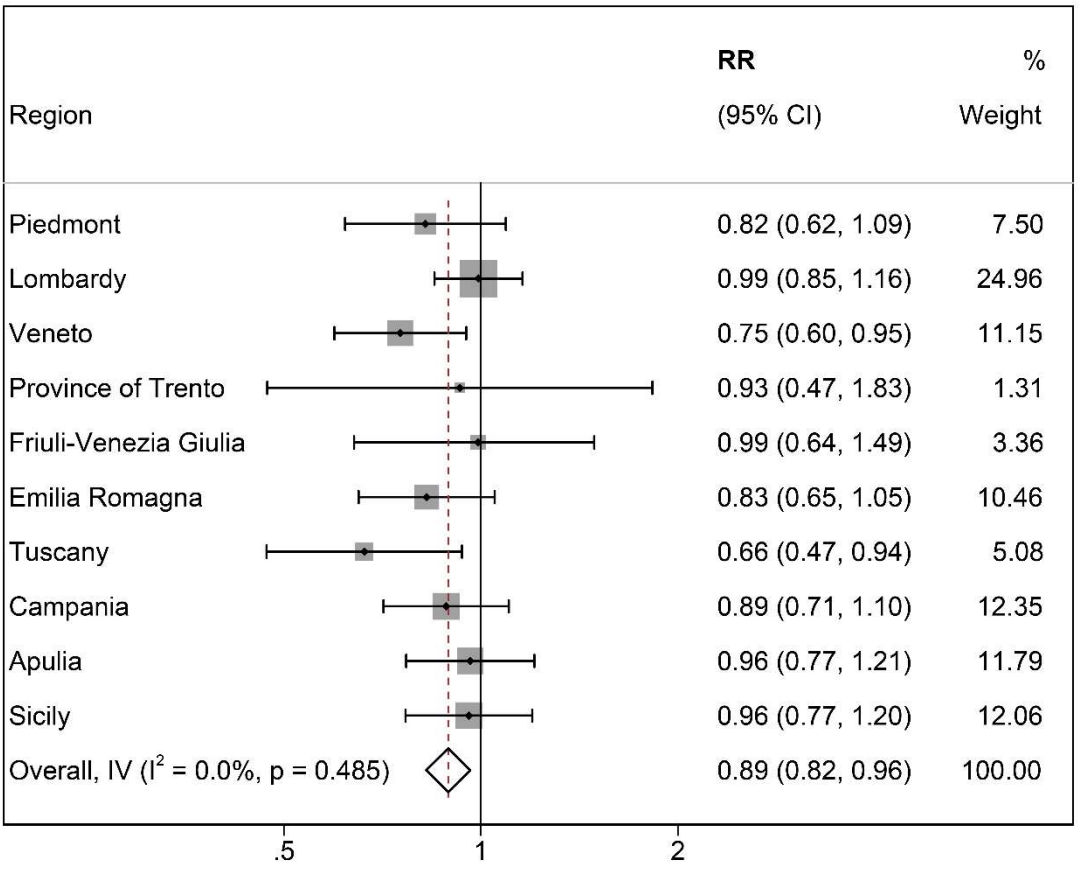


Figure S7. Forest plot for risks of liveborn preterm birth (<37 weeks' gestational age) in pandemic vs historical period in the studied Regions, singleton pregnancies. Unadjusted analysis.

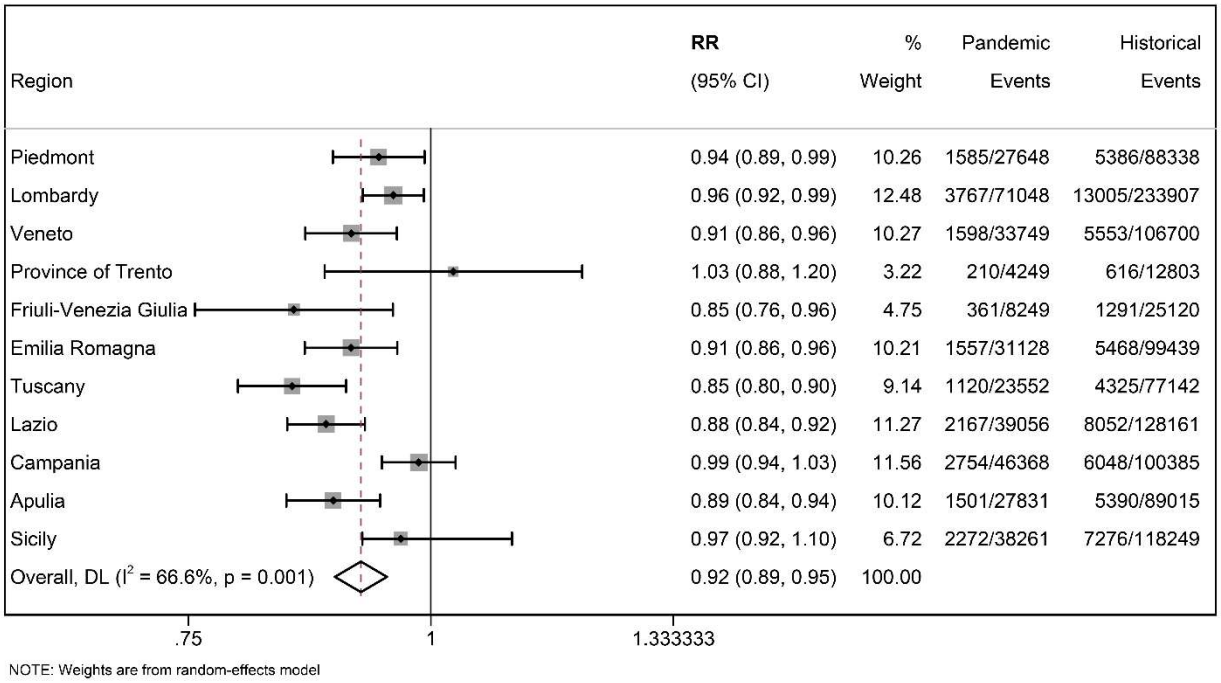


Figure S8. Forest plot for risks of liveborn late preterm birth (32-36 weeks' gestational age) in pandemic vs historical period in the studied Regions, singleton pregnancies. Unadjusted analysis.

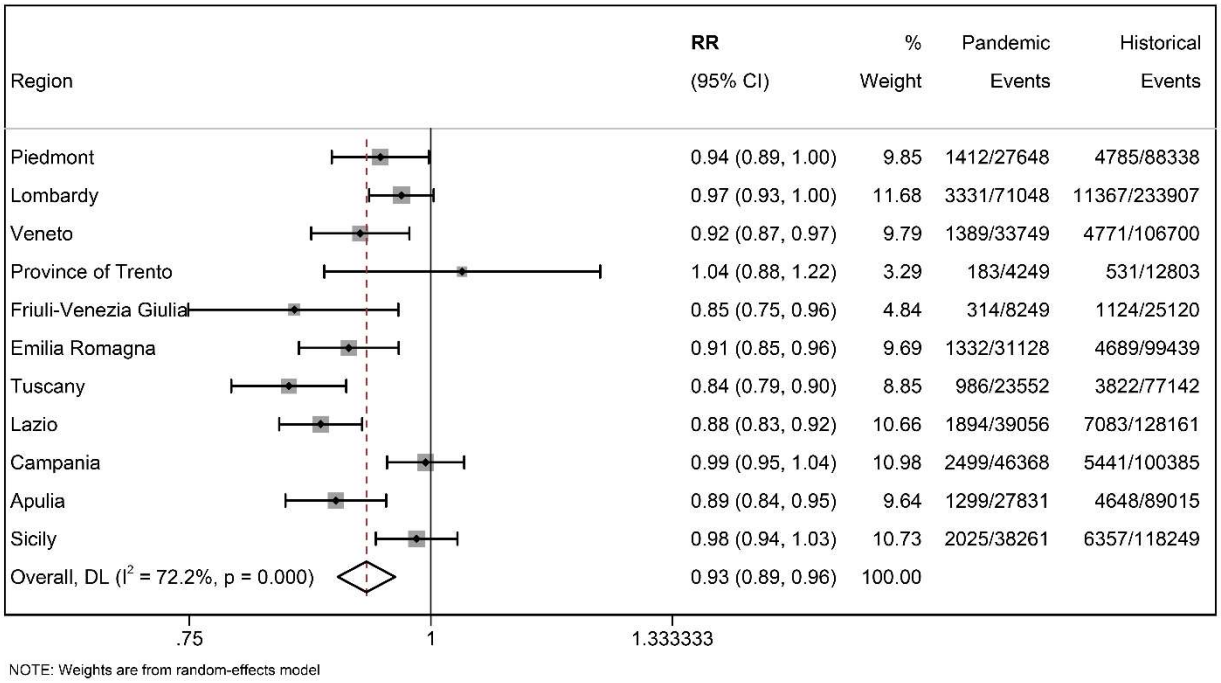


Figure S9. Forest plot for risks of liveborn very preterm birth (<32 weeks' gestational age) in pandemic vs historical period in the studied Regions, singleton pregnancies. Unadjusted analysis.

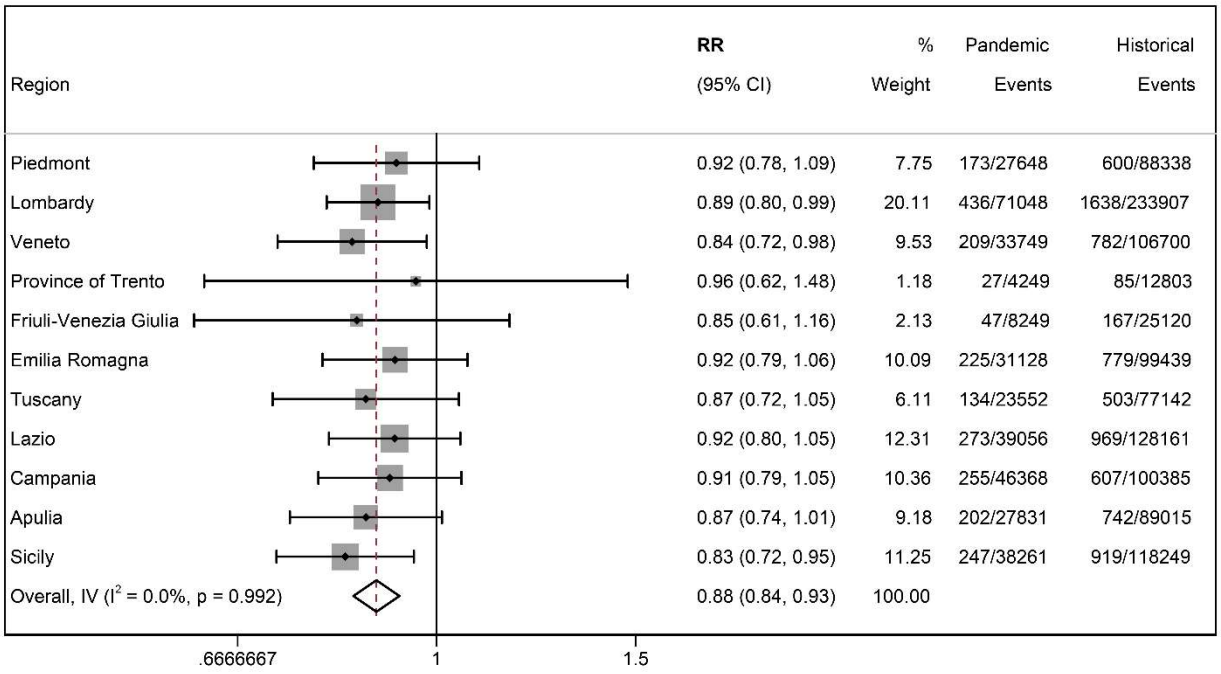


Figure S10. Forest plot for risks of liveborn extremely preterm birth (<28 weeks' gestational age) in pandemic vs historical period in the studied Regions, singleton pregnancies. Unadjusted analysis.

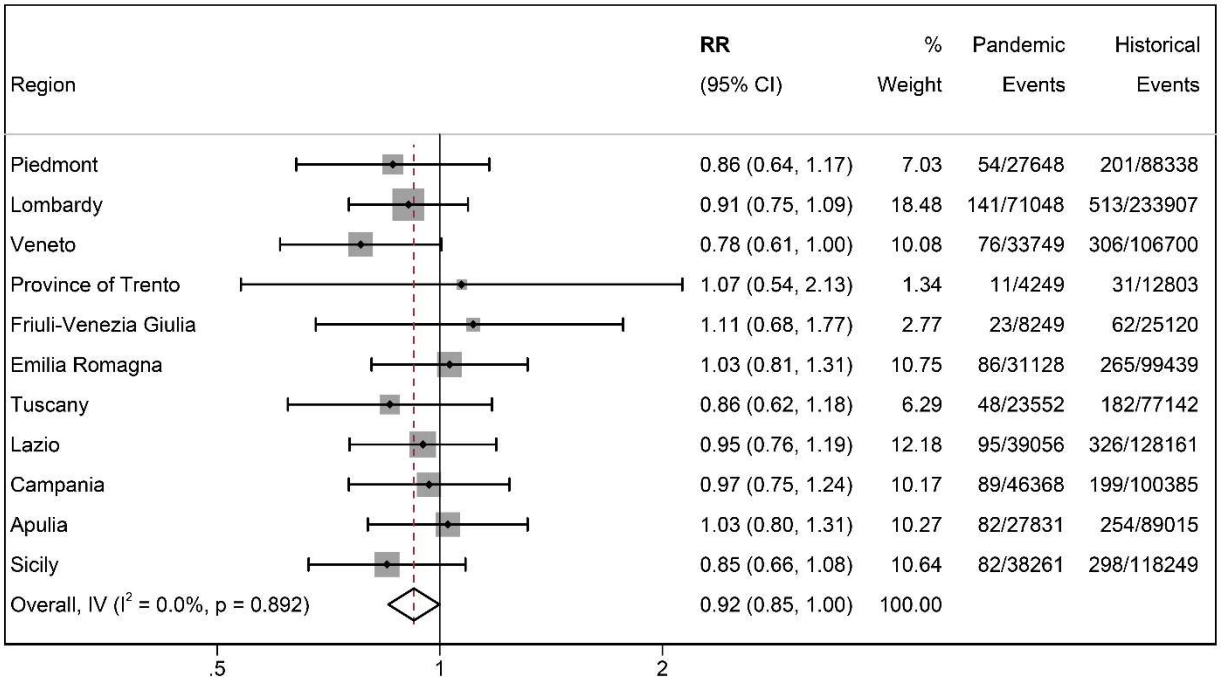


Figure S11. Forest plot for risks of liveborn preterm birth (<37 weeks' gestational age) in pandemic vs historical period in the studied Regions, singleton pregnancies. Adjusted analysis.

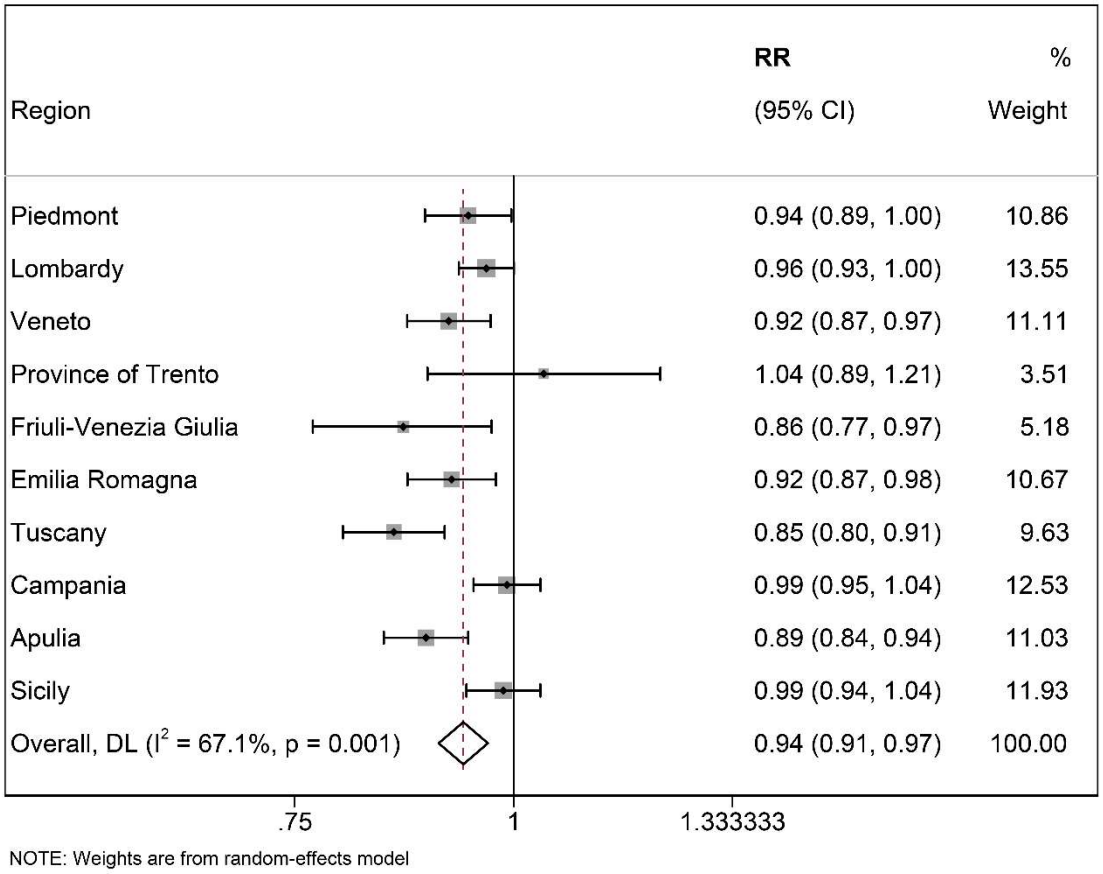


Figure S12. Forest plot for risks of liveborn late preterm birth (32-36 weeks' gestational age) in pandemic vs historical period in the studied Regions, singleton pregnancies. Adjusted analysis.

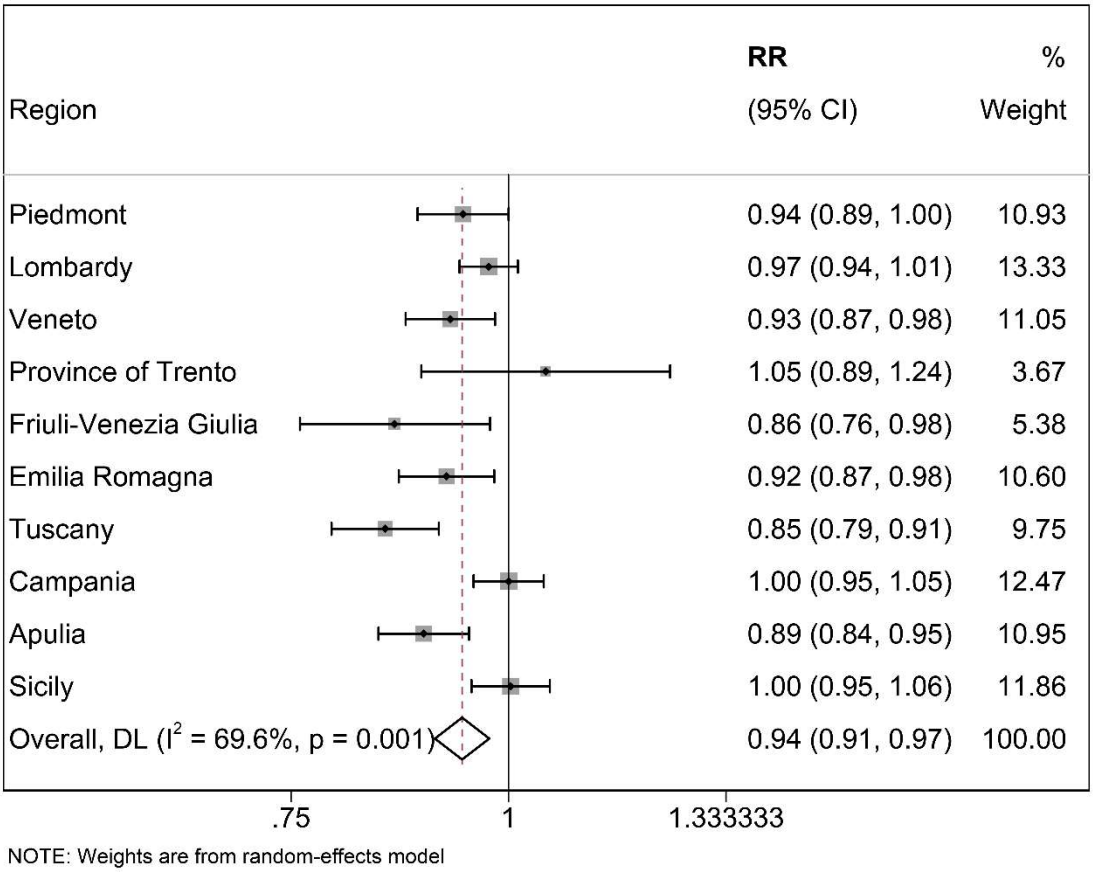


Figure S13. Forest plot for risks of liveborn very preterm birth (<32 weeks' gestational age) in pandemic vs historical period in the studied Regions, singleton pregnancies. Adjusted analysis.

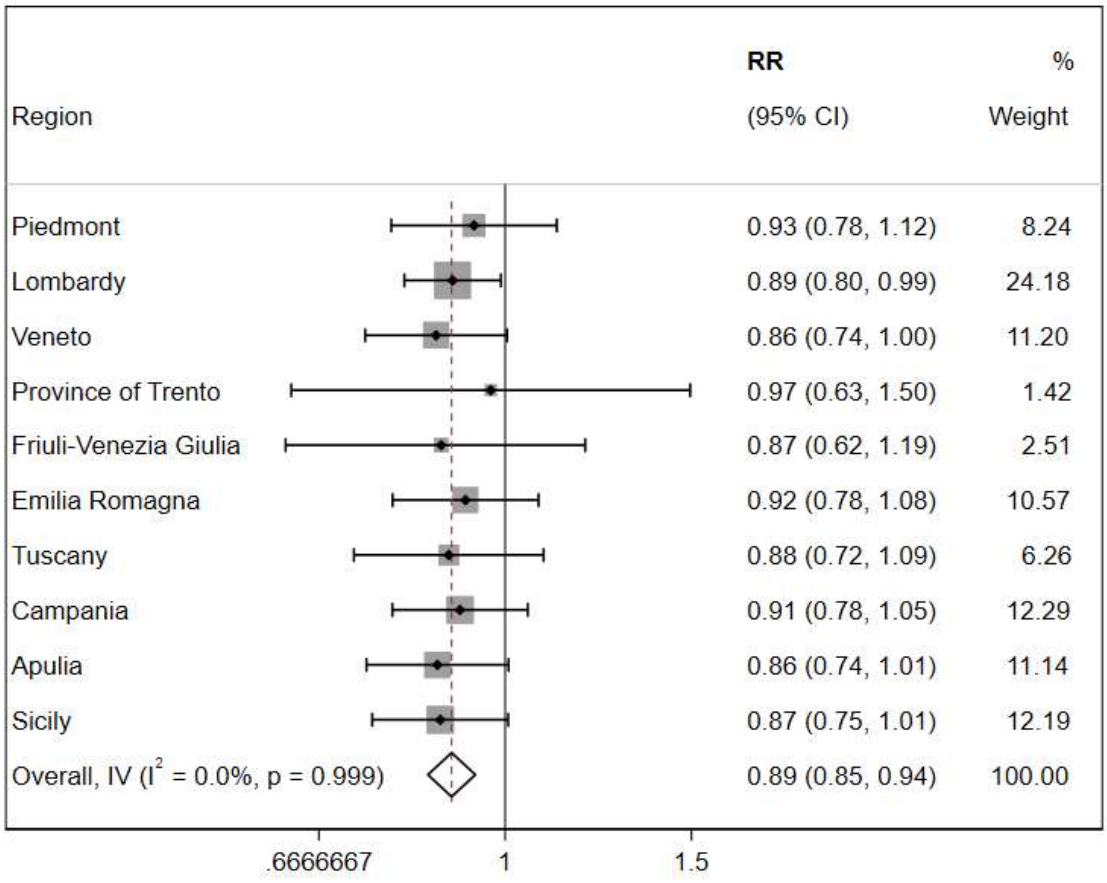


Figure S14. Forest plot for risks of liveborn extremely preterm birth (<28 weeks' gestational age) in pandemic vs historical period in the studied Regions, singleton pregnancies. Adjusted analysis.

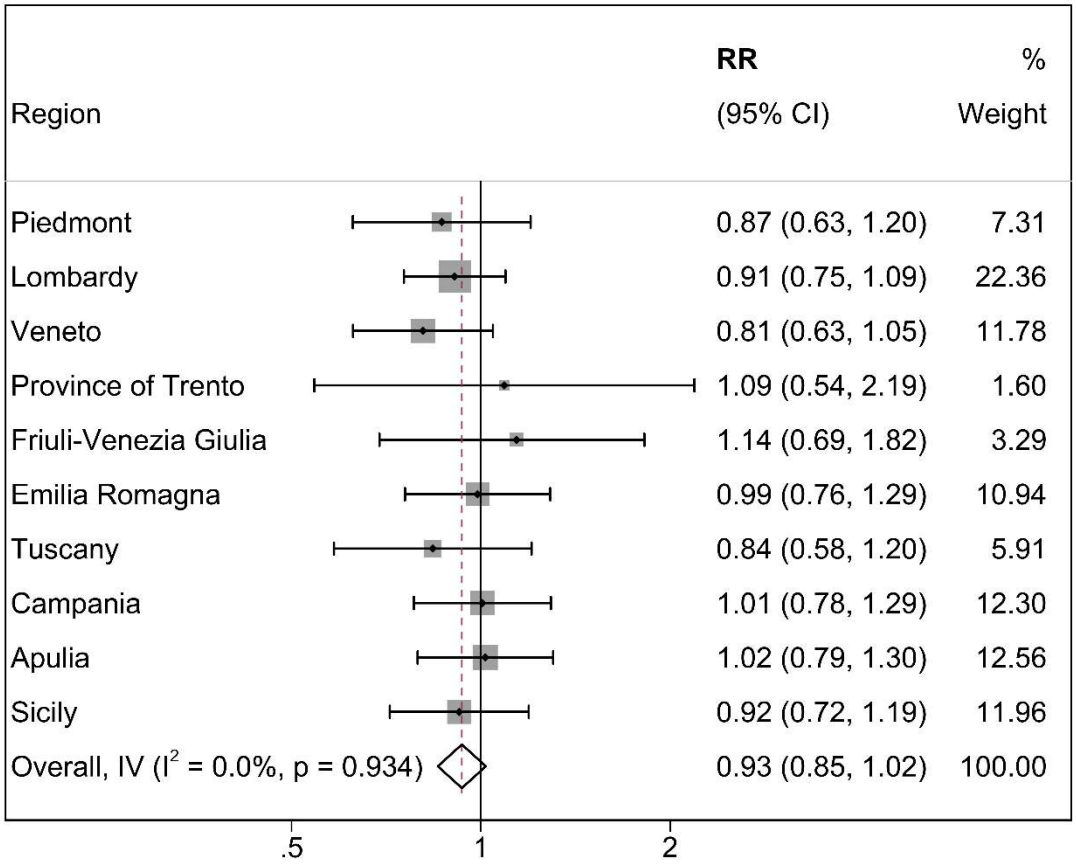


Figure S15. Forest plot for risks of liveborn preterm birth (<37 weeks' gestational age) in pandemic vs historical period in the studied Regions, multiple pregnancies. Unadjusted analysis.

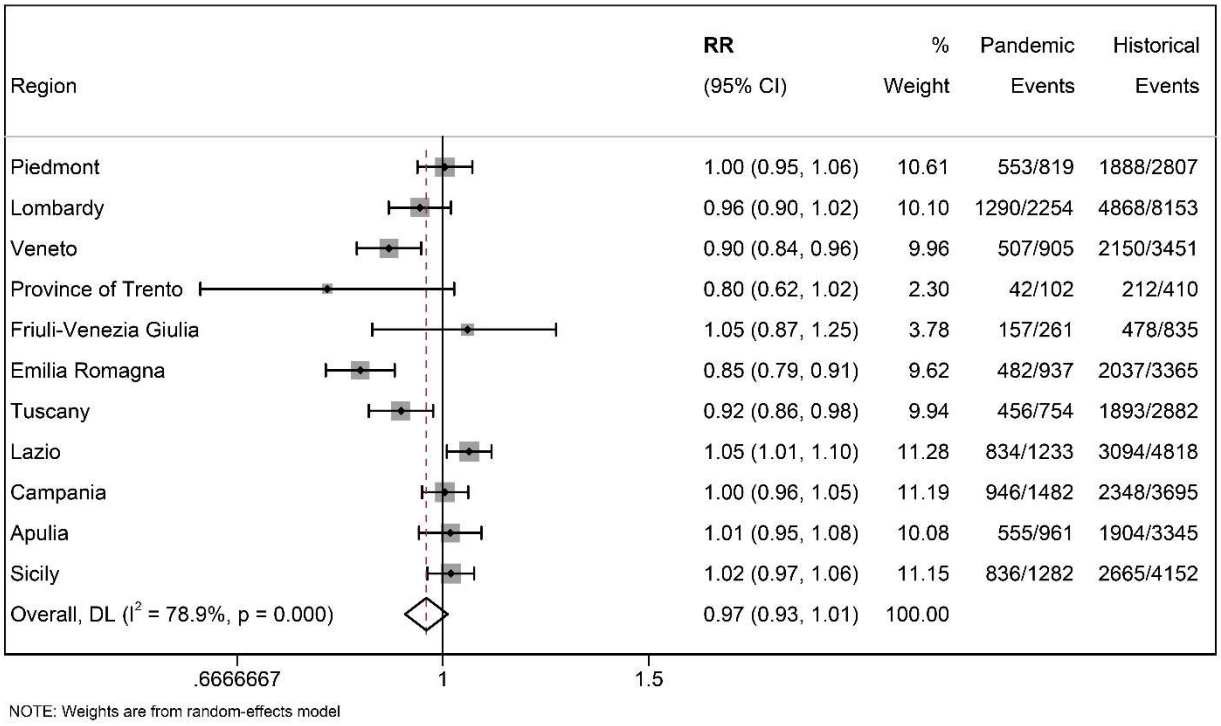


Figure S16. Forest plot for risks of liveborn late preterm birth (32-36 weeks' gestational age) in pandemic vs historical period in the studied Regions, multiple pregnancies. Unadjusted analysis.

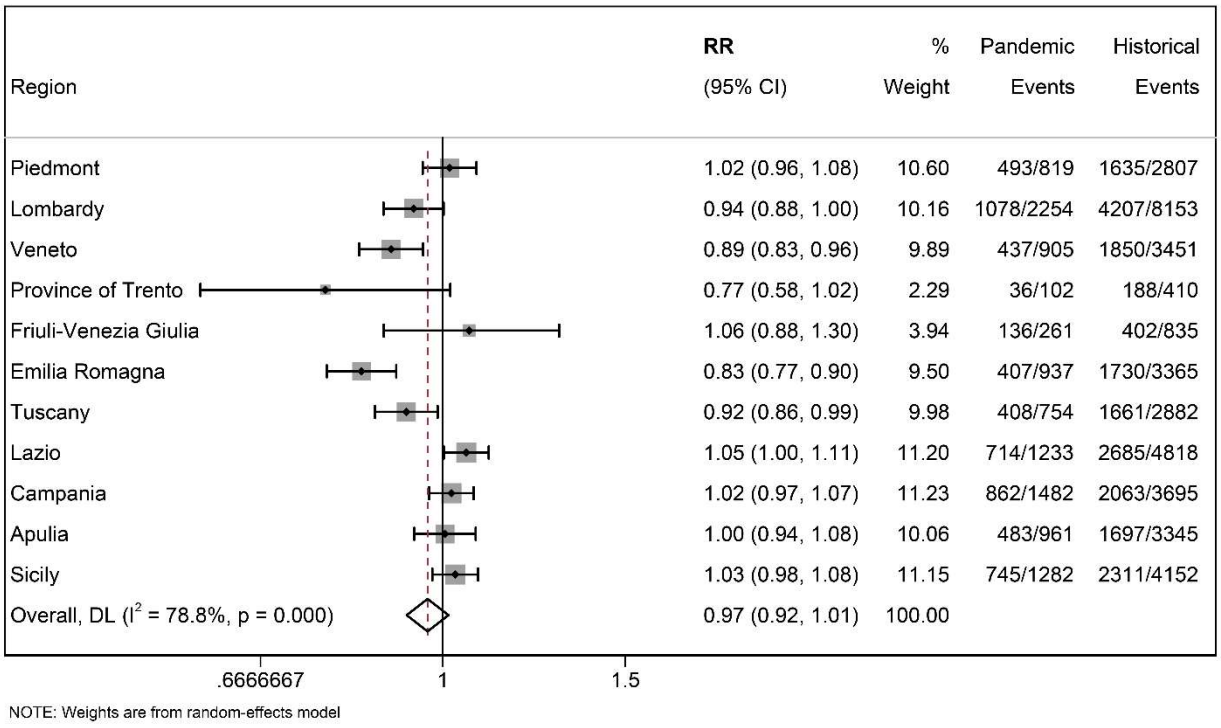


Figure S17. Forest plot for risks of liveborn very preterm birth (<32 weeks' gestational age) in pandemic vs historical period in the studied Regions, multiple pregnancies. Unadjusted analysis.

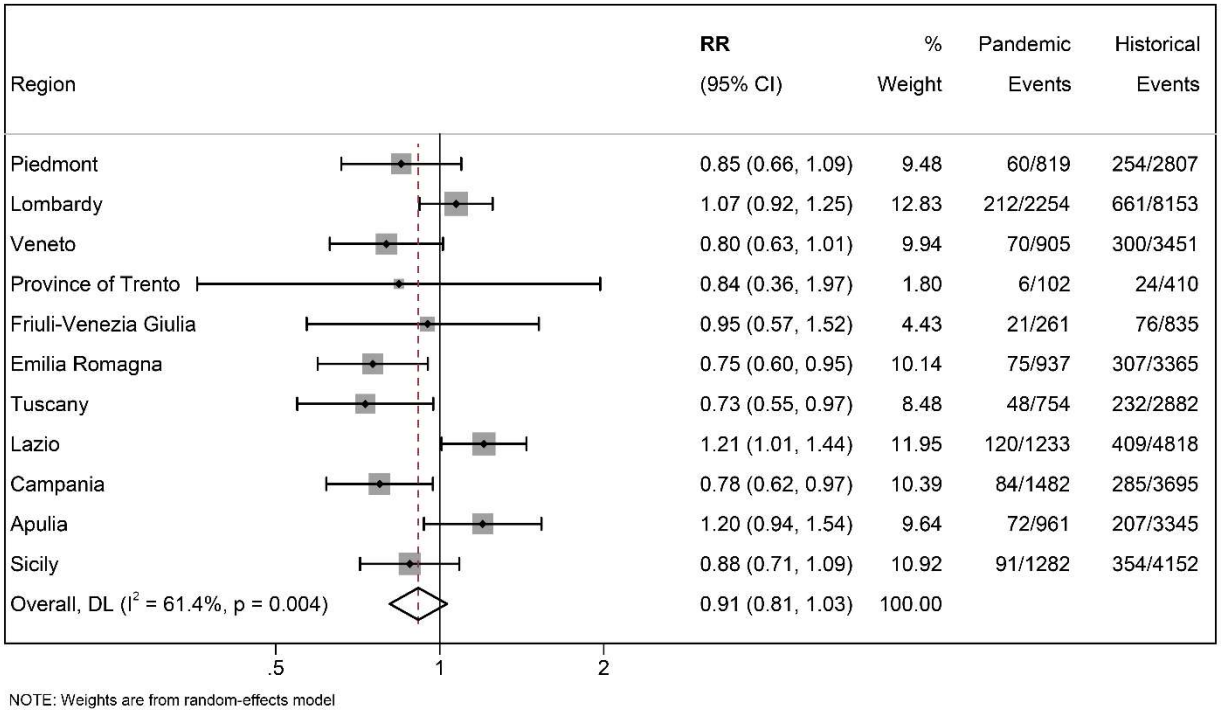


Figure S18. Forest plot for risks of liveborn extremely preterm birth (<28 weeks' gestational age) in pandemic vs historical period in the studied Regions, multiple pregnancies. Unadjusted analysis.

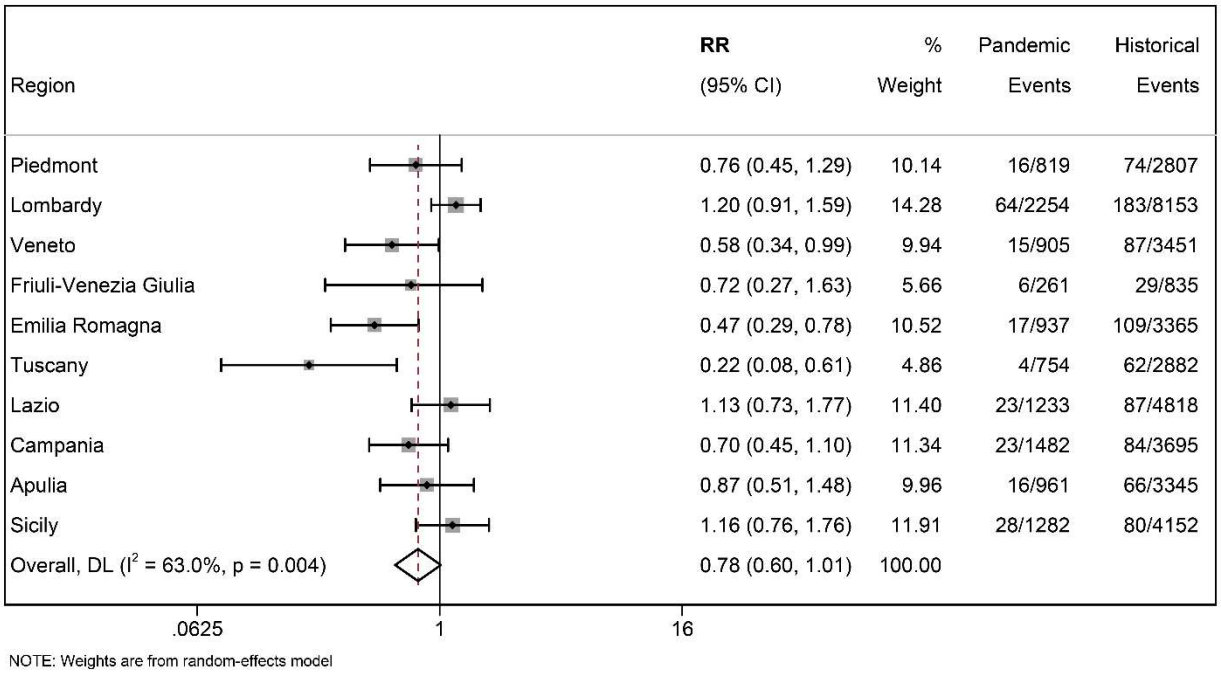


Figure S19. Forest plot for risks of liveborn preterm birth (<37 weeks' gestational age) in pandemic vs historical period in the studied Regions, multiple pregnancies. Adjusted analysis.

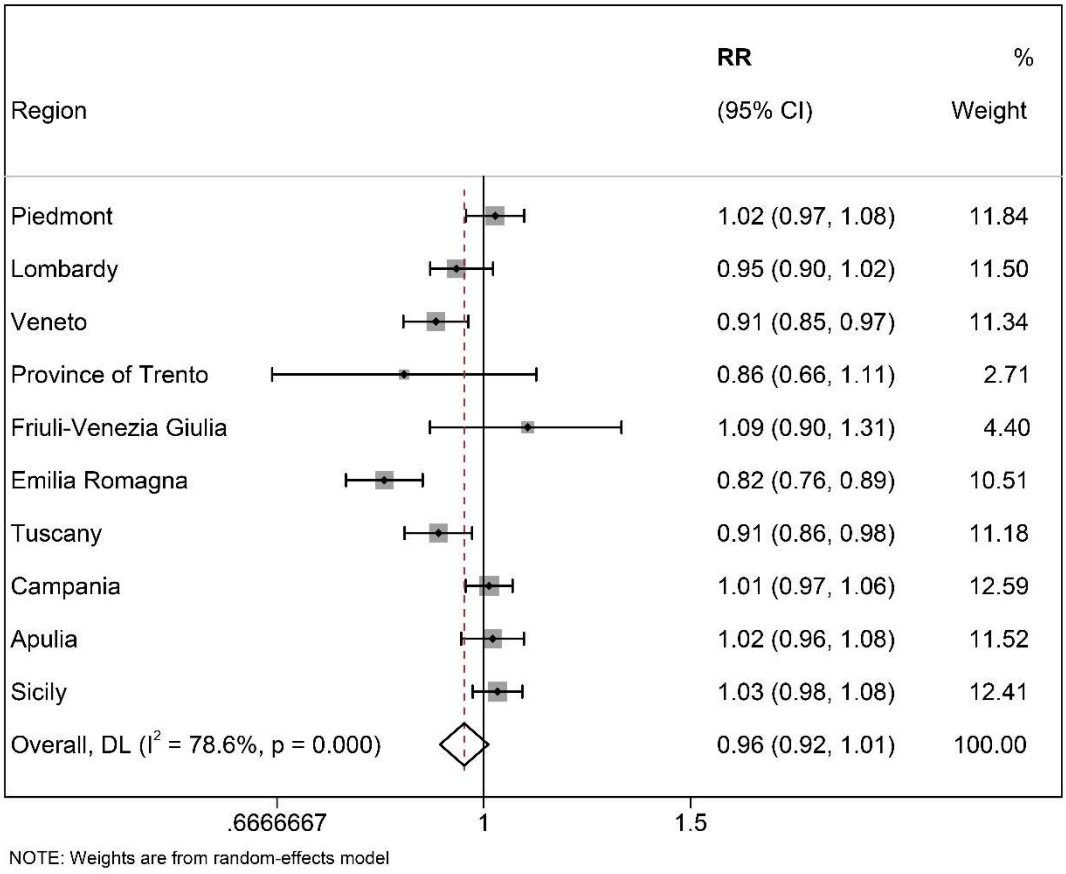


Figure S20. Forest plot for risks of liveborn late preterm birth (32-36 weeks' gestational age) in pandemic vs historical period in the studied Regions, multiple pregnancies. Adjusted analysis.

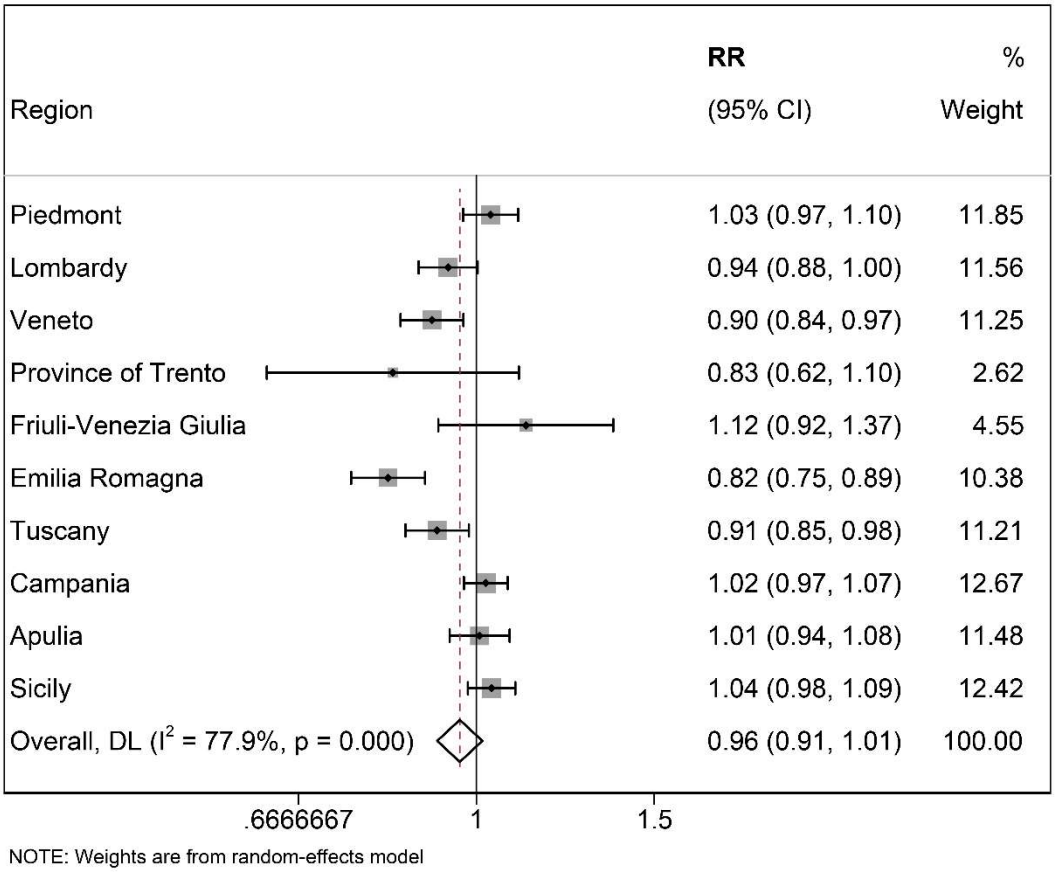


Figure S21. Forest plot for risks of liveborn very preterm birth (<32 weeks' gestational age) in pandemic vs historical period in the studied Regions, multiple pregnancies. Adjusted analysis.

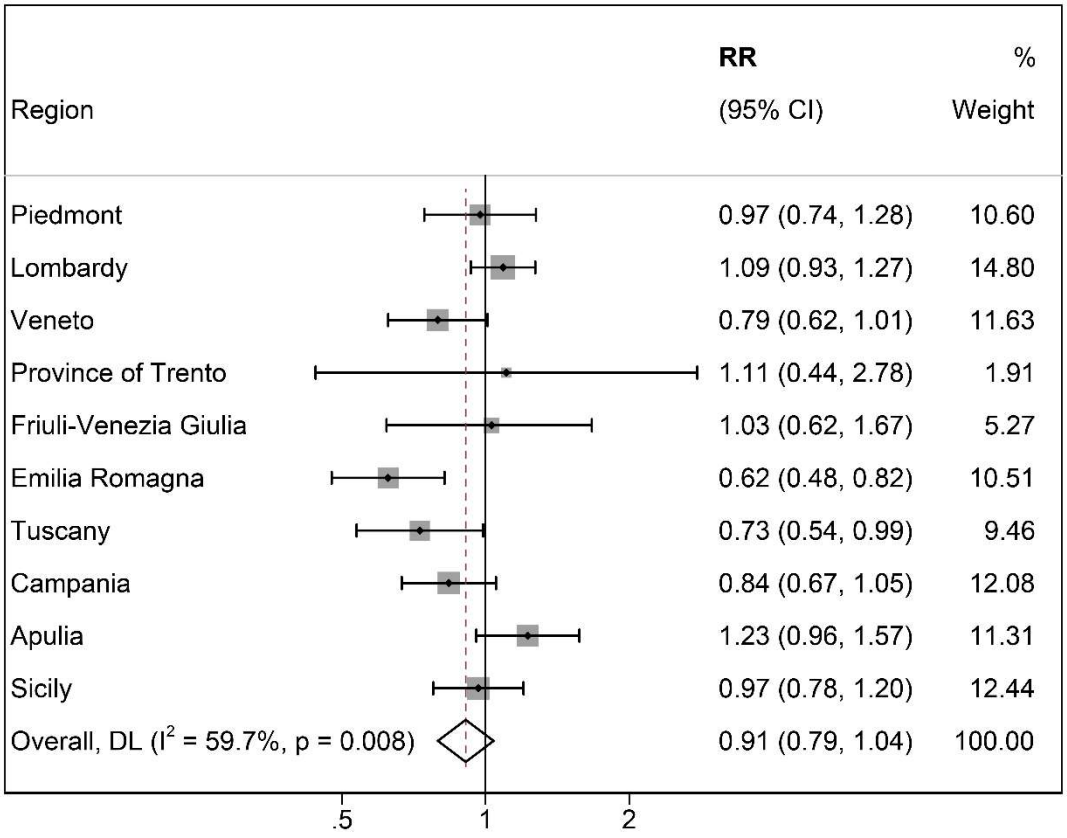


Figure S22. Forest plot for risks of liveborn extremely preterm birth (<28 weeks' gestational age) in pandemic vs historical period in the studied Regions, multiple pregnancies. Adjusted analysis.

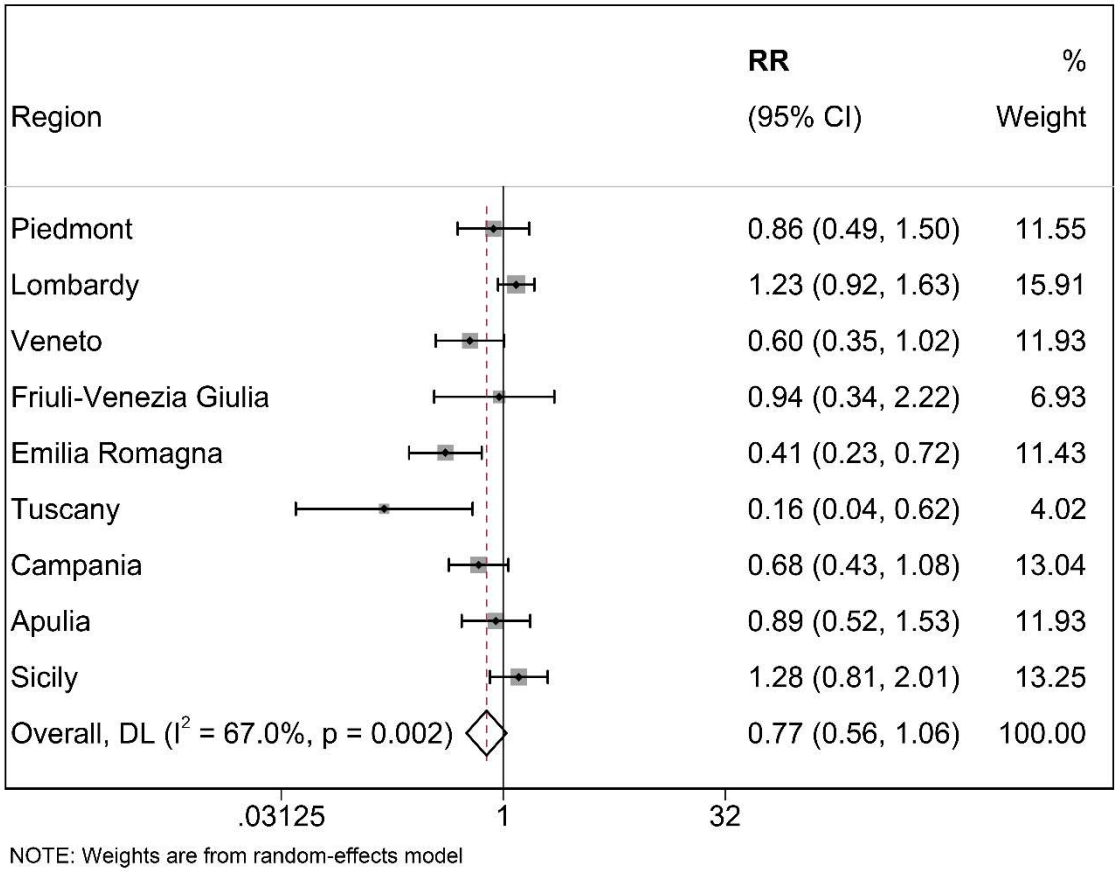


Figure S23. Comparison of observed preterm birth (<37 weeks' gestational age) monthly percentages (solid line) with those expected under a seasonally adjusted model estimated using data until February 2020 (dashed line: a counterfactual scenario of no change from March 2020). All observed points except 1 are below expected points, with a large drop in September-December 2020.

The date of implementation of mitigation measures (March 1st 2020) is shown as a vertical line.

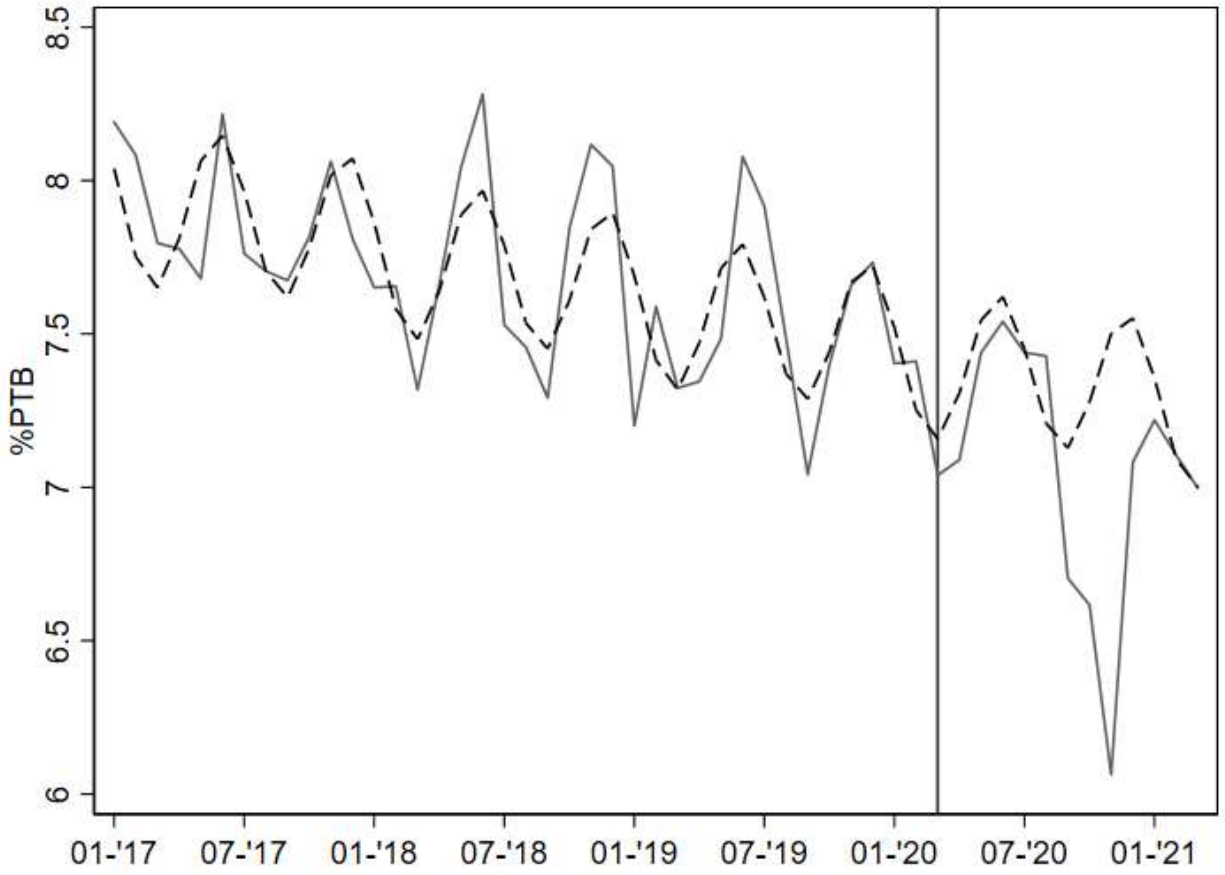


Figure S24. Interrupted time series regression. Each dot represents the average monthly percentage of liveborn late preterm births (32-36 weeks' gestational age) over total births. Time starts at January 1st 2017. Solid line: predicted trend based on the seasonally adjusted regression model. Dashed line: de-seasonalized trend.

The date of implementation of mitigation measures (March 1st 2020) is shown as a vertical line.

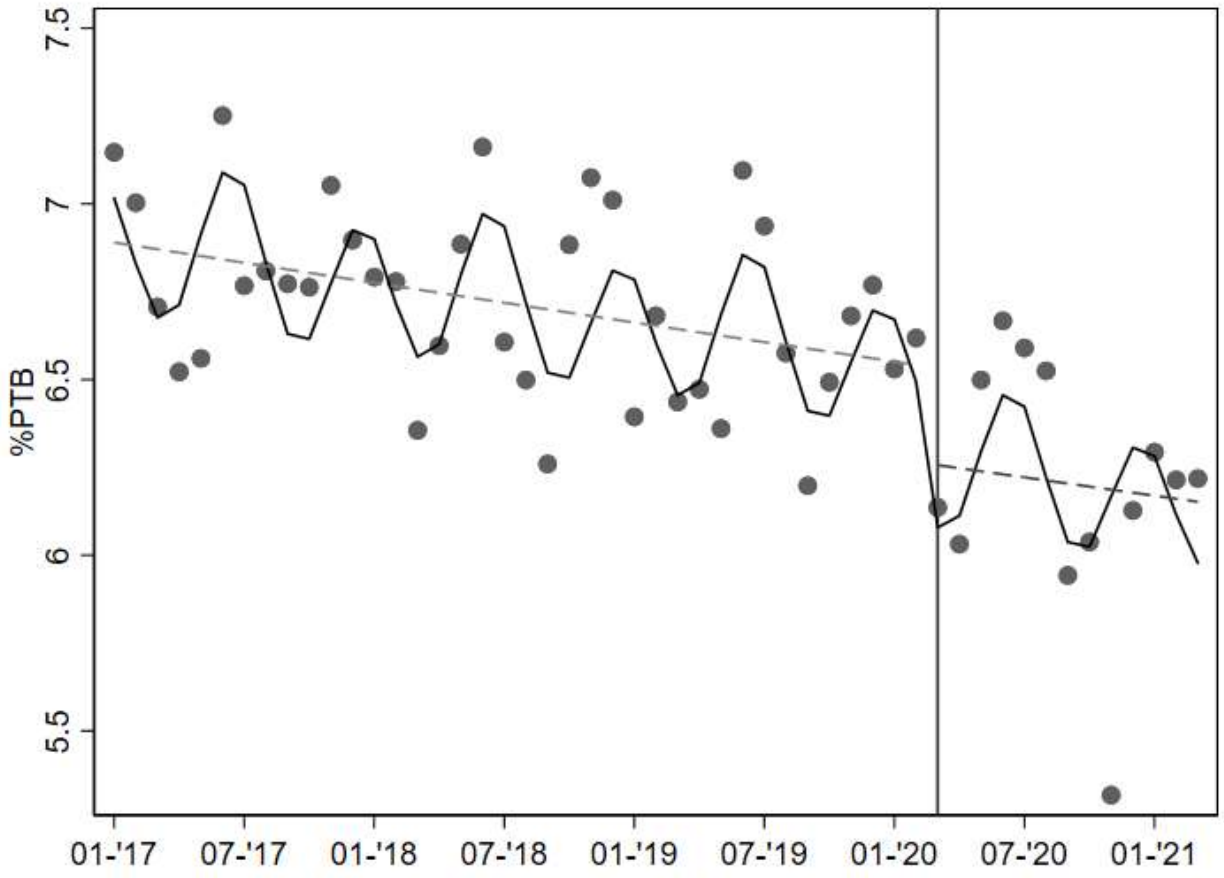


Figure S25. Interrupted time series regression. Each dot represents the average monthly percentage of liveborn very preterm births (<32 weeks' gestational age) over total births. Time starts at January 1st 2017. Solid line: predicted trend based on the seasonally adjusted regression model. Dashed line: de-seasonalized trend.

The date of implementation of mitigation measures (March 1st 2020) is shown as a vertical line.

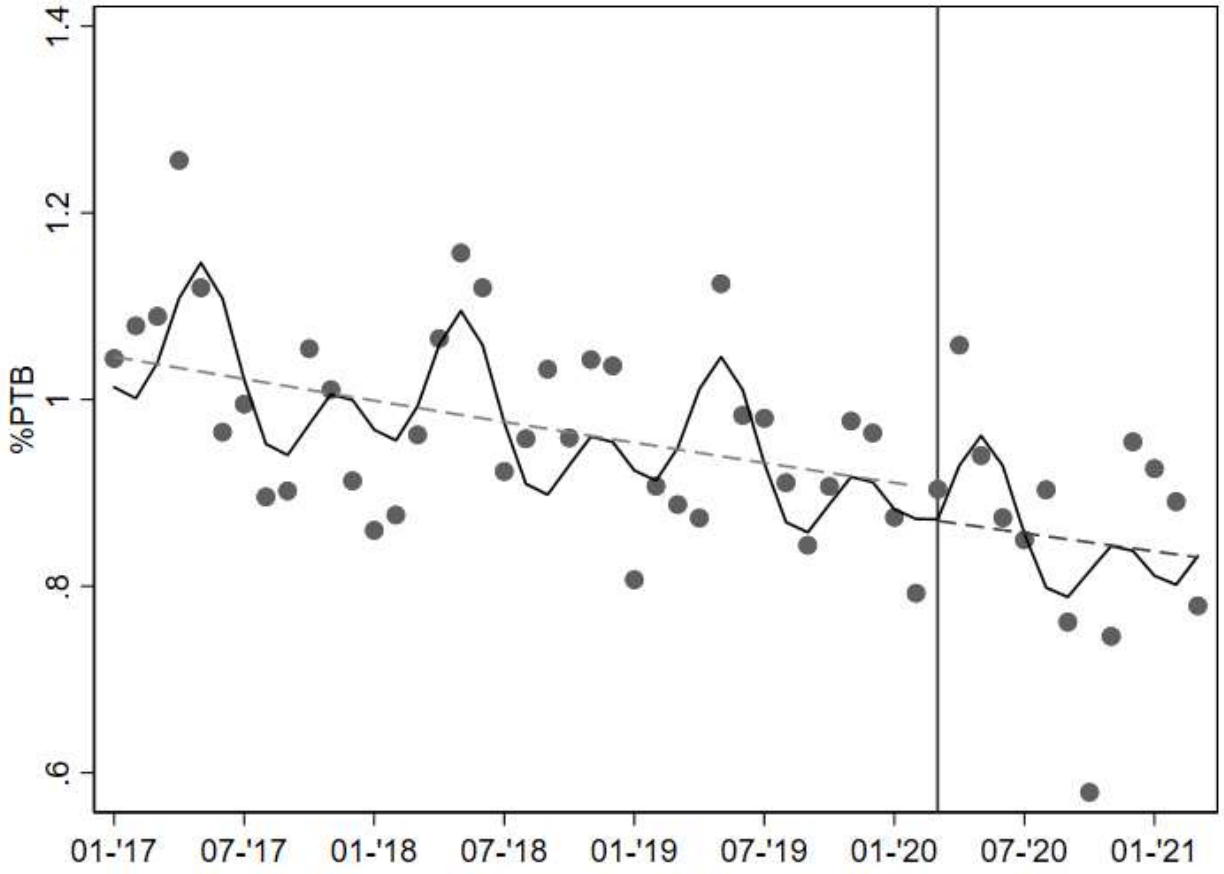


Figure S26. Interrupted time series regression. Each dot represents the average monthly percentage of liveborn extremely preterm births (<28 weeks' gestational age) over total births. Time starts at January 1st 2017. Solid line: predicted trend based on the seasonally adjusted regression model. Dashed line: de-seasonalized trend.

The date of implementation of mitigation measures (March 1st 2020) is shown as a vertical line.

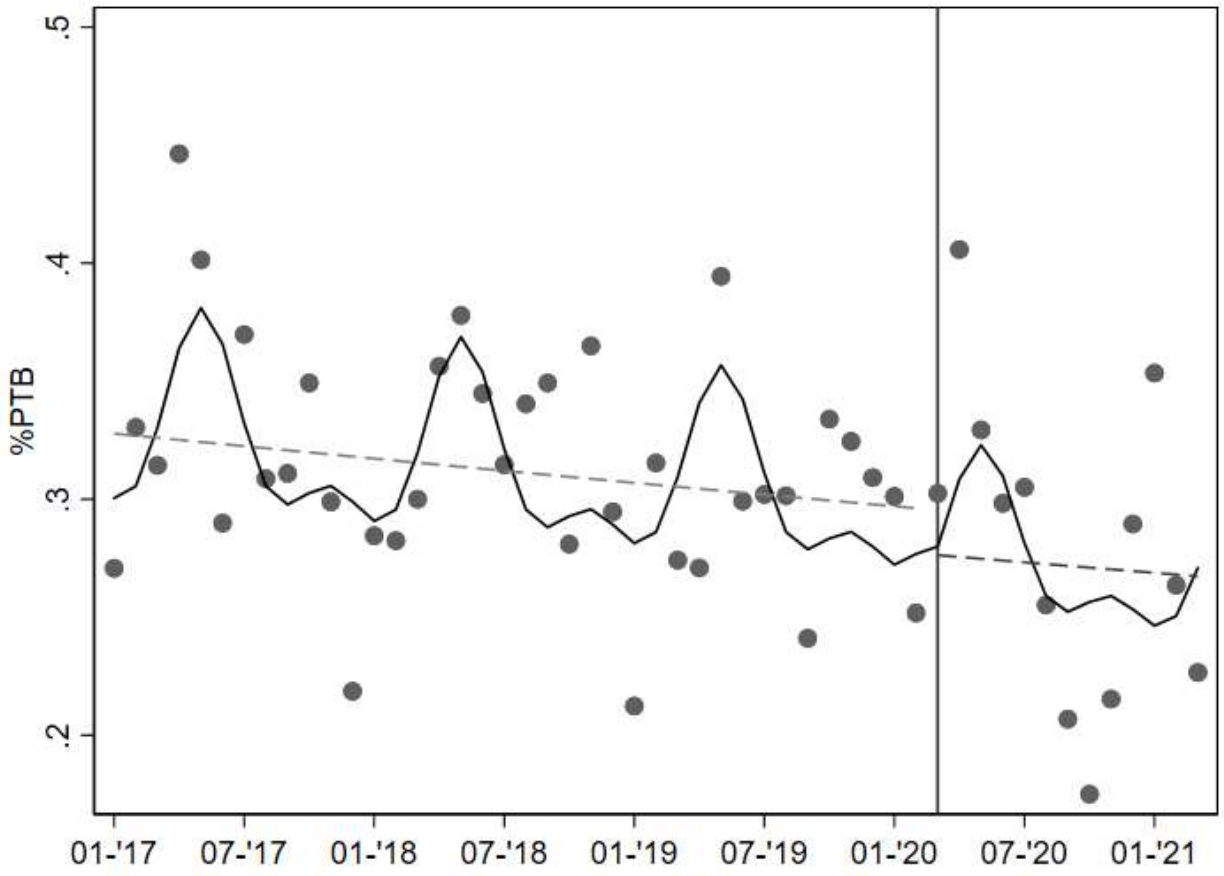


Figure S27. Interrupted time series regression. Each dot represents the average monthly percentage of liveborn preterm births (<37 weeks' gestational age) over total births in singleton pregnancies. Time starts at January 1st 2017. Solid line: predicted trend based on the seasonally adjusted regression model. Dashed line: de-seasonalized trend.

The date of implementation of mitigation measures (March 1st 2020) is shown as a vertical line.

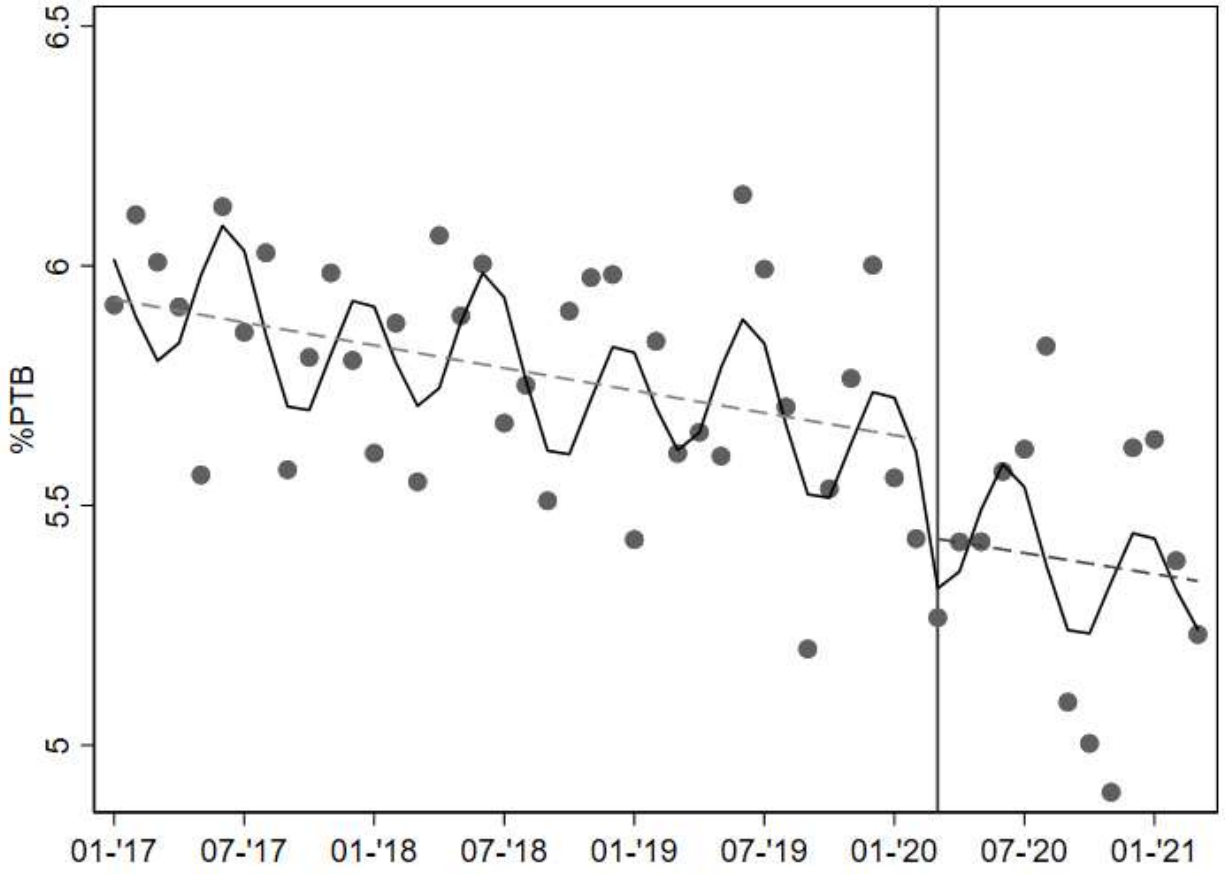


Figure S28. Interrupted time series regression. Each dot represents the average monthly percentage of liveborn late preterm births (32-36 weeks' gestational age) over total births in singleton pregnancies. Time starts at January 1st 2017. Solid line: predicted trend based on the seasonally adjusted regression model. Dashed line: de-seasonalized trend.

The date of implementation of mitigation measures (March 1st 2020) is shown as a vertical line.

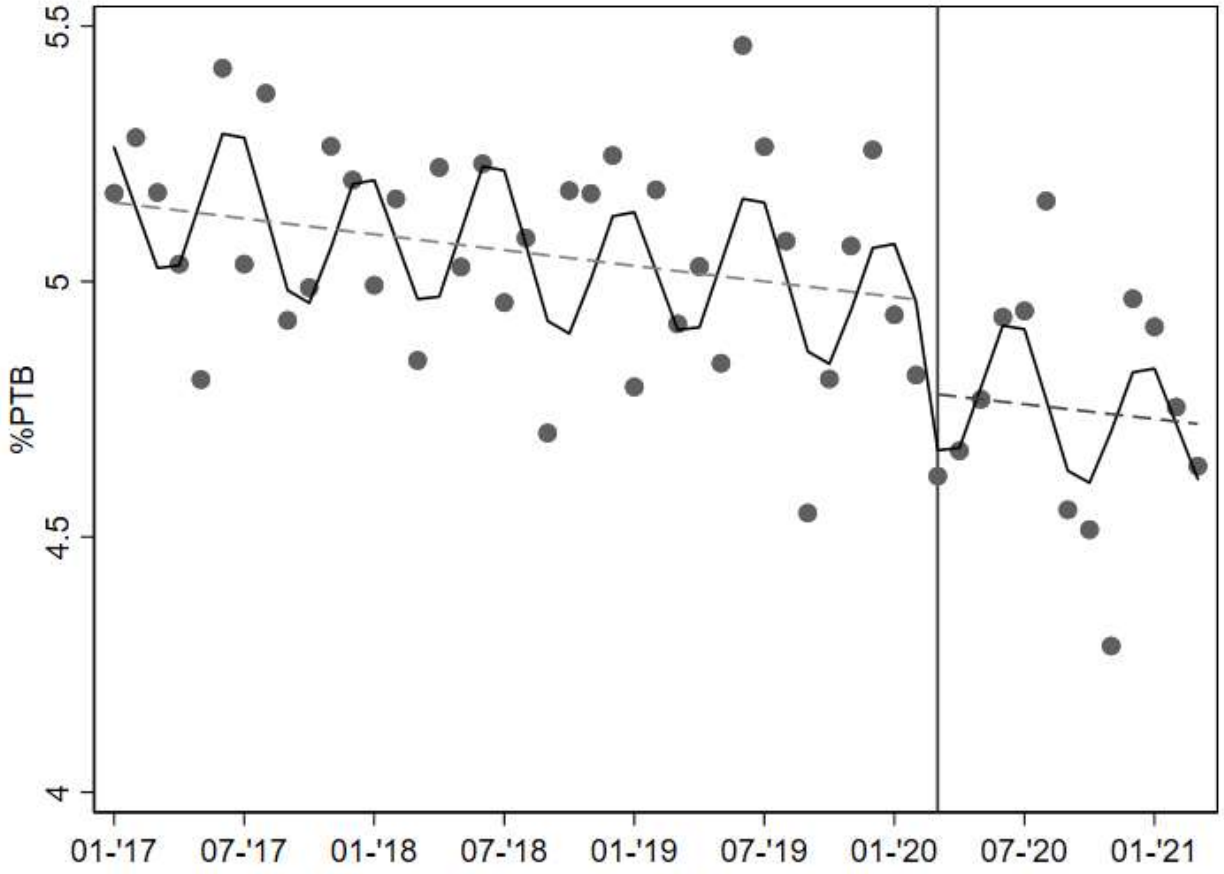


Figure S29. Interrupted time series regression. Each dot represents the average monthly percentage of liveborn very preterm births (<32 weeks' gestational age) over total births in singleton pregnancies. Time starts at January 1st 2017. Solid line: predicted trend based on the seasonally adjusted regression model. Dashed line: de-seasonalized trend.

The date of implementation of mitigation measures (March 1st 2020) is shown as a vertical line.

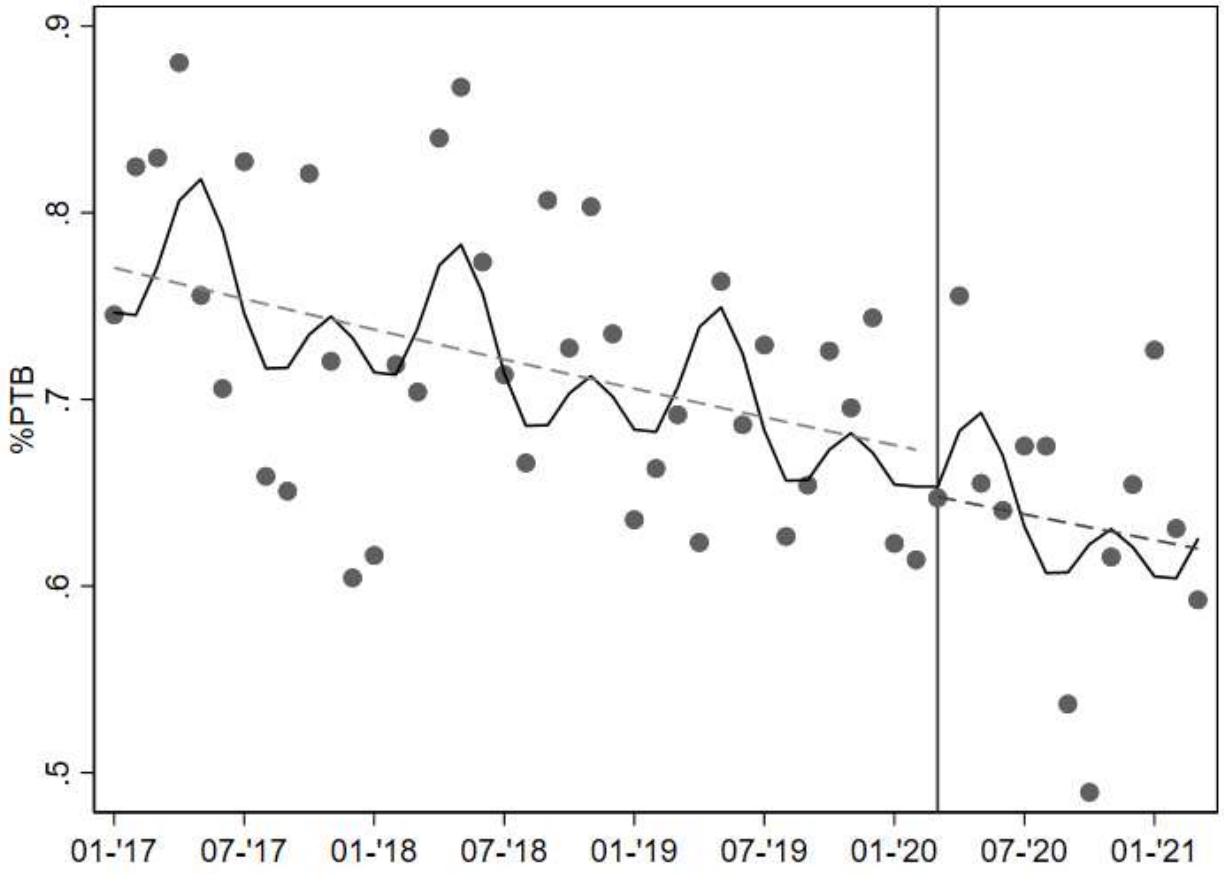


Figure S30. Interrupted time series regression. Each dot represents the average monthly percentage of liveborn extremely preterm births (<28 weeks' gestational age) over total births in singleton pregnancies. Time starts at January 1st 2017. Solid line: predicted trend based on the seasonally adjusted regression model. Dashed line: de-seasonalized trend.

The date of implementation of mitigation measures (March 1st 2020) is shown as a vertical line.