

**Supplementary Material**

**A long trend of sexually transmitted diseases before and after the COVID-19 pandemic in China (2010–21)**

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Supplementary Table S1. Sensitivity analysis for model-estimated incidence rate ratio (IRR) of five STDs.

Disease	Phase 2 (2019) reported cases	Phase 1(2010-2018)		Phase 3 (2020)		Phase 4 (2021)	
		IRR (95%CI)	<i>P-value</i>	IRR (95%CI)	<i>P-value</i>	IRR (95%CI)	<i>P-value</i>
AIDS	72630	0.72 (0.63-0.82)	<0.001	<b>0.88 (0.74-1.04)</b>	<b>0.14</b>	<b>0.85 (0.71-1.01)</b>	<b>0.07</b>
Hepatitis B	1247092	0.96 (0.91-1.01)	0.09	<b>0.91 (0.85-0.98)</b>	<b>0.01</b>	<b>0.99 (0.93-1.06)</b>	<b>0.82</b>
Hepatitis C	260704	<b>0.87 (0.82-0.93)</b>	<b>&lt;0.001</b>	<b>0.89 (0.81-0.97)</b>	<b>0.008</b>	<b>0.94 (0.86-1.02)</b>	<b>0.16</b>
Gonorrhoea	120146	<b>0.94 (0.89-0.99)</b>	<b>0.03</b>	<b>0.9 (0.83-0.97)</b>	<b>0.006</b>	<b>1.07 (0.99-1.14)</b>	<b>0.09</b>
Syphilis	587402	<b>0.79 (0.75-0.84)</b>	<b>&lt;0.001</b>	<b>0.89 (0.83-0.96)</b>	<b>0.002</b>	<b>0.91 (0.85-0.98)</b>	<b>0.01</b>

Generalized linear models (GLM) were used for estimating the IRRs of five STDs.

The seasonality of the reported cases was adjusted by the harmonic function method in this model. IRR < 1 with P < 0.05 indicates a significant decline in incidence rate in the year 2020 compared to the year 2019. All p-values are two-sided and not adjusted for multiple comparisons. The reference period is the year 2019. Statistically significant reductions (IRR < 1) are displayed in bolded font.