

Table S1
Variables, description, and years available and source for each country

Countrie	Variables	Description	Original data Availability (years)	Source
Brazil	Gini	Gini Index	2000 and 2010 = Census, at municipality level. From 2001 to 2012 = PNAD, at state level. From 2013 to 2019 = PNADC, at state level	IBGE - Census; IBGE - PNAD; and IBGE - PNADC
	Illiteracy rate	Perc. of indiv. older than 15 years who are illiterate	2000 and 2010 = Census, at municipality level. From 2001 to 2012 = PNAD, at state level. From 2013 to 2019 = PNADC, at state level	IBGE - Census; IBGE - PNAD; and IBGE - PNADC
	Poverty	Poverty Rate	2000 and 2010 = Census, at municipality level. From 2001 to 2012 = PNAD, at state level. From 2013 to 2019 = PNADC, at state level	IBGE - Census; IBGE - PNAD; and IBGE - PNADC
	Piped water	Perc. of hh with piped water	2000 and 2010 = Census, at municipality level. From 2001 to 2012 = PNAD, at state level. From 2013 to 2019 = PNADC, at state level	IBGE - Census; IBGE - PNAD; and IBGE - PNADC
	Sewage	Perc. of hh with sewage/sanitation	2000 and 2010 = Census, at municipality level. From 2001 to 2012 = PNAD, at state level. From 2013 to 2019 = PNADC, at state level	IBGE - Census; IBGE - PNAD; and IBGE - PNADC
	Hospital beds rate	Hospital Bed Rate per 1,000 inhabitants without health insurance	2000 to 2019	DATASUS - CNES
	Doctors rate	Number of Doctors per 1,000 inhabitants without health insurance	2000 to 2019	DATASUS - CNES

	Population between 0 and 4 years	Number of population under 5 years	2000 to 2019	IBGE – Municipal population estimates
	Mortality between 0 and 4 years	Number of death under 5 years	2000 to 2019	DATASUS - SIM
Ecuador	Gini	Gini Index	2001 and 2010 = Census, at municipality level.	INEC
	Illiteracy rate	Perc. of indiv. older than 15 years who are illiterate	2001 and 2010 = Census, at municipality level.	INEC
	Poverty	Poverty Rate (Consumption poverty rate)	2001 and 2010 = Census, at municipality level.	INEC
	Piped water	Perc. of hh with piped water	2001 and 2010 = Census, at municipality level.	INEC
	Sewage	Perc. of hh with sewage/sanitation	2001 and 2010 = Census, at municipality level.	INEC
	Hospital beds rate	Hospital Bed Rate per 1,000 inhabitants without health insurance	2000 to 2019	INEC
	Doctors rate	Number of Doctors per 1,000 inhabitants without health insurance	2000 to 2019	INEC
	Population between 0 and 4 years	Number of population under 5 years	2001 and 2010 = Census, at municipality level.	INEC
	Mortality between 0 and 4 years	Number of death under 5 years	2000 to 2019	INEC
Mexico	Gini	Gini Index	2000, 2005, 2010, 2020	CONEVAL

Illiteracy rate	Perc. of indiv. older than 15 years who are illiterate	2000, 2005, 2010, 2015, 2020	CONEVAL
Poverty	Poverty Rate (Marginalization index)	2000, 2005, 2010, 2020	CONAPO
Water	Perc. of hh with piped water	2000, 2005, 2010, 2015, 2020	CONEVAL
Sewage	Perc. of hh with sewage/sanitation	2000, 2005, 2010, 2015, 2020	CONEVAL
Hospital beds rate	Hospital Bed Rate per 1,000 inhabitants without health insurance	2001-2020	Datos abiertos DGIS
Doctors rate	Number of Doctorss per 1,000 inhabitants without health insurance	2001-2020	Datos abiertos DGIS
Population between 0 and 4 years	Number of population under 5 years	2000-2020	CONAPO
Mortality between 0 and 4 years	Number of death under 5 years	2000-2020	INEGI

Supplementary material

Figure S1 shows the importance of the variables to predict U5MR for the municipalities of Brazil. Poverty, illiteracy, and sewage were the most important variables in this country.

Figure S1. Importance of the variables to predict U5MR for Brazil

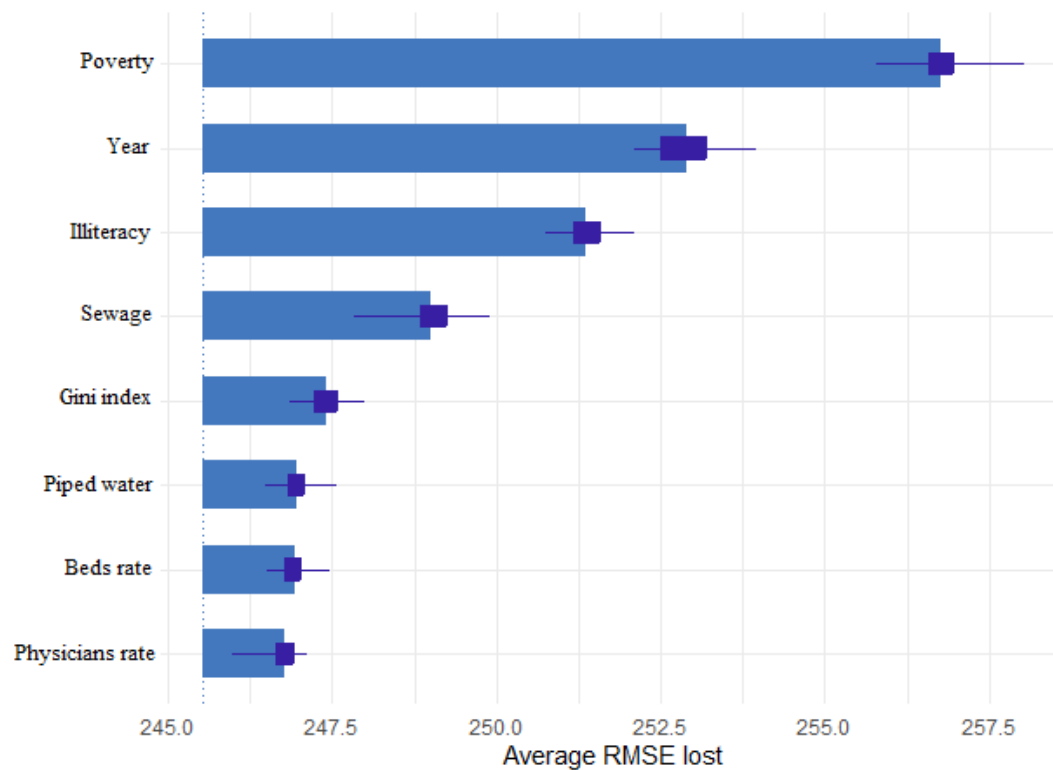


Figure S2 shows the importance of the variables to predict U5MR for the municipalities of Ecuador. Sewage, piped water and Gini index were the most important variables in this country.

Figure S2. Importance of the variables to predict U5MR for Ecuador

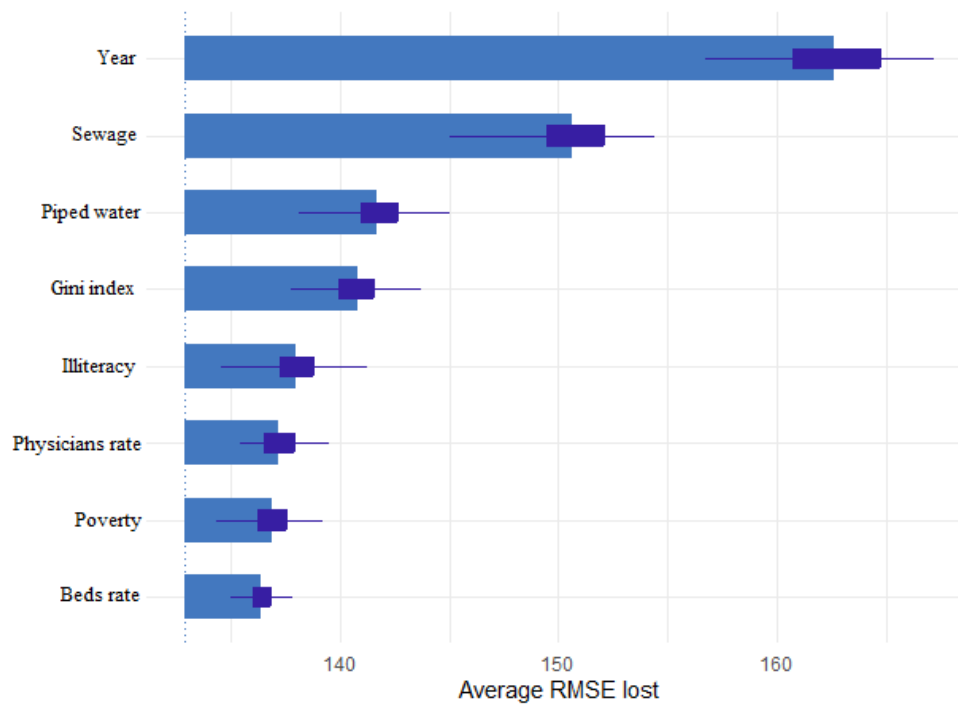


Figure S3 shows the importance of the variables to predict U5MR for the municipalities of Mexico. Poverty, illiteracy, and sewage were the most important variables in this country.

Figure S3. Importance of the variables to predict U5MR for Mexico

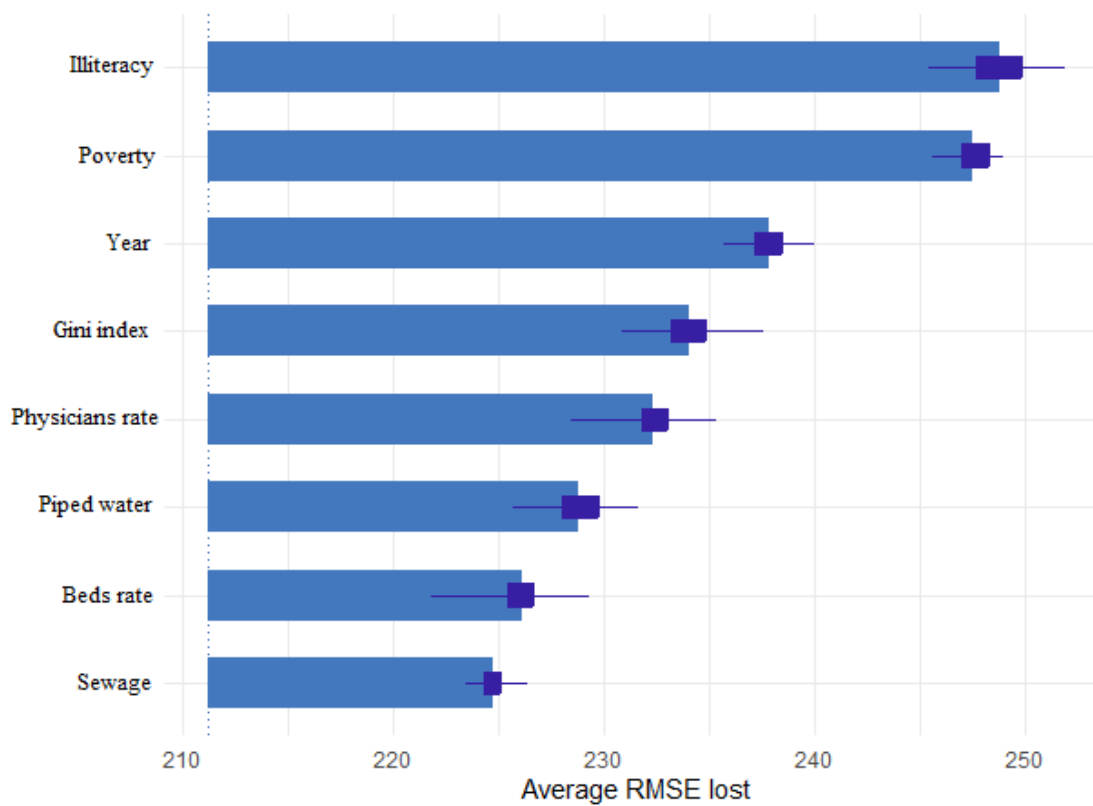


Figure S4 shows the importance of the variables in predicting U5MR due to nutritional deficiencies for all countries. Poverty, illiteracy, Gini index and were the most important variables for all countries.

Figure S4. Importance of the variables to predict U5MR due to nutritional deficiencies

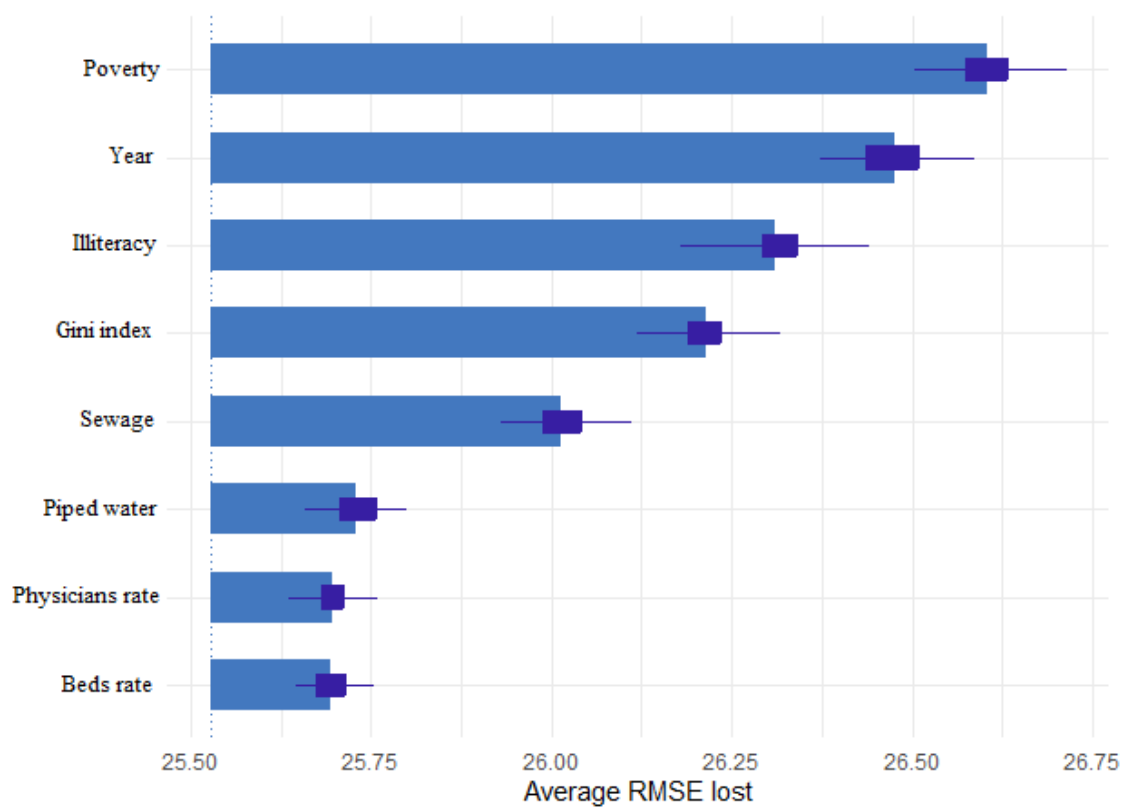


Figure S5 shows the importance of the variables in predicting U5MR due to respiratory infections for all countries. Poverty, Gini index and sewage were the most important variables for all countries.

Figure S5. Importance of the variables to predict U5MR due to respiratory infections

