

Supplementary Table S1. Countries and territories of the Asia-Pacific region

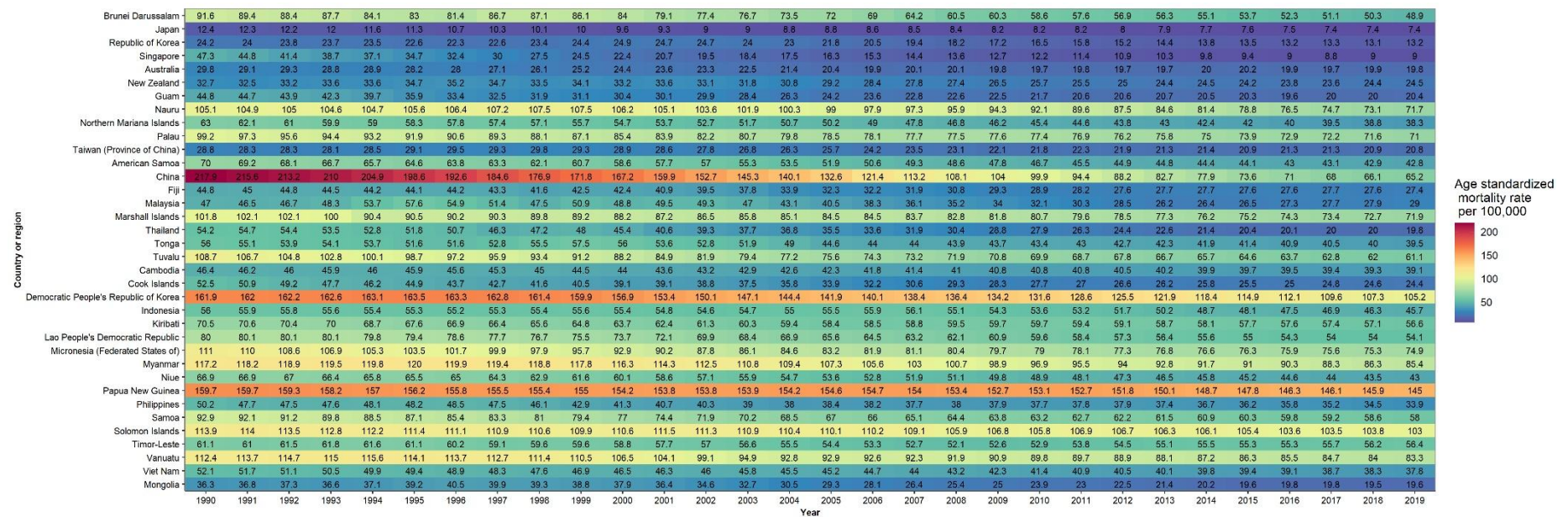
High income	Australia, Brunei Darussalam, Guam, Japan, Nauru, New Zealand, Northern Mariana Islands, Palau, Republic of Korea, Singapore, Taiwan (Province of China)
Upper-middle income	American Samoa, China, Fiji, Malaysia, Marshall Islands, Thailand, Tonga, Tuvalu
Low to middle income	Cambodia, Cook Islands, Democratic People's Republic of Korea, Indonesia, Kiribati, Lao People's Democratic Republic, Micronesia (Federated States of), Mongolia, Myanmar, Niue, Papua New Guinea, Philippines, Samoa, Solomon Islands, Timor-Leste, Vanuatu, Vietnam

Supplementary Table S2. Joinpoint analysis for COPD mortality rates in 36 selected countries and territories between 1990 and 2019

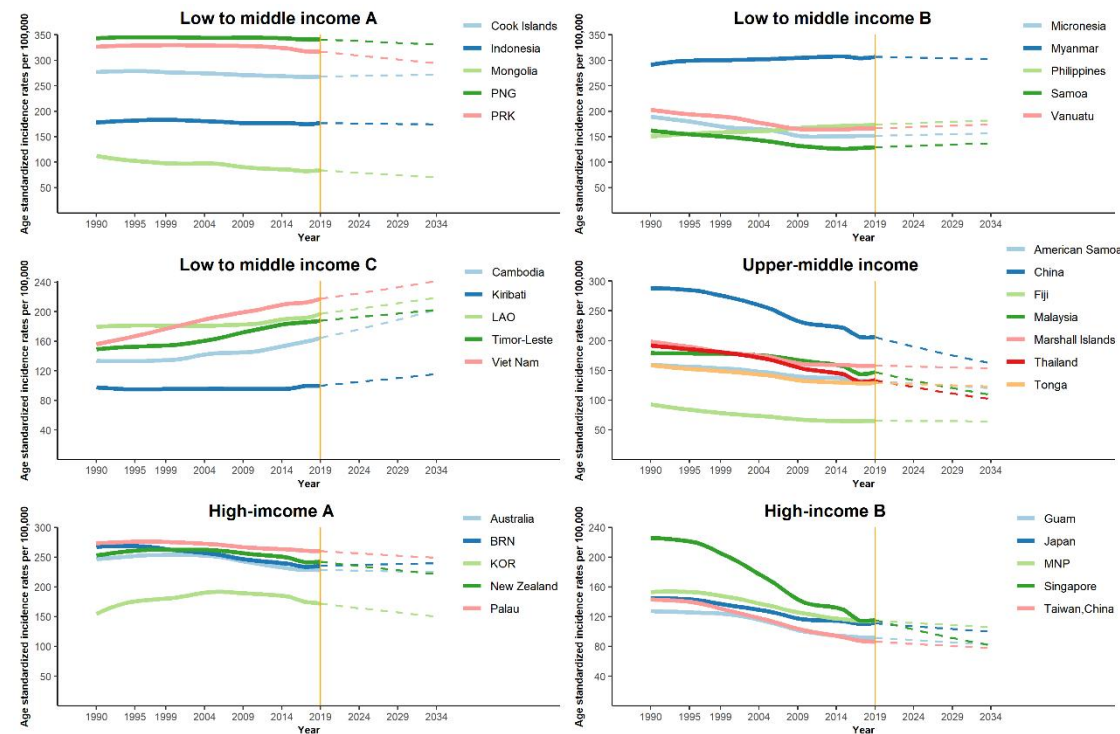
Country or region	The whole period		Period 1		Period 2		Period 3	
	Period	AAPC	Period	APC	Period	APC	Period	APC
High income								
Brunei Darussalam(A)	1990-2019	-2.0 (-2.3, -1.7)	1990-2000	-0.6 (-1.1, -0.0)	2000-2009	-3.6 (-4.3, -2.9)	2009-2019	-2.0 (-2.5, -1.5)
Japan(A)	1990-2019	-1.8 (-2.0, -1.7)	1990-1993	-1.4 (-2.8, -0.1)	1993-2001	-3.2 (-3.5, -2.8)	2001-2019	-1.3 (-1.4, -1.2)
Republic of Korea(A)	1990-2019	-2.0 (-2.4, -1.6)	1990-2003	0.2 (-0.2, 0.6)	2003-2014	-5.1 (-5.7, -4.5)	2014-2019	-0.6 (-2.4, 1.1)
Singapore(A)	1990-2019	-5.6 (-6.0, -5.3)	1990-2005	-7.2 (-7.4, -6.9)	2005-2016	-5.2 (-5.7, -4.8)	2016-2019	0.7 (-2.5, 3.9)
Australia(A)	1990-2019	-1.4 (-1.5, -1.3)	1990-1996	-0.9 (-1.4, -0.5)	1996-2006	-3.3 (-3.6, -3.1)	2006-2019	-0.1 (-0.2, 0.1)
New Zealand(A)	1990-2019	-1.0 (-1.3, -0.8)	1990-1999	0.6 (0.2, 1.1)	1999-2013	-2.6 (-2.9, -2.3)	2013-2019	0.1 (-0.8, 1.0)
Guam(B)	1990-2019	-2.8 (-3.1, -2.5)	1990-2010	-3.8 (-4.1, -3.5)	2010-2019	-0.5 (-1.4, 0.4)		
Nauru(A)	1990-2019	-1.3 (-1.4, -1.2)	1990-1999	0.3 (0.2, 0.5)	1999-2009	-1.3 (-1.4, -1.1)	2009-2019	-2.8 (-3.0, -2.7)
Northern Mariana Islands(A)	1990-2019	-1.7 (-1.8, -1.6)	1990-1994	-1.7 (-2.2, -1.2)	1994-1998	-0.9 (-1.7, -0.0)	1998-2019	-1.9 (-1.9, -1.8)
Palau(A)	1990-2019	-1.1 (-1.2, -1.1)	1990-2006	-1.5 (-1.5, -1.5)	2006-2011	-0.1 (-0.5, 0.2)	2011-2019	-1.1 (-1.2, -1.0)
Taiwan, China(A)	1990-2019	-1.1 (-1.2, -0.9)	1990-2000	0.4 (0.1, 0.7)	2000-2009	-3.1 (-3.5, -2.7)	2009-2019	-0.7 (-1.0, -0.4)
Upper middle income								
American Samoa(A)	1990-2019	-1.7 (-1.8, -1.6)	1990-1998	-1.5 (-1.7, -1.3)	1998-2011	-2.4 (-2.5, -2.3)	2011-2019	-0.8 (-1.0, -0.6)
China(A)	1990-2019	-4.2 (-4.5, -3.9)	1990-2000	-2.7 (-3.1, -2.3)	2000-2016	-5.4 (-5.6, -5.2)	2016-2019	-2.8 (-5.0, -0.5)
Fiji(A)	1990-2019	-1.7 (-2.0, -1.5)	1990-2000	-0.7 (-1.2, -0.3)	2000-2009	-4.2 (-4.8, -3.6)	2009-2019	-0.5 (-1.0, -0.0)
Malaysia(A)	1990-2019	-1.8 (-2.4, -1.1)	1990-2000	0.9 (-0.2, 1.9)	2000-2014	-4.9 (-5.6, -4.3)	2014-2019	2.2 (-0.9, 5.3)
Marshall Islands(A)	1990-2019	-1.3 (-1.5, -1.1)	1990-1995	-2.7 (-3.6, -1.7)	1995-2008	-0.8 (-1.0, -0.5)	2008-2019	-1.3 (-1.6, -1.0)
Thailand(A)	1990-2019	-3.5 (-3.9, -3.1)	1990-1999	-1.9 (-2.6, -1.2)	1999-2016	-4.9 (-5.2, -4.6)	2016-2019	-0.1 (-3.8, 3.7)
Tonga(A)	1990-2019	-1.1 (-1.8, -0.3)	1990-2002	0.0 (-0.4, 0.4)	2002-2005	-6.0 (-12.4, 0.8)	2005-2019	-0.9 (-1.2, -0.6)
Tuvalu(A)	1990-2019	-2.0 (-2.0, -1.9)	1990-1999	-1.9 (-2.0, -1.8)	1999-2004	-3.5 (-3.7, -3.3)	2004-2019	-1.5 (-1.5, -1.5)

Low to middle income								
Cambodia(A)	1990-2019	-0.6 (-0.6, -0.5)	1990-1996	0.2 (-0.4, -0.1)	1996-2008	-0.9 (-0.9, -0.8)	2008-2019	-0.5 (-0.5, -0.4)
Cook Islands(A)	1990-2019	-2.6 (-2.8, -2.4)	1990-2004	-2.6 (-2.7, -2.4)	2004-2009	-4.9 (-5.8, -3.9)	2009-2019	-1.4 (-1.7, -1.2)
Democratic People's Republic of Korea(A)	1990-2019	-1.5 (-1.6, -1.4)	1990-1997	0.2 (-0.0, 0.4)	1997-2010	-1.7 (-1.8, -1.6)	2010-2019	-2.5 (-2.6, -2.4)
Indonesia(A)	1990-2019	-0.7 (-0.9, -0.6)	1990-2003	-0.2 (-0.3, -0.1)	2003-2007	0.7 (-0.4, 1.7)	2007-2019	-1.8 (-1.9, -1.7)
Kiribati(A)	1990-2019	-0.8 (-1.1, -0.6)	1990-2006	-1.3 (-1.4, -1.2)	2006-2009	0.9 (-1.5, 3.4)	2009-2019	-0.6 (-0.8, -0.4)
Lao People's Democratic Republic(A)	1990-2019	-1.4 (-1.4, -1.3)	1990-1996	-0.2 (-0.4, 0.0)	1996-2014	-2.0 (-2.1, -2.0)	2014-2019	-0.4 (-0.7, -0.1)
Micronesia (Federated States of) (A)	1990-2019	-1.4 (-1.5, -1.3)	1990-1997	-1.5 (-1.7, -1.3)	1997-2005	-2.5 (-2.7, -2.3)	2005-2019	-0.7 (-0.8, -0.6)
Myanmar(A)	1990-2019	-1.1 (-1.2, -1.0)	1990-1998	0.2 (0.1, 0.4)	1998-2012	-1.7 (-1.8, -1.6)	2012-2019	-1.4 (-1.6, -1.1)
Niue(A)	1990-2019	-1.5 (-1.6, -1.5)	1990-1996	-0.5 (-0.7, -0.2)	1996-2010	-2.1 (-2.2, -2.0)	2010-2019	-1.4 (-1.5, -1.3)
Papua New Guinea(A)	1990-2019	-0.4 (-0.4, -0.3)	1990-1997	-0.5 (-0.6, -0.3)	1997-2010	-0.1 (-0.2, -0.0)	2010-2019	-0.7 (-0.8, -0.6)
Philippines(A)	1990-2019	-1.1 (-1.5, -0.8)	1990-1997	-0.3 (-1.0, 0.4)	1997-2001	-4.3 (-6.7, -1.7)	2001-2019	-0.8 (-0.9, -0.6)
Samoa(A)	1990-2019	-1.6 (-1.7, -1.6)	1990-1996	-1.4 (-1.5, -1.3)	1996-2005	-2.8 (-2.9, -2.7)	2005-2019	-1.0 (-1.0, -0.9)
Solomon Islands(A)	1990-2019	-0.4 (-0.6, -0.1)	1990-1999	-0.4 (-0.6, -0.2)	1999-2002	0.4 (-1.7, 2.5)	2002-2019	-0.5 (-0.5, -0.4)
Timor-Leste(A)	1990-2019	-0.3 (-0.4, -0.2)	1990-2000	-0.4 (-0.6, -0.3)	2000-2007	-1.7 (-2.1, -1.3)	2007-2019	0.6 (0.5, 0.8)
Vanuatu(A)	1990-2019	-1.1 (-1.3, -0.9)	1990-1999	-0.3 (-0.5, -0.0)	1999-2003	-4.0 (-5.2, -2.8)	2003-2019	-0.8 (-0.9, -0.7)
Viet Nam(A)	1990-2019	-1.1 (-1.2, -0.9)	1990-2007	-1.0 (-1.0, -0.9)	2007-2010	-2.0 (-3.6, -0.3)	2010-2019	-1.0 (-1.1, -0.8)
Mongolia(A)	1990-2019	-2.1 (-2.4, -1.8)	1990-1998	1.4 (0.8, 2.1)	1998-2014	-4.3 (-4.5, -4.1)	2014-2019	-0.6 (-1.8, 0.7)

Note. AAPC means average annual percent of change, APC means estimated annual percentage of change.



Supplementary Figure S1. Heatmap showing change trends in age-standardized mortality rates of COPD between 1990 and 2019 in all 36 selected countries and territories.



Supplementary Figure S2. Trends in observed (solid lines) and predicted (dashed lines) COPD incidence rates in selected Asia-Pacific countries and territories, 1990-2034. PNG means Papua New Guinea, PRK means Democratic People's Republic of Korea, Micronesia means Micronesia (Federated States of), LAO means Lao People's Democratic Republic, BRN means Brunei Darussalam, KOR means Republic of Korea, MNP means Northern Mariana Islands.

