

	All ages deaths (thousands)			Age-standardised death rate (per 100 000)		
	1990	2013	Median % change	1990	2013	Median % change
(Continued from previous page)						
Unintentional firearm injuries	51.4 (44.5 to 60.0)	47.3 (41.0 to 55.7)	-7.6 (-26.30 to 13.15)	1.0 (0.9 to 1.2)	0.7 (0.6 to 0.8)	-32.8 (-46.94 to -18.02)
Unintentional suffocation	84.0 (26.9 to 124.6)	37.6 (29.1 to 80.7)	-58.3 (-74.65 to 90.29)	1.2 (0.4 to 1.8)	0.5 (0.4 to 1.1)	-59.7 (-75.13 to 71.19)
Other exposure to mechanical forces	97.2 (88.8 to 119.9)	111.9 (95.5 to 122.4)	16.6 (-13.64 to 30.93)	1.9 (1.7 to 2.3)	1.6 (1.4 to 1.7)	-14.7 (-36.50 to -5.26)
Adverse effects of medical treatment	93.5 (77.2 to 110.2)	141.7 (107.5 to 165.9)	53.2 (27.88 to 73.38)	2.1 (1.8 to 2.6)	2.2 (1.7 to 2.6)	4.6 (-11.30 to 16.34)
Animal contact	95.5 (59.8 to 126.6)	79.6 (62.3 to 138.7)	-22.0 (-35.47 to 34.57)	1.9 (1.2 to 2.5)	1.2 (0.9 to 2.0)	-43.0 (-52.23 to -2.49)
Venomous animal contact	76.3 (47.5 to 104.7)	57.2 (44.1 to 102.5)	-30.1 (-43.14 to 28.05)	1.5 (0.9 to 2.0)	0.8 (0.6 to 1.5)	-49.3 (-58.49 to -6.80)
Non-venomous animal contact	19.2 (11.5 to 26.3)	22.4 (16.4 to 36.8)	11.2 (-9.33 to 73.85)	0.4 (0.2 to 0.5)	0.3 (0.2 to 0.6)	-16.9 (-31.27 to 25.18)
Foreign body	142.2 (99.5 to 211.6)	165.7 (114.8 to 219.1)	16.2 (-10.22 to 45.91)	2.9 (2.1 to 4.3)	2.6 (1.8 to 3.4)	-10.2 (-29.81 to 5.96)
Pulmonary aspiration and foreign body in airway	139.8 (97.2 to 209.7)	162.1 (109.8 to 214.7)	15.5 (-11.10 to 45.78)	2.9 (2.0 to 4.2)	2.5 (1.7 to 3.4)	-10.6 (-30.35 to 5.87)
Foreign body in other body part	2.5 (1.6 to 3.5)	3.6 (2.7 to 5.4)	51.5 (-3.11 to 84.33)	0.1 (0.0 to 0.1)	0.1 (0.0 to 0.1)	6.8 (-25.59 to 31.38)
Other unintentional injuries	148.1 (119.9 to 162.8)	162.8 (143.9 to 180.3)	9.3 (-4.23 to 33.11)	3.1 (2.5 to 3.4)	2.4 (2.1 to 2.7)	-21.1 (-30.53 to -4.99)
<b>Self-harm and interpersonal violence</b>	<b>1052.8 (929.3 to 1152.0)</b>	<b>1247.1 (1067.2 to 1390.9)</b>	<b>18.2 (8.38 to 29.00)</b>	<b>22.4 (19.8 to 24.6)</b>	<b>17.8 (15.3 to 19.8)</b>	<b>-20.8 (-27.32 to -13.83)</b>
Self-harm	712.0 (630.6 to 784.7)	842.4 (718.1 to 939.0)	17.8 (6.04 to 32.20)	15.8 (13.9 to 17.3)	12.2 (10.4 to 13.6)	-23.1 (-30.45 to -13.97)
Interpersonal violence	340.7 (253.9 to 415.1)	404.7 (298.7 to 496.6)	18.4 (10.24 to 29.34)	6.6 (4.9 to 8.1)	5.6 (4.1 to 6.9)	-16.0 (-21.65 to -8.41)
Assault by firearm	127.6 (89.9 to 165.1)	180.4 (120.5 to 231.3)	41.3 (26.05 to 55.53)	2.5 (1.7 to 3.2)	2.5 (1.6 to 3.2)	0.0 (-10.58 to 10.11)
Assault by sharp object	94.0 (65.1 to 127.8)	114.3 (77.1 to 163.2)	21.0 (6.27 to 40.68)	1.8 (1.3 to 2.5)	1.6 (1.1 to 2.2)	-15.2 (-25.63 to -1.29)
Assault by other means	119.1 (84.4 to 142.9)	110.0 (78.7 to 142.1)	-8.5 (-16.48 to 7.97)	2.3 (1.6 to 2.8)	1.5 (1.1 to 2.0)	-33.9 (-39.44 to -22.31)
<b>Forces of nature, war, and legal intervention</b>	<b>105.8 (77.2 to 170.7)</b>	<b>50.4 (34.4 to 88.8)</b>	<b>-53.1 (-58.41 to -46.15)</b>	<b>2.2 (1.5 to 3.6)</b>	<b>0.7 (0.5 to 1.3)</b>	<b>-66.2 (-70.18 to -61.18)</b>
Exposure to forces of nature	33.4 (19.4 to 63.5)	19.2 (13.5 to 32.0)	-43.9 (-58.70 to -6.92)	0.7 (0.4 to 1.4)	0.3 (0.2 to 0.5)	-60.4 (-71.50 to -33.98)
Collective violence and legal intervention	72.4 (54.7 to 106.5)	31.2 (20.3 to 57.0)	-57.9 (-66.76 to -45.85)	1.5 (1.1 to 2.2)	0.5 (0.3 to 0.8)	-69.3 (-75.76 to -61.23)

Data in parentheses are 95% uncertainty intervals.

Table 2: Global deaths for 235 causes in 1990 and 2013 for all ages and both sexes combined and age-standardised death rates

while that of other haemoglobinopathies fell (table 2). The residual category of endocrine, metabolic, blood, and immune disorders increased by 11.6% (table 3).

Age-standardised death rates for injuries and most specific causes of injury also fell between 1990 and 2013, but typically much less than for diseases (table 2). Age-standardised death rates for transport injury decreased since 1990, with most deaths from road injuries. The number of deaths from unintentional injuries as a whole remained essentially unchanged since 1990, although age-standardised death rates fell by more than a quarter (table 2). Especially large falls occurred for drowning, fires, unintentional suffocation, and venomous

animal contact (table 2). Age-standardised death rates also fell for self-harm and interpersonal violence (table 2). Among injuries, only falls, foreign body in other body part, adverse effects of medical treatment, and pedestrian road injuries had increased age-standardised death rates, but these were not statistically significant.

For only three level 2 causes did the age-standardised death rates increase: neurological disorders; diabetes, urogenital, blood, and endocrine diseases; and musculoskeletal disorders (figure 8). Increases in the musculoskeletal disorders were driven by the category other musculoskeletal disorders; causes with high number of death in this category were systemic lupus

	Neonates age <1 month			Children age 1-59 months		
	1990 (thousands)	2013 (thousands)	Median % change	1990 (thousands)	2013 (thousands)	Median % change
<b>All causes</b>	<b>4506.8</b> (4394.5 to 4612.8)	<b>2614.3</b> (2506.4 to 2723.2)	<b>-42.0</b> (-44.5 to -39.5)	<b>7608.5</b> (7447.7 to 7757.3)	<b>3665.7</b> (3449.4 to 3905.8)	<b>-52.0</b> (-54.7 to -48.6)
<b>Communicable, maternal, neonatal, and nutritional diseases</b>	<b>4063.8</b> (3935.0 to 4181.4)	<b>2275.5</b> (2163.6 to 2374.6)	<b>-44.0</b> (-46.6 to -41.4)	<b>6012.6</b> (5724.0 to 6256.5)	<b>2766.2</b> (2528.6 to 3010.5)	<b>-54.0</b> (-57.5 to -50.4)
HIV/AIDS	..	..	..	35.2 (32.3 to 38.3)	63.8 (58.5 to 71.6)	81.1 (64.5 to 99.9)
Diarrhoeal diseases	124.8 (110.5 to 140.5)	44.8 (36.8 to 53.3)	-64.2 (-70.6 to -56.7)	1482.4 (1339.7 to 1633.3)	474.9 (398.1 to 545.0)	-68.0 (-72.8 to -62.5)
Intestinal infectious diseases	..	..	..	82.0 (46.7 to 135.2)	62.4 (33.0 to 103.6)	-24.2 (-37.2 to -8.1)
Lower respiratory infections	399.3 (362.2 to 436.9)	196.5 (169.3 to 224.5)	-50.9 (-57.3 to -43.7)	1768.8 (1597.7 to 1926.6)	708.6 (628.6 to 791.4)	-59.9 (-64.8 to -54.5)
Meningitis	35.6 (27.7 to 47.0)	20.6 (14.9 to 26.8)	-42.6 (-52.7 to -28.4)	262.5 (212.1 to 346.3)	121.4 (90.2 to 157.0)	-54.0 (-63.4 to -41.5)
Whooping cough	..	..	..	129.8 (49.9 to 280.7)	56.4 (20.7 to 127.0)	-57.1 (-83.9 to 12.7)
Tetanus	216.9 (174.8 to 370.5)	26.0 (12.3 to 38.9)	-87.0 (-95.8 to -80.1)	65.4 (48.2 to 121.6)	5.5 (3.9 to 7.7)	-91.2 (-95.5 to -86.9)
Measles	..	..	..	472.4 (265.3 to 749.9)	82.1 (41.7 to 145.0)	-83.1 (-90.3 to -68.5)
Malaria	18.1 (13.4 to 23.5)	16.8 (11.0 to 26.4)	-9.6 (-42.6 to 52.8)	566.3 (470.8 to 662.0)	570.0 (437.5 to 733.2)	-1.3 (-27.7 to 40.9)
Preterm birth complications	1452.1 (1190.6 to 1677.3)	693.0 (553.6 to 853.9)	-52.5 (-58.6 to -45.0)	118.4 (80.1 to 157.3)	49.4 (34.5 to 69.8)	-58.3 (-69.4 to -41.3)
Neonatal encephalopathy (birth asphyxia/trauma)	820.8 (651.3 to 993.1)	611.5 (491.9 to 724.0)	-25.3 (-38.1 to -9.8)	53.3 (35.5 to 72.6)	32.3 (21.4 to 48.7)	-40.6 (-58.2 to -9.0)
Neonatal sepsis and other neonatal infections	328.3 (186.3 to 462.1)	342.2 (214.9 to 479.3)	4.6 (-17.3 to 38.5)	18.1 (9.2 to 28.3)	23.8 (13.3 to 38.0)	30.3 (-15.9 to 114.6)
Other neonatal disorders	489.9 (381.6 to 654.9)	238.2 (187.7 to 297.0)	-51.3 (-62.5 to -35.0)	87.7 (58.5 to 123.5)	38.1 (25.0 to 59.8)	-57.4 (-73.9 to -27.8)
Nutritional deficiencies	..	..	..	451.6 (376.5 to 560.5)	260.7 (197.9 to 316.6)	-42.3 (-52.4 to -30.1)
Syphilis	122.6 (68.9 to 194.3)	63.7 (37.0 to 98.4)	-47.9 (-58.6 to -35.5)	100.9 (56.9 to 157.6)	56.9 (32.5 to 90.9)	-43.3 (-56.8 to -28.5)
Other communicable diseases	55.3 (37.9 to 79.1)	22.4 (16.4 to 30.7)	-59.0 (-70.6 to -44.7)	317.7 (283.8 to 355.0)	159.9 (134.5 to 192.6)	-49.7 (-58.7 to -39.8)
<b>Non-communicable diseases</b>	<b>366.4</b> (316.1 to 443.9)	<b>292.3</b> (258.4 to 349.7)	<b>-19.8</b> (-32.4 to 4.3)	<b>906.4</b> (766.4 to 1138.2)	<b>578.8</b> (462.6 to 739.5)	<b>-36.6</b> (-43.4 to -23.6)
Congenital anomalies	303.6 (256.8 to 375.4)	246.6 (219.0 to 280.0)	-17.6 (-33.1 to -0.1)	343.6 (255.5 to 493.5)	248.7 (198.8 to 322.9)	-25.7 (-40.6 to -13.7)
Sudden infant death syndrome	3.0 (1.2 to 6.1)	2.4 (1.1 to 4.5)	-13.8 (-60.1 to 54.0)	19.1 (11.2 to 34.3)	12.7 (8.4 to 18.4)	-32.2 (-55.5 to -4.9)
Other non-communicable diseases	59.8 (52.3 to 70.5)	43.3 (32.4 to 76.9)	-31.3 (-43.3 to 18.7)	543.7 (469.1 to 642.8)	317.4 (244.2 to 422.8)	-42.8 (-52.6 to -23.3)
<b>Injuries</b>	<b>76.6</b> (58.5 to 95.1)	<b>46.4</b> (37.5 to 63.5)	<b>-41.7</b> (-53.4 to -2.9)	<b>689.5</b> (567.1 to 776.3)	<b>320.7</b> (277.8 to 371.5)	<b>-54.6</b> (-61.1 to -41.9)
Road injuries	4.1 (3.3 to 5.1)	3.8 (2.6 to 5.3)	-6.6 (-30.8 to 30.5)	105.2 (88.7 to 128.2)	64.5 (51.3 to 79.5)	-38.3 (-52.6 to -23.7)
Drowning	2.7 (1.9 to 3.5)	1.8 (1.1 to 2.8)	-38.2 (-56.7 to 16.9)	212.3 (132.4 to 275.1)	80.1 (61.7 to 111.4)	-63.3 (-74.1 to -20.4)
Other injuries	69.9 (52.2 to 88.2)	40.8 (32.1 to 58.0)	-44.1 (-55.9 to -1.0)	372.0 (280.9 to 424.3)	176.2 (153.1 to 203.7)	-53.7 (-60.8 to -37.6)

Data in parentheses are 95% uncertainty intervals. Shows major causes of death within each level 1 group that accounted for deaths in children.

Table 3: Selected causes of global child deaths in 1990 and 2013

	Age-standardised death rates (% change)	Mean absolute difference in age-standardised death rate		Gini coefficient	
		2013	Change (1990–2013)	2013	Change (1990–2013)
<b>All causes</b>	-24.2%	182.04	-19.40	0.19	0.024
<b>Communicable, maternal, neonatal, and nutritional diseases</b>	-40.5%	104.87	-42.23	0.54	0.068
HIV/AIDS and tuberculosis	-23.0%	35.91	-1.37	0.69	0.114
Diarrhoea, lower respiratory, and other common infectious diseases	-49.6%	40.44	-29.80	0.49	0.027
Neglected tropical diseases and malaria	-24.5%	9.28	-4.37	0.78	0.023
Maternal disorders	-43.4%	2.88	-1.64	0.69	0.085
Neonatal disorders	-41.1%	9.75	-5.07	0.44	0.068
Nutritional deficiencies	-28.9%	8.00	-1.40	0.59	0.044
Other communicable, maternal, neonatal, and nutritional diseases	-37.2%	2.96	-1.54	0.49	0.011
<b>Non-communicable diseases</b>	-18.5%	86.74	2.02	0.13	0.021
Neoplasms	-14.8%	18.65	-6.44	0.15	-0.021
Cardiovascular diseases	-21.9%	59.97	7.51	0.18	0.044
Chronic respiratory diseases	-30.1%	32.35	-18.44	0.36	-0.030
Cirrhosis	-13.6%	6.45	-0.08	0.30	0.028
Digestive diseases	-33.2%	7.31	-3.31	0.32	-0.001
Neurological disorders	2.5%	5.51	0.24	0.18	-0.003
Mental and substance use disorders	-6.4%	1.77	-0.04	0.44	0.002
Diabetes, urogenital, blood, and endocrine diseases	14.5%	16.67	3.99	0.30	0.026
Musculoskeletal disorders	8.3%	0.32	0.01	0.18	-0.012
Other non-communicable diseases	-17.6%	2.49	0.27	0.24	0.071
<b>Injuries</b>	-20.8%	17.31	-0.33	0.23	0.039
Transport injuries	-8.5%	5.80	0.84	0.25	0.048
Unintentional injuries	-25.5%	9.21	-2.67	0.28	0.001
Self-harm and interpersonal violence	-20.7%	6.06	0.23	0.34	0.072
Forces of nature, war, and legal intervention	-65.9%	0.85	-1.65	0.90	-0.038

■ Significant increase   
□ No significant increase   
■ Significant decrease

Figure 8: Measures of convergence for causes of death in 188 countries

erythematosus, systemic sclerosis (scleroderma), pyogenic arthritis, and chronic osteomyelitis (data not shown). The average relative difference between countries (the inter-country Gini coefficient) ranged from 0.31 for non-communicable diseases to 0.90 for forces of nature, war, and legal intervention. Mean differences in the age-standardised rates between countries ranged from 0.32 for musculoskeletal disorders to 104.87 for communicable, maternal, neonatal, and nutritional diseases. Generally, inequality was much greater for communicable, maternal, neonatal, and nutritional causes than for non-communicable causes or injuries. An important exception to that general pattern was war and disaster, which were extraordinarily unequal across countries. For neoplasms, chronic respiratory diseases, and forces of nature, war, and legal intervention the age-standardised death rate had fallen and the two convergence metrics improved significantly from 1990 to 2013. For many communicable, maternal, neonatal, and nutritional causes, age-standardised death rates and mean absolute differences decreased but relative differences increased. For digestive diseases, unintentional injuries, and other communicable, maternal, neonatal, and nutritional diseases, death rates

and mean absolute differences were falling and relative difference was not significantly different than zero.

#### Global causes of child death

We divided child causes of death into those occurring in children younger than age 1 month and those aged 1–59 months (table 3). The number of neonatal deaths decreased from 4.5 [UI 4.4–4.6] million in 1990, to 2.6 [2.5–2.7] million in 2013, a 42% (40–45) decrease. The most important cause of neonatal death in 2013 was neonatal encephalopathy, followed by neonatal sepsis, congenital anomalies, and lower respiratory infections (table 3). Causes with more than a 50% reduction in the number of neonatal deaths include tetanus, diarrhoeal diseases, lower respiratory infections, other neonatal disorders, and other communicable diseases.

For children aged 1–59 months, the global number of deaths fell by 52.0% from 1990 (7.6 [UI 7.4–7.8] million) to 2013 (3.7 [3.4–3.9] million). Communicable, neonatal, and nutritional causes accounted for three-quarters of deaths in 2013, the remainder from non-communicable diseases and injuries (table 3). For this age group, two causes each accounted for more than half a million deaths and collectively accounted for

more than a third of deaths: lower respiratory infections, and malaria (table 3). Four causes accounted for 100 000–500 000 deaths: diarrhoeal disease, meningitis, congenital anomalies, and nutritional deficiencies (table 3). Another seven causes each caused 50 000–100 000 deaths: drowning, syphilis, measles, whooping cough, intestinal infectious diseases, HIV/AIDS, and road injuries (table 3). Deaths fell by more than 50% between 1990, and 2013, for diarrhoeal diseases, lower respiratory infections, meningitis, whooping cough, tetanus, measles, preterm birth complications, drowning, other neonatal disorders, and other injuries. Of the causes detailed in table 3, only HIV/AIDS increased significantly from 1990, to 2013, although from 2005, to 2013, deaths fell from 25.95 (UI 24.54–27.50) per 100 000 to 9.83 (9.01–11.04) per 100 000. In high-income countries, cancers accounted for 5.86% (5.06–6.66) of deaths for children younger than 5 years compared with only 1.02% (0.89–1.16%) in low-income countries.

Figure 9 shows death rates of children for 19 major cause groups for the 21 GBD regions. Because infants younger than age 1 month are exposed to, at most, 1 person-month, rates in that group were high compared with children aged 1–59 months. Across regions, death rates varied widely for preterm birth complications, neonatal encephalopathy (birth asphyxia and birth trauma), other neonatal disorders and jaundice, sepsis, and lower respiratory infections (figure 9). In addition, lower respiratory infections, HIV/AIDS, congenital syphilis, malaria, diarrhoeal diseases and congenital abnormalities had an important contribution. Congenital anomalies varied by more than five-times from a high in central sub-Saharan Africa to a low in high-income Asia Pacific. Eastern, central, and western sub-Saharan Africa had substantially high death rates for children aged 1–59 months compared with other regions including south Asia (figure 9B). These higher rates were largely related to malaria, diarrhoeal diseases, measles, and nutritional disorders.

#### Global YLLs

Between 1990 and 2013, large falls occurred for measles, meningitis, tetanus, syphilis, and whooping cough (figure 10). Increases of 50% or more are evident for diabetes, HIV/AIDS, hypertensive heart disease, chronic kidney disease, Alzheimer's disease and other dementias, interstitial lung disease, and pancreatic cancer. Among the top ten causes in 1990, nine remain in the top ten in 2013, with HIV/AIDS moving in and tuberculosis moving to 11th. The largest percentage increases in YLLs were for HIV/AIDS (343.97%, 95% UI 245.48–444.17), atrial fibrillation and flutter (211.89%, 182.55–242.63), peripheral vascular disease (119.79%, 101.04–136.78), and drug use disorders (119.22%, 83.77–140.02).

Identification of key transition points in the comparative importance of different causes of premature

mortality will help to better inform programme evaluation. From 1990 to 2013, worldwide crude YLLs fell by about 16% (from 2005.5 million to 1685.4 million), more so for communicable, maternal, neonatal, and nutritional diseases (39% decrease, 1098.3 million to 667.8 million) compared with non-communicable diseases (20% increase, 674.6 million to 806.5 million), and injuries (9% decrease, 232.6 million to 210.8 million). Recent progress with disease control programmes for HIV/AIDS and malaria is clear, as is the substantial and steady progress to prevent child deaths from neonatal disorders, diarrhoeal diseases, and lower respiratory infections; YLLs from these diseases fell by 40–65% since 1990. The success of vaccination programmes since 1990 is also evident (figure 11), with YLLs from measles and tetanus, in particular, at very low levels in 2013. Specific trends for major non-communicable diseases are much less evident, with incremental decreases for several leading causes of cancer, as well as from major vascular and chronic respiratory diseases, contributing to the 30% reduction in YLLs since 1990 (37021.0 to 24493.4 per 100 000). With the exception of drowning, only modest progress was made in reducing premature mortality from other leading causes of injury, with the effect of the 1994 genocide in Rwanda clearly visible (figure 11).

#### Causes of diarrhoea and lower respiratory infection

Deaths caused by diarrhoea fell by 51% (46–56) between 1990 and 2013 (table 2). Rotavirus was the main cause of diarrhoea in children younger than 5 years. It was also the most common cause of diarrhoea deaths in this age group in 2013, with a slight decrease in the population attributable fraction since 1990, followed by cholera, *Cryptosporidium*, and shigellosis (table 4). At least 55.6% of diarrhoea in 2013 was unexplained by these pathogens in all ages, an increase from 48.1% in 1990 (table 4).

The distribution of *Shigella* and *Aeromonas* in patients had a significant ecological association with sanitation (data not shown) and along with non-typhoid *Salmonella*, deaths from these pathogens fell by 5.4% (28 062 deaths) since 1990. Rotavirus was the most important pathogen for children younger than age 5 years in east and southeast Asia and eastern Europe, with a population attributable fraction of 35–41% (104–6390); although it had the lowest population attributable fraction in high-income north America, central sub-Saharan Africa, and Caribbean. *Shigella* was an important pathogen in north Africa and Middle East and Oceania (causing 19.4% [11.8–29.4] of deaths, 3790 [1976–6381] deaths and 13.9% [9.5–19.3] of deaths, 118.4 [45.4–249.6] deaths, respectively). *Cryptosporidium* in sub-Saharan Africa, cholera in central sub-Saharan Africa, Andean Latin America, and Oceania, and enterotoxigenic *E coli* were important causes of diarrhoea death. *Campylobacter* did not have a significant epidemiological relationship with diarrhoea in most countries and was an important cause

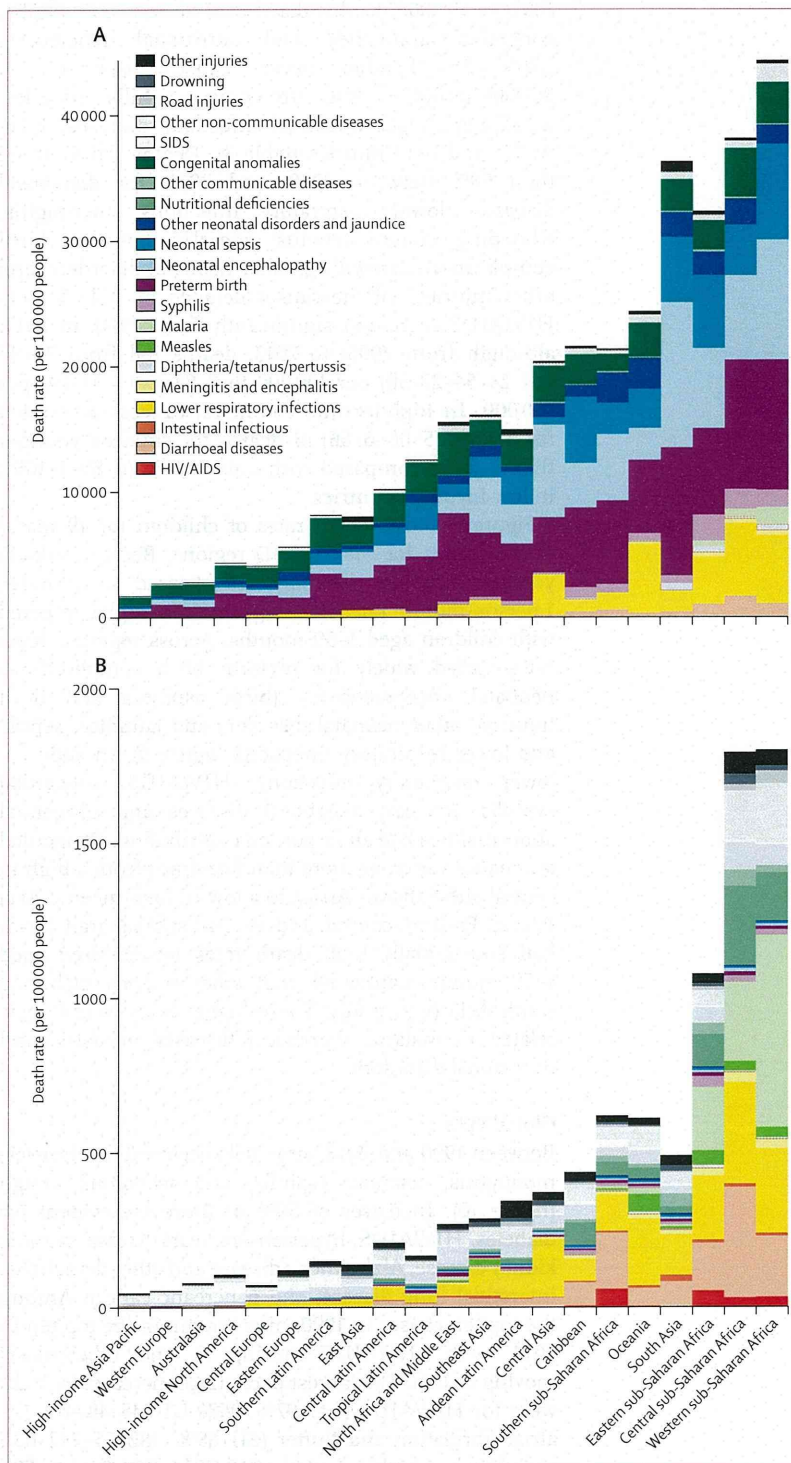
only in some age groups in the GEMS data in India, Bangladesh, and Mozambique (data not shown). *Clostridium difficile* caused more than 45% of diarrhoea deaths in western Europe, high-income north America, high-income Asia Pacific, and Australasia in 2013, ranging from eight deaths in Australasia to 92 in high-income North America, and to a lesser extent in central Europe (20.1% [14.0–27.1] or 16 [14–19] deaths, and eastern Europe (19.0% [12.6–26.6] or 47 [38–57] deaths).

Cholera caused 45 000 (23 000–68 000) deaths of children younger than age 5 years, with most deaths (34 000 [76%]) in central and eastern sub-Saharan Africa and south and southeast Asia. Cholera was the third leading cause of diarrhoea deaths for all ages in 2013, behind rotavirus and shigellosis (table 4). *Clostridium difficile* was particularly important in adults in high-income countries, where it caused as many as 95% of diarrhoea deaths in elderly people.

Globally in 2013, pneumococcus was responsible for the largest number of lower respiratory infection deaths in children younger than age 5 years—followed by *H influenzae* type B, respiratory syncytial virus, and influenza—and in people of all ages (table 4). The fraction of deaths caused by lower respiratory infection in children younger than age 5 years attributable to *H influenzae* type B has decreased substantially since 1990, as a result of the global scale-up of *H influenzae* type B vaccine, with the largest decreases in high-income regions and Latin America (data not shown), where vaccine coverage is highest. The fraction of lower respiratory infection deaths in children younger than 5 years attributable to pneumococcus also fell in high-income regions such as western Europe, north America and Australasia, caused by the scale-up of pneumococcal conjugate vaccine, but continued to account for a large proportion of such deaths in eastern Europe and elsewhere. Many lower respiratory infection deaths attributable to the four pathogens occurred in older populations.

**Country-specific probabilities of death during childhood and young adolescence**

We computed conditional probabilities of death for three phases of life (children and young adolescents, reproductive age, and middle age) by country and cause; conditional probabilities are a useful summary because the values are readily interpretable. The probability of death in children and adolescents (age 0–14 years) varied greatly between and within regions, from a low of three per 1000 girls in Iceland to a high of 179 per 1000 boys in Guinea-Bissau (figure appendix 1). In the more demographically advanced regions (measured by mean age of death, fertility, and mortality change) the probability of death was below ten per 1000 people for both sexes in all countries except Albania, Bulgaria, Belarus, Brunei, Moldova, Macedonia, Romania, Russia, and Ukraine. Causes of death were



**Figure 9: Child death rates by region and cause groups in 2013**  
 (A) Of children younger than age 1 month per person-year of exposure. (B) Of children aged 1–59 months per person-year of exposure. The set of causes is mutually exclusive and collectively exhaustive. SIDS=sudden infant death syndrome.

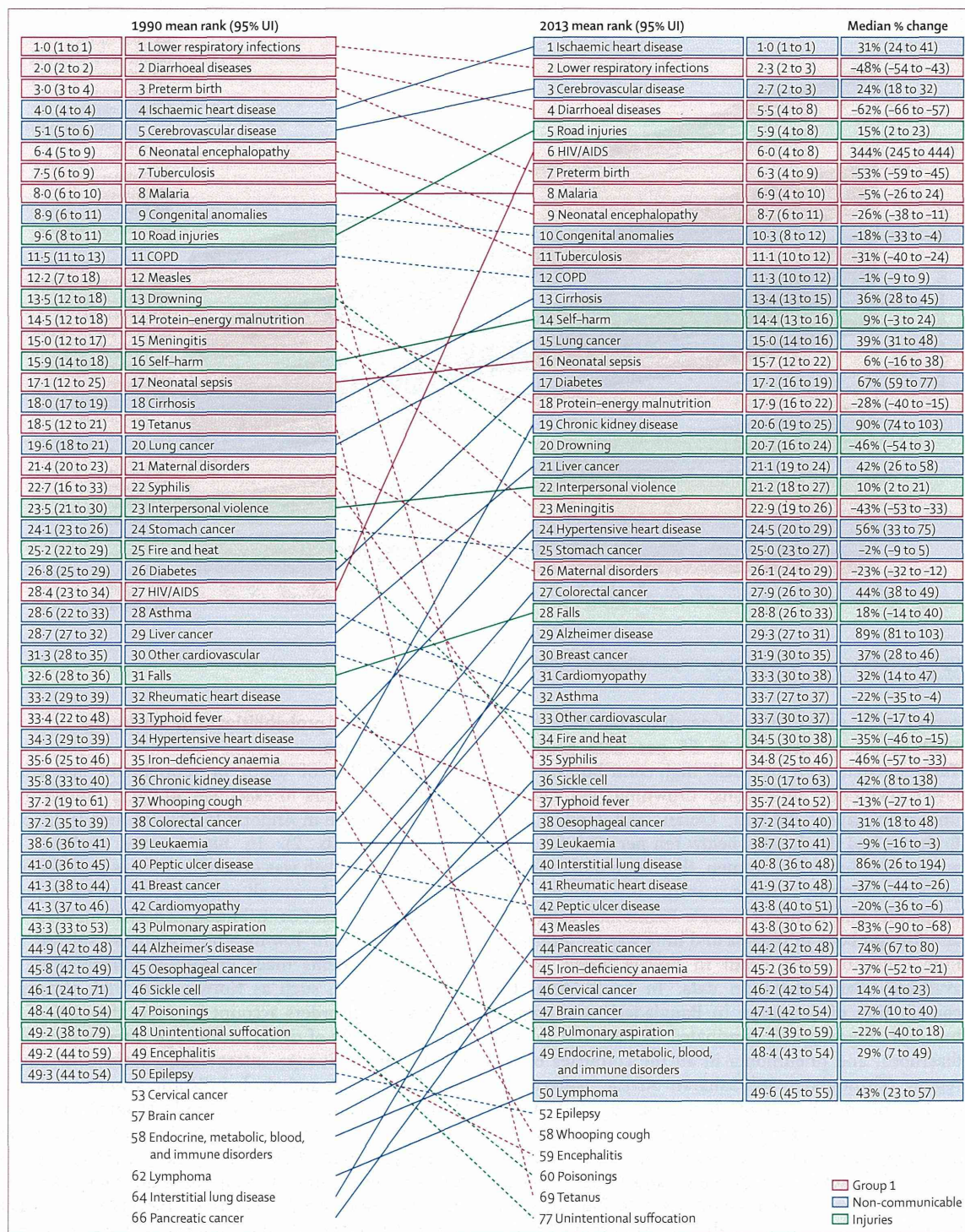


Figure 10: Top 50 causes of global years of life lost in 1990 and 2013. An interactive version of this figure is available at <http://vizhub.healthdata.org/gbd-compare/>. COPD=chronic obstructive pulmonary disease.

dominated by congenital anomalies and neonatal causes. In southeast Asia, Malaysia had the lowest probability of death and Laos the highest, with substantial mortality from lower respiratory infections, diarrhoea, and neonatal disorders. Drowning was an important cause of death for children in this region. In

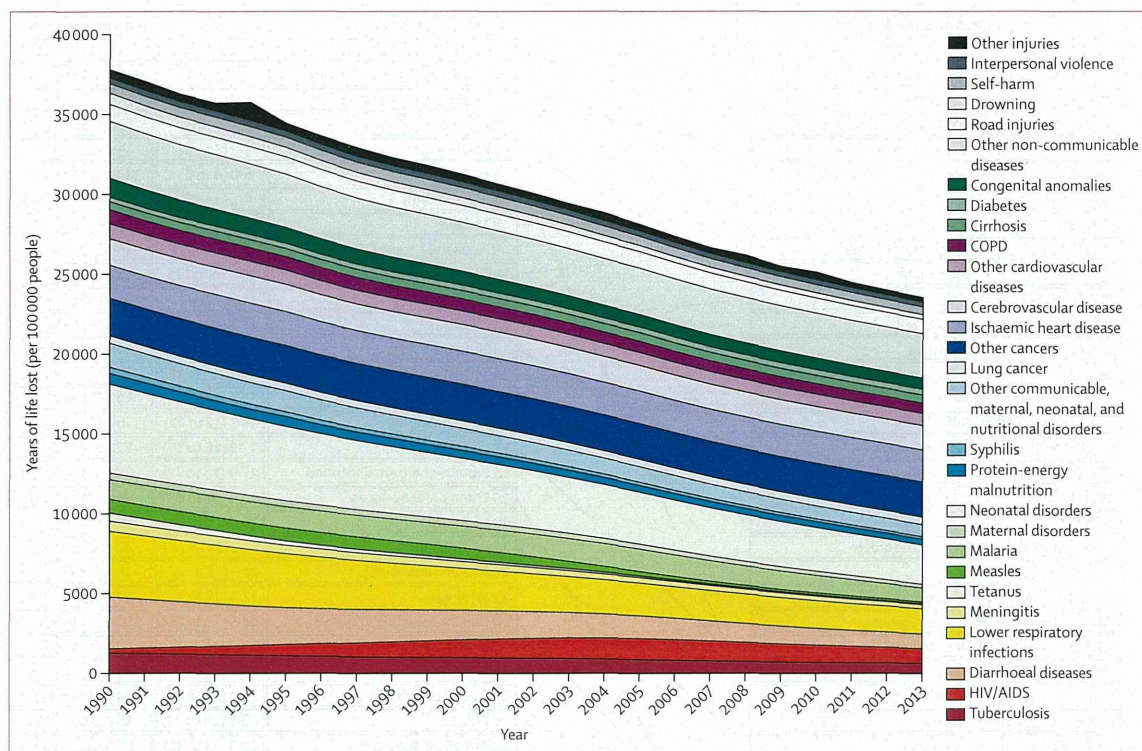


Figure 11: Global years of life lost by large cause groupings for 1990 to 2013  
COPD=chronic obstructive pulmonary disease.

central Asia, probabilities of death ranged from 17 per 1000 people in Armenia to 65 per 1000 people in Turkmenistan, with unusually high contributions from lower respiratory infections; drowning was also an important cause. Bahrain, Oman, and United Arab Emirates had death rates below ten per 1000 for girls, whereas in Sudan and Yemen, they were more than 40 per 1000. Mortality in these countries was dominated by congenital and neonatal causes. Pulmonary aspiration and foreign body in trachea and lung was an unusually high cause of child death in Bolivia based on the available vital registration data. In south Asia, the contribution of drowning in Bangladesh was notable but mortality was still dominated by neonatal causes, diarrhoea, and pneumonia in all the countries of the region. Throughout sub-Saharan Africa, patterns of causes of death varied but malaria, HIV/AIDS, tuberculosis, nutritional deficiencies, and haemoglobinopathies played an important part in many countries. Mauritius, Seychelles, and Cape Verde all had much lower probabilities of death during childhood than did other countries in this region. Countries with the highest probabilities of death in central and western sub-Saharan Africa had important contributions from malaria. Interpersonal violence was an important contributor to the probability of death in children and adolescents in many countries of Latin America and several in southern Africa.

### Country-specific probabilities of death during reproductive age

The probability of death in reproductive-age adults (exact age 15 years to exact age 50 [<sub>15</sub>Q<sub>50</sub>]) ranged from 1.2% for women in Andorra to 52% for men in Lesotho (figure appendix 2). In high-income regions, the probability of death was generally twice as high for men as for women. Across all countries, transport injuries made an important contribution, especially in men.

Among men in low-income countries, suicide and transport accidents made important contributions. In some countries, such as Norway and USA, drug and alcohol use disorders account for more than 8% of the total probability of dying in this age interval for either sex. In central Europe, interpersonal violence was high in Albania, drug and alcohol disorders were notable in Poland, Croatia, Slovakia, and Montenegro, and cirrhosis was a common cause in Bulgaria, Croatia, Hungary, Poland, Romania, Slovakia, and Slovenia. In east Asia, liver cancer was an important cause of death. In southeast Asia, maternal mortality in Laos, Cambodia, Myanmar, and Timor-Leste were important contributors for women. For men in the same region, interpersonal violence in Philippines, Sri Lanka, and Thailand were notable; suicide in Sri Lanka also accounted for a large probability of death (2.2%). Other studies have suggested that interpersonal violence in Philippines is concentrated in Mindanao.<sup>82</sup>

	Children younger than age 5 years				All ages				Rate of change for deaths 1990-2013 (%)
	1990		2013		1990		2013		
	Deaths (thousands)	Population attributable fractions (%)	Deaths (thousands)	Population attributable fractions (%)	Deaths (thousands)	Population attributable fractions (%)	Deaths (thousands)	Population attributable fractions (%)	
<b>Diarrhoea</b>									
Adenovirus	63.0 (44.4 to 89.9)	3.9 (2.7 to 5.5)	18.3 (11.8 to 25.5)	3.5 (2.4 to 4.9)	81.3 (55.9 to 115.9)	3.2 (2.1 to 4.4)	31.8 (21.5 to 44.7)	2.5 (1.7 to 3.6)	-61.2% (-67.8 to -52.5)
Aeromonas	12.3 (6.4 to 21.4)	0.8 (0.4 to 1.3)	5.5 (2.6 to 10.1)	1.1 (0.5 to 1.9)	28.0 (16.7 to 44.9)	1.1 (0.7 to 1.7)	13.0 (7.3 to 22.0)	1.0 (0.6 to 1.7)	-53.6% (-66.1 to -37.8)
Amoebiasis	5.8 (2.6 to 10.0)	0.4 (0.2 to 0.6)	1.3 (0.6 to 2.3)	0.2 (0.1 to 0.5)	18.3 (8.9 to 30.6)	0.7 (0.3 to 1.2)	11.3 (5.0 to 19.7)	0.9 (0.4 to 1.6)	-39.1% (-57 to -17.5)
Campylobacter enteritis	20.8 (11.0 to 31.9)	1.3 (0.7 to 2.0)	9.5 (3.7 to 15.7)	1.8 (0.7 to 3.0)	28.4 (16.4 to 42.8)	1.1 (0.6 to 1.6)	14.1 (6.9 to 22.4)	1.1 (0.5 to 1.8)	-50.7% (-63.7 to -37.5)
Cholera	81.7 (39.1 to 117.0)	5.1 (2.5 to 7.2)	45.2 (23.4 to 67.6)	8.7 (4.5 to 12.7)	125.3 (61.1 to 173.4)	4.9 (2.4 to 6.7)	69.9 (37.7 to 97.0)	5.5 (3.0 to 7.7)	-44.3% (-56.8 to -26.6)
Clostridium difficile	2.1 (2.0 to 2.3)	0.1 (0.1 to 0.1)	2.5 (2.4 to 2.7)	0.5 (0.4 to 0.6)	20.8 (19.9 to 21.9)	0.8 (0.7 to 0.9)	41.5 (39.1 to 43.9)	3.3 (3.0 to 3.6)	99.4% (84.3 to 114.3)
Cryptosporidiosis	92.4 (68.7 to 125.1)	5.8 (4.3 to 7.8)	35.2 (25.9 to 48.2)	6.8 (5.1 to 9.3)	98.8 (72.8 to 132.7)	3.8 (2.8 to 5.2)	41.9 (30.0 to 58.4)	3.3 (2.4 to 4.7)	-57.8% (-64.8 to -49.6)
Enteropathogenic Escherichia coli infection	4.3 (1.3 to 7.8)	0.3 (0.1 to 0.5)	1.8 (0.7 to 3.4)	0.3 (0.1 to 0.7)	4.3 (1.3 to 7.8)	0.2 (0.1 to 0.3)	1.8 (0.7 to 3.4)	0.1 (0.1 to 0.3)	-57.5% (-76.5 to -32)
Enterotoxigenic Escherichia coli infection	86.0 (61.3 to 114.1)	5.4 (3.8 to 7.2)	23.1 (17.0 to 30.4)	4.4 (3.4 to 5.9)	134.7 (97.5 to 178.2)	5.2 (3.8 to 6.8)	59.2 (44.2 to 77.7)	4.7 (3.5 to 6.1)	-56.0% (-63.0 to -46.9)
Norovirus	7.3 (2.7 to 11.8)	0.5 (0.2 to 0.7)	1.8 (0.7 to 3.1)	0.3 (0.1 to 0.6)	7.3 (2.7 to 11.8)	0.3 (0.1 to 0.5)	1.8 (0.7 to 3.2)	0.1 (0.1 to 0.2)	-75.8% (-85.1 to -61.6)
Other Salmonella infections	19.2 (11.1 to 29.1)	1.2 (0.7 to 1.8)	3.8 (1.6 to 6.7)	0.7 (0.3 to 1.2)	58.9 (42.4 to 77.8)	2.3 (1.6 to 3.0)	24.3 (16.0 to 33.3)	1.9 (1.3 to 2.6)	-58.9% (-65.4 to -51.1)
Rotaviral enteritis	398.9 (334.5 to 464.2)	24.8 (21.4 to 28.2)	122.4 (96.6 to 152.1)	23.5 (20.1 to 27.2)	477.5 (397.9 to 555.1)	18.5 (15.8 to 21.2)	176.6 (140.4 to 218.4)	14.0 (11.4 to 16.6)	-63.2% (-68.5 to -57.1)
Shigellosis	161.0 (130.0 to 200.3)	10.0 (8.2 to 12.2)	33.4 (24.9 to 43.5)	6.4 (5.1 to 7.9)	254.2 (207.9 to 311.7)	9.9 (8.2 to 11.9)	73.9 (58.9 to 93.8)	5.8 (4.7 to 7.3)	-70.9% (-74.4 to -67.3)
No identified aetiology*	652.4 (542.4 to 783.1)	40.6 (35.3 to 46.8)	215.9 (169.6 to 265.2)	41.5 (35.7 to 48.1)	1240.9 (1096.8 to 1421.5)	48.1 (43.5 to 53.5)	702.9 (619.2 to 796)	55.6 (51.4 to 60.3)	-43.2% (-49.3 to -36.1)
<b>Lower respiratory infections</b>									
Haemophilus influenzae type B pneumonia	427.1 (-39.8 to 853.4)	19.7 (-1.8 to 39.1)	108.7 (-9.9 to 226.9)	12.0 (-1.1 to 25.5)	427.1 (-39.8 to 853.4)	12.5 (-1.2 to 24.8)	108.7 (-9.9 to 226.9)	4.1 (-0.4 to 8.8)	-75.1% (-79.1 to -71.2)
Influenza	36.3 (14.2 to 73.5)	1.7 (0.7 to 3.3)	15.1 (5.7 to 30.4)	1.7 (0.6 to 3.3)	85.1 (36.1 to 156.2)	2.5 (1.1 to 4.5)	105.4 (45.3 to 188.1)	4.0 (1.7 to 7.3)	24.0% (3.4 to 47.7)
Pneumococcal pneumonia	652.4 (402.6 to 879.4)	30.1 (19.0 to 40.2)	264.0 (155.7 to 365.8)	29.2 (18.0 to 39.2)	919.5 (553.1 to 1320.5)	26.9 (16.3 to 38.4)	594.4 (295.6 to 970.2)	22.4 (11.4 to 35.9)	-36.1% (-52.7 to -19.8)
Respiratory syncytial virus pneumonia	145.1 (82.7 to 228.0)	6.7 (3.8 to 10.5)	41.1 (23.0 to 65.5)	4.5 (2.6 to 7.1)	185.5 (114.4 to 268.6)	5.4 (3.5 to 7.9)	81.5 (53.6 to 109.9)	3.1 (2.0 to 4.2)	-55.7% (-63 to -47.2)
No identified aetiology*	907.2 (407.3 to 1451.3)	41.9 (19.0 to 66.7)	476.2 (313.3 to 651.6)	52.6 (35.2 to 70.2)	1803.4 (1211.8 to 2452.5)	52.7 (35.4 to 71.1)	1762.6 (1385.3 to 2134.1)	66.5 (52.8 to 79.9)	-0.8% (-19.8 to 22.9)

Data in parentheses are 95% uncertainty intervals. \*Number or proportion of diarrhea or lower respiratory infection deaths attributable to any diarrhea or lower respiratory infection pathogens. Because of interaction between pathogens (especially for lower respiratory infection), the value is the minimum amount of unexplained deaths.

**Table 4: Counterfactual deaths and population attributable fractions for diarrhoea and lower respiratory infection pathogens for 1990 and 2013**

Risk of death from transport injuries was greater than 2% for men in Afghanistan, Côte d'Ivoire, Cameroon, Ecuador, Gabon, Guinea-Bissau, Equatorial Guinea, Kazakhstan, Mauritania, Nigeria, Oman, Sierra Leone, El Salvador, Thailand, and Uganda. Probability of death from cirrhosis in Myanmar was 1.9% for men. Tuberculosis stood out in Cambodia, Indonesia, Laos, Myanmar, and Philippines for men. The gap between

the probability of death for men and women was particularly large in eastern Europe and central Asia. Mongolia had the highest probability of death in reproductive age for men in these two regions, as a result of unusually high probabilities of interpersonal violence, self-harm, alcohol and drug use, cirrhosis, liver cancer, and tuberculosis. More generally for men, in eastern Europe and central Asia, there were major



contributions from ischaemic heart disease, self-harm, alcohol and drug use, cirrhosis, and tuberculosis; HIV played an important part in Ukraine and Russia. In north Africa and Middle East, transport injuries and ischaemic heart disease were predominant. For women in the region, breast cancer in all countries and maternal mortality in Sudan and Yemen were also major factors.

In Latin America and Caribbean, there was a large contribution of interpersonal violence in men, with the probability of death exceeding 2% in Brazil, Colombia, El Salvador, Guatemala, Honduras, and Venezuela. Despite generally high violence in the region, Cuba, Costa Rica, Bolivia, and Peru had low probabilities of death from violence. In men, the probability of death because of HIV/AIDS exceeded 1% in Belize, Haiti, Saint Vincent and the Grenadines, The Bahamas, Grenada, Guyana, Suriname, and Trinidad and Tobago. Cirrhosis contributed more than 1% to the probability of death of men in Guatemala, Mexico, and Guyana. Cervical cancer was a larger contributor to the probability of death than was breast cancer in eight countries of Latin America and Caribbean (Bolivia, Ecuador, Guatemala, Nicaragua, Peru, Paraguay, El Salvador, and Venezuela). Probabilities of death for men and women in Afghanistan were more than twice that of other countries in the region; for women, maternal mortality was the largest cause. In Oceania, Samoa and Tonga had much lower probabilities of death than did other countries in the region. Throughout sub-Saharan Africa, there were major contributions for women from maternal mortality, HIV/AIDS, and tuberculosis. For men in the region, HIV/AIDS, tuberculosis, and transport injuries dominated in most countries. Liver cancer was also a major factor, particularly for men in western sub-Saharan Africa.

#### Country-specific probabilities of death during middle age

The probability of death in middle age (exact age 50 years to exact age 75 years [<sub>25</sub>q<sub>50</sub>]) ranged from 10·3% for women in Andorra to 76·3% for men in Lesotho (figure appendix 3). In all countries, ischaemic heart disease and stroke were important contributors to the risk of death in middle age, and were greater for men than for women. Probabilities of death from ischaemic heart disease ranged from 0·8% in Japan for women to more than 24% in Belarus for men. In high-income regions, lung cancer was as a major contributor to the risk of death for men. Breast cancer for women and prostate cancer for men also made substantial contributions. Probability of death from liver cancer was greater than 2% in China, Mongolia, Myanmar, North Korea, South Korea, Taiwan (province of China), Thailand, and Vietnam.

In central Europe, chronic respiratory diseases and cirrhosis made clear contributions in Bulgaria, Croatia, Hungary, Poland, Romania, and Slovenia. In some high-income countries, including Singapore, Argentina, and Uruguay, lower respiratory infections were important causes of death for this age group, more so for men than

for women. In southeast Asia, liver cancer, diabetes, and tuberculosis made larger contributions than in many other regions, particularly in Myanmar, Philippines, Laos, Indonesia, and Cambodia. Elsewhere in the region, stroke, ischaemic heart disease, other cardiovascular and circulatory diseases, and chronic respiratory diseases were predominant. In all countries of eastern Europe and central Asia, stroke and ischaemic heart disease were particularly prominent for both sexes. Liver cancer in Mongolia had the highest probability of causing death in the world for this age group.

Egypt had extraordinarily high cirrhosis mortality, particularly from hepatitis C, in middle aged men and women. Deaths caused by diabetes were particularly high in Morocco, Bahrain, Oman, and Qatar. In central Latin America and Caribbean, diabetes made large contributions to causes of death in men and women; the highest probability of death in these regions from diabetes for males was 9·2% in Trinidad and Tobago and 8·4% for women in Guyana. Chronic kidney disease was particularly high in El Salvador, Mexico, and Nicaragua; more so for men than for women.<sup>75,76</sup> In the Caribbean, diabetes, stroke, and ischaemic heart disease accounted for 33·4% of the probability of death in this age group in Haitian men, and 54·8% in Guyanese women.

In all the countries of Oceania, diabetes accounted for an extremely large fraction of mortality in middle-aged women. For nearly all countries in sub-Saharan Africa, stroke and other cardiovascular diseases (including cardiomyopathies) were important. HIV/AIDS and tuberculosis, diarrhoea, and lower respiratory infections were also estimated to be important causes in almost every country in the region. The probability of death from liver cancer was high in most countries of western sub-Saharan Africa.

#### Country-specific leading causes of YLLs

Worldwide, the top ten causes of YLLs were ischaemic heart disease, lower respiratory infections, stroke, diarrhoea, road injury, HIV/AIDS, preterm birth, malaria, neonatal encephalopathy, and congenital causes (figure 12). The differences between high-income and low-income countries was substantial. Self-harm was the fourth highest cause of YLLs in high-income countries and the 14th in low-income countries. Lung cancer, self harm, Alzheimer's disease and other dementias, cirrhosis, chronic obstructive pulmonary disease, and colorectal cancer were in the top ten causes in high-income countries but not in low-income countries. Conversely, diarrhoea, malaria, HIV/AIDS, preterm birth complications, neonatal encephalopathy, and congenital disorders were in the top ten in low-income, but not high-income, regions.

Ischaemic heart disease, stroke, and lung cancer were the top three causes in 32 GBD developed countries. More notable differences in the rankings across high-income countries were self-harm as the second highest

	1	2	3	4	5	6	7	8	9	10
Global	IHD	LRI	Stroke	Diarrhoea	Road injuries	HIV/AIDS	NN preterm	Malaria	NN encephalitis	Congenital
Developed	IHD	Stroke	Lung C	Self harm	Alzheimer's	Cirrhosis	COPD	Colorectal C	LRI	Road injuries
Developing	LRI	IHD	Stroke	Diarrhoea	HIV/AIDS	NN preterm	Malaria	Road injuries	NN encephalitis	Congenital
High-income	IHD	Lung C	Stroke	Alzheimer's	COPD	Self harm	Colorectal C	LRI	Road injuries	Cirrhosis
Australasia	IHD	Lung C	Stroke	Self harm	Colorectal C	Alzheimer's	COPD	Road injuries	Breast C	Diabetes
Australia	IHD	Lung C	Stroke	Self harm	Alzheimer's	Colorectal C	COPD	Road injuries	Breast C	Diabetes
New Zealand	IHD	Lung C	Stroke	Colorectal C	COPD	Self harm	Alzheimer's	Road injuries	Breast C	Congenital
High-income Asia Pacific	Stroke	IHD	Self harm	Lung C	LRI	Stomach C	Liver C	Colorectal C	Cirrhosis	COPD
Brunei	IHD	Stroke	Diabetes	Road injuries	Congenital	Lung C	LRI	HIV/AIDS	COPD	Colorectal C
Japan	Stroke	IHD	LRI	Lung C	Self harm	Stomach C	Liver C	Colorectal C	COPD	Pancreatic C
Singapore	IHD	LRI	Stroke	Lung C	Colorectal C	Self harm	CKD	Breast C	COPD	Liver C
South Korea	Stroke	Self harm	Lung C	Liver C	IHD	Stomach C	Cirrhosis	Road injuries	Diabetes	Colorectal C
High-income North America	IHD	Lung C	Alzheimer's	COPD	Stroke	Road injuries	Self harm	Cirrhosis	Diabetes	Colorectal C
Canada	IHD	Lung C	Alzheimer's	Stroke	Self harm	Colorectal C	COPD	Road injuries	Breast C	Diabetes
USA	IHD	Lung C	COPD	Alzheimer's	Stroke	Road injuries	Self harm	Cirrhosis	Diabetes	Colorectal C
Southern Latin America	IHD	Stroke	LRI	COPD	Road injuries	Lung C	Congenital	Cirrhosis	Self harm	Colorectal C
Argentina	IHD	Stroke	LRI	COPD	Road injuries	Congenital	Lung C	NN preterm	Colorectal C	Self harm
Chile	IHD	Stroke	Cirrhosis	Road injuries	Self harm	Stomach C	LRI	Alzheimer's	Congenital	Lung C
Uruguay	IHD	Stroke	Lung C	Alzheimer's	COPD	LRI	Road injuries	Self harm	Colorectal C	Congenital
Western Europe	IHD	Lung C	Stroke	Alzheimer's	Colorectal C	COPD	Self harm	Cirrhosis	Breast C	LRI
Andorra	IHD	Lung C	Stroke	Alzheimer's	Colorectal C	COPD	LRI	Self harm	HIV/AIDS	Pancreatic C
Austria	IHD	Lung C	Stroke	Alzheimer's	Self harm	Cirrhosis	Colorectal C	COPD	Breast C	Diabetes
Belgium	IHD	Lung C	Stroke	Self harm	COPD	Alzheimer's	LRI	Colorectal C	Breast C	Road injuries
Cyprus	IHD	Stroke	Lung C	Road injuries	Diabetes	Alzheimer's	Breast C	Colorectal C	COPD	LRI
Denmark	IHD	Lung C	Stroke	COPD	Colorectal C	Alzheimer's	Cirrhosis	Self harm	LRI	Diabetes
Finland	IHD	Stroke	Alzheimer's	Lung C	Self harm	Cirrhosis	Colorectal C	Pancreatic C	Falls	Alcohol
France	IHD	Lung C	Stroke	Self harm	Colorectal C	Alzheimer's	Cirrhosis	Breast C	Road injuries	Other cardio
Germany	IHD	Lung C	Stroke	Alzheimer's	Colorectal C	COPD	Cirrhosis	Self harm	Breast C	Pancreatic C
Greece	IHD	Stroke	Lung C	Alzheimer's	COPD	Road injuries	Colorectal C	Breast C	LRI	CKD
Iceland	IHD	Lung C	Stroke	Alzheimer's	Self harm	Colorectal C	COPD	Breast C	Prostate C	Road injuries
Ireland	IHD	Lung C	Stroke	Self harm	COPD	Colorectal C	LRI	Alzheimer's	Breast C	Congenital
Israel	IHD	Lung C	Alzheimer's	Diabetes	Stroke	Colorectal C	Road injuries	CKD	Congenital	Breast C
Italy	IHD	Stroke	Lung C	Alzheimer's	Colorectal C	COPD	Diabetes	Breast C	Cirrhosis	Road injuries
Luxembourg	IHD	Lung C	Stroke	Self harm	COPD	Colorectal C	Cirrhosis	Alzheimer's	Breast C	Road injuries
Malta	IHD	Stroke	Lung C	Colorectal C	Breast C	COPD	Congenital	LRI	Pancreatic C	Diabetes
Netherlands	IHD	Lung C	Stroke	Colorectal C	COPD	Alzheimer's	Breast C	LRI	Self harm	Pancreatic C
Norway	IHD	Lung C	Stroke	Alzheimer's	Colorectal C	COPD	Self harm	LRI	Drugs	Breast C
Portugal	Stroke	IHD	Lung C	LRI	Colorectal C	Alzheimer's	Cirrhosis	COPD	Stomach C	Road injuries
Spain	IHD	Lung C	Stroke	Alzheimer's	Colorectal C	COPD	Cirrhosis	LRI	Breast C	Road injuries
Sweden	IHD	Stroke	Lung C	Colorectal C	Self harm	Alzheimer's	COPD	Prostate C	LRI	Breast C
Switzerland	IHD	Lung C	Stroke	Alzheimer's	Self harm	Colorectal C	Breast C	Other cardio	COPD	Pancreatic C
UK	IHD	Lung C	Stroke	COPD	Alzheimer's	LRI	Colorectal C	Breast C	Cirrhosis	Self harm
England	IHD	Lung C	Stroke	COPD	Alzheimer's	LRI	Colorectal C	Breast C	Cirrhosis	Self harm
Northern Ireland	IHD	Lung C	Stroke	COPD	LRI	Colorectal C	Alzheimer's	Self harm	Breast C	Cirrhosis
Scotland	IHD	Lung C	Stroke	COPD	Alzheimer's	Colorectal C	LRI	Cirrhosis	Self harm	Breast C
Wales	IHD	Lung C	Stroke	Alzheimer's	COPD	LRI	Colorectal C	Breast C	Cirrhosis	Self harm
Central and eastern Europe and central Asia	IHD	Stroke	LRI	Self harm	Cirrhosis	Lung C	CMP	Road injuries	COPD	Colorectal C
Central Asia	IHD	LRI	Stroke	NN encephalitis	Cirrhosis	Congenital	Road injuries	Self harm	NN preterm	Drowning
Armenia	IHD	Stroke	Lung C	Diabetes	Road injuries	Cirrhosis	Congenital	LRI	COPD	Breast C
Azerbaijan	IHD	LRI	Stroke	NN encephalitis	Congenital	Cirrhosis	Road injuries	NN preterm	Diabetes	TB
Georgia	IHD	Stroke	COPD	Cirrhosis	Lung C	Road injuries	LRI	NN encephalitis	Other cardio	Alzheimer's
Kazakhstan	IHD	Stroke	Self harm	Road injuries	Cirrhosis	LRI	Congenital	NN encephalitis	Violence	COPD
Kyrgyzstan	IHD	Stroke	LRI	Cirrhosis	NN encephalitis	NN preterm	Congenital	Road injuries	COPD	Self harm
Mongolia	IHD	Stroke	LRI	Liver C	NN encephalitis	Cirrhosis	Self harm	Congenital	Road injuries	NN preterm
Tajikistan	LRI	IHD	NN encephalitis	NN preterm	Diarrhoea	Congenital	Stroke	Drowning	Cirrhosis	Meningitis
Turkmenistan	LRI	LRI	Stroke	NN encephalitis	Diarrhoea	Congenital	NN preterm	Road injuries	Drowning	
Uzbekistan	IHD	LRI	Stroke	NN encephalitis	Cirrhosis	Road injuries	Congenital	HTN HD	Drowning	Self harm
Central Europe	IHD	Stroke	Lung C	Cirrhosis	COPD	Self harm	Colorectal C	Alzheimer's	HTN HD	Road injuries
Albania	IHD	Stroke	LRI	Lung C	Other cardio	Road injuries	COPD	Violence	Stomach C	Congenital
Bosnia and Herzegovina	IHD	Stroke	Lung C	CMP	Diabetes	COPD	Colorectal C	Alzheimer's	Self harm	Cirrhosis
Bulgaria	IHD	Stroke	COPD	HTN HD	Lung C	Other cardio	Colorectal C	Alzheimer's	Cirrhosis	LRI
Croatia	IHD	Stroke	Lung C	Colorectal C	Cirrhosis	COPD	Alzheimer's	Self harm	Road injuries	HTN HD

Figure 12 continues on next page