

	All ages DALYs (thousands)			DALYs (per 100 000)		
	1990	2010	%Δ	1990	2010	%Δ
(Continued from previous page)						
Other cirrhosis of the liver	5260 (4556-6111)	6011 (5172-7117)	14.3	99 (86-115)	87 (75-103)	-12.1
Digestive diseases (except cirrhosis)	33564 (30273-36733)	32691 (29153-35898)	-2.6	633 (571-693)	474 (423-521)	-25.1
Peptic ulcer disease	9940 (8233-10669)	6718 (5718-7752)	-32.4	187 (155-201)	98 (83-113)	-48.0
Gastritis and duodenitis	1277 (926-1717)	1197 (860-1717)	-6.3	24 (17-32)	17 (12-25)	-27.9
Appendicitis	1902 (1306-2933)	1483 (993-2096)	-22.0	36 (25-55)	22 (14-30)	-40.0
Paralytic ileus and intestinal obstruction without hernia	3860 (2243-4940)	3729 (2785-5009)	-3.4	73 (42-93)	54 (40-73)	-25.7
Inguinal or femoral hernia	999 (808-1358)	792 (539-1208)	-20.7	19 (15-26)	11 (8-18)	-39.0
Non-infective inflammatory bowel disease	2830 (1928-3648)	2875 (2190-3629)	1.6	53 (36-69)	42 (32-53)	-21.8
Vascular disorders of intestine	880 (449-1903)	1100 (566-2399)	25.1	17 (8-36)	16 (8-35)	-3.7
Gallbladder and bile duct disease	2179 (1836-2743)	2245 (1933-2598)	3.0	41 (35-52)	33 (28-38)	-20.7
Pancreatitis	1695 (1240-2121)	2354 (1811-2989)	38.9	32 (23-40)	34 (26-43)	6.9
Other digestive diseases	8003 (6261-9544)	10197 (8318-13168)	27.4	151 (118-180)	148 (121-191)	-2.0
Neurological disorders	48663 (41117-56947)	73781 (62753-84299)	51.6	918 (776-1074)	1071 (911-1224)	16.7
Alzheimer's disease and other dementias	5695 (4516-6982)	11349 (9147-13741)	99.3	107 (85-132)	165 (133-199)	53.3
Parkinson's disease	1094 (880-1374)	1918 (1529-2387)	75.3	21 (17-26)	28 (22-35)	34.9
Epilepsy	13386 (10681-16667)	17429 (14129-21202)	30.2	252 (201-314)	253 (205-308)	0.2
Multiple sclerosis	875 (700-1033)	1075 (893-1251)	22.9	17 (13-19)	16 (13-18)	-5.5
Migraine	15927 (10394-22023)	22362 (14395-31121)	40.4	300 (196-415)	325 (209-452)	8.0
Tension-type headache	1266 (754-2016)	1779 (1056-2822)	40.5	24 (14-38)	26 (15-41)	8.1
Other neurological disorders	10419 (6837-14567)	17869 (12788-24723)	71.5	197 (129-275)	259 (186-359)	32.0
Mental and behavioural disorders	134598 (112138-159316)	185190 (154647-218496)	37.6	2539 (2115-3005)	2688 (2245-3171)	5.9
Schizophrenia	10444 (6935-14099)	14999 (9766-20399)	43.6	197 (131-266)	218 (142-296)	10.5
Alcohol use disorders	13133 (9516-17511)	17644 (12928-23273)	34.3	248 (179-330)	256 (188-338)	3.4
Drug use disorders	13143 (9721-17259)	19994 (15254-25366)	52.1	248 (183-326)	290 (221-368)	17.1
Opioid use disorders	5278 (3766-6850)	9152 (7066-11443)	73.4	100 (71-129)	133 (103-166)	33.4
Cocaine use disorders	862 (529-1321)	1110 (645-1727)	28.8	16 (10-25)	16 (9-25)	-0.9
Amphetamine use disorders	1911 (1080-2984)	2617 (1470-4109)	36.9	36 (20-56)	38 (21-60)	5.4
Cannabis use disorders	1693 (1105-2418)	2057 (1348-2929)	21.5	32 (21-46)	30 (20-43)	-6.5
Other drug use disorders	3399 (2335-4932)	5059 (3555-7042)	48.8	64 (44-93)	73 (52-102)	14.5
Unipolar depressive disorders	54010 (40381-68450)	74264 (55670-94240)	37.5	1019 (762-1291)	1078 (808-1368)	5.8
Major depressive disorder	46139 (34517-58427)	63179 (47779-80891)	36.9	870 (651-1102)	917 (693-1174)	5.4
Dysthymia	7871 (5266-10858)	11084 (7297-15447)	40.8	148 (99-205)	161 (106-224)	8.4
Bipolar affective disorder	9129 (5757-13169)	12867 (8084-18654)	40.9	172 (109-248)	187 (117-271)	8.5
Anxiety disorders	19664 (13868-26820)	26826 (18779-36795)	36.4	371 (262-506)	389 (273-534)	5.0
Eating disorders	1304 (934-1770)	2161 (1519-2949)	65.7	25 (18-33)	31 (22-43)	27.5
Pervasive development disorders	5918 (4133-8130)	7666 (5355-10565)	29.5	112 (78-153)	111 (78-153)	-0.3
Autism	3088 (2119-4260)	4007 (2752-5563)	29.8	58 (40-80)	58 (40-81)	-0.2
Asperger's syndrome	2830 (1917-4016)	3659 (2463-5150)	29.3	53 (36-76)	53 (36-75)	-0.5
Childhood behavioural disorders	5472 (3277-8359)	6245 (3785-9347)	14.1	103 (62-158)	91 (55-136)	-12.2
Attention-deficit hyperactivity disorder	424 (244-667)	491 (280-775)	15.8	8 (5-13)	7 (4-11)	-10.9
Conduct disorder	5047 (2960-7840)	5753 (3428-8748)	14.0	95 (56-148)	84 (50-127)	-12.3
Idiopathic intellectual disability	1247 (746-1924)	1043 (572-1687)	-16.4	24 (14-36)	15 (8-24)	-35.7
Other mental and behavioural disorders	1135 (721-1675)	1482 (990-2152)	30.6	21 (14-32)	22 (14-31)	0.5
Diabetes, urogenital, blood, and endocrine diseases	85084 (73638-102489)	122437 (107437-143387)	43.9	1605 (1389-1933)	1777 (1559-2081)	10.7
Diabetes mellitus	27706 (23696-32894)	46823 (40085-55215)	69.0	523 (447-620)	680 (582-801)	30.0
Acute glomerulonephritis	6774 (2754-17979)	3684 (1746-8386)	-45.6	128 (52-339)	53 (25-122)	-58.1
Chronic kidney diseases	13946 (12194-15480)	21151 (18147-23223)	51.7	263 (230-292)	307 (263-337)	16.7
Chronic kidney disease due to diabetes mellitus	2642 (2371-3018)	4675 (4030-5182)	76.9	50 (45-57)	68 (58-75)	36.1
Chronic kidney disease due to hypertension	2850 (2524-3183)	4599 (3982-5057)	61.4	54 (48-60)	67 (58-73)	24.2

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	All ages DALYs (thousands)			DALYs (per 100 000)		
	1990	2010	%Δ	1990	2010	%Δ
(Continued from previous page)						
Chronic kidney disease unspecified	8453 (7291-9375)	11 877 (10 193-13 047)	40.5	159 (138-177)	172 (148-189)	8.1
Urinary diseases and male infertility	8116 (6179-10 673)	13 523 (10 484-17 718)	66.6	153 (117-201)	196 (152-257)	28.2
Tubulointerstitial nephritis, pyelonephritis, and urinary tract infections	2060 (1421-2638)	3108 (2196-3766)	50.8	39 (27-50)	45 (32-55)	16.1
Urolithiasis	897 (659-1331)	1113 (785-1834)	24.1	17 (12-25)	16 (11-27)	-4.5
Benign prostatic hyperplasia	3726 (2392-5645)	6834 (4377-10 179)	83.4	70 (45-106)	99 (64-148)	41.1
Male infertility	126 (50-270)	173 (70-365)	36.9	2 (1-5)	3 (1-5)	5.3
Other urinary diseases	1307 (829-1844)	2296 (1681-3068)	75.7	25 (16-35)	33 (24-45)	35.2
Gynaecological diseases	7858 (5064-11 911)	10 258 (6438-15 837)	30.5	148 (96-225)	149 (93-230)	0.4
Uterine fibroids	2355 (1584-3354)	3062 (1990-4573)	30.0	44 (30-63)	44 (29-66)	0.0
Polycystic ovarian syndrome	2027 (971-3786)	2756 (1312-5212)	35.9	38 (18-71)	40 (19-76)	4.6
Female infertility	91 (36-189)	125 (50-259)	37.6	2 (1-4)	2 (1-4)	5.9
Endometriosis	405 (143-739)	545 (188-1008)	34.6	8 (3-14)	8 (3-15)	3.6
Genital prolapse	1343 (548-2690)	1817 (746-3654)	35.3	25 (10-51)	26 (11-53)	4.1
Premenstrual syndrome	983 (49-2592)	1249 (63-3337)	27.0	19 (1-49)	18 (1-48)	-2.3
Other gynaecological diseases	654 (491-873)	705 (527-954)	7.7	12 (9-16)	10 (8-14)	-17.1
Haemoglobinopathies and haemolytic anaemias	14 293 (10 785-18 552)	15 640 (12 225-19 722)	9.4	270 (203-350)	227 (177-286)	-15.8
Thalassaemias	5397 (4084-7018)	5717 (4170-7728)	5.9	102 (77-132)	83 (61-112)	-18.5
Sickle-cell disorders	4333 (3288-5576)	5641 (4244-7246)	30.2	82 (62-105)	82 (62-105)	0.2
G6PD deficiency	325 (254-414)	303 (244-372)	-6.8	6 (5-8)	4 (4-5)	-28.3
Other haemoglobinopathies and haemolytic anaemias	4238 (2950-6223)	3979 (2887-5400)	-6.1	80 (56-117)	58 (42-78)	-27.7
Other endocrine, nutritional, blood, and immune disorders	6392 (4349-8434)	11 358 (8204-17 019)	77.7	121 (82-159)	165 (119-247)	36.7
Musculoskeletal disorders	116 554 (88 684-147 285)	169 624 (129 771-212 734)	45.5	2198 (1673-2778)	2462 (1883-3088)	12.0
Rheumatoid arthritis	3335 (2573-4192)	4815 (3705-6056)	44.4	63 (49-79)	70 (54-88)	11.1
Osteoarthritis	10 449 (7100-14 788)	17 135 (11 884-24 256)	64.0	197 (134-279)	249 (172-352)	26.2
Low back and neck pain	82 111 (56 962-110 433)	116 704 (80 615-156 527)	42.1	1549 (1074-2083)	1694 (1170-2272)	9.4
Low back pain	58 245 (39 934-78 139)	83 063 (56 632-111 880)	42.6	1099 (753-1474)	1206 (822-1624)	9.7
Neck pain	23 866 (16 535-33 105)	33 640 (23 469-46 476)	41.0	450 (312-624)	488 (341-675)	8.5
Gout	76 (48-112)	114 (72-167)	49.3	1 (1-2)	2 (1-2)	14.9
Other musculoskeletal disorders	20 583 (17 019-23 254)	30 856 (25 815-34 583)	49.9	388 (321-439)	448 (375-502)	15.4
Other non-communicable diseases	124 608 (101 248-157 225)	127 477 (99 171-169 616)	2.3	2350 (1910-2966)	1850 (1439-2462)	-21.3
Congenital anomalies	54 242 (45 567-69 009)	38 887 (31 850-45 719)	-28.3	1023 (860-1302)	564 (462-664)	-44.8
Neural tube defects	10 291 (6276-14 848)	6372 (3884-9096)	-38.1	194 (118-280)	92 (56-132)	-52.4
Congenital heart anomalies	21 786 (18 241-28 667)	15 457 (13 675-17 754)	-29.0	411 (344-541)	224 (198-258)	-45.4
Cleft lip and cleft palate	982 (543-1688)	571 (408-747)	-41.9	19 (10-32)	8 (6-11)	-55.3
Down's syndrome	2120 (1087-3380)	1775 (1227-2463)	-16.3	40 (21-64)	26 (18-36)	-35.6
Other chromosomal abnormalities	3051 (1159-6843)	1761 (1017-2972)	-42.3	58 (22-129)	26 (15-43)	-55.6
Other congenital anomalies	16 012 (9010-24 351)	12 951 (8408-17 169)	-19.1	302 (170-459)	188 (122-249)	-37.8
Skin and subcutaneous diseases	30 197 (20 885-44 452)	36 948 (24 800-55 671)	22.4	570 (394-838)	536 (360-808)	-5.8
Eczema	6890 (3508-10 872)	8897 (4518-14 049)	29.1	130 (66-205)	129 (66-204)	-0.6
Psoriasis	742 (371-1179)	1059 (528-1690)	42.8	14 (7-22)	15 (8-25)	9.8
Cellulitis	1428 (1069-1863)	1292 (1000-1770)	-9.6	27 (20-35)	19 (15-26)	-30.4
Abscess, impetigo, and other bacterial skin diseases	3166 (2295-4355)	2869 (2099-4175)	-9.4	60 (43-82)	42 (30-61)	-30.3
Scabies	1881 (956-3384)	1580 (807-2792)	-16.0	35 (18-64)	23 (12-41)	-35.4
Fungal skin diseases	1618 (532-3754)	2303 (740-5435)	42.3	31 (10-71)	33 (11-79)	9.5
Viral skin diseases	2354 (1058-4369)	2731 (1203-4941)	16.0	44 (20-82)	40 (17-72)	-10.7
Acne vulgaris	3281 (1545-6205)	4002 (1869-7575)	22.0	62 (29-117)	58 (27-110)	-6.2
Alopecia areata	1002 (313-1906)	1352 (424-2567)	35.0	19 (6-36)	20 (6-37)	3.9

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	All ages DALYs (thousands)			DALYs (per 100 000)		
	1990	2010	%Δ	1990	2010	%Δ
(Continued from previous page)						
Pruritus	1433 (682-2676)	2086 (1004-3951)	45.6	27 (13-50)	30 (15-57)	12.1
Urticaria	1968 (757-3431)	2600 (980-4441)	32.1	37 (14-65)	38 (14-64)	1.6
Decubitus ulcer	975 (764-1232)	1206 (914-1539)	23.6	18 (14-23)	17 (13-22)	-4.9
Other skin and subcutaneous diseases	3459 (1642-6475)	4973 (2328-9311)	43.7	65 (31-122)	72 (34-135)	10.6
Sense organ diseases	25169 (18140-35220)	34733 (25167-47663)	38.0	475 (342-664)	504 (365-692)	6.2
Glaucoma	443 (338-561)	943 (725-1178)	112.7	8 (6-11)	14 (11-17)	63.7
Cataracts	4225 (3283-5364)	4732 (3647-6010)	12.0	80 (62-101)	69 (53-87)	-13.8
Macular degeneration	513 (388-647)	1329 (1026-1668)	158.9	10 (7-12)	19 (15-24)	99.2
Refraction and accommodation disorders	3608 (2688-4762)	5593 (4117-7468)	55.0	68 (51-90)	81 (60-108)	19.3
Other hearing loss	12211 (7258-19495)	15761 (9455-25210)	29.1	230 (137-368)	229 (137-366)	-0.7
Other vision loss	4069 (2171-7180)	6240 (3260-11208)	53.4	77 (41-135)	91 (47-163)	18.0
Other sense organ diseases	100 (34-231)	136 (46-309)	35.4	2 (1-4)	2 (1-4)	4.2
Oral disorders	12417 (6824-20984)	15015 (7795-26482)	20.9	234 (129-396)	218 (113-384)	-7.0
Dental caries	3704 (1523-7150)	4984 (2086-9356)	34.5	70 (29-135)	72 (30-136)	3.5
Periodontal disease	3440 (1310-7305)	5410 (2051-11286)	57.3	65 (25-138)	79 (30-164)	21.0
Edentulism	5273 (3100-8127)	4621 (2678-7296)	-12.4	99 (58-153)	67 (39-106)	-32.6
Sudden infant death syndrome	2583 (1321-4884)	1893 (1127-3139)	-26.7	49 (25-92)	27 (16-46)	-43.6
Injuries	245694 (228373-268325)	278665 (253532-305786)	13.4	4634 (4308-5061)	4044 (3680-4438)	-12.7
Transport injuries	61026 (51613-72674)	81577 (67477-103465)	33.7	1151 (974-1371)	1184 (979-1502)	2.9
Road injury	56655 (49607-68078)	75482 (61556-94783)	33.2	1069 (936-1284)	1096 (893-1376)	2.5
Pedestrian injury by road vehicle	17477 (13682-20572)	25636 (20291-33329)	46.7	330 (258-388)	372 (295-484)	12.9
Pedal cycle vehicle	3362 (2601-4070)	4645 (3643-5496)	38.2	63 (49-77)	67 (53-80)	6.3
Motorised vehicle with two wheels	8631 (6913-10361)	12266 (9979-13897)	42.1	163 (130-195)	178 (145-202)	9.4
Motorised vehicle with three or more wheels	21448 (17644-25904)	28233 (23657-33474)	31.6	405 (333-489)	410 (343-486)	1.3
Road injury other	6565 (3845-10481)	5974 (3593-10091)	-9.0	124 (73-198)	87 (52-146)	-30.0
Other transport injury	4370 (3623-5384)	6096 (5032-7458)	39.5	82 (68-102)	88 (73-108)	7.3
Unintentional injuries other than transport injuries	129188 (118487-143697)	120546 (107276-133408)	-6.7	2437 (2235-2710)	1750 (1557-1936)	-28.2
Falls	25891 (21284-31651)	35385 (28479-44049)	36.7	488 (401-597)	514 (413-639)	5.2
Drowning	28724 (22511-34347)	19742 (16948-24802)	-31.3	542 (425-648)	287 (246-360)	-47.1
Fire, heat, and hot substances	17128 (13849-20276)	19010 (13290-24139)	11.0	323 (261-382)	276 (193-350)	-14.6
Poisonings	11151 (8403-17607)	8934 (6647-11850)	-19.9	210 (158-332)	130 (96-172)	-38.4
Exposure to mechanical forces	15793 (11470-23763)	11367 (8668-13493)	-28.0	298 (216-448)	165 (126-196)	-44.6
Mechanical forces (firearm)	7603 (4721-11573)	4624 (3125-6872)	-39.2	143 (89-218)	67 (45-100)	-53.2
Mechanical forces (other)	8504 (5674-11561)	7097 (4686-8517)	-16.5	160 (107-218)	103 (68-124)	-35.8
Adverse effects of medical treatment	2483 (1901-3006)	4082 (3333-4730)	64.4	47 (36-57)	59 (48-69)	26.5
Animal contact	4743 (3217-6151)	3659 (2366-5049)	-22.9	89 (61-116)	53 (34-73)	-40.6
Animal contact (venomous)	3531 (2110-5519)	2729 (1545-4806)	-22.7	67 (40-104)	40 (22-70)	-40.5
Animal contact (non-venomous)	1212 (625-1952)	929 (558-1281)	-23.3	23 (12-37)	13 (8-19)	-41.0
Unintentional injuries not classified elsewhere	23275 (20000-25649)	18369 (16254-20786)	-21.1	439 (377-484)	267 (236-302)	-39.3
Self-harm and interpersonal violence	49198 (41304-56869)	62195 (51859-73023)	26.4	928 (779-1073)	903 (753-1060)	-2.7
Self-harm	29605 (23033-37329)	36654 (26890-44649)	23.8	558 (434-704)	532 (390-648)	-4.7
Interpersonal violence	19593 (14501-23503)	25541 (20030-32921)	30.4	370 (274-443)	371 (291-478)	0.3
Assault by firearm	8239 (6325-10094)	11146 (8769-13161)	35.3	155 (119-190)	162 (127-191)	4.1
Assault by sharp object	4776 (3319-6698)	7095 (4828-10148)	48.6	90 (63-126)	103 (70-147)	14.3
Assault by other means	6729 (5182-7705)	7526 (6274-8920)	11.8	127 (98-145)	109 (91-129)	-13.9
Forces of nature, war, and legal intervention	6282 (4786-9222)	14347 (8969-27860)	128.4	118 (90-174)	208 (130-404)	75.7
Exposure to forces of nature	1674 (1091-2917)	13387 (8177-26226)	699.9	32 (21-55)	194 (119-381)	515.5
Collective violence and legal intervention	4608 (3538-6516)	960 (708-1480)	-79.2	87 (67-123)	14 (10-21)	-84.0

Data are DALYs (95% UI) or % change. UI=uncertainty interval. DALYs=disability-adjusted life years. %Δ=percentage change. E coli=Escherichia coli. H influenzae=Haemophilus influenzae.

Table 1: Global disability-adjusted life years for 291 causes in 1990 and 2010 for all ages, both sexes combined, and per 100 000 with 95% UI and percentage change

Maciel, Montevideo, Uruguay (P Espindola MD); Emerald Public Health Consulting Services Ltd, Abuja Nigeria (S E Ewoigbokhan MPH); Digestive Disease Research Center (Prof R Malekzadeh MD), Tehran University of Medical Sciences, Tehran, Iran (F Farzadfar MD, M Moradi-Lakeh MD); National Institute for Stroke and Applied Neurosciences (Prof V Feigin MD), Auckland Technical University, Auckland, New Zealand (R Krishnamurthi PhD, E Witt MSc); Medical School (G V Polanczyk MD), Federal University of São Paulo, São Paulo, Brazil (C P Ferri PhD); Carnegie Mellon University, Pittsburgh, PA, USA (S Flaxman BA); James Cook University, Townsville, QLD, Australia (K Watt PhD); Howard University College of Medicine, Washington, DC, USA (Prof R F Gillum MD); Addiction Info Switzerland, Lausanne, Switzerland (Prof G Gmel PhD); Department of Epidemiology and Biostatistics (M C Nevitt PhD), University of California, San Francisco, San Francisco, CA, USA (Prof R Gosselin MD, M Lipnick MD, A-C Meyer MD, C Robinson BS); College of Medicine, SUNY Downstate Medical Center, Brooklyn, NY, USA (J Groeger MPH); National Center for Injury Prevention and Control (D A Sleet PhD), Centers for Disease Control and Prevention, Atlanta, GA, USA (S T Wiersma MD); Université de Lorraine, Nancy, France (Prof F Guillemin MD); University of Bristol, Bristol, UK (Prof D Gunnell DSc); New York University, New York City, NY (Prof H Hagan PhD, Prof G D Thurston ScD); Brandeis University, Waltham, MA, USA (Y A Halasa DDS, S Shahraz MD, Prof D S Shepard PhD, E A Undurraga PhD); Parc Sanitari Sant Joan de Déu, CIBERSAM, Universitat de Barcelona, Sant Boi de Llobregat, Spain (J M Haro MD); Karolinska University Hospital, Stockholm, Sweden (R Havmoeller); The Queen Elizabeth Hospital, Adelaide, SA, Australia (C Hill MBBS); Université de Franche-Comté, Besançon, France (Prof B Hoen MD); Centre Hospitalier Régional

causes with similar ranks where the uncertainty intervals are up to tenfold wider for one compared with another cause. The largest rank uncertainty intervals are for whooping cough (149 ranks), typhoid and paratyphoid fevers (96 ranks), food-borne trematodiasis (77 ranks), fungal skin diseases (75 ranks), premenstrual syndrome (71 ranks), and acute hepatitis E (68 ranks).

Global DALYs decreased slightly from 2.503 billion in 1990 to 2.490 billion in 2010 (table 2). The nearly constant volume of DALYs is due to a near balancing of two key forces: nearly 40% growth in DALYs due to increases in population numbers, ageing of the population, and

declines of more than 35% due to changes in age-specific and sex-specific rates. The story is more complicated when we examine the balance of these demographic and epidemiological forces at the level of broad cause groups. Communicable, maternal, neonatal, and nutritional disorders have declined by more than 25% because population growth has been more than compensated by large drops in expected DALYs due to population ageing and over 50% reductions in DALYs due to declining age-specific and sex-specific rates. For NCDs, both population growth and ageing of the world's population is driving up DALYs; these factors alone would have increased NCD

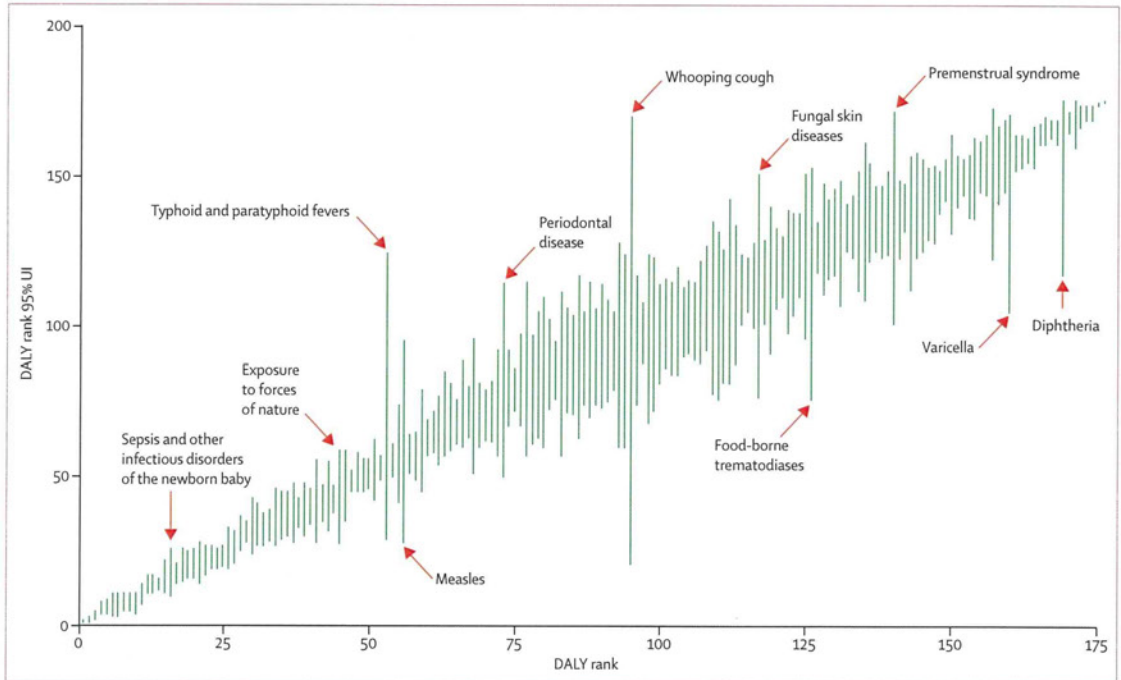


Figure 3: Global disability-adjusted life years (DALY) rank with 95% UI by cause in 2010. UI=uncertainty interval. An interactive version of this figure is available online at <http://healthmetricsandevaluation.org/gbd/visualizations/regional>.

	All causes	Communicable, maternal, neonatal, and nutritional disorders	Non-communicable diseases	Injuries
1990 DALYs (thousands)	2 502 601	1 181 610	1 075 297	245 694
DALYs expected with 2010 population, 1990 population age structure, 1990 DALY rates (thousands)	3 444 678	1 744 235	1 374 650	325 793
DALYs expected with 2010 population, 2010 population age structure, 1990 DALY rates (thousands)	3 386 762	1 481 435	1 579 654	325 673
2010 DALYs (thousands)	2 490 385	868 024	1 343 696	278 665
Percentage change from 1990 due to population growth	37.6%	47.6%	27.8%	32.6%
Percentage change from 1990 due to population ageing	-2.3%	-22.2%	19.1%	0.0%
Percentage change from 1990 due to change in DALY rates	-35.8%	-51.9%	-21.9%	-19.1%
Percentage change from 1990 to 2010	-0.5%	-26.5%	25.0%	13.4%

DALY=disability-adjusted life years.

Table 2: Decomposition analysis of the change of global disability-adjusted life years (thousands) by level 1 causes from 1990 to 2010 into total population growth, population ageing, and changes in age-specific, sex-specific, and cause-specific disability-adjusted-life-year rates

DALYs by nearly 50%. Declines in age-specific and sex-specific rates overall have meant that this group increased by 25%. Injury DALYs have increased more modestly, driven to a large extent by growth in population numbers and modest declines in rates.

These demographic and epidemiological changes have changed the age distribution of burden. In 1990, 41% of DALYs were due to deaths and disability in children younger than 5 years of age but by 2010, that had decreased to 25% (figure 4). Over the same interval, the burden of disease in the reproductive age-groups (15–49 years) increased from 27.0% to 35.0% of total DALYs. The shift to burden at older ages is also evident in the age groups 50–69 years and 70 years or older. The slight predominance of burden of 54.4% in male individuals in 1990 increased to 55.0% in 2010 (figure 4). Male burden is higher than female burden in all age groups except in the age groups 75–79 years in 1990 and 80 years or older in 1990 and 2010.

In 1990, 23.3% of DALYs were from YLDs. From 1990 to 2010, YLLs decreased from 1.919 billion to 1.713 billion, and YLDs increased 583 million to 777 million, so that by 2010, YLDs accounted for 31.2% of global DALYs, reflecting the relative increase of non-fatal versus fatal loss of healthy life years. As a consequence of these substantial structural changes in the burden of disease from younger to older ages and from YLLs to YLDs, the broad composition of the burden of disease has shifted from communicable, maternal, neonatal and nutritional disorders to NCDs and injuries. In 1990, 47% of DALYs were caused by communicable, maternal, neonatal and nutritional disorders, 43% from NCDs, and 10% from injuries. By 2010, this had shifted to 35% caused by communicable, maternal, neonatal, and nutritional disorders, 54% by NCDs, and 11% by injuries. The main changes from 1990 to 2010 are the reductions in infectious diseases, mostly among children, an increase in the HIV/AIDS and tuberculosis category, and increases in a diverse set of NCD and injury categories. Maternal disorders declined from 0.9% of DALYs in 1990 to 0.6% in 2010. From 1990 to 2010, mental and behavioural disorders increased from 5.4% to 7.4% and musculoskeletal disorders increased from 4.7% to 6.8%. Neurological disorders including dementia increased from 1.9% to 3.0% over the two decades. Increases in cardiovascular diseases were modest from 9.6% to 11.8%. Unintentional injuries including transport injuries increased from 7.6% to 8.1% in 2010.

Across the 1000 draws of the entire study results, each cause has been ordered in terms of total DALYs (figure 5). Causes in the figure are ordered by their mean rank across the 1000 draws. The order based on the mean rank across draws is not the same as the order based on the mean value of DALYs shown in table 1. For example, in 2010, malaria caused slightly more DALYs than HIV/AIDS in table 1; HIV/AIDS, however, in this figure ranks fifth and malaria seventh because across the 1000 draws HIV/AIDS is more likely to rank higher in the list than malaria because of the much greater uncertainty around

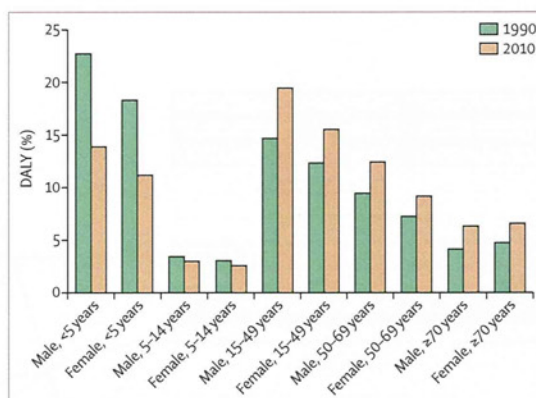


Figure 4: Proportion of disability-adjusted life years (DALYs) by age and sex, 1990 and 2010

the number of DALYs due to malaria. Causes in figure 5 are connected with lines to show changes in ranks over the two decades. Causes that moved into or dropped out of the top 25 ranks between 1990 and 2010 are listed at the bottom. Mean of the ranks of a disease across the 1000 draws of DALYs, the 95% UI in ranks, and the rank of the global mean value are shown for 1990 and 2010. The final column on the right-hand side provides the percentage change in the number of global DALYs for each cause from 1990 to 2010. As a general observation, most of the NCDs are rising in the rank list and most but not all communicable, maternal, neonatal, and nutritional disorders are declining. Notable exceptions are the stable and increasing ranks for malaria and HIV/AIDS, respectively. Among NCDs at a global level, only COPD and congenital anomalies have declined. Given that lung cancer is increasing from 24th to 22nd, the decline in COPD is worth noting. The decline is driven by the reduction of other determinants of COPD such as household air pollution in India and China, despite increasing cumulative exposure to tobacco.

In 1990, the leading cause of burden was lower respiratory infections, for which 81.4% of the total burden occurred among children younger than 5 years of age. The second leading cause was diarrhoeal diseases with 82.0% also occurring in children younger than 5 years of age. In 2010, these two causes remained among the top four causes of burden, but the absolute number of DALYs from these disorders has declined over the two decades by more than 40% in both cases. For the two cardiovascular causes now in the first and third slots, ischaemic heart disease and stroke, most of this burden is from YLLs not from YLDs, 93.2% and 95.7%, respectively. Both causes are increasing in absolute terms because of demographic changes; ischaemic heart disease increased by 29% and stroke by 19% over the two decades. HIV/AIDS went from the 33rd largest cause of burden in 1990 to the fifth largest cause in 2010. This rank is despite major declines in HIV/AIDS mortality since 2005. Malaria remains at

Universitaire de Besançon, Besançon, France (Prof B Hoen); National Institute on Deafness and Other Communication Disorders (H Hoffman MA), National Institute of Diabetes and Digestive and Kidney Diseases (R G Nelson MD), National Institutes of Health, Bethesda, MD, USA (B Grant PhD); National School of Tropical Medicine, Baylor College of Medicine, Houston, TX, USA (Prof P J Hotez MD); University of Port Harcourt, Port Harcourt, Nigeria (S E Ibeanus MBBS); George Mason University, Fairfax, VA, USA (K H Jacobsen PhD); Department of Ophthalmology, Medical Faculty Mannheim, Ruprecht Karls University, Heidelberg, Germany (Prof J B Jonas MD); All India Institute of Medical Sciences, New Delhi, India (G Karthikeyan MD); Department of Cardiology, Hebrew University Hadassah Medical School, Jerusalem, Israel (Prof A Keren MD); Case Western Reserve University, Cleveland, OH, USA (Prof C H King MD); School of Public Health, Makerere University, Kampala, Uganda (O Kobusingye MMed); University of South Africa, Johannesburg, South Africa (O Kobusingye); Kwame Nkrumah University of Science and Technology, Kumasi, Ghana (A Korangant MSc); University of Tasmania, Tasmania, TAS, Australia (L L Laslett MMedSci); Nova Southeastern University, Fort Lauderdale, FL, USA (J L Leasher OD); Ministry of Health, Jerusalem, Israel (D Levinson PhD); Miller School of Medicine, University of Miami, Miami, FL, USA (Prof S E Lipschultz MD, Prof R L Sacco MD, Prof J D Wilkinson MD); Swansea University, Swansea, UK (Prof R Lyons MD); Mulago Hospital, Kampala, Uganda (J Mabwejjano MMed); Asian Pacific Society of Cardiology, Kyoto, Japan (A Matsumori MD); Medical Research Council, Tygerberg, South Africa (R Matzopoulos MPhil); Hatter Institute (Prof K Sliwa MD), Department of Medicine (Prof G A Mensah MD), University of Cape Town, Cape Town, South Africa (R Matzopoulos MPhil, Prof B M Mayosi DPhil); Legacy Health System, Portland, Oregon (J H McAnulty MD);

Northwestern University Feinberg School of Medicine, Evanston, IL, USA (Prof M M McDermott MD); National Institute on Psychiatry Ramón de la Fuente, Mexico City, Mexico (M E Medina-Mora PhD); Thomas Jefferson University, Philadelphia, PA, USA (M Meltzer MD); College of Medicine, Alfasal University, Riyadh, Saudi Arabia (Prof Z A Memish); Pacific Institute for Research and Evaluation, Calverton, MD, USA (T R Miller PhD); National Institute of Health, Maputo, Mozambique (Prof A O Mocumbi MD); University Eduardo Mondlane, Maputo, Mozambique (Prof A O Mocumbi MD); Duke University, Durham, NC, USA (Prof T E Moffitt PhD); Institute for Maternal and Child Health, IRCCS Burlo Garofolo, Trieste, Italy (L Monasta DSc, M Montico MSc, L Ronfani PhD, G Tamburlini PhD); Mailman School of Public Health (Prof M M Weissman PhD); Columbia University, New York City, NY, USA (A Moran MD); Queensland University of Technology, Brisbane, QLD, Australia (Prof L Morawska PhD); National Center for Child Health and Development, Tokyo, Japan (R Mori MD); Watford General Hospital, Watford, UK (M E Murdoch FRCP); Kemri-Wellcome Trust, Kilifi, Kenya (M K Mwaniki MBChB); AVRI, University of KwaZulu-Natal, Durban, South Africa (Prof K Naidoo PhD); Centro Studi GISED, Bergamo, Italy (L Naldi MD); Charité-Universitätsmedizin Berlin, Berlin, Germany (S Nolte PhD); HRB-Clinical Research Facility, National University of Ireland Galway, Galway, Ireland, UK (M O'Donnell PhD); Deakin University, Melbourne, VIC, Australia (Prof R Osborne PhD); B P Koirala Institute of Health Sciences, Dharan, Nepal (B Pahari MD); Betty Cowan Research and Innovation Center, Ludhiana, India (J D Pandian MD); Hospital Juan XXIII, La Paz, Bolivia (A Panozo Rivero MD); University of Calgary, Calgary, AB, Canada (Prof S B Patten MD); Instituto Nacional de Enfermedades Respiratorias, Mexico City, Mexico (R Perez Padilla MD); Hospital Universitario

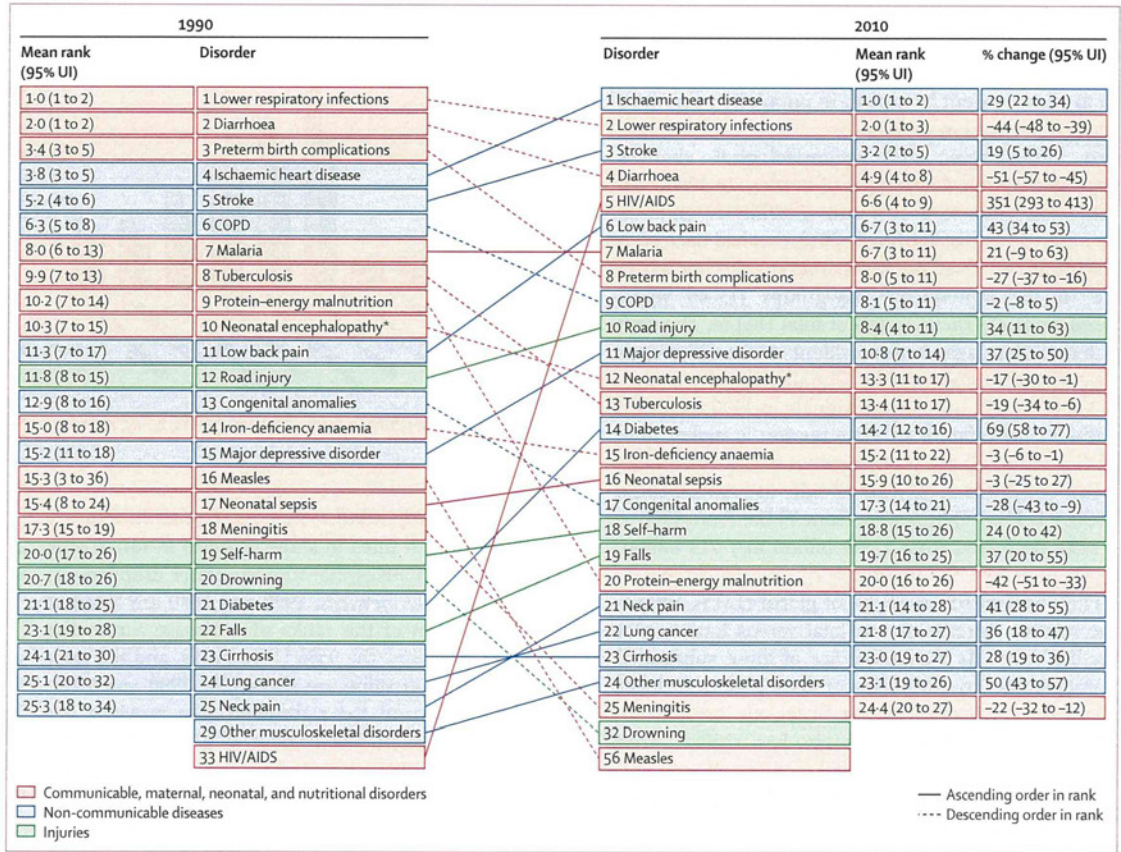


Figure 5: Global disability-adjusted life year ranks with 95% UI for the top 25 causes in 1990 and 2010, and the percentage change with 95% UIs between 1990 and 2010. UI=uncertainty interval. COPD=chronic obstructive pulmonary disease. *Includes birth asphyxia/trauma. An interactive version of this figure is available online at <http://healthmetricsandevaluation.org/gbd/visualizations/regional>.

seventh rank from 1990 to 2010, although uncertainty around malaria burden is large, spanning from the third to the eleventh rank. Of the malaria burden, 22.6% occurs in adults over age 15 years, a previously unrecognised cause of adult disease burden.³⁴ Measles dropped from the 16th to the 56th cause.

Some causes not included in the top 25 list have changed substantially over the period 1990 to 2010. The 15 causes with the largest increases include two causes of blindness or low vision: glaucoma and macular degeneration. Age-sex specific prevalence rates for these disorders have not increased; the rise in burden is completely due to the increase in the world population in the oldest age groups. Two major neurological disorders concentrated in older age-groups are also in the list of top increases—dementia and Parkinson's disease. Atrial fibrillation, peripheral vascular disease, and benign prostatic hyperplasia also increased substantially over the two decades. Not surprisingly, in view of the time course of the epidemic, HIV/AIDS increased by 351%. Kidney cancer is the one cancer to be included in this list of top increases. Conversely, the largest declines have occurred

for several of the infectious diseases including measles, tetanus, rabies, whooping cough, diarrhoeal diseases, lower respiratory infections, syphilis, leishmaniasis, and ascariasis. Large upward trends in exposure to forces of nature and downward trends in collective violence reflect the stochastic nature year by year in these causes.

East, southeast, and south Asia made up 52.7% of the global burden in 1990, declining to 48.3% in 2010 (table 3). The absolute number of DALYs has also declined in western and central Europe, central Asia, and Andean Latin America. Tropical Latin America, North Africa and Middle East, and eastern sub-Saharan Africa, have barely changed over the interval although in all three regions a substantial change in the age-structure and cause composition has occurred. Other regions have seen increases in the number of DALYs. The largest increases have been in western, southern, and central sub-Saharan Africa. The increase in the Caribbean is largely related to the Haiti earthquake in 2010 because of the increase in the death rate and the fact that Haiti accounts for 26.3% of the Caribbean population. Most high-income regions have also seen modest increases in

the number of DALYs. DALYs per 1000 confirm that these increases are largely driven by population growth; only in three regions, namely the Caribbean, southern sub-Saharan Africa, and eastern Europe, did the rate of DALYs per 1000 increase substantially over the 20-year period as a proportion of population. Declines in DALYs per 1000 have generally been larger in developing country regions than in high-income country regions.

These declines are partly due to the effect of population ageing lowering DALYs per 1000 from communicable, maternal, neonatal, and nutritional disorders, which are highest in the young age groups.

The share of burden from non-fatal health outcomes has generally increased from 1990 to 2010 in nearly all regions (figure 6); declines in southern sub-Saharan Africa can be related to the large HIV-related increase in

Cruces, Barakaldo, Spain (F Perez-Ruiz MD); Shanghai Mental Health Center, School of Medicine (Prof M R Phillips MD), School of Public Health, Shanghai Jiao Tong University, Shanghai, China (Prof Z) Zheng); Brigham Young University, Provo, UT, USA (Prof C A Pope III PhD); Centre for Addiction and Mental Health, Toronto, ON, Canada (S Popova MD, Prof J T Rehm PhD); Hospital Universitario de Canarias, Tenerife, Spain (E Porrini MD); Faculty of Medicine, School of Population and Public Health, University of British Columbia, Vancouver, BC, Canada (F Pourmalek MD); Vector Control Research Centre, Pondicherry, India (K D Ramaiah PhD); Center for Disease Analysis, Louisville, CO, USA (H Razavi PhD); University of California, Berkeley, Berkeley, CA, USA (M Regan MPH); NORC, University of Chicago, Chicago, IL, USA (D B Rein PhD); Complejo Hospitalario Caja De Seguro Social, Panama City, Panama (F Rodriguez de León MD); Centre for Alcohol Policy Research, Turning Point Alcohol and Drug Centre, Fitzroy, SA, Australia (Prof R Room PhD); Vanderbilt University, Nashville, TN, USA (Prof U Sampson MD); University of Alabama at Birmingham, Birmingham, AL, USA (Prof D C Schwebel PhD, J A Singh MBBS); Ministry of Interior, Madrid, Spain (M Segui-Gomez MD); Health Canada, Ottawa, ON, Canada

	Total DALYs (thousands)			DALYs (per thousand)		
	1990	2010	%Δ	1990	2010	%Δ
High-income Asia Pacific	38 934 (35 997-42 301)	42 486 (38 842-46 586)	9.1	231 (213-250)	239 (218-262)	3.5
Western Europe	115 151 (106 794-124 174)	113 364 (103 991-123 930)	-1.6	302 (280-326)	272 (250-298)	-9.8
Australasia	5382 (4966-5853)	6101 (5538-6733)	13.3	264 (243-287)	235 (214-260)	-10.7
High-income North America	79 582 (74 150-85 639)	91 073 (84 342-98 239)	14.4	287 (267-309)	268 (248-289)	-6.6
Central Europe	43 442 (40 918-46 341)	38 978 (36 355-41 960)	-10.3	355 (335-379)	327 (305-353)	-7.9
Southern Latin America	14 626 (13 755-15 688)	15 562 (14 458-16 917)	6.4	299 (281-321)	259 (240-281)	-13.5
Eastern Europe	88 654 (84 173-93 891)	93 104 (88 367-98 267)	5.0	400 (380-424)	449 (427-474)	12.3
East Asia	379 565 (355 627-405 991)	332 437 (306 978-358 541)	-12.4	319 (299-342)	238 (220-257)	-25.5
Tropical Latin America	53 824 (50 633-57 102)	56 781 (52 636-61 338)	5.5	349 (329-371)	281 (261-304)	-19.5
Central Latin America	53 375 (50 672-56 555)	57 706 (53 753-61 997)	8.1	321 (305-340)	250 (233-268)	-22.2
Southeast Asia	192 296 (180 655-204 699)	188 512 (175 435-202 574)	-2.0	418 (392-444)	309 (287-332)	-26.0
Central Asia	30 298 (28 853-31 889)	28 539 (26 801-30 395)	-5.8	441 (420-464)	356 (334-379)	-19.3
Andean Latin America	16 513 (15 558-17 564)	14 164 (13 074-15 304)	-14.2	427 (402-454)	265 (244-286)	-38.0
North Africa and Middle East	123 183 (116 867-130 540)	124 617 (115 374-134 555)	1.2	408 (387-432)	279 (259-302)	-31.5
Caribbean	15 582 (14 757-16 483)	26 698 (21 182-39 812)	71.3	437 (414-462)	614 (487-915)	40.6
South Asia	747 529 (705 906-798 664)	680 859 (633 905-727 982)	-8.9	665 (628-710)	422 (393-452)	-36.5
Oceania	4015 (3527-4618)	4779 (3907-5825)	19.0	621 (546-714)	481 (393-586)	-22.6
Southern sub-Saharan Africa	23 794 (22 429-25 299)	44 027 (41 666-46 474)	85.0	452 (426-481)	625 (591-659)	38.1
Eastern sub-Saharan Africa	207 130 (196 459-219 636)	204 526 (193 904-216 317)	-1.3	994 (943-1054)	575 (546-609)	-42.1
Central sub-Saharan Africa	60 702 (56 022-66 082)	77 391 (71 187-83 385)	27.5	1132 (1044-1232)	802 (738-864)	-29.1
Western sub-Saharan Africa	209 023 (196 925-221 795)	248 683 (232 208-266 906)	19.0	1040 (980-1103)	740 (691-794)	-28.8

Data are DALYs (95% uncertainty intervals) or % change. DALY=disability-adjusted life years. %Δ=percentage change.

Table 3: Disability-adjusted life years for 291 causes by region for 1990 and 2010, and the percentage change from 1990 to 2010

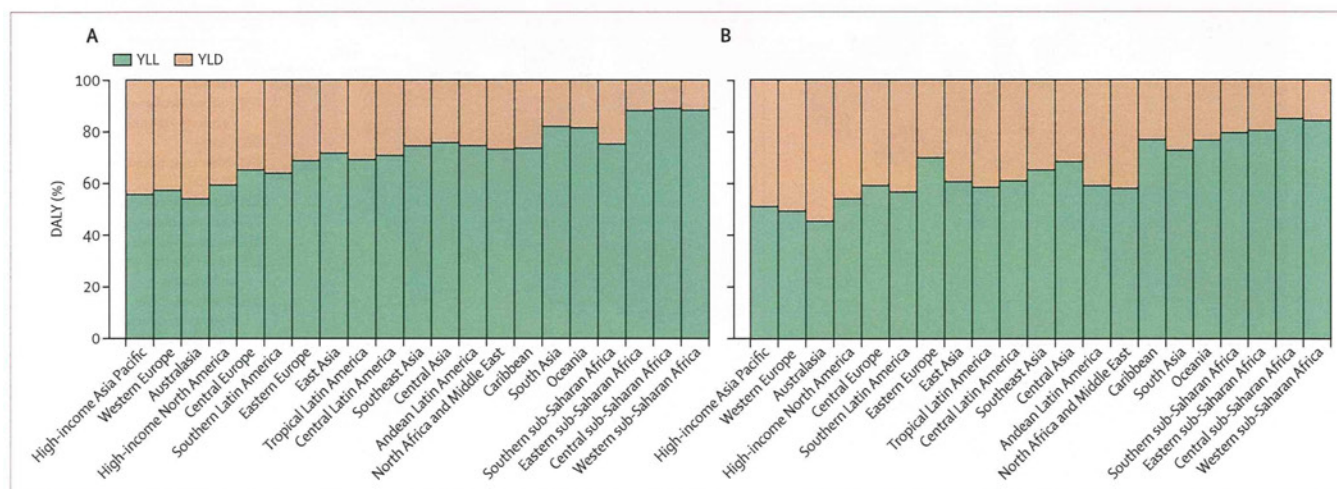


Figure 6: Years of life lost due to premature mortality and years lived with disability composition of total disability-adjusted life years by region, 1990 and 2010. Composition in 1990 (A) and 2010 (B). DALY=disability-adjusted life years. YLD=years of life lost due to premature mortality. YLL=years lived with disability.

(H Shin PhD); Queens Medical Center, Honolulu, HI, USA (D Singh MD); Department of Neuroscience (Prof L J Stovner PhD), Norwegian University of Science and Technology, Trondheim, Norway (Prof T Steiner PhD); Aga Khan University, Karachi, Pakistan (S Syed MBBS, A K M Zaidi MBBS); Drexel University School of Public Health, Philadelphia, PA, USA (J A Taylor PhD); Alberta Kidney Disease Network (Prof M Tonelli MD), University of Alberta, Edmonton, AB, Canada (N Wiebe BMath); Cincinnati Children's Hospital, Cincinnati, OH, USA (Prof J A Towbin MD); Department of Neurology, Copenhagen University Hospital, Herlev, Denmark (T Truelsen MD); University of Crete Medical School, Crete, Greece (Prof M K Tsilimbaris MD); Instituto Nacional de Epidemiologia, ANLIS, Malbran, Argentina (C Ubelda MD); KNCV Tuberculosis Foundation, The Hague, Netherlands (M J van der Werf PhD); Maastricht University Medical

mortality and in the Caribbean due to mortality from the 2010 Haiti earthquake. Figure 6, in which the regions are ordered by the mean age of death, shows that in general the share of burden from disability increased with the demographic and epidemiological transition. In 2010, the fraction of DALYs due to YLDs varied widely, from 55% in Australasia to 15% in central sub-Saharan Africa. Australasia had a higher ratio than high-income Asia Pacific; both had low mortality levels but higher YLD rates prevailed in Australasia. In eastern Europe, the fraction due to YLDs has not increased noticeably from 1990 to 2010 because of the rise in adult mortality in the region over this period, especially for men.

The global shift in the burden of disease from communicable, maternal, neonatal, and nutritional disorders to NCDs and injuries masks enormous epidemiological heterogeneity in the leading causes of burden in different regions. In the regions with an advanced demographic and epidemiological transition (high-income Asia Pacific, western Europe, Australasia, high-income North America, and central Europe), communicable, maternal, neonatal, and nutritional disorders account for less than 7% of DALYs (figure 7). Cancer and cardiovascular diseases account for a further 36% of DALYs. Mental and behavioural disorders account for 11% and musculoskeletal disorders account for 13%. Injuries make up about 11%. At the other end of the epidemi-

ological transition, in eastern, western, and central sub-Saharan Africa communicable, maternal, neonatal, and nutritional disorders account for 67–71% of DALYs. A middle group of regions have a transitional volume of burden due to communicable, maternal, neonatal, and nutritional disorders. Comparison of 1990 and 2010 shows the most profound shifts in these transitional regions, moving from a profile with substantial burden from infectious diseases predominantly in children and neonatal causes, to a much greater dominance of injuries, musculoskeletal disorders, mental and behavioural disorders, as well as cancers and cardiovascular diseases. The great rise in HIV/AIDS and tuberculosis is also evident in southern and eastern sub-Saharan Africa. In 2010, deaths from the Haiti earthquake accounted for the substantial change in cause composition in the Caribbean from 1990 to 2010.

Although a strong tendency exists for the cancer DALY rate to increase with the demographic and epidemiological transition, there is notable variation. Oceania and the Caribbean seem to have higher than expected rates and central Latin America, lower rates (figure 8). Lung, colon and rectum, breast, and pancreatic cancers are associated with DALY rates that are generally higher in the high-income regions, while cervical cancer is lower. Liver, stomach, leukaemia, and skin cancers show strong geographic variation. Among high-income

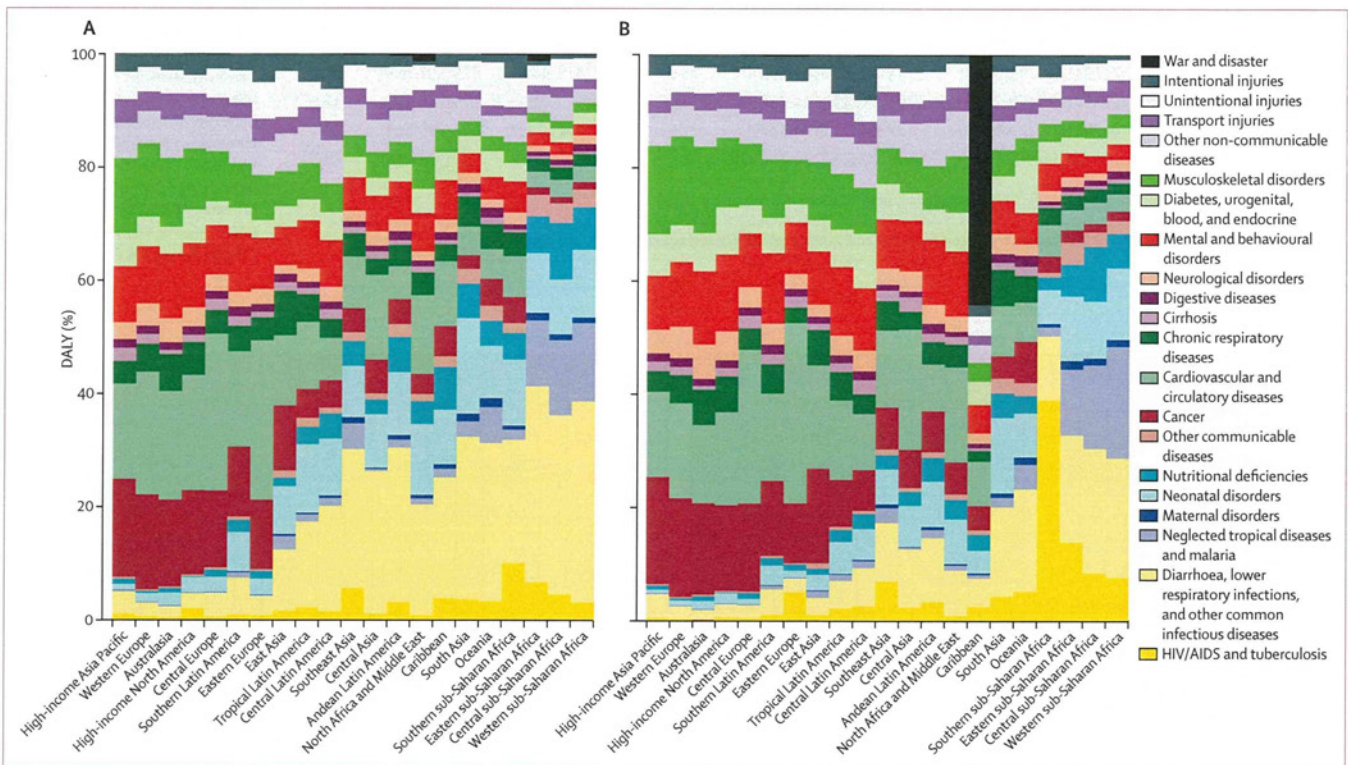


Figure 7: Percentage of disability-adjusted life years by 21 main cause groupings and region, 1990 and 2010. Proportion in 1990 (A) and 2010 (B). An interactive version of this figure is available online at <http://healthmetricsandevaluation.org/gbd/visualizations/regional>.

regions, Asia Pacific has a substantially different pattern with more stomach and liver cancer, and less breast cancer. Oceania has relatively high rates of liver, leukaemia, and cervical cancers.

The GBD study provides results for a set of diseases that are much smaller in magnitude at the global level but are important causes of burden in communities at risk. The neglected tropical diseases excluding malaria make up 1.0% of global DALYs (figure 9). Rates of neglected tropical diseases vary across regions by 961 fold. The highest rates were in central sub-Saharan Africa, largely because of the combination of schistosomiasis, onchocerciasis, African trypanosomiasis, and hookworm. Globally, leishmaniasis, schistosomiasis, hookworm, lymphatic filariasis, and food-borne trematodiasis are the dominant causes in this grouping. In view of the focal nature of the transmission of many of these diseases, the regional pattern varies substantially. As most of these diseases cause limited mortality, the neglected tropical diseases highlight why quantification of the disability from diseases is important.

The order of causes in figure 10 follows the global ranking of burden shown in figure 5. All causes that appear in the top 25 in any region are included in figure 10. The cells in the figure have been colour coded to help identify different patterns in each region. Eight causes appear as the leading cause in at least one region. Ischaemic heart disease is ranked first in seven of 21 regions. Lower respiratory infections are ranked first in Andean Latin America, south Asia, and Oceania. Malaria is ranked first in two regions: western and central sub-Saharan Africa. HIV/AIDS is ranked first in eastern and southern sub-Saharan Africa. Interpersonal violence is ranked first in central Latin America and ranked second in tropical Latin America. Due to the Haiti earthquake in 2010, forces of nature ranks first for the Caribbean. Low back pain is a top ten cause in 15 regions. Falls are a top ten cause in three regions. A total of 33 causes appear in the top ten in at least one region. This extended list includes disorders such as chronic kidney diseases, drug use disorders, cirrhosis, dementia, meningitis, liver cancer, stomach cancer, and colon and rectum cancers.

Discussion

The GBD 2010 estimates that the number of DALYs for the world in 1990 was 2.503 billion, having decreased by 0.5% in 2010. Relatively small changes in the number of DALYs have occurred because the increase in global population has been largely balanced by a decrease in age-sex-specific DALY rates. The differential effect of population growth, population ageing, and changes in age-sex-specific rates have led to striking changes in the profile of burden in every dimension. Over two decades, the burden has shifted substantially from communicable, maternal, neonatal, and nutritional disorders towards NCDs. A much larger fraction of the burden is now caused by disability rather than premature mortality.

Burden has shifted away from death of children younger than 5 years of age to death and disability in the reproductive age groups; nonetheless, a quarter of the burden is still caused by disease and injury in children younger than 5 years of age. Because of the richer dataset, improved methods, and more extensive cause list, our results for 1990 to 2010 supersede and replace previous GBD studies; comparisons with previous studies to assess change over time would not be valid.

Centre, Maastricht, Netherlands (Prof van Os PhD); National University of Singapore, Singapore (N Venketasubramanian FRCP); Beijing Neurosurgical Institute, Capital Medical University, Beijing, China (Prof W Wang MD); Brown University, Providence, RI, USA (Prof M A Weinstock MD); Royal Children's Hospital and

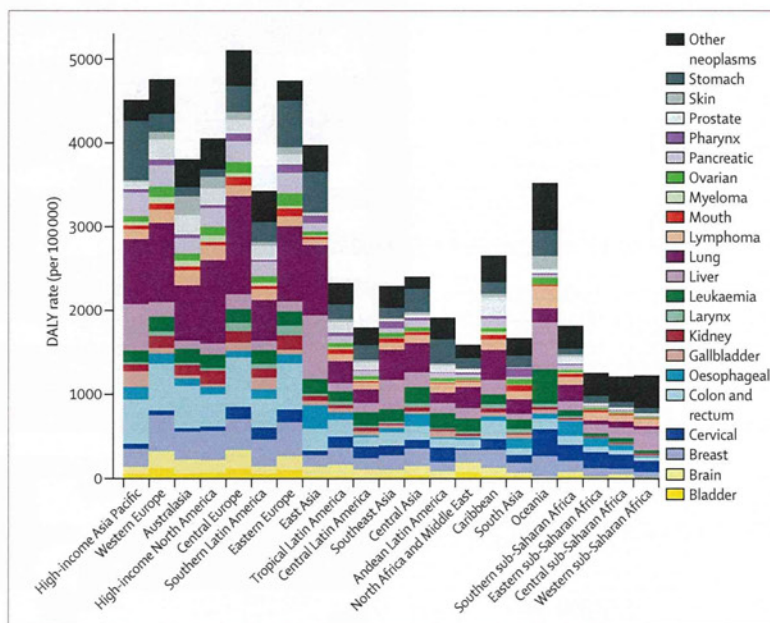


Figure 8: Cancer disability-adjusted life years per 100 000 by cause and region in 2010

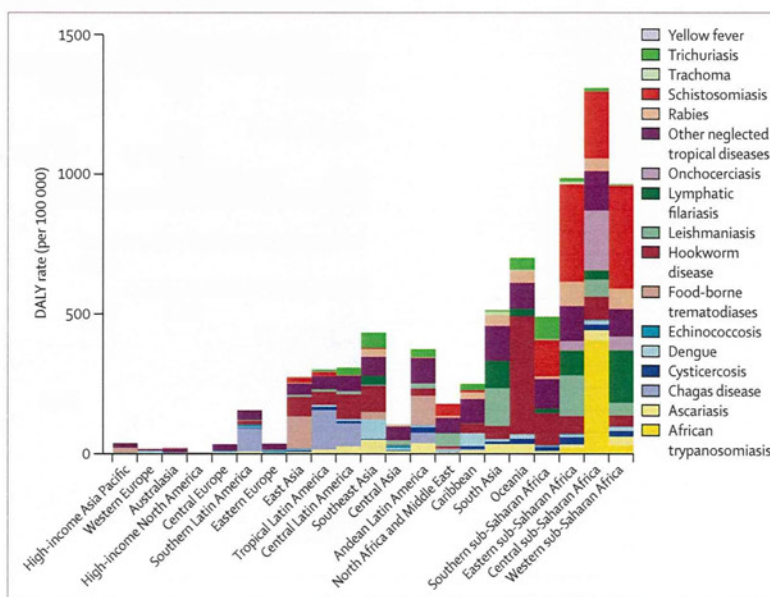


Figure 9: Neglected tropical disease disability-adjusted life year rates by cause and region in 2010. This figure excludes malaria.

Cause	Ranking legend																															
	1-10	11-20	21-30	31-50	51-90	91-176	Global	High-income Asia Pacific	Western Europe	Australasia	High-income North America	Central Europe	Southern Latin America	Eastern Europe	East Asia	Tropical Latin America	Central Latin America	Southeast Asia	Central Asia	Andean Latin America	North Africa and Middle East	Caribbean	South Asia	Oceania	Southern sub-Saharan Africa	Eastern sub-Saharan Africa	Central sub-Saharan Africa	Western sub-Saharan Africa				
Ischaemic heart disease	1	3	2	2	1	1	1	1	1	2	1	2	3	1	4	1	2	4	6	14	21	19	20									
Lower respiratory infections	2	7	21	30	21	17	6	13	15	7	6	4	2	1	5	4	1	1	1	2	3	4	2									
Cerebrovascular disease	3	1	3	5	7	2	3	2	1	4	11	1	3	11	4	3	12	11	7	16	14	16										
Diarrhoeal diseases	4	46	52	53	48	77	44	49	49	26	14	8	18	8	11	8	3	3	3	4	2	3										
HIV/AIDS	5	108	59	87	37	72	34	4	38	12	13	13	31	13	58	9	17	9	1	1	5	4										
Low back pain	6	2	1	1	3	3	2	3	5	3	7	7	7	5	2	13	10	14	15	17	23	13										
Malaria	7	163	162	157	155	163	166	163	169	145	154	22	162	142	66	58	44	5	20	2	1	1										
Preterm birth complications	8	58	44	29	26	37	12	35	27	9	9	11	8	6	8	11	2	7	6	5	6	7										
Chronic obstructive pulmonary disease	9	18	7	3	2	7	7	10	3	10	16	9	11	18	13	22	5	18	9	20	20	22										
Road injury	10	16	12	9	10	8	5	7	4	5	4	5	2	6	10	11	15	13	11	12	9											
Major depressive disorder	11	12	4	4	5	5	4	5	8	6	5	6	6	3	3	7	14	12	10	13	17	19										
Neonatal encephalopathy*	12	84	66	50	54	66	42	40	24	20	20	12	4	9	18	15	6	19	12	9	10	10										
Tuberculosis	13	42	107	123	124	55	65	17	37	46	44	2	15	21	33	17	8	4	4	7	7	12										
Diabetes	14	10	10	14	8	9	9	15	10	8	3	10	12	15	9	6	16	2	8	29	28	26										
Iron-deficiency anaemia	15	39	84	36	117	29	27	29	32	18	17	14	13	7	10	5	9	21	11	12	11	11										
Sepsis and other infectious disorders of the newborn baby	16	119	120	113	99	114	49	82	132	27	29	34	53	17	22	14	7	25	29	8	13	5										
Congenital anomalies	17	41	35	27	30	32	13	25	16	11	10	16	10	10	7	16	15	17	17	18	8	18										
Self-harm	18	5	15	18	14	11	14	6	13	29	25	29	14	32	38	33	13	26	27	32	37	69										
Falls	19	11	6	7	15	6	17	14	11	23	28	21	20	28	19	21	20	32	43	33	32	21										
Protein-energy malnutrition	20	114	119	129	116	122	80	123	99	59	34	49	68	35	37	32	19	20	36	6	3	6										
Neck pain	21	9	8	10	9	14	10	18	9	13	18	25	17	16	15	23	32	35	21	31	33	31										
Trachea, bronchus, and lung cancers	22	6	5	8	4	4	15	9	6	30	39	26	28	48	28	27	49	58	45	95	75	96										
Cirrhosis of the liver	23	17	19	37	16	10	16	11	21	19	12	15	9	22	17	34	22	16	37	30	27	25										
Other musculoskeletal disorders	24	4	9	6	6	13	8	16	14	16	15	23	19	19	21	24	31	27	26	35	36	36										
Meningitis	25	91	102	92	91	84	59	78	73	52	45	37	34	39	30	29	21	10	24	10	9	8										
Anxiety disorders	26	21	14	12	13	15	11	30	26	14	19	27	16	12	12	20	26	33	20	25	29	35										
Interpersonal violence	27	70	65	60	25	42	22	12	47	2	1	24	24	14	32	12	34	31	5	23	21	30										
Asthma	28	26	23	15	22	33	24	42	53	15	26	18	40	20	20	19	25	8	22	26	26	29										
Chronic kidney diseases	29	20	24	22	18	30	21	39	28	24	8	17	27	23	24	30	33	13	25	42	44	39										
Migraine	30	23	18	17	29	18	29	26	36	21	22	20	22	27	26	25	23	41	38	60	41	34										
Drug use disorders	31	25	20	11	11	28	18	23	35	22	24	33	26	25	16	28	35	40	18	39	49	47										
Drowning	32	48	88	64	64	49	48	28	19	35	32	31	23	30	41	50	24	37	35	28	22	38										
Liver cancer	33	13	37	52	49	39	54	60	7	56	47	28	45	50	47	49	84	24	62	64	66	40										
Fire, heat, and hot substances	34	71	94	84	73	74	55	34	79	74	71	56	43	54	42	37	18	34	33	22	24	17										
Alcohol use disorders	35	28	22	21	19	21	19	8	23	17	23	42	21	24	65	31	42	44	39	68	65	84										
Epilepsy	36	50	50	55	52	38	37	44	44	33	21	35	25	26	31	41	43	28	19	19	25	14										
Other cardiovascular and circulatory diseases	37	31	17	26	27	16	20	53	31	32	40	32	39	36	14	36	46	46	34	41	38	44										
Osteoarthritis	38	15	25	23	24	20	30	24	17	25	27	41	33	31	25	35	54	50	44	48	60	51										
Stomach cancer	39	8	29	48	56	23	32	20	12	40	35	51	30	29	46	54	61	39	75	74	80	82										
Maternal disorders	40	128	133	132	109	133	91	119	80	77	65	38	76	44	55	46	29	23	28	14	15	15										
Other hearing loss	41	27	30	28	36	25	31	31	25	36	33	36	38	34	39	45	37	59	42	37	50	41										
Hypertensive heart disease	42	37	32	68	33	19	28	36	29	28	37	30	32	43	23	26	39	70	23	50	47	64										
Schizophrenia	43	29	39	20	23	27	33	38	20	34	30	39	36	33	29	43	48	51	40	53	57	50										
Colon and rectum cancers	44	14	13	16	17	12	23	21	22	37	46	46	47	55	53	42	78	69	60	81	91	94										
Exposure to forces of nature	45	124	123	122	123	105	77	69	109	132	107	110	106	101	96	1	125	122	119	118	119	112										
Breast cancer	47	30	16	19	20	22	25	27	39	39	43	45	41	51	43	44	65	48	57	66	78	79										
Exposure to mechanical forces	48	76	92	75	75	71	64	19	54	75	56	50	29	45	36	57	36	42	16	38	30	53										
Alzheimer's disease and other dementias	49	19	11	13	12	24	26	33	41	44	50	70	58	62	64	39	88	81	66	98	101	91										
Cardiomyopathy and myocarditis	50	52	42	49	32	26	35	22	58	31	59	57	37	47	27	53	52	53	31	44	40	49										
Typhoid and paratyphoid fevers	52	150	158	151	149	161	79	161	74	98	88	19	165	83	57	104	28	109	32	36	46	37										
Syphilis	55	148	148	135	146	137	122	144	121	96	96	75	104	49	79	38	60	55	41	15	16	23										
Measles	56	157	156	152	154	156	157	160	162	157	149	54	128	98	151	155	27	74	47	24	48	28										
Oesophageal cancer	57	36	51	54	55	69	51	64	18	57	108	84	48	116	98	82	64	83	49	63	81	126										
Poisonings	58	107	105	74	42	73	102	32	40	135	94	88	49	91	60	101	41	22	64	40	34	59										
Benign prostatic hyperplasia	62	22	27	24	28	48	56	68	42	65	67	71	75	74	61	69	93	99	88	109	108	105										
Pancreatic cancer	64	24	26	31	31	31	38	37	48	60	62	77	64	75	88	62	117	114	80	132	130	137										
Sickle cell disorders	71	90	57	105	43	124	123	140	159	58	51	164	146	125	69	47	97	153	134	67	18	24										
Adverse effects of medical treatment	82	80	73	77	69	98	63	70	94	84	90	78	100	77	80	18	90	49	63	57	52	75										
Prostate cancer	88	56	28	25	34	41	39	61	122	51	55	122	93	63	95	40	150	91	68	117	126	120										

Figure 10: Regional ranking of leading causes of disability-adjusted life years in 2010

Causes in the figure are ordered according to global ranks for causes. The figure shows all causes that are in the 25 leading causes in at least one region. Ranks are also