

Trends in all-cause mortality among adults with diagnosed type 2 diabetes in West Malaysia: 2010 – 2019

Supplementary Information

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S1 Text. Calculations for mortality rates in the National Diabetes Registry population and the general population in Malaysia

a) National Diabetes Registry population

$$\text{Observed proportions of deaths} = \frac{\text{number of deaths within subgroup}}{\text{total number of people within subgroup}}$$

$$\text{Standardised deaths} = \text{standardised population} \times \text{observed proportions of deaths}$$

$$\text{Death rate confidence intervals} = \text{Death rate} \pm 1.96 \times \sqrt{\frac{\text{Death rate} \times (1 - \text{Death rate})}{\text{Frequency}}}$$

b) General population

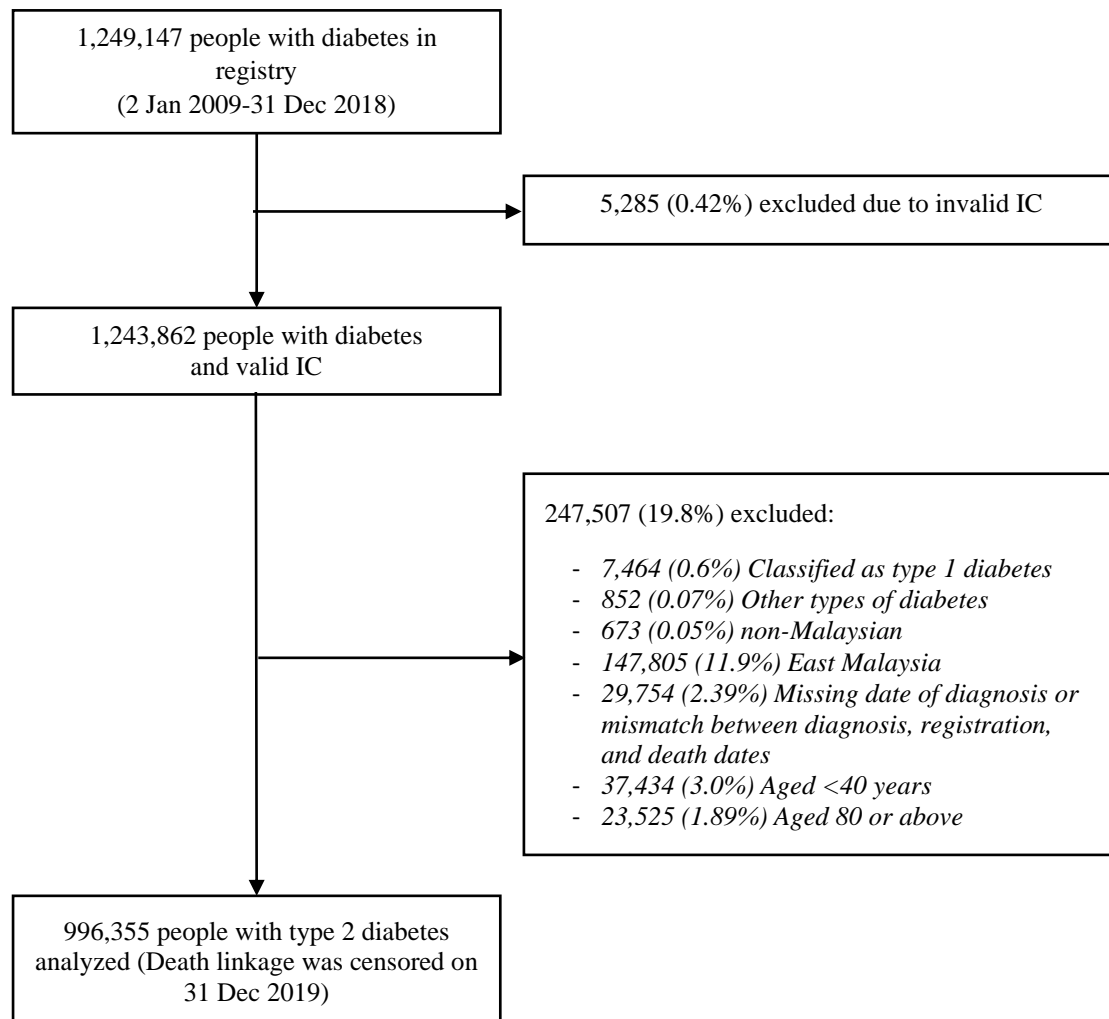
$$\text{Annual probability} = 1 - e^{-\text{death rate}^*}$$

*the death rate was taken from the Malaysia's abridged life tables for each respective year

$$\begin{aligned} \text{Expected number of deaths of general population within subgroup} \\ = \text{standardised population within subgroup} \times \text{annual probability} \end{aligned}$$

$$\text{Death rate for general population} = \frac{\text{expected number of deaths}}{\text{standardised population}} \times 10,000$$

Figure S1. Flow chart describing the numerator and denominator included in the all-cause mortality analysis in people with diagnosed type 2 diabetes in Malaysia



Footnotes: IC, identification card number (unique identifier).

Table S1. Proportions of publicly-funded primary care clinics in the Malaysian National Diabetes Registry between 2010 and 2019, stratified by states

State	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Johor	9.3%	8.6%	14.9%	16.2%	16.4%	16.8%	16.7%	16.4%	16.2%	16.1%
Kedah	5.1%	7.5%	5.5%	7.3%	7.5%	7.8%	9.1%	9.7%	10.6%	11.0%
Kelantan	10.3%	10.6%	5.2%	5.1%	5.1%	5.1%	5.1%	5.0%	4.9%	4.7%
Melaka	2.8%	5.9%	7.3%	6.8%	6.7%	6.5%	6.2%	6.0%	5.8%	5.7%
Negeri Sembilan	17.6%	18.4%	9.6%	8.7%	8.4%	8.1%	8.0%	7.8%	7.6%	7.5%
Pahang	7.4%	8.6%	7.7%	7.2%	7.1%	7.0%	6.9%	6.8%	6.7%	6.6%
Perak	7.8%	8.3%	11.6%	12.1%	12.2%	11.8%	11.4%	12.1%	12.4%	12.4%
Perlis	1.2%	1.1%	1.7%	2.2%	2.2%	2.1%	2.0%	2.0%	2.0%	2.0%
Pulau Pinang	4.9%	5.0%	7.1%	6.7%	6.6%	6.6%	6.4%	6.5%	6.6%	6.6%
Selangor	10.2%	9.9%	18.6%	17.6%	17.8%	18.2%	18.3%	17.6%	17.2%	17.1%
Terengganu	2.9%	4.5%	4.1%	3.8%	4.0%	4.1%	4.3%	4.4%	4.7%	4.7%
WP Kuala Lumpur	20.4%	11.2%	6.2%	5.9%	5.6%	5.5%	5.2%	5.1%	5.0%	5.1%
WP Putrajaya	0.2%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.5%	0.5%	0.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table S2. Trends in age-standardized all-cause mortality rates per 10,000 patient-years among people aged 40-79 years with diagnosed type 2 diabetes in Malaysia

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	AAPC, %	p-value
Overall													
Male		412 (383, 441)	376 (357, 394)	394 (384, 404)	408 (399, 417)	417 (408, 425)	405 (397, 413)	409 (402, 417)	411 (404, 418)	405 (398, 412)	397 (390, 404)	-0.02 (-0.64, 0.61)	0.954
Female		260 (241, 278)	241 (229, 254)	272 (265, 279)	278 (271, 284)	288 (282, 294)	277 (271, 282)	278 (272, 283)	282 (277, 287)	269 (264, 273)	258 (254, 263)	-0.49 (-1.57, 0.60)	0.376
Age group, years													
Male	40-49	202 (151, 253)	148 (116, 179)	155 (139, 171)	172 (157, 187)	182 (168, 197)	192 (177, 206)	191 (177, 205)	202 (188, 216)	202 (189, 216)	185 (172, 198)	2.46 (0.42, 4.55)	0.018*
	50-59	258 (219, 297)	221 (196, 246)	239 (226, 253)	270 (257, 283)	279 (267, 292)	273 (261, 284)	273 (262, 284)	286 (275, 296)	287 (276, 297)	282 (272, 292)	1.91 (0.73, 3.10)	0.002*
	60-69	429 (378, 480)	404 (371, 437)	415 (398, 433)	427 (411, 442)	431 (416, 445)	418 (405, 432)	417 (404, 429)	424 (412, 436)	410 (399, 421)	410 (400, 421)	-0.40 (-0.82, 0.01)	0.058
	70-79	752 (650, 853)	706 (641, 770)	744 (709, 778)	737 (707, 766)	752 (725, 780)	718 (692, 743)	745 (721, 770)	712 (690, 735)	709 (688, 729)	684 (665, 704)	-1.13 (-1.67, -0.58)	<0.001*
Female	40-49	98 (72, 125)	60 (46, 75)	92 (82, 102)	91 (82, 100)	104 (95, 113)	92 (84, 101)	101 (93, 109)	106 (98, 115)	107 (99, 115)	108 (99, 116)	3.39 (1.32, 5.50)	0.001*
	50-59	158 (134, 182)	147 (132, 163)	151 (142, 160)	167 (159, 175)	165 (157, 173)	165 (158, 173)	163 (156, 170)	173 (166, 180)	165 (158, 171)	158 (152, 164)	0.43 (-0.80, 1.67)	0.495
	60-69	273 (237, 308)	257 (235, 279)	277 (265, 290)	290 (278, 301)	291 (280, 301)	281 (271, 290)	287 (278, 296)	293 (284, 301)	279 (271, 287)	269 (261, 276)	-0.38 (-1.34, 0.60)	0.448
	70-79	508 (437, 579)	488 (442, 533)	581 (555, 607)	561 (539, 583)	608 (587, 629)	575 (556, 595)	566 (547, 584)	557 (540, 574)	527 (511, 542)	504 (490, 518)	-1.70 (-3.01, -0.37)	0.012*
Duration of diabetes, years													
Male	<5	310 (275, 345)	292 (268, 317)	308 (295, 320)	313 (302, 325)	317 (306, 329)	306 (295, 317)	299 (288, 309)	303 (292, 313)	293 (283, 303)	287 (277, 297)	-1.04 (-1.60, -0.47)	<0.001*
	5-10	430 (377, 483)	350 (319, 381)	373 (355, 390)	393 (377, 408)	381 (366, 395)	384 (371, 398)	381 (369, 393)	392 (380, 404)	387 (375, 398)	376 (365, 387)	0.05 (-0.66, 0.75)	0.898
	10-15	448 (348, 547)	444 (381, 507)	458 (424, 491)	476 (448, 504)	512 (487, 538)	492 (470, 514)	510 (490, 530)	498 (480, 517)	481 (464, 498)	473 (458, 489)	-0.09 (-1.16, 0.98)	0.863

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	AAPC, %	p-value
	>15	574 (443, 704)	563 (473, 652)	585 (534, 636)	596 (553, 639)	633 (592, 674)	582 (546, 618)	622 (589, 656)	611 (582, 640)	637 (610, 664)	630 (606, 655)	1.12 (0.55, 1.69)	<0.001*
Female	<5	187 (165, 210)	161 (146, 175)	172 (164, 180)	172 (165, 180)	174 (166, 181)	165 (158, 172)	163 (156, 170)	165 (158, 171)	160 (153, 167)	146 (140, 153)	-1.82 (-2.82, -0.81)	<0.001*
	5-10	230 (199, 261)	233 (214, 253)	250 (239, 262)	248 (238, 258)	248 (239, 258)	240 (231, 248)	235 (227, 243)	245 (237, 253)	228 (220, 235)	223 (216, 230)	-1.34 (-2.02, -0.65)	<0.001*
	10-15	320 (251, 388)	277 (237, 316)	324 (302, 347)	354 (335, 372)	377 (359, 394)	357 (343, 372)	363 (349, 377)	360 (348, 373)	340 (329, 3512)	317 (307, 328)	-0.94 (-2.85, 1.00)	0.338
	>15	389 (290, 487)	377 (313, 441)	455 (416, 493)	451 (419, 484)	487 (456, 517)	474 (446, 501)	490 (465, 514)	496 (474, 517)	488 (469, 507)	493 (476, 510)	1.54 (0.70, 2.38)	<0.001*
Prior CVD													
Male	Present	234 (149, 320)	379 (309, 450)	529 (488, 570)	588 (550, 626)	621 (583, 659)	565 (529, 600)	604 (569, 639)	578 (546, 610)	621 (589, 652)	625 (594, 656)	3.40 (0.79, 6.07)	0.011*
	Absent or Unknown	429 (398, 459)	377 (357, 396)	380 (369, 390)	389 (380, 398)	399 (390, 407)	391 (383, 399)	393 (385, 400)	397 (390, 405)	389 (382, 396)	380 (374, 387)	-0.16 (-0.77, 0.45)	0.599
Female	Present	259 (170, 349)	314 (253, 376)	379 (344, 413)	402 (370, 434)	415 (384, 447)	454 (422, 486)	423 (392, 453)	456 (426, 486)	436 (407, 465)	451 (421, 480)	3.01 (1.65, 4.38)	<0.001*
	Absent or Unknown	260 (241, 279)	237 (225, 250)	264 (257, 271)	269 (263, 275)	280 (274, 286)	266 (260, 271)	270 (264, 275)	273 (268, 278)	260 (255, 265)	251 (246, 255)	-0.56 (-1.58, 0.48)	0.290
Ethnicity													
Male	Bumiputera	462 (422, 502)	384 (360, 408)	437 (423, 451)	447 (434, 459)	464 (452, 476)	455 (444, 466)	455 (445, 466)	457 (447, 466)	447 (438, 457)	435 (426, 444)	0.02 (-0.92, 0.96)	0.971
	Chinese	346 (292, 400)	346 (308, 384)	327 (308, 346)	341 (324, 358)	346 (330, 362)	322 (307, 337)	343 (328, 357)	338 (324, 352)	332 (319, 345)	331 (318, 344)	-0.23 (-0.72, 0.26)	0.350
	Indian	396 (328, 465)	379 (330, 429)	358 (334, 382)	390 (368, 412)	387 (367, 408)	378 (359, 397)	374 (356, 392)	373 (356, 390)	366 (349, 382)	354 (338, 370)	-0.88 (-1.81, 0.06)	0.068
	Others	380 (87, 674)	198 (29, 367)	293 (170, 416)	428 (301, 556)	403 (288, 519)	436 (323, 549)	353 (257, 450)	365 (274, 456)	456 (359, 552)	314 (236, 392)	0.99 (-4.53, 6.83)	0.731
Female	Bumiputera	302 (277, 327)	268 (253, 283)	304 (295, 313)	306 (297, 314)	326 (318, 334)	310 (303, 318)	311 (304, 318)	318 (311, 324)	297 (291, 303)	288 (282, 294)	-0.55 (-1.72, 0.63)	0.361
	Chinese	208	200	207	205	210	213	209	207	207	186	-0.99	0.158

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	AAPC, %	p-value
		(169, 247)	(172, 227)	(193, 221)	(192, 218)	(198, 222)	(202, 225)	(198, 220)	(197, 218)	(197, 217)	(176, 195)	(-2.35, 0.39)	
	Indian	247 (201, 292)	205 (175, 234)	256 (239, 273)	288 (272, 304)	260 (246, 274)	246 (233, 259)	243 (230, 255)	243 (231, 255)	233 (222, 244)	228 (217, 239)	-1.83 (-3.37, -0.27)	0.022*
	Others	230 (12, 448)	130 (12, 247)	349 (237, 461)	312 (220, 403)	268 (188, 347)	231 (161, 300)	322 (245, 399)	268 (202, 335)	275 (211, 339)	250 (192, 308)	0.36 (-4.59, 5.56)	0.891
Region													
Male	Central	382 (344, 421)	370 (343, 398)	363 (349, 378)	384 (370, 398)	380 (367, 393)	372 (360, 384)	381 (369, 393)	376 (364, 387)	359 (348, 369)	358 (348, 368)	-0.65 (-1.31, 0.01)	0.054
	East Coast	523 (450, 596)	396 (355, 437)	460 (433, 487)	492 (467, 518)	512 (487, 536)	481 (459, 504)	496 (474, 517)	485 (465, 505)	467 (448, 486)	452 (434, 471)	-0.36 (-1.87, 1.17)	0.643
	Northern	430 (362, 499)	357 (317, 397)	412 (392, 433)	406 (389, 423)	423 (407, 440)	408 (393, 423)	404 (389, 418)	416 (402, 429)	421 (408, 433)	409 (398, 421)	0.27 (-0.36, 0.91)	0.401
	Southern	358 (267, 450)	353 (290, 416)	384 (358, 410)	394 (372, 416)	415 (394, 436)	408 (388, 427)	409 (390, 427)	420 (402, 438)	423 (406, 441)	412 (395, 428)	1.09 (0.35, 1.84)	0.004*
Female	Central	234 (209, 259)	205 (189, 222)	252 (242, 263)	260 (250, 270)	261 (251, 270)	252 (243, 261)	250 (241, 258)	257 (249, 265)	241 (233, 249)	225 (218, 232)	-0.87 (-2.51, 0.79)	0.302
	East Coast	357 (309, 404)	351 (321, 380)	335 (317, 354)	322 (305, 338)	357 (340, 373)	333 (318, 348)	335 (321, 349)	336 (323, 349)	322 (309, 334)	315 (303, 327)	-0.97 (-1.76, -0.18)	0.016*
	Northern	284 (239, 329)	243 (218, 269)	277 (263, 291)	268 (257, 280)	294 (283, 305)	285 (275, 296)	290 (280, 300)	287 (277, 296)	278 (269, 287)	266 (257, 274)	-0.25 (-1.46, 0.97)	0.682
	Southern	196 (144, 249)	221 (182, 260)	256 (238, 273)	291 (275, 307)	279 (264, 293)	269 (256, 283)	267 (254, 280)	275 (263, 288)	258 (246, 270)	261 (250, 273)	-0.26 (-1.62, 1.12)	0.714

Footnotes: All numbers in brackets are 95% confidence intervals of either the mortality rates or AAPC. Cardiovascular disease (CVD) was defined as the presence of either ischemic heart disease, stroke, or amputation at registration in the registry. The Bumiputera ethnicity is a term used in Malaysia to describe Malays and other native people.

Table S3. Trends in standardized mortality ratios in people aged 40-79 years with diagnosed type 2 diabetes in Malaysia

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Overall											
Male		1.71 (1.68, 1.73)	1.66 (1.63, 1.69)	1.76 (1.73, 1.79)	1.88 (1.85, 1.91)	1.96 (1.93, 1.99)	1.83 (1.8, 1.86)	1.91 (1.88, 1.94)	1.93 (1.9, 1.96)	1.84 (1.81, 1.87)	1.83 (1.80, 1.86)
Female		1.64 (1.61, 1.66)	1.56 (1.53, 1.59)	1.79 (1.76, 1.82)	1.88 (1.85, 1.91)	2.00 (1.96, 2.03)	1.90 (1.86, 1.93)	1.95 (1.92, 1.98)	2.02 (1.99, 2.06)	1.89 (1.86, 1.92)	1.85 (1.82, 1.89)
Age group, years											
Male	40-49	4.63 (4.33, 4.94)	3.41 (3.15, 3.68)	3.58 (3.32, 3.86)	3.97 (3.69, 4.27)	4.11 (3.83, 4.41)	4.10 (3.82, 4.39)	4.32 (4.03, 4.62)	4.44 (4.15, 4.74)	4.26 (3.98, 4.55)	3.89 (3.62, 4.16)
	50-59	2.60 (2.50, 2.70)	2.15 (2.06, 2.24)	2.33 (2.24, 2.42)	2.68 (2.58, 2.78)	2.81 (2.70, 2.91)	2.57 (2.47, 2.66)	2.72 (2.62, 2.82)	2.77 (2.67, 2.87)	2.66 (2.56, 2.76)	2.60 (2.51, 2.70)
	60-69	1.81 (1.76, 1.86)	1.75 (1.71, 1.80)	1.84 (1.79, 1.89)	1.97 (1.91, 2.02)	2.04 (1.99, 2.10)	1.86 (1.81, 1.91)	1.94 (1.88, 1.99)	1.95 (1.90, 2.01)	1.81 (1.76, 1.86)	1.82 (1.77, 1.87)
	70-79	1.26 (1.23, 1.30)	1.35 (1.31, 1.39)	1.43 (1.39, 1.47)	1.45 (1.41, 1.49)	1.51 (1.47, 1.55)	1.43 (1.39, 1.47)	1.50 (1.45, 1.54)	1.48 (1.44, 1.53)	1.44 (1.40, 1.49)	1.43 (1.39, 1.47)
Female	40-49	4.46 (4.11, 4.83)	2.65 (2.39, 2.93)	4.08 (3.75, 4.44)	3.96 (3.64, 4.31)	4.46 (4.12, 4.82)	3.90 (3.58, 4.23)	4.26 (3.93, 4.61)	4.56 (4.22, 4.93)	4.42 (4.09, 4.77)	4.41 (4.08, 4.76)
	50-59	2.79 (2.68, 2.91)	2.45 (2.35, 2.55)	2.53 (2.43, 2.64)	2.84 (2.73, 2.95)	2.86 (2.74, 2.97)	2.9 (2.79, 3.02)	2.74 (2.63, 2.85)	2.85 (2.74, 2.96)	2.64 (2.53, 2.75)	2.54 (2.43, 2.64)
	60-69	1.85 (1.79, 1.90)	1.78 (1.73, 1.84)	1.97 (1.91, 2.03)	2.12 (2.07, 2.18)	2.19 (2.13, 2.25)	2.02 (1.96, 2.07)	2.12 (2.06, 2.18)	2.15 (2.09, 2.21)	1.99 (1.94, 2.05)	1.93 (1.88, 1.99)
	70-79	1.16 (1.12, 1.19)	1.16 (1.13, 1.20)	1.41 (1.38, 1.45)	1.40 (1.37, 1.44)	1.56 (1.52, 1.60)	1.49 (1.45, 1.53)	1.52 (1.48, 1.56)	1.58 (1.54, 1.63)	1.48 (1.44, 1.52)	1.47 (1.43, 1.51)
Duration of diabetes, years											
Male	<5	1.58 (1.52, 1.63)	1.57 (1.52, 1.63)	1.67 (1.62, 1.73)	1.75 (1.69, 1.81)	1.80 (1.74, 1.87)	1.67 (1.61, 1.73)	1.68 (1.63, 1.74)	1.71 (1.65, 1.77)	1.60 (1.55, 1.66)	1.58 (1.52, 1.64)
	5-10	1.84 (1.79, 1.90)	1.60 (1.55, 1.65)	1.73 (1.68, 1.78)	1.87 (1.82, 1.92)	1.85 (1.80, 1.90)	1.80 (1.74, 1.85)	1.83 (1.78, 1.89)	1.90 (1.85, 1.96)	1.81 (1.76, 1.87)	1.78 (1.73, 1.84)
	10-15	1.62 (1.57, 1.68)	1.73 (1.67, 1.79)	1.81 (1.74, 1.87)	1.93 (1.87, 2.00)	2.13 (2.06, 2.20)	1.97 (1.90, 2.04)	2.10 (2.03, 2.17)	2.07 (2.01, 2.14)	1.94 (1.87, 2.01)	1.93 (1.87, 2.00)
	>15	1.73 (1.66, 1.81)	1.85 (1.77, 1.93)	1.95 (1.87, 2.03)	2.05 (1.96, 2.13)	2.22 (2.14, 2.31)	1.98 (1.90, 2.06)	2.16 (2.08, 2.25)	2.16 (2.07, 2.25)	2.18 (2.10, 2.27)	2.19 (2.11, 2.28)
Female	<5	1.53 (1.47, 1.59)	1.33 (1.28, 1.39)	1.45 (1.39, 1.51)	1.49 (1.43, 1.55)	1.53 (1.47, 1.60)	1.45 (1.39, 1.51)	1.45 (1.39, 1.51)	1.49 (1.43, 1.55)	1.42 (1.36, 1.48)	1.32 (1.26, 1.38)
	5-10	1.53 (1.48, 1.58)	1.59 (1.54, 1.64)	1.74 (1.69, 1.79)	1.77 (1.71, 1.82)	1.81 (1.76, 1.87)	1.73 (1.68, 1.78)	1.74 (1.68, 1.79)	1.85 (1.79, 1.9)	1.68 (1.63, 1.73)	1.67 (1.62, 1.73)
	10-15	1.79 (1.73, 1.85)	1.59 (1.54, 1.65)	1.90 (1.84, 1.97)	2.13 (2.07, 2.20)	2.33 (2.26, 2.40)	2.19 (2.12, 2.26)	2.28 (2.21, 2.35)	2.32 (2.25, 2.39)	2.15 (2.08, 2.22)	2.05 (1.98, 2.12)
	>15	1.73 (1.66, 1.80)	1.73 (1.66, 1.80)	2.14 (2.06, 2.22)	2.19 (2.10, 2.27)	2.42 (2.33, 2.51)	2.33 (2.25, 2.42)	2.48 (2.40, 2.57)	2.59 (2.50, 2.68)	2.50 (2.42, 2.60)	2.60 (2.51, 2.69)
Prior CVD											
Male	Present	0.97 (0.95, 0.99)	1.68 (1.65, 1.71)	2.37 (2.34, 2.41)	2.71 (2.67, 2.75)	2.92 (2.88, 2.96)	2.55 (2.52, 2.59)	2.81 (2.78, 2.85)	2.72 (2.68, 2.76)	2.82 (2.78, 2.86)	2.87 (2.84, 2.91)

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	Absent or Unknown	1.77 (1.75, 1.80)	1.67 (1.64, 1.7)	1.70 (1.67, 1.73)	1.79 (1.76, 1.82)	1.88 (1.84, 1.91)	1.77 (1.74, 1.80)	1.83 (1.80, 1.86)	1.87 (1.83, 1.90)	1.77 (1.74, 1.8)	1.75 (1.72, 1.78)
Female	Present	1.63 (1.61, 1.66)	2.03 (2.00, 2.06)	2.50 (2.46, 2.53)	2.72 (2.68, 2.76)	2.88 (2.84, 2.92)	3.11 (3.07, 3.15)	2.96 (2.92, 3.01)	3.27 (3.23, 3.32)	3.07 (3.03, 3.11)	3.23 (3.19, 3.28)
	Absent or Unknown	1.64 (1.61, 1.67)	1.53 (1.50, 1.56)	1.74 (1.71, 1.77)	1.82 (1.79, 1.85)	1.94 (1.91, 1.97)	1.82 (1.79, 1.85)	1.89 (1.86, 1.92)	1.96 (1.93, 1.99)	1.83 (1.80, 1.86)	1.8 (1.77, 1.83)
Ethnicity											
Male	Bumiputera	1.69 (1.66, 1.71)	1.55 (1.52, 1.57)	1.78 (1.75, 1.81)	1.88 (1.85, 1.91)	1.99 (1.96, 2.02)	1.86 (1.83, 1.89)	1.94 (1.91, 1.97)	1.95 (1.92, 1.98)	1.84 (1.81, 1.87)	1.82 (1.79, 1.85)
	Chinese	1.75 (1.72, 1.78)	1.86 (1.82, 1.89)	1.79 (1.76, 1.82)	1.91 (1.87, 1.94)	1.96 (1.93, 2.00)	1.78 (1.75, 1.82)	1.92 (1.89, 1.96)	1.93 (1.90, 1.97)	1.86 (1.83, 1.9)	1.88 (1.85, 1.92)
	Indian	1.41 (1.39, 1.44)	1.38 (1.35, 1.4)	1.31 (1.28, 1.33)	1.45 (1.43, 1.48)	1.48 (1.46, 1.51)	1.40 (1.38, 1.43)	1.42 (1.40, 1.45)	1.46 (1.44, 1.49)	1.38 (1.36, 1.41)	1.35 (1.32, 1.37)
	Others	2.29 (2.25, 2.33)	0.99 (0.97, 1.02)	1.48 (1.45, 1.51)	2.17 (2.14, 2.21)	2.11 (2.07, 2.15)	2.21 (2.18, 2.25)	1.84 (1.81, 1.87)	1.95 (1.92, 1.99)	2.39 (2.36, 2.43)	1.55 (1.52, 1.58)
Female	Bumiputera	1.58 (1.56, 1.61)	1.54 (1.51, 1.56)	1.77 (1.74, 1.80)	1.83 (1.80, 1.85)	2.00 (1.97, 2.03)	1.88 (1.85, 1.91)	1.93 (1.90, 1.96)	2.01 (1.98, 2.04)	1.83 (1.80, 1.86)	1.82 (1.79, 1.85)
	Chinese	1.88 (1.84, 1.92)	1.71 (1.67, 1.74)	1.84 (1.80, 1.88)	1.88 (1.85, 1.92)	1.97 (1.93, 2.01)	1.98 (1.94, 2.02)	1.99 (1.95, 2.03)	2.03 (1.99, 2.07)	2.04 (2.00, 2.08)	1.88 (1.84, 1.92)
	Indian	1.51 (1.48, 1.54)	1.23 (1.21, 1.26)	1.54 (1.52, 1.57)	1.77 (1.74, 1.80)	1.63 (1.60, 1.66)	1.52 (1.49, 1.55)	1.55 (1.52, 1.58)	1.60 (1.57, 1.63)	1.44 (1.41, 1.46)	1.42 (1.40, 1.45)
	Others	1.36 (1.33, 1.38)	0.71 (0.69, 0.73)	1.97 (1.94, 2.00)	1.75 (1.72, 1.78)	1.54 (1.51, 1.56)	1.35 (1.33, 1.38)	1.94 (1.90, 1.97)	1.72 (1.69, 1.75)	1.71 (1.68, 1.74)	1.46 (1.43, 1.49)

Footnotes: All numbers in brackets are 95% confidence intervals of standardized mortality ratios. Cardiovascular disease (CVD) was defined as the presence of either ischemic heart disease, stroke, or amputation at registration in the registry. The Bumiputera ethnicity is a term used in Malaysia to describe Malays and other native people.

Table S4. Trends in age-standardized all-cause mortality rates per 10,000 patient-years among people aged 40-79 years with diagnosed type 2 diabetes in Malaysia (for clinics that were included in all years from 2012 to 2018)

		2012	2015	2017	2019	AAPC, %	p-value
Overall							
Male		390 (379, 400)	400 (391, 408)	405 (398, 413)	388 (382, 395)	-0.14 (-0.78, 0.51)	0.676
Female		269 (262, 276)	275 (269, 281)	278 (273, 283)	253 (248, 257)	-0.62 (-1.81, 0.59)	0.313
Age group, years							
Male	40-49	153 (136, 170)	190 (175, 205)	202 (188, 217)	177 (164, 191)	2.13 (-0.14, 4.45)	0.066
	50-59	232 (218, 246)	270 (258, 282)	279 (268, 290)	276 (265, 287)	2.06 (0.78, 3.36)	0.002*
	60-69	415 (396, 434)	409 (395, 423)	418 (405, 430)	402 (390, 413)	-0.56 (-1.04, -0.08)	0.023*
	70-79	733 (697, 769)	713 (687, 739)	703 (680, 726)	670 (650, 690)	-1.30 (-1.89, -0.71)	<0.001*
Female	40-49	88 (78, 99)	91 (82, 99)	103 (94, 112)	105 (96, 114)	3.70 (1.72, 5.72)	<0.001*
	50-59	150 (141, 159)	160 (152, 168)	167 (160, 174)	153 (146, 160)	0.07 (-1.15, 1.29)	0.916
	60-69	271 (258, 284)	280 (270, 290)	290 (280, 299)	262 (254, 270)	-0.39 (-1.54, 0.77)	0.506
	70-79	576 (549, 603)	571 (552, 591)	549 (532, 567)	492 (477, 507)	-1.89 (-3.27, -0.50)	0.008*
Duration of diabetes, years							
Male	<5	305 (292, 318)	303 (292, 314)	294 (283, 305)	276 (265, 286)	-1.39 (-2.08, -0.70)	<0.001*
	5-10	369 (351, 387)	380 (366, 394)	388 (375, 400)	366 (354, 377)	-0.12 (-0.83, 0.60)	0.739
	10-15	454 (419, 489)	487 (465, 510)	493 (474, 512)	466 (449, 482)	-0.13 (-1.13, 0.87)	0.797
	>15	567 (516, 618)	563 (526, 599)	602 (572, 632)	625 (600, 651)	1.32 (0.65, 1.99)	<0.001*
Female	<5	173 (165, 182)	163 (156, 171)	161 (154, 168)	141 (135, 148)	-2.28 (-3.22, -1.33)	<0.001*

		2012	2015	2017	2019	AAPC, %	p-value
	5-10	244 (232, 255)	237 (228, 246)	242 (234, 251)	216 (208, 223)	-1.44 (-2.38, -0.5)	0.003*
	10-15	320 (297, 343)	351 (336, 366)	352 (339, 365)	309 (298, 320)	-1.03 (-3.01, 0.99)	0.314
	>15	448 (409, 488)	475 (447, 504)	488 (466, 510)	486 (468, 504)	1.42 (0.53, 2.33)	0.002*
Prior CVD							
Male	Present	526 (483, 568)	560 (524, 596)	561 (527, 596)	607 (572, 641)	3.04 (0.41, 5.75)	0.023*
	Absent or Unknown	375 (364, 386)	386 (378, 395)	393 (386, 401)	374 (367, 381)	-0.18 (-0.8, 0.45)	0.577
Female	Present	392 (355, 429)	452 (418, 485)	451 (418, 484)	436 (404, 468)	2.30 (0.59, 4.03)	0.008*
	Absent or Unknown	260 (252, 267)	264 (258, 270)	270 (264, 275)	246 (241, 251)	-0.58 (-1.73, 0.58)	0.328
Ethnicity							
Male	Bumiputera	431 (417, 446)	448 (437, 460)	449 (439, 460)	424 (415, 433)	-0.13 (-1.11, 0.86)	0.800
	Chinese	329 (309, 349)	322 (307, 337)	336 (322, 350)	329 (315, 342)	-0.29 (-0.71, 0.15)	0.194
	Indian	354 (329, 378)	376 (357, 395)	375 (357, 393)	349 (332, 365)	-0.89 (-1.96, 0.19)	0.107
	Others	315 (183, 447)	420 (305, 534)	351 (257, 446)	301 (218, 383)	1.10 (-4.61, 7.15)	0.712
Female	Bumiputera	301 (291, 310)	309 (301, 317)	314 (307, 321)	282 (276, 288)	-0.65 (-1.93, 0.65)	0.326
	Chinese	206 (191, 221)	214 (202, 226)	205 (194, 216)	185 (175, 195)	-1.10 (-2.35, 0.16)	0.087
	Indian	257 (239, 274)	245 (232, 258)	244 (232, 256)	225 (214, 236)	-1.91 (-3.62, -0.18)	0.031*
	Others	331 (216, 446)	213 (143, 283)	278 (206, 349)	241 (179, 303)	1.79 (-4.33, 8.30)	0.576
Region							
Male	Central	364 (349, 379)	372 (360, 385)	377 (366, 389)	356 (345, 366)	-0.60 (-1.28, 0.10)	0.091
	East Coast	447 (418, 477)	475 (451, 499)	476 (454, 498)	443 (423, 464)	-0.41 (-1.95, 1.16)	0.611

		2012	2015	2017	2019	AAPC, %	p-value
	Northern	412 (390, 434)	399 (384, 415)	405 (391, 419)	398 (386, 411)	-0.09 (-0.72, 0.54)	0.774
	Southern	373 (346, 401)	405 (385, 425)	418 (400, 437)	402 (385, 420)	1.09 (0.15, 2.04)	0.023*
Female	Central	253 (242, 263)	253 (244, 261)	257 (248, 265)	225 (218, 232)	-0.83 (-2.5, 0.86)	0.335
	East Coast	335 (315, 355)	332 (316, 347)	332 (317, 347)	314 (301, 327)	-1.07 (-2.00, -0.13)	0.025*
	Northern	271 (257, 286)	283 (272, 294)	282 (272, 292)	256 (247, 265)	-0.56 (-1.94, 0.84)	0.433
	Southern	254 (236, 273)	267 (254, 281)	273 (260, 286)	255 (243, 266)	-0.38 (-1.64, 0.91)	0.566

Footnotes: All numbers in brackets are 95% confidence intervals of either the mortality rates or AAPC. Cardiovascular disease (CVD) was defined as the presence of either ischemic heart disease, stroke, or amputation at registration into the registry. The Bumiputera ethnicity is a term used in Malaysia to describe Malays and other native people. AAPC, average annual percent change.

Table S5. Trends in standardized mortality ratios in people aged 40-79 years with diagnosed type 2 diabetes in Malaysia (for clinics that were included in all years from 2012 to 2018)

		2012	2015	2017	2019
Overall					
Male		1.74 (1.71, 1.77)	1.80 (1.77, 1.84)	1.90 (1.87, 1.93)	1.78 (1.75, 1.82)
Female		1.76 (1.73, 1.79)	1.87 (1.84, 1.91)	1.98 (1.95, 2.02)	1.80 (1.77, 1.84)
Age group, years					
Male	40-49	3.54 (3.26, 3.84)	4.06 (3.77, 4.37)	4.44 (4.13, 4.76)	3.72 (3.45, 4.01)
	50-59	2.26 (2.16, 2.36)	2.55 (2.44, 2.65)	2.71 (2.6, 2.81)	2.54 (2.44, 2.65)
	60-69	1.84 (1.79, 1.90)	1.82 (1.76, 1.87)	1.92 (1.87, 1.98)	1.78 (1.73, 1.84)
	70-79	1.41 (1.37, 1.45)	1.42 (1.38, 1.47)	1.46 (1.42, 1.51)	1.40 (1.36, 1.44)
Female	40-49	3.92 (3.58, 4.29)	3.83 (3.50, 4.19)	4.43 (4.07, 4.81)	4.30 (3.95, 4.67)
	50-59	2.52 (2.41, 2.64)	2.81 (2.69, 2.93)	2.76 (2.64, 2.88)	2.46 (2.35, 2.57)
	60-69	1.92 (1.86, 1.98)	2.01 (1.95, 2.07)	2.12 (2.06, 2.19)	1.88 (1.83, 1.94)
	70-79	1.40 (1.36, 1.44)	1.48 (1.43, 1.52)	1.56 (1.51, 1.61)	1.43 (1.39, 1.48)
Duration of diabetes, years					
Male	<5	1.66 (1.60, 1.72)	1.65 (1.59, 1.72)	1.66 (1.60, 1.72)	1.52 (1.46, 1.58)
	5-10	1.71 (1.66, 1.76)	1.78 (1.72, 1.83)	1.88 (1.83, 1.94)	1.74 (1.68, 1.79)
	10-15	1.79 (1.72, 1.85)	1.94 (1.88, 2.01)	2.05 (1.97, 2.12)	1.90 (1.83, 1.97)
	>15	1.88 (1.80, 1.97)	1.90 (1.82, 1.99)	2.12 (2.03, 2.21)	2.17 (2.08, 2.26)
Female	<5	1.46 (1.40, 1.53)	1.43 (1.36, 1.49)	1.46 (1.39, 1.52)	1.27 (1.21, 1.34)
	5-10	1.69 (1.63, 1.74)	1.71 (1.65, 1.76)	1.82 (1.76, 1.88)	1.62 (1.56, 1.68)
	10-15	1.87 (1.81, 1.94)	2.14 (2.07, 2.21)	2.26 (2.18, 2.33)	1.99 (1.92, 2.06)
	>15	2.09 (2.01, 2.17)	2.32 (2.23, 2.41)	2.53 (2.43, 2.63)	2.54 (2.44, 2.64)
Prior CVD					
Male	Present	2.35 (2.31, 2.39)	2.53 (2.49, 2.57)	2.63 (2.59, 2.67)	2.78 (2.74, 2.83)
	Absent or Unknown	1.68 (1.65, 1.71)	1.74 (1.71, 1.78)	1.84 (1.81, 1.88)	1.72 (1.69, 1.75)
Female	Present	2.57 (2.53, 2.61)	3.08 (3.03, 3.12)	3.22 (3.17, 3.27)	3.11 (3.07, 3.16)
	Absent or Unknown	1.70 (1.67, 1.73)	1.80 (1.77, 1.83)	1.93 (1.89, 1.96)	1.76 (1.72, 1.79)
Ethnicity					
Male	Bumiputera	1.75 (1.72, 1.78)	1.83 (1.80, 1.86)	1.91 (1.88, 1.95)	1.77 (1.74, 1.80)
	Chinese	1.79 (1.76, 1.83)	1.78 (1.75, 1.82)	1.92 (1.88, 1.96)	1.87 (1.83, 1.90)
	Indian	1.29 (1.27, 1.31)	1.39 (1.37, 1.42)	1.47 (1.44, 1.50)	1.33 (1.30, 1.35)
	Others	1.59 (1.56, 1.62)	2.12 (2.09, 2.16)	1.87 (1.84, 1.91)	1.48 (1.45, 1.51)
Female	Bumiputera	1.74 (1.71, 1.77)	1.86 (1.83, 1.89)	1.98 (1.95, 2.01)	1.77 (1.74, 1.81)
	Chinese	1.82 (1.78, 1.86)	1.97 (1.93, 2.01)	1.99 (1.95, 2.04)	1.87 (1.82, 1.91)
	Indian	1.54 (1.51, 1.57)	1.51 (1.48, 1.54)	1.60 (1.57, 1.63)	1.40 (1.37, 1.43)
	Others	1.86 (1.83, 1.89)	1.24 (1.22, 1.27)	1.77 (1.73, 1.80)	1.40 (1.37, 1.43)

Footnotes: All numbers in brackets are 95% confidence intervals of standardized mortality ratios. Cardiovascular disease (CVD) was defined as the presence of either ischemic heart disease, stroke, or amputation at registration into the registry. The Bumiputera ethnicity is a term used in Malaysia to describe Malays and other native people.

Table S6. Trends in age-standardized all-cause mortality rates per 10,000 patient-years among people aged 40-79 years with diagnosed type 2 diabetes in Malaysia, after excluding those who were diagnosed at younger than 30 years of age

		2012	2015	2017	2019	AAPC, %	p-value
Overall							
Male		393 (383, 404)	404 (396, 412)	410 (403, 417)	397 (390, 403)	-0.04 (-0.65, 0.57)	0.900
Female		272 (265, 279)	276 (270, 281)	282 (277, 287)	258 (253, 262)	-0.49 (-1.57, 0.59)	0.372
Age group, years							
Male	40-49	146 (130, 162)	184 (170, 199)	195 (181, 209)	179 (167, 192)	2.71 (0.50, 4.98)	0.016*
	50-59	238 (225, 252)	270 (259, 282)	284 (273, 295)	281 (270, 291)	1.88 (0.74, 3.03)	0.001*
	60-69	415 (397, 433)	417 (404, 431)	423 (411, 435)	410 (399, 421)	-0.43 (-0.83, -0.03)	0.034*
	70-79	743 (708, 778)	718 (692, 743)	712 (690, 734)	684 (665, 703)	-1.14 (-1.68, -0.59)	<0.001*
Female	40-49	87 (78, 97)	86 (77, 94)	102 (93, 110)	102 (94, 110)	3.41 (1.70, 5.15)	<0.001*
	50-59	151 (142, 159)	163 (155, 170)	172 (165, 179)	157 (150, 163)	0.45 (-0.72, 1.63)	0.455
	60-69	275 (263, 288)	280 (270, 290)	292 (284, 301)	268 (261, 276)	-0.37 (-1.37, 0.64)	0.470
	70-79	582 (556, 608)	576 (556, 595)	557 (540, 574)	504 (490, 518)	-1.69 (-3.00, -0.37)	0.013*
Duration of diabetes, years							
Male	<5	308 (295, 320)	306 (295, 317)	303 (292, 313)	287 (277, 297)	-1.04 (-1.60, -0.47)	<0.001*
	5-10	373 (355, 390)	384 (371, 398)	392 (380, 404)	376 (365, 387)	0.05 (-0.66, 0.75)	0.900
	10-15	458 (424, 492)	493 (471, 515)	500 (481, 518)	475 (459, 491)	-0.11 (-1.17, 0.96)	0.840
	>15	588 (535, 641)	580 (542, 617)	609 (580, 639)	635 (610, 660)	1.10 (0.54, 1.66)	<0.001*
Female	<5	172 (164, 180)	165 (158, 172)	165 (158, 171)	146 (140, 153)	-1.83 (-2.83, -0.82)	<0.001*

		2012	2015	2017	2019	AAPC, %	p-value
	5-10	250 (239, 262)	240 (231, 248)	245 (237, 253)	223 (216, 230)	-1.34 (-2.02, -0.65)	<0.001*
	10-15	326 (304, 349)	359 (345, 374)	362 (349, 374)	318 (308, 328)	-0.99 (-2.90, 0.96)	0.319
	>15	457 (417, 497)	472 (444, 501)	502 (480, 524)	499 (481, 516)	1.63 (0.85, 2.41)	<0.001*
Prior CVD							
Male	Present	521 (480, 562)	560 (525, 595)	575 (543, 607)	625 (594, 656)	3.46 (0.86, 6.13)	0.009*
	Absent or Unknown	380 (369, 390)	390 (382, 398)	396 (389, 404)	380 (373, 387)	-0.19 (-0.77, 0.39)	0.514
Female	Present	379 (344, 413)	452 (420, 485)	452 (422, 483)	446 (417, 475)	2.88 (1.53, 4.25)	<0.001*
	Absent or Unknown	264 (257, 271)	265 (260, 271)	273 (268, 278)	250 (246, 255)	-0.55 (-1.56, 0.48)	0.294
Ethnicity							
Male	Bumiputera	437 (423, 451)	453 (442, 464)	455 (446, 465)	435 (426, 443)	-0.02 (-0.93, 0.90)	0.973
	Chinese	327 (308, 346)	322 (308, 337)	336 (322, 350)	329 (316, 342)	-0.31 (-0.77, 0.16)	0.198
	Indian	357 (333, 382)	376 (357, 395)	373 (355, 390)	354 (338, 370)	-0.87 (-1.79, 0.05)	0.065
	Others	294 (171, 417)	429 (316, 542)	367 (276, 459)	316 (237, 394)	0.99 (-4.47, 6.75)	0.729
Female	Bumiputera	304 (295, 313)	310 (303, 317)	318 (311, 324)	287 (282, 29)	-0.55 (-1.73, 0.65)	0.370
	Chinese	207 (193, 222)	211 (200, 223)	207 (197, 218)	185 (176, 195)	-0.99 (-2.32, 0.37)	0.153
	Indian	255 (238, 272)	244 (231, 257)	243 (231, 255)	227 (216, 238)	-1.86 (-3.39, -0.30)	0.019*
	Others	358 (244, 472)	233 (163, 304)	265 (199, 332)	253 (194, 311)	0.13 (-4.78, 5.29)	0.960
Region							
Male	Central	363 (348, 378)	370 (357, 382)	374 (363, 386)	357 (347, 367)	-0.70 (-1.34, -0.05)	0.034*
	East Coast	459 (432, 487)	481 (459, 504)	484 (464, 504)	453 (435, 471)	-0.34 (-1.88, 1.23)	0.670

		2012	2015	2017	2019	AAPC, %	p-value
	Northern	410 (390, 431)	409 (394, 424)	414 (401, 428)	409 (397, 421)	0.26 (-0.33, 0.86)	0.391
	Southern	383 (357, 409)	406 (387, 426)	420 (402, 438)	411 (395, 428)	1.12 (0.36, 1.88)	0.004*
Female	Central	252 (241, 262)	250 (242, 259)	257 (249, 265)	224 (217, 232)	-0.87 (-2.47, 0.76)	0.293
	East Coast	336 (318, 355)	334 (319, 349)	336 (323, 349)	315 (303, 327)	-1.02 (-1.78, -0.25)	0.009*
	Northern	276 (262, 290)	285 (274, 295)	287 (277, 296)	265 (256, 273)	-0.27 (-1.48, 0.95)	0.664
	Southern	255 (238, 273)	269 (255, 282)	276 (263, 288)	261 (250, 273)	-0.20 (-1.61, 1.22)	0.779

Footnotes: All numbers in brackets are 95% confidence intervals of either the mortality rates or AAPC. Cardiovascular disease (CVD) was defined as the presence of either ischemic heart disease, stroke or amputation at registration into the registry. The Bumiputera ethnicity is a term used in Malaysia to describe Malays and other native people. AAPC, average annual percent change.

Table S7. Trends in standardized mortality ratios in people aged 40-79 years with diagnosed type 2 diabetes in Malaysia, after excluding those who were diagnosed at younger than 30 years of age

		2012	2015	2017	2019
Overall					
Male		1.75 (1.73, 1.79)	1.82 (1.79, 1.85)	1.92 (1.89, 1.95)	1.82 (1.79, 1.85)
Female		1.78 (1.75, 1.81)	1.88 (1.85, 1.91)	2.01 (1.98, 2.05)	1.84 (1.81, 1.88)
Age group, years					
Male	40-49	3.36 (3.10, 3.63)	3.92 (3.65, 4.21)	4.26 (3.98, 4.57)	3.75 (3.49, 4.03)
	50-59	2.32 (2.23, 2.41)	2.54 (2.45, 2.64)	2.75 (2.65, 2.85)	2.58 (2.49, 2.68)
	60-69	1.84 (1.79, 1.89)	1.85 (1.80, 1.90)	1.95 (1.90, 2.00)	1.82 (1.77, 1.87)
	70-79	1.43 (1.39, 1.47)	1.43 (1.39, 1.47)	1.48 (1.44, 1.52)	1.43 (1.39, 1.47)
Female	40-49	3.86 (3.53, 4.20)	3.59 (3.28, 3.92)	4.34 (4.00, 4.71)	4.15 (3.82, 4.49)
	50-59	2.53 (2.42, 2.63)	2.86 (2.74, 2.97)	2.83 (2.72, 2.94)	2.52 (2.41, 2.62)
	60-69	1.96 (1.90, 2.01)	2.01 (1.96, 2.07)	2.15 (2.09, 2.2)	1.93 (1.87, 1.98)
	70-79	1.41 (1.38, 1.45)	1.49 (1.45, 1.53)	1.58 (1.54, 1.63)	1.47 (1.43, 1.51)
Duration of diabetes, years					
Male	<5	1.67 (1.62, 1.73)	1.67 (1.61, 1.73)	1.71 (1.65, 1.77)	1.58 (1.52, 1.64)
	5-10	1.73 (1.68, 1.78)	1.80 (1.74, 1.85)	1.90 (1.85, 1.96)	1.78 (1.73, 1.84)
	10-15	1.80 (1.73, 1.86)	1.96 (1.89, 2.03)	2.06 (2.00, 2.13)	1.92 (1.86, 1.99)
	>15	1.90 (1.82, 1.98)	1.91 (1.83, 2.00)	2.09 (2.01, 2.18)	2.15 (2.06, 2.24)
Female	<5	1.45 (1.39, 1.51)	1.45 (1.39, 1.51)	1.49 (1.43, 1.55)	1.32 (1.26, 1.38)
	5-10	1.74 (1.69, 1.79)	1.73 (1.68, 1.78)	1.85 (1.79, 1.90)	1.67 (1.62, 1.73)
	10-15	1.90 (1.84, 1.96)	2.18 (2.12, 2.25)	2.31 (2.24, 2.38)	2.04 (1.97, 2.10)
	>15	2.08 (2.01, 2.17)	2.26 (2.18, 2.34)	2.55 (2.46, 2.64)	2.55 (2.46, 2.65)
Prior CVD					
Male	Present	2.32 (2.29, 2.36)	2.52 (2.49, 2.56)	2.69 (2.65, 2.73)	2.86 (2.82, 2.90)
	Absent or Unknown	1.69 (1.67, 1.72)	1.76 (1.73, 1.79)	1.85 (1.82, 1.89)	1.74 (1.71, 1.77)
Female	Present	2.48 (2.45, 2.52)	3.08 (3.04, 3.13)	3.23 (3.19, 3.27)	3.19 (3.14, 3.23)
	Absent or Unknown	1.73 (1.70, 1.76)	1.81 (1.78, 1.84)	1.95 (1.92, 1.98)	1.79 (1.76, 1.82)
Ethnicity					
Male	Bumiputera	1.77 (1.74, 1.80)	1.85 (1.82, 1.88)	1.94 (1.91, 1.97)	1.81 (1.78, 1.84)
	Chinese	1.78 (1.75, 1.81)	1.78 (1.74, 1.81)	1.92 (1.88, 1.95)	1.86 (1.83, 1.90)
	Indian	1.30 (1.28, 1.32)	1.39 (1.37, 1.42)	1.46 (1.43, 1.48)	1.34 (1.32, 1.37)
	Others	1.48 (1.45, 1.51)	2.16 (2.13, 2.20)	1.95 (1.92, 1.99)	1.55 (1.52, 1.58)
Female	Bumiputera	1.76 (1.73, 1.79)	1.87 (1.84, 1.90)	2.00 (1.97, 2.03)	1.81 (1.78, 1.84)
	Chinese	1.83 (1.80, 1.87)	1.95 (1.91, 1.99)	2.02 (1.98, 2.06)	1.87 (1.83, 1.91)
	Indian	1.53 (1.50, 1.56)	1.50 (1.48, 1.53)	1.59 (1.56, 1.62)	1.41 (1.39, 1.44)
	Others	2.01 (1.98, 2.04)	1.36 (1.34, 1.39)	1.69 (1.66, 1.72)	1.47 (1.44, 1.50)

Footnotes: All numbers in brackets are 95% confidence intervals of standardized mortality ratios. Cardiovascular disease (CVD) was defined as the presence of either ischemic heart disease, stroke, or amputation at registration into the registry. The Bumiputera ethnicity is a term used in Malaysia to describe Malays and other native people.