

Supplementary Material

Do medical alliances truly work? Perspectives on health service utilisation among outpatients with chronic diseases in Shanghai, China

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Supplementary Table S1. Trends of outpatient visits in the Chuansha MA in chronic disease categories from 2016 to 2020

Rank	Chronic Disease Systems	Total Numbers, n	Medical Institutions	Outpatients, n (%)					Pearson's <i>r</i>	P value
				2016	2017	2018	2019	2020		
1	Cardiovascular and circulatory diseases	2297586	Hospitals	392616 (31.29)	445782 (31.42)	510198 (33.92)	481948 (33.70)	377042 (32.00)	0.47	0.430
		4578941	CHCs	862343 (68.71)	973082 (68.58)	994050 (66.08)	948074 (66.30)	801392 (68.00)	-0.47	
2	Respiratory diseases	1708667	Hospitals	337526 (50.89)	350828 (51.54)	327514 (51.68)	433622 (61.07)	259177 (58.46)	0.83	0.082
		1422493	CHCs	325767 (49.11)	329903 (48.46)	306178 (48.32)	276456 (38.93)	184189 (41.54)	-0.83	
3	Digestive diseases	1599738	Hospitals	269757 (54.25)	318705 (57.32)	354160 (61.91)	369671 (63.77)	287445 (59.31)	0.70	0.189
		1089852	CHCs	227490 (45.75)	237293 (42.68)	217871 (38.09)	210022 (36.23)	197176 (40.69)	-0.70	
4	Endocrine, nutritional and metabolic diseases	1117563	Hospitals	178028 (43.78)	204939 (43.32)	250204 (45.17)	259829 (45.16)	224563 (44.90)	0.75	0.143
		1391638	CHCs	228648 (56.22)	268099 (56.68)	303760 (54.83)	315548 (54.84)	275583 (55.10)	-0.75	
5	Musculoskeletal diseases	980191	Hospitals	144403 (47.83)	193194 (53.03)	195557 (54.84)	225085 (58.62)	221952 (60.46)	0.98	0.002
		793736	CHCs	157482 (52.17)	171150 (46.97)	161053 (45.16)	158902 (41.38)	145149 (39.54)	-0.98	
6	Genitourinary diseases	1189553	Hospitals	215674 (68.11)	224117 (68.35)	246840 (72.00)	275188 (75.08)	227734 (72.27)	0.81	0.096
		479436	CHCs	100990 (31.89)	103775 (31.65)	95978 (28.00)	91331 (24.92)	87362 (27.73)	-0.81	
7	Skin and subcutaneous tissue diseases	646888	Hospitals	122803 (62.86)	131248 (63.78)	137120 (65.97)	140048 (66.81)	115669 (62.36)	0.16	0.791
		357203	CHCs	72545 (37.14)	74537 (36.22)	70717 (34.03)	69589 (33.19)	69815 (37.64)	-0.16	
8	Nervous system diseases	314829	Hospitals	50687 (46.08)	59140 (49.42)	70641 (43.63)	70532 (39.50)	63829 (37.79)	-0.88	0.047
		424226	CHCs	59299 (53.92)	60538 (50.58)	91286 (56.37)	108036 (60.50)	105067 (62.21)	0.88	
9	Eye and adnexa diseases	398050	Hospitals	78676 (62.05)	88609 (62.38)	84590 (60.53)	83612 (57.98)	62563 (49.83)	-0.88	0.049
		280312	CHCs	48118 (37.95)	53436 (37.62)	55170 (39.47)	60594 (42.02)	62994 (50.17)	0.88	
10	Mental and behavioral disorders	247992	Hospitals	43794 (53.82)	47292 (49.39)	57096 (61.08)	53701 (65.90)	46109 (63.35)	0.82	0.092
		176886	CHCs	37574 (46.18)	48464 (50.61)	36378 (38.92)	27792 (34.10)	26678 (36.65)	-0.82	
11	Ear diseases	195407	Hospitals	37620 (71.76)	38016 (68.92)	41847 (67.45)	43010 (71.87)	34914 (68.64)	-0.26	0.670
		84932	CHCs	14806 (28.24)	17144 (31.08)	20194 (32.55)	16837 (28.13)	15951 (31.36)	0.26	
12	Blood and hematopoietic organ diseases and certain diseases involving immune mechanisms	94875	Hospitals	10862 (61.01)	14932 (63.67)	21365 (68.51)	24330 (70.30)	23386 (69.29)	0.91	0.030
		45928	CHCs	6941 (38.99)	8519 (36.33)	9821 (31.49)	10280 (29.70)	10367 (30.71)	-0.91	
13	Tumour	111467	Hospitals	19096 (92.57)	18121 (93.18)	20262 (91.54)	26066 (93.54)	27922 (94.66)	0.62	0.264
		8108	CHCs	1533 (7.43)	1326 (6.82)	1872 (8.46)	1801 (6.46)	1576 (5.34)	-0.62	

Supplementary Table S2. Trends of outpatient visits stratified by sex in the Chuansha MA in chronic disease categories from 2016 to 2020

Chronic Disease System	Medical Institutions	Male outpatients, n (%)									Female outpatients, n (%)								
		Rank	Total Numbers, n	2016	2017	2018	2019	2020	Pearson's r	P-value	Rank	Total Numbers, n	2016	2017	2018	2019	2020	Pearson's r	P-value
Cardiovascular and circulatory diseases	Hospital	1	1143100	207077 (33.78)	230684 (33.82)	260190 (35.95)	249339 (35.67)	195810 (33.88)	0.30	0.628	1	1064484	185539 (28.90)	215098 (29.19)	250008 (32.03)	232609 (31.82)	181230 (30.18)	0.57	0.321
	CHC		2152663	405932 (66.22)	451399 (66.18)	463497 (64.05)	449680 (64.33)	382155 (66.12)	-0.30			2426272	45641 (71.10)	521688 (70.81)	530553 (67.97)	498388 (68.18)	419237 (69.82)	138190 (27.47)	
Respiratory diseases	Hospital	2	1186597	221414 (58.55)	253091 (61.77)	253555 (63.23)	297172 (68.75)	161365 (63.79)	0.75	0.148	2	1089646	203467 (53.78)	234110 (56.86)	239109 (59.26)	274764 (65.13)	138190 (59.03)	0.71	0.176
	CHC		687575	156774 (41.45)	156656 (38.23)	147459 (36.77)	135098 (31.25)	915882 (36.21)	-0.75			759877	17484 (46.22)	177587 (43.14)	164397 (40.74)	147136 (34.87)	95915 (40.97)	-0.71	
Digestive diseases	Hospital	3	784522	133951 (56.64)	155956 (59.56)	172767 (63.81)	179502 (65.25)	142346 (61.31)	0.70	0.192	3	815200	135806 (52.08)	162749 (55.33)	181399 (60.20)	190164 (62.44)	145090 (57.48)	0.70	0.190
	CHC		491846	102548 (43.36)	105891 (40.44)	97965 (36.19)	95606 (34.75)	89836 (38.69)	-0.70			598002	12494 (47.92)	131402 (44.67)	119909 (39.80)	114414 (37.56)	107340 (42.52)	-0.70	
Endocrine, nutritional and metabolic diseases	Hospital	4	520589	79941 (43.17)	92605 (42.68)	117052 (45.13)	124103 (45.48)	106888 (45.01)	0.80	0.101	4	596974	98087 (44.28)	112334 (43.87)	133152 (45.20)	135726 (44.87)	117675 (44.80)	0.61	0.272
	CHC		651252	105223 (56.83)	124365 (57.32)	142298 (54.87)	148786 (54.52)	130580 (54.99)	-0.80			740386	12342 (55.72)	143734 (56.13)	161462 (54.80)	166762 (55.13)	145003 (55.20)	-0.61	
Musculoskeletal diseases	Hospital	5	443443	65632 (49.3)	86954 (54.69)	87530 (56.42)	100834 (60.15)	102493 (62.45)	0.99	0.002	6	805889	78771 (46.68)	106237 (51.74)	108026 (53.62)	124249 (57.43)	119451 (58.85)	0.98	0.003
	CHC		335573	67492 (50.7)	72044 (45.31)	67599 (43.58)	66800 (39.85)	61638 (37.55)	-0.99			229301	89990 (53.32)	99106 (48.26)	93454 (46.38)	92099 (42.57)	83511 (41.15)	-0.98	
Genitourinary diseases	Hospital	6	383658	66893 (58.42)	71324 (57.22)	80805 (61.56)	87650 (63.47)	76986 (61.44)	0.76	0.133	5	430497	148780 (73.59)	152793 (75.18)	166037 (78.48)	187538 (82.10)	150747 (79.42)	0.86	0.058
	CHC		250133	47601 (41.58)	53318 (42.78)	50455 (38.44)	50452 (36.53)	48307 (38.56)	-0.76			458160	53389 (26.41)	50455 (24.82)	45523 (21.52)	40879 (17.90)	39055 (20.58)	-0.86	
Skin and subcutaneous tissue diseases	Hospital	7	310918	58809 (61.96)	62736 (62.88)	65490 (65.26)	67348 (66.10)	56535 (61.96)	0.26	0.668	7	335952	63993 (63.72)	68512 (64.62)	71629 (66.64)	72695 (67.47)	59123 (62.74)	0.07	0.910
	CHC		177245	36110 (38.04)	37028 (37.12)	34861 (34.74)	34543 (33.90)	34703 (38.04)	-0.26			179954	36434 (36.28)	37508 (35.38)	35855 (33.36)	35045 (32.53)	35112 (37.26)	-0.07	
Nervous system diseases	Hospital	8	146416	24178 (49.73)	27854 (52.72)	32346 (45.87)	33280 (41.83)	28758 (38.85)	-0.91	0.030	8	168413	26509 (43.19)	31286 (46.81)	38295 (41.89)	37252 (37.63)	35071 (36.97)	-0.84	0.076
	CHC		179143	24437 (50.27)	24982 (47.28)	38171 (54.13)	46279 (58.17)	45274 (61.15)	0.91			245078	34862 (56.81)	35556 (53.19)	53115 (58.11)	61752 (62.37)	59793 (63.03)	0.84	
Eye and adnexa diseases	Hospital	9	172331	34407 (63.02)	38296 (63.62)	36254 (61.74)	36134 (59.43)	27240 (51.46)	-0.87	0.055	9	225715	44269 (61.32)	50312 (61.47)	48336 (59.65)	47478 (56.93)	35320 (48.64)	-0.89	0.045
	CHC		114924	20190 (36.98)	21900 (36.38)	22470 (38.26)	24671 (41.57)	25693 (48.54)	0.87			165388	27928 (38.68)	31536 (38.53)	32700 (40.35)	35923 (43.07)	37301 (51.36)	0.89	
Mental and behavioral disorders	Hospital	10	98885	17021 (56.12)	19250 (53.00)	22785 (65.52)	21930 (71.60)	17899 (67.45)	0.83	0.082	10	149107	26773 (52.46)	28042 (47.18)	34311 (58.45)	31771 (62.47)	28210 (61.00)	0.80	0.102
	CHC		59706	13309 (43.88)	17071 (47.00)	11991 (34.48)	8698 (28.40)	8637 (32.55)	-0.83			117167	24265 (47.54)	31393 (52.82)	24386 (41.55)	19085 (37.53)	18038 (39.00)	-0.80	
Ear diseases	Hospital	11	91481	17368 (75.46)	17618 (72.57)	19314 (71.79)	20547 (76.11)	16634 (72.28)	-0.22	0.717	11	103924	20252 (68.86)	20398 (66.05)	22532 (64.13)	22463 (68.38)	18279 (65.63)	-0.33	0.587
	CHC		32725	5648 (24.54)	6658 (27.43)	7591 (28.21)	6450 (23.89)	6378 (27.72)	0.22			52207	9158 (31.14)	10486 (33.95)	12603 (35.87)	10387 (31.62)	9573 (34.37)	0.33	
Blood and hematopoietic organ disease and certain diseases involving immune mechanisms	Hospital	12	35773	3711 (61.6)	4934 (63.59)	4934 (70.33)	9619 (72.83)	9619 (71.84)	0.92	0.026	12	59101	7150 (60.71)	9998 (63.71)	13475 (67.49)	14711 (68.74)	13767 (67.61)	0.89	0.044
	CHC		15827	2313 (38.4)	2825 (36.41)	3329 (29.67)	3589 (27.17)	3771 (28.16)	-0.92			30101	4628 (39.29)	5694 (36.29)	6492 (32.51)	6691 (31.26)	6596 (32.39)	-0.89	

Supplementary Table S3. Trends of outpatient visits stratified by sex in the Chuansha MA in chronic disease categories from 2016 to 2020 stratified by age group

0-18 years old

Rank	Chronic Disease Systems	Total Numbers, n	Medical Institutions	Outpatients, n (%)					Pearson's <i>r</i>	P value
				2016	2017	2018	2019	2020		
1	Digestive diseases	173636	Hospitals	26324 (92.53)	36705 (94.85)	38445 (95.42)	40309 (96.20)	23249 (95.70)	0.85	0.069
			CHC	2126 (7.47)	1992 (5.15)	1847 (4.58)	1594 (3.80)	1045 (4.30)	-0.85	
2	Skin and subcutaneous tissue diseases	113210	Hospitals	23432 (94.44)	23841 (94.83)	23523 (95.12)	22452 (95.77)	14319 (94.93)	0.62	0.263
			CHC	1380 (5.56)	1299 (5.17)	1207 (4.88)	992 (4.23)	765 (5.07)	-0.62	
3	Respiratory diseases	902941	Hospitals	184083 (98.55)	197617 (98.68)	189533 (98.73)	228722 (99.05)	91711 (98.61)	0.40	0.507
			CHC	2700 (1.45)	2651 (1.32)	2436 (1.27)	2193 (0.95)	1295 (1.39)	-0.40	
4	Eye and adnexa diseases	68921	Hospitals	13223 (98.27)	14959 (98.85)	14247 (98.92)	15657 (99.12)	9975 (98.43)	0.26	0.669
			CHC	233 (1.73)	174 (1.15)	155 (1.08)	139 (0.88)	159 (1.57)	-0.26	
5	Endocrine, nutritional and metabolic diseases	34155	Hospitals	799 (27.16)	1079 (13.02)	1509 (16.93)	1921 (22.14)	1849 (34.65)	0.45	0.450
			CHC	2143 (72.84)	7211 (86.98)	7403 (83.07)	6754 (77.86)	3487 (65.35)	-0.45	
6	Genitourinary diseases	27626	Hospitals	4207 (89.47)	4649 (90.91)	5291 (92.52)	6983 (96.46)	4492 (92.58)	0.71	0.177
			CHC	495 (10.53)	465 (9.09)	428 (7.48)	256 (3.54)	360 (7.42)	-0.71	
7	Ear diseases	24635	Hospitals	4777 (98.80)	5322 (98.96)	5500 (99.35)	5922 (99.43)	2912 (99.39)	0.91	0.032
			CHC	58 (1.20)	56 (1.04)	36 (0.65)	34 (0.57)	18 (0.61)	-0.91	
8	Musculoskeletal diseases	15963	Hospitals	2881 (93.84)	5308 (96.39)	2575 (95.51)	2612 (95.71)	1873 (95.51)	0.45	0.450
			CHC	189 (6.16)	199 (3.61)	121 (4.49)	117 (4.29)	88 (4.49)	-0.45	
9	Cardiovascular and circulatory diseases	9156	Hospitals	1740 (97.10)	2153 (97.95)	1583 (97.66)	2398 (99.21)	1114 (98.76)	0.85	0.066
			CHC	52 (2.90)	45 (2.05)	38 (2.34)	19 (0.79)	14 (1.24)	-0.85	
10	Blood and hematopoietic organ diseases and certain diseases involving immune mechanisms	7674	Hospitals	768 (86.20)	1346 (95.73)	1761 (94.42)	2235 (95.23)	1043 (89.53)	0.23	0.706
			CHC	123 (13.80)	60 (4.27)	104 (5.58)	112 (4.77)	122 (10.47)	-0.23	
11	Nervous system diseases	2083	Hospitals	318 (86.41)	331 (91.94)	417 (91.45)	451 (91.48)	364 (89.66)	0.42	0.484
			CHC	50 (13.59)	29 (8.06)	39 (8.55)	42 (8.52)	42 (10.34)	-0.42	
12	Mental and behavioral disorders	1596	Hospitals	298 (92.55)	306 (88.7)	256 (93.09)	314 (99.37)	335 (99.11)	0.82	0.090
			CHC	24 (7.45)	39 (11.3)	19 (6.91)	2 (0.63)	3 (0.89)	-0.82	
13	Tumour	1167	Hospitals	233 (100.00)	241 (99.59)	237 (97.93)	265 (94.98)	170 (99.42)	-0.44	0.455
			CHC	0 (0)	1 (0.41)	5 (2.07)	14 (5.02)	1 (0.58)	0.44	

19-39 years old

Rank	Chronic Disease Systems	Total Numbers, n	Medical Institutions	Outpatients, n (%)					Pearson's <i>r</i>	P value
				2016	2017	2018	2019	2020		
1	Respiratory diseases	669608	Hospitals	100647 (75.80)	113920 (78.79)	117121 (80.87)	137067 (83.82)	71685 (85.45)	1.00	0.000
			CHC	32124 (24.20)	30675 (21.21)	27709 (19.13)	26452 (16.18)	12208 (14.55)	-1.00	
2	Genitourinary diseases	519308	Hospitals	97156 (91.91)	95937 (93.70)	99153 (94.37)	109202 (95.95)	88593 (95.93)	0.96	0.009
			CHC	8547 (8.09)	6450 (6.30)	5910 (5.63)	4606 (4.05)	3754 (4.07)	-0.96	
3	Digestive diseases	495830	Hospitals	76198 (84.23)	87613 (85.73)	96599 (88.29)	98304 (88.89)	74420 (89.47)	0.96	0.009
			CHC	14269 (15.77)	14578 (14.27)	12810 (11.71)	12281 (11.11)	8758 (10.53)	-0.96	
4	Musculoskeletal diseases	322292	Hospitals	40969 (85.30)	57187 (88.55)	57545 (89.61)	67792 (90.89)	65570 (92.51)	0.98	0.004
			CHC	7059 (14.70)	7398 (11.45)	6669 (10.39)	6798 (9.11)	5305 (7.49)	-0.98	
5	Skin and subcutaneous tissue diseases	286750	Hospitals	49239 (85.25)	51692 (87.07)	52987 (88.81)	54884 (90.31)	44013 (89.47)	0.91	0.031
			CHC	8516 (14.75)	7675 (12.93)	6678 (11.19)	5887 (9.69)	5179 (10.53)	-0.91	
6	Cardiovascular and circulatory diseases	170080	Hospitals	23081 (66.97)	25141 (68.63)	25261 (70.60)	25137 (71.94)	20195 (71.47)	0.94	0.019
			CHC	11384 (33.03)	11494 (31.37)	10520 (29.40)	9804 (28.06)	8063 (28.53)	-0.94	
7	Endocrine, nutritional and metabolic diseases	163646	Hospitals	25117 (85.88)	27886 (86.01)	30193 (86.32)	31487 (87.07)	26452 (85.77)	0.25	0.680
			CHC	4128 (14.12)	4535 (13.99)	4783 (13.68)	4677 (12.93)	4388 (14.23)	-0.25	
8	Eye and adnexa diseases	111842	Hospitals	20633 (92.30)	23452 (93.07)	21886 (92.78)	21131 (92.12)	16142 (90.88)	-0.71	0.179
			CHC	1721 (7.70)	1747 (6.93)	1703 (7.22)	1808 (7.88)	1619 (9.12)	0.71	
9	Ear diseases	63296	Hospitals	11482 (94.32)	12063 (95.12)	12710 (95.61)	13483 (97.13)	10795 (95.82)	0.77	0.130
			CHC	691 (5.68)	619 (4.88)	584 (4.39)	398 (2.87)	471 (4.18)	-0.77	
10	Nervous system diseases	47995	Hospitals	5996 (74.56)	7026 (79.39)	8477 (80.63)	8732 (80.47)	7753 (79.62)	0.71	0.181
			CHC	2046 (25.44)	1824 (20.61)	2037 (19.37)	2119 (19.53)	1985 (20.38)	-0.71	
11	Mental and behavioral disorders	31718	Hospitals	6592 (79.14)	4996 (69.70)	4743 (79.21)	4779 (88.52)	4299 (88.95)	0.76	0.134
			CHC	1738 (20.86)	2172 (30.30)	1245 (20.79)	620 (11.48)	534 (11.05)	-0.76	
12	Blood and hematopoietic organ diseases and certain diseases involving immune mechanisms	18559	Hospitals	2318 (82.37)	2933 (83.78)	3333 (87.00)	3705 (85.06)	3572 (88.05)	0.86	0.059
			CHC	496 (17.63)	568 (16.22)	498 (13.00)	651 (14.94)	485 (11.95)	-0.86	
13	Tumour	16401	Hospitals	3344 (95.11)	3247 (96.24)	3057 (93.80)	3134 (96.88)	2891 (95.82)	0.28	0.653
			CHC	172 (4.89)	127 (3.76)	202 (6.20)	101 (3.12)	126 (4.18)	-0.28	

Supplementary Table S3. Trends of outpatient visits stratified by sex in the Chuansha MA in chronic disease categories from 2016 to 2020 stratified by age group
(Continued)

40-59 years old

Rank	Chronic Disease Systems	Total Numbers, n	Medical Institutions	Outpatients, n (%)					Pearson's <i>r</i>	P value
				2016	2017	2018	2019	2020		
1	Cardiovascular and circulatory diseases	1448307	Hospitals	98191 (35.03)	111814 (36.86)	127432 (40.06)	126560 (41.4)	96353 (40.01)	0.87	0.055
			CHC	182112 (64.97)	191571 (63.14)	190708 (59.94)	179112 (58.6)	144454 (59.99)	-0.87	
2	Digestive diseases	710485	Hospitals	83968 (60.76)	94620 (64.18)	104139 (68.76)	107798 (70.58)	82720 (68.54)	0.87	0.057
			CHC	54219 (39.24)	52806 (35.82)	47308 (31.24)	44940 (29.42)	37967 (31.46)	-0.87	
3	Respiratory diseases	704342	Hospitals	62336 (41.31)	72176 (46.03)	76324 (49.70)	83779 (54.89)	48649 (53.79)	0.95	0.012
			CHC	88557 (58.69)	84632 (53.97)	77240 (50.30)	68858 (45.11)	41791 (46.21)	-0.95	
4	Endocrine, nutritional and metabolic diseases	642186	Hospitals	60621 (53.86)	67154 (54.39)	79546 (56.74)	82957 (57.77)	70849 (57.90)	0.96	0.011
			CHC	51941 (46.14)	56309 (45.61)	60653 (43.26)	60644 (42.23)	51512 (42.10)	-0.96	
5	Musculoskeletal diseases	512036	Hospitals	52671 (60.4)	68834 (65.76)	69199 (67.58)	79378 (71.39)	79072 (74.20)	0.99	0.001
			CHC	34534 (39.6)	35842 (34.24)	33193 (32.42)	31817 (28.61)	27496 (25.80)	-0.99	
6	Genitourinary diseases	450574	Hospitals	64037 (73.85)	66801 (76.12)	73302 (79.37)	82634 (83.96)	70539 (82.67)	0.94	0.016
			CHC	22676 (26.15)	20960 (23.88)	19049 (20.63)	15788 (16.04)	14788 (17.33)	-0.94	
7	Skin and subcutaneous tissue diseases	240988	Hospitals	28244 (59.38)	30954 (62.74)	32384 (65.27)	33735 (67.43)	29475 (66.33)	0.91	0.031
			CHC	19324 (40.62)	18382 (37.26)	17232 (34.73)	16297 (32.57)	14961 (33.67)	-0.91	
8	Nervous system diseases	148286	Hospitals	11059 (47.87)	13284 (54.16)	16625 (51.19)	17765 (51.01)	16701 (50.08)	0.09	0.887
			CHC	12043 (52.13)	11244 (45.84)	15855 (48.81)	17064 (48.99)	16646 (49.92)	-0.09	
9	Eye and adnexa diseases	144344	Hospitals	20211 (71.36)	21999 (71.36)	20883 (69.87)	20219 (67.50)	15763 (62.17)	-0.91	0.030
			CHC	8113 (28.64)	8828 (28.64)	9004 (30.13)	9734 (32.50)	9590 (37.83)	0.91	
10	Mental and behavioral disorders	104503	Hospitals	12541 (55.07)	12869 (52.12)	13991 (63.44)	12903 (70.10)	11626 (70.12)	0.91	0.032
			CHC	10230 (44.93)	11821 (47.88)	8064 (36.56)	5504 (29.90)	4954 (29.88)	-0.91	
11	Ear diseases	66262	Hospitals	10601 (77.28)	9922 (75.00)	11047 (76.50)	11044 (80.37)	8791 (78.95)	0.66	0.228
			CHC	3116 (22.72)	3307 (25.00)	3393 (23.50)	2697 (19.63)	2344 (21.05)	-0.66	
12	Tumour	40868	Hospitals	6872 (88.90)	6533 (89.36)	6955 (88.63)	8441 (90.97)	8101 (93.10)	0.85	0.068
			CHC	858 (11.10)	778 (10.64)	892 (11.37)	838 (9.03)	600 (6.90)	-0.85	
13	Blood and hematopoietic organ diseases and certain diseases involving immune mechanisms	37185	Hospitals	3297 (69.38)	4394 (68.80)	6138 (75.39)	7252 (78.18)	6645 (77.02)	0.89	0.043
			CHC	1455 (30.62)	1993 (31.20)	2004 (24.61)	2024 (21.82)	1983 (22.98)	-0.89	

60-79 years old

Rank	Chronic Disease Systems	Total Numbers, n	Medical Institutions	Outpatients, n (%)					Pearson's <i>r</i>	P value
				2016	2017	2018	2019	2020		
1	Cardiovascular and circulatory diseases	3804841	Hospitals	189754 (27.33)	214696 (27.10)	245852 (29.22)	226256 (28.30)	181766 (26.84)	0.04	0.955
			CHC	504544 (72.67)	577647 (72.90)	595524 (70.78)	573319 (71.70)	495483 (73.16)	-0.04	
2	Endocrine, nutritional and metabolic diseases	1357072	Hospitals	73580 (34.61)	87337 (34.82)	111683 (37.13)	115581 (36.72)	100722 (36.23)	0.72	0.172
			CHC	139038 (65.39)	163494 (65.18)	189114 (62.87)	199201 (63.28)	177322 (63.77)	-0.72	
3	Respiratory diseases	1072331	Hospitals	54649 (25.34)	71852 (30.04)	74686 (32.14)	85286 (37.52)	57821 (36.63)	0.95	0.012
			CHC	160995 (74.66)	167339 (69.96)	157664 (67.86)	142005 (62.48)	100034 (63.37)	-0.95	
4	Digestive diseases	1000844	Hospitals	65640 (35.66)	78935 (38.55)	90358 (43.90)	96827 (45.96)	82653 (42.27)	0.79	0.115
			CHC	118410 (64.34)	125828 (61.45)	115461 (56.10)	113865 (54.04)	112867 (57.73)	-0.79	
5	Musculoskeletal diseases	719909	Hospitals	38783 (30.37)	50397 (33.99)	53024 (36.50)	60401 (39.92)	62313 (42.30)	1.00	<0.001
			CHC	88936 (69.63)	97894 (66.01)	92248 (63.50)	90903 (60.08)	85010 (57.70)	-1.00	
6	Genitourinary diseases	491932	Hospitals	37558 (42.58)	42286 (43.49)	51083 (50.45)	57584 (53.50)	48426 (49.61)	0.81	0.097
			CHC	50650 (57.42)	54935 (56.51)	50172 (49.55)	50056 (46.50)	49182 (50.39)	-0.81	
7	Nervous system diseases	372121	Hospitals	22351 (41.63)	26466 (44.79)	31275 (38.82)	31061 (34.30)	28537 (32.35)	-0.90	0.039
			CHC	31341 (58.37)	32623 (55.21)	49283 (61.18)	59501 (65.70)	59683 (67.65)	0.90	
8	Skin and subcutaneous tissue diseases	274104	Hospitals	17018 (34.03)	19228 (35.38)	21720 (38.96)	22694 (40.10)	21534 (37.52)	0.74	0.152
			CHC	32995 (65.97)	35119 (64.62)	34026 (61.04)	33904 (59.90)	35866 (62.48)	-0.74	
9	Eye and adnexa diseases	267455	Hospitals	20151 (41.77)	23005 (42.64)	22271 (41.10)	21428 (37.70)	16573 (30.55)	-0.87	0.053
			CHC	28087 (58.23)	30942 (57.36)	31917 (58.90)	35414 (62.30)	37667 (69.45)	0.87	
10	Mental and behavioral disorders	209373	Hospitals	17583 (46.83)	20794 (44.37)	26165 (56.15)	24243 (59.67)	21405 (56.73)	0.83	0.085
			CHC	19964 (53.17)	26068 (55.63)	20437 (43.85)	16385 (40.33)	16329 (43.27)	-0.83	
11	Ear diseases	96356	Hospitals	8854 (51.94)	8807 (47.86)	10050 (46.52)	10228 (51.16)	10079 (52.20)	0.23	0.705
			CHC	8194 (48.06)	9596 (52.14)	11552 (53.48)	9766 (48.84)	9230 (47.80)	-0.23	
12	Blood and hematopoietic organ diseases and certain diseases involving immune mechanisms	57819	Hospitals	3213 (46.10)	4596 (50.45)	7587 (59.19)	8338 (60.30)	9482 (62.82)	0.96	0.010
			CHC	3756 (53.90)	4514 (49.55)	5231 (40.81)	5490 (39.70)	5612 (37.18)	-0.96	
13	Tumour	49693	Hospitals	6696 (94.58)	6901 (95.56)	8389 (92.74)	11241 (93.83)	13639 (94.95)	-0.14	0.818
			CHC	384 (5.42)	321 (4.44)	657 (7.26)	739 (6.17)	726 (5.05)	0.14	

Supplementary Table S3. Trends of outpatient visits stratified by sex in the Chuansha MA in chronic disease categories from 2016 to 2020 stratified by age group
(Continued)

>80 years old

Rank	Chronic Disease Systems	Total Numbers, n	Medical Institutions	Outpatients, n (%)					Pearson's <i>r</i>	P value
				2016	2017	2018	2019	2020		
1	Cardiovascular and circulatory diseases		Hospitals	79850 (32.71)	91978 (32.35)	110070 (35.81)	101597 (35.35)	77614 (33.60)	0.49	0.406
			CHC	164251 (67.29)	192325 (67.65)	197260 (64.19)	185820 (64.65)	153378 (66.40)	-0.49	
2	Respiratory diseases		Hospitals	23171 (32.91)	31637 (39.26)	35001 (42.78)	37087 (46.47)	29706 (48.00)	0.98	0.004
			CHC	47240 (67.09)	48946 (60.74)	46808 (57.22)	42729 (53.53)	32176 (52.00)	-0.98	
3	Endocrine, nutritional and metabolic diseases		Hospitals	17911 (36.32)	21483 (37.02)	27273 (39.48)	27883 (38.64)	24691 (38.84)	0.79	0.110
			CHC	31398 (63.68)	36550 (62.98)	41807 (60.52)	44272 (61.36)	38874 (61.16)	-0.79	
4	Digestive diseases		Hospitals	17627 (31.42)	20832 (33.11)	24619 (37.84)	26433 (41.45)	24403 (40.04)	0.93	0.022
			CHC	38466 (68.58)	42089 (66.89)	40445 (62.16)	37342 (58.55)	36539 (59.96)	-0.93	
5	Musculoskeletal diseases		Hospitals	9099 (25.37)	11468 (27.78)	13214 (31.43)	14902 (33.74)	13124 (32.51)	0.92	0.028
			CHC	26764 (74.63)	29817 (72.22)	28822 (68.57)	29267 (66.26)	27250 (67.49)	-0.92	
6	Genitourinary diseases		Hospitals	12716 (40.58)	14444 (40.79)	18011 (46.87)	18785 (47.67)	15684 (44.86)	0.73	0.159
			CHC	18622 (59.42)	20965 (59.21)	20419 (53.13)	20625 (52.33)	19278 (55.14)	-0.73	
7	Nervous system diseases		Hospitals	10963 (44.24)	12033 (44.81)	13847 (36.52)	12523 (29.94)	10474 (28.17)	-0.96	0.011
			CHC	13819 (55.76)	14818 (55.19)	24072 (63.48)	29310 (70.06)	26711 (71.83)	0.96	
8	Skin and subcutaneous tissue diseases		Hospitals	4870 (32.04)	5533 (31.45)	6506 (35.98)	6283 (33.43)	6328 (32.67)	-0.29	0.635
			CHC	10330 (67.96)	12062 (68.55)	11574 (64.02)	12509 (66.57)	13044 (67.33)	0.29	
9	Eye and adnexa diseases		Hospitals	4458 (30.91)	5194 (30.66)	5303 (29.97)	5177 (27.72)	4110 (22.75)	-0.90	0.040
			CHC	9964 (69.09)	11745 (69.34)	12391 (70.03)	13499 (72.28)	13959 (77.25)	0.90	
10	Mental and behavioral disorders		Hospitals	6780 (54.69)	8327 (49.89)	11941 (64.36)	11462 (68.46)	8444 (63.48)	0.75	0.145
			CHC	5618 (45.31)	8364 (50.11)	6613 (35.64)	5281 (31.54)	4858 (36.52)	-0.75	
11	Ear diseases		Hospitals	1906 (40.96)	1902 (34.78)	2540 (35.43)	2333 (37.18)	2337 (37.54)	-0.29	0.635
			CHC	2747 (59.04)	3566 (65.22)	4629 (64.57)	3942 (62.82)	3888 (62.46)	0.29	
12	Blood and hematopoietic organ diseases and certain diseases involving immune mechanisms		Hospitals	1266 (53.26)	1663 (54.58)	2546 (56.20)	2800 (58.30)	2644 (54.98)	0.60	0.289
			CHC	1111 (46.74)	1384 (45.42)	1984 (43.80)	2003 (41.70)	2165 (45.02)	-0.60	
13	Tumour		Hospitals	1951 (94.25)	1199 (92.37)	1624 (93.33)	2985 (96.48)	3121 (96.21)	0.71	0.180
			CHC	119 (5.75)	99 (7.63)	116 (6.67)	109 (3.52)	123 (3.79)	-0.71	