

Table S1 Subtypes of CHD diagnostic codes

CHD subtypes	ICD-10
VSD	Q21.0
ASD	Q21.1
PDA	Q25.0
TOF	Q21.3
DORV	Q20.0
ECD	Q21.2

CHD, congenital heart disease; VSD, ventricular septal defect; ASD, atrial septal defect; PDA, patent ductus arteriosus; TOF, tetralogy of Fallot; DORV, double outlet right ventricle; ECD, endocardial cushion defect.

Table S2 2010–2019 GDP deflator

Years	GDP index ^a	GDP deflator ^b
2010	2073.1	100
2011	2271.1	107.5
2012	2449.6	110.8
2013	2639.9	112.5
2014	2835.9	114.7
2015	3035.6	114.1
2016	3243.5	115.7
2017	3468.8	121.0
2018	3703	124.9
2019	3923.3	126.7

^a, The GDP index is a relative value reflecting the trend and degree of changes in GDP over a certain period of time. The data comes from the annual statistical yearbook of the National Bureau of Statistics, with the index of 100 in 1978 as the reference value; ^b, the GDP deflator for each year is calculated by taking 2010 as the base period. GDP, Gross domestic product.

Table S3 The average length of stay and average hospitalization costs for hospitalized patients with CHD from 2010 to 2019

Years	N	Average length of stay (days), median (IQR)	Average hospitalization costs (\$), median (IQR)	Chain growth rate (%)
2010	266	15 (11–22)	28,814.27 (24,415.50–34,686.71)	–
2011	299	13 (13–18)	26,308.61 (21,292.76–32,176.84)	–8.70
2012	356	14 (11–20)	30,589.87 (26,036.22–37,322.10)	16.27
2013	366	15 (10–20)	31,705.88 (26,260.70–39,634.99)	3.65
2014	388	14 (11–20)	29,182.31 (24,950.34–36,323.73)	–7.96
2015	296	15 (12–21)	34,819.61 (35,501.70–58,622.81)	19.32
2016	269	14 (11–19)	35,090.85 (27,249.13–45,987.66)	0.80
2017	207	17 (14–23)	38,584.93 (28,715.39–51,542.43)	9.96
2018	412	15 (11–21)	31,915.73 (25,841.37–43,957.82)	–17.28
2019	228	14 (10–20)	35,504.37 (27,366.73–50,192.03)	11.24
Total	3087	15 (11–20)	28,393.16 (26,762.98–43,044.71)	3.03

IQR, interquartile range.

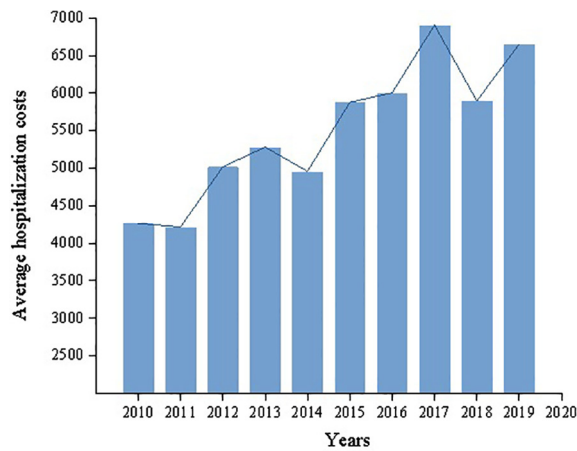


Figure S1 Trends in average hospitalization costs for patients with CHD in 2010–2019.

Table S4 Composition of average hospitalization costs for inpatients with CHD in 2010–2019

Years	Average hospitalization costs (\$), median (IQR)	Service costs (\$) (%)	Nursing costs (\$) (%)	Diagnosis costs (\$) (%)	Treatment costs (\$) (%)	Surgery costs (\$) (%)	Drug costs (\$) (%)	Blood costs (\$) (%)	Material costs (\$) (%)
2010	28,814.27 (24,415.50–34,686.71)	480 (1.67)	369.50 (1.28)	3,541.7 (12.29)	2,526.00 (8.77)	6,059.25 (21.03)	5,455.39 (18.93)	1,114.00 (3.87)	8,445.74 (29.31)
2011	26,489.61 (21,292.76–32,176.84)	390.59 (1.47)	358.04 (1.35)	3,344.37 (12.63)	2,243.00 (8.47)	6,408.25 (24.19)	4,780.23 (18.05)	818.37 (3.09)	76,17.44 (28.76)
2012	30,589.87 (26,036.22–37,322.10)	433.13 (1.42)	416.17 (1.36)	4,034.38 (13.19)	3,637.34 (11.89)	7,325.78 (23.95)	5,268.26 (17.22)	569.61 (1.86)	7,694.64 (25.15)
2013	31,705.88 (26,260.70–39,634.99)	373.16 (1.21)	396.67 (1.25)	4,073.07 (12.85)	3,607.24 (11.38)	7,972.43 (25.16)	5,838.66 (18.41)	257.09 (0.53)	7,580.46 (23.91)
2014	29,182.31 (24,950.34–36,323.73)	400.73 (1.37)	372.16 (1.28)	3,880.06 (13.30)	3,674.10 (12.59)	6,876.51 (23.56)	4,342.88 (14.88)	210.32 (0.73)	6,826.24 (23.39)
2015	34,819.61 (35,501.70–58,622.81)	420.68 (1.21)	384.27 (1.10)	4,119.97 (11.83)	4,263.61 (12.25)	9,099.21 (26.13)	5,929.91 (17.03)	230.04 (0.49)	6,894.64 (19.80)
2016	35,090.85 (27,249.13–45,987.66)	414.94 (1.18)	465.85 (1.38)	4,138.27 (11.79)	4,424.71 (12.61)	9,480.94 (27.02)	4,342.88 (14.88)	209.9 (0.39)	7,752.04 (22.09)
2017	38,584.93 (28,715.39–51,542.43)	710.62 (1.84)	561.89 (1.46)	4,273.26 (11.07)	3,034.29 (7.86)	10,636.81 (27.57)	6,861.80 (17.78)	219.63 (0.57)	8,833.07 (22.89)
2018	31,915.73 (25,841.37–43,957.82)	734.76 (2.30)	722.75 (2.26)	4,065.83 (12.74)	2,954.95 (9.26)	8,743.69 (27.40)	5,393.63 (16.90)	272.28 (0.85)	8,294.25 (25.99)
2019	35,504.37 (2,7366.73–80,593.83)	700.58 (1.97)	1,314.34 (3.70)	4,224.82 (11.90)	3,153.46 (8.88)	10,209.58 (28.76)	5,893.93 (16.60)	252.61 (0.71)	9,365.39 (26.38)

IQR, interquartile range; CHD, congenital heart disease.

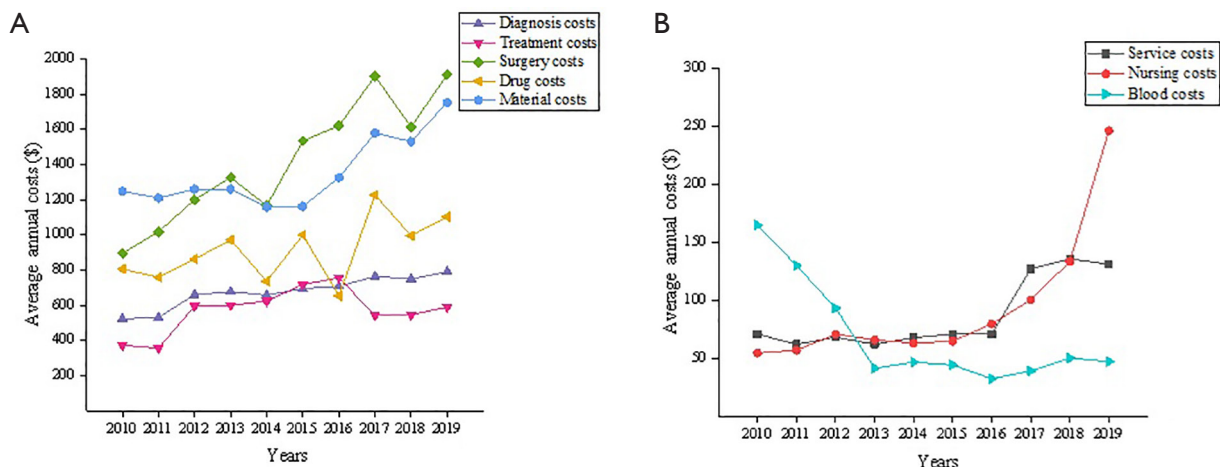


Figure S2 Trends in average annual costs (the components of hospitalization costs) for inpatients with CHD in 2010–2019.

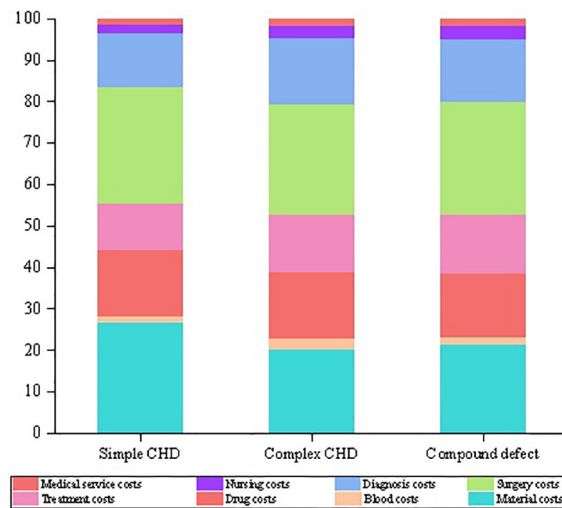


Figure S3 The composition and distribution of hospitalization costs for the three CHD types.

Table S5 The relational coefficient of the average costs of each item for hospitalized patients with CHD from 2010 to 2019

Years	Material costs	Drug costs	Treatment costs	Surgery costs	Diagnosis costs	Nursing costs	Medical service costs	Blood costs
2010	0.921	0.810	0.757	0.864	0.781	0.695	0.696	0.710
2011	1.00	0.851	0.786	0.912	0.821	0.733	0.732	0.744
2012	0.797	0.697	0.671	0.766	0.688	0.603	0.601	0.603
2013	0.73	0.651	0.629	0.741	0.633	0.567	0.551	0.559
2014	0.750	0.656	0.634	0.752	0.645	0.569	0.567	0.564
2015	0.659	0.595	0.565	0.724	0.579	0.514	0.513	0.509
2016	0.625	0.530	0.533	0.695	0.533	0.477	0.475	0.472
2017	0.495	0.476	0.437	0.566	0.445	0.398	0.399	0.396
2018	0.574	0.544	0.494	0.592	0.509	0.453	0.457	0.454
2019	0.519	0.485	0.436	0.526	0.444	0.408	0.399	0.395

CHD, congenital heart disease.

Table S6 The economic burden of CHD in the area compared to other regions

Years	Regions	Health care costs for CHD ^a (CN¥)	Disposable income per capita ^b (CN¥)	Ratios ^c
2019	Gansu, China	35,504.37	19,139.02	1.86
2017	Guangdong, China	37,555.00 (1)	33,003.29	1.14
2015	Qingdao, China	21,693.25 (2)	32,885.00	0.66
2011	Shanxi, China	25,000.00 (3)	21,810.00	1.15
2012	Beijing, China	25,408.00 (4)	36,000.00	0.71
2014	Shandong, China	30,713.99 (5)	20,864.00	1.47

^a, represents health care costs for patients with CHD (including average hospitalization costs, direct medical costs, etc.); ^b, The data on disposable income per capita in each region is obtained from the National Bureau of Statistics; ^c, represents the ratio of hospitalization costs to disposable income per capita. CHD, congenital heart disease.

References

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