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Original Research Article

Financial burden of intranatal care services: a study in Hassan district, Karnataka

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ABSTRACT

Background: In India, the financial burden of institutional delivery remains a major barrier to equitable maternal healthcare access. Significant cost disparities between public and private healthcare centres create substantial barriers, particularly for economically vulnerable households. Out-of-pocket expenditure on delivery care is a key driver of catastrophic health expenditure (CHE) among Indian households.

Methods: A cross-sectional study was conducted including 415 mother who experienced institutional delivery. Cost data were classified into total direct and total indirect delivery costs. Statistical analysis used Welch's t-test for comparing group means and Cohen's d for effect size assessment. CHE was defined as total delivery cost exceeding 10% of household's annual income.

Results: The average direct cost of normal deliveries in private healthcare centres (₹34,270) was 48.5-fold higher compared to public healthcare centres (₹706). For caesarean deliveries, the average direct expense in private healthcare centres (₹69,981) was around 42 times greater than in public healthcare centres (₹1,647). However, total indirect expenses showed no statistically significant variation across centres and delivery types (normal delivery, p=0.189; caesarean delivery, p=0.081). CHE occurred in 56% of private healthcare centres users compared to 8% of public healthcare centres users. For cesarean deliveries, CHE occurred in 64.4% of private healthcare centres cases versus 11.8% in public healthcare centres.

Conclusions: This study identified higher CHE in private healthcare centres; therefore, the government should regulate delivery costs in private healthcare centres and enhance quality facilities in public healthcare centres, and creating public awareness to promote their utilization.

Keywords: Catastrophic health expenditure, Cesarean delivery, Financial burden, Normal delivery, Private healthcare centres, Public healthcare centres,

INTRODUCTION

Intranatal care (INC), includes the comprehensive medical, midwifery, and nursing care support offered to a woman from the commencement of genuine labor through delivery and into the immediate after delivery period[1]. It's the mid-section of maternity care, occurring after antenatal care and before postnatal care.[1] The intranatal period is one of the riskiest phases in the maternity continuum, with more than one-third of maternal mortality and a substantial percentage of neonatal deaths attributable to problems during the birth process.[1]

India recorded approximately 24.2 million (2.42 crore) registered births in 2020, indicating one of the largest birth cohorts globally.[2] Institutional deliveries in India have experienced a transformative and sustained increase over the past three decades, escalating from approximately 26.1% in National Family Health Survey

(NFHS-1)[3], 1992–93, 33.6% in NFHS-2 (1998–99)[4], 38.7% in NFHS-3 (2005–06)[5], 78.9% in NFHS-4 (2015–16)[6] and 88.6% in NFHS-5 (2019–21).[3-7]

In India, the finance atmosphere of maternal healthcare reveals a significant disparity between the public and private healthcare centres. Although government healthcare centres are required to offer free or significantly subsidised delivery services through national programmes such as the Janani Suraksha Yojana (JSY) and the Janani Shishu Suraksha Karyakram (JSSK), it is actually not free, empirical evidence consistently demonstrates that households still face significant out-of-pocket expenditure (OOPE) when utilising public healthcare centres services.[8-11] The mode of delivery is a critical determinant of total expenditures, with c-sections resulting much higher costs than normal deliveries, particularly in private healthcare centres environments.[12]

The sustainable development goals (SDG) target 3.8 not only advocates for the expansion of essential health service coverage but also underscores the decreasing the proportion of population suffering significant household expenditure on health relative to total household expenditure or income (SDG target 3.8.2).[13] Due to healthcare costs, 100 million people worldwide are pushed into extreme poverty annually.[14]

Catastrophic health expenditure (CHE) is a measure for evaluating the degree to which health systems generate financial hardships, typically estimated as the percentage of the population suffering significant health-related household expenses relative to total household consumption or income.[15]

The usage of maternal health services, is significantly influenced by methods of delivery, which can impose financial burden and create the risk of catastrophic health expenditure for households, especially among poor and marginalised communities.

In this context, Hassan district, Karnataka characterised by a diverse healthcare facility, including district hospital (medical college), sub-divisional hospitals, community health centres, primary health centres, multi-specialty hospitals, super-specialty hospitals, nursing homes, clinic and ayurvedic hospitals, this environment provides an optimal context for analysing the relationship between facility type and delivery mode in relation to the financial burden of intranatal care.

The current study conducts a systematic examination of the financial burden associated with intranatal care in Hassan district, categorising costs into total direct and total indirect and total cost components across public and private healthcare centres, it also investigates these costs based on delivery mode, and conducts catastrophic expenditure analysis to assess the financial burdens that delivery costs impose on households, alongside the socio-economic characteristics of the population utilising the services.

Objectives

To compares the total direct, total indirect and total delivery costs of normal and cesarean deliveries between public and private healthcare centres in Hassan district. To evaluate the incidence of catastrophic health expenditure associated with institutional delivery across healthcare centres types and delivery types.

Hypotheses

H₀: The total direct, total indirect, and total delivery costs for both normal and cesarean deliveries are higher in private healthcare centres compared to public healthcare centres.

METHODS

Study design and setting

A cross-sectional descriptive study design was utilized to collect primary data from delivered women who had institutional delivery at both public and private healthcare centres within Hassan district, Karnataka, from December 2023 to December 2024. The Hassan district includes eight taluks and is served by one district hospital, seven sub divisional hospitals (taluk hospitals), seven first referral units, several public sector primary health centres and community health centres. In addition to over 50 clinic, nursing homes, super specialty, multi-specialty and ayurvedic hospitals, providing obstetric services.

Inclusion criteria

Recently delivered women (RDW) in the Hassan district within the study setting.

Exclusion criteria

Participates unwilling to engage in the study and mothers whose deliveries occurred more than 2 years ago.

Sample characteristics

The study included 415 delivered women who had institutional delivery, with respondents drawn from both rural (n=275) and urban (n=140) areas by proportionate stratified random sampling. The percentage of pregnant women recorded in the e-Janma software in 2022 was utilized to determine the numbers of respondents to be chosen from each region. Respondents were chosen using a simple random sampling technique. participants were classified according to their usage of healthcare centres into two categories: public healthcare centres (n=274, 66%) and private healthcare centres (n=141, 34%). Among all respondents, 192 (46.3%) reported normal

delivery, while 223 (53.7%) experienced cesarean delivery.

Data collection instrument

Data were gathered via in-person interviews using a structured, pre-tested interview schedule. Pre-testing was conducted with 25 respondents, who were neglected from the final study, and the instrument was subsequently refined based on their feedback.

A structured interview schedule was utilized to gather detailed cost data, socio-demographic variables, and delivery-related information.

Cost classification followed total direct costs and total indirect costs: total direct costs included all medical expenditures including hospital admission charges, doctors' fees, pharmaceuticals, laboratory investigations, OT charges, and blood components. Total indirect costs captured non-medical expenditures including food, transportation, and other miscellaneous expenses. Total cost was computed as the arithmetic sum of total direct and total indirect cost components. All expenses were documented in Indian rupees (₹).

Expenditure data was verified with prescriptions, invoices, and receipts from healthcare centres maintained by the respondents whenever possible. In the missing of formal evidence, estimations based on recall-based were documented using suitable prompts to minimize recall bias.

Statistical analysis

The difference in delivery costs between the two groups was examined using Welch's t-test for consistently throughout the analysis. Effect sizes were measured using Cohen's d. Catastrophic health expenditure was identified as delivery costs higher than 10% of annual household income. Data were analysed using python 3.11 version.

RESULTS

Table 1 illustrates the socio-demographic and obstetric profile of the 415 respondents, classified by types of healthcare centres, including 274 (66%) from public healthcare centres and 141 (34%) from private healthcare centres.

The majority responders from public healthcare centres were from rural regions (73%), whereas users of private healthcare centres were more evenly distributed, with 53.2% from rural and 46.8% from urban regions, indicating that private healthcare centres attract a slightly greater share of urban respondents.

Table 1: Socio demographic and obstetric profile of respondents by healthcare centres type.

Variables	Public healthcare centres (n=274) (%)	Private healthcare centres (n=141) (%)
Location		
Rural	200 (73)	75 (53.2)
Urban	74 (27)	66 (46.8)
Age groups (years)		
18-24	113 (41.2)	31 (22)
25-30	132 (48.2)	72 (51.1)
Above 31	29 (10.6)	38 (26.9)
Education		
School Education	185 (67.5)	44 (31.2)
College education	89 (32.5)	97 (68.8)
Family annual income		
With in 5,00,000	238 (86.9)	61 (43.3)
5,00,001 -10,00,000	26 (9.5)	54 (38.3)
Above 10,00,001	10 (3.7)	26 (18.4)
Caste		
SC	70 (25.5)	11 (7.8)
ST	14 (5.1)	2 (1.4)
OBC	190 (69.3)	128 (90.8)
Type of delivery		
Normal delivery	155 (56.6)	37 (26.2)
Cesarean delivery	119 (43.4)	104 (73.8)

Source: Primary data.

The majority age group in public healthcare centres was 25-30 years (48.2%), followed by 18-24 years (41.2%), while individuals over 31 were the lowest proportion (10.6%). Respondents from private healthcare centres exhibited the greatest presence in the 25-30 age bracket (51.1%), while the above 31 cohort was much higher (26.9%) compared to public healthcare centres, suggesting an older population utilizing private healthcare centres services.

A notable disparity emerged in educational background. Respondents from public healthcare centres were predominantly school-educated (67.5%), while private healthcare centres respondents were predominantly college-educated (68.8%), showing that elevated educational attainment correlates with the use of private healthcare centres services.

A significant majority of public healthcare centres users (86.9%) indicated family incomes below 5,00,000, highlighting the lower socioeconomic status of this demographic. In contrast, users of private healthcare centres exhibited a more varied income distribution, with 43.3% earning up to 5,00,000, 38.3% between 5,00,001-10,00,000, and 18.4% above 10,00,001, reflecting enhanced economic diversity among private healthcare centres users.

OBC respondents represented the largest caste category in both environments- 69.3% in public healthcare centres and 90.8% in private healthcare centres. SC presence was significantly greater in public healthcare centres (25.5%) compared to private healthcare centres (7.8%), although ST respondents constituted a smaller fraction in both categories (5.1% versus 1.4%), indicating that marginalized caste groups depend more on public healthcare centres services.

Normal delivery was more prevalent among responders from public healthcare centres (56.6%), while cesarean delivery was predominant in private healthcare centres (73.8%). This variance may indicate variations in clinical practice, patient preferences, or the impact of financial incentives in private healthcare centres environments.

Overall, public healthcare centres primarily serve a rural, lower-income, and school-educated population, whereas private healthcare centres accommodate a more urban, economically varied, and college-educated clientele. These findings underscore considerable socioeconomic disparities in healthcare utilization patterns, with critical implications for health policy and equitable the delivery of services.

Cost comparison: normal delivery

Table 2 shows descriptive statistics for normal delivery expenses between public and private healthcare centres. The average total direct cost in public healthcare centres (₹706) is markedly lower compared to the cost of private healthcare centres (₹34,270), yielding ratio of 48.5:1. The minimal overall total direct cost in public healthcare centres (median of just ₹10) indicates the effective implementation of JSSK benefits, and they provide free delivery services including medicines and diagnostics. The strong skewness of total direct costs at public healthcare centres (2.24) indicates a significantly right-skewed distribution, characterized by a predominance of women incurring little expenses, while a small fraction faces moderate charges.

Table 2: Descriptive statistics for normal delivery cost by healthcare centres type.

Variables	Healthcare centres	Mean	Median	Q1	Q3	Skewness
Total direct cost	Public	706	10	0	850	2.24
	Private	34,270	35,000	28,000	40,000	0.32
Total indirect cost	Public	6,963	5,600	4,100	10,000	1.62
	Private	6,000	5,000	3,000	10,000	1.36
Total cost	Public	7,669	7,000	5,000	10,000	1.44
	Private	39,541	37,500	32,000	45,000	-0.19

Source: Primary data.

The average total indirect expenditures are similar across healthcare centres (public: ₹6,963; private: ₹6,000), indicating that food, transportation and other miscellaneous expenses a common burden irrespective of the choice of healthcare centres. The elevated overall average total indirect costs at public healthcare centres may suggest the typically greater distance to these facilities for women in rural areas, together with other miscellaneous expenses.

The average total cost of normal delivery in private healthcare centres (₹39,541) was approximately five times more than that of public healthcare centres (₹7,669), highlighting a significant financial difference between the two healthcare centres types. The median cost in private healthcare centres (₹37,500) was substantially higher than in public healthcare centres (₹7,000), exhibiting a broader interquartile range (₹32,000-₹45,000) compared to public healthcare centres (₹5,000-₹10,000), indicating increased cost variability in private healthcare centres. The positive skewness in

public healthcare centres (1.44) indicates that most respondents experienced moderate costs, with a few high-cost outliers, while the almost symmetrical distribution in private healthcare centres (−0.19) implies that respondents consistently faced uniformly high delivery expenses.

Overall, the data indicate a significant economic disparity in normal delivery expenses, demonstrating that public healthcare centres are significantly more affordable and financially accessible than private healthcare centres.

Cost comparison: cesarean delivery

Table 3 presents descriptive statistics regarding the cost of cesarean deliveries in public versus private healthcare centres. The average total direct cost at public healthcare centres (₹1,647) is significantly lower compared to the cost of private healthcare centres (₹69,981), resulting in a ratio of 42.48:1. The little overall total direct cost in public healthcare centres (median of just ₹10) signifies the excellent execution of JSSK benefits, and which encompass complimentary delivery services, medicines and diagnostics. The pronounced skewness of total direct costs at public healthcare centres (2.87) signifies a markedly right-skewed distribution, described by a majority of women incurring minimal expenses, while a minority fraction faces moderate charges. The average total indirect expenditures are comparable among healthcare centres (public: ₹11,005; private: ₹9,356), signifying that food, transportation and other miscellaneous expenses reflect an equal burden regardless of the choice of healthcare centres. The increased overall average total indirect expenditures at public healthcare centres may indicate the generally greater distance to these facilities for women in rural regions, together with other miscellaneous expenses.

The average total expense of cesarean delivery in private healthcare centres (₹79,240) was around six times greater than that in public healthcare centres (₹12,661), underscoring a substantial financial disparity between the two types of healthcare centres.

The public healthcare centres (1.24) indicate a slightly positive right-skewed distribution, indicating that most of respondents experienced relatively cheap delivery costs near the median (₹10,010), but an insignificant fraction experienced disproportionately high expenses. The skewness value for private healthcare centres (2.53) indicates a pronounced positive right-skewed distribution, suggesting that while the majority of respondents incurred costs clustered in the lower range, there exists a considerable number of extreme high-cost cases, resulting in the average (₹79,240) to significantly surpass the median (₹71,000). The findings indicates that cost inequality is significantly greater in private healthcare centres compared to public healthcare centres, where unpredictable and excessively high delivery costs impose a substantial financial burden on many respondents seeking cesarean delivery services.

The results reveal a substantial economic discrepancy in cesarean delivery costs, indicating that public healthcare centres are considerably more affordable and financially accessible than private healthcare centres.

Table 3: Descriptive statistics for cesarean delivery cost by healthcare centres type.

Variables	Healthcare centres	Mean	Median	Q1	Q3	Skewness
Total direct cost	Public	1,647	10	0	2,500	2.87
	Private	69,981	65,000	58,000	75,000	2.59
Total indirect cost	Public	11,005	10,000	5,500	15,000	1.18
	Private	9,356	10,000	5,000	10,000	1.30
Total cost	Public	12,661	10,010	7,000	15,505	1.24
	Private	79,240	71,000	64,500	85,750	2.53

Source: Primary data

Table 4: Hypothesis test results (public versus private healthcare centres costs).

Comparison	Cost type	Welch's t	df	P value	Cohen's d	Decision on hypothesis
Normal delivery (Public versus private)	Direct cost	-22.51	36.4	<0.001	-8.13	Reject H_o
	Indirect cost	1.31	61	0.189	0.22	Fail to Reject
	Total cost	-15.78	38.6	<0.001	-4.74	Reject H_o
Cesarean delivery (Public versus private)	Direct cost	-26.54	105.5	<0.001	-3.80	Reject H_o
	Indirect cost	1.74	220.2	0.081	0.23	Fail to Reject
	Total cost	-22.07	116.1	<0.001	-3.14	Reject H_o
Overall (Public versus private)	Direct cost	-25.40	141	<0.001	-3.66	Reject H_o
	Indirect cost	0.37	278	0.709	0.04	Fail to Reject
	Total cost	-21.89	146.7	<0.001	-3.07	Reject H_o

Source: Primary data

Hypothesis testing

Table 4 illustrates the findings of Welch's independent samples t-test, which compares total direct, total indirect, and total delivery costs across public and private healthcare centres among three classifications: normal delivery, cesarean delivery, and overall.

For normal deliveries, statistically significant disparities were observed between public and private healthcare centres in both total direct delivery costs (t=−22.51, df=36.4, p<0.001, d=−8.13) and total delivery expenditure (t=−15.78, df=38.6, p<0.001, d=−4.74), resulting in the rejection of the null hypothesis in each case. The negative t-values and significant Cohen's d values suggest that public healthcare centres incur significantly lower total direct and total delivery costs compared to private healthcare centres. However, total indirect delivery costs exhibited no statistically significant variation (t=1.31, df=61, p=0.189, d=0.22), indicating that the total indirect delivery cost burden for normal delivery is similar across both healthcare centres.

Comparable data showed for cesarean deliveries. Total direct costs (t=−26.54, df=105.5, p<0.001, d=−3.80) and total delivery costs (t=−22.07, df=116.1, p<0.001, d=−3.14) were significantly lower costs in public healthcare centres, resulting to the rejection of the null hypothesis. Total indirect costs showed no statistically significant difference (t=1.74, df=220.2, p=0.081, d=0.23), signifying equivalence between healthcare centres type in this cost component.

The comprehensive study, including both delivery types, confirmed the sectoral differences. Total direct costs (t=−25.40, df=141, p<0.001, d=−3.66) and total costs (t=−21.89, df=146.7, p<0.001, d=−3.07) were significantly lower in public healthcare centres, leading to the rejection of the null hypothesis in both cases. Total indirect costs exhibited no significant difference (t=0.37, df=278, p=0.709, d=0.04), reflecting the pattern identified in the delivery-specific analyses.

In all three classifications, a uniform outcome is observed: public healthcare centres have substantially lower total direct and total delivery costs than private healthcare centres, with large effect sizes (Cohen's d ranging from −3.07 to −8.13) highlighting the practical significance of these disparities. In contrast, total indirect costs exhibit no variation across healthcare centres in any comparison, indicating that elements like as respondents travel cost, food and other miscellaneous expenses are distributed uniformly throughout public and private healthcare centres. These findings have significant implications for healthcare policy, especially in assessing the cost effectiveness and financial burden of childbirth services among healthcare centres type.

Catastrophic health expenditure analysis

Table 5 presents the catastrophic health expenditure (CHE) and cost-to-income ratio categorized by healthcare centres and delivery type. Over half (56%) of women delivering in private healthcare centres suffered CHE, in contrast to only 8% of those accessing public healthcare centres. The disparity across subgroups is significant: 5.2% for normal deliveries in public healthcare centres compared to 32.4% for normal deliveries in private healthcare centres. 11.8% of cesarean deliveries occur in public healthcare centres, compared to 64.4% in private healthcare centres.

Table 5: Catastrophic health expenditure and cost to income ratio by healthcare centres and delivery type.

Group	n	Mean total cost (₹)	Mean cost as % income	Median cost as % income	Catastrophic health expenditure (%)
Normal delivery in public healthcare centres	155	7,669	3.5	2.5	5.2
Cesarean delivery in public healthcare centres	119	12,661	5.4	4.2	11.8
Normal delivery in private healthcare centres	37	39,541	9.7	8.3	32.4
Cesarean delivery in private healthcare centres	104	79,240	15.9	12.9	64.4
All deliveries in public healthcare centres	274	9,837	4.3	3.0	8
All deliveries in private healthcare centres	141	68,823	14.3	10.8	56

Source: Primary data; Catastrophic expenses defined as ANC services cost >10% of annual household income

In private healthcare centres, the average total cost of cesarean deliveries consumed 15.9% of annual household income, with a median was 12.9%, indicating that more than half of these households faced expenses over the catastrophic level for a single delivery event.

In public healthcare centres, cesarean deliveries create a major financial burden, with 11.8% of respondents suffering catastrophic expenditure. This disclosure is particularly given the expenses for cesarean deliveries at public healthcare centres mainly include of total indirect

cost (transportation, outside food and other miscellaneous expenses), which are not included by JSSK and JSY benefits. For the lowest income quartile, even the minimal expenses associated with public healthcare centres delivery services can represent a significant financial burden.

DISCUSSION

This study provides detailed, district level evidence on the economic framework of institutional childbirth in Hassan district, enhancing the current knowledge base in various analytical and policy-relevant aspects. The following discourse analyses each key findings within the wider framework of national and international evidence, highlighting both similarities and divergences from established patterns.

The present study revealed a significant difference in total average direct healthcare expenditures between public and private healthcare centres. The total average direct cost for normal delivery was significantly lower at public healthcare centres (₹706) compared to private healthcare centres (₹34,270), resulting in a ratio of 48.5:1. Similarly, for cesarean delivery, the total average direct cost at public healthcare centres (₹1,647) was significantly lower than at private healthcare centres (₹69,981), yielding a ratio of 42.48:1. However, total indirect expenses showed no statistically significant variation across healthcare centre and delivery types (normal delivery p=0.189 and cesarean delivery p=0.081).

Studies on the expenses associated with childbirth in both public and private healthcare centres have been conducted at the nationally and internationally; however, significant gaps exist in the current literature.

At the national level, Tripathy et al conducted a secondary study of NSSO 2014 data, estimating both direct and indirect out-of-pocket expenditures for delivery hospitalisation in public and private health institutions throughout India.[16] However, their analysis reported childbirth expenditures as a unified category, neglecting to differentiate findings by type of delivery-specifically, normal delivery and cesarean delivery separately.

Similarly, research utilising NFHS data by Singh et al has documented overall out-of-pocket expenses and cesarean delivery rates across various facility types; however, it did not separately analyse total direct and total indirect expenditures for each type of delivery between public and private hospitals.[17]

At the international level, Nahar and Costello observed hidden direct and indirect costs associated with maternity care for both normal deliveries and cesarean deliveries in public institutions in Dhaka, Bangladesh, although excluded comparisons with private hospitals.[18]

Khan and Zaman, in their hospital-based cost accounting study conducted in Islamabad, Pakistan, assessed direct and indirect costs associated with both normal delivery and cesarean delivery from the perspectives of the hospital and the patient; however, this study was limited to a single public tertiary hospital without a comparison to the private sector.[19] Sabnom and Islam analysed the direct and indirect expenses of cesarean delivery between a public and a private hospital in Dhaka, excluding normal deliveries from their comparison.[20]

Thus, to date, no study- whether national or international level- has thoroughly and simultaneously analysed total direct expenses and total indirect costs for both normal delivery and cesarean delivery between public and private healthcare centres. This work addresses a significant gap in evidence.

In the current study, the total average cost of a normal delivery at private healthcare centres (₹39,541) was around five times greater than at public healthcare centres (₹7,669). Similarly, the total average cost of cesarean delivery at private healthcare centres (₹79,240) was also around sixfold greater than that at public healthcare centres (₹12,661). These findings indicates that, irrespective of the type of delivery, the financial burden on families is significantly higher in private healthcare centres compared to public healthcare centres. Modugu et al reported similar findings.[9]

In the current study revealed that CHE for childbirth was greater among those who delivered in private healthcare centres (56%) compared to those who utilised public healthcare centres (8%). Similar findings were noted in the studies conducted by Tripathy et al and Prinja et al.[16,21] The financial burden identified in our study is 5.2% for normal deliveries in public healthcare centres compared to 32.4% for normal deliveries in private healthcare centres and 11.8% of cesarean deliveries happen in public healthcare centres, compared to 64.4% occur in private healthcare centres. Prinja et al observed comparable outcomes in their study, indicating that childbirth in a private healthcare centre is consistently associated to a financial burden of CHE compared to a public healthcare centre.[21]

This study has some limitations. The unequal sample numbers within healthcare centres groups (normal delivery: public 155, private 37; cesarean delivery: public 37, private 104) indicate that variations in healthcare centres utilization patterns are indicative of variety rather than intentional distribution.

CONCLUSION

According to this study we found that, the disparity in charges between public and private healthcare centres institutional delivery is mostly due to total direct costs rather than total indirect costs. Given the rising total indirect costs for childbirth public healthcare centres

users, which are now comparable to those of private healthcare centres, it is essential to implement effective measures for the provision of free ambulance services under JSSK and to ensure the distribution of high-quality food. The government must implement measures to prevent doctors and government hospital from accepting bribes. The significant frequency of catastrophic expenditures across private healthcare centres users, particularly regarding cesarean delivery, illustrates the immediate require for regulatory supervision of private healthcare centres delivery costs, enhancement of financial protection mechanisms, and strengthening of public healthcare facility capacities.

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