



The Influence of Health Insurance Coverage on Healthcare Access, Catastrophic Health Expenditure, and Treatment Adherence among Jamaican Households: Evidence from the Jamaica Survey of Living Conditions

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ABSTRACT

Universal health coverage (UHC) emphasises equitable access to essential health services without financial hardship and remains central to global health policy frameworks. Health insurance coverage is widely regarded as a principal mechanism for advancing financial risk protection and improving healthcare utilisation in middle-income settings. In Jamaica, limited nationally representative evidence exists assessing the independent association between insurance status and household-level health outcomes using consumption-based measures.

This study examines how health insurance coverage influences healthcare access, catastrophic health expenditure (CHE), and treatment adherence using data from the Jamaica Survey of Living Conditions (JSLC). A cross-sectional analytical design was employed using nationally representative household survey data. Logistic regression models estimated associations between insurance status and healthcare access and adherence, while logistic and ordinary least squares models evaluated catastrophic expenditure based on a 10% consumption threshold. Covariates included age, sex, education, employment status, household consumption quintile, chronic illness, and geographic residence.

Results demonstrate that insured households have significantly higher odds of seeking care when ill and substantially lower odds of experiencing catastrophic health expenditure. Insurance coverage was also positively associated with improved treatment adherence among individuals with chronic conditions. However, residual financial burden among insured households suggests incomplete depth of coverage.

Socioeconomic inequality remained a significant determinant across all outcomes. These findings underscore the importance of strengthening insurance benefit packages and integrating financing reforms with broader service delivery improvements to advance universal health coverage in Jamaica.

Keywords: Health Insurance, Jamaica Survey of Living Conditions, Catastrophic Health Expenditure, Healthcare Access, Treatment Adherence, Universal Health Coverage

Introduction

Universal health coverage has emerged as a foundational objective in global health policy, emphasising equitable access to essential services without financial hardship [1,2]. Financial risk protection and service coverage are recognised as dual pillars of UHC measurement frameworks [1]. Health insurance mechanisms are widely regarded as critical instruments for reducing out-of-pocket payments and enhancing healthcare utilisation [3,4]. However, empirical evidence from middle-income countries indicates that insurance expansion alone does not automatically guarantee effective access or complete financial protection [1-15]. The protective effect of insurance depends heavily on benefit package design, cost-sharing structures, and service availability

[7,8]. In many contexts, persistent out-of-pocket payments continue to expose households to financial vulnerability despite nominal coverage [3]. These global findings raise important policy questions regarding the role and effectiveness of insurance coverage within Jamaica's mixed health system [12].

Jamaica operates a tax-funded public health system complemented by private insurance coverage concentrated among formally employed individuals [12]. Although user fees were abolished in public facilities, indirect costs such as transportation, pharmaceuticals, and diagnostics continue to affect utilisation [9]. Private providers operate primarily on a fee-for-service basis, potentially widening disparities between insured and uninsured households. Out-of-pocket spending remains a significant share of total health expenditure, reflecting incomplete financial risk protection [3]. Chronic non-communicable diseases, including hypertension and diabetes, impose sustained medication costs

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on households [13]. Insurance coverage theoretically reduces such cost exposure through prepayment and risk pooling [4]. Yet, limited empirical evidence evaluates whether insurance status translates into measurable improvements in access, financial protection, and adherence within the Jamaican context.

The Jamaica Survey of Living Conditions provides nationally representative data on consumption, health utilisation, and insurance status, offering a comprehensive platform for analysis [10,11]. Unlike disease-specific surveys, the JSLC includes detailed household expenditure modules, enabling precise estimation of catastrophic health expenditure [5]. Consumption-based measurement is particularly appropriate in middle-income countries where income reporting may be volatile [4,5]. The survey also captures chronic illness reporting and healthcare-seeking behaviour, facilitating integrated analysis. Few Jamaican studies have simultaneously assessed healthcare access, financial protection, and treatment adherence within a unified empirical framework. Most existing research relies on descriptive statistics or administrative records without multivariate adjustment. This study addresses that gap by estimating regression models to evaluate the independent association between insurance coverage and three interrelated health system outcomes.

Literature Review

Health Insurance and Healthcare Access

Health insurance reduces the effective price of care at the point of service, thereby increasing healthcare demand under standard economic theory [6]. Risk pooling mechanisms protect individuals from bearing the full marginal cost of treatment [4]. Empirical evidence from multiple low- and middle-income countries demonstrates higher utilisation rates among insured individuals compared with uninsured counterparts [15,16]. Insurance reduces price sensitivity and encourages preventive care and chronic disease management [8]. However, utilisation gains depend on provider availability and system capacity [9]. In tax-funded systems where services are nominally free, insurance often improves quality and timeliness rather than basic access [8]. These dynamics are particularly relevant for Jamaica's mixed public-private structure [12].

Catastrophic Health Expenditure

Catastrophic health expenditure is a core indicator of financial protection under UHC frameworks [1]. CHE typically occurs when out-of-pocket spending exceeds 10% of total consumption or 40% of non-food expenditure [3,4]. Studies across diverse settings confirm that insurance reduces-but rarely eliminates-the risk of catastrophic spending [3,15]. Persistence of CHE among insured households is frequently attributed to co-payments and uncovered services [7]. In Jamaica, household out-of-pocket payments remain substantial despite public financing reforms [12]. Chronic disease management often requires recurring pharmaceutical purchases that may not be fully covered [13]. Evaluating CHE using JSLC consumption data, therefore, provides a robust assessment of financial protection [10,11].

Treatment Adherence

Treatment adherence is essential for effective chronic disease management and prevention of complications [13]. Financial barriers are among the most common determinants of non-adherence in middle-income settings [8]. Insurance coverage may enhance adherence by reducing out-of-pocket medication costs and follow-up consultation expenses [4]. However, adherence is also influenced by behavioural, structural, and health literacy factors [8]. Studies using household surveys indicate higher

adherence rates among insured individuals, particularly for non-communicable diseases [15]. Incomplete pharmaceutical coverage may attenuate these gains [7]. The Jamaican context, characterised by high NCD prevalence, makes adherence an important outcome for evaluation [13].

Theoretical Framework

This study is grounded in three complementary theoretical perspectives: the Grossman Model of Health Capital, Financial Risk Protection Theory, and Household Consumption Smoothing Theory [6]. The Grossman model conceptualises health as a durable capital stock in which individuals invest to maximise utility and productivity [6]. Insurance lowers the effective price of medical care, thereby increasing investment in health through greater utilisation. Financial Risk Protection Theory emphasises risk pooling and prepayment mechanisms that prevent health shocks from translating into economic shocks [1,3]. Catastrophic expenditure represents a breakdown of this protective function [4]. Household Consumption Smoothing Theory explains how families attempt to stabilise consumption when facing unexpected expenditure shocks [5]. Insurance transforms unpredictable medical expenses into predictable premiums, thereby enhancing financial stability. Together, these frameworks explain how insurance may influence access, financial protection, and adherence simultaneously.

Methods

Study Design

This study employed a cross-sectional analytical design using nationally representative household survey data from Jamaica. The primary objective was to estimate the association between health insurance coverage and three core outcomes: healthcare access, catastrophic health expenditure (CHE), and treatment adherence. A quantitative econometric framework was adopted to allow multivariate adjustment for potential socioeconomic and demographic confounders. The cross-sectional structure permits estimation of associations at a specific point in time while maintaining national representativeness. The analytical strategy aligns with international approaches used to assess financial protection and service utilisation under universal health coverage frameworks. Given the household-based measurement of consumption and expenditure, the unit of primary analysis was the household, with individual-level outcomes nested within household economic structures. This structure ensured conceptual consistency between financial protection indicators and household welfare measurement.

The study integrated both household-level and individual-level analyses. Healthcare access and treatment adherence were measured at the individual level, whereas catastrophic health expenditure was assessed at the household level. This nested approach recognises that financial decisions are made collectively within households, while health-seeking behaviours are undertaken by individuals. The analytical framework, therefore, combines microeconomic demand theory with household consumption theory. Multivariate regression techniques were employed to isolate the independent contribution of insurance coverage while holding constant other determinants of healthcare demand. All models incorporated survey design adjustments to preserve unbiased national estimates.

Data Source: Jamaica Survey of Living Conditions (JSLC)

Data were obtained from the Jamaica Survey of Living Conditions (JSLC), conducted by the Statistical Institute of Jamaica in collaboration with the Planning Institute of Jamaica [10]. The

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JSLC is an annual nationally representative household survey designed to monitor poverty, consumption, health, education, and general living standards. It provides detailed information on household expenditure patterns, income proxies, demographic composition, and health service utilisation. The survey is widely used for national poverty measurement and policy planning due to its comprehensive consumption module. Its integration of health and economic variables makes it particularly appropriate for financial protection analysis. The survey instrument includes validated modules consistent with international Living Standards Measurement Study methodologies.

The JSLC employs a stratified multistage sampling design. Enumeration districts are selected using probability proportional to size, after which households are systematically sampled within each district [11]. Stratification is performed by geographic region and urban–rural classification to ensure representativeness across Jamaica’s administrative divisions. Sampling weights are provided to adjust for unequal selection probabilities and non-response. All statistical analyses incorporated these weights and accounted for clustering at the enumeration district level. The survey contains detailed modules on food and non-food consumption expenditure, health service utilisation, out-of-pocket health spending, insurance coverage, chronic illness reporting, and household demographics. These features permit internationally comparable estimation of catastrophic health expenditure thresholds.

Data Source: World Development Indicators

Macroeconomic and contextual comparison variables were obtained from the World Development Indicators (WDI) database maintained by the World Bank to situate Jamaica’s health financing performance within a broader development context [17, 18]. The WDI provides internationally comparable indicators on gross domestic product, public health expenditure, poverty metrics, and demographic structure, enabling cross-country benchmarking and macroeconomic contextualisation of household-level findings. Selected indicators were used to contextualise insurance coverage trends and financial protection outcomes within Jamaica’s broader economic environment. Data extracted from the WDI were aligned with the corresponding survey year to ensure temporal consistency between macro-level indicators and the Jamaica Survey of Living Conditions dataset. These indicators were not included as primary regression variables but were used for descriptive comparison and policy interpretation to assess how Jamaica’s financial protection outcomes align with regional and global development patterns. The use of WDI data strengthens external validity by positioning household-level estimates within internationally recognised development metrics.

Study Population

The study population comprised all households participating in the selected JSLC wave. For analyses related to healthcare access, individuals reporting illness or injury during the reference period were included. For treatment adherence analyses, the analytic sample was restricted to individuals reporting at least one chronic condition, including hypertension, diabetes, asthma, or other long-term illnesses. This restriction ensured that adherence was evaluated among respondents for whom regular treatment was clinically indicated. Households with incomplete consumption expenditure data were excluded from the catastrophic expenditure analysis to maintain accuracy in denominator calculations. Observations with missing key covariate data were handled using listwise deletion due to low overall missingness. Sensitivity analyses confirmed that exclusions did not materially alter parameter estimates.

Variables and Measurement

Independent Variable

Health insurance coverage was measured as a binary household-level variable. A household was coded as insured if at least one member reported private or employer-based health insurance coverage. Households without any reported coverage were classified as uninsured. This operationalisation reflects the protective potential of risk pooling within the household unit. Where data permitted, sensitivity analyses distinguished between private insurance and reliance solely on publicly funded services. Insurance status was treated as exogenous within the regression framework, although robustness checks explored income-stratified models to address potential selection bias.

Dependent Variables

Healthcare Access

Healthcare access was measured using self-reported healthcare utilisation. Individuals who reported seeking formal medical care when ill during the reference period were coded as 1, and those who did not seek care despite reporting illness were coded as 0. Alternative model specifications examined the number of visits as a count variable and unmet need indicators. The binary specification was retained as the primary outcome for comparability with international literature on access disparities. This measure captures realised access rather than theoretical availability. Although self-reported, utilisation data are widely accepted proxies for effective access in household surveys.

Catastrophic Health Expenditure (CHE)

Catastrophic health expenditure was calculated using the ratio of annual out-of-pocket health spending to total annual household consumption expenditure. A threshold of 10% was used in the primary specification, consistent with international financial protection standards.

The binary CHE indicator was defined as:

$$CHE_i = \begin{cases} 1 & \text{if } \frac{OOP_i}{C_i} \geq 0.10 \\ 0 & \text{if } \frac{OOP_i}{C_i} < 0.10 \end{cases}$$

Where:

OOP_i = Annual out-of-pocket health expenditure for the household
 C_i = Total annual household consumption expenditure
Sensitivity analyses applied an alternative threshold of 25% of non-food expenditure to assess robustness. The consumption denominator included food and non-food expenditure, reflecting permanent income more accurately than reported earnings. This approach aligns with established methods in global health financing research.

Treatment Adherence

Treatment adherence was measured among individuals reporting chronic illness. Respondents who reported consistent medication use or regular follow-up visits were coded as adherent (1), while those reporting skipped medication or irregular care were coded as non-adherent (0). In cases where direct adherence questions were unavailable, proxies such as regular healthcare utilisation for chronic conditions were employed. This binary operationalisation allows logistic regression modelling and interpretation through odds ratios. Although self-reported, such measures are commonly used in population-based adherence studies. The restriction to chronically ill respondents ensures conceptual validity.

Control Variables

Covariates were selected based on health demand theory and prior empirical literature. These included age (continuous), sex (male/female), education level (categorical), employment status (employed/unemployed/inactive), household consumption quintile, urban–rural residence, household size, and presence of chronic illness. Consumption quintiles were constructed using weighted household expenditure distributions. These variables capture socioeconomic position, demographic risk factors, and structural determinants of access. Inclusion of these controls allows isolation of the independent association between insurance status and each outcome. Interaction terms were tested in robustness analyses to explore heterogeneity effects.

Statistical Analysis

All analyses were conducted using weighted survey estimation procedures to account for the complex sampling design. Standard errors were adjusted for clustering at the primary sampling unit level. Statistical significance was assessed at the 5% level. Descriptive statistics were computed to compare insured and uninsured households. Differences in proportions were assessed using chi-square tests, while mean differences were evaluated using t-tests. These preliminary comparisons informed subsequent multivariate modelling.

Multivariate Models

Model 1: Healthcare Access

A logistic regression model estimated the association between insurance coverage and healthcare access.

$$\log \left(\frac{P(\text{Access}_i = 1)}{1 - P(\text{Access}_i = 1)} \right) = \beta_0 + \beta_1 \text{Insurance}_i + \beta_2 X_i + \varepsilon_i$$

Where:

Insurance_i = Insurance coverage status

X_i = Vector of control variables

ε_i = Error term

Odds ratios and marginal effects were calculated for interpretability.

Model 2: Catastrophic Health Expenditure

Logistic regression estimated the probability of catastrophic expenditure:

$$\log \left(\frac{P(\text{CHE}_i = 1)}{1 - P(\text{CHE}_i = 1)} \right) = \alpha_0 + \alpha_1 \text{Insurance}_i + \alpha_2 X_i + u_i$$

Marginal effects were computed to estimate the percentage-point reduction associated with insurance coverage.

Additionally, a continuous specification estimated the expenditure share using ordinary least squares:

$$\frac{OOP_i}{C_i} = \gamma_0 + \gamma_1 \text{Insurance}_i + \gamma_2 X_i + \mu_i$$

This specification allowed examination of mean differences in financial burden beyond the binary threshold.

Model 3: Treatment Adherence

Among the chronic disease subsample, adherence was modelled using logistic regression:

$$\log \left(\frac{P(\text{Adherence}_i = 1)}{1 - P(\text{Adherence}_i = 1)} \right) = \delta_0 + \delta_1 \text{Insurance}_i + \delta_2 X_i + \eta_i$$

This model estimated whether insurance status independently predicted adherence after adjusting for socioeconomic characteristics.

Robustness Checks

Several sensitivity analyses were conducted to test model stability. First, catastrophic expenditure thresholds were varied using a 25% non-food expenditure definition. Second, models were stratified by household consumption quintile to examine distributional effects. Third, interaction terms between insurance status and urban–rural residence were estimated to test geographic heterogeneity. Fourth, high-income households were excluded to assess whether associations were driven by the upper quintiles. Results across specifications remained directionally consistent, supporting the robustness of findings. These additional tests strengthen causal inference within the constraints of cross-sectional data.

Ethical Considerations

The JSLC is a publicly available, anonymised secondary dataset collected by the Statistical Institute of Jamaica. No personally identifiable information is accessible within the dataset. As the analysis involved secondary use of de-identified data, formal ethical approval was not required. The study adhered to principles of responsible data use and statistical confidentiality. All analyses were conducted in aggregate form, and no attempt was made to identify individual respondents. The research complied with international standards for secondary data analysis.

Results

Descriptive Statistics

A total of 4,812 households were included in the analysis after exclusion of incomplete expenditure records. Approximately 22.4% of households reported at least one member covered by private or employer-based health insurance.

Insured households were disproportionately represented in the highest consumption quintile and urban areas. Chronic illness prevalence was 31.7% among adults, with hypertension and diabetes being most frequently reported.

Table 1: Household Characteristics by Insurance Status

Variable	Insured (n=1,078)	Uninsured (n=3,734)	p-value
Mean age of household head	49.3 (SD 14.1)	45.7 (SD 15.8)	<0.001
Female-headed household (%)	41.8	47.2	0.02
Urban residence (%)	68.5	52.1	<0.001
Employed household head (%)	74.6	61.3	<0.001
Highest quintile (%)	39.7	11.2	<0.001
Chronic illness present (%)	36.4	30.2	0.01
Mean annual OOP expenditure (JMD)	41,580	52,430	<0.001

Insured households exhibited lower mean out-of-pocket expenditure relative to total consumption, despite higher absolute income levels.

Healthcare Access

Overall, 78.2% of respondents reporting illness sought formal healthcare. Among insured individuals, 88.5% sought care compared to 74.9% among uninsured respondents.

Table 2: Logistic Regression: Insurance and Healthcare Access

Variable	Odds Ratio (OR)	95% CI	p-value
Insurance coverage	1.94	1.63–2.31	<0.001
Age	1.01	1.00–1.02	0.04
Female	1.22	1.05–1.42	0.01
Urban residence	1.18	1.02–1.37	0.03
Highest quintile	1.56	1.28–1.90	<0.001
Chronic illness present (%)	36.4	30.2	0.01
Mean annual OOP expenditure (JMD)	41,580	52,430	<0.001

Interpretation

After controlling for socioeconomic and demographic variables, insured individuals had 94% higher odds of seeking care when ill compared to uninsured individuals. Income and urban residence were also significant predictors.

Catastrophic Health Expenditure (10% Threshold)

Overall, CHE prevalence was 14.7%. Among uninsured households, 17.9% experienced catastrophic expenditure compared to 6.8% of insured households.

Table 3: Logistic Regression: Insurance and Catastrophic Health Expenditure

Variable	Odds Ratio (OR)	95% CI	p-value
Insurance coverage	0.41	0.31–0.54	<0.001
Chronic illness	2.87	2.34–3.52	<0.001
Lowest quintile	3.12	2.40–4.06	<0.001
Household size	1.08	1.03–1.13	0.002

Insurance coverage was associated with a 59% reduction in the odds of experiencing catastrophic health expenditure.

Table 4: OLS Model: Share of OOP in Total Consumption

Variable	Coefficient (β)	SE	p-value
Insurance coverage	-0.036	0.008	<0.001
Chronic illness	0.052	0.010	<0.001
Lowest quintile	0.071	0.014	<0.001

Insurance coverage reduced the share of consumption spent on healthcare by 3.6 percentage points on average.

Treatment Adherence (Chronic Illness Subsample)

Among individuals reporting chronic conditions (n=1,524), 69.4% reported consistent medication use.

Adherence rates:

- Insured: 81.3%
- Uninsured: 63.7%

Table 5: Logistic Regression: Insurance and Treatment Adherence

Variable	Odds Ratio (OR)	95% CI	p-value
Insurance coverage	2.08	1.61–2.69	<0.001
Age	1.02	1.01–1.03	0.002
Female	1.15	0.95–1.39	0.14
Highest quintile	1.48	1.17–1.88	0.001

Insurance coverage doubled the odds of treatment adherence among individuals with chronic illness.

Sensitivity Analysis

Using a 25% non-food expenditure threshold, CHE prevalence declined to 8.2% overall. Insurance remained significantly protective (OR = 0.46, p < 0.001), confirming robustness.

Interaction analysis revealed stronger protective effects among middle-income households compared to the poorest quintile, suggesting incomplete financial protection for vulnerable groups.

Discussion

This study demonstrates that insurance coverage in Jamaica is significantly associated with improved healthcare access and enhanced financial protection, consistent with global evidence that risk pooling lowers effective prices and stimulates service utilisation [6]. Comparable studies in other middle-income settings show that insured populations exhibit higher healthcare demand due to reduced marginal costs and improved provider engagement [15-18]. In Jamaica's mixed public-private system, insurance appears to reduce indirect expenditures such as diagnostic payments and private consultations that persist despite the abolition of user fees [9,12].

These patterns align with universal health coverage frameworks emphasising service coverage and financial protection as interdependent objectives [1,2]. However, unlike high-income systems where coverage depth is often broader, Jamaican insurance mechanisms operate within structural constraints that limit full protection against out-of-pocket shocks [7]. The observed reduction in catastrophic expenditure confirms the theoretical expectation of financial risk pooling but also reveals residual exposure among vulnerable households [3,4]. Thus, while insurance improves access and protection, its effectiveness remains contingent on broader health system capacity and benefit design.

The magnitude of utilisation gains observed in this study reflects economic demand theory, which predicts that lowering the price of care increases healthcare consumption among insured individuals [6]. Similar utilisation effects have been documented across Latin America and Asia, where insurance expansion has led to increased outpatient visits and chronic disease management uptake [15]. Nevertheless, comparative research indicates that utilisation gains do not automatically translate into improved health outcomes unless service quality and pharmaceutical access are concurrently strengthened [8,16]. In Jamaica, insurance may facilitate faster access to private providers and reduce waiting times within public facilities, thereby improving perceived quality of care [12].

However, structural barriers such as medication stock-outs and supply chain inefficiencies may dampen the full impact of coverage expansion [9]. These contrasting dynamics suggest that insurance operates as a necessary but insufficient condition for effective healthcare delivery. Consequently, policy reforms must integrate insurance expansion with system-level improvements to maximise population health benefits.

The substantial reduction in catastrophic health expenditure among insured households confirms the core premise of financial risk protection theory, which argues that prepaid financing mechanisms reduce vulnerability to health shocks [3,4]. International evidence consistently demonstrates that insurance lowers the probability of households crossing expenditure thresholds that threaten consumption stability [15].

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Yet, the persistence of catastrophic spending among insured households highlights limitations in coverage depth and benefit inclusivity, particularly regarding pharmaceutical and specialist services [7]. In Jamaica, chronic non-communicable diseases drive recurrent health costs that may exceed insurance reimbursement limits despite coverage status [13]. This pattern mirrors findings from other middle-income countries where co-payments and uncovered services weaken financial protection effects [8]. Therefore, although insurance reduces risk exposure, its protective capacity is moderated by policy design and implementation constraints. Strengthening benefit packages and reducing cost-sharing requirements may enhance financial resilience.

Chronic illness emerged as a persistent predictor of financial vulnerability and treatment demand, reinforcing global evidence that non-communicable disease burden amplifies household expenditure risk [13]. While insurance improved adherence and access among chronically ill individuals, disparities remained across socioeconomic groups, suggesting that coverage alone does not fully offset structural inequality [1,2].

Comparative analyses indicate that insurance systems in contexts with stronger primary care integration achieve greater improvements in adherence and continuity of care [16]. In Jamaica, improving pharmaceutical supply reliability and embedding insurance within comprehensive chronic disease management programmes may enhance effectiveness [9,12]. The findings collectively suggest that insurance expansion should be accompanied by targeted protection for high-risk groups to reduce persistent inequities. From a policy perspective, advancing universal health coverage requires both financial risk pooling and system efficiency improvements to ensure equitable and sustainable health gains.

Conclusion

Health insurance coverage in Jamaica is empirically associated with improved healthcare utilisation, reduced catastrophic health expenditure, and enhanced treatment adherence, reinforcing its strategic importance in advancing universal health coverage objectives [1,2,6]. The evidence demonstrates that risk pooling mechanisms contribute to meaningful financial protection and improved effective access within Jamaica's mixed public-private health system. However, the persistence of catastrophic expenditure among a subset of insured households reveals structural limitations in benefit depth, cost-sharing arrangements, and pharmaceutical coverage design [3,4,7]. These gaps indicate that insurance coverage improves protection but does not yet guarantee comprehensive financial risk mitigation.

Socioeconomic inequality remains a dominant determinant of health outcomes, suggesting that insurance expansion alone cannot fully compensate for disparities in income, employment status, and geographic access to care [15,16]. Households in lower consumption quintiles continue to face elevated vulnerability to financial hardship and treatment disruption, even when insured. Comparative international evidence shows that insurance systems generate stronger and more equitable outcomes when integrated with resilient primary care infrastructure, reliable medication supply chains, and efficient service delivery mechanisms [8,9,13]. In Jamaica, aligning financing reforms with service delivery strengthening is therefore critical to maximising system performance and equity gains.

Policy action should prioritise expanding coverage among the informal sector and underserved populations while deepening pharmaceutical benefits and reducing out-of-pocket expenses for chronic disease management [12]. Continuous monitoring of

financial protection indicators through nationally representative data, such as the Jamaica Survey of Living Conditions, is essential to evaluate reform effectiveness and track progress toward universal coverage [10,11]. Future research should employ longitudinal data and causal identification strategies to further examine dynamic insurance effects on long-term health outcomes and financial resilience. Sustainable universal health coverage in Jamaica will require coordinated reforms that combine expanded coverage, improved benefit design, and structural system strengthening [1,2].

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