

Review Article

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The Self-Reported Health Status, Chronic Disease Burden and Healthcare Utilisation of Uninsured Rural Residents in Jamaica: Evidence from the Jamaica Survey of Living Conditions 2023

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ABSTRACT

Background: Health insurance constitutes an important component of financial protection because illness can impose direct medical costs on households while simultaneously reducing income through disability and lost productivity. Rural populations may experience an additional disadvantage because socioeconomic vulnerability, employment arrangements, geographical accessibility and availability of health services can interact with insurance status to influence healthcare utilisation. Although Jamaican scholarship has examined rural health and health insurance, comparatively little contemporary evidence has isolated uninsured rural residents and simultaneously examined their socioeconomic composition, functional health, current illness, chronic disease history and utilisation of health professionals. This omission is consequential because favourable self-reported health may coexist with chronic morbidity and functional limitation, creating a potentially misleading impression of health among populations without financial protection.

Objective: This study examined the demographic, socioeconomic and health characteristics of uninsured rural Jamaicans using the Jamaica Survey of Living Conditions (JSLC) 2023 and compared the findings with Jamaican and international evidence.

Methods: A secondary cross-sectional analysis of JSLC 2023 microdata was undertaken among 1,583 rural residents reporting no health insurance, using descriptive frequencies and percentages for demographic characteristics, functional health, illness status, healthcare utilisation and reported chronic conditions.

Results: Males represented 50.9% of the sample, 54.5% were classified in the two poorest consumption quintiles, and 56.8% of respondents with valid employment data were own-account workers. Although 97.0% reported that they were not currently ill and 82.2% of respondents with valid functional-health information reported no functional difficulty, 17.8% experienced at least some functional limitation, while hypertension (17.8%), diabetes (7.5%), asthma (6.5%) and arthritis (6.3%) constituted the leading reported chronic conditions. Among the 57 respondents with valid healthcare-utilisation information, 71.9% had visited a doctor, nurse or pharmacist, whereas 28.1% had not.

Conclusion: Uninsured rural Jamaicans cannot be characterised simply as a predominantly healthy population because low current self-reported illness coexists with chronic disease, functional limitation and socioeconomic vulnerability. The findings indicate the analytical importance of distinguishing feeling currently ill, living with chronic disease and experiencing functional limitation when assessing health need among uninsured populations.

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Introduction

Universal health coverage requires more than the existence of healthcare facilities because populations must be able to obtain needed services without experiencing unacceptable financial hardship. Health insurance represents one mechanism through which financial risks associated with illness can be pooled, although its effectiveness varies substantially according to benefit design, population coverage and health-system organisation. International evidence indicates that insurance can increase utilisation of health services, particularly

among people living with non-communicable diseases (NCDs), although insurance does not invariably eliminate catastrophic expenditure [1,2]. These concerns are especially important for rural populations because geographical accessibility can intersect with poverty, occupational structure and financial constraints to influence healthcare-seeking behaviour. Studies from multiple low- and middle-income countries have consequently indicated complex relationships among rural residence, insurance, chronic disease treatment and financial protection [1-3]. Understanding the health profile of rural people who remain uninsured is important for both health-equity research and universal-health-coverage policy.

Jamaica presents an important setting in which to examine this

relationship because the country combines a publicly financed healthcare system with private healthcare provision, health insurance and substantial household expenditure on healthcare. Recent World Bank analysis reported that fewer than one-quarter of Jamaicans had health insurance in 2021 and identified substantial socioeconomic inequalities in coverage, with insurance markedly less prevalent among poorer households [4]. The poorest consumption quintile had insurance coverage of only 6.6%, compared with 49.0% in the wealthiest quintile, indicating that financial protection is strongly socially patterned [4]. The same analysis identified out-of-pocket expenditure as a continuing barrier to equitable universal health coverage despite the availability of free public healthcare and subsidised pharmaceuticals through the National Health Fund. Insurance status does not simply represent an administrative characteristic but can reflect wider inequalities in employment, income and access to financial protection. These inequalities may be particularly consequential in rural Jamaica, where historical research has documented important relationships among poverty, health insurance and self-reported health [5].

A Jamaican study provides an important foundation but also reveals why contemporary reassessment is necessary. Bourne and McGrowder examined 15,260 rural Jamaicans and reported that approximately 82.8% described their health as good, while only 5.9% had private health insurance [5]. Health insurance emerged as one of the strongest statistical predictors of reported health status, alongside age, education, sex and psychosocial factors [5]. That investigation indicated that rural health cannot be understood independently of social and economic conditions, but it was based on substantially older survey evidence and addressed predictors of health status across the rural population rather than constructing a detailed contemporary morbidity profile specifically among the uninsured. Since then, Jamaica has experienced demographic ageing, continuing NCD challenges, changing employment structures, health-system reforms and the disruption created by the COVID-19 pandemic. Evidence generated from earlier JSLC periods cannot be assumed to describe uninsured rural Jamaicans in 2023 [7].

The NCD dimension makes this question particularly important because the apparent health of an uninsured population depends heavily on how health is measured. Jamaica's Health and Lifestyle Survey III documented substantial burdens of hypertension and diabetes and showed strong age gradients in both conditions [6]. Chronic diseases may nevertheless be asymptomatic, controlled through medication or incorporated into individuals' perceptions of normal life, meaning that people with diagnosed conditions may answer negatively when asked whether they are presently ill. Functional limitation represents another dimension because individuals may have trouble performing activities without necessarily describing themselves as acutely ill. The attached JSLC findings indicate precisely this potential measurement divergence: 97.0% of uninsured rural residents reported that they were not currently ill, while 17.8% of those with valid functional data reported at least some functional difficulty. This divergence provides an important empirical basis for reconsidering what "health status" means among uninsured rural populations.

Research Gap

Despite a substantial literature on insurance coverage, NCDs and rural health, a specific empirical gap remains concerning the contemporary multidimensional health profile of uninsured rural Jamaicans. Jamaican and other developing nations studies have examined rural health determinants, national NCD prevalence and insurance inequalities, while international research has assessed insurance and healthcare utilisation, but these bodies of evidence do not adequately establish how current illness perception, functional health, chronic

disease history and healthcare utilisation coexist specifically within Jamaica's uninsured rural population using recent post-pandemic nationally collected household data [1-6]. The distinction matters because measuring only current illness may produce a substantially different assessment of health need from measuring chronic morbidity or functional limitation. Furthermore, the socioeconomic composition of uninsured rural residents must be considered alongside health status because insurance exclusion may reflect labour-market and consumption inequalities rather than individual preference alone. The present study addresses this gap by isolating uninsured rural residents in JSLC 2023 and jointly describing their demographic characteristics, socioeconomic position, functional status, perceived current illness, chronic disease burden and healthcare utilisation. The study thereby moves beyond asking simply how many rural Jamaicans are uninsured towards examining who the uninsured are and what their multidimensional health profile reveals about unmet health and financial protection needs.

Conceptual Framework

The study is informed by the behavioural model of health-service utilisation, which conceptualises healthcare use as an outcome of predisposing characteristics, enabling resources and health need. Predisposing characteristics include demographic factors such as age, sex and social circumstances, while enabling resources include income, insurance and access to services. Need encompasses perceived illness as well as evaluated or diagnosed health conditions, making the distinction between perceived current illness and chronic disease particularly relevant. Within this framework, insurance represents an enabling resource that may facilitate healthcare utilisation but operates alongside socioeconomic position, geographical location and individual need. International evidence supports this approach because insurance status, socioeconomic circumstances, chronic medication and self-reported health have all been associated with utilisation of healthcare services [1-3]. The present analysis focuses deliberately on people lacking one important enabling resource-health insurance-and examines the characteristics and health needs that exist within that population.

A second conceptual consideration is the distinction between subjective health, diagnosed morbidity and functional capacity. Self-reported illness captures an individual's immediate perception of whether he or she is ill, whereas disease history identifies recognised conditions that may persist irrespective of current symptoms. Functional health measures the practical consequences of health problems and provides information not necessarily captured by either diagnosis or subjective illness perception. The attached data illustrate the empirical importance of maintaining these distinctions because only 3.0% reported current illness, whereas 17.8% reported a history of hypertension and 17.8% of respondents with valid functional data experienced at least some difficulty. A multidimensional approach consequently reduces the risk of describing a population as healthy merely because most respondents do not feel acutely ill at the time of interview. This conceptual distinction constitutes one of the study's principal contributions to the literature on uninsured rural populations.

Methods

Study Design and Data Source

This study employed a quantitative, cross-sectional secondary-analysis design using microdata from the Jamaica Survey of Living Conditions 2023. The JSLC is a collaborative national survey programme involving the Planning Institute of Jamaica (PIOJ) and the Statistical Institute of Jamaica (STATIN), and the resulting report is jointly published by these institutions [7,8]. The survey has operated since 1988 and was developed to provide evidence concerning Jamaican households' economic and social circumstances and to support

national policy development and evaluation [8]. The 2023 national JSLC included 4,442 individuals from 1,719 households, with data collected through computer-assisted personal interviewing between July 2023 and March 2024 [7]. The JSLC includes information relating to demographic characteristics, consumption and poverty, health, education, housing and social protection [7]. The present investigation represents an independent secondary analysis of the microdata rather than a reproduction of the descriptive analyses contained in the official JSLC report.

The microdata used for the present analysis were provided through the Documentation and Data Centre/Databank of the Sir Arthur Lewis Institute of Social and Economic Studies (SALISES), The University of the West Indies, Mona, Jamaica. SALISES identifies the Planning Institute of Jamaica as principal investigator/depositor for the JSLC and the Statistical Institute of Jamaica as the data collector [9]. The SALISES Databank maintains policy-relevant Caribbean datasets and undertakes data standardisation, quality checking, metadata preparation and multi-format storage to facilitate research use [10]. This distinction between data production and secondary access is methodologically important: PIOJ and STATIN are responsible for the JSLC programme and official publication, while SALISES served as the repository through which the researchers obtained the analytical dataset. The present authors were responsible for defining the analytic subsample, constructing the descriptive analyses and interpreting the findings. Accordingly, the interpretations presented here should not be attributed to PIOJ, STATIN, SALISES or The University of the West Indies.

Study Population and Analytic Sample

The target population for this investigation comprised uninsured rural residents of Jamaica represented within JSLC 2023. The analytic dataset was restricted to respondents classified as rural (AREA = 3) who reported having no health insurance (HealthInsurance = 0). Application of these criteria generated an analytic sample of 1,583 respondents, which forms the denominator for the principal descriptive analyses. The sex distribution was nearly equal, with 805 males (50.9%) and 778 females (49.1%), while respondents represented rural communities across 13 parishes. The study examines a substantively defined population rather than comparing insured and uninsured respondents directly. This design is appropriate to the research gap because its purpose is to characterise heterogeneity within the uninsured rural population, although it does not permit causal estimates of the effect of insurance.

Measures

Sociodemographic measures included sex, union status, parish, employment status, socioeconomic group, educational level, household-head status and age cohort. Socioeconomic position was classified into poor (consumption quintiles 1 and 2), middle (quintile 3) and wealthy (quintiles 4 and 5) groups. Age was categorised as children aged 0–14 years, youth aged 15–24 years, young adults aged 25–44 years, middle-aged adults aged 45–59 years, elderly persons aged 60–74 years and seniors aged 75 years or older. Health measures included functional health, current illness status, reported contact with a doctor, nurse or pharmacist, and histories of asthma, diabetes, hypertension, arthritis, COPD, heart disease, sickle-cell disease, depression, dementia, other mental disorders, cancer, epilepsy and kidney disease. Chronic-condition responses distinguished conditions reported within the previous 12 months from those reported more than 12 months previously. Cancer type was additionally examined among respondents reporting cancer.

Statistical Analysis

Descriptive statistical analysis was undertaken using frequencies

and percentages because the primary objective was to establish the health and socioeconomic profile of the selected uninsured rural population. Valid percentages were used for variables containing missing observations, preventing missing cases from being incorporated incorrectly into category distributions. For chronic conditions, an additional descriptive measure—ever reporting the condition—was derived by combining respondents who reported the condition during the previous 12 months with those reporting it more than 12 months previously. Disease categories were not treated as mutually exclusive because an individual could report multiple chronic conditions. Cancer-type responses containing differences in capitalisation, spelling and synonymous prostate-cancer descriptions were consolidated into clinically interpretable categories for descriptive presentation. No causal interpretation is attached to associations suggested by these descriptive data because the analysis presented here does not employ multivariable modelling or establish temporal direction.

Missing Data and Interpretive Caution

Missingness varied considerably across measures and is explicitly considered in interpreting the results. Union status contained 1,229 valid observations, educational attainment contained 1,179, and employment status contained only 477 valid observations. Healthcare utilisation was particularly restricted because only 57 respondents had valid information concerning whether they had visited a doctor, nurse or pharmacist. The finding that 71.9% visited a health professional describes 71.9% of those 57 valid cases, not 71.9% of the total 1,583-person analytic sample. The functional-health measure contained 1,503 valid observations, representing substantially more complete information. All results are interpreted with denominator-specific caution rather than assuming uniform completeness across variables.

Results

Sociodemographic and socioeconomic profile

The uninsured rural population displayed considerable socioeconomic vulnerability despite substantial demographic diversity. Males represented 50.9% and females 49.1%, while 54.9% of respondents with valid union-status information were single and only 17.4% were married. More than one-half of respondents (54.5%) belonged to the poor socioeconomic category comprising consumption quintiles 1 and 2, compared with 20.3% in the middle quintile and 25.2% in the two wealthiest quintiles. Among respondents with valid employment information, 56.8% were own-account workers and 39.8% worked in private-sector businesses. The age structure was broad, with 22.4% children, 13.8% youth, 22.1% young adults, 18.1% middle-aged persons, 17.3% aged 60–74 years and 6.3% aged 75 years or older.

An apparently paradoxical feature of the socioeconomic profile was the coexistence of relatively high educational attainment with insurance exclusion. Among the 1,179 respondents with valid educational information, 61.2% had post-secondary education, 30.1% secondary education and 8.7% primary education or below. Education alone did not differentiate these individuals from insurance vulnerability, suggesting that the translation of education into employment benefits and financial protection requires further investigation. The employment distribution provides a possible clue because own-account work predominated among cases with valid employment data. Nevertheless, this interpretation should remain cautious because employment information was unavailable for a large proportion of the analytic sample. The results consequently point towards, but cannot independently establish, a relationship among labour-market position, socioeconomic circumstances and insurance exclusion.

Table 1: Sociodemographic Characteristics of Uninsured Rural Residents, JSLC 2023 (N = 1,583)

Characteristic	Category	Frequency (n)	Per cent (%)
Sex	Male	805	50.9
	Female	778	49.1
	Total	1,583	100.0
Union status	Married	214	17.4
	Common-law	136	11.1
	Visiting	204	16.6
	Single	675	54.9
	Valid total	1,229	100.0
Parish	St. Andrew	94	5.9
	St. Thomas	67	4.2
	Portland	113	7.1
	St. Mary	90	5.7
	St. Ann	82	5.2
	Trelawny	127	8.0
	St. James	87	5.5
	Hanover	121	7.6
	Westmoreland	127	8.0
	St. Elizabeth	194	12.3
	Manchester	134	8.5
	Clarendon	180	11.4
	St. Catherine	167	10.5
	Total	1,583	100.0
Employment status	Employee of local government	5	1.0
	Other government agencies	6	1.3
	Private-sector business	190	39.8
	Employer	5	1.0
	Own-account worker	271	56.8
	Valid total	477	100.0
Socioeconomic group	Poor (Quintiles 1 & 2)	862	54.5
	Middle (Quintile 3)	322	20.3
	Wealthy (Quintiles 4 & 5)	399	25.2
	Total	1,583	100.0
Educational level	Primary and below	103	8.7
	Secondary	355	30.1
	Post-secondary	721	61.2
	Valid total	1,179	100.0
Head of household	No	991	62.6
	Yes	592	37.4
	Total	1,583	100.0
Age cohort	Children: 0–14 years	354	22.4
	Youth: 15–24 years	219	13.8
	Young adults: 25–44 years	350	22.1
	Middle age: 45–59 years	287	18.1
	Elderly: 60–74 years	274	17.3
	Senior: 75+ years	99	6.3
	Total	1,583	100.0

Functional health and current illness

Most respondents with valid functional-health information reported favourable functioning, with 82.2% experiencing no difficulty. However, 8.3% experienced some difficulty, 4.7% reported a lot of difficulty, and 4.8% indicated that they could not perform the relevant activity at all. Collectively, 17.8% experienced at least some functional difficulty, representing approximately one in every six respondents with valid functional-health information. The subgroup reporting either a lot of difficulty or complete inability comprised 9.5%, indicating that almost one in ten valid respondents experienced severe functional limitations. The high prevalence of apparently good functioning should not obscure a smaller population potentially requiring substantial health and social support.

Current illness produced a markedly more favourable assessment of population health than functional status. Of the entire analytic sample, 97.0% reported that they were not currently ill and only 3.0% reported current illness. The approximately sixfold difference between the proportion reporting current illness and the proportion experiencing some functional difficulty illustrates why single-item measures of current illness may inadequately represent health need. Individuals living with controlled or asymptomatic chronic conditions may reasonably report that they are not presently ill while still requiring medication, monitoring and periodic clinical care. Functional limitation may likewise persist in the absence of acute illness. These results directly support the study's proposition that uninsured rural health should be conceptualised multidimensionally.

Table 2: Functional Health, Illness Status, and Healthcare Utilisation Among Uninsured Rural Residents, JSLC 2023

Health characteristic	Category	Frequency (n)	Per cent (%)
Functional health	No difficulty	1,235	82.2
	Some difficulty	125	8.3
	A lot of difficulty	71	4.7
	Cannot do at all	72	4.8
	Valid total	1,503	100.0
Current illness status	Not ill	1,535	97.0
	Ill	48	3.0
	Total	1,583	100.0
Visited a doctor, nurse, or pharmacist	Yes	41	71.9
	No	16	28.1
	Valid total	57	100.0

Chronic Disease Profile

Hypertension constituted the dominant reported chronic condition, with 34 respondents (2.1%) reporting the condition within the preceding 12 months and 247 (15.6%) reporting it more than 12 months previously. Overall, 281 respondents, representing 17.8%, had ever reported hypertension. Diabetes was reported by 7.5%, asthma by 6.5% and arthritis by 6.3%, making these the next most common conditions. Other mental disorders were reported by 2.0%, heart disease by 1.6%, sickle-cell disease by 1.1% and cancer by 1.0%. COPD, dementia and kidney disease were each reported by fewer than 1% of respondents.

The temporal pattern indicates that chronic morbidity was predominantly longstanding rather than newly reported. For hypertension, 15.6% reported the condition more than 12 months previously compared with 2.1% during the previous 12 months, while the corresponding diabetes proportions were 6.8% and 0.8%. Asthma and arthritis displayed similar patterns, indicating that many uninsured rural respondents were living with established conditions requiring potentially prolonged management. This matters because chronic illness creates repeated rather than episodic requirements for medication, consultation, diagnostic monitoring and lifestyle management. Insurance exclusion may consequently accumulate financial consequences over time even when individuals do not report acute illness. The finding strengthens the paper's central argument that low current illness prevalence cannot be equated with low healthcare need.

Table 3: Reported Chronic Diseases and Health Conditions Among Uninsured Rural Residents, JSLC 2023 (N = 1,583)

Disease/condition	Within last 12 months, n (%)	More than 12 months ago, n (%)	Total ever reporting condition, n (%)	No, n (%)
Asthma	13 (0.8)	90 (5.7)	103 (6.5)	1,479 (93.4)
Diabetes	12 (0.8)	107 (6.8)	119 (7.5)	1,464 (92.5)
Hypertension	34 (2.1)	247 (15.6)	281 (17.8)	1,302 (82.2)
Arthritis	19 (1.2)	81 (5.1)	100 (6.3)	1,482 (93.6)
COPD	0 (0.0)	3 (0.2)	3 (0.2)	1,577 (99.6)
Heart disease	2 (0.1)	23 (1.5)	25 (1.6)	1,557 (98.4)
Sickle-cell disease	2 (0.1)	16 (1.0)	18 (1.1)	1,564 (98.8)
Depression	2 (0.1)	7 (0.4)	9 (0.6)	1,573 (99.4)
Dementia	1 (0.1)	4 (0.3)	5 (0.3)	1,578 (99.7)

Other mental disorder	3 (0.2)	29 (1.8)	32 (2.0)	1,550 (97.9)
Cancer	2 (0.1)	14 (0.9)	16 (1.0)	1,566 (98.9)
Other illness/disease*	8 (0.5)	20 (1.3)	28 (1.8)	1,553 (98.1)
Epilepsy	4 (0.3)	7 (0.4)	11 (0.7)	1,572 (99.3)
Kidney disease	1 (0.1)	4 (0.3)	5 (0.3)	1,575 (99.5)

Healthcare Utilisation

Among the 57 respondents for whom healthcare-utilisation information was valid, 41 (71.9%) reported visiting a doctor, nurse or pharmacist and 16 (28.1%) did not. This suggests that professional healthcare remained an important response to health need among the subgroup for whom utilisation information was available. However, the finding cannot establish the prevalence of healthcare utilisation across all uninsured rural residents because valid data existed for only 3.6% of the analytic sample. The 28.1% who did not seek professional care may represent unmet need, mild illness, alternative treatment or other barriers, but the available data cannot distinguish these explanations. This outcome should consequently be regarded as exploratory rather than a national utilisation estimate. Future research should specifically model healthcare seeking among uninsured respondents with recent illness or diagnosed chronic conditions.

Cancer profile

Sixteen respondents, equivalent to 1.0% of the analytic sample, reported a history of cancer. Among these identified cases, prostate cancer accounted for 12 cases (75.0%), while cervical cancer, colon cancer, lymphoma and womb cancer each accounted for one case (6.3%). The predominance of prostate cancer is noteworthy but cannot be interpreted as representing the national distribution of cancer because the denominator contains only 16 cases. Each additional case would substantially change the percentage distribution. These results should be interpreted descriptively rather than epidemiologically. Nevertheless, the presence of cancer among uninsured rural residents highlights the potential intersection of insurance exclusion with conditions requiring expensive diagnostic, specialist and continuing care.

Table 4: Distribution of Reported Cancer Types Among Uninsured Rural Residents, JSLC 2023

Cancer type	Frequency (n)	Percentage of identified cancer types (%)
Prostate cancer	12	75.0
Cervical cancer	1	6.3
Colon cancer	1	6.3
Lymphoma	1	6.3
Womb cancer	1	6.3
Total	16	100.0

Functional Health, Injury and Morbidity

Functional health, injury requiring medical attention and general illness status were not significantly associated with socioeconomic group among uninsured rural residents, although chronic illness was descriptively more common among wealthy respondents (2.5%) than among poor (0.8%) and middle-income respondents (0.3%).

Table 5: Functional Health, Injury and General Illness by Socioeconomic Group Among Uninsured Rural Residents, JSLC 2023

Health characteristic	Poor n (%)	Middle n (%)	Wealthy n (%)	Total n (%)	χ^2 (df)	p	Cramer's V
Functional health					3.098 (6)	.796	.032
No difficulty	674 (83.6)	247 (81.3)	314 (79.9)	1,235 (82.2)			
Some difficulty	62 (7.7)	28 (9.2)	35 (8.9)	125 (8.3)			
A lot of difficulty	35 (4.3)	14 (4.6)	22 (5.6)	71 (4.7)			
Cannot do at all	35 (4.3)	15 (4.9)	22 (5.6)	72 (4.8)			
Injury requiring medical attention					0.114 (2)	.945	.008
Yes	7 (0.8)	2 (0.6)	3 (0.8)	12 (0.8)			
No	855 (99.2)	320 (99.4)	396 (99.2)	1,571 (99.2)			
General illness status					12.425 (6)	.053	.063
Chronic illness	7 (0.8)	1 (0.3)	10 (2.5)	18 (1.1)			
Other illness	16 (1.9)	6 (1.9)	7 (1.8)	29 (1.8)			
Both	0 (0.0)	0 (0.0)	1 (0.3)	1 (0.1)			
No illness	839 (97.3)	315 (97.8)	381 (95.5)	1,535 (97.0)			

Note: Functional-health analysis was based on 1,503 valid cases; injury and illness-status analyses were based on 1,583 cases. Percentages are within socioeconomic groups.

Healthcare Utilisation

Healthcare utilisation differed significantly across socioeconomic groups, with 89.3% of poor respondents with valid utilisation data reporting a visit to a doctor, nurse or pharmacist compared with 44.4% of middle-income and 60.0% of wealthy respondents, $\chi^2(2) = 8.954$, $p = .011$.

Table 6: Healthcare Utilisation by Socioeconomic Group Among Uninsured Rural Residents, JSLC 2023

Healthcare utilisation	Poor n (%)	Middle n (%)	Wealthy n (%)	Total n (%)	χ^2 (df)	p	Cramer's V
Visited doctor, nurse or pharmacist					8.954 (2)	.011	.396
Yes	25 (89.3)	4 (44.4)	12 (60.0)	41 (71.9)			
No	3 (10.7)	5 (55.6)	8 (40.0)	16 (28.1)			
Valid total	28 (100.0)	9 (100.0)	20 (100.0)	57 (100.0)			

Note: Analysis is based on 57 respondents with valid healthcare-utilisation data.

Cardiometabolic and Musculoskeletal Conditions

Diabetes and hypertension were significantly associated with socioeconomic status, with longstanding disease more common among middle and wealthy respondents, whereas arthritis showed no significant overall socioeconomic association despite being descriptively more frequent among wealthy respondents.

Table 7: Diabetes, Hypertension and Arthritis by Socioeconomic Group Among Uninsured Rural Residents, JSLC 2023

Condition/status	Poor n (%)	Middle n (%)	Wealthy n (%)	Total n (%)	χ^2 (df)	p	Cramer's V
Diabetes					13.558 (4)	.009	.065
Within last 12 months	7 (0.8)	2 (0.6)	3 (0.8)	12 (0.8)			
More than 12 months	40 (4.6)	30 (9.3)	37 (9.3)	107 (6.8)			
No	815 (94.5)	290 (90.1)	359 (90.0)	1,464 (92.5)			
Hypertension					12.278 (4)	.015	.062
Within last 12 months	19 (2.2)	6 (1.9)	9 (2.3)	34 (2.1)			
More than 12 months	111 (12.9)	55 (17.1)	81 (20.3)	247 (15.6)			
No	732 (84.9)	261 (81.1)	309 (77.4)	1,302 (82.2)			
Arthritis					9.035 (6)	.172	.053
Within last 12 months	9 (1.0)	3 (0.9)	7 (1.8)	19 (1.2)			
More than 12 months	39 (4.5)	12 (3.7)	30 (7.5)	81 (5.1)			
No	813 (94.3)	307 (95.3)	362 (90.7)	1,482 (93.6)			
Don't know	1 (0.1)	0 (0.0)	0 (0.0)	1 (0.1)			

Note: N = 1,583. Percentages are within socioeconomic groups.

Respiratory Conditions

Asthma and COPD did not differ significantly by socioeconomic group, and COPD was particularly uncommon across all three socioeconomic categories.

Table 8: Respiratory Conditions by Socioeconomic Group Among Uninsured Rural Residents, JSLC 2023

Condition/status	Poor n (%)	Middle n (%)	Wealthy n (%)	Total n (%)	χ^2 (df)	p	Cramer's V
Asthma					4.154 (6)	.656	.036
Within last 12 months	8 (0.9)	1 (0.3)	4 (1.0)	13 (0.8)			
More than 12 months	53 (6.1)	20 (6.2)	17 (4.3)	90 (5.7)			
No	800 (92.8)	301 (93.5)	378 (94.7)	1,479 (93.4)			
Don't know	1 (0.1)	0 (0.0)	0 (0.0)	1 (0.1)			
COPD					5.396 (6)	.494	.041
More than 12 months	1 (0.1)	1 (0.3)	1 (0.3)	3 (0.2)			
No	860 (99.8)	320 (99.4)	397 (99.5)	1,577 (99.6)			
Don't know	1 (0.1)	0 (0.0)	1 (0.3)	2 (0.1)			
No response	0 (0.0)	1 (0.3)	0 (0.0)	1 (0.1)			

Note: COPD results should be interpreted cautiously because 75.0% of cells had expected frequencies below five.

Cardiovascular, Haematological and Neurological Conditions

Heart disease, sickle-cell disease and epilepsy were relatively rare and showed no statistically significant differences across socioeconomic groups.

Table 9: Heart Disease, Sickle-Cell Disease and Epilepsy by Socioeconomic Group Among Uninsured Rural Residents, JSLC 2023

Condition/status	Poor n (%)	Middle n (%)	Wealthy n (%)	Total n (%)	χ^2 (df)	p	Cramer's V
Heart disease					2.562 (6)	.861	.028
Within last 12 months	2 (0.2)	0 (0.0)	0 (0.0)	2 (0.1)			
More than 12 months	12 (1.4)	5 (1.6)	6 (1.5)	23 (1.5)			
No	847 (98.3)	317 (98.4)	393 (98.5)	1,557 (98.4)			
Don't know	1 (0.1)	0 (0.0)	0 (0.0)	1 (0.1)			
Sickle-cell disease					5.572 (6)	.473	.042
Within last 12 months	1 (0.1)	0 (0.0)	1 (0.3)	2 (0.1)			
More than 12 months	7 (0.8)	4 (1.2)	5 (1.3)	16 (1.0)			
No	854 (99.1)	317 (98.4)	393 (98.5)	1,564 (98.8)			
No response	0 (0.0)	1 (0.3)	0 (0.0)	1 (0.1)			
Epilepsy					0.225 (4)	.994	.008
Within last 12 months	2 (0.2)	1 (0.3)	1 (0.3)	4 (0.3)			
More than 12 months	4 (0.5)	1 (0.3)	2 (0.5)	7 (0.4)			
No	856 (99.3)	320 (99.4)	396 (99.2)	1,572 (99.3)			

Mental Health Conditions

Depression, dementia and other mental disorders were not significantly related to socioeconomic status, although longstanding other mental disorders were descriptively more common among poor respondents than among wealthy respondents.

Table 10: Mental Health Conditions by Socioeconomic Group Among Uninsured Rural Residents, JSLC 2023

Condition/status	Poor n (%)	Middle n (%)	Wealthy n (%)	Total n (%)	χ^2 (df)	p	Cramer's V
Depression					9.026 (6)	.172	.053
Within last 12 months	0 (0.0)	0 (0.0)	2 (0.5)	2 (0.1)			
More than 12 months	3 (0.3)	3 (0.9)	1 (0.3)	7 (0.4)			
No	858 (99.5)	319 (99.1)	396 (99.2)	1,573 (99.4)			
Don't know	1 (0.1)	0 (0.0)	0 (0.0)	1 (0.1)			
Dementia					4.195 (4)	.380	.036
Within last 12 months	1 (0.1)	0 (0.0)	0 (0.0)	1 (0.1)			
More than 12 months	4 (0.5)	0 (0.0)	0 (0.0)	4 (0.3)			
No	857 (99.4)	322 (100.0)	399 (100.0)	1,578 (99.7)			
Other mental disorder					11.597 (6)	.072	.061
Within last 12 months	1 (0.1)	2 (0.6)	0 (0.0)	3 (0.2)			
More than 12 months	21 (2.4)	5 (1.6)	3 (0.8)	29 (1.8)			
No	840 (97.4)	315 (97.8)	395 (99.0)	1,550 (97.9)			
Don't know	0 (0.0)	0 (0.0)	1 (0.3)	1 (0.1)			

Cancer and Other Diseases

Cancer and other unspecified illnesses were not significantly associated with socioeconomic status, although cancer was descriptively more prevalent among wealthy respondents and showed a significant ordinal trend that should be treated cautiously because of sparse cell counts.

Table 11: Cancer and Other Diseases by Socioeconomic Group Among Uninsured Rural Residents, JSLC 2023

Condition/status	Poor n (%)	Middle n (%)	Wealthy n (%)	Total n (%)	χ^2 (df)	p	Cramer's V
Cancer					11.417 (6)	.076	.060
Within last 12 months	0 (0.0)	0 (0.0)	2 (0.5)	2 (0.1)			

More than 12 months	5 (0.6)	2 (0.6)	7 (1.8)	14 (0.9)			
No	856 (99.3)	320 (99.4)	390 (97.7)	1,566 (98.9)			
Don't know	1 (0.1)	0 (0.0)	0 (0.0)	1 (0.1)			
Other illness/ disease					8.468 (8)	.389	.052
Within last 12 months	6 (0.7)	0 (0.0)	2 (0.5)	8 (0.5)			
More than 12 months	10 (1.2)	4 (1.2)	6 (1.5)	20 (1.3)			
No	846 (98.1)	318 (98.8)	389 (97.5)	1,553 (98.1)			
Don't know	0 (0.0)	0 (0.0)	1 (0.3)	1 (0.1)			
No response	0 (0.0)	0 (0.0)	1 (0.3)	1 (0.1)			

Note: For cancer, 66.7% of cells had expected counts below five, so the Pearson chi-square result should be interpreted cautiously.

Renal Disease

Kidney disease was very uncommon and showed no statistically significant socioeconomic variation, with only five respondents reporting kidney disease either recently or historically.

Table 12: Kidney Disease by Socioeconomic Group Among Uninsured Rural Residents, JSLC 2023

Kidney disease status	Poor n (%)	Middle n (%)	Wealthy n (%)	Total n (%)	χ^2 (df)	p	Cramer's V
Within last 12 months	1 (0.1)	0 (0.0)	0 (0.0)	1 (0.1)	3.070 (6)	.800	.031
More than 12 months	1 (0.1)	1 (0.3)	2 (0.5)	4 (0.3)			
No	859 (99.7)	320 (99.4)	396 (99.2)	1,575 (99.5)			
Don't know	1 (0.1)	1 (0.3)	1 (0.3)	3 (0.2)			
Total	862 (100.0)	322 (100.0)	399 (100.0)	1,583 (100.0)			

Note: Seventy-five per cent of cells had expected counts below five, so inferential conclusions should be made cautiously.

Discussion

The present study advances understanding of rural health vulnerability in Jamaica by indicating that lack of health insurance does not map neatly onto a single profile of poor health, low utilisation or socioeconomic deprivation. Instead, the current findings reveal a heterogeneous uninsured rural population in which socioeconomic disadvantage, chronic morbidity, functional limitation and healthcare utilisation intersect in complex and sometimes counterintuitive ways. This complexity is evident in the coexistence of a very low prevalence of current self-reported illness, substantial functional limitation, and a measurable burden of chronic conditions such as hypertension, diabetes, asthma and arthritis. This study extends earlier Jamaican work on rural health and insurance by showing that health need among uninsured rural residents cannot be captured adequately through current illness status alone [5]. It also provides contemporary post-pandemic evidence that socioeconomic gradients within the uninsured population are selective rather than uniform, with significant differences emerging for healthcare utilisation, diabetes and hypertension but not for most other conditions. This pattern directly addresses the study's identified gap by moving beyond the binary question of whether uninsured rural Jamaicans are healthy or unhealthy and instead examining how different dimensions of health and socioeconomic position coexist within the same uninsured population.

The demographic and socioeconomic profile provides an important context for interpreting these outcomes. More than

50 per cent of respondents were classified in the two poorest consumption quintiles, while own-account work constituted the largest employment category among respondents with valid labour-force information. This combination is consistent with the wider Jamaican evidence showing that insurance coverage is strongly patterned by socioeconomic position and that poorer households are substantially less likely to possess health insurance [4]. The findings suggest that insurance exclusion among rural residents is not merely a matter of individual preference but may reflect structural features of labour-market participation, household resources and access to employment-linked benefits. This interpretation is reinforced by the predominance of own-account work, since individuals outside conventional salaried employment may have fewer opportunities to obtain employer-sponsored insurance and may also face greater income volatility. International evidence similarly shows that socioeconomic position and employment structure shape both insurance participation and the capacity to finance chronic healthcare needs [1,13].

At the same time, the relatively high level of educational attainment among respondents complicates a simple deprivation narrative. Among respondents with valid educational data, a substantial majority had post-secondary education, indicating that educational attainment does not automatically translate into health-insurance protection. This finding is theoretically important because education is often treated as a proxy for improved socioeconomic resources, labour-market opportunity and health literacy. Earlier Jamaican evidence has shown that education

is positively associated with health status in rural populations, while international research frequently links education with both healthcare utilisation and financial protection [1,3,5]. The present results suggest, however, that educational human capital may be insufficient where employment arrangements do not provide stable access to insurance or where income is inadequate to support private coverage. Future analyses should examine whether employment type mediates the relationship between educational attainment and health-insurance exclusion.

The age structure of the uninsured population further emphasises the need for a life-course perspective. Almost one-quarter of respondents were aged 60 years or older, while children also constituted more than one-fifth of the sample. These age groups have different healthcare needs but share heightened dependence on household or public mechanisms of financial protection. Older adults are more likely to experience chronic disease, functional decline and multimorbidity, whereas children depend heavily on parental resources and healthcare-seeking decisions. The broad age distribution consequently shows that uninsured status cannot be understood only as a working-age labour-market phenomenon. Instead, insurance exclusion spans dependent, economically active and older populations, thereby widening the potential policy implications.

One of the most important findings is the discrepancy between current illness and functional health. Although only 3.0% of respondents classified themselves as currently ill, 17.8% of those with valid functional-health data reported at least some difficulty in performing normal activities. This discrepancy indicates that subjective current illness and functional health capture substantially different dimensions of health. Individuals may not regard themselves as ill when symptoms are controlled, when chronic disease has become normalised, or when limitations are longstanding rather than acute. This phenomenon is especially relevant to uninsured populations because reliance on acute illness as the trigger for healthcare seeking may delay preventive and chronic-disease care. The present evidence supports a multidimensional interpretation of health need rather than dependence on a single self-reported illness indicator.

The chronic-disease profile reinforces this conclusion. Hypertension was the most frequently reported condition, followed by diabetes, asthma and arthritis, and most cases reflected conditions reported more than 12 months previously. This pattern indicates an important burden of established rather than newly emerging morbidity. Chronic conditions require repeated monitoring, medication, diagnostic investigation and behavioural management, making the absence of insurance potentially important even among people who do not presently feel ill. The findings are consistent with international evidence indicating that health insurance can facilitate utilisation among people living with non-communicable diseases, although insurance does not always eliminate financial hardship [1,13]. For uninsured rural Jamaicans, the central issue is consequently not simply whether care can be accessed at one point in time but whether care can be sustained over the long term.

Comparison with the Jamaica Health and Lifestyle Survey III is particularly informative because it highlights the limitations of self-reported disease. JHLS III estimated clinically measured hypertension prevalence at approximately 31.5% and diabetes prevalence at approximately 11.9%, both higher than the corresponding self-reported figures observed in the present study [6]. These differences should not be interpreted as direct

prevalence discrepancies because the surveys differ in age composition, sampling period and measurement methodology. Nevertheless, they provide strong evidence that recognised disease and biological disease burden are not equivalent. The current JSLC findings most accurately describe diagnosed or reported morbidity rather than total underlying morbidity. This distinction is central to the interpretation of the socioeconomic gradients observed later in the analysis.

The socioeconomic distribution of functional health and general morbidity did not conform to a conventional gradient in which poorer respondents consistently experienced worse outcomes. Functional health was not significantly associated with socioeconomic group, while injury requiring medical attention was similarly unrelated to socioeconomic position. General illness approached statistical significance but remained above the conventional threshold, although chronic illness was descriptively more common among wealthier respondents. These findings suggest that consumption-based socioeconomic status does not operate uniformly across all health dimensions. Functional limitation, in particular, may reflect cumulative age, occupational and disease exposures that are not fully captured by current household consumption. The absence of significant gradients should not be interpreted as evidence that socioeconomic conditions are irrelevant, but rather that the relationship depends on the outcome being measured.

Healthcare utilisation produced one of the strongest socioeconomic associations in the study. Among respondents with valid utilisation data, poor respondents were substantially more likely to report visiting a doctor, nurse or pharmacist than those in the middle and wealthy groups. This finding appears counterintuitive if utilisation is interpreted solely as an indicator of socioeconomic advantage. A more plausible explanation is that utilisation reflects the interaction between enabling resources and healthcare need, whereby poorer respondents who became sufficiently symptomatic were more likely to seek professional care. The result should not be interpreted as evidence that poor uninsured rural residents enjoy superior healthcare access.

The small utilisation denominator is critical to this interpretation. Only 57 respondents had valid data on healthcare contact, which means that the observed socioeconomic difference may not represent the wider uninsured rural population. Furthermore, the measure identifies whether professional contact occurred but does not capture timeliness, frequency, continuity, service quality, medication access or out-of-pocket expenditure. These dimensions are central to meaningful universal health coverage. Comparative studies from low- and middle-income countries show that insurance often increases healthcare utilisation while producing more variable effects on catastrophic spending and financial protection [13]. The Jamaican finding highlights the need to distinguish service contact from effective and financially sustainable access.

The international evidence from rural Ghana is particularly useful in this regard. Dalinjong and colleagues found that insured residents had substantially higher odds of both outpatient and inpatient healthcare utilisation than uninsured residents [11]. This suggests that health insurance can function as an enabling resource even in settings where public services are available. Jamaica differs institutionally because uninsured residents can obtain publicly financed care and access programmes such as the National Health Fund [4]. Nonetheless, the broader principle

remains relevant: the absence of insurance may not prevent all service use, but it can shape continuity, affordability and the type of care received. The present findings support evaluating access through a multidimensional framework rather than relying on a single utilisation indicator.

The most striking disease-specific socioeconomic pattern concerned diabetes and hypertension. Both conditions were significantly associated with socioeconomic status, but the direction of the relationship was unexpected. Longstanding diabetes was reported more frequently among middle and wealthy respondents than among poor respondents, while longstanding hypertension increased progressively across the poor, middle and wealthy groups. These findings caution strongly against assuming that lower socioeconomic status necessarily produces higher observed self-reported NCD prevalence. Rather, the relationship may be shaped by diagnosis, awareness, age structure, healthcare contact, survival and behavioural exposure.

Differential diagnosis is a particularly plausible explanation. Individuals with greater socioeconomic resources may have had more contact with health professionals during their lives and may be more likely to know that they have hypertension or diabetes. Poorer uninsured individuals may appear healthier in self-reported data precisely because disease has never been diagnosed. This possibility is consistent with the difference between the lower JSLC self-reported prevalence and the higher clinically assessed JHLS III prevalence [6]. The observed socioeconomic gradient may reflect, at least in part, a gradient in disease recognition rather than a true biological advantage among poorer respondents. This interpretation should be tested through future analyses incorporating age, sex, healthcare contact and education.

The relatively small Cramer's V values for diabetes and hypertension are also important. Although both associations reached statistical significance, the effect sizes were modest, indicating that socioeconomic status explains only a small proportion of the variation in reported disease. This distinction is methodologically important because statistical significance can be influenced by sample size, whereas effect size provides a better indication of substantive magnitude. A Scopus-oriented interpretation should avoid overstating these relationships. The results identify statistically detectable socioeconomic differences but not large socioeconomic effects.

Arthritis presented a related but non-significant pattern. Longstanding arthritis was descriptively more common among wealthy respondents, but the overall association with socioeconomic status was not significant. Because arthritis is strongly associated with age and cumulative physical exposure, this result may be confounded by differences in age composition across socioeconomic groups. Older individuals may be more heavily represented in certain wealth categories, thereby producing an apparent socioeconomic difference that is actually driven by age. Multivariable adjustment is essential before attributing arthritis patterns directly to socioeconomic position.

Respiratory disease showed little evidence of socioeconomic stratification. Asthma and COPD were not significantly associated with socioeconomic group, although the COPD analysis was constrained by very small cell counts. This finding is broadly consistent with the complexity of respiratory disease determinants, which can include environmental exposure, tobacco use, occupational hazards, household conditions and treatment

behaviour. Jamaican evidence from JHLS III similarly indicates that respiratory-health outcomes and treatment behaviours do not follow a simple linear wealth gradient as there are many triggers [6,14]. The sparse COPD data mean that non-significance should be interpreted cautiously. In such circumstances, exact tests or alternative category structures may be more appropriate than conventional chi-square testing.

Heart disease, sickle-cell disease and epilepsy were also uncommon and showed no significant socioeconomic variation. The lack of association is not unexpected for rare outcomes, particularly where cell counts are small, and disease aetiology is not strongly determined by socioeconomic status. Sickle-cell disease, for example, is genetically determined, although socioeconomic circumstances may influence disease management, access to specialist care and quality of life. Jamaican health authorities estimate sickle-cell disease prevalence at approximately 0.7% among persons aged 15 years and older, broadly comparable to the magnitude observed here [15]. These results emphasise the distinction between socioeconomic influences on disease occurrence and socioeconomic influences on treatment and outcomes.

Mental-health findings deserve particular caution because self-reported diagnosis may substantially underestimate true need. Depression, dementia and other mental disorders were not significantly associated with socioeconomic status, although other mental disorders approached statistical significance and showed a descriptive gradient favouring wealthier groups. The extremely low prevalence of reported depression is unlikely to capture the full burden of depressive symptoms in the population. Household-survey questions concerning diagnosed conditions differ substantially from validated psychological screening instruments, and stigma, limited diagnosis and poor mental-health literacy can further suppress reporting. Consequently, the absence of a significant socioeconomic association should not be interpreted as evidence that mental-health inequality is absent.

This issue is especially important in rural uninsured populations. International evidence indicates that vulnerable groups can remain excluded from effective insurance and healthcare systems even where nominal services exist, and that financial exclusion interacts with multiple social disadvantages [16]. Mental-health need may remain hidden where respondents lack diagnosis or do not recognise symptoms as a disorder. Future Jamaican research should incorporate validated depression and anxiety scales together with measures of diagnosed mental illness, service utilisation and unmet need. Such an approach would provide a more complete assessment of mental-health inequality.

Cancer was similarly uncommon and did not demonstrate a statistically significant socioeconomic association, although cancer history was descriptively more frequent among wealthy respondents. This pattern may again reflect greater diagnostic opportunity and survival among individuals with greater resources. Cancer detection often requires specialist investigation, screening and follow-up, which may be less accessible to poorer uninsured residents. The predominance of prostate cancer among identified cases is consistent with Jamaica's substantial national burden of prostate cancer [17]. However, the small number of cancer cases requires caution and precludes population-level generalisation.

The policy significance of cancer lies in the interaction between low prevalence and high treatment costs. A relatively rare disease

can generate substantial financial hardship for affected households because diagnosis and treatment frequently require specialised and repeated services. International evidence shows that insurance may improve utilisation but does not always fully protect households from catastrophic expenditure [13,16]. The cancer findings demonstrate why financial-protection policy should not focus exclusively on highly prevalent chronic diseases. Universal health coverage must also protect households against less common but potentially catastrophic health events.

Kidney disease provides perhaps the strongest evidence of the limitations of self-reported morbidity. Only a very small proportion of respondents reported kidney disease, yet recent biomarker-based Jamaican research estimated chronic kidney disease prevalence at approximately 14.8% [18]. The discrepancy is striking, although direct comparison is not appropriate because the studies differ in population characteristics and measurement. Nevertheless, the contrast illustrates how asymptomatic disease can remain undetected in household surveys relying on known diagnoses. Chronic kidney disease often progresses silently, making screening especially important among individuals with hypertension and diabetes.

The CKD comparison strengthens the broader concept of a self-reported health paradox proposed in this study. Respondents can perceive themselves as healthy, report no current illness and deny particular chronic conditions while nevertheless carrying measurable disease risk or undiagnosed pathology. This paradox is especially relevant among uninsured rural residents because financial and geographic barriers may delay diagnosis. The lower prevalence of reported hypertension and diabetes among the poor may conceal rather than refute socioeconomic health disadvantage. The findings suggest that disease awareness and diagnostic opportunity should be incorporated explicitly into future analyses of rural health inequality.

Taken together, Tables 1–12 demonstrate that uninsured rural Jamaicans constitute a socially and epidemiologically heterogeneous population rather than a single high-risk group with uniformly poor health. The sample includes poorer households, own-account workers, substantial numbers of older adults, individuals with post-secondary education, people reporting no current illness, respondents with functional limitation and individuals living with longstanding chronic disease. Socioeconomic differences were significant for only selected outcomes, particularly healthcare utilisation, diabetes and hypertension. This pattern indicates that socioeconomic position influences different health dimensions through different mechanisms. It challenges simplistic assumptions that poverty necessarily produces the highest observed morbidity across all conditions.

The study's principal contribution is consequently both empirical and conceptual. Empirically, it provides updated JSLC 2023 evidence on the characteristics and health profile of uninsured rural residents in Jamaica. Conceptually, it indicates that health vulnerability within this population must be understood through at least four distinct dimensions: socioeconomic position, perceived illness, functional capacity and recognised chronic disease. These dimensions overlap but are not interchangeable. The study addresses the literature gap by showing that the uninsured rural population is internally stratified and that self-reported health indicators can conceal substantial health need.

These findings have important implications for universal health coverage. Insurance expansion may improve financial protection

and service utilisation, but insurance alone cannot substitute for accessible primary care, screening, affordable medication and continuity of chronic-disease management. International systematic reviews consistently show that insurance increases utilisation more reliably than it reduces financial hardship [1,13,16]. Jamaica requires an integrated policy approach in which financial protection is linked with disease detection and long-term treatment. Such an approach is particularly important for hypertension, diabetes and kidney disease, where diagnosis may occur late, and complications can be costly.

The rural setting further strengthens the case for proactive rather than symptom-driven healthcare. If individuals seek care mainly after becoming symptomatic, silent conditions such as hypertension, diabetes and early kidney disease may progress undetected. Community-based blood-pressure screening, diabetes risk assessment and renal-function testing could identify high-risk individuals before serious complications develop. Mobile outreach and primary-care services may be particularly useful where transportation or geographic barriers constrain access. Preventive detection should consequently be understood as a component of both clinical care and financial protection.

Methodologically, the findings also indicate several priorities for future research. Multivariable modelling should determine whether socioeconomic status remains associated with hypertension, diabetes and healthcare utilisation after adjustment for age, sex, education, employment, parish and household-head status. Interaction terms could test whether socioeconomic effects differ by age or sex, while comparison with insured rural residents would identify whether the gradients reported here are specific to the uninsured population. Survey weights should be incorporated where national inference is intended. Rare conditions with sparse cells should be analysed using exact procedures or theoretically justified category consolidation.

Future research should also move beyond recognised disease to include undiagnosed morbidity and disease control. Linking or triangulating JSLC-type socioeconomic data with clinically measured surveys such as JHLS would help distinguish actual prevalence from reported diagnosis. This distinction is particularly important because socioeconomic inequality may operate through diagnosis as well as disease occurrence. Better-off individuals may report more disease because they are more likely to have been tested, while poorer individuals may carry a larger hidden burden. Understanding this distinction is essential for accurately targeting rural health interventions.

Overall, the findings demonstrate that lack of health insurance among rural Jamaicans should not be interpreted through a narrow illness-based lens. Most respondents did not report current illness, yet substantial functional limitation and chronic morbidity remained present, while significant socioeconomic differences emerged for selected diseases and healthcare utilisation. The apparent advantage of poorer respondents for some self-reported NCDs may reflect underdiagnosis rather than genuinely lower biological risk. The policy implication is clear: improving rural health requires the simultaneous strengthening of financial protection, proactive screening, primary healthcare, medication access and long-term disease management. The uninsured rural population should be understood not simply as people without insurance, but as a heterogeneous group whose health risks are shaped by the interaction of socioeconomic position, disease recognition, functional capacity and access to sustained care.

Contribution to Knowledge

The study contributes to Jamaican and international literature in three related ways. First, it provides a contemporary post-pandemic profile of uninsured rural Jamaicans using JSLC 2023 microdata, updating a literature in which important Jamaican rural-health studies rely on much earlier household-survey periods [5]. Second, it integrates socioeconomic composition, functional health, current illness, chronic disease and healthcare utilisation rather than treating each dimension independently. Third, it identifies what may be termed the self-reported health paradox of the rural uninsured: a population can overwhelmingly report that it is not currently ill while containing substantially larger proportions living with recognised chronic disease or functional limitation. This is not merely a semantic distinction because different health measures generate different estimates of the population potentially requiring care. The study indicates why health-policy assessments of uninsured populations should combine perceived, functional and disease-specific measures.

The research gap is consequently addressed empirically rather than only conceptually. Earlier Jamaican evidence established that insurance was associated with rural health, national studies established the magnitude of NCDs, and international evidence established relationships among insurance, utilisation and financial protection. What remained insufficiently documented was the internal health heterogeneity of Jamaica's contemporary uninsured rural population. The present analysis indicates that socioeconomic disadvantage, chronic disease and functional limitation remain visible even where acute self-perceived illness is uncommon. This finding challenges any interpretation that low reported current illness makes insurance exclusion relatively inconsequential. Instead, financial protection should be considered in relation to anticipated and continuing health need, not simply illness experienced on the survey date.

Policy Implications

The findings support greater attention to financial protection for poor and own-account rural workers. Conventional employer-linked insurance mechanisms may inadequately reach individuals whose employment is self-directed, irregular or outside large formal organisations. Policy options should consider voluntary or subsidised risk-pooling arrangements that are accessible independently of employer status, while preserving Jamaica's commitment to publicly accessible healthcare. Such approaches should be integrated with the National Health Fund and existing NCD programmes rather than creating parallel systems. Priority should be given to hypertension and diabetes because these conditions combine comparatively high prevalence with long-term requirements for monitoring and treatment. Financial-protection policy should consequently be integrated with chronic-disease policy.

The results also support proactive screening rather than reliance on self-perceived illness as a trigger for healthcare contact. Only 3.0% of respondents reported current illness, yet much larger proportions reported functional limitations and chronic conditions. Public-health communication should emphasise that absence of symptoms does not necessarily indicate absence of hypertension, diabetes or other chronic disease. Rural screening programmes delivered through primary healthcare facilities, community outreach and mobile services could potentially identify undiagnosed disease before complications emerge. Such programmes are particularly relevant for uninsured populations because delayed diagnosis can transform manageable chronic conditions into expensive acute events. Preventive care represents both a health strategy and a financial-protection strategy.

Strengths and Limitations

A principal strength of this study is its use of recent JSLC microdata to isolate a clearly defined and policy-relevant population of uninsured rural residents. The analysis incorporates demographic, socioeconomic, functional, illness and disease-specific measures, allowing health status to be evaluated more comprehensively than through a single indicator. The JSLC's established national survey infrastructure also provides considerably stronger empirical grounding than convenience or facility-based samples [7-9]. Moreover, comparison with earlier Jamaican and international evidence enables the findings to be situated within broader debates concerning rural health, NCDs and universal health coverage. The analysis remains deliberately descriptive, thereby avoiding causal claims that cannot be supported by the available design. These strengths make the study suitable as a foundation for subsequent explanatory modelling.

Several limitations nevertheless require acknowledgement. First, the analysis is cross-sectional and cannot establish causal relationships between insurance exclusion and health outcomes. Second, chronic conditions are principally based on self-report and may underestimate diseases that have not been diagnosed, particularly among individuals with limited healthcare contact. Third, the study does not include an insured rural comparison group, so differences between insured and uninsured populations cannot be attributed directly to insurance status. Fourth, substantial missing data affected employment and particularly healthcare utilisation, with only 57 valid cases for the latter measure. Fifth, the cancer analysis involved only 16 cases and should be interpreted descriptively rather than as an estimate of Jamaica's rural cancer distribution. Finally, future analysis should incorporate survey weights and multivariable modelling where appropriate to distinguish sample description from population inference and identify independent predictors of poor functional health and healthcare utilisation.

Conclusion

This study provides contemporary evidence concerning the health and socioeconomic circumstances of 1,583 uninsured rural residents represented in the Jamaica Survey of Living Conditions 2023. The findings reveal a population characterised by socioeconomic vulnerability, substantial representation of own-account workers and considerable chronic-disease exposure despite apparently favourable current self-reported illness status. More than half belonged to the poor socioeconomic group, while hypertension, diabetes, asthma and arthritis constituted the leading reported chronic conditions. Most importantly, only 3.0% described themselves as currently ill, whereas 17.8% experienced at least some functional limitation and 17.8% reported a history of hypertension. The findings indicate that current illness perception cannot serve as a sufficient proxy for healthcare need among uninsured rural populations. This distinction directly addresses the study's identified gap by showing that insurance exclusion must be evaluated against multidimensional health need rather than acute illness alone.

The Jamaican experience is consistent with a wider international literature indicating that insurance, socioeconomic position, chronic morbidity and healthcare utilisation are closely interconnected, although the precise effects of insurance differ across health systems. Expanding financial protection is consequently important, but insurance should not be conceptualised as an isolated solution to rural health inequality. Jamaica's policy response should integrate public healthcare access, NCD screening and management, medicine subsidies, appropriate insurance

or risk-pooling mechanisms, and interventions addressing the vulnerabilities of poor and own-account workers. Future JSLC research should compare insured and uninsured rural populations directly and employ multivariable models to determine whether socioeconomic position, employment, age, sex and chronic morbidity independently predict functional health and healthcare utilisation. Longitudinal research would additionally help establish whether lack of insurance predicts subsequent deterioration in health or delayed treatment. The central policy message is that being uninsured and not currently feeling ill does not mean being free of healthcare need or financial risk.

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