PROJECT TITLE: HEALTH INSURANCE COVERAGE AND ROUTINE CHECKUP ANALYSIS

Prepared For:

Project Collaboration and Practice

Prepared By:

Patrick Gichuki, Freelance Data Analyst

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Contact: +254 791 567 373

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HEALTH INSURANCE COVERAGE AND ROUTINE CHECKUP ANALYSIS

1. Project Background and Overview

Routine health checkups and health insurance coverage are critical indicators of preventive healthcare. This analysis tracks key metrics such as insurance coverage rates, routine checkup participation, and checkup intervals to identify trends and disparities, aiming to guide public health strategies toward improving access and equity. This analysis examines these aspects to identify trends and disparities, aiming to guide public health strategies toward improving access and equity.

Dataset Overview:

- **Total Records Analyzed:** 6,158 entries.

- **Key Variables:** Demographics, socioeconomic status, health insurance coverage, and routine checkup intervals.

Objectives:

1. Quantify the proportion of individuals with health insurance and routine checkups.

2. Analyze routine checkup behavior across demographic and socioeconomic groups.

3. Identify patterns in the frequency of routine health checkups.

2. Executive Summary

Key Findings

Insurance Coverage:

- 58.8% of individuals are insured; 41.2% are uninsured.

- Coverage rates increase significantly with employment and income levels.

Routine Checkups:

- Only 29.1% of individuals undergo routine checkups.

- Higher participation is observed among older adults (60+ years: 63.3%) and higher-income groups (52.6%).

Checkup Intervals:

- 94.0% do not engage in routine checkups.

- 3.9% report annual checkups, highlighting limited engagement in preventive healthcare.

Implications: The findings emphasize the need for targeted interventions to enhance both insurance coverage and routine checkup participation. Expanding access and increasing awareness will directly impact public health outcomes.

Figure 1

Health Insurance coverage and toutine checkups dashboard
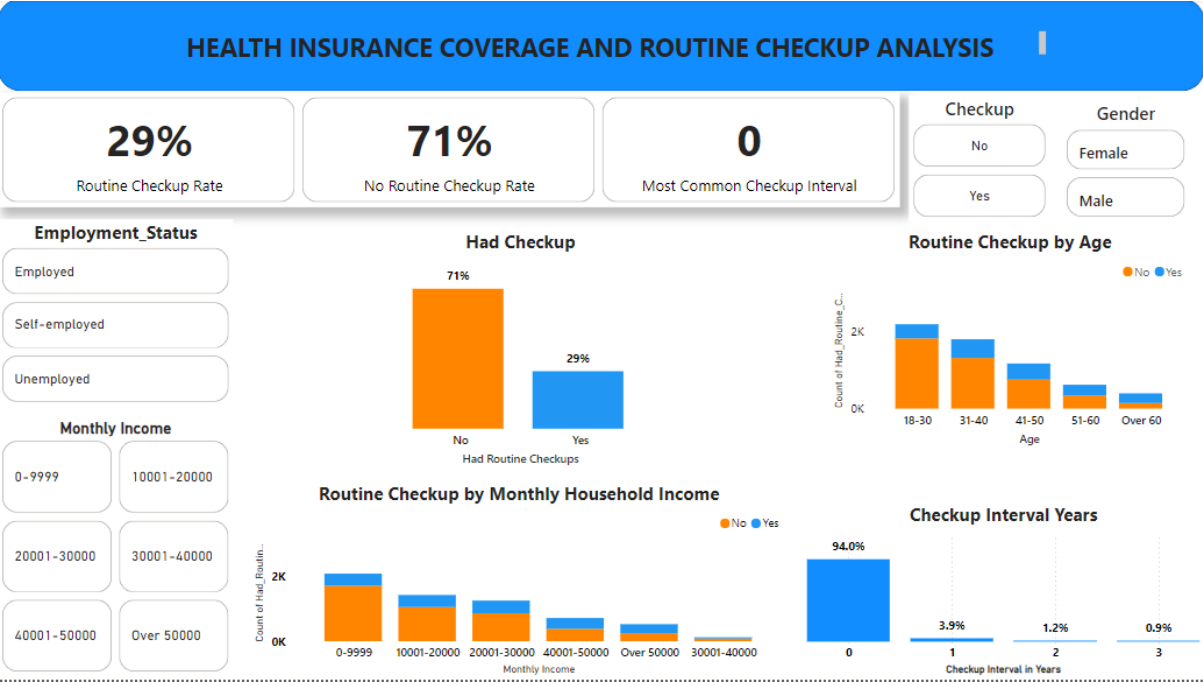
3. Data Structure Overview

The dataset captures demographic, socioeconomic, and healthcare-related information, including:

- **Demographics:** Age, gender, marital status.

- **Socioeconomic Factors:** Employment status, income levels.

- **Healthcare Utilization:** Insurance coverage, routine checkup intervals.

Key Relationships:

- Demographics and income influence insurance and routine checkup patterns.

- Routine checkup intervals reflect preventive healthcare engagement.

(Placeholder for Data Visualization: Healthcare Data Relationships)

| Healthcare_Table ▾ |
| --- |
| Date |
| Age |
| Gender |
| Marital_Status |
| Num_Children |
| Employment_Status |
| Monthly_Household_Income |
| Had_Health_Insurance |
| Insurance_Cover_Count |
| Insurance_Cover |
| Last_Hospital_Visit_Months |
| Had_Health_Insurance_During_Last_Visit |
| Had_Routine_Checkup |
| Checkup_Interval_Years |
| Had_Cancer_Screening |
| Cancer_Screening_Interval_Years |

4. Key Insights

Insight 1: Health Insurance Coverage

- **Data:** 58.8% insured; 41.2% uninsured.
- **Metric:** Insurance coverage correlates with income and employment status.
- **Observation:** Low-income and unemployed groups have significantly lower coverage rates.
- **Recommendation:**
    o Introduce employer-sponsored insurance initiatives.
    o Expand public health schemes targeting low-income populations.

Visualization: Insurance Coverage Proportion

Percentage of Individuals with Health Insurance
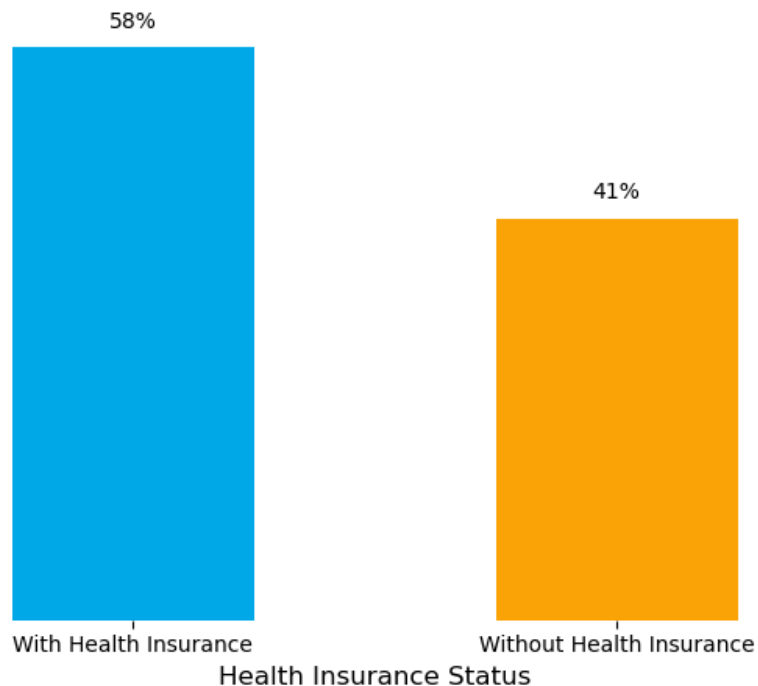
## Insight 2: Routine Health Checkups

- **Data:**

    o 29.1% of individuals participate in routine checkups.

    o 63.3% participation among older adults (60+ years).

    o 52.6% participation among high-income earners.

- **Metric:** Higher engagement is observed among older adults and high-income groups.

- **Observation:** Younger individuals and low-income groups lack engagement in routine preventive care.

- **Recommendation:**

    o Launch awareness campaigns targeting younger populations.

    o Incentivize routine checkups for low-income groups through subsidized healthcare.
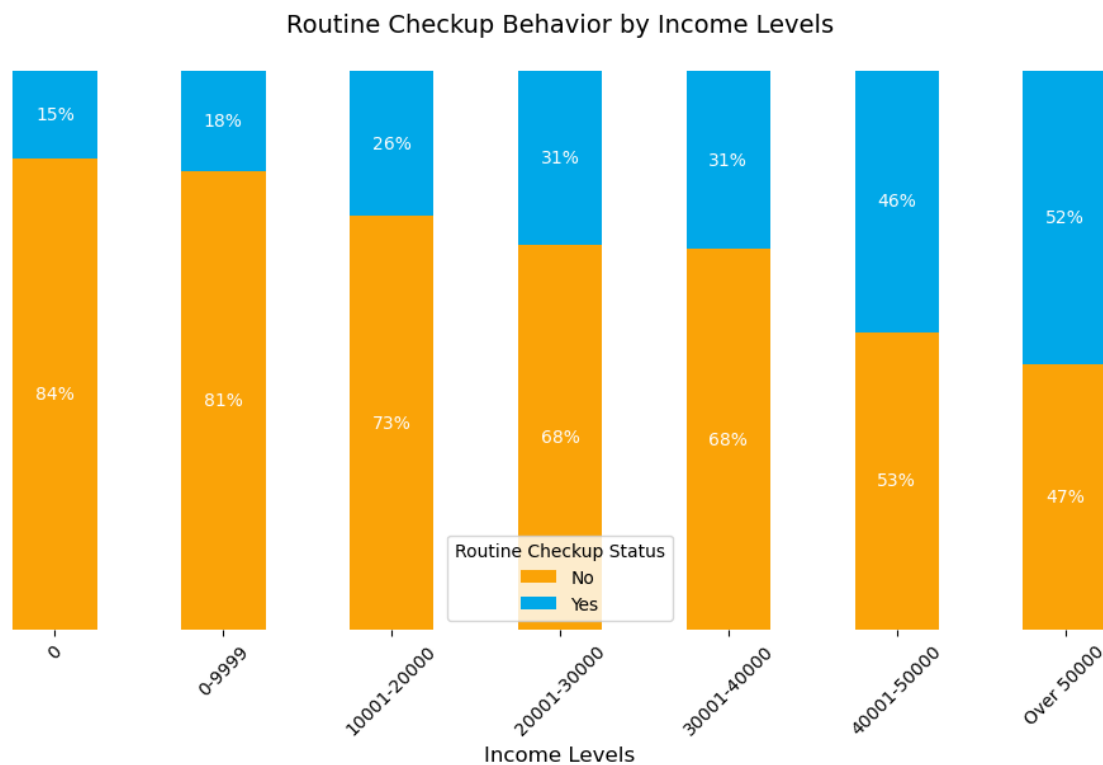
Visualization: Routine Checkups by Age, Gender, and Income

Routine Checkup Behavior by Gender
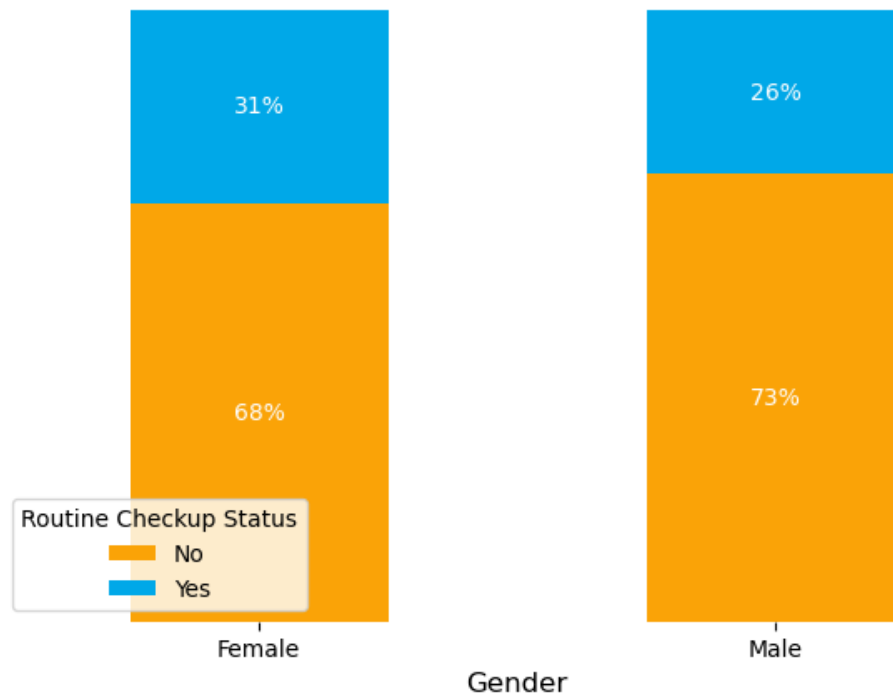
Routine Checkup Behavior by Age Groups

Routine Checkup Behavior by Income Levels
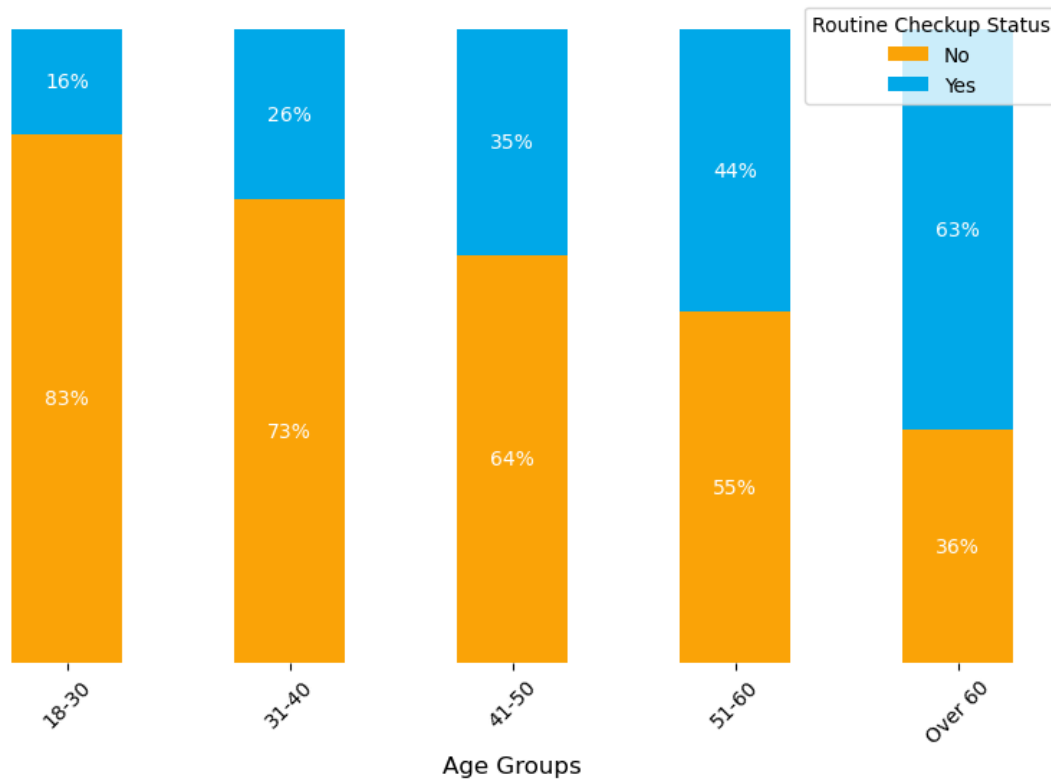
Insight 3: Patterns in Checkup Intervals

- **Data:**
    - 94.0% do not engage in routine checkups.
    - 3.9% report annual checkups.
- **Metric:** Preventive care engagement remains low across all groups.
- **Observation:** Most individuals either do not engage or prefer annual checkups.
- **Recommendation:**
    - Promote annual checkups as a standard practice.
    - Collaborate with healthcare providers to offer incentives for regular participation.

Visualization: Checkup Interval Patterns

Distribution of Time Intervals for Routine Checkups

94.0%

3.9%

1.2%

0.9%

Years Between Routine Checkups
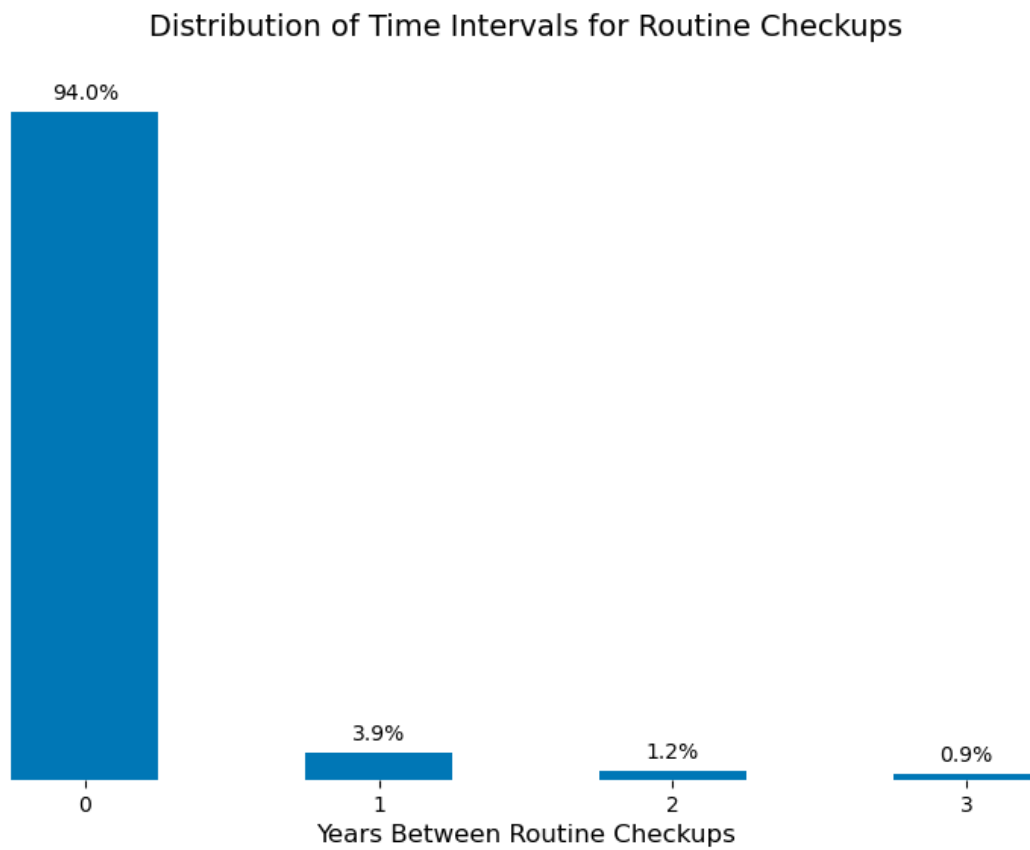
5. Recommendations

Increase Awareness

- Develop targeted campaigns emphasizing the importance of preventive healthcare.

- Focus on younger demographics and low-income populations.

Improve Accessibility

- Offer free or subsidized routine checkups through community programs.

- Partner with healthcare providers to enhance availability of preventive services.

Expand Insurance Coverage

- Advocate for employer-sponsored insurance and government-subsidized plans.

- Simplify enrollment processes to increase accessibility.

6. Communication Strategy

To Policymakers:

- Propose subsidies for routine checkups and insurance expansion programs.

To Employers:

- Highlight the productivity benefits of employee health programs.

To Healthcare Providers:

- Develop community outreach programs promoting routine health checkups.

7. Caveats and Assumptions

1. **Data Limitations:** The dataset may not represent all population groups equally.

2. **Self-Reported Bias:** Routine checkup and income data may contain inaccuracies.

3. **Temporal Context:** Results reflect a specific period and may not capture recent trends.

4. **Unmeasured Variables:** Factors like regional healthcare access and cultural norms are not included.