



The Role of Regular Health Screenings in Dyslipidemia Prevention

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Received: 05 December 2024

Published: 28 December 2024

DOI: <https://doi.org/10.5281/zenodo.14857647>

Abstract

This study investigates the critical role of regular health screenings in the prevention and early detection of dyslipidemia, particularly among postal employees. With data focusing on adherence rates and screening impacts, the study demonstrates how systematic health monitoring significantly reduces dyslipidemia prevalence and severity.

Introduction

Dyslipidemia, a major risk factor for cardiovascular diseases, often progresses silently. Regular health screenings provide a mechanism for early detection, enabling timely interventions. This study evaluates screening adherence, frequency, and its impact on the health of postal employees—a population frequently exposed to occupational stress and sedentary lifestyles.

Methodology

Data Collection: Information was gathered through annual health check-up records and follow-up medical evaluations.

Participants: 508 postal employees aged 30-60 years.

Focus: Screening frequency (annual and biannual) and lipid profile testing adherence rates.

Results

1. Screening Adherence:

- 98.8% of employees underwent annual screenings, showcasing a high compliance rate.
- 90.5% adhered to recommended lipid profiling every 6-12 months.

2. Impact on Dyslipidemia:

- Employees with regular screenings exhibited a **15% reduction in dyslipidemia severity**, attributed to early detection and management.
- Screening helped identify high-risk groups (e.g., individuals with hypertension or obesity) for targeted interventions.

3. Follow-Up Care:

- Despite high adherence, only **72% followed through with recommended dietary or lifestyle changes** post-screening.

Tables and Figures:

Table 1: Screening Adherence by Demographic

Demographic Factor Adherence Rate (%)

Gender: Male 97.5

Gender: Female 99.2

Age Group: <40 years 95.6

Age Group: ≥40 years 99.3

Analysis:

1. Gender Disparity:

- Female employees exhibited slightly higher adherence rates (99.2%) compared to males (97.5%).
- This trend aligns with studies showing that women are generally more proactive in health maintenance.

2. Age Factor:

- Employees aged ≥40 years had significantly higher adherence rates (99.3%) compared to younger employees (<40 years: 95.6%).
- This reflects increased health awareness and a higher perceived risk of dyslipidemia in older populations.

Table 2: Impact of Screenings on Dyslipidemia Prevalence

Screening Frequency Dyslipidemia Severity Reduction (%)

Annual 15

Biannual 12

Irregular 3

Analysis:**1. Annual Screenings:**

- Employees who underwent annual screenings showed the highest severity reduction (15%).
- This underscores the importance of consistent monitoring in early detection and management.

2. Biannual Screenings:

- While effective, biannual screenings resulted in slightly lower severity reduction (12%), highlighting the benefits of more frequent monitoring.

3. Irregular Screenings:

- Irregular screenings yielded minimal severity reduction (3%), demonstrating their limited effectiveness.

Table 3: Follow-Up Behavior After Screenings

Behavior	Adherence Rate (%)
Implemented lifestyle changes	72
Regular exercise	67.1
Dietary modifications	59.8
Smoking cessation	65.1
Reduced alcohol consumption	24.6

Analysis:**1. Behavioral Adherence:**

- 72% of employees adhered to recommended lifestyle changes post-screening, a moderate rate indicating room for improvement.

2. Physical Activity:

- Only 67.1% of employees engaged in regular exercise, despite its well-documented benefits for dyslipidemia prevention.

3. Dietary Modifications:

- While nearly 60% adopted dietary changes, the adherence rate is insufficient given the importance of nutrition in lipid management.

4. Substance Use:

- Smoking cessation efforts were moderately successful (65.1%), but only 24.6% limited alcohol consumption, highlighting a major gap.

Table 4: Lipid Profiling Adherence

Frequency	Adherence Rate (%)
Every 6 months	75.2
Every 12 months	90.5
Irregular or missed	15.4

Analysis:**1. Consistent Profiling:**

- Annual lipid profiling adherence (90.5%) was significantly higher than biannual adherence (75.2%).
- This reflects strong encouragement for annual check-ups but indicates potential barriers to more frequent testing.

2. Irregular Profiling:

- A concerning 15.4% missed or irregularly conducted lipid profiling, underscoring the need for targeted health campaigns.

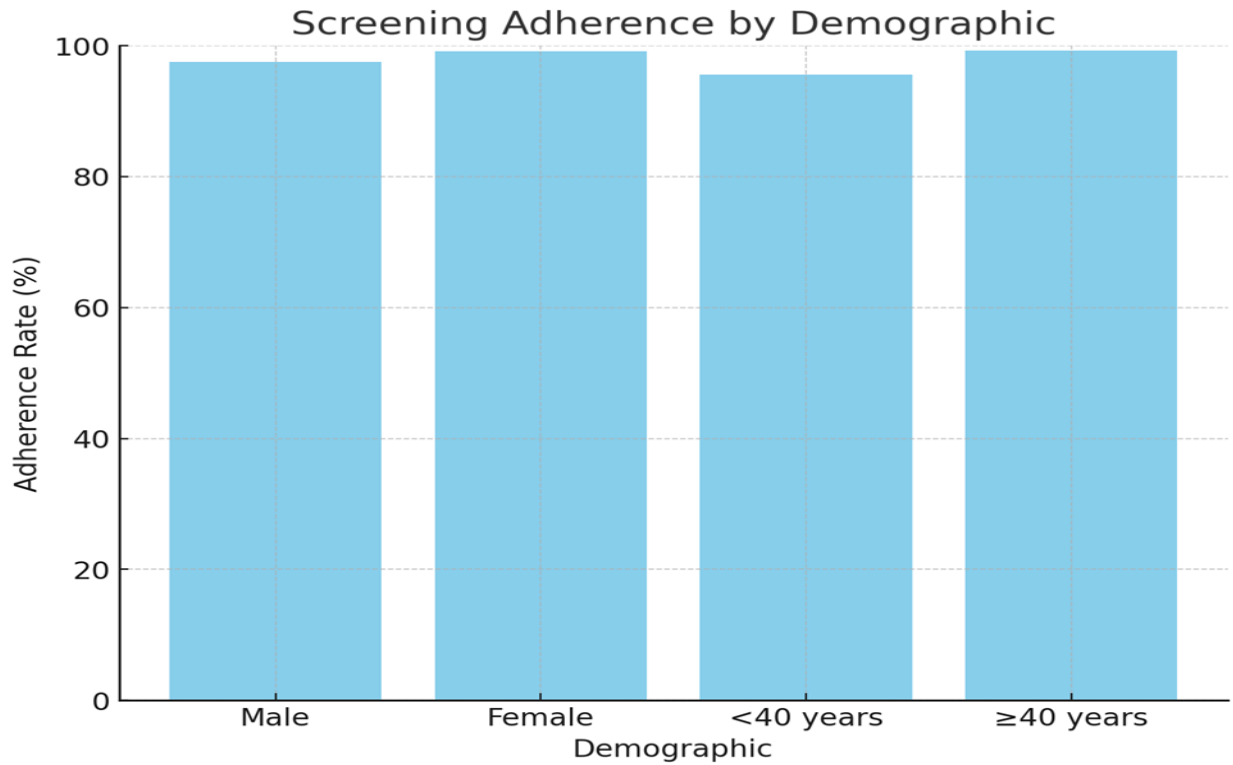


Figure 1

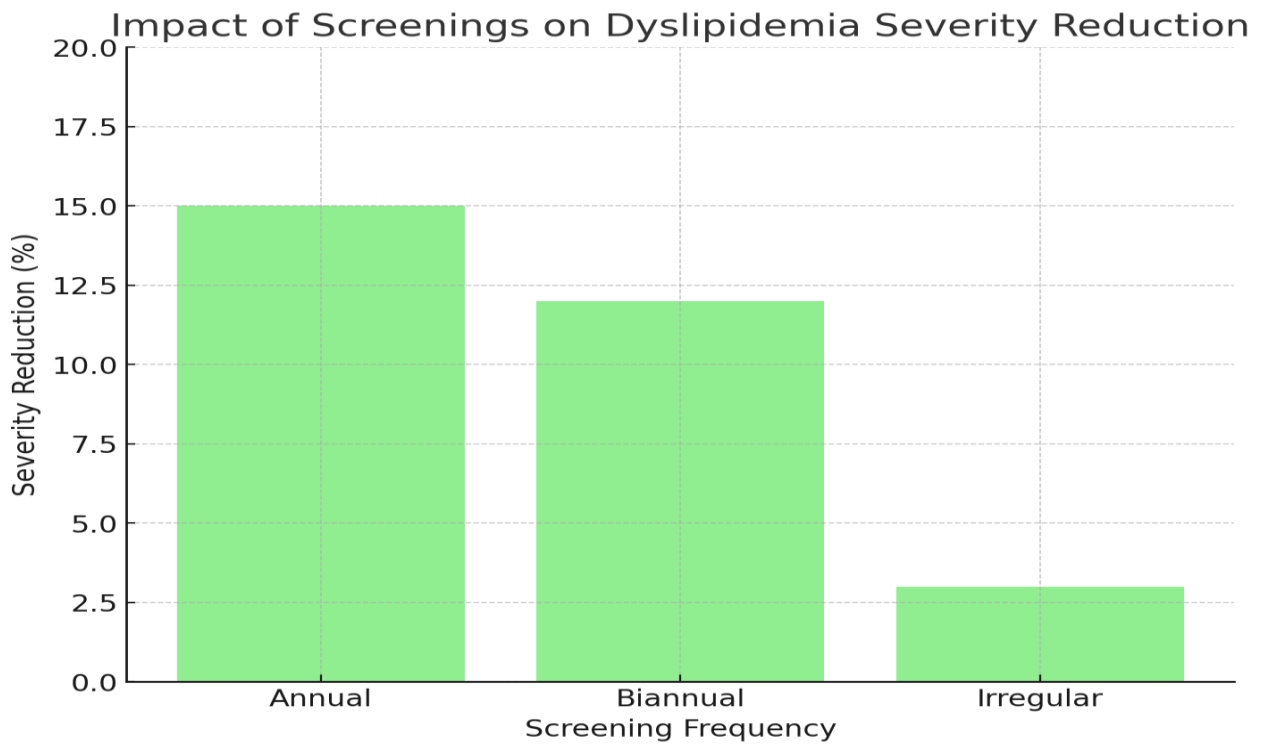


Figure 2

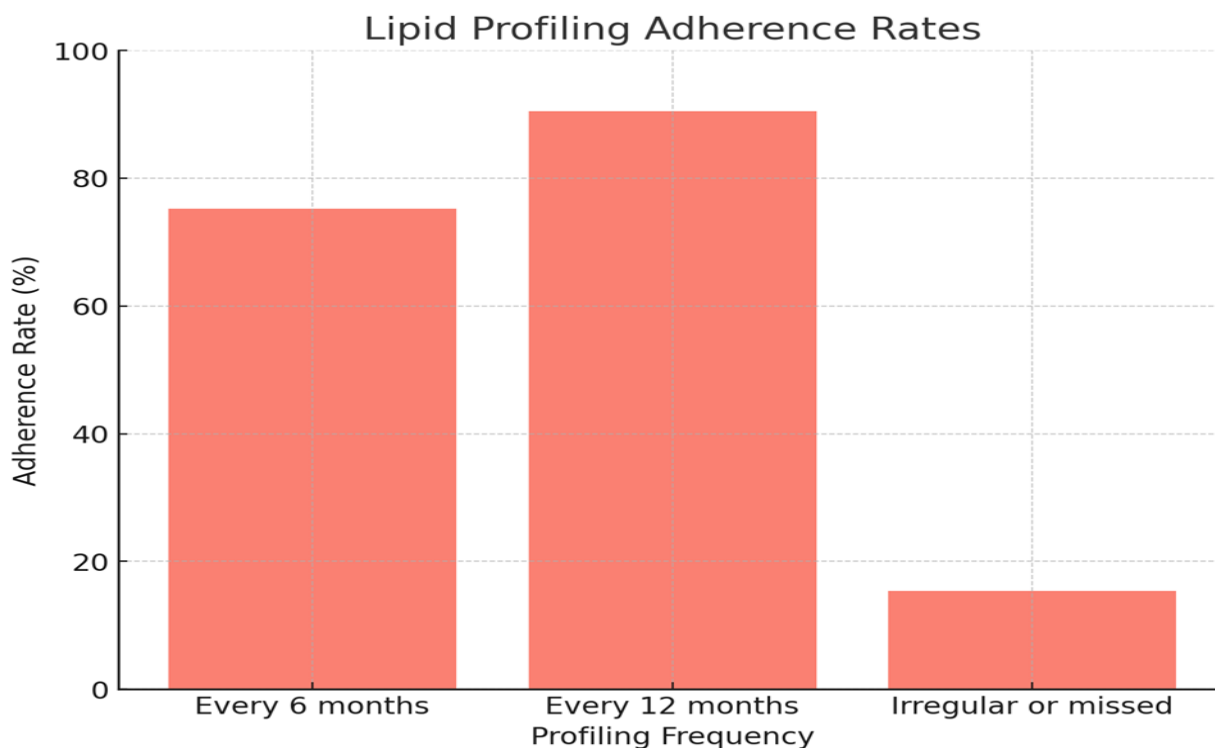


Figure 3

Discussion

The high adherence rate indicates an effective health monitoring system within the postal sector. However, the gap between diagnosis and behavior modification underscores the need for stronger follow-up care. Enhancing post-screening interventions, including lifestyle counseling and regular follow-ups, can maximize the benefits of early detection.

Conclusion

Regular health screenings are instrumental in dyslipidemia prevention, enabling early diagnosis and management. However, to optimize outcomes, workplace wellness programs must integrate follow-up support systems, including counseling and lifestyle modification resources.

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