18th Gulf Heart Association Conference
November 12-14, 2026
Oman Exhibition & Convention Center
Muscat, Sultanate of Oman



POSTER PRESENTATION

Utilisation patterns and quality of lipid control among patients prescribed lipid-lowering therapies in primary care settings in Kuwait: a nationwide cross-sectional study

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INTRODUCTION

Cardiovascular diseases are the leading cause of mortality in Kuwait[1].

Uncontrolled lipids remain a significant modifiable risk factor for CVDs.

Primary healthcare centres (PHCCs) serve as the first point of contact for managing non-communicable diseases (NCDs), including lipid disorders.

- Prescribing patterns of lipid-lowering therapies (LLTs) and quality of lipid control in PHCCs remain unclear in Kuwait.

AIM

To assess the prescribing patterns of LLTs.

To evaluate the quality of lipid control among patients prescribed LLTs as necessary.

METHODS

Study design & Setting

A nationwide, cross-sectional study was conducted using the WHO STEPwise approach to surveillance (STEPS)[2] across six randomly selected PHCCs, each representing one of the six governorates in Kuwait.

Exposure and sample size

- Patients from NCD clinics prescribed at least one LLT (statins, ezetimibe, fibrates, or PCSK9Is) were included.
- A proportional sample size was calculated based on the population data from the Public Authority for Civil Information (PACI).

Study outcomes

- Prescribing patterns stratified by the class of LLT.
- Proportion of patients achieving therapeutic goals. The CV risk categories and corresponding lipid treatment goals were defined using the 2021 Middle East consensus[3] (Table 1).

Table 1. Targets for LDL-C and non-HDL-C, adapted from the 2021 Middle East consensus

Risk category	LDL-C	Non-HDL-C
Extreme	≥50% reduction from baseline and <1.4 mmol/L	<2.2 mmol/L
Very high	≥50% reduction from baseline and <1.8 mmol/L	<2.6 mmol/L
High	LDL-C goal of <1.8 mmol/L	<2.6 mmol/L
Moderate	LDL-C goal of <2.6 mmol/L	<3.4 mmol/L

LDL-C: Low Density Lipoprotein Cholesterol; **non-HDL-C**: non- High-Density-Lipoprotein Cholesterol.

RESULTS

1. Characteristics of the LLT users (Table 2):

Table 2. Characteristics of patients on lipid-lowering therapy

Variables		Total patients (n= 434)
Age (years)	Mean ± SD	54.3 ± 9.7
	<55; n (%)	219 (50.5)
Gender, male	n (%)	211 (48.6)
Current smokers	n (%)	93 (21.4)
Body mass index (Kg/m²)	Median (IQR)	28 (24.9, 32)
	Obese (≥30); n (%)	155 (35.7)
History of diabetes	n (%)	409 (94.2)

2. Prescribing patterns of LLTs:

- Monotherapy was prescribed to the vast majority of patients (Figure 1).
- Statins were the most prescribed LLT (Figure 1).
- Simvastatin was the most frequently used (Figure 2).

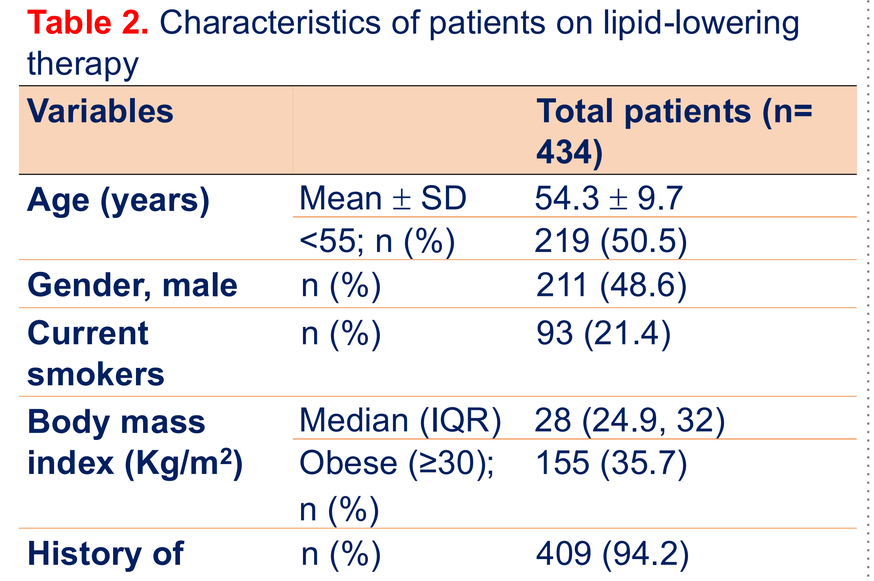


Figure 1. Flowchart illustrating the patterns of lipid-lowering therapies utilisation stratified by drug class. **LLTs**: Lipid-lowering therapies; **EZE**: Ezetimibe; **PCSK9I**: Proprotein convertase subtilisin/kexin type 9 inhibitor.

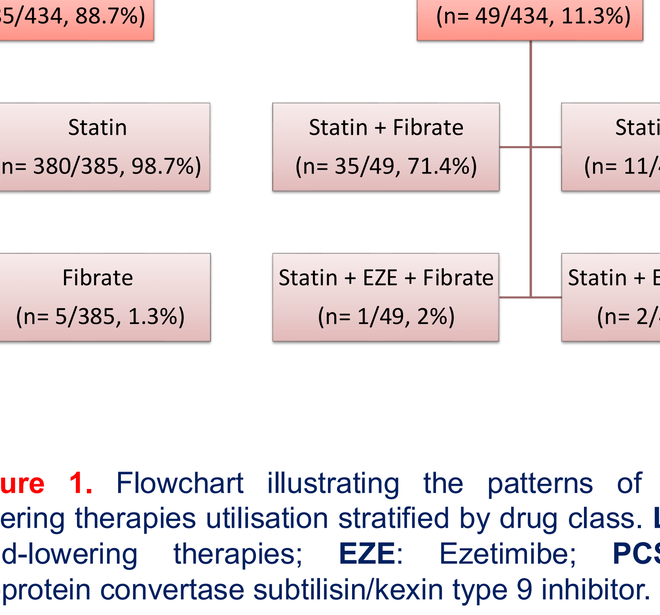


Figure 2. Flowchart illustrating statin utilisation stratified by agent.

RESULTS (Cont.)

3. Target goal attainment:

Overall participants:

- **LDL-C** and **non-HDL-C** goals achievement were 20.4% (n=65/318) and 26.6% (n= 84/316), respectively.
- For other lipid parameters, **TG** was achieved in 61% (<1.7 mmol/L), **HDL-C** in 53% (>1 for males, and >1.3 mmol/L for females), and **TC** in 70% (5.0 mmol/L).

Participants stratified by CV risk category:

- See Figure 3 for LDL-C goals achievement in extreme (n= 9/113), very-high (n= 27/106), and high (n= 29/97) risk categories.
- See Figure 3 for non-HDL-C goals achievement in extreme (n= 16/116), very-high (n= 35/102), and high (n= 33/96) risk categories.

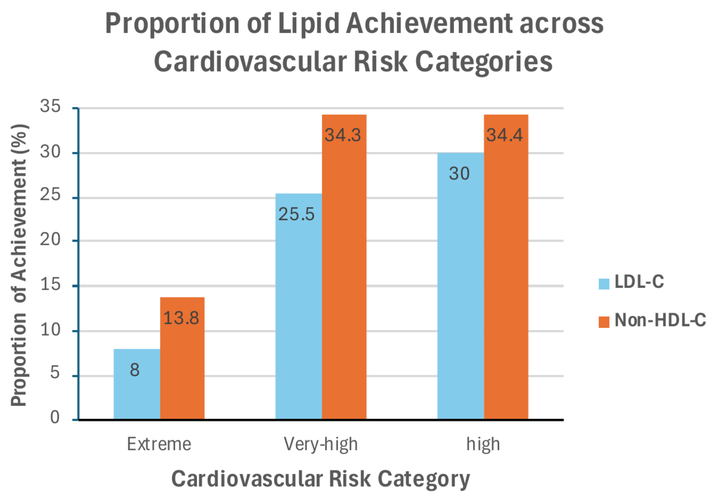


Figure 3. Proportion of patients attaining target lipid goals according to cardiovascular risk category (extreme, very high, and high).

4. Multivariate analyses for LDL-C and non-HDL-C:

- Binomial logistic regression showed that individuals in lower CV risk categories had higher odds of achieving their respective lipid targets.

CONCLUSIONS

- Statins remain the cornerstone therapy across PHCCs in Kuwait.
- However, suboptimal lipid control persists, highlighting the need for personalised care and therapy intensification in line with updated guidelines.
- Strategies to improve adherence and optimise treatment regimens, such as escalation to high-intensity statins or adding ezetimibe/PCSK9Is, may help bridge the gap towards optimal lipid management.

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ACKNOWLEDGEMENTS

- Special thanks are extended to the heads and staff of the six PHCCs for their cooperation and assistance throughout the data collection process.