
Amira Al Kharusi

Poster



Prevalence and Economic Burden of Obesity-Related Comorbidities in the Gulf Region: Results from the POEM-Gulf Study

Noor Al Busaidi¹, Mohammad N Alajmi², Mohamed Aly Elsherif³, Fadhila Al Busaidi⁴, Asrar Alsayed Hashem⁵, Amira Nasser Al Kharusi⁶, Sulaiman Almazeedi⁷, Tarik A Elhadd⁸, Amin Jayyousi⁹, Rayaz A Malik¹⁰, Prakash Shanmugam¹¹ , Malek Arjoub¹², Mohammad El Taweel¹², Guruprasad Subbarao¹², Fahad Al Ajmi¹³

INTRODUCTION

- Obesity is a complex and chronic disease that increases the risk of cardiometabolic disorders and adversely impacts the quality of life^{1,2}
- In the Eastern Mediterranean Region, **obesity affects over 50% of women and 40% of men**,³ significantly increasing the socioeconomic and healthcare burden of ORCs⁴
- Despite high prevalence, **there is paucity of contemporary data on prevalence and economic burden of obesity and ORCs**

AIM/OBJECTIVE

The POEM-Gulf study assessed the prevalence and management costs associated with 14 common ORCs in PwO across Kuwait, Qatar and Oman.

METHOD

POEM-Gulf study:
A real-world analysis of medical records of Arab nationals
This is a multi-centre, retrospective, observational study

Ethical Approval Letter No.: MoH/CSR/23/27643

Data collection period: Dec 2023 – Oct 2024

Inclusion Criteria

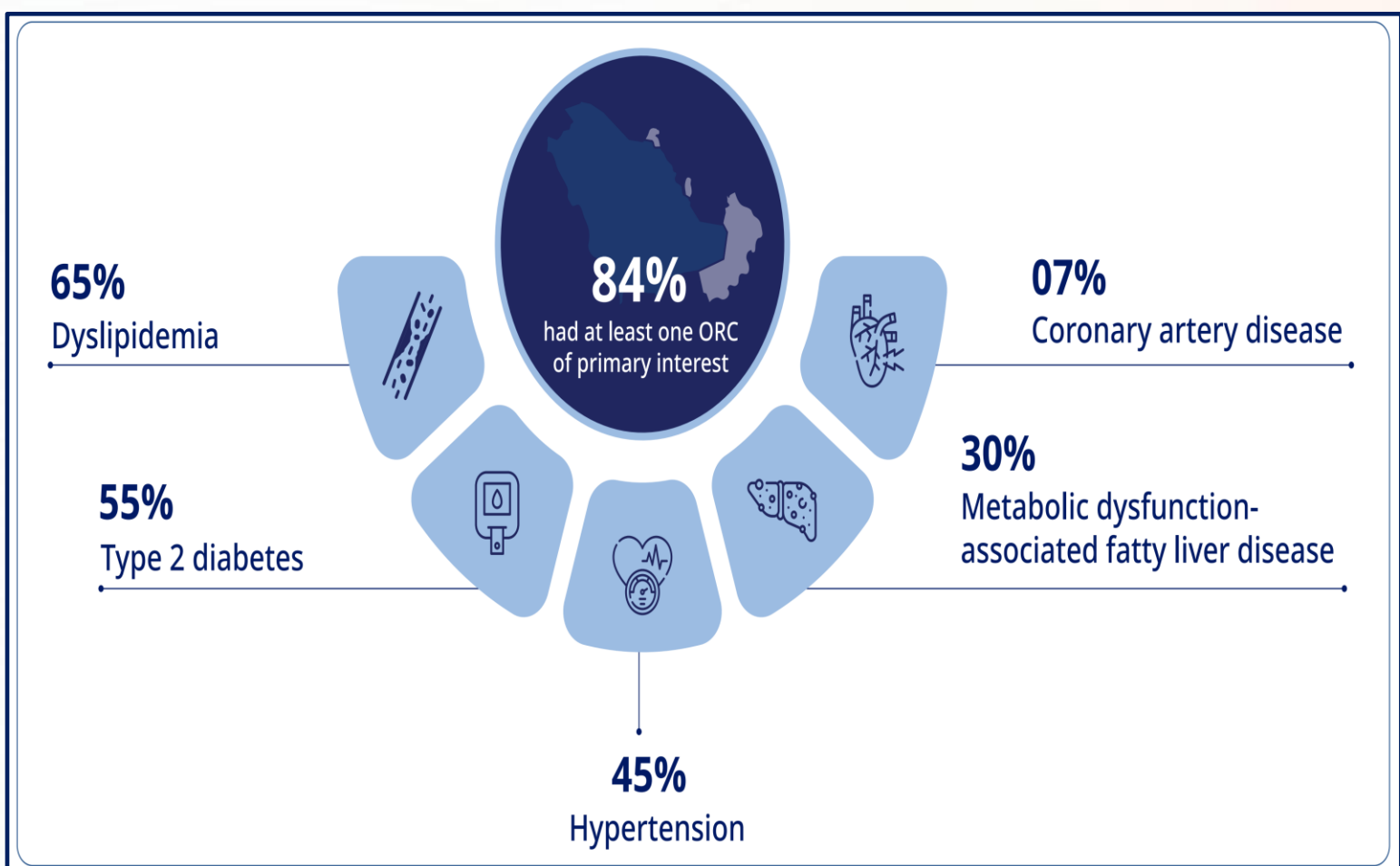
- Adults ≥18 years
- Arab ethnicity with local nationality
- Obesity diagnosis (BMI ≥30 kg/m²) at index date and throughout the follow-up

Exclusion Criteria

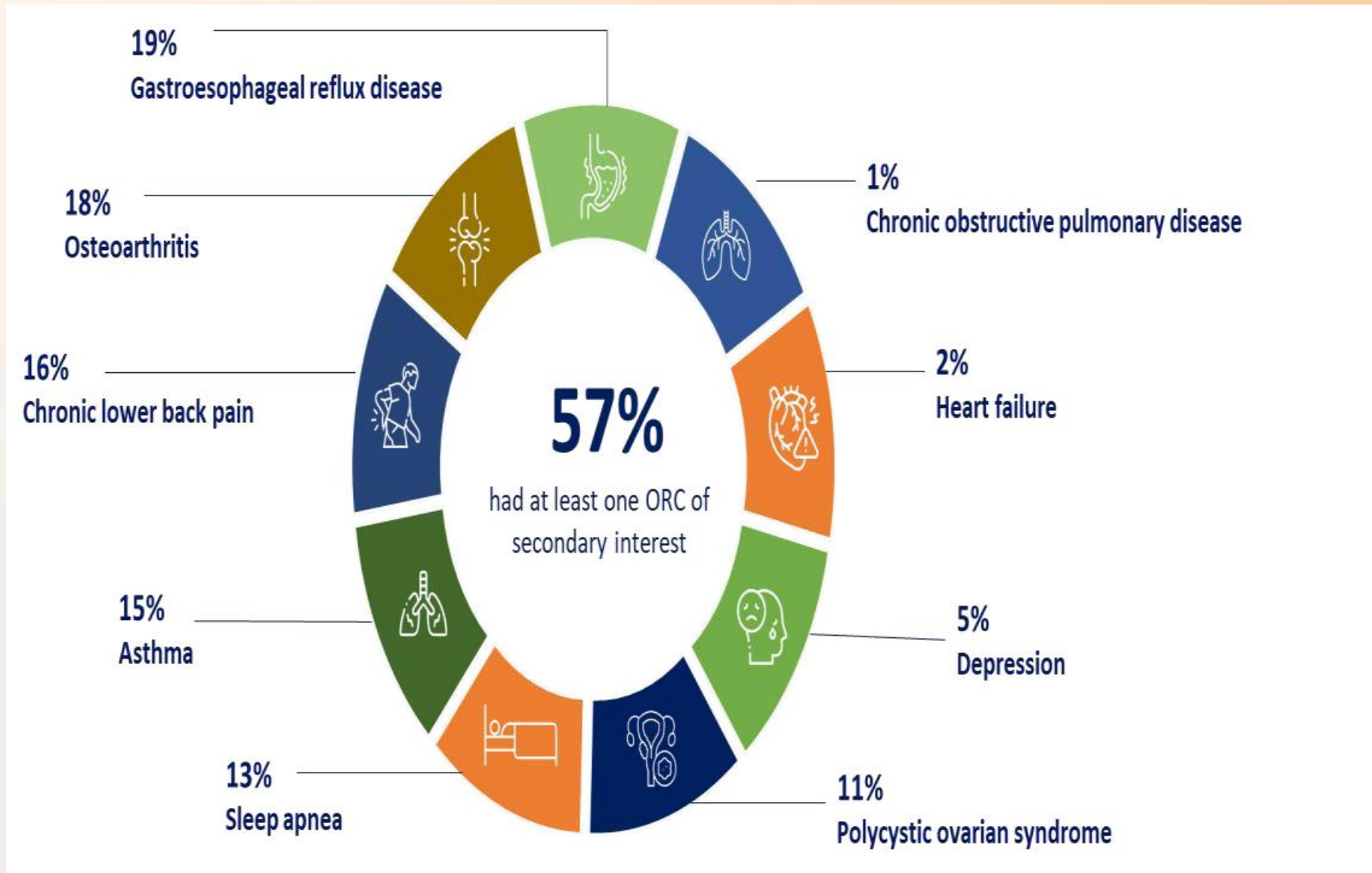
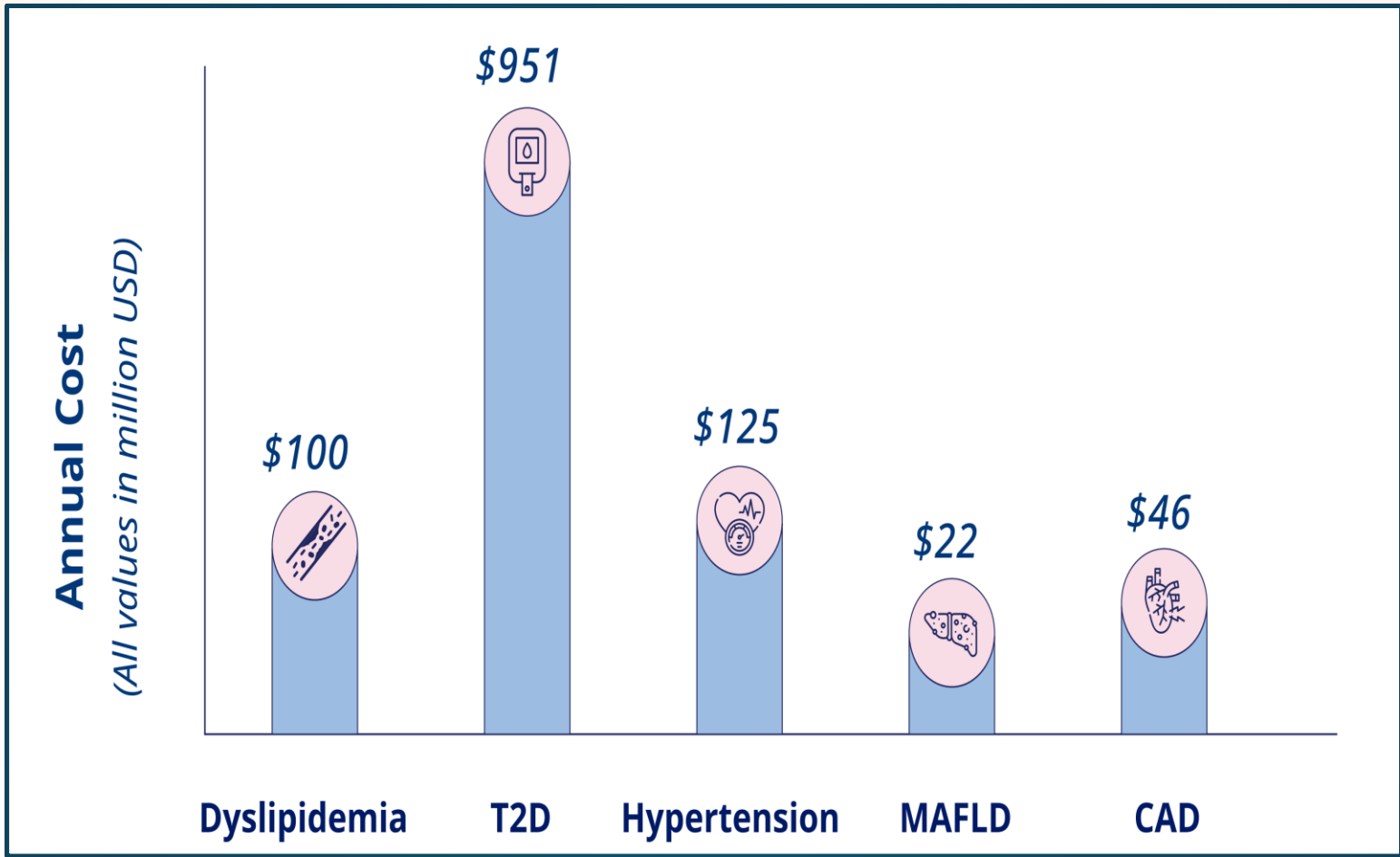
- Participation in interventional trials during observation
- Conditions causing unintentional weight change, including:
 - Malignancy, HIV, cachexia, anorexia
 - GI disorders, IBD, pancreatitis
 - Feeding difficulties or major weight fluctuation
 - Nutritional deficiencies (*except vitamin deficiency*)
 - Pregnancy
- Bariatric surgery within 18 months before index date
- Non-ambulatory disability

RESULTS

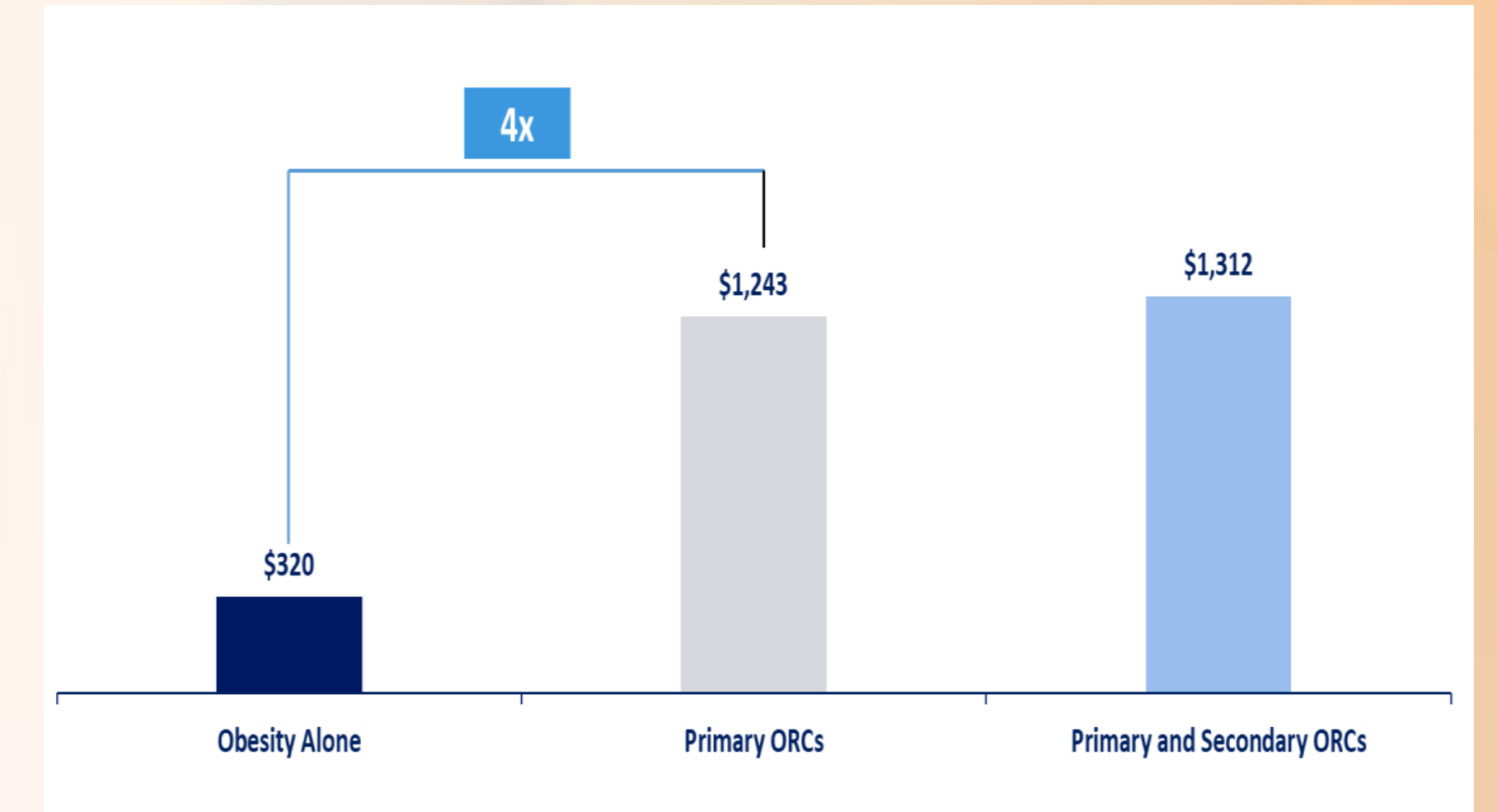
3 countries: Oman , Qatar and Kuwait
7 healthcare sites
Total : 1,316 PwO



Prevalence and economic burden of ORCs of primary interest



Prevalence and economic burden of ORCs of secondary interest



CONCLUSION

- In the Gulf region, ORCs such as dyslipidemia (the most prevalent) and T2D (the most economically burdensome) pose significant cardiovascular risks.
- ORC prevalence increased with age and remained consistent across all obesity classes, underscoring the urgent need for early, multifaceted interventions. ORCs cost four times more than obesity alone.
- Provides policy-relevant insights into the financial impact on Ministries of Health/ Govt

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ORC, obesity-related comorbidities; PwO, people with obesity.
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Dr. Laila Al Khanbashi

Poster

Unusual success of hydroxyurea in a case with severe type of beta-thalassemia

Laila Al Khanbashi, Yasser Wali, Shaimaa Al Ghafri, Arifa Al Kharousi, Saoud Al Ghafri

INTRODUCTION

Beta-thalassemia is an inherited hemoglobinopathy. It has a major impact on health care systems and patients’ quality of life. Treatment options are bone marrow transplantation and regular blood transfusions.^{2,3} Studies found that hydroxyurea can act as a blood transfusion alternative in patients with beta-thalassemia.^{4,5} However, this practice is still not well incorporated in the management of beta-thalassemia because of the variation in response among patients.^{6,7} This is a descriptive case report, where the diagnosis of a patient was revised and hydroxyurea was started as a trail in a case with severe type of beta-thalassemia. The response was measured via regular assessment of patient clinical condition and hemoglobin level. The items cost was provided by finance department.

RESULTS

The impact of hydroxyurea was assessed over 3.5 years. Hemoglobin was maintained above 7 without blood transfusion figure (1). No significant side effects. Kidneys and liver functions remained normal and serum ferritin improved. Thus, the iron chelator was discontinued. Clinically, her growth parameters remained normal for age and sex. No clinical manifestations of extra-medullary hematopoiesis. The cost of therapy was reduced from1946.4 OMR/year to 135.48 OMR/year table (1) and (2). The therapy improved the psychological and social well-being of both the child and her family.

AIM/OBJECTIVE

The aim of this case report is to illustrate the importance of accurate diagnosis and describe the unusual success of hydroxyurea in a severe type of beta-thalassemia on reduction of blood transfusion as well as cost effectiveness.

METHOD

This is a descriptive case where a patient diagnosis was revised and treatment plan was changed accordingly. A 6 years old with anemia Hb 6, splenomegaly and HPLC (Hb F 92%, Hb A2 5.1%, Hb A 0). Labelled as beta-thalassemia major and started on regular blood transfusion. A year later, the diagnosis was revised in view of the late manifestation of the disease, genetic testing confirmed

Table 1. cost while on regular blood transfusion

No	Requirement	Unit price (R.O)	Monthly price (R.O)	Comments
1	Opening visit	1.2	1.2	
2	Bed	20	20	
3	Cannula	2	2	
4	CBC	4	4	
5	Cross Match	9	9	
6	Ferritin	3	3	
7	UE	8	8	
8	LFT	8	8	
9	Blood Collection	15	15	
10	Blood Group Test	4	4	
11	Blood Product Irradiation	4	4	
12	Packed Red Blood Cells	64	64	
13	Dr consultation (monthly)	20	20	
	Total		162.2 R. O	1946.4 R. O / Year

Table 2. cost while on hydroxyurea

No	Requirement	Unit price	Monthly price	Comments
1	Hydroxyurea	0.09	3,240	
2	Folic	0.005	0.150	
3	Dr consultation (every 3 months)	20	6.6	
4	CBC every 3 months	4	1.3	
	Total		11.29	135.48 R. O / Year

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homozygous beta zero mutation, and detected a homozygous Alpha 3.7 deletion.Theoretically, the co-existence of homozygous beta zero with homozygous alpha trait will reduce the imbalance between beta and alpha globin, hence reducing the ineffective erythropoiesis and delay the manifestation of the disease. Thus Hydroxyurea was started as an alternative to blood transfusion. The response to therapy was monitored by regular checkup of growth parameters, clinical examination for hepato-splenomegaly, facial bony changes and monthly check up of hemoglobin. The cost was calculated based on items prices registered in the records of finance department in our hospital.

CONCLUSION

Hydroxyurea is a cost effective and a good alternative to blood transfusion in patients with beta-thalassemia. However, the variation of response to hydroxyurea among beta thalassemia patients may need further studies for the factors associated with good response of hydroxyurea in patients with beta-thalassemia.

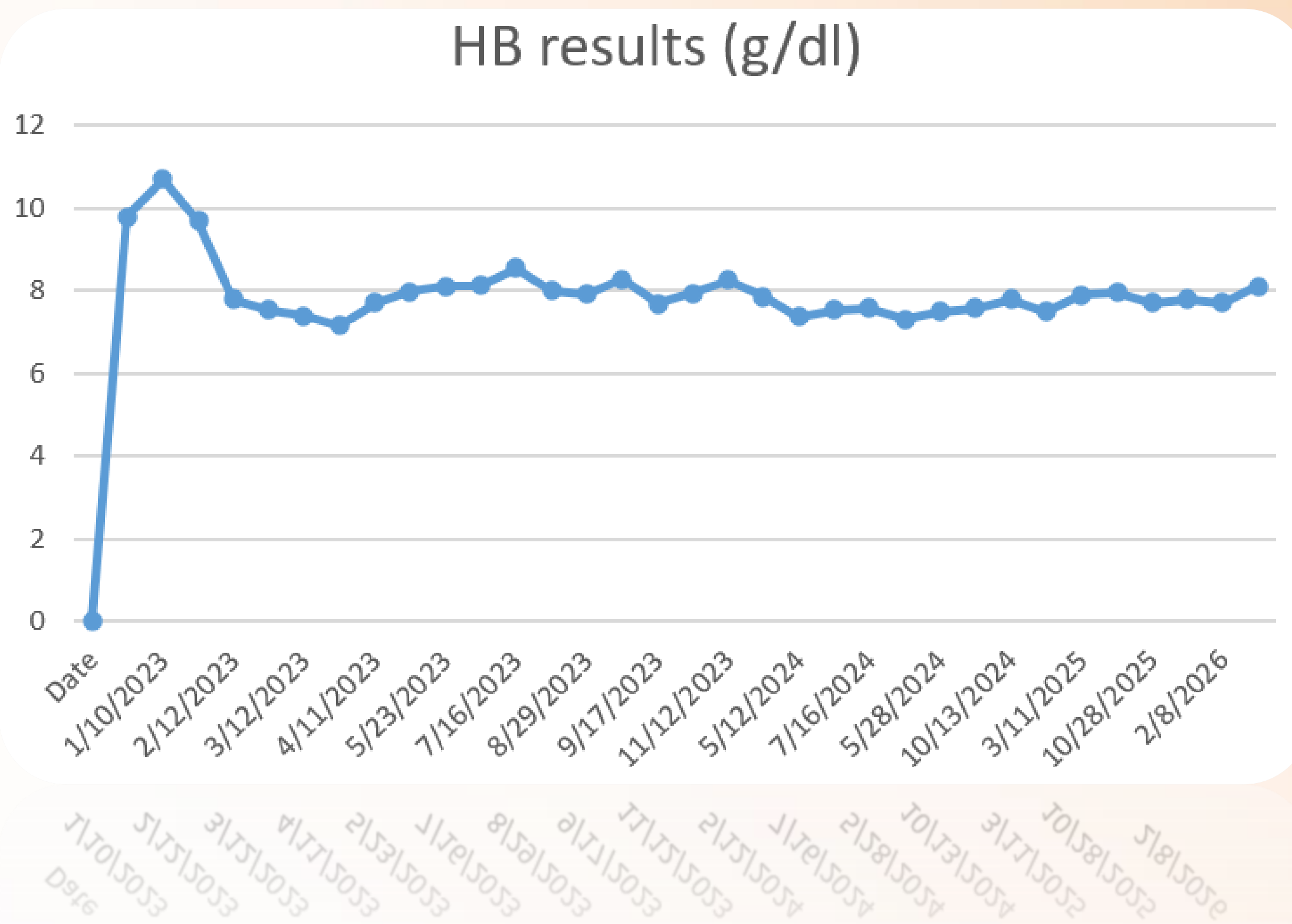


Figure (1) Hemoglobin level on hydroxyurea

Dr. Eyad Abu Alhaijaa

Poster

Impact of Smoking Cessation Counselling Among Acute Myocardial Infarction Patients on Post Hospitalization Mortality Rate: Systematic Review

INTRODUCTION

Smoking is a global health problem and the leading cause of death,1 resulting in 8 million deaths annually.2 The estimated mortality rate among patients with acute myocardial infarction (AMI) is about 30%,in which about 10% of deaths occurs within the first year.1.

A couple of studies reported a positive impact of smoking cessation on mortality rates of AMI patients 3-5. However, little is known about the effectiveness of such counseling on mortality rates.

AIM/OBJECTIVE

This systematic review paper aimed to assess the impact and effectiveness of smoking cessation counseling (SCC) on patients' short- and long-term mortality rates after acute myocardial infarction (AMI).

METHOD

A systematic review of bibliographical databases such as Medline (PubMed), ScienceDirect, CINAHL, was conducted. No limit on either English language or year of publication was applied. All possible combinations of the keywords were searched, and a manual literature search was further performed by reviewing studies referenced in retrieved papers.

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guideline.6

This study review protocol was registered in Prospero (registration No. CRD42020143071).

Two investigators independently screened titles and abstracts identified by the searches to check their eligibility.

RESULTS

The literature search yielded 233 abstracts, of which 36 were found eligible based on initial screening. Of the 36 studies, 5 met the inclusion criteria and were included in the final evaluation.7-11

Four of the studies were retrospective, cross-sectional,7-10 three of them published from the United States, and were sampling the US national cooperative cardiovascular quality improvement project database,7-9 .

The remaining one was published from Canada and utilized the Canadian Enhanced Feedback for Effective Cardiac Treatment (EFFECT) project data.10. The fifth study was a randomized controlled trial, and published from the US.11

Smoker patients were not routinely counseled to quit smoking during their post-AMI hospital stay; The smoking cessation counselling rate ranged between 33.9% and 52.1%.7-10

Patients who were less likely to receive SSC were non-white, women, diabetic, heart failure, hypertensive, elderly, had stroke, had a higher APACHE score and were discharged to a skilled nursing facility.

patients who were most likely to receive SCC had a history of chronic obstructive pulmonary disease, peripheral vascular disease, Killip class >2, underwent revascularization procedure, administered aspirin and beta blockers.

All studies reported a statistically significant reduction in AMI patients' mortality 30 days (18-28%), 8-9, 60 days(19%),9,and 1 year (14-37%),9, after discharge from hospital among patients who received SCC compared with patients who did not receive SCC.

The 2-year mortality rate risk reduction was reported only from 1 study and was 8%, with a hazard ratio of (0.92), and a 95% CI of (0.86–0.98).8.

Smoking cessation counseling that includes behavioral and pharmacological treatment is superior to conventional routine intervention. 11

CONCLUSION

Smoking cessation counseling is simple, and one of the cost-effective lifestyle changes interventions post AMI, which nurses can carry out or suggest.

Smoking cessation counseling of AMI patients during hospitalization and after discharge independently or in conjunction with other interventions reduce short- and long term mortality.

To maximize SCC programs, counseling should begin straightaway during the AMI hospitalization period and continue after discharge.

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Adil Rashid AlSaidi

Poster

Nurses' Readiness to Implement Evidence-Based Practice for Safe Care of Patients with Noncommunicable Diseases: A Cross-Sectional Study from Oman

Adil Rashid Abdullah Al-Saidi
Nursing Supervisor, Ibri Hospital
Ministry of Health, Sultanate of Oman
adiloalsaidi@gmail.com
+968 95547990

INTRODUCTION

Evidence-Based Practice (EBP) is essential to deliver safe, effective and person-centred care for people living with noncommunicable diseases (NCDs).



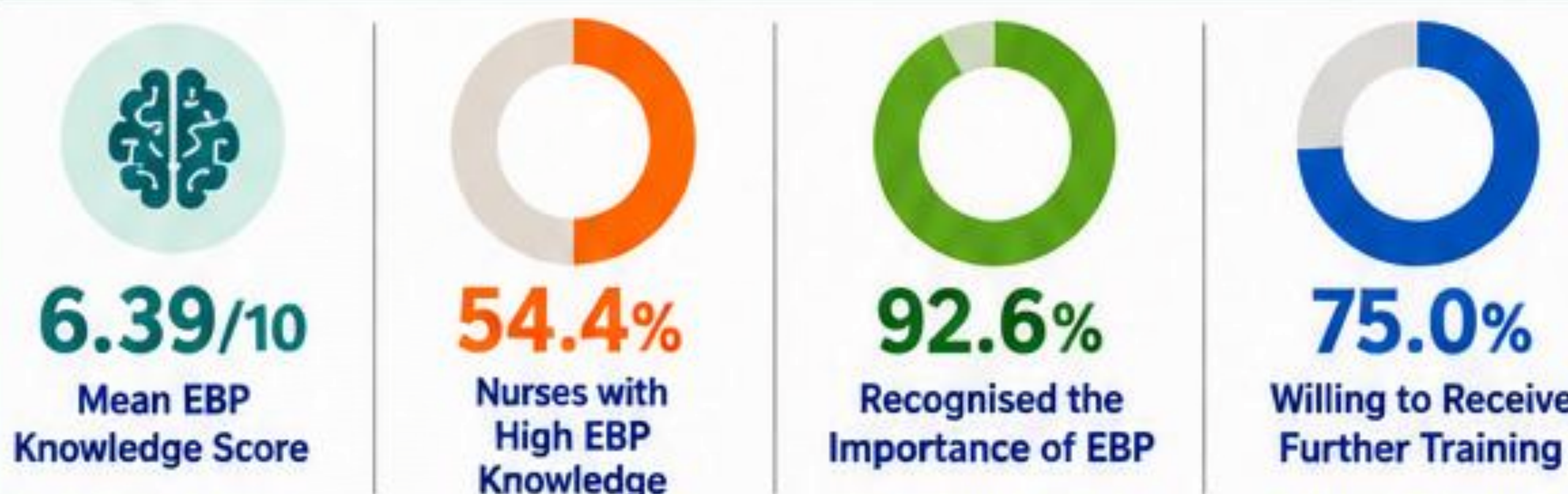
Nurses play a key role in:



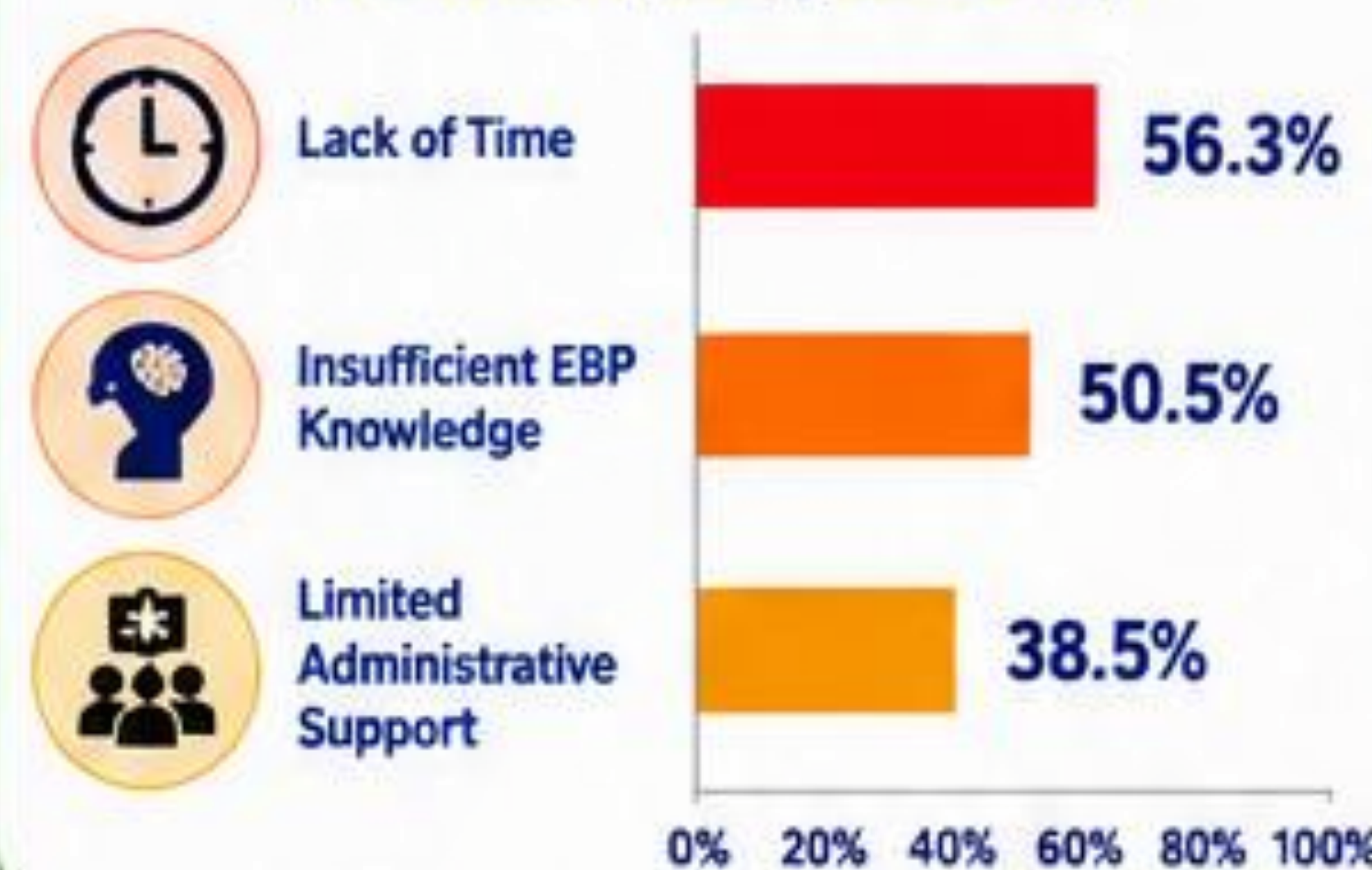
However, implementation of EBP remains challenging in many healthcare settings.

RESULTS

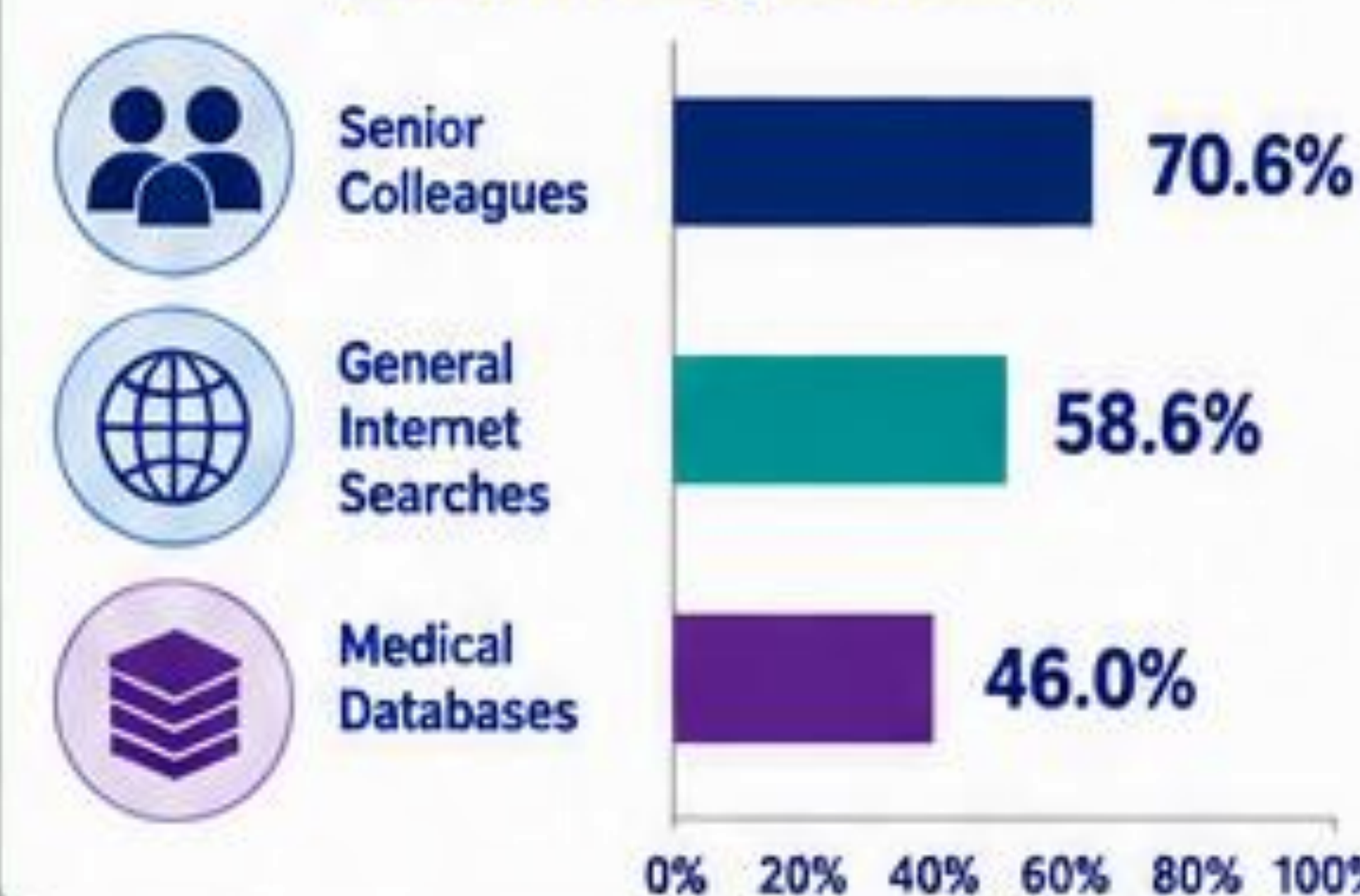
A. EBP READINESS



B. TOP BARRIERS TO EBP IMPLEMENTATION (% of nurses reporting each barrier)



C. EVIDENCE-SEEKING BEHAVIOUR (% of nurses using each source)



AIM / OBJECTIVES

To assess nurses' readiness to implement Evidence-Based Practice and identify barriers affecting its adoption to strengthen safe nursing care for patients with noncommunicable diseases.

- Assess EBP readiness
- Identify implementation barriers
- Inform safer NCD nursing care

FROM FINDINGS TO ACTION: HOSPITAL-WIDE QUALITY IMPROVEMENT PROGRAMME



Digital EBP Platform
Easy access to quality evidence at the point of care.

Monthly Journal Clubs
Promoting critical appraisal, knowledge sharing and team learning.

EBP Objectives Integrated into Staff Performance Plans
Embedding EBP into daily work and professional development.

Ibri Hospital, Oman

METHODS



DOMAINS ASSESSED



Ibri Hospital, Oman

CONCLUSION

Positive EBP attitudes alone are not enough.



Stronger Evidence-Informed Clinical Decisions

Safer Care for People Living with NCDs

Strengthening nurses' EBP capability provides a practical pathway for embedding evidence into routine nursing practice and supporting safer NCD care within Oman's healthcare system.

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Scan for full abstract

Nurses' Readiness to Implement Evidence-Based Practice for Safe Care of Patients with Noncommunicable Diseases: A Cross-Sectional Study from Oman

Adil Rashid AlSaidi , Ibri Hospital , Oman

INTRODUCTION

Evidence-based practice (EBP) is essential for delivering **safe, effective, and person-centred care** to patients with noncommunicable diseases (NCDs). Nurses play a central role in chronic disease management, medication safety, and evidence-informed clinical decision-making. However, translating evidence into routine nursing practice remains challenging, highlighting the need to assess nurses' readiness and identify barriers to EBP implementation.

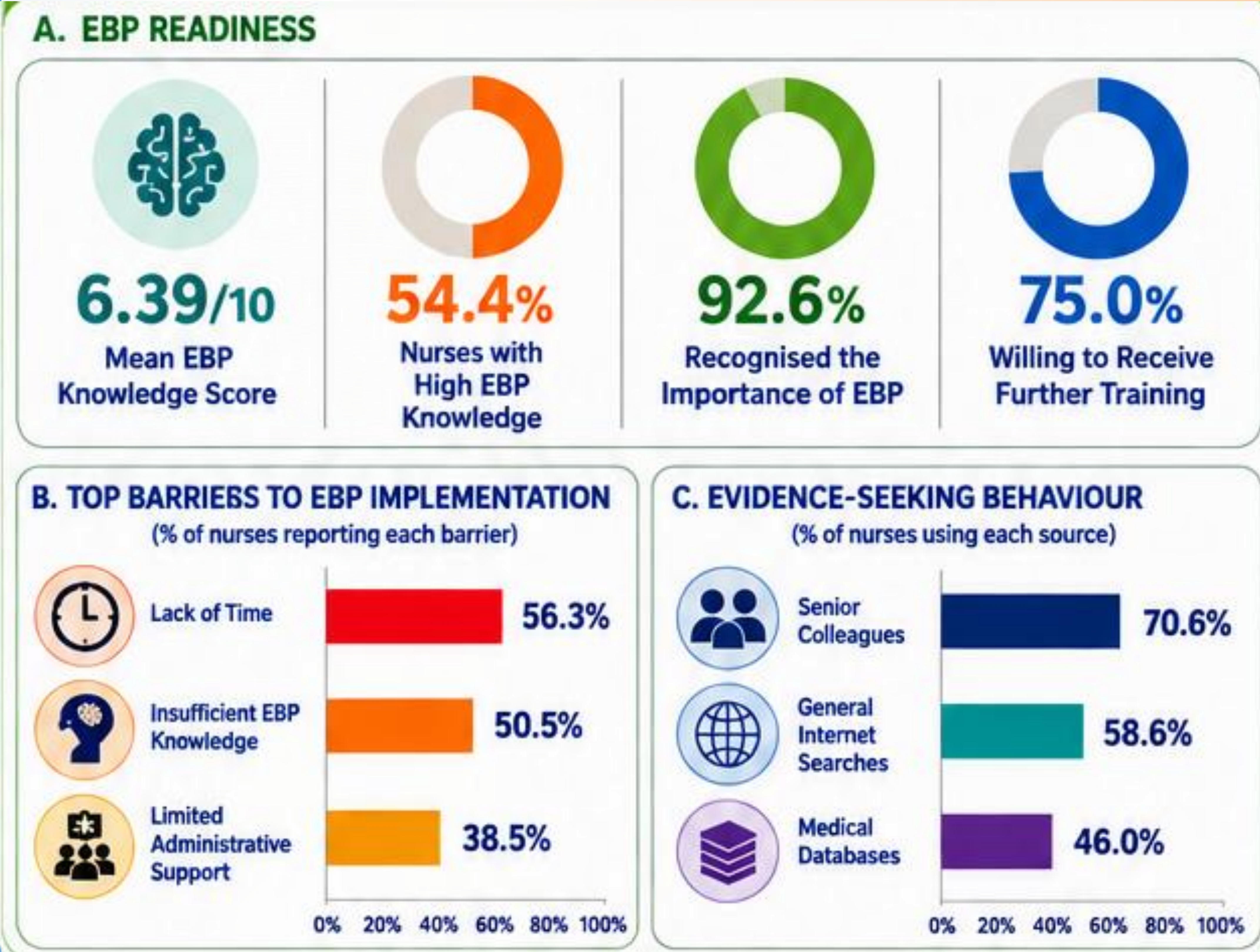
AIM/OBJECTIVE

To assess nurses' readiness to implement evidence-based practice (EBP), identify key barriers to its adoption, and inform quality-improvement initiatives to strengthen safe nursing care for patients with noncommunicable diseases (NCDs).

METHOD

A descriptive cross-sectional study was conducted among 336 registered nurses from 13 clinical departments at Ibri Hospital, Oman. A structured questionnaire assessed EBP knowledge, attitudes, perceived barriers, evidence-seeking behaviours, and clinical practice. Data were analysed using descriptive statistics.

RESULTS



CONCLUSION

Nurses demonstrated positive attitudes towards EBP, but educational and organisational barriers continue to limit its consistent implementation. Strengthening EBP knowledge, access to digital evidence resources, leadership support, and protected learning time can promote evidence-informed decision-making and enhance safe care for patients with noncommunicable diseases.

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Manal

Poster



Non-Communicable Diseases among Clinical Nurses in Oman: Prevalence, Risk Factors, Work Performance, and Lived Experiences

Manal Ibrahim Al-Rahbi¹, Umaima Mahmood Al-Raisi², Sheikha Juma Ibrahim Al-Jadeedi³,
Shinuna Salim Abdullah Al Tuwaijri⁴, Ghosoon Mohammed AlJabri⁵

1. Governance Health Care Center, Ministry of Health, Muscat, Oman

2. National Heart Center, Royal Hospital, Ministry of Health, Muscat, Oman

3. Nursing Department, DGHS North Batinah, Ministry of Health, Oman

4. Quality and Patient Safety, DGHS Muscat, Ministry of Health, Oman

5. Nursing Department, DGHS North Sharqia, Ministry of Health, Oman



Key Message: NCDs affect 65% of MOH nurses in Oman, with shift work, poor sleep, stress, and job dissatisfaction contributing to impaired performance.



1) Introduction

- Non-communicable diseases (NCDs) are chronic conditions influenced by genetic, physiological, environmental, and behavioural factors.
- Globally, NCDs account for about 74% of all deaths.
- In Oman, NCDs account for approximately 83% of all deaths.
- Nurses are especially vulnerable because of rotational shifts, heavy workload, sleep disruption, and psychosocial stress.
- No previous national study has comprehensively examined NCD prevalence and work performance among nurses in Oman.

Research Gap

Research in Oman has focused mainly on stress, burnout, and musculoskeletal disorders. National evidence on the wider burden of NCDs among nurses and their effect on performance has been lacking.



2) Aim / Objectives

- ✓ Determine the prevalence of NCDs among MOH nurses in Oman.
- ✓ Identify occupational, psychosocial, and lifestyle risk factors.
- ✓ Examine the physical and psychological factors impact of NCDs on work performance.
- ✓ Explore nurses' lived experiences managing chronic illness while working.



3) Methods

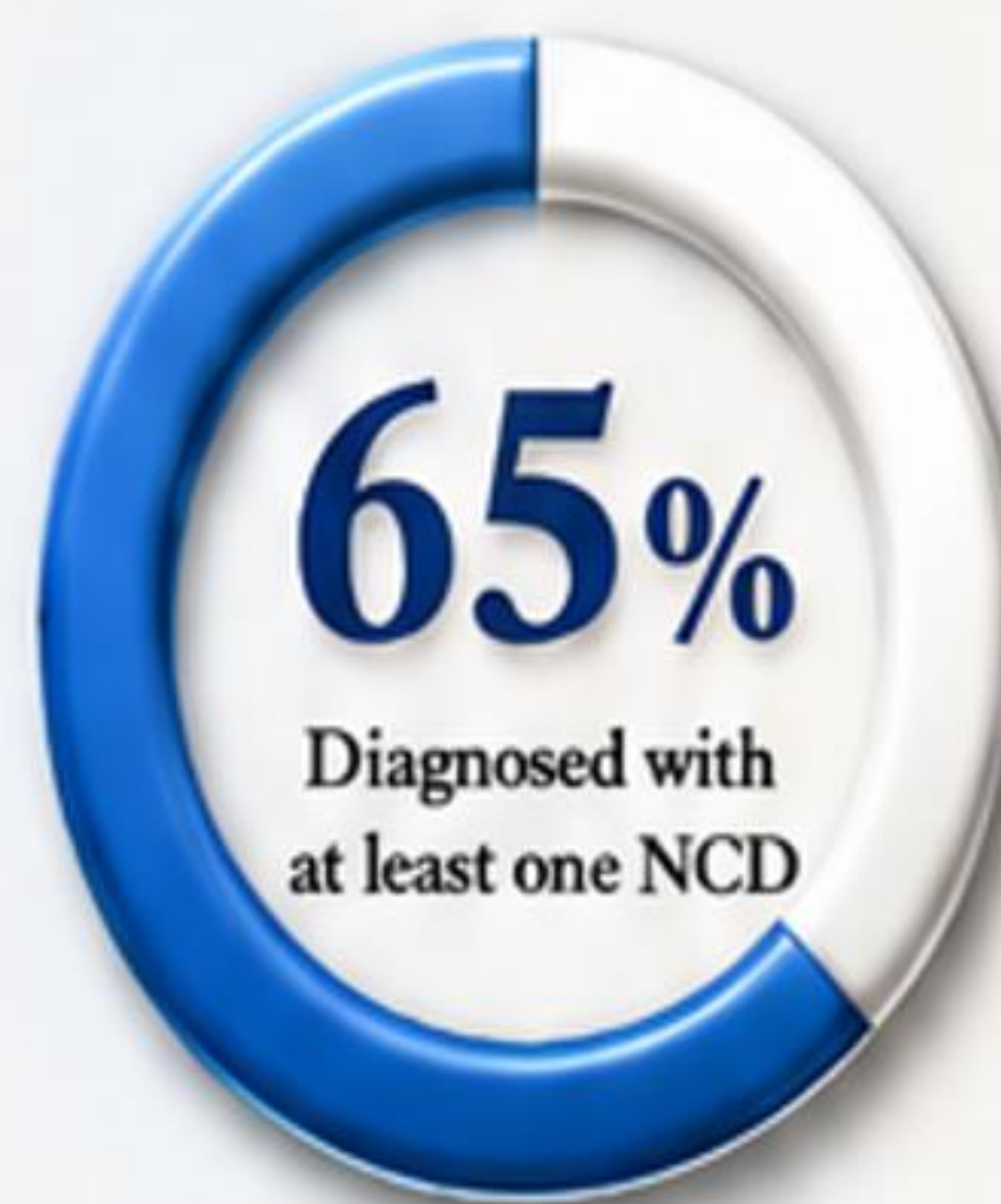
- 1** **EMR extraction:** Adults EMR records for 15,444 MOH nurses were screened using ICD codes
- 2** **WHO 5-SF filtering:** Nurses with NCD diagnoses were identified using the WHO 5-SF framework
- 3** **Survey:** 620 nurses with NCDs completed a structured survey on occupation, psychosocial, and lifestyle factors.
- 4** **Interviews & analysis:** 50 nurses were interviewed; data were analysed using descriptive statistics, chi-square, Spearman correlation, logistic regression, and Braun & Clarke thematic analysis.



Design: Convergent mixed-methods study



4) Results



15,444
Total
MOH nurses



9,983
Nurses with
NCDs

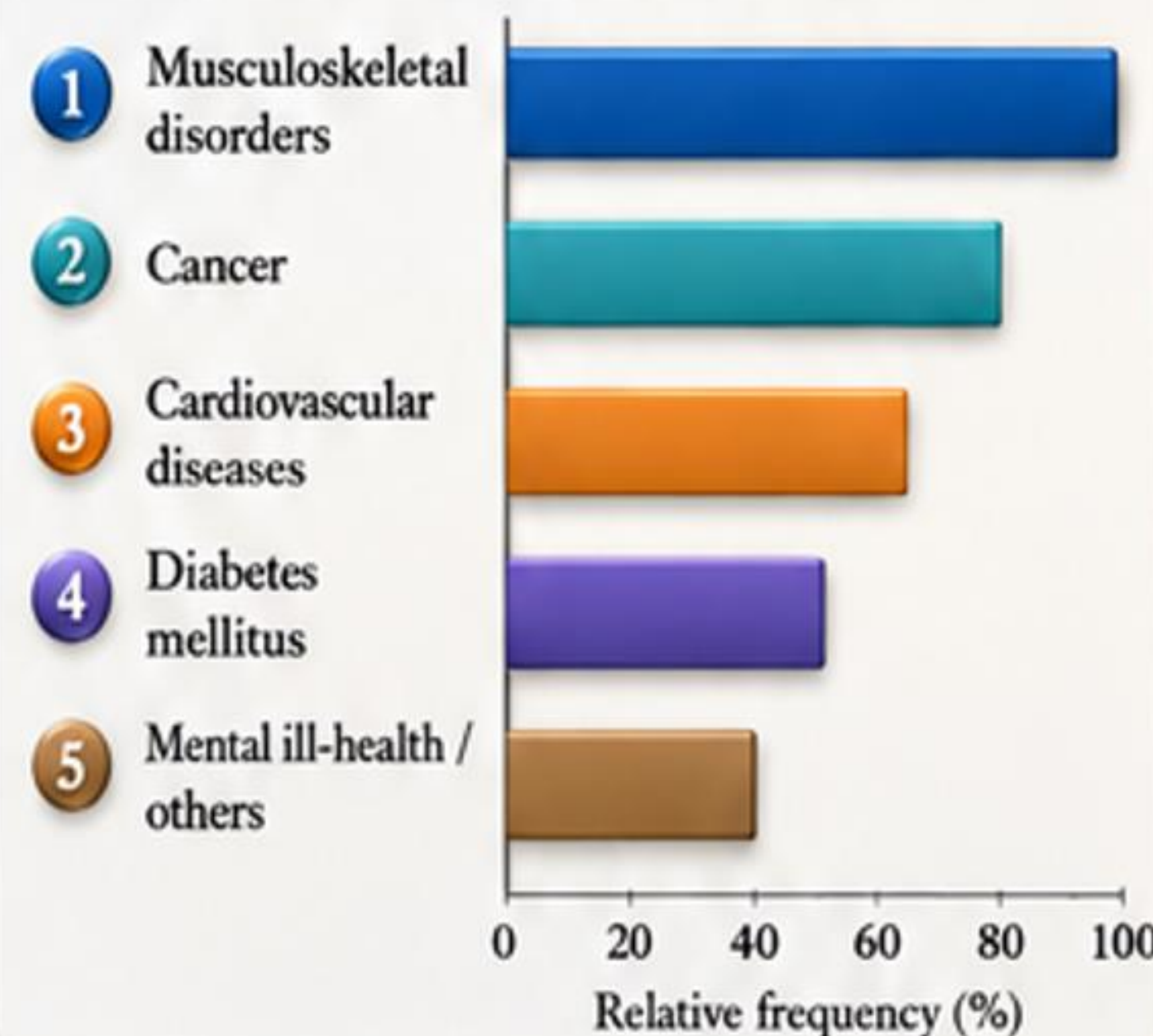


620
Survey
participants

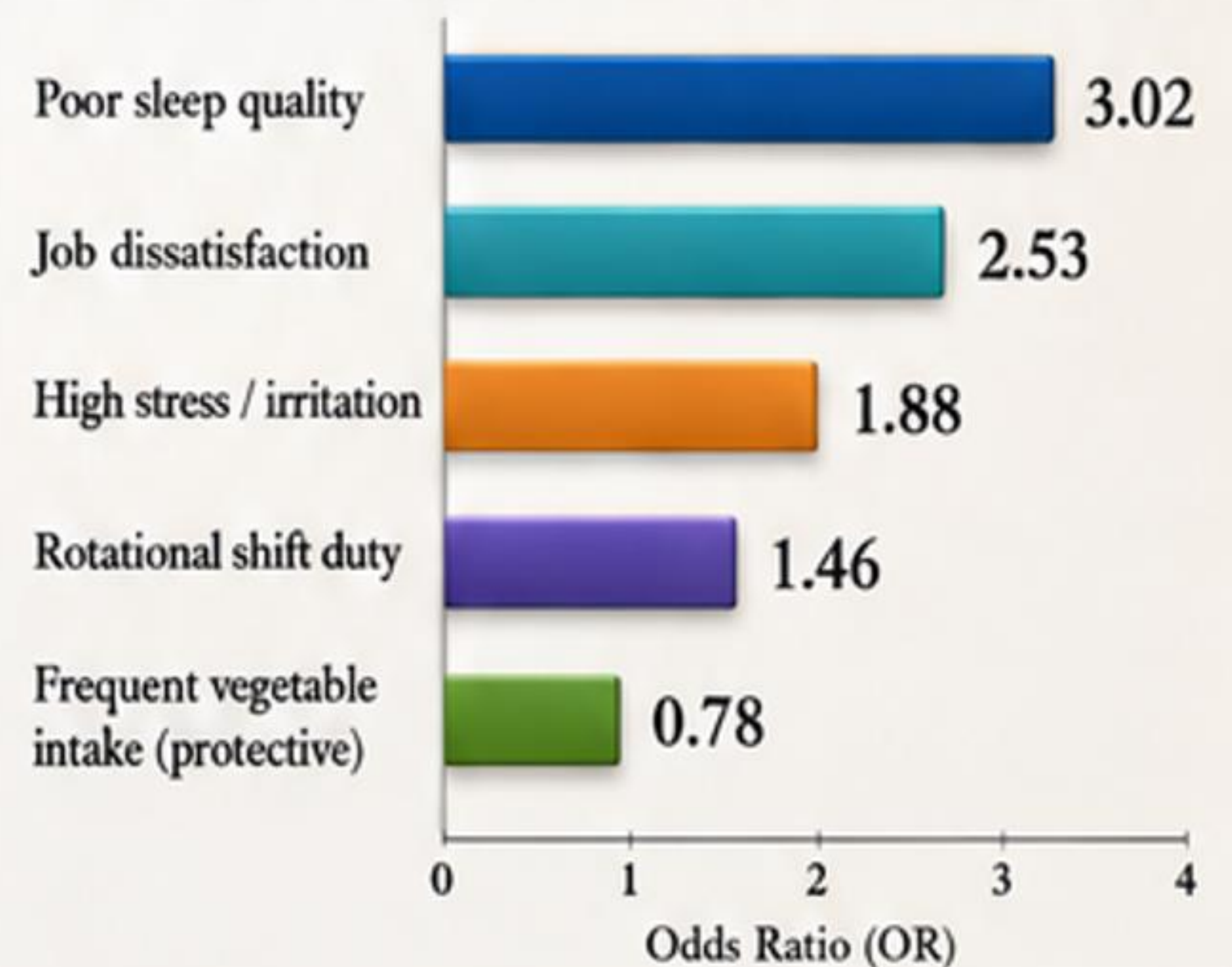


50
Interview
participants

Most common NCD categories



Predictors of impaired work performance (OR)



Spearman correlations showed better job satisfaction ($p = 0.42$) and sleep quality ($p = 0.36$) were associated with better performance, while stress and mental demand were inversely related.



Qualitative Themes from Interviews

- Physical exhaustion and symptom burden
- Emotional distress and psychological strain
- Coping and adaptation strategies
- Workplace and organizational challenges
- Need for stronger organizational support



Interpretation: Psychosocial and organizational factors were stronger determinants of performance than lifestyle behaviours alone.

5) Conclusion & Sustainable Plan

- ✓ NCDs substantially affect nurses' physical wellbeing, psychological health, and occupational productivity.
- ✓ Organizational action is needed to protect nurse wellbeing and patient safety.
- ✓ Priorities include ergonomic forward-rotating shift schedules and structured recovery periods.
- ✓ Implement fatigue management and sleep-hygiene support.
- ✓ Expand psychosocial support and workplace wellness/nutrition programmes.
- ✓ Integrate routine occupational health screening and formal accommodation policies for nurses with chronic illness.



A resilient nursing workforce requires recognizing NCDs as a system-level occupational health priority.



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Dr. Lizy
Poster

Healthy Workforce, Safe Workplace

Employee BMI Screening, Early Identification & Lifestyle Intervention Program

Rationale & Background

NCD Risk Factors: Obesity drives diabetes, hypertension, and cardiovascular diseases in healthcare staff.

Workforce Burden: Contributes directly to fatigue, absenteeism, and burnout.

Patient Safety Link: Staff well-being directly reinforces clinical safety and quality of care.

Program Objectives

≥ 70% Screening Coverage: Hospital-wide BMI & health risk assessment (1st phase : 40% & 2nd Phase 30%)

Risk Stratification: Early identification of overweight and obesity profiles.

Lifestyle Impact: Diet, fitness, and stress support to improve BMI metrics.

METHOD

The initiative follows the **Plan-Do-Study-Act (PDSA)** cycle.

PLAN :Establish baseline health profile, conduct risk categorization, and design tailored intervention workflows.

Do : BMI screening, Employee wellness program (BMI, waist circumference, and blood pressure, Healthy eating and nutrition education, Dietitian consultation, Stress management session, Physical activity and fitness session)

Study: Percentage of employees screened, Employee wellness Program enrolment rate, Employee satisfaction

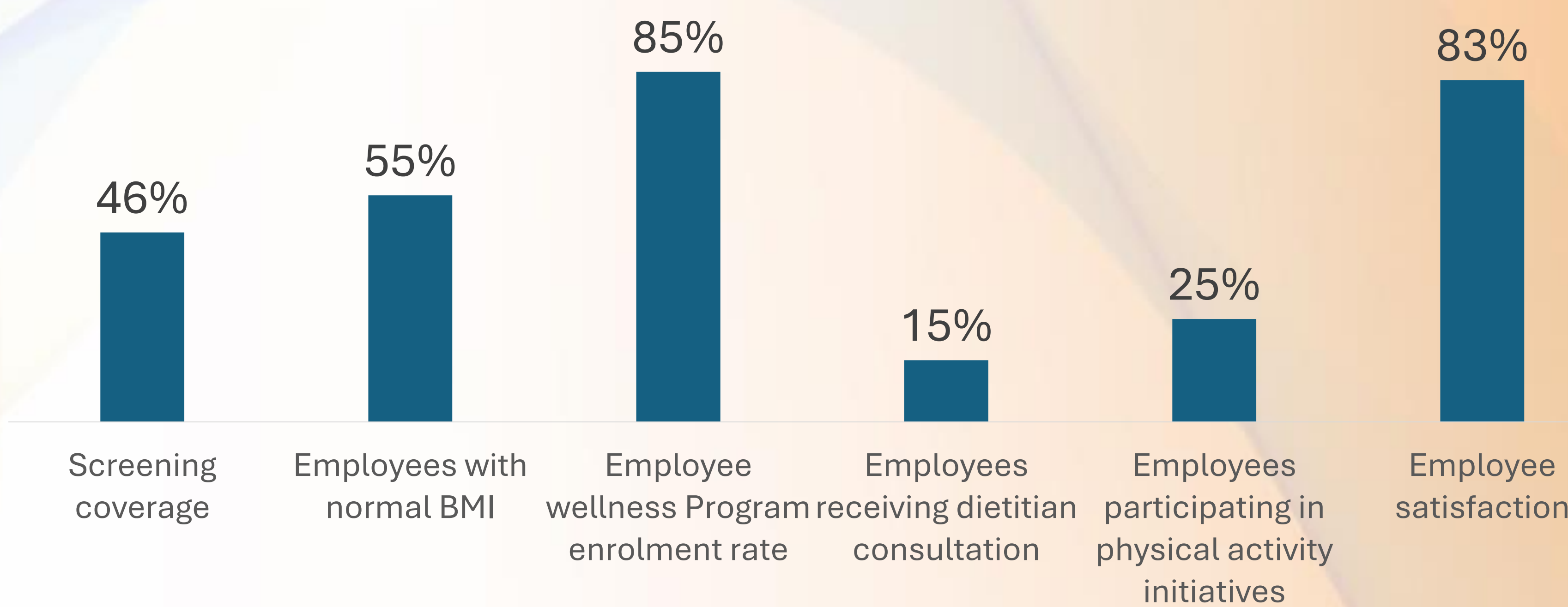
Act :Enhance the program based on participation, outcomes, and employee feedback.

RESULTS

Baseline Assessment

- Hospital-wide employee BMI screening was initiated and 140 employees participated in the 1st phase
- Early Risk Detection: Allowed proactive clinical and dietary referrals, preventing potential burnout and obesity-related health complications.
- High-risk employees were referred for further clinical assessment, including fasting blood glucose and lipid profile where clinically indicated.
- Health education and awareness sessions were conducted
- Employee participation and satisfaction were monitored.

Screening Achievement 40% (Target Met)



CONCLUSION



Workforce Well-being : Early obesity identification reduces long-term NCD risks, mitigates work-related fatigue, and lowers absenteeism among medical and support personnel.



Quality Patient Care : A healthier, energized workforce enhances clinical concentration, minimizes operational errors, and directly supports Oman's patient safety standards



Continued Monitoring and Next 6-Month Action Plan : The program will continue with regular monitoring of employees' health indicators and focused interventions over the next six months.

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Dr. Divey Lizy

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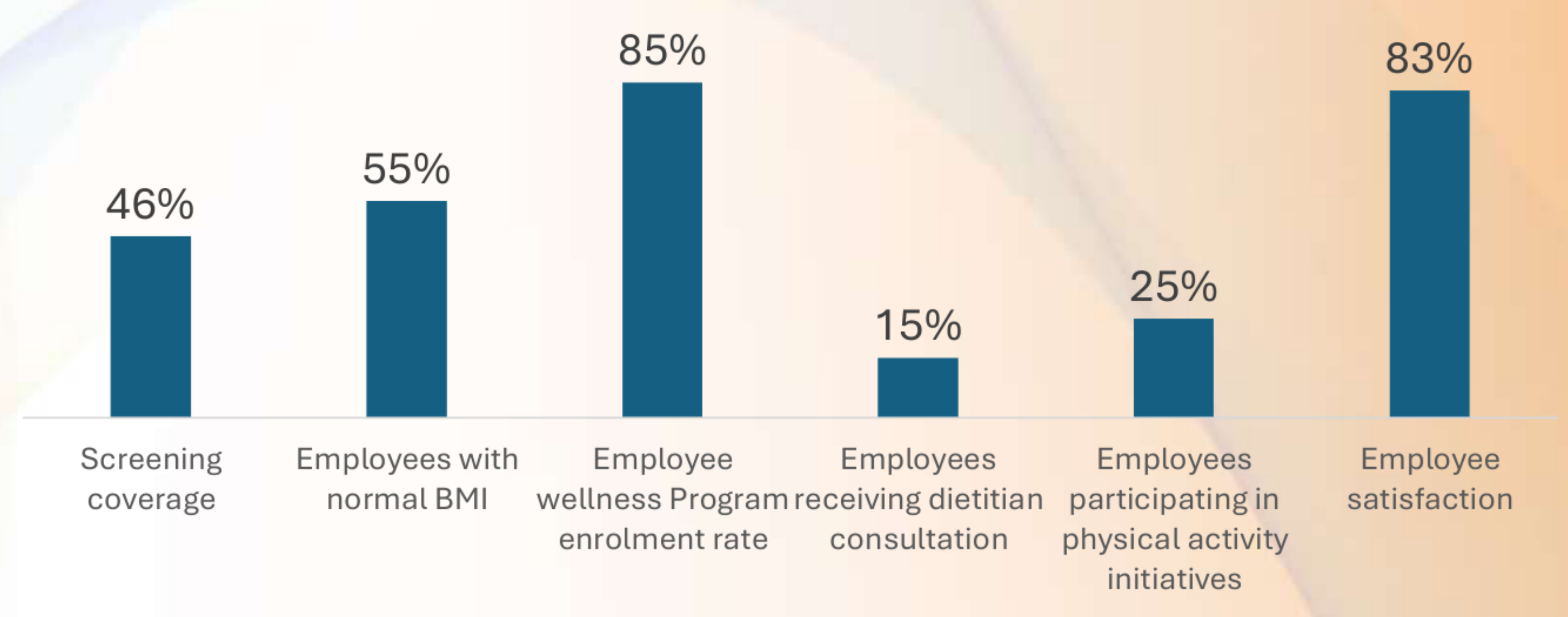
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Workforce Well-being : Early obesity identification reduces long-term NCD risks, mitigates work-related fatigue, and lowers absenteeism among medical and support personnel.



Quality Patient Care : A healthier, energized workforce enhances clinical concentration, minimizes operational errors, and directly supports Oman's patient safety standards



Continued Monitoring and Next 6-Month Action Plan : The program will continue with regular monitoring of employees' health indicators and focused interventions over the next six months.

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Badriya Al Salmani - Ismaiya

Poster

The Impact of WhatsApp Motivational Messages on Improving
Glycemic Control and Follow-up Among Patients with Type 2 Diabetes Mellitus
A Quality Improvement Initiative at Ismaiya Health Center, Oman

INTRODUCTION

Type 2 Diabetes Mellitus is a major noncommunicable disease that requires continuous follow-up and active patient engagement to prevent complications and improve patient safety. Missed appointments and poor adherence to lifestyle recommendations contribute to inadequate glycemic control.

Digital health tools, such as WhatsApp, provide a simple and effective way to deliver education, reminders, and motivational messages, especially in primary health care settings.



AIM/OBJECTIVE



To improve annual diabetes assessment coverage and increase the proportion of patients achieving HbA1c below 7% among patients with Type 2 Diabetes Mellitus at Ismaiya Health Center.

METHOD

A quality improvement initiative was conducted from July to December 2025. Adult patients with Type 2 Diabetes Mellitus received structured motivational and educational WhatsApp messages, including:

 Appointment reminders

 Medication adherence support

 Healthy lifestyle advice

 Physical activity encouragement

 Blood glucose monitoring reminders

 Motivational health messages

Program effectiveness was evaluated using Ministry of Health diabetes KPI indicators by comparing 2024 baseline performance with 2025 outcomes.

RESULTS

KPI 1

Percentage of DM Patients Assessed Annually

Indicator	2024 (Baseline)	2025 (After Initiative)
Target (Number)	104	125
% of Assessed DM Clients	87%	95%



Annual diabetes assessment coverage improved from 87% in 2024 to 95% in 2025 (125 patients), exceeding the Governorate performance of 85%.

KPI 2

Percentage of DM their latest HBA1C < 7

Indicator	2024 (Baseline)	2025 (After Initiative)
Total (Patients)	57	125
%	27%	39%



The proportion of patients achieving HbA1c <7% improved from 27% in 2024 to 39% in 2025, higher than the Governorate average (37%).

CONCLUSION

WhatsApp motivational messaging proved to be a simple, low-cost, and effective digital health intervention that improved diabetes follow-up, glycemic control, and patient engagement. The initiative contributed to safer chronic disease management and supports integrating digital communication into routine primary health care services.



Better Care
Healthier Tomorrow

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Samiyaa AlGhannami

Poster

Development, Implementation, and Early Evaluation of the SAFEGUARD–NCD Model: A Systems-Based Approach to Navigate, Coordinate, and Defend Safe Care Across the Continuum for People Living with Noncommunicable Diseases

S. S. Al Ghannami, M. F. S. Latif

Quality and Patient Safety (QPS) Department, Shifa Hospital, Muscat, Sultanate of Oman

Presenting author: Sumaiya S. Al Ghannami, Head of Quality and Patient Safety • Co-author: Dr. Maria Fahmy Saad Latif, Quality and Patient Safety Specialist

INTRODUCTION

People living with noncommunicable diseases (NCDs) require continuous, multi-setting care, creating recurring points of vulnerability to diagnostic error, medication-related harm, fragmented care transitions, and preventable deterioration. Existing safety initiatives often address these risks in isolation rather than as an integrated system.

AIM/OBJECTIVE

This project aimed to design, implement, and conduct an early evaluation of the SAFEGUARD-NCD Model at Shifa Hospital, a systems-based framework to Navigate, Coordinate, and Defend safe care across the NCD continuum.

RESULTS

Early implementation demonstrated feasibility of embedding all nine SAFEGUARD domains into routine safety operations. Between June and August 2026, the Unified Risk Intelligence layer captured 47 occurrences through the hospital-wide OVR system, with monthly volume rising 1 to 15 to 31 and 51% (24/47) submitted anonymously — evidence of a strengthening no-blame safety culture. Risk stratification recorded zero sentinel and zero extreme-risk events, classifying 23 occurrences as high risk; 12 occurrences triggered a formal CAPA, all open, on-track, zero overdue. Governance and Leadership was operationalized through 3 CEO-chaired committee sessions (2 QPS Committee plus the inaugural MMC meeting), each achieving quorum, logging 36 action items across five departments, with 9 completed and none overdue. These early indicators confirm improved multidisciplinary coordination and strengthening risk governance, supporting readiness for structured scale-up. Patient engagement was tracked via monthly Cardiology patient-experience surveys (28 responses, Jun–Aug): recommendation scores of 9.9, 9.08 and 9.6/10, with NPS improving from +69.2 (Jul) to +87.5 (Aug) and 100% of August respondents positive across all five core questions.

METHOD

The model operationalizes nine safety domains — Safe Diagnosis, Appropriate Evidence-Based Care, Failure Prevention, Engagement, Governance and Leadership, Unified Risk Intelligence, Analytics for Continuous Improvement, Resilient Healthcare Systems, and Digital Innovation — under three guiding principles: Navigate, Coordinate, and Defend. Implementation mapped existing infrastructure onto these domains: the hospital-wide OVR incident reporting system, Investigation and CAPA Registers, and Risk Register served as Unified Risk Intelligence and Failure Prevention; the QPS Committee, chaired by the CEO, provided Governance and Leadership; and an Executive Dashboard with harm-scale coding and automated RCA-timeline tracking supported Analytics for Continuous Improvement. New Hypertension (SH-CAR-CPW-001) and Heart Failure (SH-CAR-CPW-002) pathways were developed with Cardiology to close gaps in Safe Diagnosis and Evidence-Based Care, alongside patient engagement piloted via monthly Cardiology experience surveys (Jun–Aug 2026).

CONCLUSION

The SAFEGUARD–NCD Model provides a coherent, systems-based framework unifying clinical, governance, risk-intelligence, and digital dimensions to reduce preventable harm across the NCD continuum. Sustained adoption is recommended through formalizing SAFEGUARD-NCD as a governed QPS policy, continued Committee oversight, expansion across additional NCD service lines, and ongoing dashboard-driven monitoring with audit and stakeholder feedback.

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Intisar Al Bahri

Poster

SMART Asthma Discharge Bag

A Safe Transition Home Initiative to Ensure Safe Discharge and Reduce Pediatric Asthma Readmissions

INTRODUCTION

Pediatric asthma readmissions may be influenced by gaps in discharge preparation, incorrect inhaler technique, limited caregiver understanding, medication-related issues, and inadequate follow-up. A safe transition from hospital to home requires standardized education, demonstrated caregiver competency, and clear follow-up planning.



AIM/OBJECTIVE

- **Ensure Safe Discharge** by using the SMART Asthma Discharge Bag.
- **Reduce preventable asthma-related readmissions** and asthma related ED revisits.
- **Improve caregiver competency** in inhaler and spacer technique using Teach-Back before discharge.
- **Improve caregiver confidence and preparedness** in home asthma management.
- **Improve medication safety** through medication reconciliation and clear caregiver education.
- **Improve Staff Compliance** with standardized discharge bundle checklist.

METHOD

- **Baseline Assessment** :Identified discharge gaps and readmission trends .
- **Multidisciplinary Team** :Nurses ,physicians ,and pharmacists collaborated .
- **CNE Teaching** :Trained staff on standardized asthma discharge care .
- **SMART Asthma Discharge Bag** :Provided action plan ,medication guidance ,education, QR resources ,and follow-up .
- **Discharge Bundle Checklist** :Standardized safe-discharge requirements .
- **Teach-Back Competency** :Verified caregiver inhaler and spacer technique .
- **Caregiver Satisfaction Survey** :Measured confidence , preparedness ,and satisfaction .
- **Asthma KPI Dashboard** :Monitored compliance ,competency , readmissions ,and ED revisits .
- **Audit** :Monitored outcomes and sustained improvement .

RESULTS

2024

Pre-intervention baseline

2025

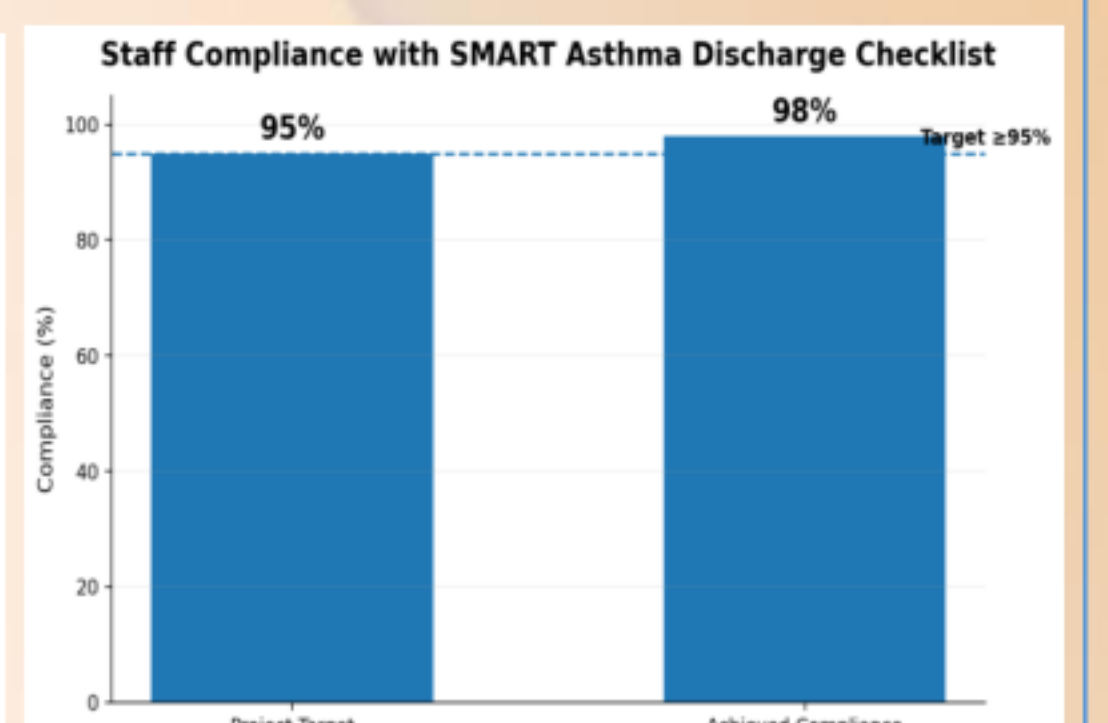
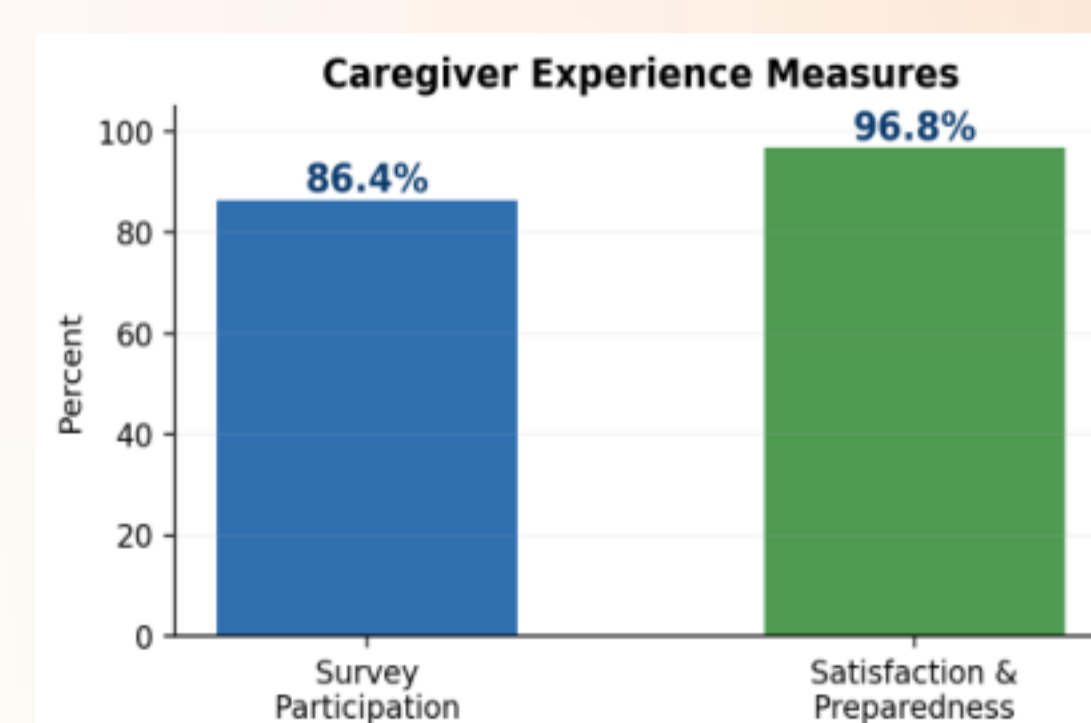
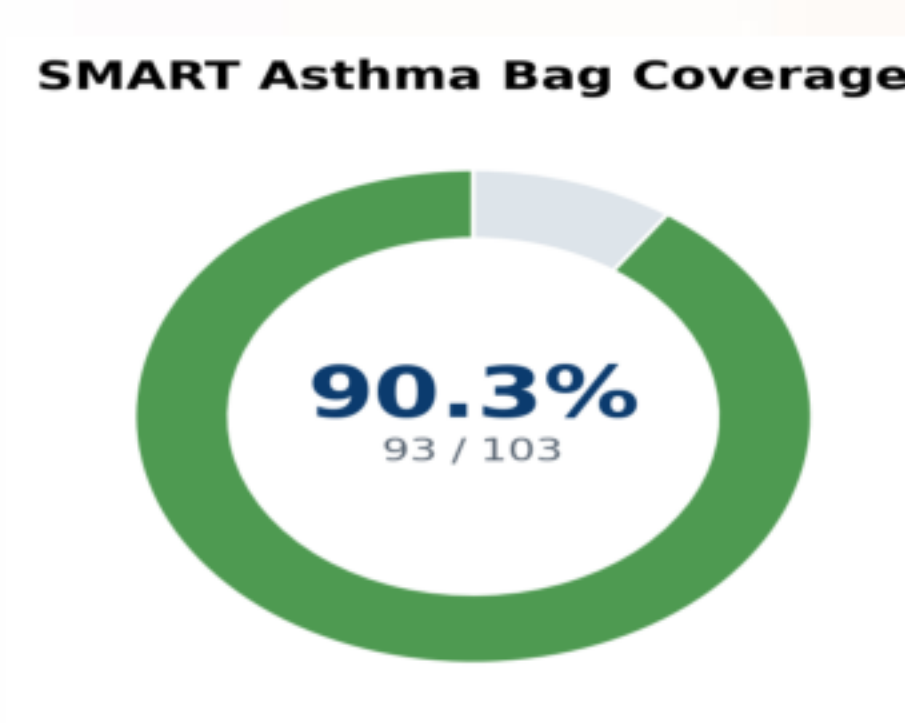
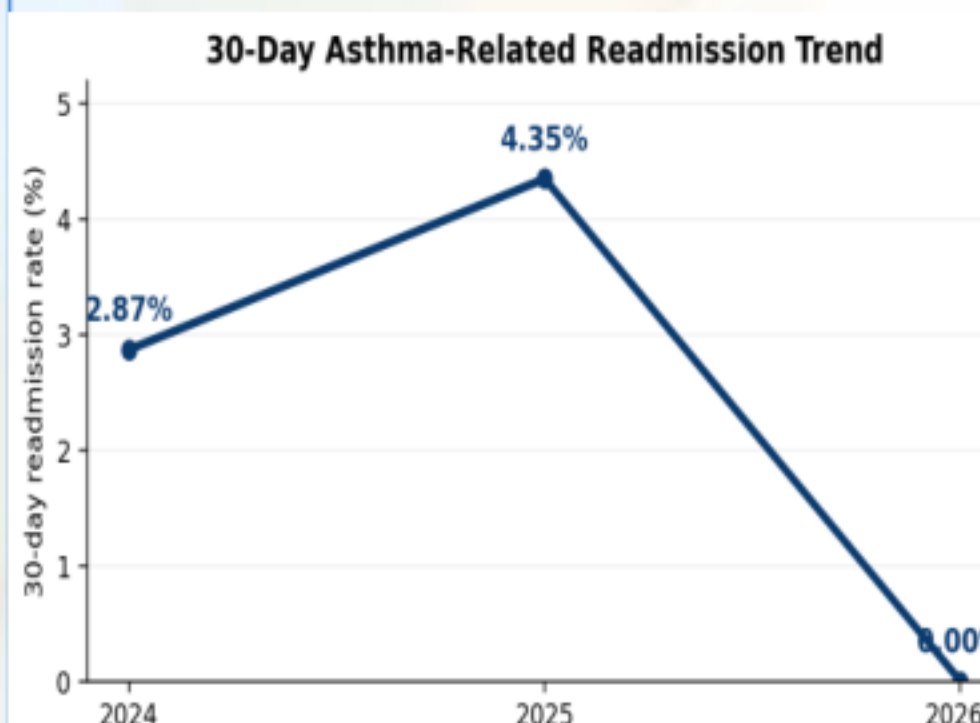
Pre-intervention + implementation
started Nov 2025

2026

Post-implementation monitoring

RESULTS

- 1. Asthma Case Total:** A total of **484** pediatric asthma cases were recorded across the three-year review: 174 in 2024, 207 in 2025, and 103 in the available 2026 dataset.
 - 2. Implementation:** The SMART Asthma Discharge Bag initiative commenced in November 2025.
 - 3. 30-Day Asthma-Related Readmissions:** Readmissions within 30 days were 5/174 (2.87%) in 2024, 9/207 (4.35%) in 2025, and **0/103 (0.00%)** in the available 2026 post-implementation dataset.
 - 4. Observed Improvement:** Compared with 2025, the observed readmission rate decreased from 4.35% to 0.00% in 2026 — an absolute reduction of 4.35 percentage points and a 100% relative reduction in the observed rate.
 - 5. SMART Asthma Bag Coverage:** 93 of 103 eligible/reviewed pediatric asthma cases received the SMART Asthma Discharge Bag (90.3%).
 - 6. Caregiver Teach-Back Competency:** All **93 caregivers (100%)** successfully demonstrated correct inhaler and spacer technique before discharge. **54 (58.1%)** achieved competency on the first attempt, **28 (30.1%)** on the second attempt, and **11 (11.8%)** on the third attempt following additional coaching and reassessment.
 - 7. Staff Compliance:** Staff compliance with the SMART Asthma Discharge Checklist was 98%, exceeding the project target of ≥95%.
 - 8. Caregiver / Family Satisfaction :** A total of 89 out of 103 caregivers (86.4%) participated in the survey. The mean satisfaction and discharge preparedness score was 4.84/5 (96.8%), indicating a very high level of caregiver satisfaction and preparedness for safe discharge.
- #### ANALYSIS
- Safety Gap:** 30-day readmissions increased from **2.87% (2024) to 4.35% (2025)**, identifying a need for safer, standardized asthma discharge.
- SMART Intervention:** A structured Safe Transition Home pathway was implemented in **November 2025**, integrating education, Teach-Back, medication safety, action planning, follow-up, and KPI monitoring.
- Clinical Impact:** In 2026, **zero 30-day readmissions (0/103)** were observed, representing a **100% relative reduction** compared with 2025.
- Process Reliability:** SMART Bag coverage reached **90.3%**, while staff compliance reached **98%**, exceeding the ≥95% target.
- Family Preparedness:** Caregiver satisfaction and preparedness reached **96.8% (4.84/5)**, supporting confidence in safe asthma management at home.



CONCLUSION

The **SMART Asthma Discharge Bag** established a structured and reliable **Safe Transition Home** pathway for pediatric asthma patients. Following implementation, the available 2026 data showed **zero 30-day readmissions**, with **100% caregiver Teach-Back competency**, **98% staff compliance**, and **high caregiver satisfaction and preparedness (96.8%)**, supporting safer and more standardized discharge practices.

Recommendation:

- **Sustain and standardize** the SMART Asthma Discharge Bag as part of routine pediatric asthma discharge.
- Maintain **100% caregiver Teach-Back competency before discharge** and continue staff compliance audits.
- Continue monitoring **30-day readmissions, SMART Bag coverage, caregiver satisfaction, and staff compliance** through the Asthma KPI Dashboard.
- Consider **expanding the initiative** to other pediatric units after continued outcome monitoring confirms sustained effectiveness.

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- **Agency for Healthcare Research and Quality – Teach-Back Method** — Caregiver education and competency .
- **National Heart ,Lung ,and Blood Institute / National Institutes of Health – Asthma Action Plan** — Written asthma action plan and family education