

Middle East Forum on Quality and Safety in Healthcare **2024**



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Hospital-Based Preventive Medicine Model – International Best Practice & Progress in Qatar

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- There is NO Conflict of Interest
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Rationale of developing Preventive Medicine in HMC

- HMC, as a modern employer and healthcare provider, must fulfill its obligation in the realization of Preventive Medicine (PM) measures towards its workforce.
- Changing public expectations and increasing prevalence of lifestyle-related and chronic diseases required a wider scope and systematic delivery of preventive health care services at HMC.
- PM is an integrative approach, where key elements such as employee's individual health, risk reduction at work, workplace safety and aspects of occupational and environmental medicine are united.



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Rationale of developing Preventive Medicine in HMC

Baseline situational analysis in HMC showed that few preventive care services and initiatives were already ongoing across HMC facilities, however, these services were scattered among various departments. The observed gaps were broadly identified as:

- Missing transparent and unified organizational structure for coordination, development and quality assurance of PM service delivery, related education, and research on the corporate level.
- Lack of essential PM services at the workplace.
- Lack of local and corporate preventive medicine service policies.



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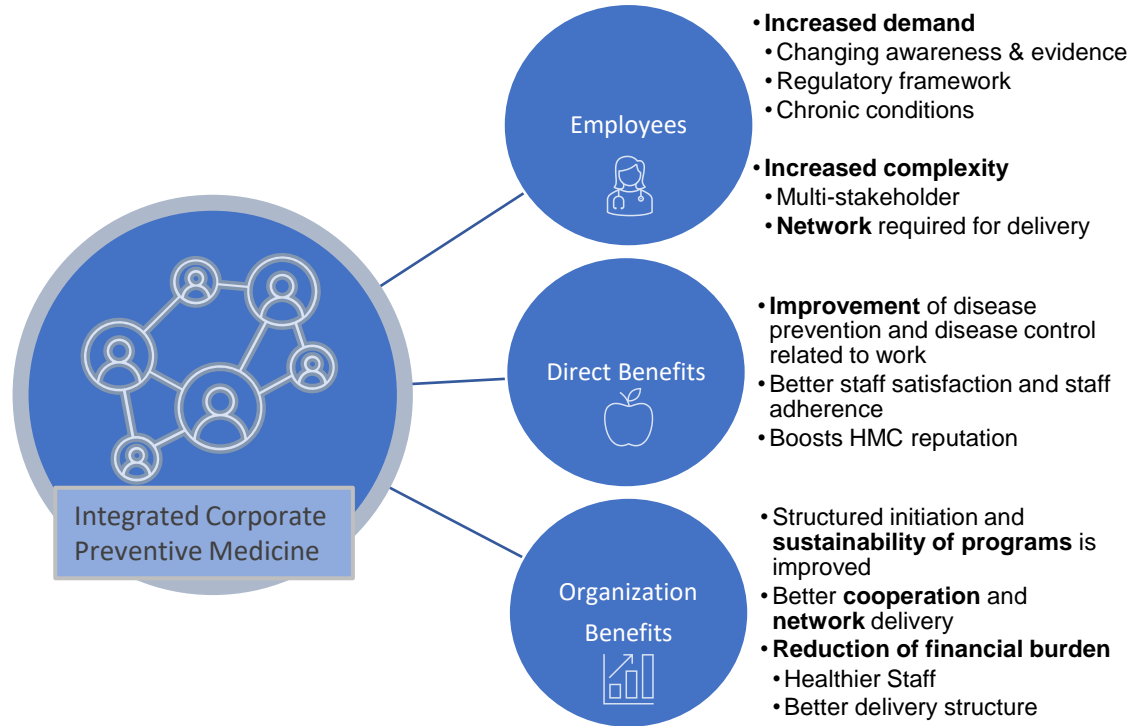


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Hospital-Based PM Model at HMC

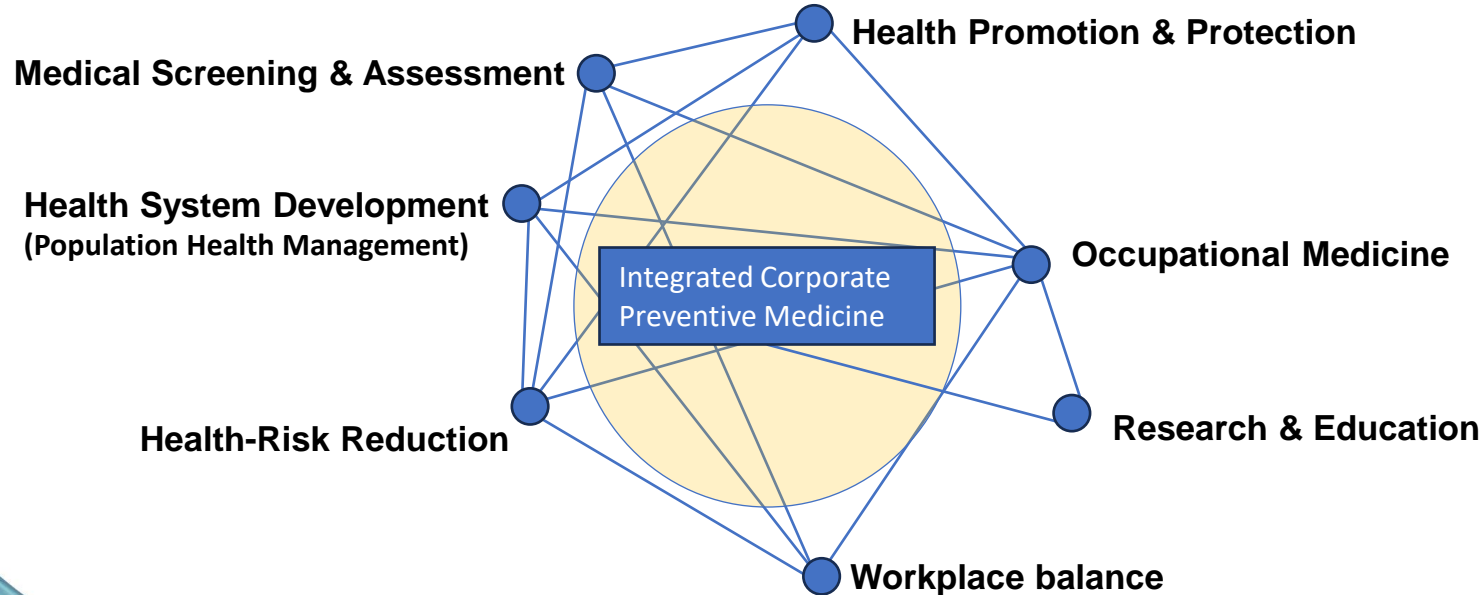


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Scope for Established Corporate Preventive Medicine - HMC

- ✓ Facilitating better connection of the existing areas and creation of new areas at HMC and driving academic and interprofessional work



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What are the Benefits of the PM Initiative ?

Healthy Employees:

- Promote healthy lifestyle & overall health
- Decrease health-risk factors & burden of disease



Benefits to HMC:

- Decrease employee absenteeism
- Optimum resource utilization
- Potential insurance impact (reward/benefit)



Reputation:

- HMC as better employer and attractor on healthcare market
- HMC as driver for development on national level



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What are the Benefits of the PM-HMC Initiative ?

- **Cost Effectiveness**

A meta-analysis* found that:

- Medical costs fall by about \$3.27 for every \$1 spent on preventive programs.
- Absenteeism costs fall by about \$2.73 for every \$1 spent.
- Improved health and reduced turnover of workers.
- Community prevention programs could save \$16 billion annually within five years – a return of \$5.60 per \$1 invested.

- **Return on investment** suggests that the wider adoption of preventive care programs could prove beneficial for budgets and productivity as well as health outcomes.

*Baicker K, Cutler D, Song Z. Workplace wellness programs can generate savings. Health Aff (Millwood). 2010;29(2):304-311. doi:10.1377/hlthaff.2009.0626



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Official Launch of Preventive Medicine at HMC

- The Hospital-Based Preventive Medicine Division was officially launched under the Corporate Department of Medicine in 2023.
- This division is dedicated to promoting health and reducing health risks, through proactive and preventive measures that could detect predisposition to certain diseases or very early stages of diseases.
- We recognize the significance of preventive medicine in enhancing the overall health of our community and are committed to delivering top-notch, evidence-based services to our diverse population.
- We aim to provide comprehensive, integrated, preventive and therapeutic approaches by maintaining a healthy lifestyle and reducing the burden of diseases and their risk factors, which aligns with the National Health Strategy in Qatar.



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Objectives of Preventive Medicine at HMC

- ❑ To screen all HMC employees for disease risk factors such as *smoking, obesity, lack of physical activity, sleep disturbance, lack of social connectedness, anxiety, stress, depression and unhealthy eating habits*.
- ❑ To create a structured pathway for health risk assessment and timely follow-up.
- ❑ Early detection of work-related disease in apparently healthy individuals by providing ongoing screening programs to monitor for any health deterioration due to damaging exposures at workplace.



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Objectives of Preventive Medicine at HMC

- ❑ To provide health promotion through evidence-based lifestyle and behavioral interventions to prevent, treat and often reverse chronic diseases .
- ❑ Conduct epidemiological studies, medical surveillance and research across Preventive Medicine programs.
- ❑ Enhance the overall quality of life of people.

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Scope of Preventive Medicine at HMC

According to review of studies and experiences of other countries in this field, the preventive interventions provided in hospitals are grouped into:

- **Clinical preventive services:**

Interventions with medical approach	Interventions with behavioural approach
Recognizing and preventing risk factors (health screening, immunization, and surveillance).	Modifying lifestyle risk factors (smoking, physical activity, alcohol, diet and psychosocial support).

- **Non-Clinical preventive services:**

Policies, programs and services that aim to improve the health of the entire population or specific subpopulations. *e.g: population health campaigns.*



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Preventive Medicine Clinics at HMC

- Preventive Medicine Clinics
- Health Risk Reduction Clinics (Lifestyle Medicine)
- Occupational Medicine Clinics
- Pediatric Preventive Medicine Clinics
- Geriatric Wellness Clinics
- Dietitian Clinics
- Health Educator Clinics
- Ad-Hoc MDT Clinics

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Deployment schedule for PM services across HMC

Phase I

Future phases: Phase II,III,IV

Initiation of PMD (6 months)

I



- Set-up of **Executive Office** Structure
- Set-up of **Advisory Board** Structure

Performance Indicator & Tasks:

- Governance
- Policies
- Work-groups
- Strategic plan
- Working plan

Transformation of PM (2 years)

II

Development of PM (2 years)

III

Sustainability (∞)

IV

Corporate Preventive Medicine Department

Existing Services

Continuation of Current services:

- Public Health Accreditation
- Human Subject Research Program- HGH JCI
- Occupational health and safety (collaboration)
- Pediatric Preventive Health care clinic (Obesity clinic)
- Geriatric wellness clinic (collaboration)

Expansion of Current service:

- Health screening & risk reduction (Lifestyle medicine)
- Pre-employment Fitness to Work
- Periodic Fitness to Work Assessment
- Occupational medicine clinic
- Adult Immunization (collaboration)
- Health Promotion Related Activities (collaboration)
- Training and education (collaboration)

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Data-Driven Outcome



PM-Health Risk Reduction Clinic

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Table 1: Health-related characteristics of patients attending Health Risk Reduction Clinic

	Frequency (n=73)	Percentage (%)
Gender		
Male	27	(30.1)
Female	46	(60.9)
Cholesterol		
High	11	(15.0)
Borderline	16	(22.0)
Desirable	29	(40.0)
Missing	17	(23.0)
Diabetes		
Diabetes	13	(17.8)
Pre-diabetes	37	(50.7)
Not diabetic	23	(31.5)
Weight		
Underweight	2	(2.8)
Normal	18	(24.6)
Overweight	22	(30.1)
Obese	27	(38)
Missing	4	(4.5)



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Table 1: Health-related characteristics of patients attending Health Risk Reduction Clinic

	Frequency (n=73)	Percentage (%)
Physical Activity		
Active	36	(49.3)
Not active	34	(46.6)
Missing	3	(4.1)
Annual influenzas vaccine		
Received	37	(50.7)
Defaulters	36	(49.3)
Hypertension		
No	60	(82.2)
Yes	13	(16.1)
Missing	2	(2.7)



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Table 2: Significant improvement in health parameter of patients attending Health Risk Reduction Clinic

	Mean of first visit	Mean follow-up	P-value
Cholesterol	5.2	5.1	<0.0001
Triglyceride	1.6	1.5	<0.0001
LDL	3.3	3.2	<0.0001
HDL	1.2	1.3	<0.0001
HBA1C	6	5.8	<0.0001
Vitamin D level	24	27	<0.0001
Vitamin B12	320	338	<0.0001
Fat percentage	37.5	36	<0.0001
Visceral fat	10.8	10.4	<0.0001
Weight	82	80	<0.0001

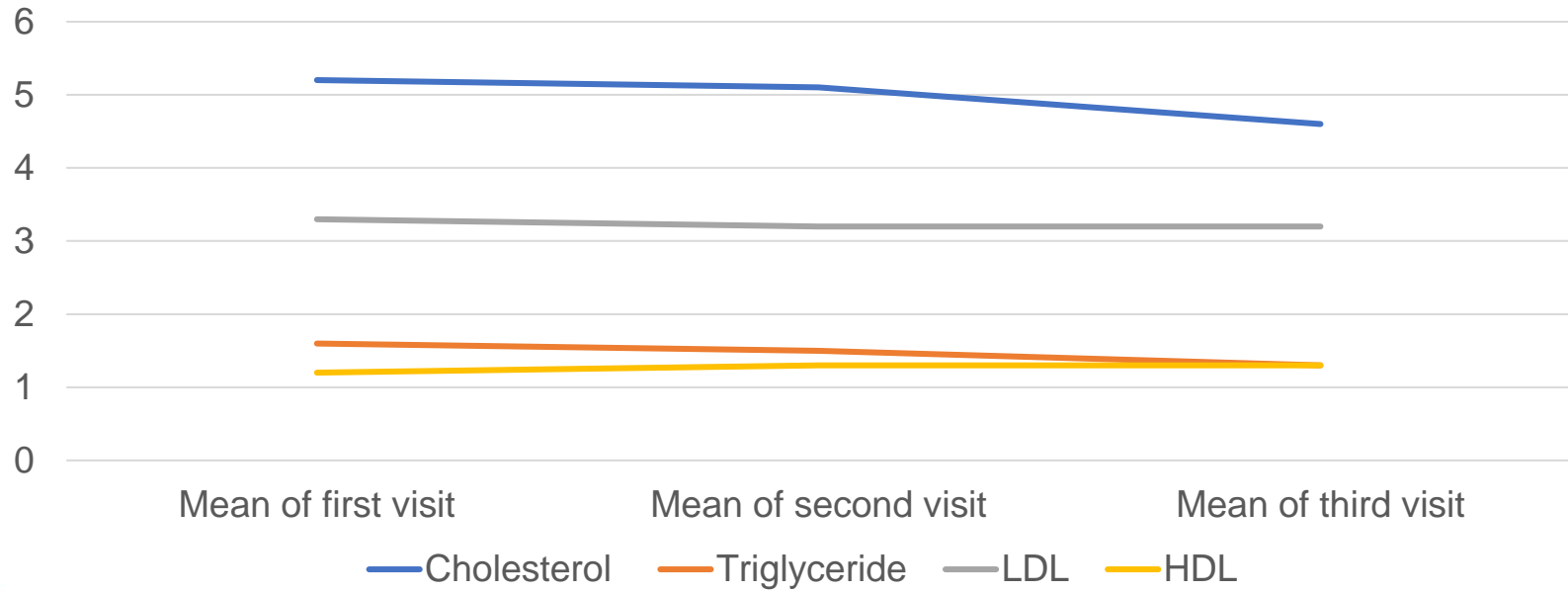


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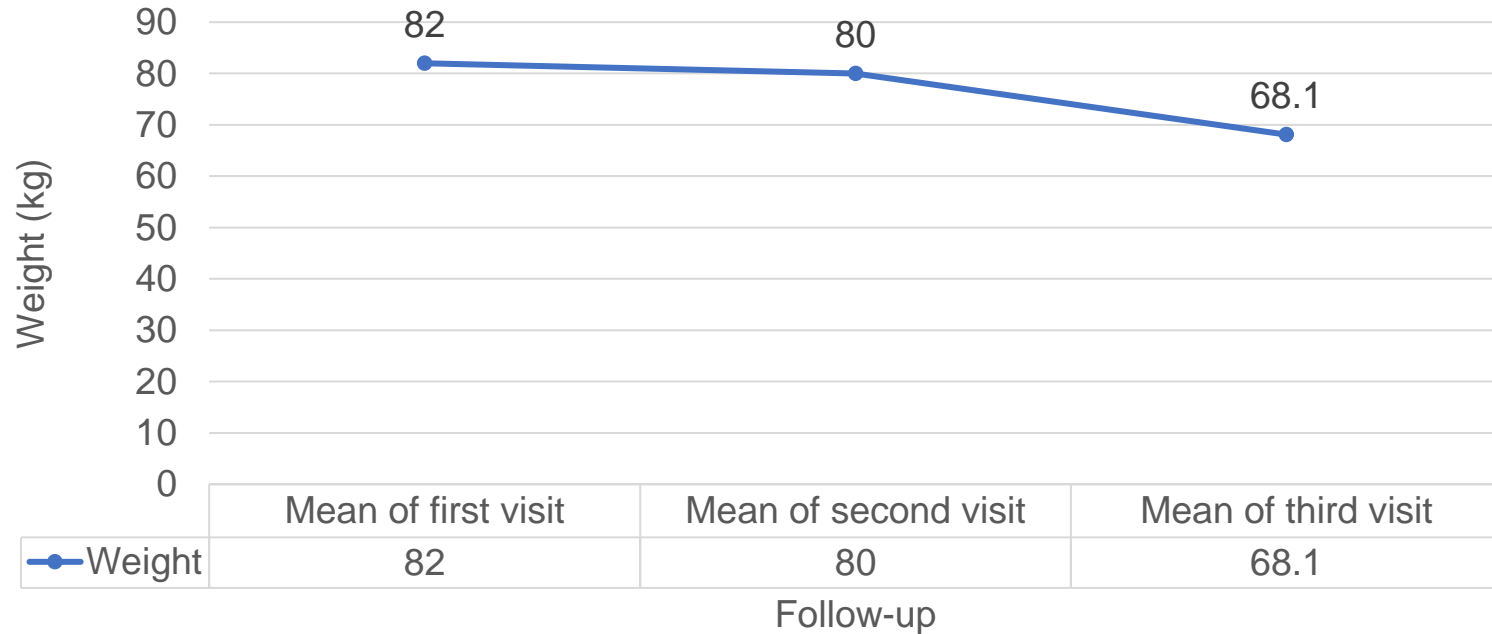
Figure 1: Improvement in lipid profile among employees attending Health Risk Reduction Clinic



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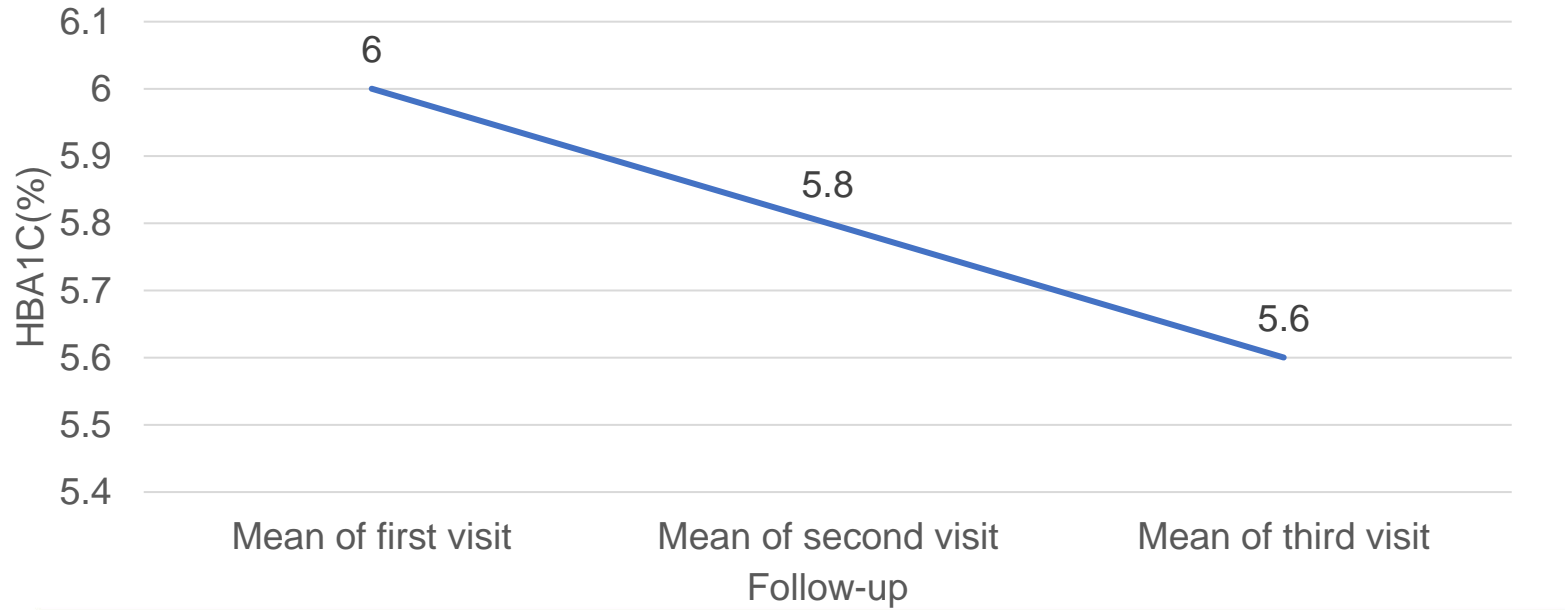
Figure 2: Weight Reduction among employees attending Health Risk Reduction Clinic



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Figure 3 : Improvement HBA1C among employees attending Health Risk Reduction Clinic



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Success Stories from our service

Patient Background:

- A 45-year-old Female, has a history of obesity. She has struggled with weight management for most of her life and has tried various diets and exercise routines without long-term success. Her BMI is currently 30, classifying her as obese. She often resorts to fast food and processed meals for convenience, which contributes to her weight gain

Medical History:

- She has been diagnosed with hypertension, hyperlipidemia and type 2 diabetes, both of which are commonly associated with obesity. She also experiences joint pain and fatigue, which further impact her quality of life. Her blood work shows elevated cholesterol TG and HbA1C% levels .

Treatment Plan:

- She is on medication for hypertension and diabetes, as well as regular monitoring of her blood sugar levels. She has been advised to follow a balanced diet and increase her physical activity to help manage her weight and improve her overall health.

Goals:

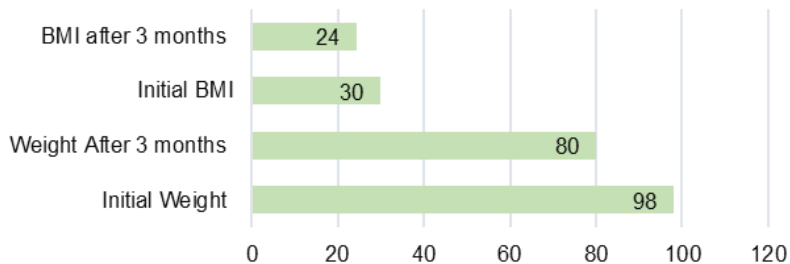
- The long-term goals for her include achieving a sustainable weight loss of 10-20% of her current body weight over the next year through lifestyle modifications. This can significantly improve her blood pressure, blood sugar control, cholesterol levels, and overall well-being.

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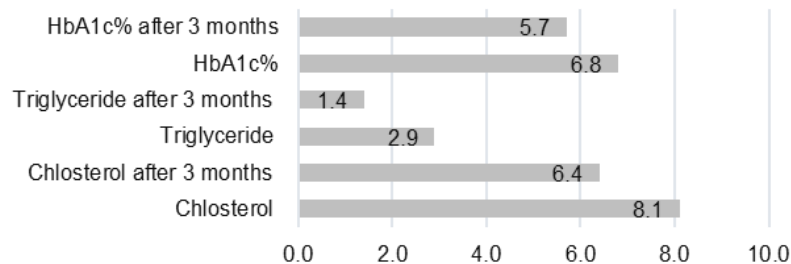
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Success Stories from our service

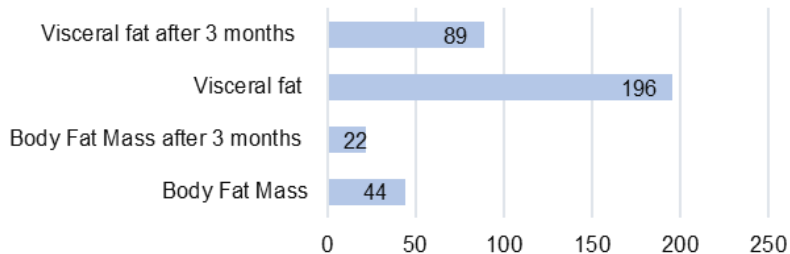
Weight and BMI



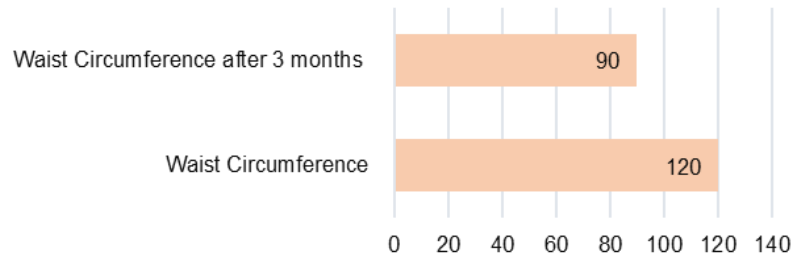
Lab change



Fat Change



Waist Circumference Change



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In Summary

- Preventive Medicine fulfills the triple aim of Qatar's National Health Strategy in delivering **better health, better care** and **better value**.
- Our model has added a new dimension to multidisciplinary team approach, where collective contributions can make a huge difference on patient outcomes.
- Our service has an added benefit of significant cost savings on capital and revenue, that can be spent on further improving patient care.

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Acknowledgements

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- Department of Dietetics and Nutrition
- Mental Health Services
- Department of Pediatrics



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Thank you