



Evaluation of Home Respiratory Therapy Delivered to Patients in the Ministry of Health’s Home Medical Program (HMP) and Administered through the Madinah HMP Center, Kingdom of Saudi Arabia, 2013



Rana Abed Alhelali¹, Ziad A Memish^{1,2}, Aisha Alsagheer¹, Scott JN McNabb²

1.Ministry of Health, Kingdom of Saudi Arabia 2. Hubert Department of Global Health, Emory University, Rollins School of Public Health, Atlanta, GA, USA

Introduction

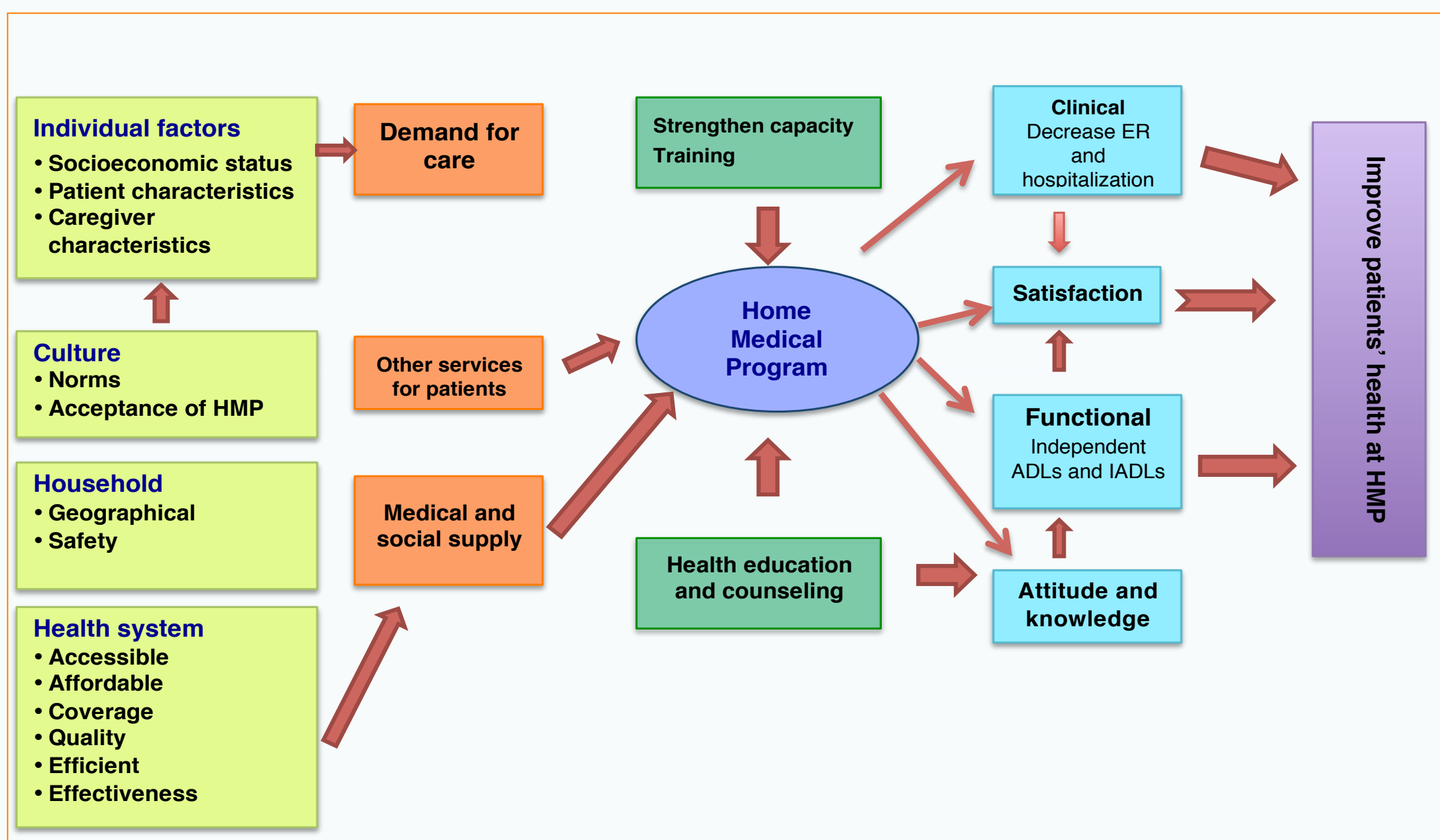
- Home healthcare (HHC) is one of the most cost-effective ways to lower the hospital occupancy rate
- HHC is a comprehensive, regulated program operated by a multidisciplinary team of healthcare professionals in the patient's home
- In March 2009, the Minister of Health, Dr. Abdullah Bin Abdul Aziz Al-Rabia, launched a General Administration of Home Medical Program (HMP)
- Six years after the establishment of the first HMP Center, it was unclear if the program was achieving its aims

Objectives

- Describe demographic characteristics, diagnoses, and services utilized by patients enrolled for home respiratory therapy (HRT) through the HMP Center
- Assess outcome measures for Madinah HMP Center
- Compare patient costs and benefits of HMP and hospital care for respiratory services



Figure 1. Conceptual Framework of Home Medical Program, Madinah HMP Center, Ministry of Health, Kingdom of Saudi Arabia



Methods

- Retrospective design and descriptive analyses
- Evaluated HRT delivered through the Madinah HMP Center
- Analyzed the characteristics of patients enrolled (N = 83), including clinical care received and outcomes
- Assessed 30-patient subset for cost

Results

Population

- 83 patient-records evaluated
- 72% were > 60 years of age
- Most were female (80%) and of Saudi nationality (90%)
- 56% percent were not married

Clinical diagnosis

- Asthma 34%
- Chronic Obstructive Pulmonary Disease 11%
- Respiratory failure 10%
- Lung fibrosis 8%

Results (continued)

Outcomes

- 90% of patients and caregivers expressed high or very high level of satisfaction with HRT services provided through HMP Center

Table 1. Outcomes of patients needing respiratory therapy in the Home Medical Program, Madinah HMP Center, Kingdom of Saudi Arabia, 2013

Outcomes	N (%)
Patient satisfaction	
Very Satisfied/Satisfied	37 (90.2)
Very Dissatisfied/Dissatisfied	2 (4.9)
Uncertain	2 (4.9)
Total	41 (100)
Patient progress	
Not improved/Static	40 (48.2)
Improved	36 (43.4)
Deterioration or died	7 (8.4)
Total	83 (100)
Hospital utilization	
0-2 Visits	50 (60.2)
More than 2 Visits	33 (39.8)
Total	83 (100)

- Costs savings were achieved by reduction in emergency room and outpatient department visits after HRT enrollment

Discussion

- This study assessed respiratory therapy delivered through the Madinah HMP Center and revealed many positive findings
- It provided clinical and financial evidence supporting the provision of HMP respiratory services, leading to cost savings



Table 2. Clinical assessment of 30 random patients needing respiratory therapy in the Home Medical Program prior to enrollment in Madinah HMP Center, Kingdom of Saudi Arabia, 2013

Medical Care		N (%)
Hospital stay		
1 to 30 days in General Ward		24 (28.9)
30 to 60 days in General Ward		3 (3.6)
Over 60 days in General Ward		2 (2.4)
0 to 30 days in ICU		12 (14.5)
Over 60 days in ICU		4 (4.8)
Hospital Utilization		
Before Enrollment		
Number of ER visits		30
Cost of ER visits		\$2400
Number of OPD visits		29
Cost of OPD visits		\$1933
Total		\$4333
After Enrollment		
Number of ER visits		13
Cost of ER visits		\$1040
Number of OPD visits		17
Cost of OPD visits		\$1133
Total		\$2173
Clinical Care		
Glasgow Coma Scale		Mean (SD)
Before enrollment		13.0 (1.1)
After enrollment		13.6 (2.4)
Mean difference		0.6 *(1.9)
*P > 0.05		

Conclusion

HRT administered through the Madinah HMP Center improved clinical outcomes and increased patient satisfaction while reducing hospital utilization and associated costs.

Recommendation

While this evaluation was descriptive, prospective studies seem well-justified.

Acknowledgements

I would like to thank the Madinah Home Medical Program Center staff for helping me carry out this study.



Photos courtesy of the Madinah HMP Center