



Ventricular Assist Device AHC Experience

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Outline:

- Heart Failure worldwide
- Main challenge
- Specialist HF nurse
- Ventricular Assist Device
- Indications of VAD
- Criteria of Selection
- VAD Devices
- VAD Devices Parameters
- Complications
- Health Teaching



Heart Failure worldwide

- 26 million** HF patients worldwide
- 1-2%** Prevalence of HF (8 -10% in elderly)
- 74%** HF patients suffering from at least one co-morbidity

Furthermore

The most common cause of hospital readmission as well as high mortality rate
The annual cost associated with HF in USA is estimated to 37\$ Billion



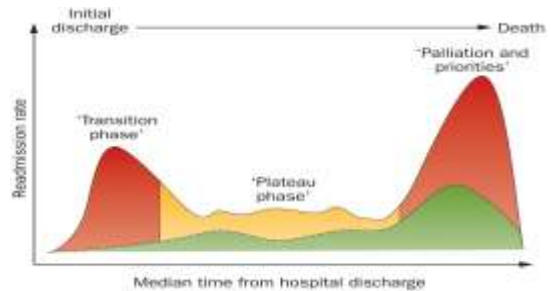
Main challenge: Re-hospitalization for HF



Almost 1 out of 4 hospitalized patients (24%) are rehospitalized for heart failure within the 30-day post discharge period*



Nearly 1 out of 2 patients (46%) are rehospitalized for heart failure within the 60-day post discharge period*



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European journal of
Heart Failure



Essential components of successful heart failure care

- Specialist HF nurse
- Specialist HF Cardiologist
- Adherence to guidelines
- A HF outpatient clinics
- A multiprofessional team

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A Specialist Nurse

Specialist nurse play a major role in patient education, management and monitoring

A well structured clinic and a multidisciplinary team enhance the patient quality of life

Minimize the patient readmission and increase the survival rate

Database – Studies

Increase the patient and the caregivers satisfaction

Decrease the expenditure regarding the HF

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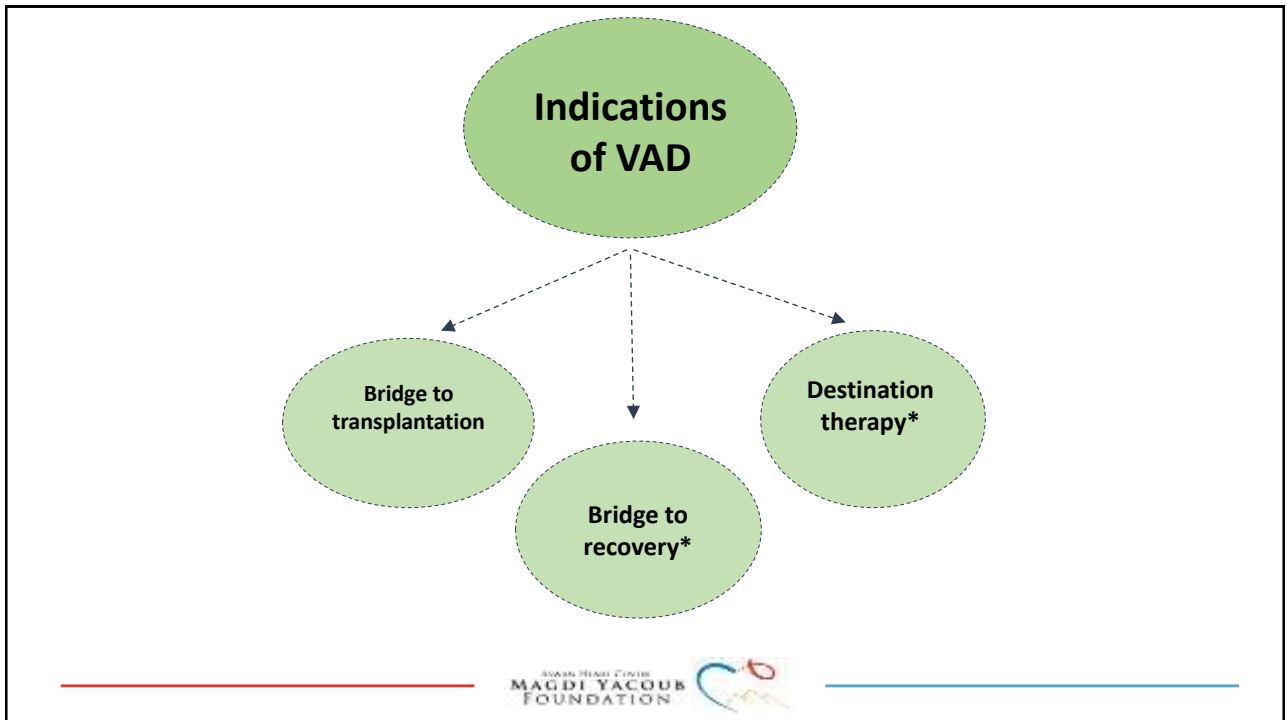
Ventricular Assist Device

A single system device that is surgically attached to the ventricles of the heart and to the aorta

A VAD is designed to circulate the blood in the pulmonary and/or systemic circulation when the natural heart is unable to maintain normal blood flows and pressures.

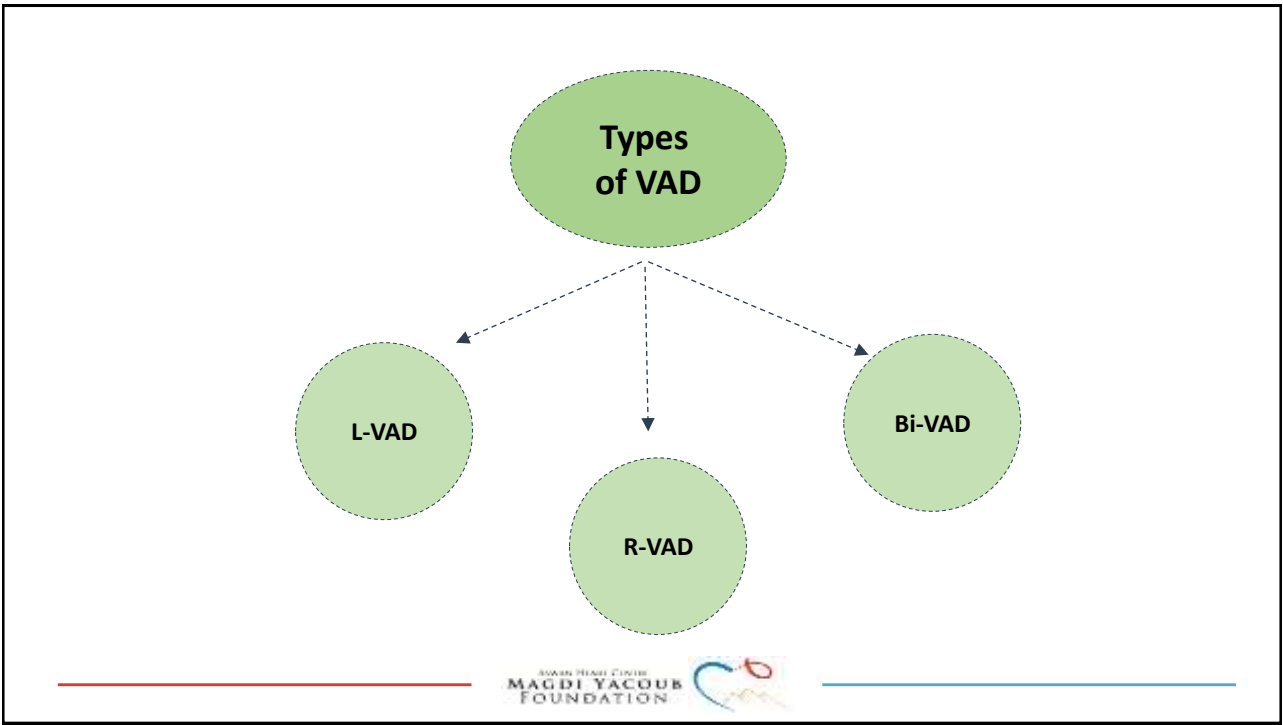
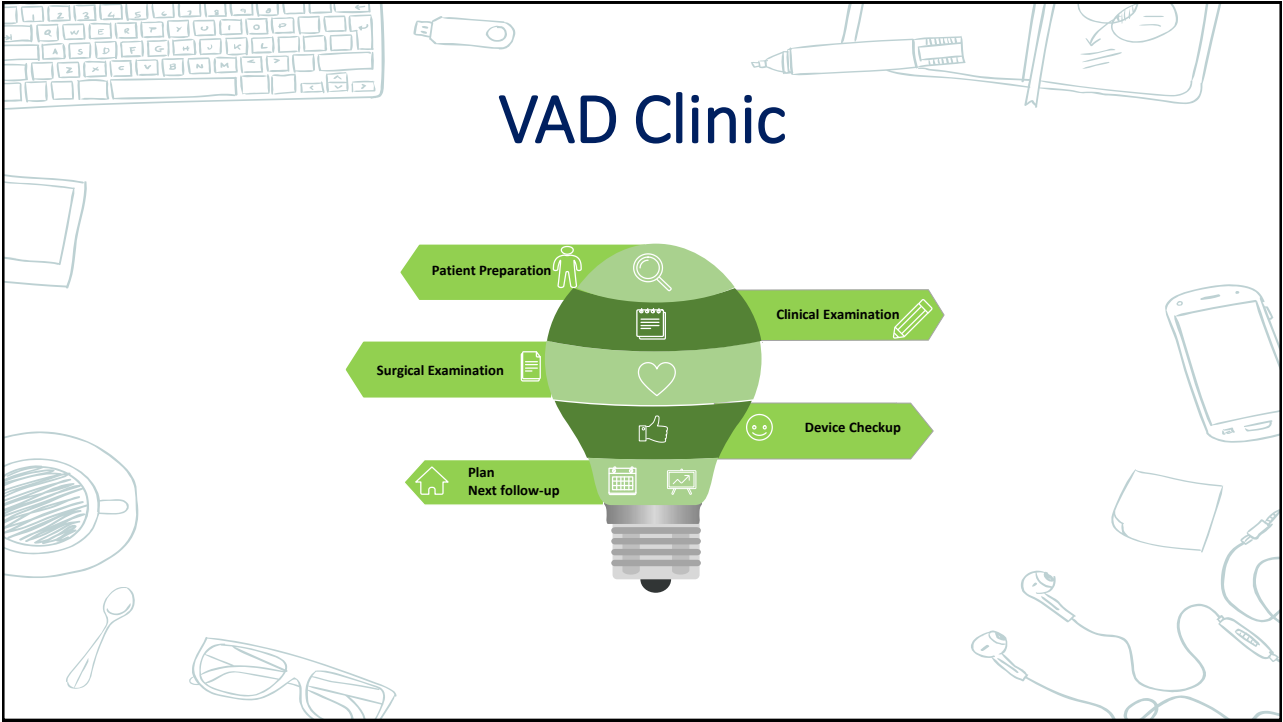
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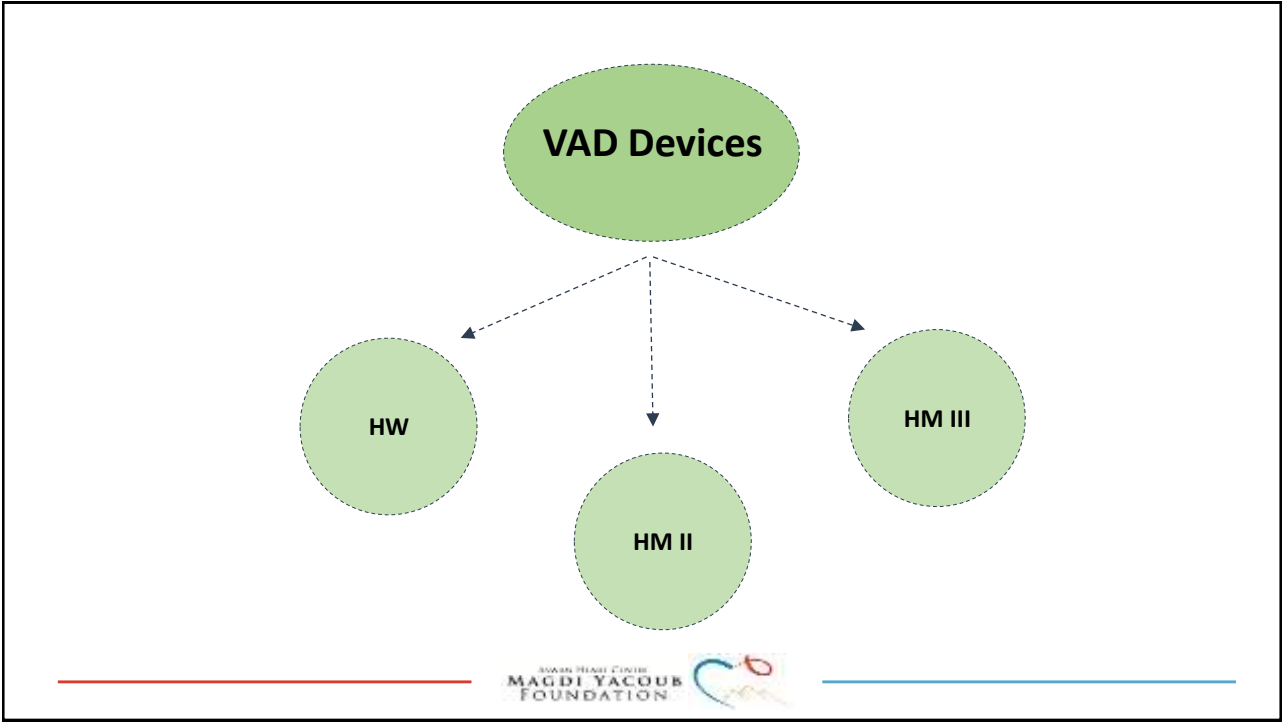




Criteria of Selection

- Free of any comorbidities
- NYHA III & IV
- Frequent hospitalization episodes for the previous 6 months
- Educational level and cognitive functioning
- Presence of caregivers





VAD Devices

The complex block displays various components and users of VAD devices. It includes a photograph of a man and a woman, both wearing VAD devices. To the right is the **HeartWare** logo with the tagline "Leading a small revolution". Below the logo are images of the **Pump & Drive-Line** and the **Controller**. On the left, there are anatomical diagrams of the heart and a patient wearing a VAD device. At the bottom, there are images of the **Battery**, **Controller DC Adapter**, **Controller AC Adapter**, **Charger**, and **Monitor**. The monitor displays vital signs: 3.8 L/min, 3000 rpm, 4.4 mmHg, and a graph showing pressure over time.

Below the images is the logo for the **ROWAN HEART CENTER MAGDI YACOUB FOUNDATION**.

VAD Devices



HM
II & III



Pump & Drive-Line

Controller



Charger



Battery



Controller AC/DC Adaptor



Monitor

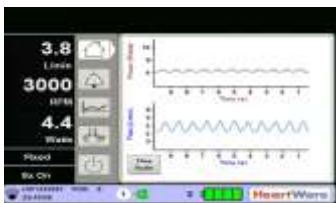


VAD Devices Parameters

RPM Round Per Minute performed by the pump
How quickly the pump rotates

Flow Generated flow = cardiac output
Estimated value of the volume running through the pump

Watts (Power) Power consumption to meet the RPM range
Measure of motor voltage and current



Complications

Anticoagulants drugs Issues
Infection
Device malfunctions



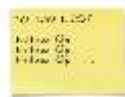
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Health Teaching

- Pre-Surgery Orientation
- Device Training
- Medications
- INR Monitoring
- Wound Care
- Shower and personal hygiene
- Diet
- Activities Social support behaviors
- Emergency and Transportation
- Follow Up Visits

Health Education 



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“I Have A Dream”

Martin Luther King



Thanks

