

Ventricular Assist Device AHC Experience

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Outline:

- **Heart Failure worldwide**
- **Main challenge**
- **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

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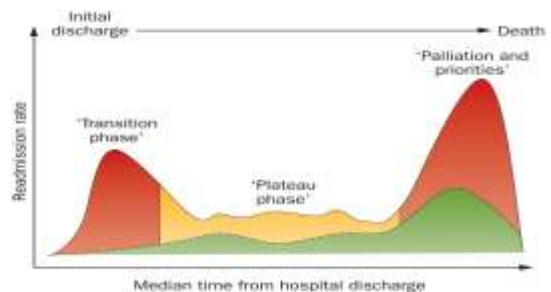
Main challenge: Re-hospitalization for HF



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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Essential components of successful heart failure care

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

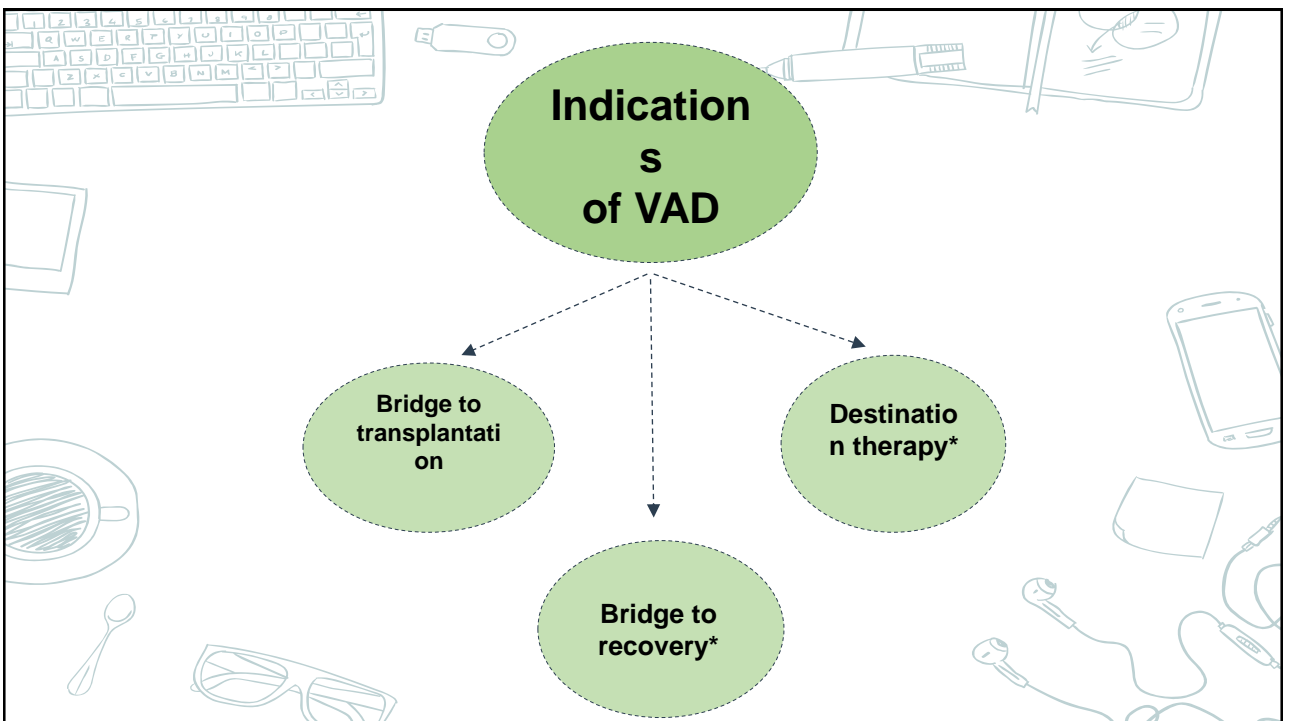
VAD

Ventricular Assist Device

Ventricular Assist Device

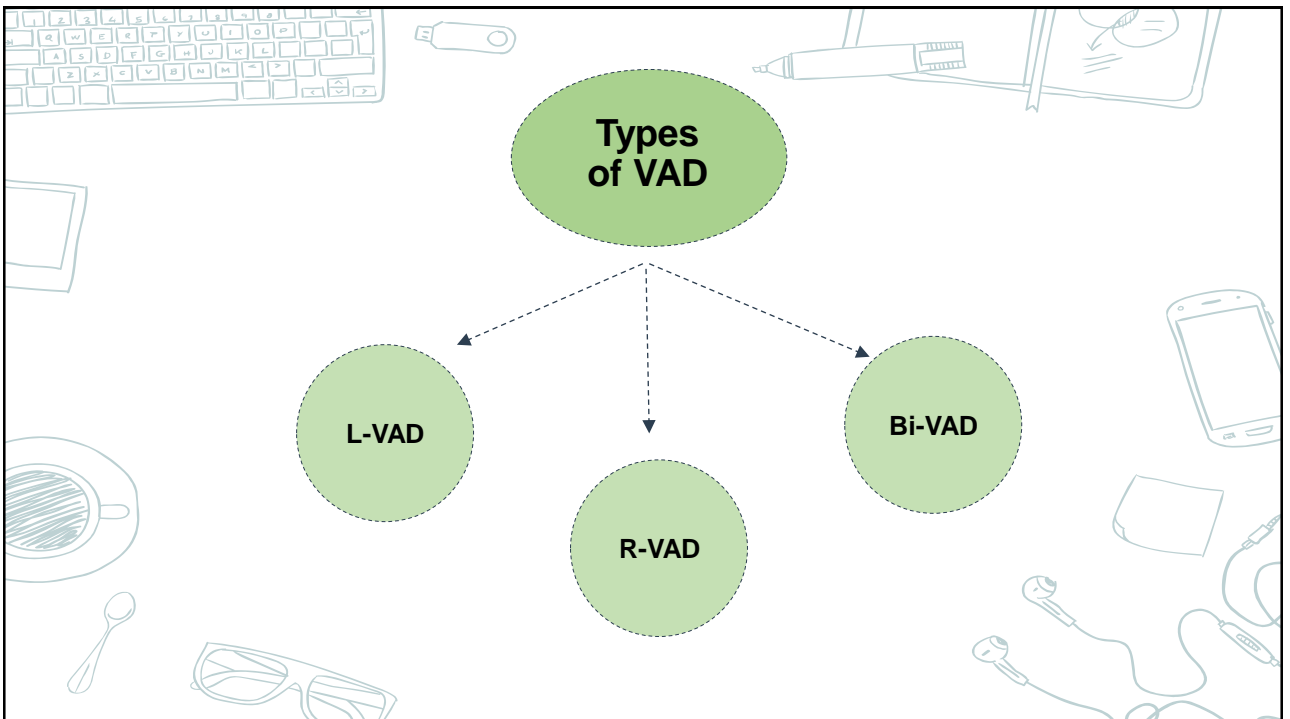
A single system device that is surgically attached to the ventricles of the heart and to the aorta

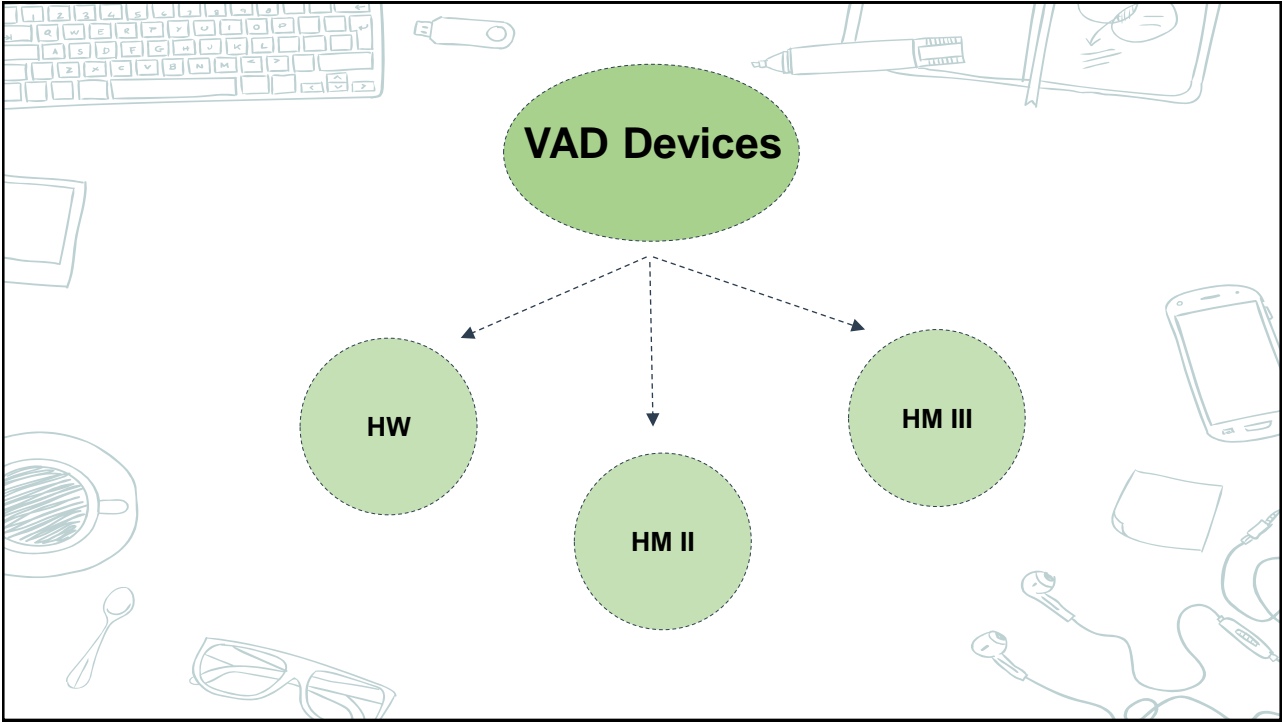
A VAD is designed to circulate the blood in the pulmonary and/or systemic circulation when the natural heart is unable to maintain normal blood flows and pressures.



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

HeartWare
Leading a small revolution

Pump & Drive-Line

Controller

Battery

Controller DC Adapter

Controller AC Adapter

Charger

Monitor

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VAD Devices



HM II & III



Pump & Drive-Line

Controller



Charger



Battery



Controller AC/DC Adaptor



Monitor

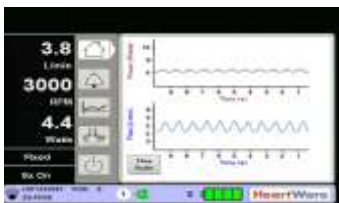


VAD Devices Parameters

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



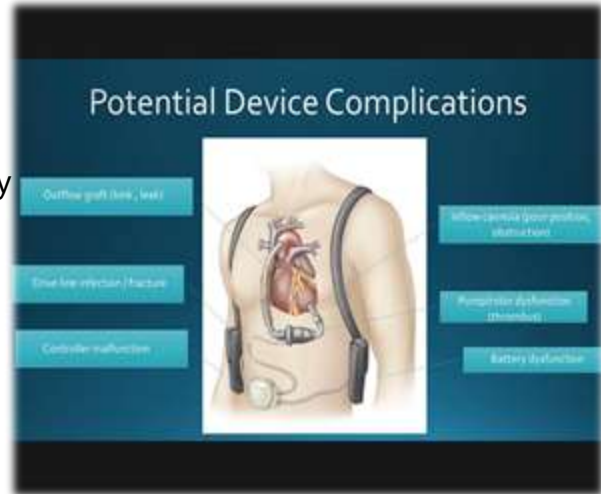
Benefits Vs Complications

Benefits

- *Survival rate
- *Improve QoL
- *Bridge to Transplantation or Recovery

Complications

- *Anticoagulants drugs Issues
- *Infection
- *Device malfunctions
- *Secondary organ failure
- *Psychological issues



Health Teaching

- Pre-Surgery Orientation
- Device Training

- Medications
- INR Monitoring

- Wound Care
- Shower and personal hygiene

- Diet
- Activities Social support behav

- Emergency and Transportat

- Follow Up Visits

Health Education 



Thanks...
Question!

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