Internalizing a VAD program: Opportunities and Challenges

Barbara Amos CNS, MSN, RN, CHFN
Ventricular assist device program manager
Kaiser Permanente NW

 Copyright © 2017 Kaiser Foundation Health Plan, Inc.

KAISER PERMANENTE®

Who, what and how

KPNW snapshot

KPNW VAD program

Internalization Challenges

Current state

Challenges today

Future directions

Kaiser Permanente Sunnyside Medical Center

KPNW Regional Service Area Map

Kaiser Permanente Northwest locations

Hospital Demographics

- Approximately 2,100 employees
- 618,167 square feet on a 53-acre campus
- 302 Licensed Beds
- Volume (2015)
  - 183 Average Daily Census
  - 81,560 Hospital Visits
  - 57,993 ED Visits
  - Cardiac Surgery Cases 2017
    - 192 Coronary Artery Bypass Graft (CABG)
    - 59 Aortic Valve Replacements (AVR)
    - 26 Mitral Valve Replacement/Repairs
    - 96 Transcatheter Aortic Valve Replacements (TAVR)

KSMC Achievements & Accolades

- Society of Thoracic Surgeons: Highest Three-Star Quality for 7 Consecutive Years
- AHA/ASA: Stroke Gold Plus Achievement Award for 6 years
- Silver beacon award 2018: CVPCU
- Silver Beacon Award 2014: Medical Surgical ICU
- The Leapfrog Group Hospital Patient Safety Score of “A”
- Healthgrades 50 Best Hospitals for Vascular Surgery Award 2018
- Healthgrades 50 Best Hospitals for Cardiac Surgery Award 2018
- Healthgrades 100 Best Hospitals for Cardiac Care Award 2018
- Healthgrades 100 Best Hospitals for Pulmonary Care Award 2018
- US News & World Report: recognized as a High Performer in 5 Procedures. Ranked #6 of all Oregon hospitals. 2017

Ventricular Assist Device Program

The Advanced Heart Failure/VAD Program Team

Advanced Heart Failure/VAD Program Interdisciplinary Team

- Tim Jacobson MD Chief, Cardiologist, Advanced Heart Failure Program Director
- Yong Shin MD Chief, Cardiothoracic Surgeon
- Ryan Morrissey MD Cardiologist
- Siobhan Gray MD Internal Medicine
- Nancy Turner RN Practice Director Cardiology, Cardiovascular,
- Barbara Amos RN VAD Coordinator/Program Manager
- Pamela Montes RN VAD Coordinator
- Allison Lipnick LCSW
- Kraig Russell MD Palliative Care
- Keith Stockbauer RN Transplant Coordinator

Advanced Heart Failure Program Goals

- Class III-IV systolic heart failure patients will be managed by a member of the Advanced Heart Failure Team.
- Through access to advanced heart failure therapies, end-stage heart failure patients will have an improvement in quality of life.
- Deliver high quality guideline based care in a patient and family centered model of care.
- Achieve a high patient satisfaction level.
- Eliminate care gaps and provide seamless care pathway transitions.
- Provide a collaborative, multidisciplinary team approach to performance improvement in the pursuit of excellence.
- Provide ongoing access to social work services and palliative care in support of patients and their families.
- Honor each patient’s right of self-determination by acknowledging their wishes and/or advance directive.

Program Development

KSMC VAD Program:
Why did we start a program?

- Convinced we could provide excellent care for appropriate patients
- Decrease fragmentation of care
- Ability to control and select patients who are appropriate for advanced therapies
- Fiscally responsible
- Patient Centric: Our patients wanted to get their care from their KP care providers

Challenges to starting a VAD program in the NWKP region

- Leadership needed to be convinced that we were capable of delivering the care
  - Education provided regarding current state of cardiac care
  - Education provided about the current state of the technology

- Leadership needed to be convinced that internalizing this care would save money and improve the quality of care delivered
  - Business case was written
  - Looked at the costs to NWKP for several VAD cases that had been referred out
  - Quality outcomes were evaluated of the cases referred out. Detailed discussion and plans made about how we would improve those outcomes

Challenges cont’d

- We needed to work with our traditional MCS and transplant referral center to develop new care pathways (share care) and exchange of information.
- We chose a phase-in plan for internalizing this service with specific outcomes to be achieved before moving on to the next phase (thus the necessity for needing new care pathways with our traditional referral center).
  - This strategy may have been perceived too slow by some
- We needed all the right people in place (board certified heart failure specialists, trained cardiac surgeons, Program/VAD coordinator).
- We needed and developed a detailed education plan for the all those health care providers who may touch one our vad patients within our facilities and in the community.
- Protocols, policies and procedures all written prior to starting
- Simulation training
- Implementation of debriefing each case and developing warm handoffs to improve quality outcomes (introduction of new practices)

Getting to Go Live

Phase 1: Clinic

- Began 10/2010
- Shared care developed
- Contracts with vendor for clinic equipment
- Clinic training and set up
- First patient seen 4/2011

Phase 2: Hospital

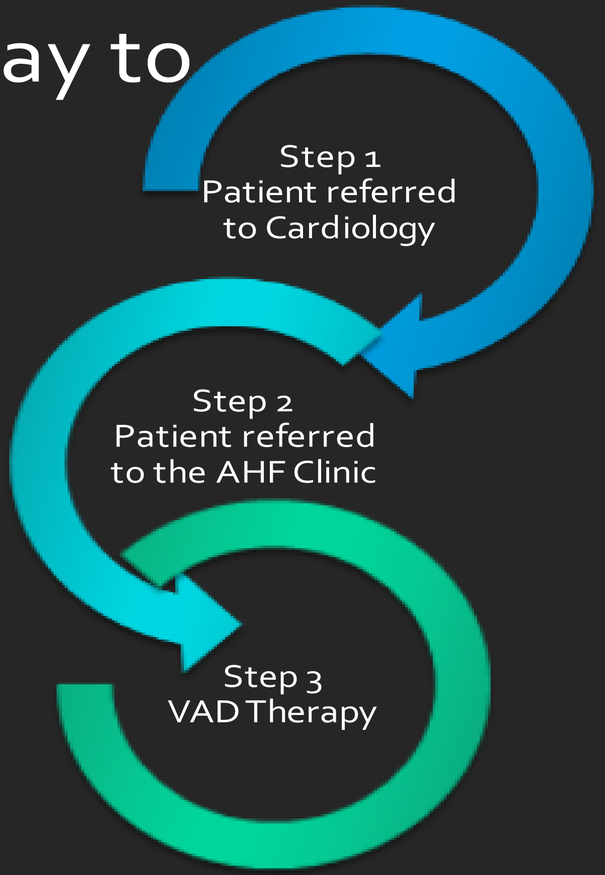
- From the doorway in
- ED readiness
- Inpatient care
- Care protocols and policies
- EMS training
- Community awareness
- Go live 9/2011

Phase 3: Implant

- CVOR, CVICU, CVPCU hospital readiness
- Blood bank and lab readiness
- Ancillary staff
- Contracts, equipment purchasing and management
- Go live 4/2012

© 2011 Kaiser Foundation Health Plan, Inc. For internal use only.

Clinical Pathway to VAD Therapy



1

- PCP refers patient to Dept of Cardiology, pt. is evaluated by Cardiologist
- Appropriate diagnostic studies ordered (Echo, ECG, CXR, Angio), guideline based care initiated.
- If / when the patient is classified as having Class III or IV systolic heart failure, patients interested in aggressive care are referred to the AHF clinic

2

- Pt is assessed by the AHF team and Cardiac Surgical team
- Transplant candidacy assessed
- Case presented at our Heart Team Conference
- Pt meets the selection criteria as defined by the program

3

- Patient is assessed by a multi-disciplinary team (Board Certified HF Cardiologists, Internist, Social Worker, AHF- VAD certified Nursing Staff)
- Medical management adjusted/intensified (medication titration, additional diagnostic testing, BiV upgrade)
- Advanced systolic HF with failure to respond to medical management, pt. is formally assessed for VAD or transplant.

Advanced Heart Failure Patient Referral

- Goal of seeing > 80% of outpatient referrals within 14 days
- Same day inpatient evaluations (for referrals called to us prior to 5 pm)
- Emergent referrals are seen immediately (24/7/365)
- For VAD implant: patient selection committee to date of surgery within 14 days

Selection Committee Process

- All primary team members attend and have input
- Review of patient history, all test information, and team member evaluations.
- Standard documentation template in Electronic Medical record (EMR)
- Decision is by consensus

Implant and Hospital Management

- Admitted night before surgery to CVPCU or CVICU
- All pre-op patient and family education and tests completed
- CVICU post op: average LOS 5 days
- Extubated and out of bed: post-op day 1
- Patient and family/support person education ongoing
- LOS post-implant: 12-14 days
- Home with 24/7 support person for 4 weeks

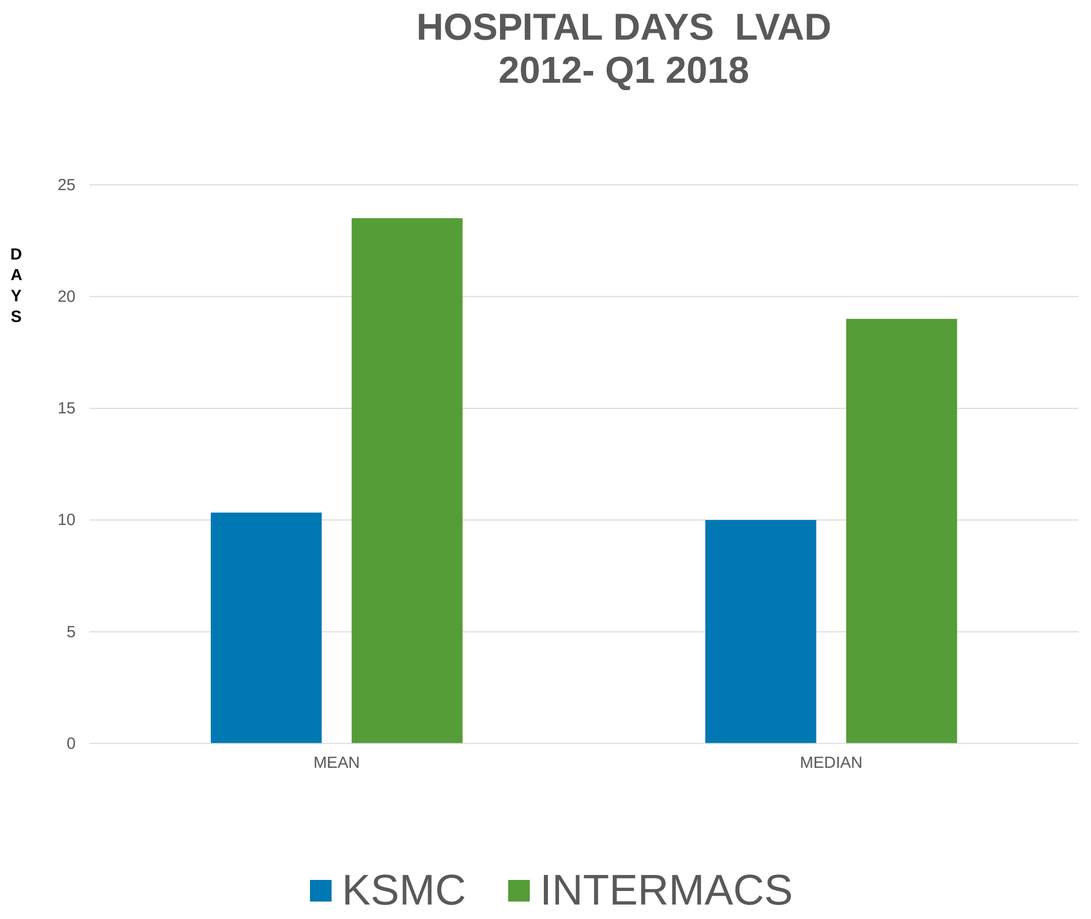
Long Term Management

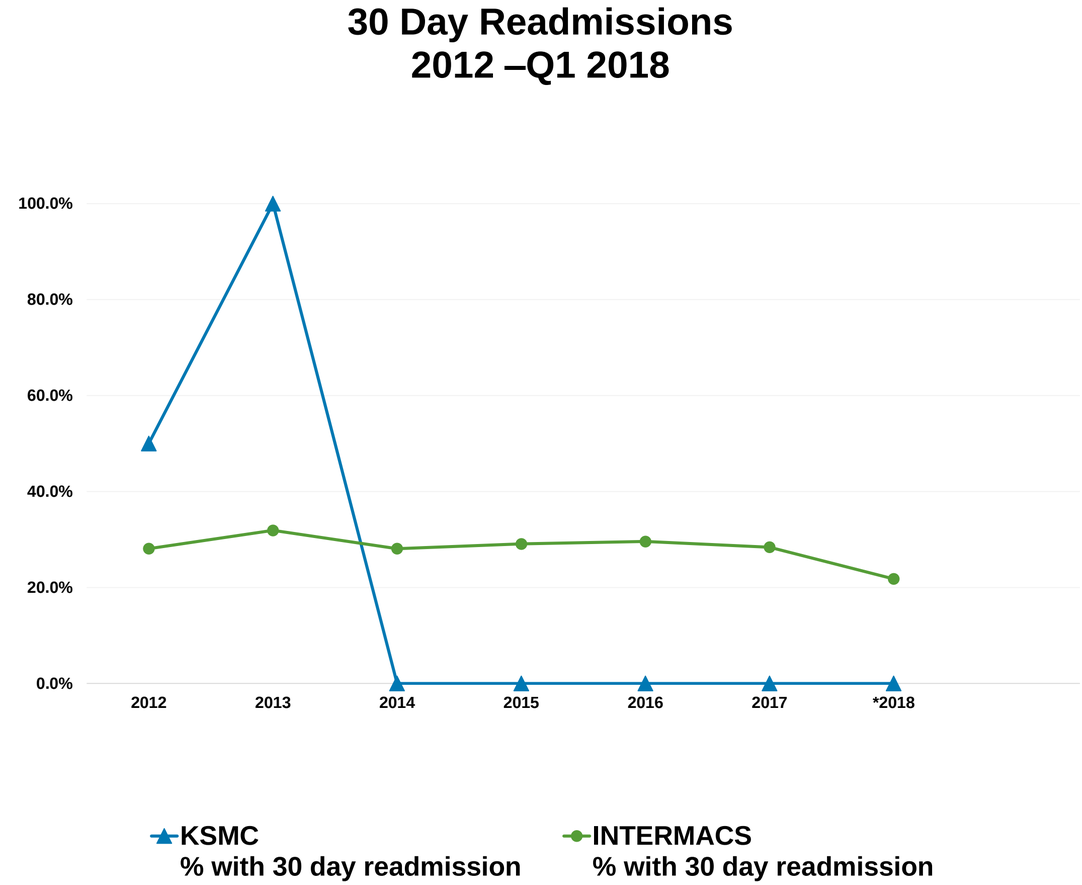
- Clinic visit weekly X 4, 2 weeks X 4, then monthly
- Anticoagulation by ACC clinic
- Labs weekly →biweekly.
- Full device interrogation, driveline assessment, and education and support with clinic appt.
- Ongoing equipment maintenance
- INTERMACS reporting
- Social support
- 24/7 direct access to VAD Coordinator
- Hospital and community ongoing education and competency

Where the program is now…..

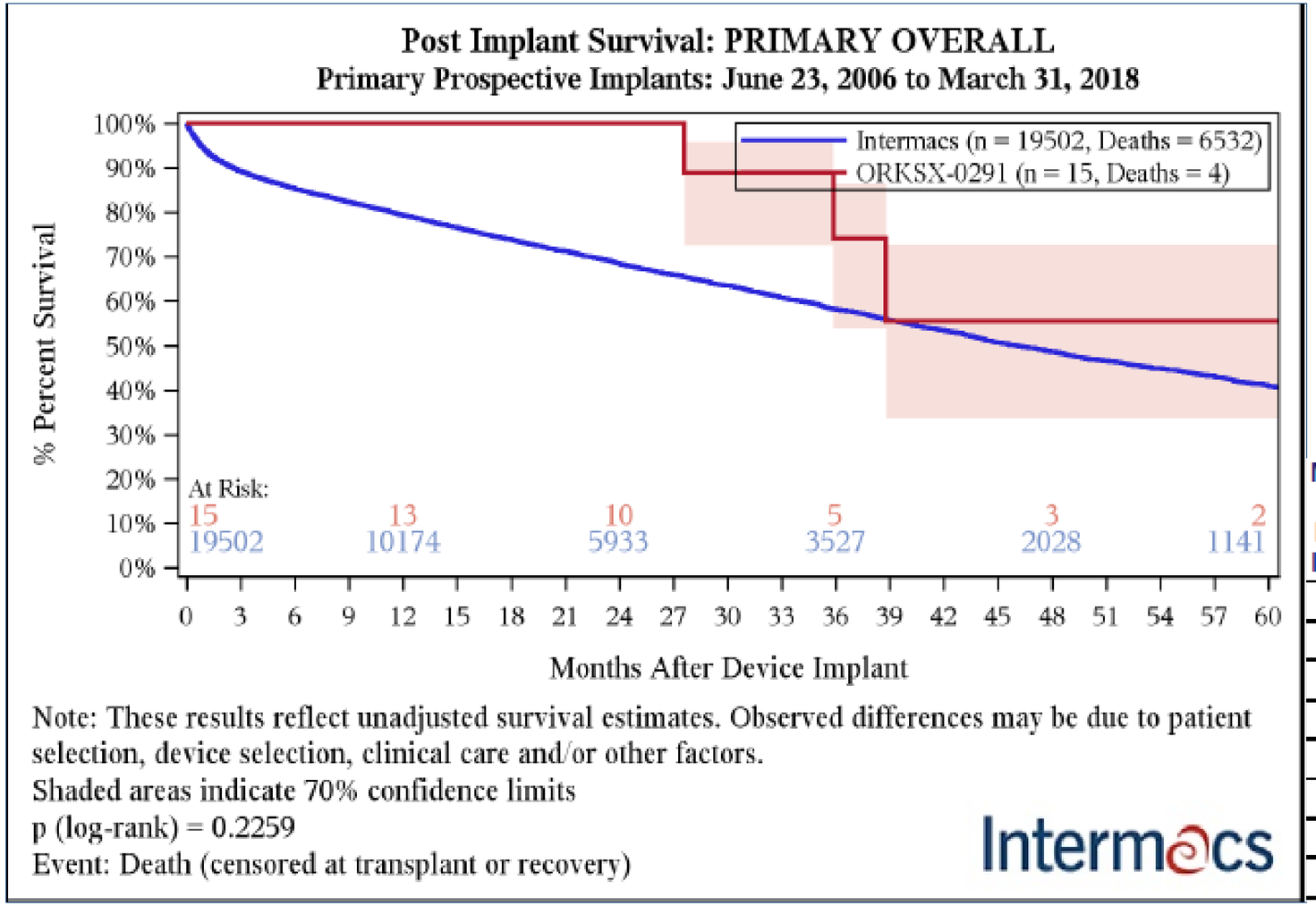
- Since 2012 KSMC has implanted 21 Heartmate II VADS
- We have performed 3 pump exchanges
- Average LOS post-implant: 10 days
- 16 cases with no blood intra-op transfusions
- 2 actively listed for transplant
- Advanced Heart Failure/VAD clinic: every Friday and prn

Quality data





Survival



Months after Device Implant	Intermacs	ORKSX-0291
1	94.1% (93.9%-94.2%)	100.0% (100.0%-100.0%)
3	89.2% (89.0%-89.4%)	100.0% (100.0%-100.0%)
6	85.3% (85.0%-85.5%)	100.0% (100.0%-100.0%)
12	79.3% (79.0%-79.6%)	100.0% (100.0%-100.0%)
24	68.4% (68.0%-68.8%)	100.0% (100.0%-100.0%)
36	58.2% (57.7%-58.7%)	74.1% (53.8%-86.5%)
48	48.6% (48.1%-49.2%)	55.6% (33.7%-72.8%)
60	41.0% (40.3%-41.6%)	55.6% (33.7%-72.8%)

Ongoing challenges

- Illness burden is unpredictable, increase call frequency for small group of providers
- Providers need to assist in managing noncardiac related needs
- Staff competency and training for hospital and community
- Maintaining TJC certification
- Data management
- Continuous quality improvement
- Team work-Life balance

Future Directions

Maintain TJC Gold Seal for Advanced VAD Program Certification

Develop a shared care site with newest KP region, KPWA

Continuously strive to provide exceptional quality of care and service, uncompromised by increased volume.

Questions

Thank you