The Business Case for an Advanced Heart Failure Center with a Shared Care Program

The Baptist Health Lexington Experience

Presented by:
Christine McIntyre, RN, MHA, FACHE, AACC

This presentation was presented at the Thoratec Corporation Economic Summit held on September 30-October 2 in La Jolla, CA. Please note that this presentation and content thereof represents the ideas and opinions of the presenters, who are solely responsible for such content, and not necessarily those of Thoratec Corporation.
Disclaimer

This reimbursement information is intended to provide the health care professional with information related to billing, coding and reimbursement requirements that may apply to Thoratec products. It is being provided for general informational and educational purposes only, and is not intended, and does not constitute, reimbursement or legal advice. Use of codes identified here does not guarantee coverage or payment at any specific level and is not intended to increase or maximize payment by any payer. Laws, regulations and coverage policies are complex and updated frequently. In addition, reimbursement policies vary widely from insurer to insurer and will reflect different patient conditions. You should check the current law and regulations and insurer’s policies to confirm the most current coverage, coding or billing requirements. Any questions should be directed to your attorneys or reimbursement specialist. The health care professional is responsible for all aspects of reimbursement, including using codes that accurately reflect the patient’s condition, procedures performed, and products used and ensuring the veracity of all claims submitted to third party payers.
Christine McIntyre, RN, BSN, MHA, FACHE, AACC

Christine is the Executive Director of Cardiovascular Services at Baptist Health Lexington in Lexington KY. She received a Bachelor of Nursing and a Master of Health Administration from the University of Kentucky. She is currently responsible for the administrative operations of the Baptist Heart and Vascular Institute. In collaboration with the Institute’s medical directors and senior administrative staff and provides oversight to many programs including Non-Invasive Cardiology services, the Advanced Heart Failure with Shared Care program, Atrial Fibrillation and Arrhythmia Center, Heart and Valve/TAVR Center, Heart Attack Risk Assessment Center, and the Chest Pain Center with PCI. She is a board member with the KY-ACC, an Associate with American College of Cardiology, a Fellow with the American College of Healthcare Executives and serves as Secretary with the Lexington Cardiac Research Foundation.

Baptist Health Lexington
Office 859-260-6324
Cell 859-333-6876
Fax 859-260-6375
Baptist Health Lexington

- Community-based hospital in Lexington, KY
- 357 licensed beds, 4 OP Diagnostic Centers
- One of 3 hospitals in East Region
- One of 7 hospitals in Baptist Health System, Kentucky

Christine McIntyre, RN – Presented at the Economic Summit on VADs, October 1, 2015
Heart Failure: Incidence, Prevalence and Disease Burden

- Leading cause of hospital readmissions in adults > 65 years
  - *The single, biggest factor predicting admission for HF is a prior admission*

- Affects 5.8 million US adults with associated costs estimated at $33.7 billion
  - *One in 5 adults in the US will develop HF after age 40*

- One fifth of Medicare pts are readmitted within 30 days and 90% of those readmissions are unplanned or preventable, costing $17 billion

Christine McIntyre, RN – Presented at the Economic Summit on VADs, October 1, 2015
## Top Conditions for 30-Day Readmissions

<table>
<thead>
<tr>
<th>Condition at Discharge</th>
<th>30-Day Hospitalization Rate (%)</th>
<th>Proportion of All Hospitalizations (%)</th>
<th>Most Frequent Reason for Readmit</th>
<th>2nd Most Frequent Reason for Readmit</th>
<th>3rd Most Frequent Reason for Readmit</th>
</tr>
</thead>
<tbody>
<tr>
<td>All medical</td>
<td>21.0</td>
<td>77.6</td>
<td><strong>Heart Failure</strong></td>
<td>Pneumonia</td>
<td>Psychoses</td>
</tr>
<tr>
<td>Heart failure</td>
<td>26.9</td>
<td>7.6</td>
<td><strong>Heart Failure</strong></td>
<td>Pneumonia</td>
<td>Renal Failure</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>20.1</td>
<td>6.3</td>
<td>Pneumonia</td>
<td><strong>Heart Failure</strong></td>
<td>COPD</td>
</tr>
<tr>
<td>COPD</td>
<td>22.6</td>
<td>4.0</td>
<td>COPD</td>
<td>Pneumonia</td>
<td><strong>Heart Failure</strong></td>
</tr>
<tr>
<td>Psychoses</td>
<td>24.6</td>
<td>3.5</td>
<td>Psychoses</td>
<td>Drug toxicity</td>
<td>Drug or alcohol misuse</td>
</tr>
<tr>
<td>All surgical</td>
<td>15.6</td>
<td>22.4</td>
<td><strong>Heart Failure</strong></td>
<td>Pneumonia</td>
<td>GI problems</td>
</tr>
<tr>
<td>Other vascular surgery</td>
<td>23.9</td>
<td>1.4</td>
<td>Other vascular surgery</td>
<td>Amputation</td>
<td><strong>Heart Failure</strong></td>
</tr>
<tr>
<td>Other hip or femur surgery</td>
<td>17.9</td>
<td>0.8</td>
<td>Pneumonia</td>
<td><strong>Heart Failure</strong></td>
<td>Septicemia</td>
</tr>
</tbody>
</table>
Team Based Care Model: Characteristics of Disease Management Centers

- Advanced niche service offerings (e.g. TAVR)
  - Targeted community marketing
- Clinical research, trial involvement
  - Integrated financial structure
  - Formalized partnerships with post-acute care
- Dedicated disease center coordinators
- Centralized appointment scheduling
- Accreditation/certification
- Focused physician outreach
- Individualized, patient-centered care
- Services span IP, OP, clinic setting
- Administrative, clinical dyad leadership
- Multidisciplinary care

Christine McIntyre, RN – Presented at the Economic Summit on VADs, October 1, 2015
Baptist Health Lexington’s Advanced Heart Failure Center: A Team Based Model for Patients Across the Continuum of Care

Christine McIntyre, RN – Presented at the Economic Summit on VADs, October 1, 2015
Advanced Heart Failure Center at BHLEX

- Opened January 2013; Providers: 2.0 APRNs, 0.5 RN; recently added 1.0 PharmD, APRN and CNA

- **Disease center impetus**: Decrease readmission rate, improve morbidity and mortality with guideline recommended therapy and early identification of advance therapies

- **Services offered**: OP mgmt including IV diuresis; same day appts; ED pt f/u apmt, telephone triage, Shared Care Program for LVAD began in November 2013 with two transplant/LVAD facilities, (First Shared Care Program in KY).

- **Facility**: Co-located with the A Fib Center, Heart and Valve/TAVR Center and HTN Center; 6 exam rooms in same building as employed Cardiology and CT MD offices, cath and EP labs, CV Nuclear/PET Lab, Sleep Center, Cardiac Rehab; Echo lab w/n center

- **Impact of center**: Decrease in readmissions, decrease ED visits, OP mgmt of high risk pts with multiple comorbidities, initiated a regional HF management strategy, awarded AHA HF “GWTG” Gold recognition for quality care

Christine McIntyre, RN – Presented at the Economic Summit on VADs, October 1, 2015
Greater Urgency to Deliver Care in Low Cost Settings

Current Motivators for Shifting Care to Lower Cost Settings

• Increasing hospital CMI
• Ensuring optimal use of capacity
• Responding to OP shift
• Enhancing the patient experience

Future Motivators for Shifting Care to Lower Cost Settings

• Price-sensitive consumers seeking to reduce out-of-pocket expenses
• Payer steerage to lower-cost providers
• Higher cost providers increasingly omitted from health insurance exchange networks

Estimated Cost Per Care Site for Routine and Minor Care

- Retail Clinic: $76
- Physician Office: $120
- Urgent Care: $121
- ED: $499

Christine McIntyre, RN – Presented at the Economic Summit on VADs, October 1, 2015
Scheduling Appointments Nice in Theory, Not in Practice

Two Main Challenges to Scheduling Physician Visits After Discharge

Challenge #1: Finding a PCP

% of Patients Reporting Finding a PCP Was a “Big Problem”

- Medicare: 21%
- Medicare: 12%

Challenge #2: A Timely Appointment

% of Patients Reporting Unwanted Delays Scheduling a Routine Appointment

- Medicare: 29%
- Medicare: 23%

Christine McIntyre, RN – Presented at the Economic Summit on VADs, October 1, 2015
Outpatient APRN-Led Center

Typical Visit in the APRN Led CV Clinic
45 minute/pt

- Pharmacy Med Management Therapy 10 minutes
- APRN Treatment Plan 20-30 minutes (+/- TTEcho, diuresis, Lab, Neb tx)
- RN Education 10 minutes

Average monthly wRVU = 312 per provider

Average Visit (1 APRN, 1 RN, 1 PharmD)

Average 191 visits/month
(Providing care for high risk HF, AF, AMI pts)

Christine McIntyre, RN – Presented at the Economic Summit on VADs, October 1, 2015
BHLex Strategies to Reduce CV HF Readmissions

- Medication reconciliation on admit and discharge by pharmacist
  - Pt med calendar prepared on discharge with teaching by Pharmacist
  - Med rec performed by Pharmacist on all OP HF Center pts
- Intense post-discharge education including f/u care
- F/U apmt within 7 days of DC on all HF pts (RN driven order)
  - Fall 2013 included “low EF pt” referrals to HF Center (post AMI, CT Surgery)
  - Weekend discharged pt appointments were “hard-wired” to provide f/u apmts within 7 days of DC
- Same day/ urgent appointments in HF Center for high risk pts ans symptomatic pts requiring IV Diuresis
- Developed coordinated approach with employed Cardiology office to refer “high-risk” pts to both AF and HF Centers
- Call Center (hospital-based)
  - High risk pts called at 3, 7, 14 days
Decrease in Baptist Health Lexington Heart Failure Admissions

![Bar chart showing decrease in inpatient heart failure encounters from 2012 to 2014.](chart.png)

Christine McIntyre, RN – Presented at the Economic Summit on VADs, October 1, 2015
Baptist Health Lexington and Advanced Heart Failure Center 2013 - 2014

**Jan-Dec 2013**
- **HF Inpatient**
  - New consults = 796
- **HF Outpatient**
  - Total visits = 747
    - New pt visits: 316
    - F/U visits: 431
  - APRN pt mgt phone calls: 2,537
  - Shared Care pt visits: 2

**Jan-Dec 2014**
- **HF Inpatient**
  - New consults = 176
- **Outpatient**
  - Total visits = 1,785 (↑59%)
    - New pt visits: 588
    - F/U visits: 1197
  - IV Diuresis = 154
  - APRN pt mgt phone calls: 3,692
  - Shared Care pt visits: 14

CMS HF Readmission Rate = 12.9%

2014 HF Center patient readmit rate = 2% (2/588)

CMS HF Readmission Rate = 14.8%

Christine McIntyre, RN – Presented at the Economic Summit on VADs, October 1, 2015
HF Center Impact for Baptist Health Lexington FY 2014

HF Center 2014
- 588 unique pts with 1785 total encounters
- E&M charges are predominantly at 3 and 4 levels
- 154 pt visits for IV Diuresis, in addition to the pt visit
- New pt visit = echo (unless prev w/n 3-6 mths), labs, EKG, KCCQ, 6-min walk
- F/u pt visit = labs, EKG
- 3-5% of HF pt are new referrals for employed Cardiology MDs - PM/ICD procedures
- 20% of HF pts referred for sleep study, C Rehab
- 14 visits Shared Care LVAD evaluation

Baptist Health Lexington
- 25% decrease in volume of HF pts admitted from ED
- 40% of all HF pts from the ED are referred and followed by the HF Center
- IP HF volume decreased by 21% in 2013 and 2014
- IP HF LOS decreased by almost 20%

Christine McIntyre, RN – Presented at the Economic Summit on VADs, October 1, 2015
Why We Developed a Shared Care Program?

- New Business opportunity for our hospital – (pts were lost in f/u to the implanting center)

- BHLex HF Program is seen as a leader in HF management by local medical staff

- Increased awareness and treatment options for our Stage D Heart Failure patients - Cardiologists more likely to refer pt for LVAD if someone else helps coordinate the referral and education

- To minimize the burden of routine care for our LVAD pts – travel and expenses

- Destination therapy management is not exclusive to academic medical centers – our pts wants to stay close to their providers and our providers want to maintain contact with their pts.
Community Hospital Shared Care Program: Essential Elements --> Support and Buy-in with MDs and Administration

Started in November 2013:
- Introduced MDs and staff to concept of LVAD and Shared Care mgmt via Grand Rounds with the CT Surgeon and Cardiologist from Transplant/Implanting Center

- Presented program plans at Heart and Vascular Institute Quality Committee; “pts need to continue to see BHLex as a provider for advanced OP HF mgmt”
  - Communicated with Nursing Administration and Emergency Dept mgmt the plan to maintain an OP program only – but we also coordinated education with the ED and EMS for pts with LVADs
  - Our HF providers offered to coordinate LVAD education during a pts hospital stay and their initial LVAD evaluation at the LVAD Implanting Center

Christine McIntyre, RN – Presented at the Economic Summit on VADs, October 1, 2015
Typical LVAD Follow Up Visits

**The post op schedule:**
- Weekly with implanting center (initial 1-3 mths)
- Monthly, alternating with implanting center at 3 mth interval (12 mths) for INTERMACS data
- Every 2-3 mths for long-term pts

**E&M Level 5 Visit Includes:**
- Thorough “H&P, anemia, BP, EKG, weights
- LVAD Device Interrogation for alarms, flow, power
- PMK, ICD interrogation as needed
- Labs, CBC w diff, CMP, LDH, Mag, BNP, PT/INR
- Possible 2D echo
- 12 lead EKG
- Inspect drive line, change dressing
- Consider referral to Cardiac Rehab – improves mental health and overall well-being

---

**LVAD Shared Care Documentation**

<table>
<thead>
<tr>
<th>NYHA</th>
<th>NICU/ICU/Other</th>
<th>Last Visit</th>
<th>ICD check</th>
<th>Provider: Gleen Holen Gragnola</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Vital Signs:**
- **Blood:** Up or Down
- Tamp: ____________
- Pulse: ____________
- **Doppler:** ____________
- Resp: ____________
- Bp: ____________
- **Doppler:** Off: NAP ____________

**VAD Site:**
- Memeory: Y N
- Swelling: Y N
- Discharge: Y N
- Warm: Y N
- Pain: Y N
- Culture Sent: Y N
- No Abnormalities

**Equipment issues:**
- Anticoagulation / Labs:
  - INR
  - LDH
  - Mag
  - BNP

**Assessment:**
- HEFT
- Resp:
- Culture
- **JVD:**
- VAD Sounds
- **GEO:**
- Exhales
- Nausea
- Pain:

**Plan:**

---

Christine McIntyre, RN – Presented at the Economic Summit on VADs, October 1, 2015
LVAD Patient Evaluation = The Halo Effect

LVAD PT Evaluation typical procedures for hospital and Cardiologist
- R/L heart cath
- 3D Echo
- 12-lead ECG
- Chest CT or CXR
- Carotid Doppler
- Labs – metabolic panel, TSH, CBC, HgAIC, LFTs

Some HF pts have recurring Afib and were initially managed in the Afib center prior to LVAD evaluation.
- Testing included: 3D Echo, Ext Cardioversion, Additional work up may include, referrals for cancer screening, sleep apnea, ICD interrogation, etc.

Christine McIntyre, RN – Presented at the Economic Summit on VADs, October 1, 2015
BHLEX Results: Nov 2013 - Dec 2014

- DT Implants = 6 pts
  - (all pts are enrolled with BHLEX Shared Care Program)

- Referrals for DT evaluation by HF APRN = 5 pts
  - DT implanted = 2
  - Managed pts = 3

- Referred for DT evaluation – proceeded with transplant = 1 pt

- New DT implants – will be Shared Care in 1 mth = 3 pts
Results continued

- Total patient volume = 6 Shared Care patients

Procedures generated from Shared Care Program

- 13 HF Center APRN visits – E&M Level 5
  - 5 VAD Interrogations in HF Center
  - 2 pts for Lasix or Bumex diuresis mgmt in HF Center
  - Labs ordered – CMP, BMP, PT/INR, LDH, LFT

- 2 R/L heart cath
- 2 Echos 3D complex w color doppler
- 1 Cardiac Rehab Phase 2 referral
Our next steps; Opportunities for Growth:

“you can’t feel a pulse, you can’t get a blood pressure reading from a BP cuff and you can’t give pt CPR”

- Broaden the scope of education for LVAD to EDs and EMS in referring hospitals for potential pts in their community with LVAD

- Continue to educate physicians to refer patients earlier with first indications of worsening or severe HF

- Echo result triggers (similar to TAVR tracking) to identify pts

- Individualize instructions and plan of care for pts and share with PCP/Cardiology or invite them to pts initial post op shared care apmt

- Targeted marketing benefits—know your data and communicate to referring physicians - pt satisfaction, decreased readmissions, QOL outcomes

- Reinforce importance with pts to enroll in Cardiac Rehab HF program post implant (CMS HF Cardiac Rehab reimbursement started Feb. 2014)
Questions?

Thank you!

Christine McIntyre, RN – Presented at the Economic Summit on VADs, October 1, 2015