

## Improvement of Quality Metrics in Patients with Ischemic Vascular Disease (IVD), Coronary Artery Disease (CAD), and Congestive Heart Failure (CHF)

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# Improvement of Quality Metrics in Patients with Ischemic Vascular Disease (IVD), Coronary Artery Disease (CAD), and Congestive Heart Failure (CHF)

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## Background

Medicare's Shared Savings Program, in which Lehigh Valley Health Network participates, requires Accountable Care Organizations (ACOs) to demonstrate adherence to 33 quality guidelines.

Project goals:

- Identify patients from Lehigh Valley Physician's Group (LVPG) who are not in adherence with metrics for IVD, CHF, and CAD & potential reasons why not
- Educate providers and medical staff on documentation of allergies, contraindications, and intolerances to improve metric accuracy
- Encourage providers to prescribe medications related to each metric when appropriate
- Improve evidence-based patient care for IVD, CHF, and CAD

## Methods

1. Quality metrics for patients with cardiovascular disease chosen:

- IVD patients on antiplatelet therapy
- CHF patients with LVSD on beta-blockers
- CAD patients with LVSD/DM on ACE inhibitors/ARBs

2. Patients not in compliance with metrics were identified using the EPIC EMR

3. Patient charts were reviewed & relevant information documented in Excel spreadsheets for each metric (shown below for antiplatelet metric)

MRN	Provider	Age	Date of upcoming appt	Date of last appt	Practice Provider	Chart review completed (CPO, CE + EPIC)	Meds Transferred
GI bleed history/ chronic peptic ulcer	Hemorrhage	Fall Risk	Blood disorder/ low platelets	Allergy (specify reaction)	Severe kidney disorder (Stage IV, V, or end)	Intolerance due to side effect	
Other anticoagulants	N-saids	Chronic steroids	Documented Patient Preference	Other	Could potentially be on aspirin?		

4. Collected data was shared with a specified contact person at each of the practices

5. Each contact person updated the patient medication lists or consulted providers about adding medications if appropriate

6. Progress of each practice was tracked through weekly review of EPIC quality metric reports/graphs

## Results

**Table 1: Antiplatelet Quality Metric**

Charts Reviewed: 733 Practices: 8

Possible Clinical and Pharmaceutical Contraindications	Percentage of Total Patients Reviewed	Percentage of Patients not currently/previously on aspirin
On a blood thinner	31.4%	46.9%
History of Hemorrhage	7.5%	11.6%
GI Bleed/Ulcer	7%	10%
Fall Risk	7.4%	9.7%
Severe Kidney Disease	10%	14.4%
Use of N-saids	5.9%	6.3%
Chronic Steroid Use	5.2%	8.1%
Allergy	5.2%	N/A
Aspirin listed in past notes	45.4%	N/A

**Table 2: ACE inhibitor/ARB Quality Metric**

Charts Reviewed: 212 Practices: 3

Possible Clinical Contraindications	Percentage of Total Patients Reviewed
Hypotension, angioedema, renal insufficiency, hyperkalemia, bradycardia	18.9%
Intolerance	2.8%
Allergy	7.5%

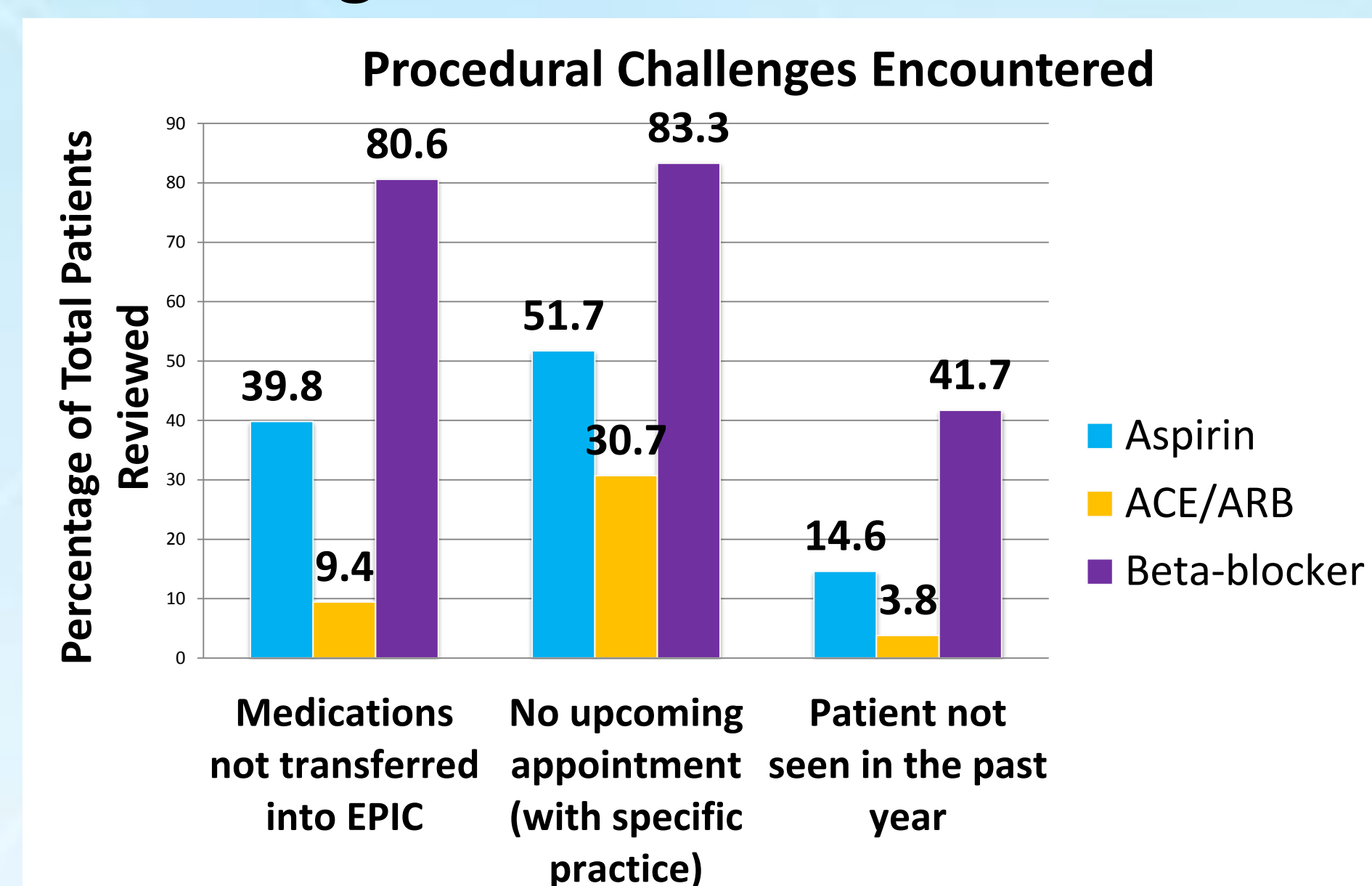
**11.0%** average increase in antiplatelet metric  
**13.0%** average increase in beta blocker metric

**Table 3: Beta blocker Quality Metric**

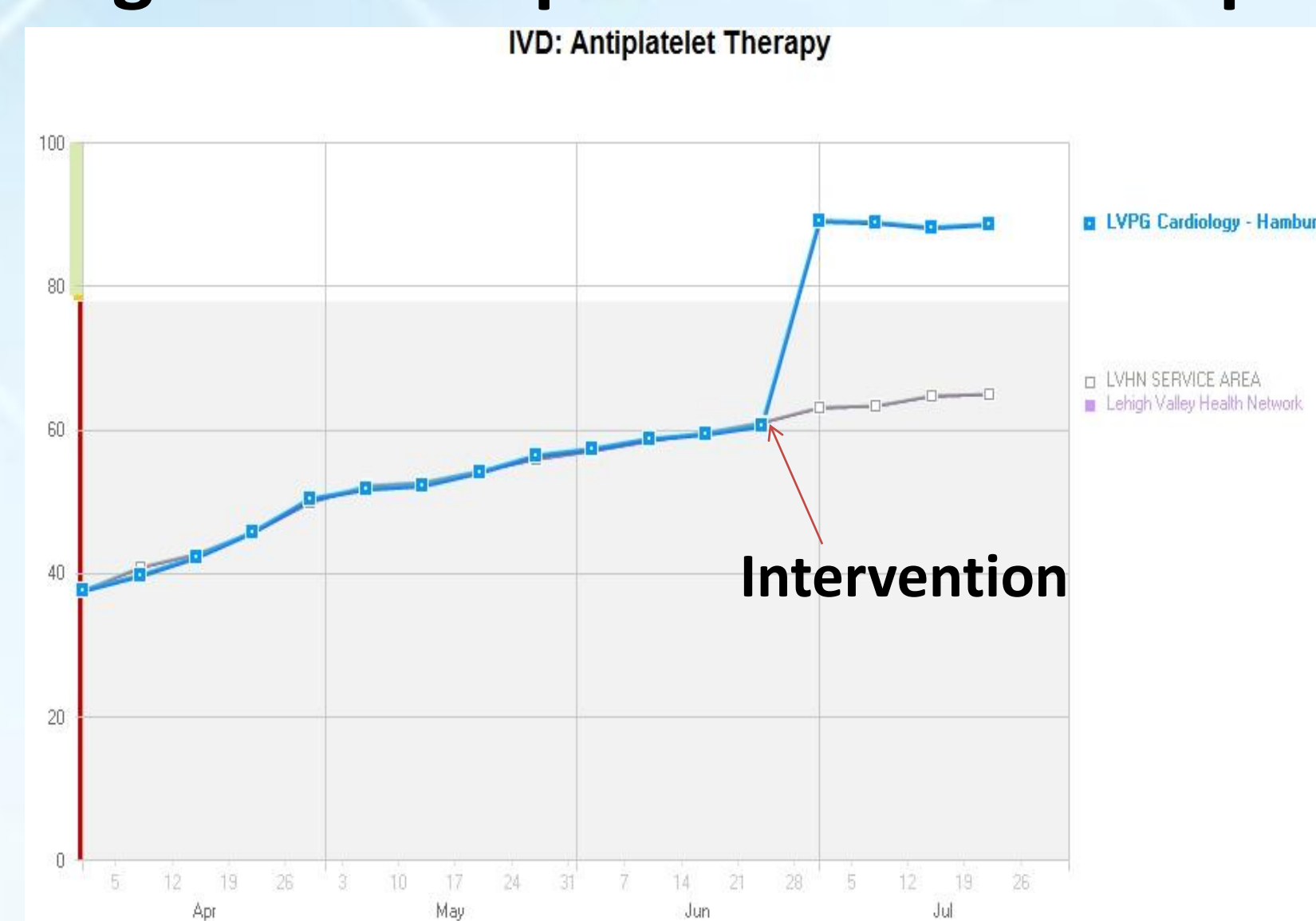
Charts Reviewed: 72 Practices: 1

Possible Clinical Contraindications	Percentage of Total Patients Reviewed
Severe Reactive Airway Disease	4.2%
Bradycardia	1.4%
Hypotension	2.8%
Intolerance	6.9%
Allergy	1.4%
Beta blocker listed in past notes	76.4%

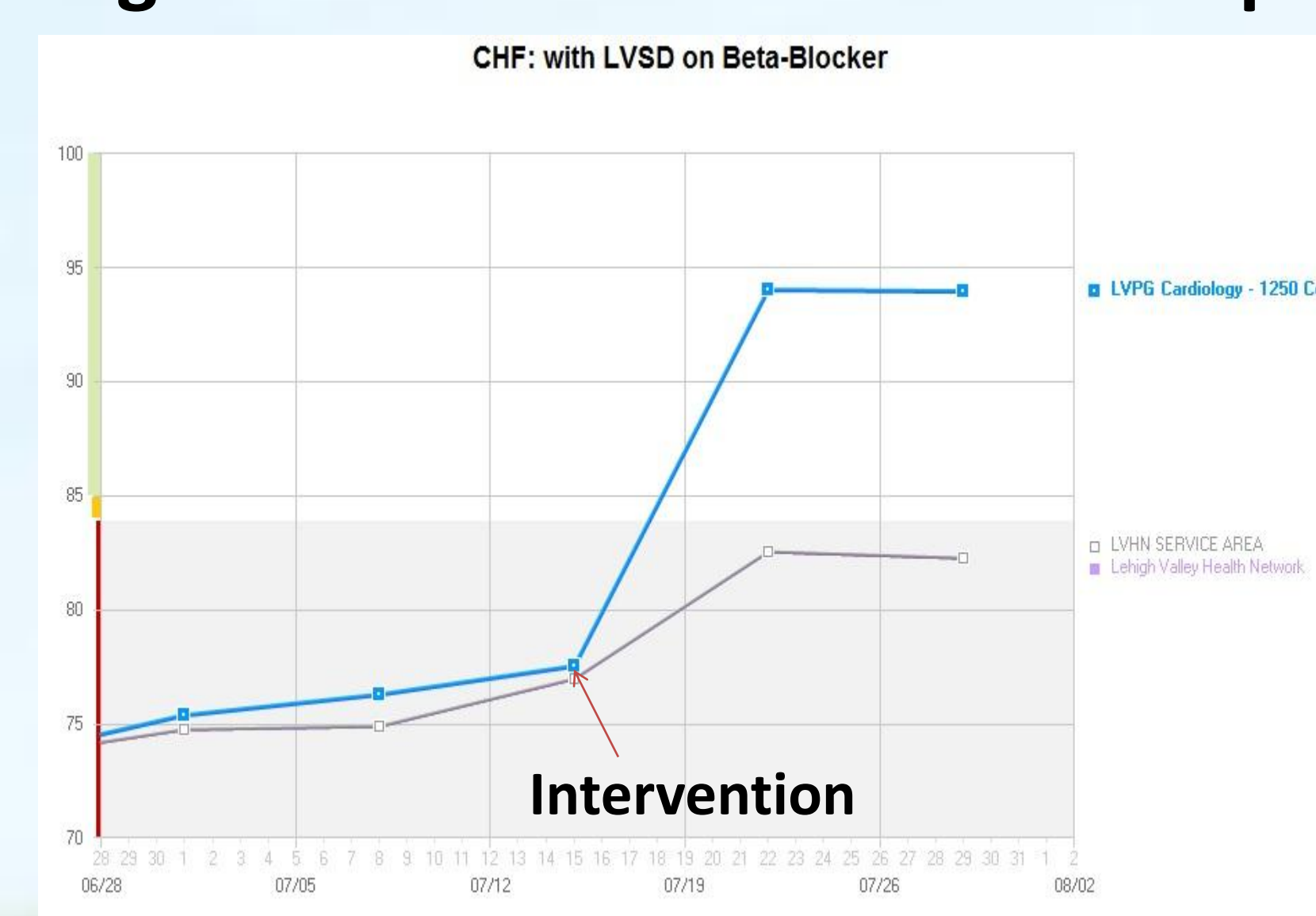
**Figure 1: Procedural Issues**



**Figure 2: Antiplatelet Metric Graph**



**Figure 3: Beta Blocker Metric Graph**



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## Discussion/Conclusion

Most common procedural problem was medication list not transferred with the average occurrence being 43.3% of patients. Also, 55.2% of patients did not have an upcoming appointment. This proves as a problem for the project in the future.

- Most common contraindications found:
  - Antiplatelet—use of blood thinner 31.4%
  - Beta blocker—intolerance (fatigue) 6.9% \*Only one practice examined
  - ACE inhibitor/ARB – clinical contraindications 18.9%

Improvement of the antiplatelet metric was seen in all practices. Three practices now meet Medicare's metric goal of >77.7%. Additionally, the percentage of patients on beta blockers at three practices now meet Medicare's Metric goal of >83.4%. ACE/ARB improvement was not able to be tracked due to difficulties in definitions for metric within EPIC.

## Future Directions

Education tools developed for sustainability:

- A PowerPoint for practice education with EPIC screenshots for documenting allergies, intolerances, contraindications, and declinations and for how to generate, customize, and filter reports
- Review of reports regularly to determine patients coming in for an appointment who are not receiving standard of care medications
- Follow work flows to address patients not meeting standards
  - Version 1: entire flow chart on a single page with yes or no questions asked of the person and then directions based on the answers
  - Version 2: booklet format including information on risk assessment tools

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