Same-Day Discharge in Patients Undergoing Elective PCI: How Barnes-Jewish Hospital Used National Cardiovascular Data Registry (NCDR®) CathPCI Registry® Risk Models to Develop a Novel 'Patient-Centered' Approach

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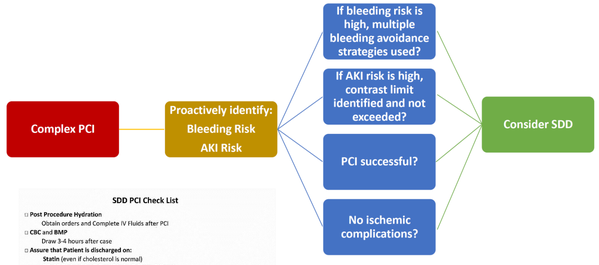
Background

- Same-Day Discharge (SDD) after elective percutaneous coronary intervention (PCI) is primarily performed in low-risk patients.
- We examined a 'Patient-Centered' approach to enable SDD in an 'all-comer' high-risk, complex, elective PCI population at Barnes Jewish Hospital (BJH).
- We evaluated a time trend in SDD while comparing patient characteristics, outcomes, satisfaction, and cost in a large, urban academic medical center.

Methods

- From July 2014 to September 2015, we developed and implemented a SDD protocol for complex PCI patients, using individualized patient risks and collaborative decision-making between nurses and physicians at BJH.
- We used a nurse-led health IT solution (ePRISM) pre-PCI to proactively identify risks of bleeding, mortality, and AKI using CathPCI Registry risk models.
- SDD was based upon collaborative decision-making on mitigation of risks via bleeding avoidance therapies (BATs), minimizing contrast volume, PCI lesion complexity, and post-procedure nursing evaluation.
- Nursing team used a standardized checklist to ensure proper cath lab discharge and patient management (see Figure).
- Safety and patient satisfaction with SDD was evaluated via a follow up phone call the next day.

Methods Continued



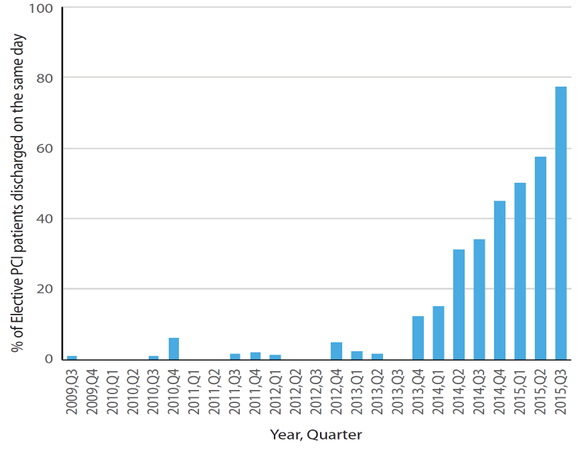
SDD PCI Check List

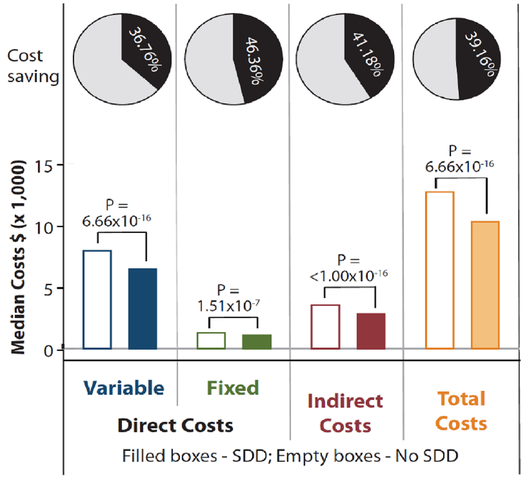
- ☐ **Post Procedure Hydration**
  - Obtain orders and Complete IV Fluids after PCI
- ☐ **CBC** and **BMP**
  - Draw 3-4 hours after case
- ☐ **Assure that Patient is discharged on:**
  - **Statin** (even if cholesterol is normal)
  - **P2y12 Platelet Inhibitor** (Plavix, Brilinta, Effient)
  - **Aspirin**
- ☐ **Provide Home Discharge Packet**
  - Stent Card
  - Stent Patient Information Guide
  - Cardiac Rehab Brochure
  - Angioseal Brochure
  - Discharge Instructions
- ☐ **Use Mobile Pharmacy for New Prescriptions**
  - **Fax** a copy of the **Prescriptions** and a **Completed Mobile Pharmacy Form** to 314-747-3055.
  - *Note: Must provide patient's Home Pharmacy Information on Form.*
  - Jackie may have Rx Savings Cards for some of the newer medications at her desk (Brilinta, Crestor and Effient). Please send these savings cards when applicable.
- ☐ **Schedule Follow-Up Cardiology Appointment**
  - Contact Primary Cardiologist's Office for appointment 1-6 weeks out.
  - **For Washington University BJH Physicians call 314-362-1291 option #1.**
  - If the follow up is greater than 6 weeks out ask the MD office to contact the patient at home to schedule appointment.
- ☐ **Assure Discharge Stability:**
  - Patient must walk, eat and void prior to discharge. Must be free of groin or bleeding complications have no SOB or CP. Groin site should be checked again 3-4 hours after closure device.
- ☐ **Leave Info for Next Day Follow Up call**
  - Please note in the PCI book at Cath Lab Triage Desk that patient was a Same Day Discharge. If they are not going home please leave the patient's contact phone number.

Results

- We analyzed NCDR CathPCI Registry Data from July 2009 to September 2015 (N=1,752).
- SDD occurred in 230 (13%) patients, but increased rapidly from 0% to 77%, p<0.001 (see Figure).
- While SDD patients were comparable to Non-SDD patients, SDD was not associated with adverse outcomes: 0% mortality, 0% bleeds, and 0.4% AKI.
- Costs were lower in SDD by $6,710 (p <0.001) (see Figure).
- Patient satisfaction was high with same-day discharge.

Results Continued





Conclusion

- SDD rapidly increased and was achieved in 75% of elective PCIs despite PCI complexity, when NCDR CathPCI risk models were used in a nurse-led patient centered approach.
- Utilization of health IT tool (ePRISM) allowed for proactive PrePCI risk mitigation thereby enabling safe SDD in more complex patients.
- Our study underscores an important opportunity to improve patient satisfaction and lower costs among high-risk, elective PCI population.

Disclosures

Amit Amin, MD, MSc: National Center for Advancing Translational Sciences of the NIH; National Cancer Institute of the NIH; AHRQ; Medicines Company; Terumo; AstraZeneca.
Marissa Pendegraft RN, BSN: No Disclosures.
Brandon Rahn, MHA: No Disclosures.
ePrism is part of Health Outcomes Sciences, which has a strategic partnership with the ACC.

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