



Developing a Successful TAVR Program/Clinic: The Team Approach

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The Heart Valve Center NYP-Columbia University Medical Center

- Collaboration between Department of Medicine and Surgery
- Vision is to create a world renowned multidisciplinary center for the treatment of valvular heart disease
- Provide a “one stop shop” for referring physicians and patients
- Valve center brand is marketed both internally and externally



Essentials for a Successful Program

- Strong support from administration
- Programmatic goals
 - Short-term
 - Long-term
- TAVR Team
 - Collaborative relationships between essential divisions and departments (Interventional Cardiology, CT Surgery, Nursing, Echo, Radiology, Vascular, Cardiology, Anesthesia)
 - Role designation/Processes for communication




Essentials for a Successful Program

- Develop mechanisms for efficient evaluation
 - Valve clinic (multispecialty)
 - Inpatient service
 - Multidisciplinary rounds
 - Dedicated service attending
 - Access to advanced imaging
- Strong referral base within and outside institution
 - Maintain communication with referring providers




Team Based Approach

CAD	AS
<ul style="list-style-type: none">• Interventional Cardiologist• CT Surgeon• Clinical Cardiologist• PA/NP	<ul style="list-style-type: none">• Interventional Cardiologist• CT Surgeon• Clinical Cardiologist• Imaging Specialist• Anesthesia• Intensivist• Radiologist• PA/NP




How to Form the Team?

- Find interested motivated individuals
 - 'cutting edge'
 - Generally earlier in career
- Focus on treating valve/structural disease
 - Not TAVR vs. sAVR, TA vs. TF
- Align organization and incentives
 - All benefit from treating patients
 - Allows unbiased decisions





Who/What Do You Need?

- **Collaborative environment**
 - Joint evaluation by CT Surgery and Interventional Cardiology
 - Essential input from an experienced Echocardiographer
- **Program coordinator(s)**
 - NP/RN/PA
 - Facilitate efficient evaluation
 - Patient triage
 - Assist with clinical oversight and communication with referrals
 - Patient/family education
- **Administrative support**
 - Dedicated phone line with "live" coverage
 - Database to track patients, referring physicians etc.
- **Medical assistant(s)**




Development of Heart Valve Team

2007	2009	2014
<ul style="list-style-type: none">• Interventional Cardiology and Cardiac Surgery Physicians• One Research Coordinator• No dedicated echo personnel• No Registry	<ul style="list-style-type: none">• Interventional Cardiology and Cardiac Surgery Physicians• One Nurse Practitioner• Research Nurse and research coordinator• Agreement with echo department to provide coverage with dedicated personnel	<ul style="list-style-type: none">• Interventional Cardiology and Cardiac Surgery Physicians• Three Fellows• Three PAs• Two Research Nurses and three research coordinators• Full time echo attending• Dedicated echo tech and echo machine




Who Should Do TAVR?

- **Only well trained qualified individuals**
- **This is done as a team**
 - Not a single operator procedure
 - Focus needs to be on catheter skills
 - Surgical skills must be available
 - Best served by having multiple expertise
 - Interventional Cardiologist/ Cardiac Surgeon
 - Echo, anesthesia, nursing
- **Team is ideally a formal structure**



TAVR Procedural Requirements

- Hybrid OR and/or Cath Lab
 - Location will vary from institution to institution
 - Necessary surgical and interventional equipment must be available in either location
 - Cardiopulmonary bypass on stand-by
- Staff education and training
 - Core group to "own" TAVR procedures
 - Cath lab/OR cross-training
 - Scrub/circulating nurse roles
 - Create familiar environment for staff
 - Worst-case scenario planning



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Pivotal Processes

- Referral Management
 - Telephone Triage /Scheduling
 - Receipt and review of records
- Communication
- Clinical Management
 - Valve Clinic oversight
 - Evaluation/ Patient/family education/consent process
 - Inpatient Service
- Team Communication
 - Regular team meetings
 - Operations
 - Patient review
 - Coordination of procedures

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Inpatient Valve Service

- Dedicated service to facilitate management of the TAVR patient population
- Standardize protocols for post procedural patient management
- Include PAs, NPs, RNs, Fellows (surgery and interventional)
- Identify key sub-specialty consultants
 - GI, Neurology, EP, Pulmonary, Psychiatry, etc
- Strong relationships with ancillary services
 - Social workers
 - PT, OT
- Continued communication with referring physicians during inpatient stay

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HEART VALVE CLINIC



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Expectations

<u>Patients</u>	<u>Reality</u>
<ul style="list-style-type: none">• Easy access to appointments• They will be seen on time• All questions will be answered• A decision will be made that day• They will leave happy	<ul style="list-style-type: none">✓ Appointment within 10 days✓ AS/TAVR discussion is long - We are sometimes on time✓ We try and answer ALL questions✓ We CAN Have an answer that day✓ They usually leave happy

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Who Should be in Valve Clinic? EVERYONE

- Surgeon
- Cardiologist/Interventionalist
- TAVR Coordinator (PA/NP)
- ECHO Attending
- Research Team
- Registry Coordinator
- Medical Assistants
- Front Desk Personal

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Components to a Successful Clinic

- Chart Review PRIOR to appt
 - Calc STS, review studies, Cheat Sheet
- Registration materials mailed prior to appointment
- Obtain ALL images/reports prior to appt and review PRIOR to seeing the patient
- Have any additional testing done at your facility PRIOR to appt - Repeat ECHO, PFTs, etc.
- Hardware/Software for image review
- Plan formulated and all tests scheduled at end of visit
- Referral MDs called/letter mailed within 24 hours of visit
- Dedicated database to track patients and referral patterns



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Organization is Key!

NAME	DOB	ADDRESS	PHONE	EMAIL	PROVIDER	STATUS	DATE	REMARKS
...
...



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Team Approach

- Having the ENTIRE Team in Clinic will aide in the clinical decision making process
- Seen by Interventional Cardiologist and Cardiac Surgeon during same initial visit
- Begin Research and Registry requirements
- This will ease the decision process and will please the patient by having the answer in the SAME day



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Summary: Strategies for Success

- Identify Team Members and Role Designation
- Formalize
 - Processes for managing referrals and evaluating patients
 - Operational structure
 - Establish relationships between essential divisions
- Communication channels
 - Standardize communication channels
 - Follow up requirements
- Expect speed bumps and be prepared for frequent adjustments along the way

The Heart Team is Here to Stay

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STATE-OF-THE-ART PAPER

The Heart Team of Cardiovascular Care

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The management of complex cardiovascular disease has changed markedly with the development of new strategies of care, an increasing amount of scientific evidence-based data and appropriate use criteria. Applying this plethora of information and synthesizing it for presentation and recommendations to the patient and family have assumed central importance. To facilitate this process of patient centric evidence-based care multidisciplinary Heart Teams have become identified as cornerstones. While specific strategies for implementation of these teams will vary, this broad approach will become the standard of cardiovascular care. (J Am Coll Cardiol 2013;61:903-7) © 2013 by the American College of Cardiology Foundation

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