

WellSpan York Hospital

Site Best Practice

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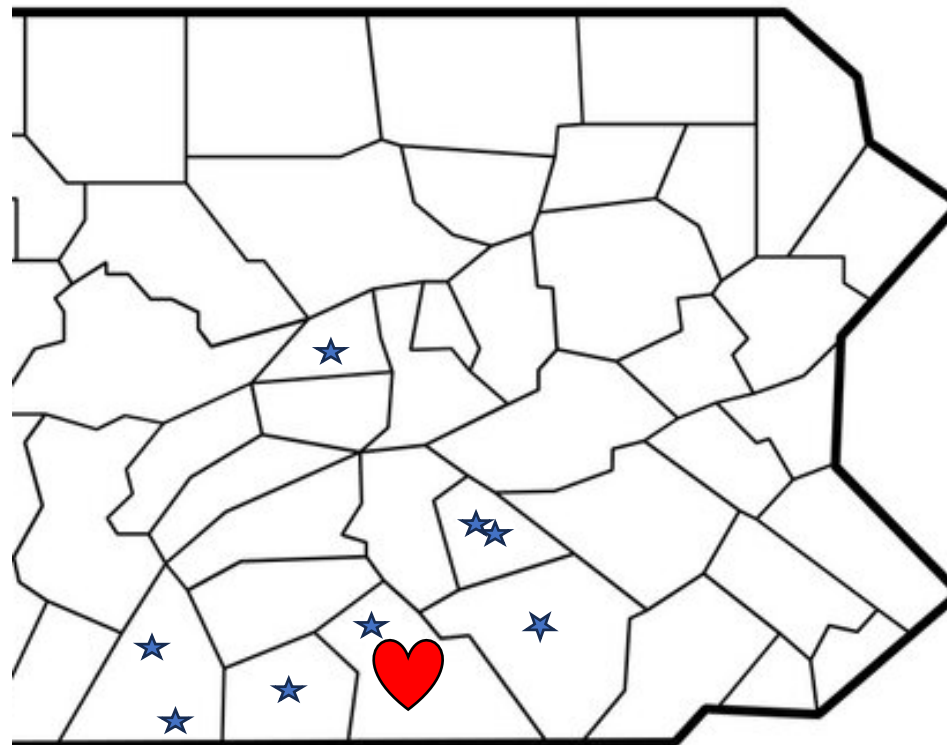
Target: Aortic Stenosis™



- 593 beds
- Level 1 trauma center
- Advanced Comprehensive Stroke and VAD center accreditation through DNV
- Gold level ELSO Excellence in Life Support Award
- Chest Pain Center Accreditation through ACC
- Teaching hospital with 9 residency programs and a cardiology fellowship
- Leapfrog “A” Designation
- High performing TAVR center recognized by US News & World Report
- 2025 Target AS Honor Roll



York Hospital
Structural Heart Program
1001 S. George St
York, PA 17405
717-812-3617



Satellite hospitals range from 1-2 hours away





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Where we began and what drove us to change

- Over 900 referrals per month were routed to a general cardiology work queue that was managed by non-clinical team members
 - Referrals for aortic stenosis (AS) were not prioritized
 - Patient appointments generated from AS referrals were often scheduled with the incorrect provider
 - Referrals from outlying areas returned to York multiple times for testing and office appointments
 - Evaluation of patients by Multidisciplinary Team (MDT) took longer than 10 weeks to complete
 - Definitive treatment for severe AS was complete >100 days
- Structural Heart (SH) nursing team was not made aware of patients until after initial appointment or sometimes not at all
 - Delay between appointment and bringing back for required testing because general cardiology was scheduling testing and it was not prioritized or expedited
 - Patient frustration due to length of time for work up and multiple trips to York



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Target: Aortic Stenosis™

- In 2021, a “flag” was created. A yes/no click box for “Is this a Structural Heart”. Referrals are routed to a work queue managed by the SH program Registered Nurses (RNs)
- In 2022, a “Structural Heart Program/TAVR” was added to a specialty services box. Since other specialty services referrals were also created, systemwide education took place.
- Even if department location is selected, if specialty service is also selected, the default is for the referral to come to the specialty program

Ambulatory referral to Cardiology ✓ Accept ✗ Cancel

Class: Incoming Referral Internal Referral Outgoing Referral

Referral: Override Restrictions

To Department: ! 🔍

WellSpan Cardiology - Carlisle WellSpan Cardiology - Saint Paul Drive
WellSpan Interventional Cardiology - Chambersburg WellSpan Cardiology - Ephrata
WellSpan Cardiology - Baltimore Street WellSpan Cardiology - Lancaster
WellSpan Cardiology - Lebanon WellSpan Cardiology - New Holland
WellSpan Cardiology - Shippensburg WellSpan Cardiology - Gettysburg
WellSpan Cardiology - Waynesboro WellSpan Cardiology - Heart and Vascular Center
WellSpan Cardiology - Cross Keys WellSpan Cardiology - Palmyra
WellSpan Heart and Vascular Center in Lewisburg

To Department Specialty: Cardiology 🔍

To Provider: 🔍

Reason: Specialty Services Required 🔍 Specialty Services Required Second Opinion Patient Preference
 Patient Self Referral

Priority: Routine 🔍 Routine Urgent

Number of Visits: 1 📅

Please select any of the following specialized services, if appropriate (optional):

ED Protocol for Chest Pain ED Protocol for Afib Surgical Clearance Heart Failure Program
Structural Heart Program/TAVR Watchman/LA Appendage Occlusion Inherited Cardiovascular Diseases Clinic
Complex Lipid Program Peripheral Vascular Disease Program Women's Health/Pre-eclampsia Program Covid Care
Post Procedure/HOS f/u (Cardiology Use Only) Transfer of Care (Cardiology Use Only)
Medication Titration (Internal HF/Cardiology Program Use Only) Complex Coronary (Cardiology Use Only)

For Urgent Referrals Within 3 days 1-2 weeks 3 weeks Within the month

⌵ Additional Order Details





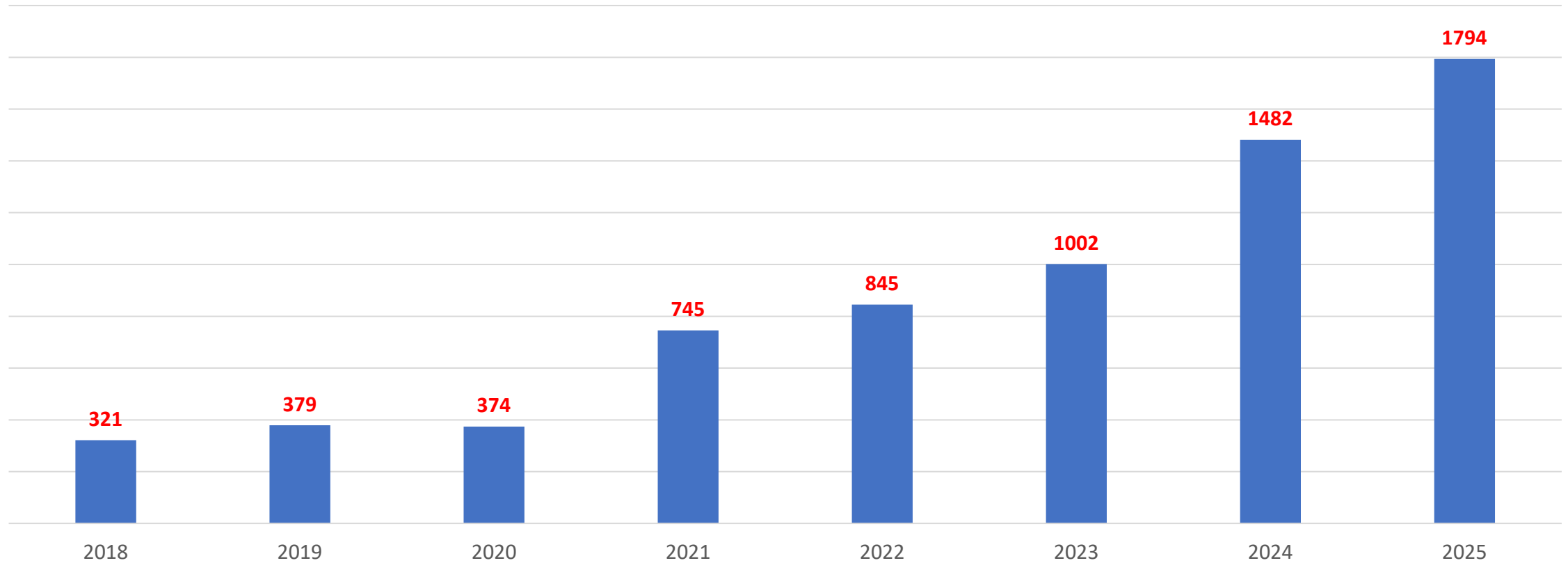
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If you build it...they will come....

Yearly Referral Volume

*includes aortic, mitral, tricuspid, and ASD/PFO



SH Flag added to referral in 2021

Ambulatory referral order with all specialty services go live date – March 15, 2022



Valve Clinic 2023 up to April 2025	CTA	Joint IC & CTS appointment
Patient 1	0800/0830	1245
Patient 2	0830/0900	1315
Patient 3	0900/0930	1345
Patient 4	0930/1000	1415
Patient 5	1000/1030	1445

- Created flag on the referral for patients who were not ready for intervention
- SH Non-Invasive Cardiology work up



General
Referred By/To
Diagnoses
Services
Scheduling
Appointment List
Communications
Flags
Referral Details
Authorization
AETNA A*/AETNA A*
Coverage Auth

Flags

Card SH NI Work-Up

Title

Card Not Structural Heart Program Referral

Card Not Watchman/LA Appendage Occlusion Program

Card Peripheral Vascular Disease Program

Card SH NI Work-Up

Card Structural Heart Program Referral





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Aortic Nurse Protocol

Aortic Patients must meet any of the following criteria before pended orders are sent to the APP for review:

- Echo shows a mean gradient of 35 mmHg
- Echo shows a peak velocity of 3 m/s and moderate AI
- Invasive mean gradient > 35 mmHg
- For patients meeting the above criteria, documentation of the referring physician, indication for referral, and cardiac testing completed to date will be sent to the APP for review. Outpatient testing orders as indicated below will be pended to the APP for review and signature

The following orders may be pended in the note for review and signature by the APP.

- Transthoracic Echo
- CTA of Chest, Abdomen/Pelvis per TAVR protocol
- Carotid Ultrasound Duplex
- Pulmonary Function Test
- Lab work: CBC with diff, BMP, CMP, BNP, PT/INR, LDH, total bilirubin, pre-albumin, Pre-admission blood bank screen, nickel allergy testing panel
- COVID-19 PCR (if required per current hospital guidelines)
- Urinalysis & Culture if indicated
- Ambulatory Referrals to Cardiology, CT Surgery, Heart Failure

*referrals that do not meet this criteria are reviewed with SH APP for guidance on next steps



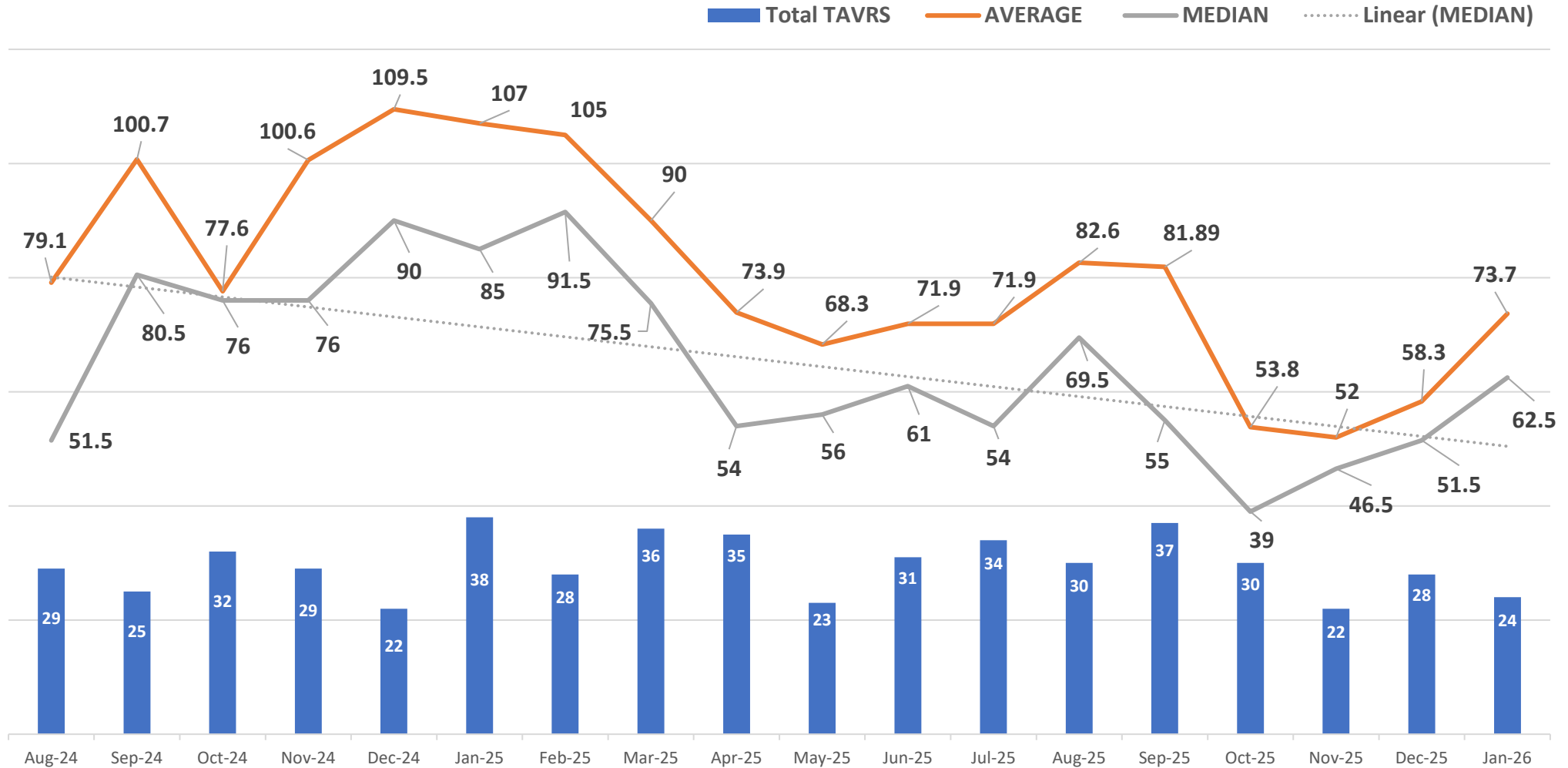
Sample of Current Valve Clinic

3/27/2026					
	APP: AH		IC: Dr R		CTS: Dr B
	CTA		CARDIOLOGY		CARDIAC SURGERY
		10:00	MINNIE	10:00	MICKEY
		10:30	MICKEY	10:30	MINNIE
8:00/8:30	MINNIE	11:00	DAISY	11:00	DONALD
8:30/9:00	MICKEY	11:30	DONALD	11:30	DAISY
9:00/9:30	DAISY	12:45	PLUTO	12:45	GOOFY
9:30/10:00	DONALD	1:15	GOOFY	1:15	PLUTO
10:00/10:30	PLUTO	1:45	CHIP	1:45	DALE
10:30/11:00	GOOFY	2:15	DALE	2:15	CHIP
		2:45	JESSIE	2:45	WOODY
		3:15	WOODY	3:15	JESSIE





Referral to TAVR in Days



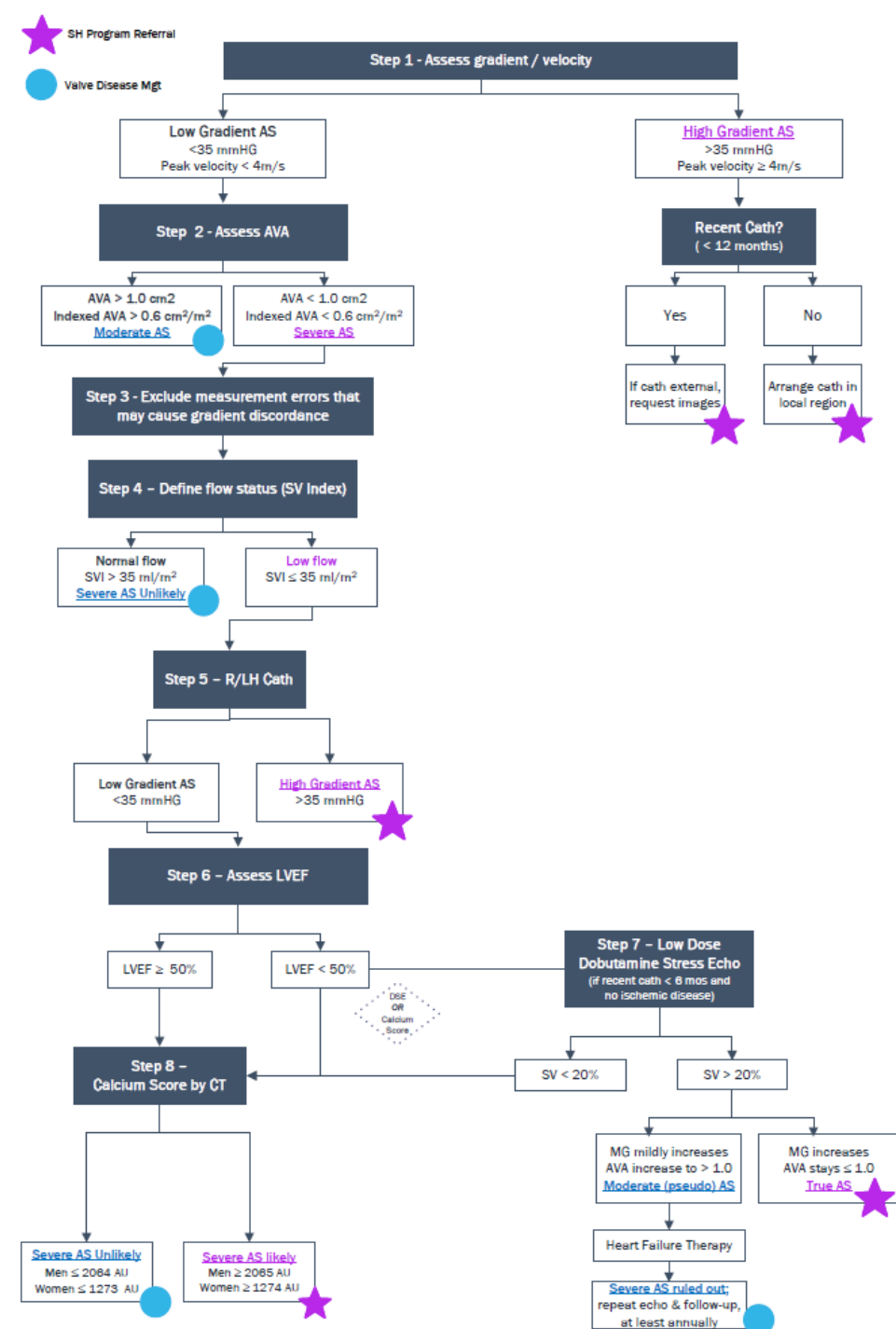
Trial dates for expanded valve clinic: 11/15/2024, 12/13/2024, 12/20/2024, 2/7/2025, 3/28/2025

GO LIVE Date: 4/4/2025



System Wide Education

- Met with referring providers at our satellite hospitals
- Shared aortic stenosis algorithm
- Encouraged completion of multimodal testing to confirm severity of aortic stenosis and expedite work up prior to referral to our team
- Increased patient satisfaction that some testing can be local





68 yo M with history of HTN, type 2 DM, COPD, prior CABG in 2016 & lives 1 hr 15 min away from York

- ❑ 2/13/2025 TTE (local hospital)
 - ❑ EF 45-50%
 - ❑ AV peak velocity 4.41 m/s
 - ❑ AV peak gradient 78 mmHg, mean gradient 41 mmHg
 - ❑ AVA 0.53 cm²
- ❑ 2/27/2025 appt with primary cardiologist
- ❑ 3/14/2025 RLHC (local hospital)
 - ❑ Patent LIMA to LAD/D1
 - ❑ Dominant LCx with luminal irregularities
 - ❑ RCA no disease
- ❑ 3/14/2025 Ambulatory referral to Structural Heart Program
- ❑ 3/17/2025 @1421 SH RN reviewed referral and pended orders for creatinine, CTA per TAVR protocol, and ambulatory referral to cardiac surgery to SH APP based on nursing protocol. Order signed by APP @ 1539
- ❑ 3/18/2025 @ 1148 SH RN made initial call to patient. Educated about AoS, CTA, dual appointments and dental clearance. Scheduled appts in EPIC. Mailed welcome packet with education, appt reminders and directions
- ❑ 4/4/2025 CTA & Valve Clinic (York)
 - ❑ Arrive @0830
 - ❑ CTA @0900 – calcium score 6004 AU
 - ❑ MDT review prior to physician appts
 - ❑ Interventional Cardiologist @ 1100
 - ❑ Cardiac Surgeon @ 1130
 - ❑ SH RN education/schedule procedure @ 1200
- ❑ 4/8/2025 TAVR (York)
- ❑ 4/9/2025 Discharged home

53 days from echo to intervention
25 days from referral to intervention



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In Summary...

- Redirecting SH referrals from non-clinical cardiology office staff to SH program RNs with established nurse-driven algorithms and protocols, decreased time to evaluation by MDT.
- The SH RNs establish an early relationship with patients and families upon referral which decreases their fear and anxiety while building trust between the clinical team and the patient.
- MDT valve clinic with CTA & same-day appointments save patients from multiday travel, increasing efficiency and patient satisfaction

Structural Heart Program Coordinator

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Sophia Pabon, RN
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Target AS data abstractors: Rachel Landis & Jordan Sheffer



*Thank you
for your
attention!*