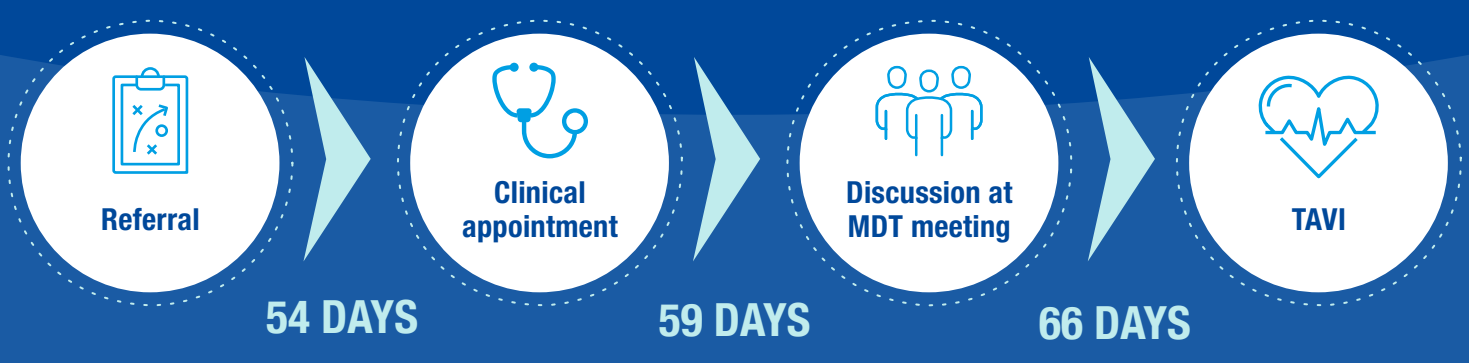
Access to TAVI in Europe

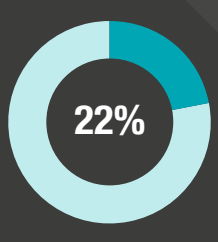
Even before the COVID-19 pandemic, TAVI waiting lists posed a problem

In the NHS, the demand for TAVI outstrips capacity resulting in long waiting times. A survey of UK TAVI centres calculated mean waiting times.[1]

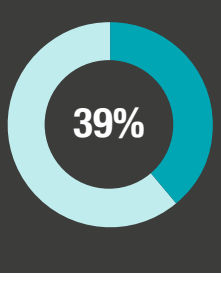


Long wait times are responsible for high mortality rates

Hospitals with lower TAVI capacity have greater wait times, resulting in higher morbidity and mortality.[2] A focused analysis in one large centre revealed:[1]



OF TAVI PROCEDURES WERE IN HOSPITALISED PATIENTS



OF URGENT IN-PATIENT PROCEDURES WERE DECOMPENSATED PATIENTS WAITING FOR TAVI

Even for patients undergoing successful TAVI, pre-procedural waiting times significantly increase rates of post-procedural mortality in Caen University Hospital.[3]

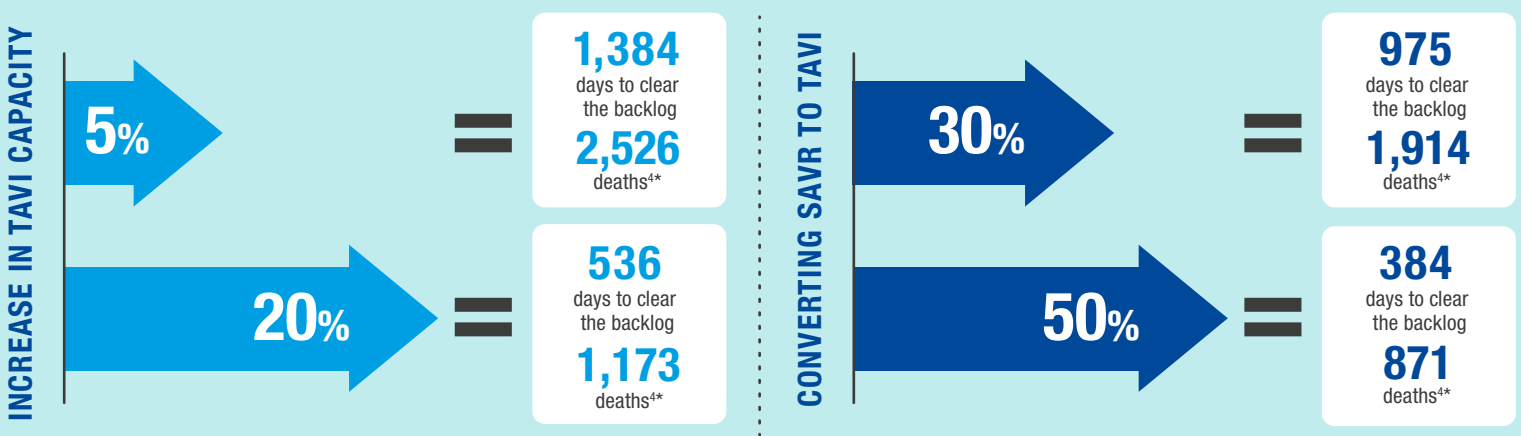
MEAN WAIT TIME WAS 144 DAYS[3]

DEATH IN 14.4% OF PATIENTS WITHIN A YEAR[3]

RISK OF DEATH WITHIN A YEAR INCREASED BY 2% PER WEEK OF WAIT TIME[3]

A considerable increase in access to TAVI is necessary to address backlogs from COVID-19

In the pre-COVID-19 period, the routine capacity for treatment of severe AS was set to cover the normal incidence rate, making clearing the backlog (from March to November 2020) of ~4989 untreated AS cases impossible.[4,5]



Increasing capacity and converting of SAVR to TAVI may clear the backlog within a year

Increased capacity and conversion from SAVR to TAVI should be of interest to decision makers[4]

*Peer reviewed outcomes from a mathematical model propose strategies to clear the backlog.[4]

Appropriate early discharge is a safe and effective way to increase TAVI capacity

Patients appropriately selected for early discharge have low rates of all-cause mortality, as well as other post-procedural complications.

Early discharge[6]	Eligible patients (%)*	Stroke (%)	PPI (%)	Major bleeding (%)	Major vascular complications (%)
Low risk, discharge ≤3 days	71	0	4.3	0.3	0.3
High risk, discharge >3 days	23.5	2.8	15.9	6.5	4.7

*Low risk, discharged >3 days = 4.3%, high risk, discharged ≤3 days = 1.2%; PPI = Permanent pacemaker implantation.

Same-day discharge was achieved in 5.8% of the patient population[7†]

2.8%

Rate of 30-day cardiovascular readmissions[7]

0%

Rate of vascular access complications[7]

0.8%

Rate of post-TAVI PPI[7]

†in patients with mean age 78 years, Median Society of Thoracic Surgeon score 2.4%, baseline permanent pacemaker rate 32.3%, median pre-TAVI LVEF of 58%

AS = Aortic stenosis, MDT = Multidisciplinary team, PPI = Permanent pacemaker implantation, SAVR = Surgical aortic valve replacement, TAVI = Transcatheter aortic valve implantation

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References:

1. Ali N, Faour A, Rawlins J, et al. "Valve for Life": tackling the deficit in transcatheter treatment of heart valve disease in the UK. *Open Heart*. 2021;8(1).
2. Henning KA, Ravindran M, Qiu F, et al. Impact of procedural capacity on transcatheter aortic valve replacement wait times and outcomes: a study of regional variation in Ontario, Canada. *Open Heart*. 2020;7(1).
3. Roule V, Rebouh I, Lemaitre A, et al. Impact of wait times on late postprocedural mortality after successful transcatheter aortic valve replacement. *Sci Rep*. 2022;12(1):5967.
4. Stickels CP, Nadarajah R, Gale CP, et al. Aortic stenosis post-COVID-19: a mathematical model on waiting lists and mortality. *BMJ Open*. 2022;12(6):e059309.
5. Martin GP, Curzen N, Goodwin AT, et al. Indirect Impact of the COVID-19 Pandemic on Activity and Outcomes of Transcatheter and Surgical Treatment of Aortic Stenosis in England. *Circ Cardiovasc Interv*. 2021;14(5):e010413.
6. Barbanti M, van Mourik MS, Spence MS, et al. Optimising patient discharge management after transfemoral transcatheter aortic valve implantation: the multicentre European FAST-TAVI trial. *EuroIntervention*. 2019;15(2):147-154.
7. Barker M, Sathananthan J, Perdoncin E, et al. Same-Day Discharge Post–Transcatheter Aortic Valve Replacement During the COVID-19 Pandemic. *JACC: Cardiovascular Interventions*. 2022;15(6):590-598.