

Implementing High Value Care in Europe

# Third party quality registry

## The Netherlands Heart Registry

### Context

The Netherlands Heart Registry (NHR) is a non-profit organisation facilitating a HVC programme for cardiac diseases across 22 Dutch heart centres. This registry was established in 2012 under the name of Meetbaar Beter ('Measure Better') and merged into the NHR, a third party connected to the national associations of cardiologists and cardiothoracic surgeons, ensuring a clinician-driven perspective. With a budget of €1.7 million, NHR is committed to serving clinicians' needs to benchmark performance against a standard and compete effectively in the market. Through public reporting, NHR serves cardiac patients and health system users in making outcome data visible and patient choice possible<sup>1</sup>.



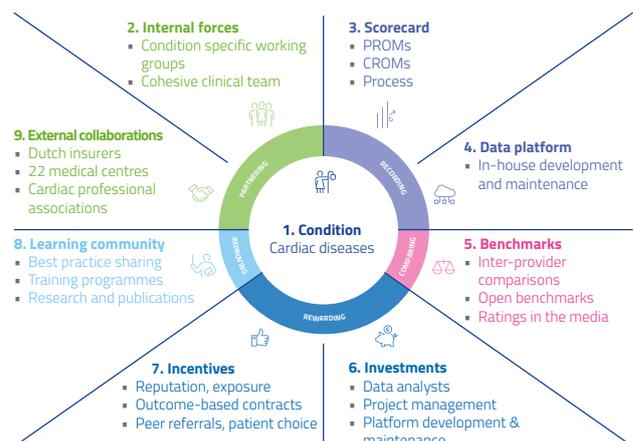
### Achievements

As of 2018, NHR had collected data across five conditions and 12 treatment options, representing 85% of complex heart care in the Netherlands. Between 2015 and 2017, the 120-day mortality rate for the Transcatheter Aortic Valve Implantation (TAVI) dropped by 17%. For combined aortic valve disease and coronary artery disease, the 120-day mortality dropped by 38%<sup>2</sup>. Completeness of published data is 99% on average, with more than 500

quality checks performed annually on 600,000 endpoints for patient relevant outcomes. The registry covers over 1.3 million cardiac procedures across the Netherlands, with an increase of 80,000 per year. It has been recognised and accepted as a public utility, with mandatory hospital interventional cardiology and cardiac surgery license registrations embedded in the database.

### Implementation

NHR implements its organisational strategy with an eye towards the HVC plan of the institutions it serves, aiming to support hospitals and heart centres in their Matrix implementation. NHR assists medical centres with an implementation handbook, standard operating procedures and guidelines for data collection. The NHR support of the Hospital Implementation Matrix is presented on the right.





## Scorecard

For each cardiac condition covered in the registry, NHR builds registration committees to select, define and maintain the most relevant scorecards. Registration committees collaborate in a multidisciplinary way, including both cardiologists and cardiothoracic surgeons from participating heart centres, and are organised around specific cardiac conditions. Further solidifying and maintaining clinician buy-in is a rigorous validation process conducted by NHR statisticians and experts in medical decision-making. NHR also works with independent organisations in data validation, including through the international academic advisory council (IAAC), and councils on methodology, data management and statistics.



## Internal forces

NHR assembled an expert panel to ensure the involvement of health insurers, as well as patient and government organisations. *"Our main focus is that hospitals send good quality data,"* says Dennis van Veghel, Director and cofounder of NHR. *"We are here to help them. It's a collaboration based on trust"<sup>3</sup>.* The NHR database is critical to hospitals in catalysing internal dynamics focused on data, benchmarking, and improvement, and the trust in the data quality enables clinical leadership to point the team in the direction of a concrete target. The public data also creates a competitive market place, with a common objective between the teams, which further sharpens the focus of cardiac departments on achieving higher quality outcomes.



## Data platform

In addition to these processes to validate the data, NHR implements safeguards to minimise errors and give clinicians the opportunity to verify data before reports are made public. For one, the reporting process is programmed to reject the upload of data documents that include errors into the system. In addition, providers receive initial reports and have the opportunity to make corrections. NHR also requires that 90% of the data reported is complete. Finally, clinicians review a dashboard with uncorrected average data, and get the opportunity to examine outliers and advocate for changes that may be necessary.



## Investments

To participate in the registry, institutions sign contracts which obligate them to full data disclosure. To have their data analysed, audited and published, medical centres pay an annual fee of €10,000, on top of the regular fee, which depends on their cardiac procedures (pacemaker = €3,000; percutaneous coronary intervention = €30,000; cardiac surgery = €70,000). The clear incentive for medical centres, besides the ambition to improve quality, is that nonparticipation could send a worrying signal to patients and insurers regarding the reasons why the hospital has chosen not to make their data transparent.



## Learning community

NHR is a learning ecosystem where providers are enabled to improve thanks to outcome sharing and collective performance. Several centres have implemented improvement projects that were directly inspired by NHR outcome-data published. In a separate learning opportunity in 2014, another medical centre showed higher mortality rates than predicted, and did not want to release their data, citing allegations that the data were biased. Following a series of quality checks, NHR data analysts verified that the data were sound and valid. NHR proposed (i) the hospital to exit the programme and have this pullback disclosed to the media, which could affect its reputation and its capacity to contract with insurers, or (ii) to publish transparently and provide space for the hospital in the publication to explain their improvement plan. The provider accepted to proceed with data publication and, the year after, their outcome data improved and reached the national average. This example illustrates the direct influence of NHR's learning community to leverage performance across providers.



## External collaborations

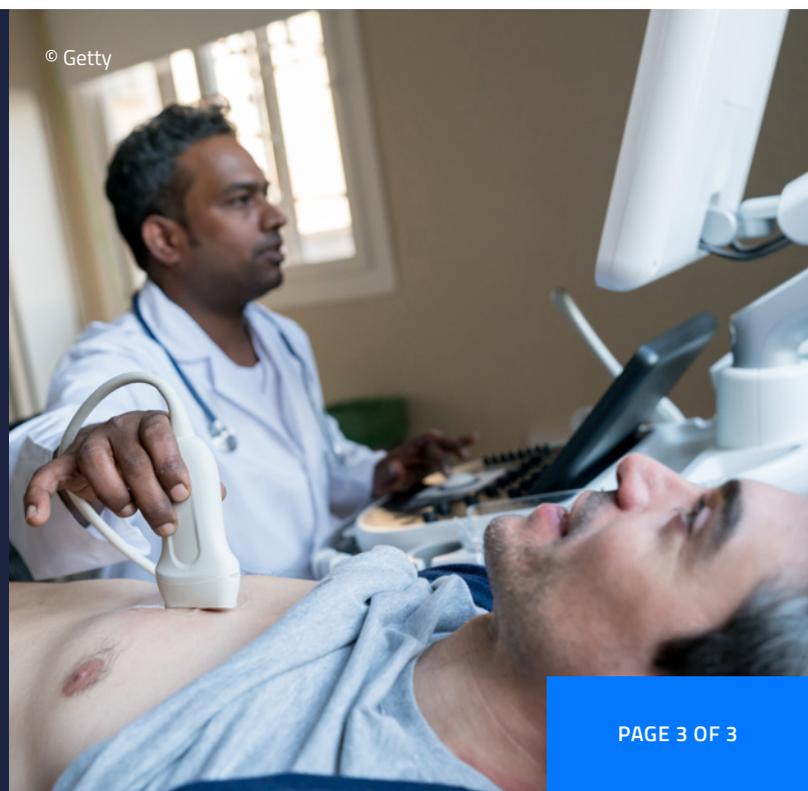
The NHR data registry also serves as the infrastructure necessary for insurers and providers to pilot bundled payment arrangements that involve a financial bonus to clinicians for quality outcomes. NHR creates the rules around which market players compete – a framework that did not exist prior to NHR, and one that stimulates a data-driven, value-based dynamics across providers. NHR also makes participating providers visible in the media. *“We manage the media every year. Network, newspaper, TV. Providers deserve visibility and a safe environment based on trust,”* says Veghel.

# Highlights

**The NHR case illustrates the power of data transparency. As an independent third party, NHR has succeeded in acting as a neutral facilitator to create a value driven competition across cardiac medical centres in the Netherlands. Involving cardiac medical societies, patient representatives, health insurers and the media has been instrumental to establish NHR's leadership role.**

#### References:

1. Veghel, H.P.A.v., Improving cardiovascular disease management by implementing valuebased healthcare principles. Technische Universiteit Eindhoven 2019. 115.
2. NHR Publicatie Registratie 2018.
3. Interview with Dr Dennis van Veghel, Founder of the Netherlands Heart Registry, October 4, 2019.



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