

Improved & personalized nephrology care by using outcome data

Voorend CGN, ten Dam MAJG, van Uden-Kraan CF, Hoekstra T, Prinsen H, Hemmeler M, Bos WJW

Background

Nephrology care in the Netherlands aims for a more sustainable way of using outcome data. Our goal was to describe and analyze example national and regional initiatives using outcome data for quality improvement, including gains and success factors.

Methods

Mixed-method approach comprising trend analyses, interviews, analysis of quality improvement cycles of:

- I. Nephrology quality system, including national registry and visitation practices.
- II. Santeon learning network's nephrology initiatives for continuous improvement and personalisation of care.

Results

Gains are presented in the boxes on the right.

Success factors included *collaboration with various professional and interest groups* to ensure *broad support, an open culture, and patient participation*.

Variation between centers in the use of outcome data in quality improvement remains significant. Also, the use of outcomes in scientific publications and guideline development is still limited.

Lessons learned

The lessons learned for sustainable use of outcomes are summarized in recommendations for other fields of medicine:

1. Start with establishing a quality framework,
2. Promote collaboration and support,
3. Involve patient representation and/or experienced individuals,
4. Establish a management process for the registration dataset,
5. Identify practice variation with benchmark reports,
6. Initiate visits for quality improvement,
7. Create transparency in a learning network,
8. Use outcome information for personalized care.

Conclusions

- **Use of outcome data** in a quality system and learning hospital network likely **contributes to improvement of and personalizing care** for patients with chronic kidney disease.
- Dutch nephrology care managed to have a **stable prevalence and decreased incidence of patients on dialysis**, despite the aging of the population and prolonged survival on dialysis (see figures in box I).
- **Value is created for both patients** (longer life at higher quality) **and society** (no increase in the finance, labor, and resource-intensive dialysis-treatment).

I. Gains Dutch Nephrology Quality system

Checks on registry data collection and visitations to all dialysis centers have encouraged **awareness of quality and process improvement**.

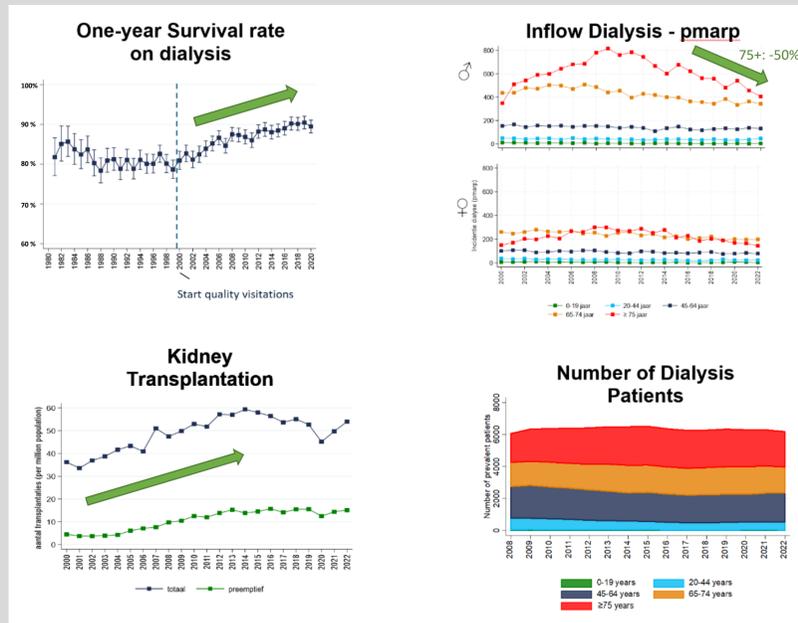
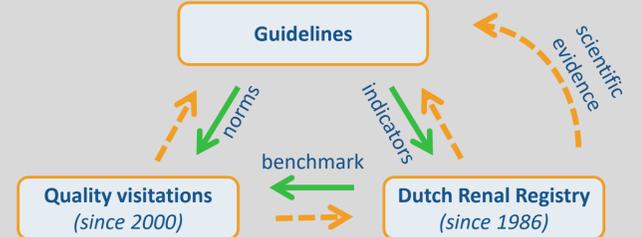
Benchmark reports using funnel plots and trend graphs of registration data have **enriched the local PDCA cycle**.

Within kidney care, **confidence to discuss outcomes is high**. An expanded national outcome set will be implemented.

Remarkable improvements in clinical outcomes are observed:

- ✓ dialysis initiation halved in older patients (aged ≥ 65 y) in the past decade
- ✓ mortality rates for those on dialysis halved from 20% in 2000 to 10% in 2020
- ✓ number of annual kidney transplantations increased since 2000 by 68%
- ✓ median time on dialysis before transplantation decreased since 2011 from 4 to 2.5 years

Next to other factors, such as the improvement of treatment techniques, and increased choice for conservative treatment, it is plausible that the quality system has contributed to these positive changes.

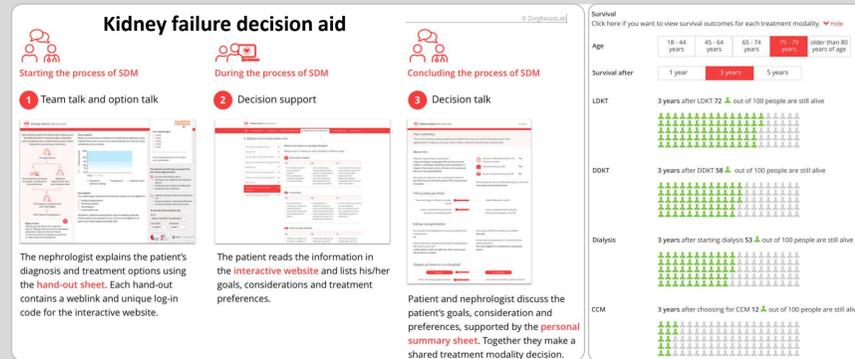
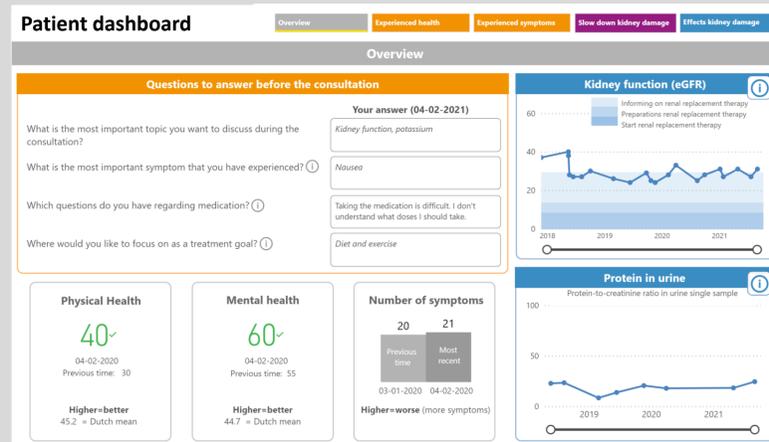


II. Gains Santeon learning network of 7 hospitals

Continuous improvement through establishment of **quality improvement cycles**. Outcome data was collected, compared, and used for implementation of quality-of-care improvement initiatives on:

- (i) improvement of vascular access care,
- (ii) preservation of residual diuresis, and
- (iii) reduction of central venous catheter infections.

Outcome data was also used for **personalizing care** within a **patient dashboard** and **decision aid**. Resulting in improved shared decision making, less decisional regret, and a slight change to the choice for either kidney transplantation or conservative care. [1,2]



More information?

- Scan QR to read the report "Samen voor Beter Nierzorg" (in Dutch)
- Contact: info@nefrovisie.nl, info@santeon.nl
- Ask Carlijn Voorend, Willem Jan Bos, Nelly van Uden or Hetty Prinsen at ICHOM 2024

