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Norwegian clinical dashboard: updated and expanded versions may lead to further Nordic collaboration

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In 2023, we introduced a national safety, quality and utilisation dashboard, referred to as ‘the clinical dashboard’, developed from routinely reported data to be used by executive boards and senior leaders in Norwegian specialist healthcare.¹ Building on a modified version of Wennberg’s framework for analysing variation in healthcare delivery, the dashboard focuses on two core domains: (a) effective care and patient safety and (b) preference-sensitive and supply-sensitive care.² For readers less familiar with Wennberg’s framework, it may be useful to briefly restate the distinction between these categories. Effective care refers to services with well-established benefits and limited trade-offs, where variation primarily reflects underuse. Preference-sensitive and supply-sensitive services involve clinical discretion and resource availability, where unwarranted variation is more often related to overuse and is better assessed using utilisation indicators. This conceptual distinction underpins the structure of the clinical dashboard.

The first version of the dashboard—covering interventional somatic procedures—was implemented following its publication in *BMJ Leader*.¹ Subsequent versions including non-procedural somatic care, mental healthcare including substance use, and laboratory diagnostics and imaging were completed and deployed in 2025. This article provides an updated description of the expanded dashboard, early experience with its use in governance within the South-Eastern Norway Regional Health Authority (HSO) and the growing national and international interest in its application.

ENHANCEMENTS AND NEW FUNCTIONALITY

Effective care

Years of life lost for patients with schizophrenia and severe mental illness

Patients with severe mental disorders experience a reduction in life expectancy of approximately 10–20 years compared with the general population.³ It has been proposed that diminished benefits from treatments for cardiovascular, respiratory and metabolic diseases may contribute to this disparity. Recent analyses indicate that this inequity is worsening.⁴ Using data from the Norwegian Patient Registry, we identify individuals treated for schizophrenia or

bipolar disorder and apply parametric survival models to estimate average lifespan. This is compared with expected lifespan derived from Statistics Norway, enabling calculation of years of life lost for each region and hospital trust.

Preference-sensitive and supply-sensitive care

Mental healthcare utilisation

Utilisation indicators have been expanded to include hospitalisations, outpatient contacts and diagnostic categories in child and adolescent psychiatry, adult psychiatry and substance use disorders. Subcategories include severe mental illness, depression and anxiety disorders, adjustment and eating disorders, personality disorders, opioid and alcohol use disorders, opioid agonist treatment and other substance use disorders.

Somatic healthcare

The dashboard now incorporates utilisation indicators for interventional procedures, emergency non-surgical admissions and outpatient activity. Emergency admissions are categorised into cardiovascular, respiratory, obstetric, digestive, cancer-related, genitourinary, injury-related, infectious, neurological and non-specific clinical presentations. Outpatient activity is categorised by specialty (figure 1). The dashboard also provides visualisations of patient flows across hospital catchment areas and displays activity at both hospital trust (may comprise one or more hospitals in the same geographical area) and regional levels.

The Norwegian Operational Group for Reassessment Programme

To reduce low-value care, the Norwegian Operational Group for Reassessment (NOR Programme) has been established to identify procedures based on international low-value lists, risk profiles, cost, volume and geographical variation.⁵ Initial targets include: (a) arthroscopic shoulder procedures, (b) early upper gastrointestinal endoscopy in patients under 45 years and (c) invasive coronary angiography for stable coronary artery disease. The dashboard displays utilisation rates including trends for all three procedures.

Laboratory medicine and medical imaging

The expanded dashboard has been further developed to include utilisation indicators for laboratory medicine

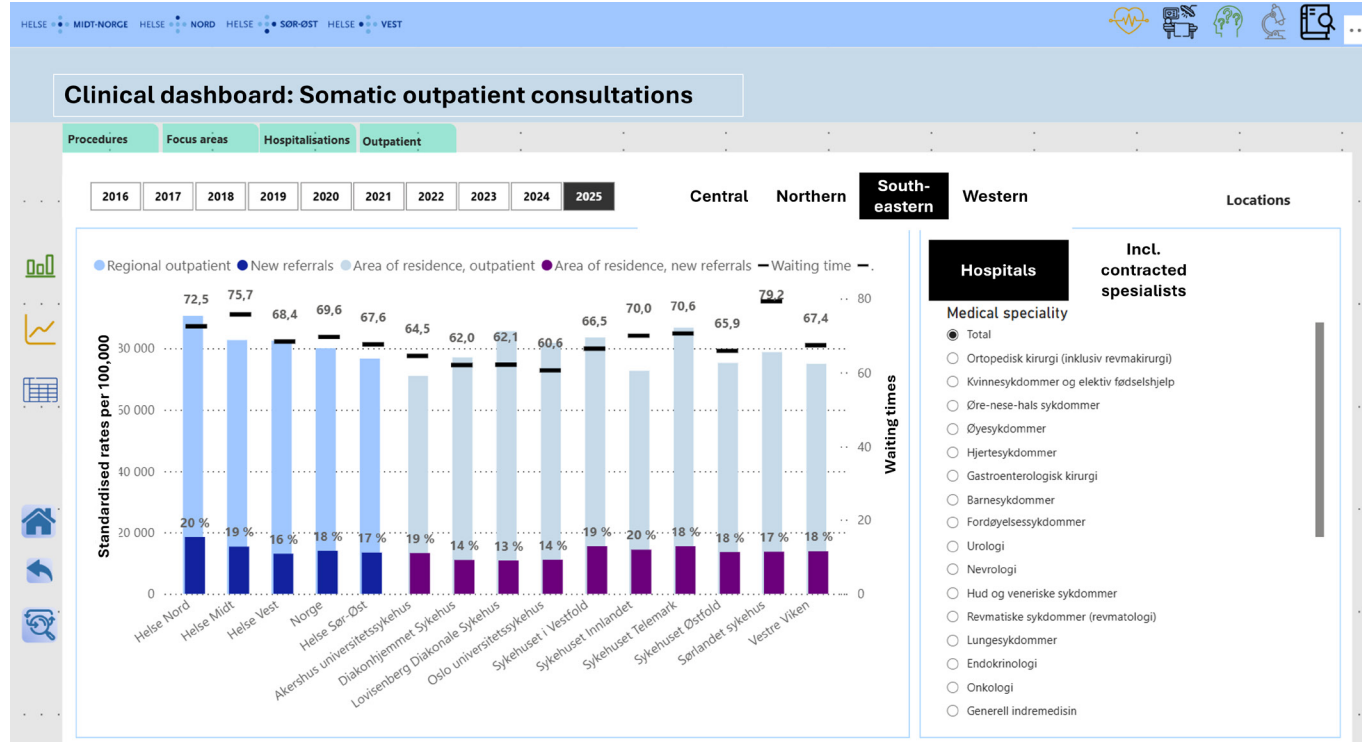


Figure 1 Outpatient activity across hospital trusts. This figure presents utilisation rates for somatic outpatient consultations per 100 000 inhabitants (y-axis) for each hospital trust (x-axis). In addition, it displays the proportion of first-time referrals and the mean waiting time for consultation. A menu function allows users to filter and view data by medical specialty represented in the dashboard.

(biochemistry, microbiology, immunology, pharmacology) and imaging modalities including computer tomography (CT), Magnetic Resonance Imaging (MRI), ultrasound, X-ray and positron emission tomography (PET-scan).

IMPLEMENTATION

National

The dashboard was first introduced in South-Eastern Norway Regional Health Authority in 2024. Following requests from the other three regional health authorities, a national version was developed and published by Centre for Clinical Documentation and Evaluation in 2025.⁶

Nordic collaboration

Norwegian stakeholders initiated a collaboration with the Danish Healthcare Quality Institute to enable a Danish version of the clinical dashboard for internal monitoring and Nordic benchmarking. Similar processes have begun in Sweden and Finland. A dedicated dashboard variant has been developed specifically for benchmarking the largest university hospitals in the Nordic capitals through the Nordic University Hospital Alliance.⁷ Preliminary analyses indicate divergent patterns of healthcare utilisation both within and between Norway and Denmark. Access to larger datasets provides improved insight into the drivers of utilisation rates, including the influence of healthcare capacity on potential overuse of specific procedures. For example, comparative analyses of age-standardised upper and lower endoscopy rates in Denmark and Norway reveal substantial within-country variation and a positive correlation between the two procedures, which may suggest elements of supply-sensitive utilisation⁸ (figure 2).

GOVERNANCE APPLICATIONS

Norway's four regional health authorities are responsible for providing specialist health services through their hospital trusts

and contracted private health services providers. In South-Eastern Norway Regional Health Authority, the dashboard has been integrated into governance routines since 2025. The clinical dashboard is formally reviewed in two governance meetings each year. This frequency reflects the update cycle of the underlying national data sources, which are updated three times annually, and empirical experience showing limited meaningful variation between successive tertial updates. In addition, several key indicators displayed in the dashboard, such as 30-day mortality and 5-year cancer survival, require longer observation periods to provide statistically robust and actionable information. More frequent review, for example on a monthly basis, would therefore add little value and risk amplifying random variation rather than supporting sound governance decisions.

Ahead of each governance meeting, Chief Medical Officers in the hospital trusts receive summaries highlighting important outliers in quality and utilisation indicators. These findings are discussed at board and executive levels, and key lessons and expectations are subsequently communicated back to clinical and managerial leaders through established quality improvement and leadership fora. In this way, the dashboard serves as both a monitoring tool and a catalyst for organisational learning.

Negative outliers in outcomes such as 30-day mortality or 5-year cancer survival are deemed unacceptable and now trigger board-level reporting and retrospective case reviews (eg, Sørlandet Hospital Trust, *Board case 014-2026*, 2026). This is addressed during governance meetings attended by the chief executive officer, the chief medical officer and the chair of the hospital trust board. Identified positive and negative variations may also trigger interorganisational learning activities. Depending on the issue, this can include peer dialogue between clinicians, thematic audits or site visits between hospitals with differing performance profiles.

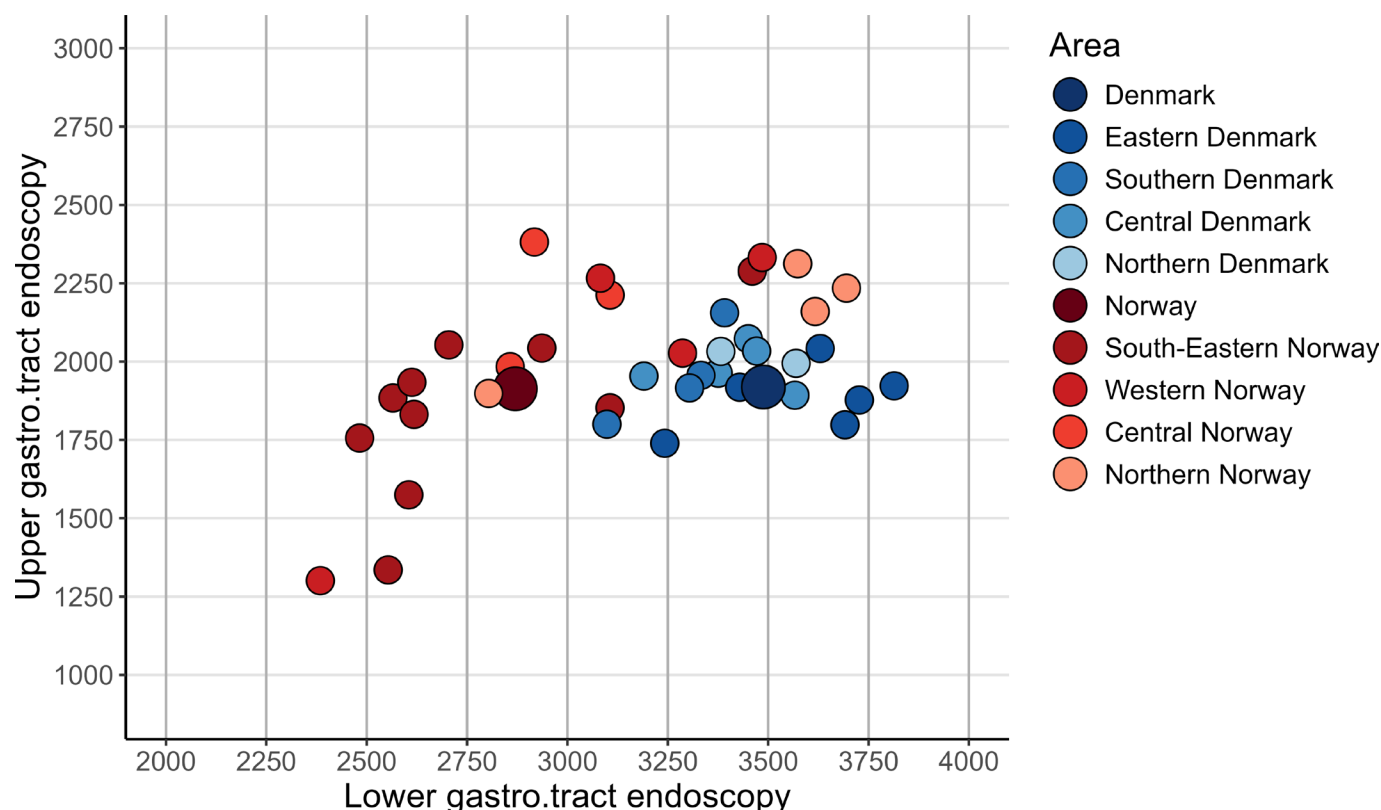


Figure 2 Regional variation in endoscopy utilisation rates in Norway and Denmark. Colour denotes national context (blue=Denmark, red=Norway), while variations in colour shading indicate the health regions, whereas each dot represents the utilisation rate within a hospital catchment area. gastro.tract, gastrointestinal tract.

Such activities are typically integrated into existing regional quality improvement structures rather than organised as a stand-alone dashboard function, but the dashboard provides a common analytical starting point for shared learning across organisations.

DISCUSSION

Our initial hypothesis was that executive boards and senior leaders are often overwhelmed with financial and activity-based metrics at the expense of clinically meaningful indicators. The clinical dashboard was designed to address this imbalance by focusing on outcomes and utilisation patterns aligned with strategic priorities in quality, safety and resource use. Early experience indicates increased attention to unwarranted variation, and strengthened leadership engagement in the South-Eastern region and national implementation has enabled broader benchmarking and informed internal resource redistribution. In practice, executive boards and senior leaders report that utilisation indicators, particularly those linked to potential overuse, have been more amenable to targeted action than outcome indicators, which primarily serve an accountability and surveillance function. This distinction has shaped how quality improvement initiatives are prioritised and followed up at board and executive levels. A recent Organisation for Economic Co-operation and Development report⁹ highlights the importance of a robust health data infrastructure to be able to produce reliable and comparable performance indicators, reinforcing the relevance of our approach. Early comparisons of the Norwegian and Danish data indicate that the dashboard's structure supports harmonisation of data formats across countries, despite differing governance models and recent implemented and planned national health reforms. Insights from the clinical dashboard may support

ongoing assessments of governance models and contribute to evidence-informed reforms across the Nordic region.

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