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Quality Monitoring and Public Reporting: Recommendations for the Swiss Healthcare System

Report Mandated by the Federal Quality Commission

Swiss Learning Health System

University of St. Gallen, University of Zurich, Unisanté and University of Lausanne, University of Lucerne, University of Applied Sciences and Arts of Southern Switzerland

The Federal Quality Commission is an independent extra-parliamentary commission. It supports the Federal Council in the development of quality in the provision of medical services within the framework of the Federal Health Insurance Act. Further information can be found at www.bag.admin.ch/eqk.

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Authors

Justus Vogel^{1,⊘}, Maxime Sapin¹, David Kuklinski¹, Carla Walker¹, Sarah Mantwill², Michael Havranek³, Carla Sabariego^{2,4,5}, Carlo De Pietro⁶, Jakob Burgstaller⁷, Isabelle Peytremann-Bridevaux⁸, Alexander Geissler¹

¹ Chair of Healthcare Management, School of Medicine, University of St. Gallen, St.-Jakob-Strasse 21, 9000 St. Gallen, Switzerland

² Faculty of Health Sciences & Medicine, University of Lucerne, Frohburgstrasse 3, 6002 Lucerne, Switzerland

³ Competence Center for Health Data Science, Faculty of Health Sciences and Medicine, University of Lucerne, Frohburgstrasse 3, 6002 Lucerne, Switzerland

⁴ Swiss Paraplegic Research, Guido A. Zäch Str. 1, 6207 Nottwil, Switzerland

⁵ Center for Rehabilitation in Global Health Systems, University of Lucerne, Frohburgstrasse 3, 6002 Lucerne, Switzerland

⁶ Department of Business Economics, Health and Social Care, University of Applied Sciences and Arts of Southern Switzerland, Via Violino 11, 6928 Manno, Switzerland

⁷ Institute of Primary Care, University of Zurich, University Hospital Zurich, Pestalozzistrasse 24, 8091 Zurich, Switzerland

⁸ Center for Primary Care and Public Health (Unisanté) and University of Lausanne, Route de la Corniche 10, 1010 Lausanne, Switzerland

⊘ Corresponding author, Justus.Vogel@unisg.ch

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Federal Quality Commission
c/o Federal Office of Public Health
Schwarzenburgstrasse 157, 3003 Bern
eqk@bag.admin.ch
www.bag.admin.ch/eqk

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Executive Summary

Project mandate

As part of its goals for quality development in the Swiss healthcare system between 2021 and 2024, the Federal Council has instructed the Federal Quality Commission (FQC) to develop a monitoring system and a dashboard for quality development and transparency. To this end, the FQC has mandated us as external research team to create a knowledge base by collecting information of exemplary monitoring systems and dashboards used in Switzerland and abroad. Moreover, the FQC mandated us to answer the project's overarching question *"Who should and wants to use a monitoring system, who wants to use a dashboard, and for what purpose?"* by conducting stakeholder dialogues.

Information collection

Regarding the information collection, we conducted a targeted mapping across five healthcare areas¹ of eight monitoring systems and 18 dashboards from eight countries: Australia, England, France, Germany, the Netherlands, Sweden, Switzerland, and the United States of America (USA). Information was collected according to the goal of the information collection ("[...] objectives, target audience, form, content (indicators), and where possible the structure and processes of data collection and processing [...]") using a standardized collection template. Information was primarily collected from websites and reports, supported by seven open interviews with experts from three countries, and open interviews with topic experts from the research team regarding quality monitoring and public reporting in Switzerland. Findings per monitoring system/ dashboard were summarized in standardized profiles.

The monitoring systems we investigated most commonly target and/ or are run by regulators, or by payers with a legal mandate to do so. Monitoring is performed in different ways. We present examples of both rigid auditing processes (e.g., the French monitoring approach "La certification des établissements de santé") and monitoring that focuses on primary and secondary data analysis, often followed by structured dialogues with providers with unsatisfactory quality (e.g., monitoring of acute somatic care in hospitals by the Institute for Quality and Transparency in Healthcare (IQTiG) in Germany). Monitoring results are most often published in reports and in many cases also on dashboards (e.g., on the French website QualiScope). If primary and/ or secondary data is used for monitoring, these data can in some cases be downloaded or are available upon request (e.g., IQTiG). Collected and analyzed quality information focuses on outcome quality in many cases, yet often, other quality information is also considered.

Dashboards, i.e., websites publishing provider (quality) information, primarily target patients, their relatives, and the general public with the goal to inform patients where best to seek care (usually referred to as "provider choice"). Some dashboards also mention referring physicians assisting patients or providers and medical professionals as target groups. Presented quality information varies greatly. We present examples ranging from dashboards focusing on patient ratings and reviews (e.g., Zorgkaart from the Netherlands, or NHS Choices from England), to dashboards presenting detailed information of

¹ We divided the healthcare system in five areas, specifically 1) general practitioners (GPs) and outpatient physicians/ ambulatory care, 2) hospitals (somatic care), 3) psychiatric care, 4) rehabilitation and non-physician healthcare services, and 5) home and long-term care, serving as a structure both for the information collection and for the stakeholder dialogues with experts.

all quality dimensions (e.g., Medicare from the U.S.). The number of healthcare areas covered by dashboards also varies strongly. Some focus on one healthcare area (e.g., “Qualitätskliniken.de” for rehabilitative care in Germany), others include all healthcare areas (e.g., Zorgkaart or Medicare). Data sources of dashboards are often data gathered for quality monitoring purposes. Still, in many cases, dashboards also generate own data and/ or use other secondary data sources.

Stakeholder dialogues

We organized and realized seven workshops between May and July 2023. For each of the defined five healthcare areas, we conducted one workshop (i.e., five “healthcare area workshops”). In addition, we conducted two workshops with patients, relatives, and the general public (i.e., two “general public workshops”), one in the French-speaking part of Switzerland (Lausanne) and one in the German-speaking part (St. Gallen).

Overall, the stakeholder dialogues showed that experts and patients, relatives, and the general public have different expectations concerning both quality monitoring and public reporting of (quality) information (“dashboards”).

Regarding quality monitoring, the general public workshop participants did not have specific demands. Most expect that providers offer a certain standard of medical quality. Experts, on the other hand, have clear demands regarding who should be involved in quality monitoring (providers and regulators) and what quality monitoring should look like. The main consensus among experts was that quality measurement and monitoring cannot be its own end but must serve as a means for quality development and improvement. To this end, experts agreed that a main focus should lie on outcome quality and where needed process quality. In addition, the quality information that is used for quality monitoring should be actionable for providers by being up-to-date and including information at a high level of detail (e.g., at the patient/ case level) to allow for targeted improvement efforts. Finally, stakeholders expressed that, wherever possible, existing data sources should be used, and existing initiatives should be built upon.

With regards to public reporting of quality, some experts were skeptical or at least careful regarding the publication of (risk-adjusted) outcome quality. The main reason for this was that they did not believe that such indicators are understandable for patients and that making them understandable is very difficult and comes with oversimplification and methodological shortcomings. However, many experts agreed that potentially, referring physicians could play a key role in supporting patients to understand and to use published quality information. Patients, relatives, and the general public formulated a clear demand for public reporting of quality and other provider-related information (e.g., free capacities and waiting lists, staff and patient satisfaction, outcome quality). The workshops showed that for making a choice for or against a provider (or a treatment), these stakeholder groups' information needs exceed information on quality. General public workshop participants also perceived the referring physician or some other medical professional as a potential “coach” when entering the healthcare system and for guiding them in their decision-making process. Overall, their expectation towards a dashboard is a tool that guides them through the healthcare system, enables them to make decisions together with physicians and medical professionals, and ultimately, helps them recover and heal faster and better.

Recommendations

Based on our findings, we developed seven recommendations for quality monitoring and public reporting in Switzerland:

- (I) Quality monitoring should be a collaborative effort between providers and regulators, with the shared goal of developing and improving quality of care across all healthcare areas.
- (II) Quality monitoring should focus on outcome quality and, where necessary, process quality, considering intersectoral interdependencies.
- (III) Quality monitoring should use up-to-date data at a high level of detail.
- (IV) Quality monitoring and public reporting should leverage existing data sources and initiatives. Sources and initiatives should be mapped.
- (V) A dashboard designed for public reporting should be created targeting patients and their relatives, who could be assisted by referring physicians. A dashboard's goal should be to facilitate informed decisions regarding where to seek care and to provide easy access to the healthcare system.
- (VI) Public reporting should make quality information easily understandable. Only quality relevant to patients should be presented.
- (VII) Personalized searches should be a key dashboard feature, possibly facilitated through the use of latest technologies.

Zusammenfassung

Projektmandat

Im Rahmen seiner Ziele zur Qualitätsentwicklung 2021–2024 im Schweizerischen Gesundheitssystem hat der Bundesrat die Eidgenössische Qualitätskommission (EQK) angewiesen, ein Monitoringsystem und ein Dashboard für Qualitätsentwicklung und Transparenz zu erarbeiten. Zu diesem Zweck hat uns die EQK als externes Forschungsteam beauftragt, Informationen zu Beispielen von Monitoringsystemen und Dashboards, die in der Schweiz und im Ausland existieren und genutzt werden, zu sammeln und eine Wissensbasis aufzubauen. Darüber hinaus beauftragte uns die EQK, mittels Durchführung von Stakeholder-Dialogen Antworten auf die übergeordnete Fragestellung des Projekts zu finden. Diese lautet: *«Wer sollte und möchte ein Monitoringsystem nutzen, und wer möchte ein Dashboard nutzen und zu welchem Zweck?»*

Sammeln von Informationen

Für das Sammeln der Informationen haben wir eine gezielte Bestandsaufnahme in fünf Bereichen des Gesundheitswesens² vorgenommen und dabei acht Monitoringsysteme und 18 Dashboards aus folgenden acht Ländern berücksichtigt: Australien, Deutschland, England, Frankreich, Niederlande, Schweden, Schweiz und USA. Die Informationen wurden entsprechend dem Zweck der Informationssammlung (Sichtbarmachen von Zielen, Zielgruppen, Form, Inhalten (Indikatoren) und gegebenenfalls von der Datenerhebung und -verarbeitung zugrunde liegenden Strukturen und Prozesse) unter Verwendung eines standardisierten Templates zur Datenerhebung zusammengetragen. Sie wurden in erster Linie Websites und Berichten entnommen, durch sieben offene Interviews mit Fachpersonen aus drei Ländern sowie durch offene Interviews mit Fachpersonen aus dem Forschungsteam zu den Themenbereichen Qualitätsmonitoring und öffentliche Berichterstattung in der Schweiz ergänzt. Die Ergebnisse zu den einzelnen Monitoringsystemen und Dashboards wurden in standardisierten «Profilen» zusammengefasst.

Die von uns untersuchten Monitoringsysteme richten sich in der Regel an Regulierungsbehörden oder Kostenträger mit einem entsprechenden gesetzlichen Auftrag und/oder werden von diesen betrieben. Das Monitoring wird auf unterschiedliche Weise durchgeführt. Im Bericht nennen wir sowohl Beispiele für rigide Kontrollsysteme (z. B. den französischen Monitoringansatz «La certification des établissements de santé» (Zertifizierung von Gesundheitseinrichtungen)) wie auch für Monitoringverfahren, die sich auf die Analyse von Primär- und Sekundärdaten konzentrieren. Letztere werden oft ergänzt durch strukturierte Dialoge mit Leistungserbringern, deren Qualität nicht zufriedenstellend ist (z. B. die Überwachung der somatischen Akutversorgung in Spitälern durch das Institut für Qualitätssicherung und Transparenz im Gesundheitswesen (IQTiG) in Deutschland). Die Monitoringergebnisse werden meist in Berichten und in vielen Fällen auch via Dashboards veröffentlicht (z. B. auf der französischen Website QualiScope). Wenn Primär- und/oder Sekundärdaten für das Monitoring genutzt werden, können diese

² Wir haben das Gesundheitssystem in fünf Bereiche unterteilt, nämlich 1) Hausärztinnen und Hausärzte und ambulante ärztliche Versorgung, 2) Spitäler (akutsomatische Versorgung), 3) psychiatrische Versorgung, 4) Rehabilitation und nicht ärztliche Leistungserbringer sowie 5) häusliche Pflege und Langzeitpflege. Dieser strukturierte Rahmen wurde sowohl zur Sammlung von Informationen als auch für die Stakeholder-Dialoge mit Fachpersonen herangezogen.

in einigen Fällen heruntergeladen oder angefragt werden (z. B. beim IQTiG). Bei den gesammelten und analysierten Informationen zur Qualität von Leistungen liegt der Fokus zwar in vielen Fällen auf der Ergebnisqualität, doch häufig werden auch andere Qualitätsinformationen berücksichtigt.

Dashboards, d. h. Websites, auf denen Informationen über Leistungserbringer und / oder deren Qualität publiziert werden, richten sich in erster Linie an Patientinnen und Patienten, deren Angehörige und die Öffentlichkeit und sollen den Patientinnen und Patienten über den am besten geeigneten Ansprechpartner für ihre Behandlung informieren (Ermöglichung der «freien Wahl des Leistungserbringers»). Einige Dashboards nennen auch überweisende Ärztinnen und Ärzte, die Patientinnen und Patienten bei der Informationssuche unterstützen können, oder Leistungserbringer und medizinische Fachpersonen als Zielgruppen. Bei den zur Verfügung gestellten Qualitätsinformationen sind grosse Unterschiede erkennbar. So führen wir im Bericht verschiedene Beispiele auf, von Dashboards mit einem Fokus auf Patientenbewertungen und -erfahrungen (z. B. die Plattformen Zorgkaart aus den Niederlanden oder NHS Choices aus England) bis hin zu Dashboards mit detaillierten Angaben zu sämtlichen Qualitätsdimensionen (z. B. Medicare aus den U.S.A.). Auch die Zahl der Gesundheitsbereiche, für die Dashboards Qualitätsinformationen veröffentlichen, variiert stark. Einige konzentrieren sich auf einen Gesundheitsbereich (z. B. «Qualitätskliniken.de» für die rehabilitative Versorgung in Deutschland), andere wiederum umfassen alle Bereiche des Gesundheitswesens (z. B. Zorgkaart oder Medicare). In die Dashboards fliessen häufig Daten ein, die zu Zwecken des Qualitätsmonitorings erhoben werden. Dennoch generieren Dashboards in vielen Fällen auch eigene Daten und/oder nutzen andere sekundäre Datenquellen.

Stakeholder-Dialoge

Zwischen Mai und Juli 2023 haben wir sieben Workshops organisiert und durchgeführt, und zwar für jeden der fünf definierten Gesundheitsbereiche einen Workshop (d. h. fünf «Fachworkshops»). Zudem veranstalteten wir zwei Workshops mit Patientinnen und Patienten, Angehörigen und der Öffentlichkeit (d. h. zwei «öffentliche Workshops») – einen in der Westschweiz (in Lausanne) und einen in der Deutschschweiz (in St. Gallen).

Insgesamt zeigten die Stakeholder-Dialoge, dass Fachpersonen, Patientinnen und Patienten, Angehörige und die breite Öffentlichkeit unterschiedliche Erwartungen an das Qualitätsmonitoring und die öffentliche Berichterstattung zu (Qualitäts-)Informationen («Dashboards») haben.

Die Teilnehmenden der öffentlichen Workshops stellten keine spezifischen Forderungen an das Qualitätsmonitoring. Die meisten erwarten, dass die Leistungserbringer ein bestimmtes Mass an medizinischer Qualität bieten. Die Fachpersonen stellen hingegen klare Forderungen, wer beim Qualitätsmonitoring involviert sein muss (Leistungserbringer und Regulierungsbehörden) und wie das Qualitätsmonitoring auszusehen hat. Sie waren sich vor allem darin einig, dass Qualitätsmessung und -monitoring kein Selbstzweck sein darf, sondern der Qualitätsentwicklung und -verbesserung dienen muss. Die Fachpersonen kamen somit überein, dass ein Hauptaugenmerk auf der Ergebnisqualität und gegebenenfalls auf der Prozessqualität liegen sollte. Darüber hinaus müssen die beim Qualitätsmonitoring genutzten Informationen zur Qualität für die Leistungserbringer auch verwertbar sein; das heisst, sie müssen stets auf dem neusten Stand sein und einen hohen Detaillierungsgrad aufweisen (z. B. auf Patienten-/Fallebene), damit gezielte Verbesserungsmassnahmen möglich sind. Schliesslich sprachen sich die Stakeholder dafür aus, nach Möglichkeit bestehende Datenquellen zu nutzen und auf bestehenden Initiativen aufzubauen.

Beim Thema öffentliche Berichterstattung zu Qualitätsfragen äusserten sich einige Fachpersonen in Bezug auf die Veröffentlichung der (risikoadjustierten) Ergebnisqualität skeptisch oder zumindest zurückhaltend. Insbesondere weil man nicht glaubt, dass entsprechende Indikatoren für Patientinnen und Patienten wirklich nachvollziehbar sind. Es wäre ihrer Ansicht nach auch sehr schwierig, diese einfach verständlich zu gestalten bzw. könnte eine zu starke Vereinfachung methodische Mängel zur Folge haben. Viele Fachpersonen waren sich jedoch einig, dass die überweisenden Ärztinnen und Ärzte möglicherweise einen bedeutenden Beitrag dazu leisten könnten, dass Patientinnen und Patienten die veröffentlichten Qualitätsinformationen auch verstehen und nutzen können. Vonseiten der Patientinnen und Patienten, der Angehörigen und der breiten Öffentlichkeit kam die klare Forderung nach öffentlicher Berichterstattung zur Qualität von Leistungen und zu anderen leistungserbringer-bezogenen Informationen (z. B. freie Kapazitäten und Wartelisten, Personal- und Patientenzufriedenheit, Ergebnisqualität). Die Workshops haben gezeigt, dass diese Stakeholdergruppen über die medizinische Qualität hinausgehende Informationen benötigen, um sich für oder gegen einen Leistungserbringer (oder eine Behandlung) entscheiden zu können. Die Teilnehmenden der öffentlichen Workshops betrachteten den überweisenden Arzt bzw. die überweisende Ärztin oder andere medizinische Fachpersonen auch als «Coach», der sie gegebenenfalls beim Eintritt in das Gesundheitssystem und bei ihrer Entscheidungsfindung unterstützen kann. Insgesamt erwarten sie von einem Dashboard Orientierung im Gesundheitssystem; es soll ihnen ermöglichen, gemeinsam mit Ärztinnen und Ärzten oder anderen medizinischen Fachpersonen Entscheidungen zu treffen und schliesslich ihren Genesungs- und Heilungsprozess zu beschleunigen und verbessern.

Empfehlungen

Auf der Grundlage unserer Erkenntnisse haben wir sieben Empfehlungen für das Qualitätsmonitoring und die öffentliche Berichterstattung in der Schweiz erarbeitet:

- (I) Das Qualitätsmonitoring sollte ein Kooperationsprojekt zwischen Leistungserbringern und Regulierungsbehörden sein, mit dem gemeinsamen Ziel, die Qualität der Leistungen in allen Bereichen des Gesundheitswesens weiterzuentwickeln und zu verbessern.
- (II) Das Qualitätsmonitoring sollte sich auf Ergebnisqualität und gegebenenfalls auch auf Prozessqualität konzentrieren, wobei sektorübergreifende Interdependenzen zu berücksichtigen sind.
- (III) Im Rahmen des Qualitätsmonitorings sollten aktuelle Daten mit einem hohen Detaillierungsgrad verwendet werden.
- (IV) Für das Qualitätsmonitoring und die öffentliche Berichterstattung sollten bestehende Datenquellen und Initiativen genutzt werden. Zudem sollte eine Bestandsaufnahme bestehender Quellen und Aktivitäten erfolgen.
- (V) Es sollte ein Dashboard für die öffentliche Berichterstattung erstellt werden, das sich spezifisch an Patientinnen und Patienten und deren Angehörige richtet, die gegebenenfalls von den überweisenden Ärztinnen oder Ärzten unterstützt werden können. Ziel eines solchen Dashboards sollte es sein, eine fundierte Wahl der Leistungserbringer sowie einen einfachen Zugang zum Gesundheitssystem zu ermöglichen.
- (VI) Im Rahmen der öffentlichen Berichterstattung sollten nur für Patientinnen und Patienten relevante und gut nachvollziehbare Angaben zur Qualität gemacht werden.
- (VII) Ein Schlüsselement des Dashboards sollte eine personalisierte Suchfunktion sein, die sich gegebenenfalls durch den Einsatz neuester Technologien optimieren lässt.

Synthèse

Mandat du projet

Dans le cadre de ses objectifs de développement de la qualité dans le système de santé suisse pour la période 2021-2024, le Conseil fédéral a chargé la Commission fédérale pour la qualité (CFQ) d'élaborer un système de monitoring et un tableau de bord (*dashboard*) pour le développement de la qualité et la transparence. À cette fin, la CFQ nous a demandé, en tant qu'équipe de recherche externe, de créer une base de connaissances en collectant des informations sur les systèmes de monitoring et les tableaux de bord faisant leurs preuves en Suisse et à l'étranger. En outre, elle nous a chargés de mener des dialogues avec les parties prenantes pour répondre aux questions suivantes, sous-tendant le projet : *Qui devrait et veut utiliser un système de monitoring ? Qui veut utiliser un tableau de bord ? Et pourquoi ?*

Collecte d'informations

Pour ce qui est de la collecte d'informations, nous avons procédé, dans cinq domaines des soins de santé³, à une cartographie ciblée de huit systèmes de surveillance et de dix-huit tableaux de bord utilisés dans huit pays : l'Allemagne, l'Angleterre, l'Australie, les États-Unis d'Amérique, la France, les Pays-Bas, la Suède et la Suisse. Pour ce faire, conformément à l'objectif fixé, nous avons collecté des informations sur les objectifs, le public cible, la forme, le contenu (indicateurs) et, si possible, la structure et le processus de la collecte et du traitement des données ; nous avons utilisé ici un modèle de collecte standardisé. Nous avons principalement collecté les informations sur des sites Internet et dans des rapports, ainsi que lors de sept entretiens ouverts avec des experts de trois pays et des entretiens ouverts avec des experts de l'équipe de recherche concernant le monitoring de la qualité et la publication de rapports sur celle-ci en Suisse. Les conclusions relatives à chaque système de monitoring/tableau de bord ont été résumées dans des profils standardisés.

De manière générale, les systèmes de monitoring que nous avons étudiés ciblent et/ou sont gérés par les autorités de surveillance, ou par des agents payeurs ayant le mandat légal de le faire. Le monitoring est réalisé de différentes façons. Nous présentons des exemples tant de processus d'audit rigides (p. ex. l'approche française de certification des établissements de santé) que d'un suivi axé sur l'analyse des données primaires et secondaires, souvent suivie d'un dialogue structuré avec les fournisseurs dont la qualité n'est pas satisfaisante (p. ex. le monitoring des soins somatiques aigus dans les hôpitaux en Allemagne, réalisé par l'Institut pour la qualité et la transparence des soins de santé [*Institut für Qualitätssicherung und Transparenz im Gesundheitswesen – IQTiG*]). Les résultats du monitoring sont le plus fréquemment publiés dans des rapports, souvent aussi dans des tableaux de bord (p. ex., en France, sur le site « QualiScope »). Lorsque des données primaires et/ou secondaires sont utilisées pour le monitoring, elles peuvent, dans certains cas, être téléchargées, ou sont disponibles sur demande (p. ex. pour l'IQTiG). Dans bien des cas, les informations collectées et analysées sont axées

³ Nous avons divisé le système de santé en cinq domaines qui ont servi de structure à la fois pour la collecte d'informations et pour les dialogues avec les parties prenantes : 1) les médecins généralistes et les soins ambulatoires, 2) les hôpitaux (soins somatiques), 3) les soins psychiatriques, 4) la réadaptation et les services de soins de santé non médicaux, et 5) les soins à domicile et de longue durée.

essentiellement sur la qualité des résultats, mais d'autres informations sur la qualité sont souvent aussi prises en compte.

Les tableaux de bord, autrement dit des sites Internet publiant des informations (au sujet de la qualité) sur les fournisseurs de prestations, sont essentiellement destinés aux patients, à leurs proches et au grand public, l'objectif étant d'informer les patients des meilleures possibilités de recours aux soins (en vue du choix du fournisseur). Certains ciblent également les médecins référents qui assistent les patients, ou les fournisseurs de prestations et les membres des professions médicales. Les informations fournies varient énormément. Nous présentons des exemples allant de tableaux de bord axés sur les évaluations et les commentaires des patients (p. ex. « Zorgkaart » aux Pays-Bas ou « NHS Choices » en Angleterre) à des tableaux de bord présentant des informations détaillées sur toutes les dimensions de la qualité (p. ex. « Medicare » aux États-Unis). Le nombre de domaines des soins de santé couverts par ces outils varie aussi fortement. Certains mettent l'accent sur un seul domaine (p. ex. le site allemand « Qualitätskliniken.de », qui est centré sur la réadaptation), tandis que d'autres les incluent tous (p. ex. « Zorgkaart » ou « Medicare »). Si les tableaux de bord présentent généralement des données collectées à des fins de monitoring de la qualité, ils génèrent aussi souvent leurs propres données et/ou utilisent des sources de données secondaires.

Dialogues avec les parties prenantes

Nous avons organisé sept ateliers entre mai et juillet 2023 : un pour chacun des cinq domaines des soins de santé définis (ateliers thématiques) et deux avec des patients, des proches et des membres du grand public (ateliers publics) l'un en Suisse romande (Lausanne) et l'autre en Suisse alémanique (Saint-Gall).

Globalement, les dialogues avec les parties prenantes ont montré que les attentes des experts, des patients, des proches et du grand public sont différentes en ce qui concerne le monitoring de la qualité et les rapports publiés à son sujet (tableaux de bord).

Les participants aux ateliers publics n'avaient pas d'exigences spécifiques concernant le monitoring de la qualité ; la plupart attendent des fournisseurs de prestations qu'ils répondent à un certain standard du point de vue de la qualité médicale. Les experts, pour leur part, ont des exigences claires par rapport à qui doit être impliqué dans le monitoring (fournisseurs et autorités de surveillance) et quelle forme celui-ci doit revêtir. Le principal consensus parmi les experts est que le monitoring de la qualité ne doit pas être une fin en soi, mais doit servir de moyen pour développer et améliorer cette dernière. Dans cette optique, les experts s'accordent sur le fait que l'un des éléments prioritaires doit être la qualité des résultats et, là où cela est nécessaire, celle des processus. En outre, les fournisseurs de prestations doivent pouvoir exploiter les informations utilisées pour le monitoring, c'est-à-dire qu'elles doivent être actualisées et doivent être très détaillées (p. ex. au niveau du patient ou du cas) afin de permettre des efforts d'amélioration ciblés. Enfin, les parties prenantes ont fait savoir que, dans la mesure du possible, les sources de données disponibles devaient être utilisées et qu'il fallait s'appuyer sur les initiatives existantes.

S'agissant des rapports destinés au public, certains experts se sont montrés sceptiques ou, du moins, prudents par rapport à la publication de la qualité des résultats (ajustée en fonction des risques). Ils estiment que de tels indicateurs ne sont pas compréhensibles pour les patients et qu'il est très difficile de les rendre intelligibles, de sorte que cela conduit à des simplifications à outrance et à des lacunes

méthodologiques. Toutefois, de nombreux experts s'accordent à dire que les médecins référents pourraient jouer un rôle crucial pour aider les patients à comprendre et à exploiter les informations publiées en matière de qualité. Les patients, les proches et le grand public demandent clairement la publication de telles informations et d'autres données sur les fournisseurs de prestations (p. ex. les disponibilités et les listes d'attente, la satisfaction du personnel et des patients, la qualité des résultats). Les ateliers publics ont montré que ces groupes de parties prenantes ont besoin d'information allant au-delà des questions de qualité pour pouvoir choisir ou rejeter un fournisseur de prestations (ou un traitement). Les participants ont aussi jugé que les médecins référents ou d'autres professionnels de la santé pouvaient jouer le rôle de « coach » dans le système de santé et les aider à prendre leurs décisions. Pour résumer, ils attendent d'un tableau de bord qu'il les oriente au sein du système de santé, les aide à prendre des décisions avec les médecins et les autres professionnels de la santé et, en fin de compte, à se soigner et à guérir plus rapidement.

Recommandations

Sur la base de nos conclusions, nous formulons les sept recommandations ci-après pour le monitoring de la qualité et la publication de rapports à ce sujet en Suisse :

- (I) Le monitoring de la qualité devrait être un effort de collaboration entre les fournisseurs de prestations et les autorités de surveillance, dans le but commun de développer et d'améliorer la qualité des soins dans tous les domaines de la santé.
- (II) Le monitoring de la qualité devrait être axé sur la qualité des résultats et, s'il y a lieu, sur la qualité des processus, en tenant compte des interdépendances intersectorielles.
- (III) Le monitoring de la qualité devrait être fondé sur des données actualisées et très détaillées.
- (IV) Le monitoring de la qualité et les rapports publiés à son sujet devraient exploiter les sources de données et les activités existantes. Il conviendrait de les cartographier.
- (V) Tout tableau de bord destiné au public devrait être créé à l'intention des patients et de leurs proches, qui pourraient bénéficier de l'aide de médecins référents. Son objectif devrait être de faciliter une prise de décisions éclairée sur les meilleures possibilités de recours aux soins et faciliter l'accès au système de santé.
- (VI) La diffusion au public devrait présenter les informations relatives à la qualité de manière compréhensible. Elle devrait se limiter aux informations pertinentes pour les patients.
- (VII) Un tableau de bord devrait permettre de faire des recherches personnalisées, éventuellement grâce à l'utilisation des technologies les plus récentes.

Sintesi

Mandato del progetto

Nell'ambito degli obiettivi per lo sviluppo della qualità nel sistema sanitario svizzero per il periodo 2021-2024, il Consiglio federale ha incaricato la Commissione federale per la qualità (CFQ) di realizzare un sistema di monitoraggio e una dashboard per lo sviluppo della qualità e della trasparenza. A questo scopo, la CFQ ci ha incaricato, in qualità di team di ricerca esterno, di creare una base di conoscenze raccogliendo informazioni su sistemi di monitoraggio e dashboard esemplari utilizzati in Svizzera e all'estero. Inoltre, la CFQ ci ha affidato il compito di rispondere alla domanda principale del progetto «*Chi dovrebbe e vuole utilizzare un sistema di monitoraggio, chi vuole utilizzare una dashboard e a quale scopo?*» dialogando con i portatori d'interesse.

Raccolta di informazioni

Per quanto riguarda la raccolta di informazioni, abbiamo condotto una mappatura mirata, in cinque ambiti sanitari⁴, di otto sistemi di monitoraggio e di 18 dashboard di otto Paesi: Australia, Francia, Germania, Inghilterra, Paesi Bassi, Stati Uniti d'America (USA), Svezia e Svizzera. Le informazioni sono state raccolte in base alla finalità della raccolta di informazioni (“[...] obiettivi, destinatari, forma, contenuto (indicatori) e, ove possibile, struttura e processi di raccolta ed elaborazione dei dati [...]”) utilizzando un modello di raccolta standardizzato. Le informazioni sono state raccolte principalmente da siti web e rapporti e suffragate mediante sette interviste aperte a esperti di tre Paesi e ulteriori interviste aperte a esperti del team di ricerca in materia di monitoraggio della qualità e comunicazione pubblica in Svizzera. I risultati per ciascun sistema di monitoraggio/dashboard sono stati riassunti in profili standardizzati.

I sistemi di monitoraggio che abbiamo analizzato sono per lo più rivolti a e/o gestiti da enti regolatori o da agenti pagatori con un mandato legale in tal senso. Il monitoraggio è svolto in diversi modi. Presentiamo esempi sia di processi con audit rigorosi (p. es. l'approccio di monitoraggio francese «La certification des établissements de santé») sia di monitoraggio che si concentra sull'analisi di dati primari e secondari, spesso seguita da dialoghi strutturati con i fornitori che presentano una qualità insoddisfacente (p. es. il monitoraggio delle cure somatiche acute negli ospedali da parte dell'Istituto per la salvaguardia della qualità e la trasparenza nel settore sanitario in Germania [IQTiG]). I risultati del monitoraggio sono spesso pubblicati in rapporti e in molti casi anche su dashboard pubbliche (p. es. sul sito web francese QualiScope). Se per il monitoraggio vengono utilizzati dati primari e/o secondari, in alcuni casi tali dati sono scaricabili o disponibili a richiesta (p. es. IQTiG). Le informazioni sulla qualità raccolte e analizzate si concentrano in molti casi sulla qualità dei risultati, ma spesso vengono considerate anche altre informazioni sulla qualità.

Le dashboard, cioè i siti web che pubblicano informazioni sulla qualità dei fornitori, si rivolgono principalmente ai pazienti, ai loro familiari e al grande pubblico, con l'obiettivo di informare i pazienti su dove è meglio rivolgersi per le cure (di solito si parla di «scelta del fornitore»). Alcune dashboard

⁴ Abbiamo suddiviso il sistema sanitario in cinque ambiti che hanno fatto da struttura sia per la raccolta di informazioni sia per i dialoghi dei portatori d'interesse con gli esperti, segnatamente: 1) medici generici e ambulatoriali, 2) ospedali (cure somatiche), 3) cure psichiatriche, 4) riabilitazione e servizi sanitari non medici e 5) assistenza domiciliare e di lunga durata.

menzionano come gruppi target anche i medici di famiglia curanti o altri fornitori di prestazioni e i professionisti della salute. Le informazioni sulla qualità presentate variano notevolmente. Presentiamo esempi che vanno dalle dashboard incentrate sulle valutazioni e sulle recensioni dei pazienti (p. es. Zorgkaart nei Paesi Bassi o NHS Choices in Inghilterra) a quelle che presentano informazioni dettagliate su tutte le dimensioni della qualità (p. es. Medicare). Anche il numero degli ambiti sanitari coperti dalle dashboard varia notevolmente. Alcune si focalizzano su un solo ambito sanitario (p. es. «Qualitätskliniken.de» per le cure riabilitative in Germania), altre comprendono tutti gli ambiti sanitari (p. es. Zorgkaart o Medicare). Le dashboard spesso incorporano dati raccolti per il monitoraggio della qualità. Tuttavia, in molti casi, le dashboard generano anche dati propri e/o utilizzano altre fonti di dati secondari.

Dialoghi con i portatori d'interesse

Tra maggio e luglio 2023 abbiamo organizzato e svolto sette workshop, di cui uno per ciascuno dei cinque ambiti sanitari definiti (ossia cinque «workshop specialistici»), nonché altri due workshop rivolti a pazienti, familiari e al grande pubblico (ossia due «workshop divulgativi»), uno nella Svizzera francofona (Losanna) e uno nella Svizzera germanofona (San Gallo).

Nel complesso, dai dialoghi con i portatori d'interesse è emerso che gli esperti e i pazienti, i familiari e il grande pubblico hanno aspettative diverse per quanto riguarda il monitoraggio della qualità e la comunicazione pubblica di informazioni sulla qualità («dashboard»).

In fatto di monitoraggio della qualità, i partecipanti ai workshop divulgativi non hanno espresso richieste specifiche. La maggioranza si aspetta che i fornitori offrano un determinato standard di qualità medica. Gli esperti, invece, hanno richieste chiare su chi dovrebbe essere coinvolto nel monitoraggio della qualità (fornitori ed enti regolatori) e su come dovrebbe svolgersi tale monitoraggio. Concordano quasi unanimemente sul fatto che la misurazione e il monitoraggio della qualità non possono essere fini a sé stessi, ma devono fungere da strumenti per sviluppare e migliorare la qualità. A tal fine, hanno concordato sul fatto che l'attenzione principale dovrebbe essere rivolta alla qualità dei risultati e, se necessario, alla qualità dei processi. Inoltre, per essere utilizzabili da parte dei fornitori, le informazioni sulla qualità usate per monitorarla dovrebbero essere aggiornate e includere informazioni altamente dettagliate (p. es. a livello di paziente/caso) al fine di consentire interventi di miglioramento mirati. Infine, i portatori d'interesse hanno espresso la necessità di utilizzare le fonti di dati esistenti e di basarsi sulle iniziative esistenti ogni volta che ciò sia possibile.

Per quanto riguarda la comunicazione pubblica della qualità, alcuni esperti si sono dimostrati scettici o quantomeno cauti riguardo alla pubblicazione di indicatori di «outcome» (aggiustati secondo il rischio). Il motivo principale è che non ritengono che tali indicatori siano comprensibili per i pazienti e che renderli comprensibili sia molto difficile, oltre a comportare un'eccessiva semplificazione e carenze metodologiche. Tuttavia, molti esperti hanno concordato sul fatto che potenzialmente i medici di famiglia potrebbero svolgere un ruolo chiave nell'aiutare i pazienti a comprendere e utilizzare le informazioni sulla qualità pubblicate. I pazienti, i familiari e il grande pubblico hanno espresso una chiara richiesta di comunicazione pubblica della qualità e di altre informazioni relative ai fornitori di prestazioni (p. es. disponibilità e liste d'attesa, soddisfazione del personale e dei pazienti, qualità dei risultati). Dai workshop è emerso che, per operare una scelta a favore o contro un fornitore di prestazioni (o un trattamento), a livello informativo le esigenze di questi gruppi di portatori d'interesse vanno oltre le informazioni sulla qualità. I partecipanti al workshop divulgativo hanno anche percepito il medico di famiglia o altri professionisti della salute come potenziali «coach»

che li guidano nel loro processo decisionale nel momento in cui accedono al sistema sanitario. In generale, da una dashboard si aspettano uno strumento che li guidi attraverso il sistema sanitario, che permetta loro di prendere decisioni insieme a medici e a professionisti della salute e che, in ultima analisi, li aiuti a riprendersi e a guarire meglio e più rapidamente.

Raccomandazioni

Sulla base dei risultati ottenuti, abbiamo elaborato sette raccomandazioni per il monitoraggio della qualità e la comunicazione pubblica in Svizzera:

- (I) il monitoraggio della qualità deve essere uno sforzo collaborativo tra soggetti fornitori ed enti regolatori, con l'obiettivo condiviso di sviluppare e migliorare la qualità delle cure in tutti gli ambiti sanitari;
- (II) il monitoraggio della qualità deve concentrarsi sulla qualità dei risultati e, se necessario, sulla qualità dei processi, tenendo conto delle interdipendenze intersettoriali;
- (III) il monitoraggio della qualità deve utilizzare dati aggiornati altamente dettagliati;
- (IV) I monitoraggio della qualità e la rendicontazione pubblica devono sfruttare le fonti di dati e le iniziative esistenti. Le fonti e le iniziative devono essere mappate.
- (V) deve essere creata una dashboard per la comunicazione pubblica rivolta ai pazienti e ai loro familiari, che potrebbero essere assistiti dai medici di famiglia. L'obiettivo di una dashboard deve essere quello di facilitare le decisioni informate su dove cercare assistenza e semplificare l'accesso al sistema sanitario;
- (VI) la comunicazione pubblica deve rendere facilmente comprensibili le informazioni sulla qualità. Vanno presentati solo gli aspetti della qualità rilevanti per i pazienti;
- (VII) le ricerche personalizzate devono essere una funzionalità chiave della dashboard, possibilmente agevolata dall'uso delle tecnologie più recenti.

Declarations

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Conflicts of interest

Michael Havranek has received several research grants from the Swiss Innovation Agency (Innosuisse) to adapt different sets of international quality indicators for Switzerland and develop a quality monitoring system for Swiss hospitals together with several hospitals and a software partner. The monitoring system has now been adopted by the Swiss National Association for Quality Development in Hospitals and Clinics (ANQ) and their software partner INMED GmbH. The ANQ provides the developed quality monitoring system to the Swiss hospitals and cantonal health authorities. To support these efforts, Michael Havranek provides consulting and analysis services to the ANQ, INMED, and several cantonal health authorities. However, none of these organizations were involved in the design or execution of this FQC mandated project, or the writing and publication of this report.

Jakob Burgstaller is part of the FIRE project, which is the largest database covering medical routine data from Swiss general practitioners. The FIRE project is hosted by the University of Zurich and would be suitable for building a monitoring system / dashboard reflecting quality of care in Swiss general practice.

The other authors have no conflicts of interest to declare that are relevant to the content of this report.

List of abbreviations

AHRQ	Agency for Healthcare Research and Quality (<i>Agency based in Australia</i>)
AIHW	Australian Institute of Health and Welfare
ANQ	Association nationale pour le développement de la qualité dans les hôpitaux et les cliniques (National Association for Quality Development in Hospitals and Clinics)
AOK	Allgemeine Ortskrankenkasse (<i>group of German statutory sickness funds</i>)
AROC	Australasian Rehabilitation Outcomes Centre
CH-IQI	Swiss Inpatient Quality Indicators
CMS	Centers for Medicare and Medicaid Services (<i>based in the USA</i>)
CQC	Care Quality Commission (<i>based in England</i>)
FOPH	Federal Office of Public Health (<i>based in Switzerland</i>)
FQC	Federal Quality Commission (<i>based in Switzerland</i>)
G-BA	Gemeinsamer Bundesausschuss (Joint Federal Committee, <i>based in Germany</i>)
GDK/ CDS	Konferenz der kantonalen Gesundheitsdirektorinnen und -direktoren / Conférence des directrices et directeurs cantonaux de la santé (Health Directors Conference, <i>based in Switzerland</i>)
GP	General Practitioner
HAS	Haute Autorité de Santé (<i>based in France</i>)
IQM	Initiative Qualitätsmedizin (Initiative Quality Medicine, <i>based in Germany</i>)
IQTiG	Institut für Qualitätssicherung und Transparenz im Gesundheitswesen (Institute for Quality and Transparency in Healthcare, <i>based in Germany</i>)
KVG	Krankenversicherungsgesetz (Federal Law on Health Insurance)
NHS	National Health Service (<i>based in England</i>)
NJR	National Joint Registry (<i>based in England</i>)
PHIN	Public Health Information Network (<i>based in England</i>)
PREM	Patient-Reported Experience Measure
PROM	Patient-Reported Outcome Measure
SLHS	Swiss Learning Health System
USA	United States of America

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1 Introduction

1.1 Background

The Swiss healthcare system is characterized by its complex and multifaceted organizational structure, not least due to its federalist political system. The healthcare system operates within nationally set frameworks, yet it is governed at the cantonal level and healthcare provision is decentralized. Both this multilevel organization and decentralization have implications for quality monitoring and public reporting of quality of care.

1.1.1 Quality monitoring

The monitoring of provider quality lies within cantonal responsibility for all healthcare areas. This has led to some cantons being very active in quality monitoring, e.g., Basel-City, Bern, Vaud, and Zurich, among others, for acute somatic care or the Ticino for long-term care, while other cantons' efforts are limited.

Traditionally, active cantons have developed their quality monitoring initiatives independently. Cantons aim to learn from one another, for example by using the Conference of Cantonal Health Directors (*Gesundheitsdirektorenkonferenz; Conférence des directrices et directeurs cantonaux de la santé / Conferenza delle direttrici e dei direttori cantonali della sanità*) as platform. Still, cantonal initiatives are very diverse and lack standardization.

Due to this lack of national standardization, providers in some cantons are monitored more closely than in others having to adhere to more quality requirements than elsewhere. As a result, providers might feel unfairly treated. At the same time, the population of cantons that are active in quality monitoring might benefit from the resulting continuous quality development.

Regarding mandating providers with service provision, some standardization across cantons exists in the field of acute somatic care, psychiatric care, and rehabilitative care. To receive a service mandate for a certain service group (e.g., defined via diagnosis and/ or procedure codes for acute somatic care), providers need to comply with a variety of structural quality requirements (sometimes also procedural quality requirements).

Moreover, in the area of acute somatic care, the FOPH annually publishes the CH-IQIs with a two-year time lag. These data can be used by hospitals for own quality monitoring. The two-year time lag and clinicians' skepticism towards the risk-adjustment methodology (based only on age and gender), seem to prevent a wider adoption of these indicators by hospitals for own quality monitoring, however.

Another example of nationwide quality measurement is the ANQ providing information on outcome quality and patient (and/ or relatives') satisfaction for rehabilitative care, psychiatric care, and acute somatic care, until now usually also with a two-year time lag. ANQ indicators can also be used by providers for own quality monitoring and quality development initiatives. Still, also in the case of the ANQ indicators, the time lag seems to prevent wider adoption by providers.

Both the CH-IQIs and the ANQ indicators can and are used by some cantons for quality monitoring (e.g., Basel-City). Their usage is not standardized across cantons, however.

An example for provider-led quality monitoring and development is the Initiative Quality Medicine (IQM). Originating in Germany, as of Spring 2023, 45 Swiss hospitals (about 30% of acute somatic care hospitals) participate in the IQM, with a notable concentration in the German-speaking part of Switzerland. Initially, the Swiss Hospital Association H+ started the "Allianz Peer Review CH" in 2014 to adapt the IQM procedure for Switzerland, e.g., emphasizing an interdisciplinary approach to actively involve nursing in the peer review process.

In the area of nursing homes, to name another example, six quality indicators have been defined in application of Art. 59a of the federal law on Health Insurance (KVG) for quality monitoring. These indicators can be measured from data collected with the instruments adopted by nursing homes in all cantons to assess residents' needs. To define them, a pilot project was launched in 2009 and concluded in 2018. This project took place under the direction of CURAVIVA Switzerland (ARTISET Federation) with the FOPH, the GDK/ CDS and the Federal Statistical Office as members of the project committee, with the support of the Institute of Nursing Sciences at the University of Basel.

1.1.2 Public reporting of quality information

In theory, public reporting of quality is to trigger quality competition between providers in a healthcare market where patients can freely choose a provider. The underlying assumption is that patients will use quality information "rationally", i.e., prefer providers with better (outcome) quality. Providers expecting such patient preferences are then incentivized to conduct quality development and improvement projects. If these fail or are not conducted, patients will "vote with their feet" and choose a better performing provider instead. Both provider activities and deliberate, rational patient choices for better quality providers are to increase quality on system level.

Relying on this logic and dynamic, (healthcare) organizations in various countries provide quality information on websites (i.e., quality "dashboards") aiming to make quality information accessible and understandable for patients. Examples include the [AOK-Gesundheitsnavigator \(hospital search\)](#) in Germany, [QualiScope](#) in France, [Zorgkaart](#) in the Netherlands, [Medicare](#) in the USA, [Äldreguiden](#) in Sweden or [MyHospital](#) in Australia. Similarly, there are websites in Switzerland publishing quality information such as [Spitalfinder](#), [welches-spital.ch](#), or [Spitalinfo](#), established and run by health insurances, consumer groups, private organizations, or the Swiss Hospital Association H+. Generally, the quantity and quality of published quality information varies greatly between such websites as do the provided explanations and visualization of quality information.

In the last years, several empirical studies have investigated how patients choose a provider and to what extent quality information plays a role in patients' provider choice [1–3]. Generally, findings suggest that risk-adjusted outcome quality indicators measuring adverse events (e.g., 90-day mortality ratios, or 1-year reoperation ratios), even if published, hardly influence patients' provider choice. Service quality (e.g., measured by patient satisfaction scores or other patient-reported experience measures (PREMs)), patient-reported outcome measures (PROMs), and specialization indicators such as certifications, procedure volume, and certain medical technology (e.g., robotic-assisted surgery systems) are more influential for patients' provider choice.

1.2 Project goal

To strengthen quality and efficiency in healthcare, the Federal Assembly passed an amendment to KVG in 2019. As part of this revision, the Federal Council established the FQC. The FQC is an extra-parliamentary expert commission. It supports the Federal Council in promoting quality in healthcare within the framework of the KVG. As part of its goals for quality development between 2021 and 2024, the Federal Council has instructed the FQC to develop a monitoring system and a dashboard for quality development and transparency. The FQC has established a working group to address this goal. As a result, the FQC wants to clarify stakeholder needs for a monitoring system and dashboard by answering the following overarching project question:

"Who should and wants to use a monitoring system, who wants to use a dashboard, and for what purpose?"

Additionally, the FQC intends to learn from exemplary monitoring systems and dashboards used in Switzerland and abroad.

To this end, the FQC developed a list of requirements for an external research team for the project *Monitoring and indicators: Development of a knowledge base and stakeholder dialogues* and mandated the SLHS and a research consortium consisting of five Swiss universities with this project (cf. Figure 58 in Appendix I: Information collection).

The project and this report consist of two parts:

- (I) *Information collection:* For selected quality monitoring systems and dashboards used in Switzerland and abroad, we gathered information on the objectives, target audience, form, content (indicators), and where possible the structure and processes of data collection and processing. Results provide an overview of different quality monitoring systems and dashboards informing the development of a Swiss monitoring system and a dashboard directed at selected stakeholder groups.
- (II) *Stakeholder dialogues:* We organized and realized stakeholder dialogues (i.e., structured, moderated, guided, and open exchange of knowledge and opinions) with both healthcare experts as well as patients, relatives, and the general public. From all stakeholder groups, we wanted to understand what quality information they need and in what form, i.e., as part of a monitoring system and/ or in the form of a dashboard. Moreover, we used the stakeholder dialogues to gain first-hand, unfiltered input and buy-in towards what quality type(s) and quality dimension(s) matter to the different stakeholder groups and at what aggregation level quality information is needed (e.g., per treatment area, per hospital, per region, etc.). Lastly, to inform subsequent FQC projects, we discussed with stakeholders what criteria are important for them for the selection of quality indicators (e.g., understandability, comparability, data collection effort, etc.).

1.3 Definitions

In this subchapter, we define three terms that are relevant for the further understanding of this report: (1) Healthcare area, (2) "monitoring system" and (3) "dashboard".

1.3.1 Healthcare areas

According to its yearly goals, the FQC is to establish a national quality monitoring system spanning all providers, sectors, and quality dimensions. Still, stakeholder needs, and current public reporting practices might differ between healthcare areas. As we intended to find and discuss these differences building a knowledge base for both quality monitoring and public reporting in Switzerland, we divided the healthcare system in five parts, serving as a structure both for the information collection and for the stakeholder dialogues with experts:

- (I) *General practitioners (GPs) and outpatient specialists / ambulatory care*: This healthcare area encompasses all care facilities providing outpatient somatic care in a private or group practice (psychiatric care excluded, see 3). For the information collection, we used the term GPs and outpatient specialists as published quality information usually is on clinic or practice level. For the purpose of the stakeholder dialogue, the healthcare area was re-named to “ambulatory care” to make it more open for stakeholder groups such as non-physician medical professionals working in GP offices, clinics, and outpatient care centers.
- (II) *Hospitals (somatic care)*: This healthcare area encompasses all hospitals providing in- and outpatient somatic care.
- (III) *Psychiatric care*: This healthcare area encompasses all hospitals and outpatient psychiatrists providing in- and outpatient psychiatric care.
- (IV) *Rehabilitation and non-physician health services*: This healthcare area focuses on care facilities providing in- and outpatient rehabilitative care. Moreover, non-physician health services provided in an outpatient setting such as physio-, and ergotherapy, logopedics, and osteopathy or services provided by dieticians, and midwives are summarized in this healthcare area.
- (V) *Home and long-term care*: This healthcare area encompasses long-term care facilities such as nursing homes and home care services such as Spitex.

Naturally, when trying to structure a complex system with multiple interrelations and interdependencies such as healthcare, some overlaps⁵ will ultimately pertain. Nonetheless, we believe the above structure to be fitting for the project goal.

1.3.2 Monitoring system

In this report, a monitoring system is understood to be a web-interface, a report, and/ or an application/software directed at and used by governments, health policy authorities, payers, and/ or controlling institutions on a federal (in rarer cases: state or regional) level (see also Figure 59 in Appendix I: Information collection).

For these systems, rich, comprehensive data are collected and made available at a detailed level exclusively to the users of the system. These data can be but are not necessarily (automatically) analyzed in every possible detail but are available in their raw form. Usually, quality indicators being monitored are compared to a threshold or benchmark that is commonly defined top-down or

⁵ For instance, the work of a self-employed physiotherapist providing services to a hospital providing inpatient physiotherapy as part of the inpatient recovery process for knee replacement patients would be part of the second healthcare area in this project context.

calculated bottom-up. If the threshold or benchmark is surpassed or not met by a provider, authorities have a basis for action, e.g., for potential sanctions or other measures directed at that provider to improve the provider's quality. Ultimately, the goal of a monitoring system is to ensure a minimum level of quality for all providers and thus, at the system level.

Potentially, providers can have access to the raw data of the monitoring system with the aim to use it for quality development and improvement. However, as the results of the stakeholder dialogues will show, providers' expectations and needs towards the data collected in a monitoring system differ from regulators' needs.

1.3.3 Dashboard

In the context of the project mandate and this report, we define dashboards as websites (and possibly also reports) used for public reporting of quality information. These websites are accessible by "everyone" and specifically directed at people in need to choose a provider for their own treatment (patients) or the treatment of somebody in their care (caregivers and/ or relatives, physicians, and possibly other medical experts). Typically, data are not provided or displayed in their raw form but rather in overall ratings and composite measures (e.g., star rating, traffic lights, grades, etc.). However, more detailed information might be provided upon request or when "drilling down" to specific data sources and information categories. Analyses can be provided with attractive visualization, e.g., in graphs and intuitive tables. Filtering and sorting providers by selected criteria might be featured. In addition, only reliable, generally accepted quality indicators are provided, and indicators still disputed in the scientific literature and/ or politically are not available. A dashboard might draw from one or several data sources that might also serve as the basis for a monitoring system. In such cases, a dashboard thus is an excerpt and/ or synthesis of the information provided in a monitoring system (and possibly additional data sources). Ultimately, the goal of such dashboards is to enable objective, well-founded comparisons of providers to empower people in need of care to find the "right" and "best" provider for them.

For our search, we classified voluntary benchmarking and quality improvement programs driven by providers themselves such as the Arbeitsgemeinschaft für ["Qualitätssicherung in den Chirurgischen Disziplinen"](#), [IQM](#), or [Swissnoso](#) as out-of-scope. Reasons for this are that (1) the quality information collected is not publicly available, and (2) monitoring and quality improvement is often very specific (e.g., hospital-acquired infections).

Lastly, the stakeholder dialogues showed that providers often associated both terms "quality monitoring" and "dashboard" differently as described above (cf. chapter 3). We also want to point out that the term "dashboard" in healthcare is often associated with a clinical dashboard, e.g., used for clinical decision making, among other uses [4].

2 Information collection

2.1 Methods

2.1.1 Country selection

To reach the goal of the information collection, examples for quality monitoring systems and dashboards from different countries were necessary and required the definition of exemplary countries. In a first step, the project team's topic experts⁶ each suggested three countries for their healthcare area. Suggestions were based on (1) the topic experts' experience with these countries' public reporting and quality monitoring activities, and (2) topic experts' personal network, i.e., countries they knew experts to contact and to interview. Regarding the organizational framework of healthcare areas, we maintained the established structure even though not all dashboards precisely adhere to this configuration. Indeed, various countries have adopted alternative categorizations within their healthcare systems. In the case of Medicare (USA) for example, the dashboard differentiates between "Home Health Services" and "Long-term Care Hospitals", each possessing distinct characteristics. By merging these distinctions into a single "Home and Long-term Care" category, we sought to uphold a uniform structure, thereby promoting a shared frame of reference between countries, and enabling comparisons across diverse dashboards.

The result of the first, preliminary country selection is provided below (Figure 1):

Figure 1: Preliminary country selection

Healthcare area / country ->	Switzerland	Australia	England	France	Germany	Italy	Netherlands	Sweden	USA
GPs and outpatient specialists	✓		✓		✓		✓		
Hospitals (somatic care)	✓		✓	✓	✓		✓		✓
Psychiatric care	✓		✓	✓			✓		
Rehabilitation and "non-physician" health services	✓	✓	✓		✓				
Home and long-term care	✓			✓		✓		✓	

Annotation: Switzerland was set as target country for each healthcare area.

Canada, Israel, and Denmark were defined as additional candidates for target countries in case not enough information would be available from the first selection of countries.

Initially, we expected to find information for each healthcare area separately. After starting the information collection, we found several monitoring systems and dashboards per country, some of






⁶ The term «topic expert» refers to the persons/ university in charge of a healthcare area (see Figure 58 and Table 12 in the appendix).

which covered several if not all healthcare areas. Thus, we did not need to add Canada⁷, Israel, or Denmark to the list of target countries. Moreover, Italy was dropped as target country as information from the other countries proved sufficient.

In total, we collected information from eight countries, including Switzerland (Figure 2):

Figure 2: Final country selection and healthcare area coverage per country

Healthcare area / country ->	Switzerland	England	France	Germany	Netherlands	USA	Australia	Sweden
GPs and outpatient specialists	● (red)	● (green)		● (yellow)	● (green)	● (dark grey)		
Hospitals (somatic care)	● (green)	● (green)	● (green)	● (green)	● (green)	● (yellow)	● (dark grey)	
Psychiatric care	● (green)	● (green)	● (yellow)	● (green)	● (yellow)	● (dark grey)		
Rehabilitation and "non-physician" health services	● (green)	● (yellow)	● (dark grey)	● (green)	● (dark grey)	● (dark grey)	● (yellow)	
Home and long-term care	● (green)	● (yellow)		● (green)	● (dark grey)	● (dark grey)		● (yellow)

- Category 1: Thorough internet search and expert interview 
- Category 2: Thorough internet search 
- Category 3: Found information when looking for something else 
- Category 4: Investigated but no information found 
- Category 5: Not investigated 

Annotation: For Switzerland, we included two initiatives for monitoring quality of home and long-term care in the information collection template and one additional dashboard (Spitalfinder), but we do not describe these initiatives in this report (see reasoning in the deep dive on Switzerland, chapter 2.2.10).

At least one monitoring system or dashboard could be found for each healthcare area-country combination, except for GPs and outpatient specialists in Switzerland as indicated by the red circle in Figure 2 above⁸. Several healthcare areas were initially not in focus for France, the Netherlands, the USA, and Australia, but were eventually included as monitoring systems/ dashboards covering these healthcare areas was found when looking for information for other healthcare areas (see dark grey circles in Figure 2). For each healthcare area-country combination, a thorough internet search was conducted indicated by the yellow circles in Figure 2. For healthcare area-country combinations with a green circle in Figure 2, an expert interview was conducted to complement the information obtained in the internet search.

2.1.2 Finding and collecting information

In order to record and analyze information about the objectives, target audience, form, content (indicators), and the structure and processes of data collection and processing of different monitoring systems and dashboards, we developed an input template (see A: Information collection template).

⁷ One example from Canada, the dashboard the Canadian Institute for Health Information, was added to the information collection template as an example for a website providing quality information at provider as well as at regional level for hospitals (somatic care) and nursing homes.

⁸ In the future, data on PROMs and PREMs in Switzerland should be obtained from the ParIS international survey conducted by the OECD. Unisanté has already conducted a pilot trial, and a main trial is scheduled for 2023 (<https://www.unisante.ch/fr/formation-recherche/recherche/projets-etudes/phase-pilote-suisse-lenquete-internationale-locde>, <https://www.bag.admin.ch/bag/fr/home/das-bag/organisation/ausserparlamentarische-kommissionen/commission-federale-qualite-cfq/laufende-programme-und-projekte/paris.html>)

We used a three-step search strategy. In a first step, we compiled a list of websites measuring, reporting, and/ or monitoring quality supported by an AI-based natural language processing tool (*chatGPT-3.5*)⁹. We visited each website to assess if it was in scope for our project. In addition, we conducted manual desk internet research. Websites were then systematically scrutinized to identify the needed information. Findings were documented in the information collection template.

In a second step, we conducted open expert interviews. Initially, we aimed to conduct one expert interview for each targeted healthcare area of each target country and contacted 19 experts. Eight experts did not respond to our request or were unavailable, and three experts initially showed interest but eventually were unable to meet our timeline. Eventually, we conducted interviews with seven experts. Moreover, all topic experts from the project team as well as the person formerly responsible for rehabilitative care at the ANQ were interviewed about their field of expertise for Switzerland and in the case of the University of St. Gallen also for Germany. See a list of all interview partners in the Appendix (Table 13).

The main aim of the interviews was to double check and complement the compiled information. Interviews were based on open-ended questions, lasted between 60 and 90 minutes, and followed a flexible four-step agenda:

- (I) Introductions (5 min)
- (II) Short presentation of the FQC project “Monitoring and indicators: Development of a knowledge base and stakeholder dialogues” (5-10 min)
- (III) Discussion of open points of monitoring systems and dashboards of <country name> for <healthcare area> (~60 min)
- (IV) Discussion of additional monitoring systems and dashboards known to the expert that we had not found so far (~20 min)

We provided experts with the project description, with website links of monitoring systems and dashboards we wanted to discuss and with the above agenda before the interview. We did not share specific questions, however, as we aimed to conduct open interviews and wanted to keep the discussions flexible. The information collection template served as a loose structure for agenda item (3).

In a third step, we conducted a supporting search for scientific and gray literature. Ultimately, one report was used to identify monitoring systems/ dashboards¹⁰, yet other contributions were not needed to fill the information collection template as the websites, reports published on the websites, and expert interviews provided sufficient information.

2.1.3 Monitoring system / dashboard profiles

In order to visualize the information collected in the information collection template, we developed a template that could be used to create standardized “profiles” of monitoring systems and dashboards.

⁹ Prompts included for instance: (1) Make a list of the most important websites that measure and report the quality of care in <country name>, (2) Make a list of the most important websites that serve as dashboards for the quality of care in <country name>, (3) Make a list of the most important websites of monitoring systems of the quality of care in <country name>

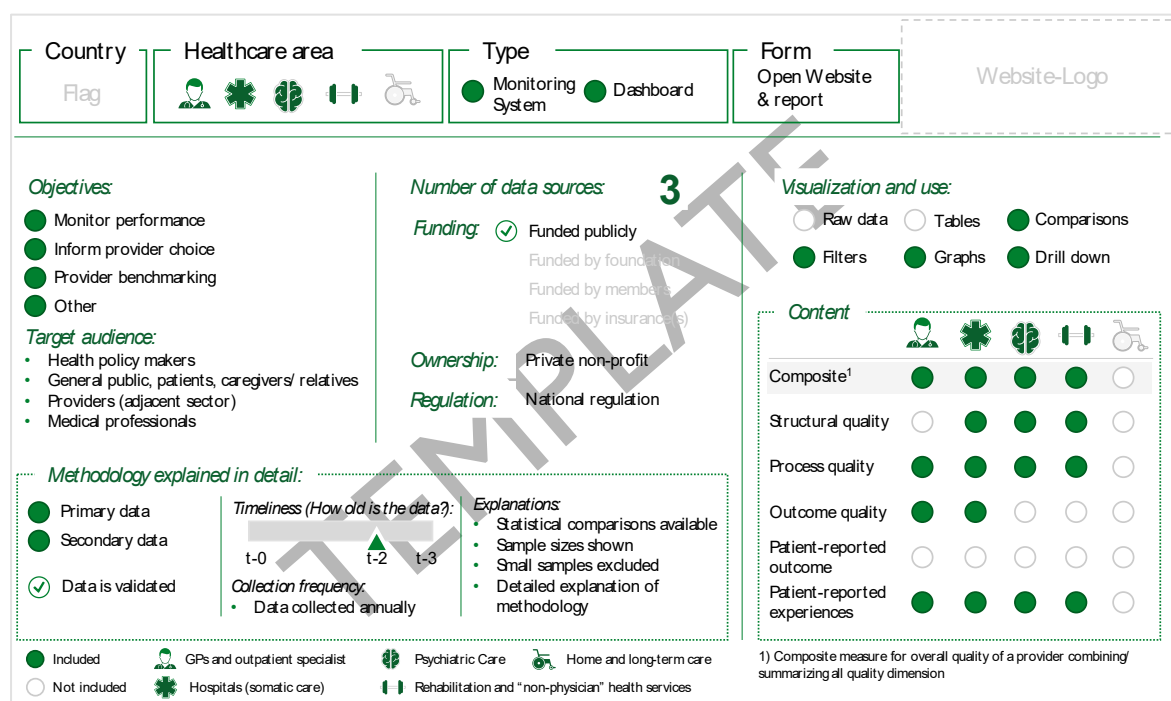
¹⁰ https://www.oecd-ilibrary.org/social-issues-migration-health/improving-healthcare-quality-in-europe_b11a6e8f-en

These profiles show the objectives, target audience, form, content (indicators), and the structure and processes of data collection for each monitoring system/ dashboard (Figure 3).

In the profile header, we indicate the country with the respective country flag. Moreover, we show what *healthcare areas* are covered by the monitoring system/ dashboard using a distinct icon per healthcare area (cf. figure legend). Next, we specify the *type*, i.e., monitoring system or dashboard, and show the *form* in which quality information is published including its accessibility. Possible forms are website, report, application/software and/ or other (e.g., a raw data download). A report published on a website was counted as report.

Access can be open, i.e., the monitoring system/ dashboard is accessible by “everyone”, access is restricted to certain user groups, it is open for pay (paywall), or upon request (e.g., for researchers).

Figure 3: Reading guide for monitoring system/ dashboard profiles



Possible *objectives* of monitoring systems/ dashboards are:

- (I) **Monitor performance:** Quality indicators are compared to a (top-down) benchmark or threshold. If results suggest a sub-standard quality level, improvement measures are defined. Note that monitoring can be done by providers themselves and/ or by health authorities/ regulators.
- (II) **Inform provider choice:** Quality information is provided for people in need for care (and possibly also people advising them such as GPs and/ or outpatient physicians) to make an informed choice where to seek care, i.e., to choose the “right” and “best” provider.
- (III) **Provider benchmarking:** Providers use quality information to benchmark themselves with their peers/ competitors. Providers can use this benchmark to derive quality goals and best practices.
- (IV) **Other:** Diverse set of objectives; for instance, a regulating body might publish quality information to show accountability for fulfilling its legally defined obligations such as conducting audits and inspections.

The *target audience* of quality monitoring systems/ dashboards are the different stakeholders of a health system, i.e., health policy makers and authorities, the general public, patients, and caregivers/relatives, (health) insurances, providers, medical professionals, the research community, or industry players (pharmaceutical and medical-technology companies).

A monitoring system/ dashboard draws data from one or more *data sources*. In the profile, we specify the number of data sources quality information is sourced, analyzed, and published from. Sometimes, as part of the monitoring process, auditors will use one or more data sources for their auditing. These data sources are not included in the number of data sources reported by us, however. Examples for data sources are data from patient experience questionnaires, claims data, hospital billing data, data from quality report cards, etc.

Funding of a monitoring system/ dashboard can be provided by government, by public organizations, by non-for-profit foundations, by (a) (health) insurance(s), or it is self-funded by membership fees¹¹. Accordingly, *ownership* is private for-profit, private non-profit, private-public partnership, or public. Note that ownership can, for instance, be private non-profit (e.g., a foundation owns the website) but funding can still be public (e.g., grants or government subsidies). The monitoring system/ dashboard can be based on national or state *regulation*, or no formal regulation applies. An example for the latter case might be that a health insurance publishes quality information based on their own claims data to enable its insurees to make informed provider choices.

We provide detailed information on the *methodology* of monitoring systems/ dashboards:

- (I) Data type: Primary data are collected primarily for the monitoring system/ dashboard by or on behalf of the organization running it. Secondary data are data that have a different primary purpose, were not collected by the monitoring system/ dashboard itself and are thus “re-used” for the monitoring system/ dashboard.
- (II) Data validation: Data validation might, for instance, be that patients’ answers to patient experience questionnaires are checked for implausibility or that patient reports are screened for their plausibility. Another example is a health insurance excluding insurees with incomplete data. We found that usually, some kind of data validation is performed yet the quality and rigorousness of data validation varies greatly between monitoring systems/ dashboards.
- (III) Timeliness: This indicates how old the data of the published quality information are. We find that most data are two years old, i.e., t-2. For monitoring purposes, audits are often performed. These are usually done more or less regularly, and results are published continuously. Thus, for some providers, results might be quite recent (t-0) while for others, results are much older (t-4 or even older).
- (IV) Collection frequency: Data can be collected semi-annually, annually, bi-annually, or continuously. For instance, if the collection frequency is given as “Data collected annually” and timeliness is “t-2”, this means that data are collected every year and published data are two years old.
- (V) Explanations: We specify whether statistical comparisons are available, if sample sizes are shown, how small sample sizes are handled, and if and in what detail the methodology for data collection and analysis is explained. Usually, some type of statistical comparisons

¹¹ We also present one example of a private for-profit company building a business model on public reporting of quality information (see “Le Guide Santé”). For this particular dashboard, the “funding” source thus is “business model”.

(often comparisons with the national average) is available, yet the number and quality of comparisons vary greatly between monitoring systems/ dashboards. Ideally, small sample sizes are excluded, yet sometimes we found (partial) adjustments (e.g., below a certain threshold, results are shown in gray/ transparent color) of small samples sizes, or the limitation was disregarded altogether.

Concerning the *visualization and use* of data and quality information, we indicate whether raw data, e.g., as a download, are available and what visual and analytical features are provided. “Raw” data does not mean patient or case level data used to calculate quality indicators, however, but, for instance, the results of all quality indicators for all providers considered by the monitoring system/ dashboard.

Lastly, as *content* of a monitoring system/ dashboard, we show per healthcare area, for what quality dimensions quality information is used for monitoring and/ or publication. Note that we provide explanations on what quality indicators are used in the text accompanying each profile and at great level of detail in the information collection template.

Similarly, in the following results section, we can only highlight the most important information per monitoring system/ dashboard. We provide additional, detailed information on all above-discussed criteria in the information collection template as comments. In these comments, we supply excerpts from website texts, links, reasoning, and insights from expert interviews accounting for the collected information.

In addition to the standardized profile, we include two to three screenshots of each website and/ or report we scrutinized for information. For most examples and where suitable, we present the landing page, the search interface, a list of search results, and/ or (parts of) the detailed view of the results for one provider.

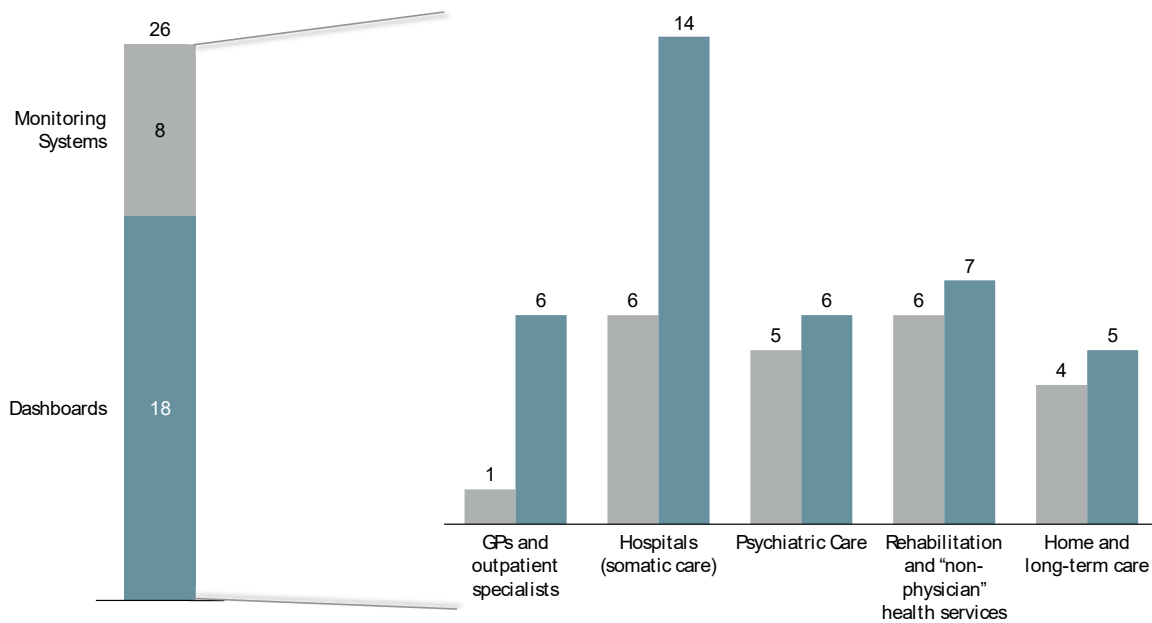
2.2 Results

2.2.1 Overview

Overall, we analyzed 25 quality measurement and reporting systems/ initiatives (cf. Table 14 in the appendix): seven were classified as monitoring systems, and 17 as dashboards, according to the definition provided in chapter 1.3. In the case of the ANQ, a clear distinction was difficult as ANQ shows characteristics of both a monitoring system and a dashboard. Thus, we counted the ANQ once as monitoring system and once as dashboard resulting in eight monitoring systems and 18 dashboards overall.

Each monitoring system/ dashboard covers at least one healthcare area (Figure 4). Out of the 18 investigated dashboards, 14 covered the healthcare area hospitals (somatic care). The other healthcare areas were covered by five to seven dashboards. Of the eight identified monitoring systems, one covered the healthcare area GPs and outpatient specialists, and the other healthcare areas were covered by four to six monitoring systems.

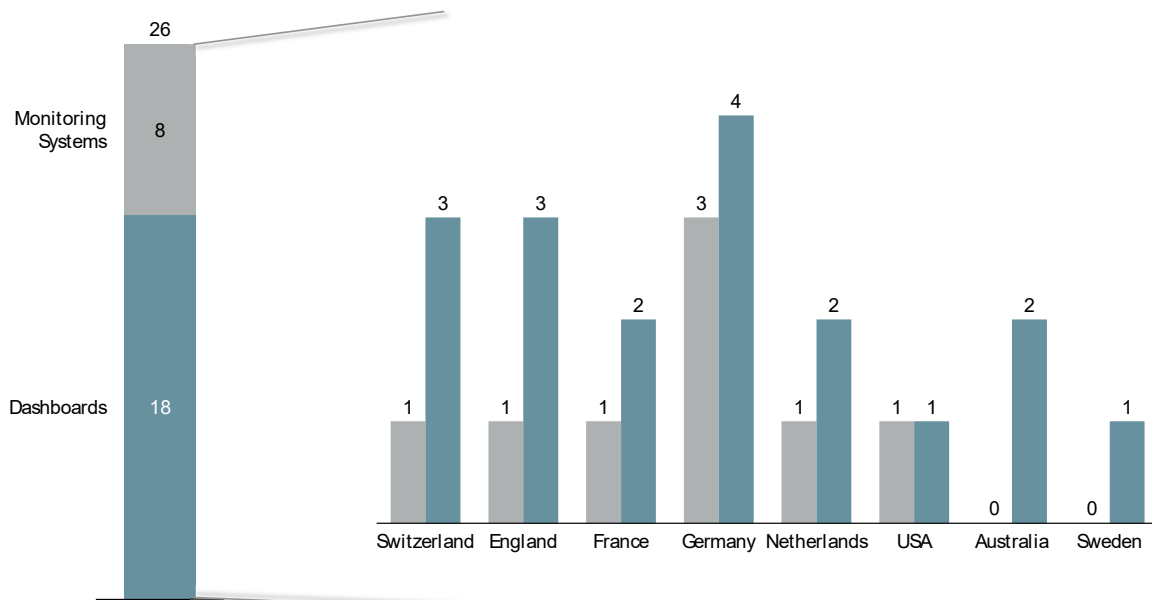
Figure 4: Monitoring systems/ dashboards per healthcare area



Annotation: Note that one monitoring system/ dashboard covers at least one healthcare area (average: 2.4 healthcare areas). Thus, some monitoring systems/ dashboards are counted several times in the right-hand part of Figure 4. Moreover, the ANQ is both as a monitoring system and a dashboard.

Overall, we examined one English, one French, one Dutch, one American, three Swiss, and three German monitoring systems (Figure 5). Regarding dashboards, we collected information from one American and one Swedish dashboard, from two Dutch, two Australian and two French dashboards, from three English and three Swiss dashboards, and from four German dashboards.

Figure 5: Monitoring systems/ dashboards per target country



It was not our goal to find and collect information from all monitoring systems/ dashboards available in the investigated countries. Thus, the number of investigated monitoring systems and dashboards per country cannot and should not be interpreted as one country being more active or less active than the other. Likewise, general statements such as "Country A is very active / rather not active in

public reporting and/ or quality monitoring” cannot be made. Similarly, the number of investigated monitoring systems/ dashboards does not convey any rating towards the quality of single monitoring systems/ dashboards. For instance, the examples we describe in the next section from the USA are quite comprehensive whereas one dashboard from Germany is rather basic.

2.2.2 Investigated monitoring systems/ dashboards per country

For **England**, we considered one monitoring system and three dashboards. The monitoring system is run by the Care Quality Commission (CQC), an English regulating body responsible for auditing providers from all healthcare areas along pre-defined criteria. Audit results are published on the CQC’s website in the form of an overall rating and ratings of several sub-dimensions. Two dashboards were investigated, the National Health Service (NHS) Choices and the Public Health Information Network (PHIN). Both use the CQC auditing results as one data source. NHS Choices additionally publishes patient experience ratings and reports for GPs and outpatient physicians, hospitals, and psychiatric care. The PHIN is an independent, not-for-profit organization that collects, analyzes, and publishes data on the quality and safety of private healthcare services (outpatient physicians/ consultants and hospitals). Lastly, the public reporting website of the National Joint Registry was investigated as an exemplary dashboard provided by a medical association.

For **France**, we included one monitoring system (“La certification des établissements de santé”) and two dashboards (QualiScope, “Le Guide Santé”). The Haute Autorité de Santé (HAS) is responsible for both “La certification des établissements de santé” and QualiScope. Both cover the healthcare areas hospitals (somatic care), psychiatric care, and rehabilitative care. As part of the monitoring system, providers are evaluated and awarded a certification if they meet the required standards. The rigorous evaluation process includes reviewing providers’ organizational structures, staff qualifications, medical equipment availability, and quality of care. The results of the certification process are published for all providers on QualiScope in the form of an overall certification grade and a comprehensive certification report. In addition, quality information from other sources is published on QualiScope. The second dashboard we investigated is a privately run website called “Le Guide Santé,” which provides quality information for acute somatic care using QualiScope and “La certification des établissements de santé” as main data sources.

For **Germany**, we considered three monitoring systems and four dashboards. The monitoring systems cover one healthcare area each, namely hospitals (Institute for Quality and Transparency in Healthcare), rehabilitation (“Deutsche Rentenversicherung”), and home and long-term care (“Medizinischer Dienst Bund”). These organizations are all legally mandated to monitor quality of care in their respective healthcare area. Regarding dashboards, we investigated a dashboard run by a group of statutory health insurances, the Allgemeine Ortskrankenkasse (AOK), called the “AOK-Gesundheitsnavigator”. Furthermore, we looked at “Weisse Liste”, “Arzt-Auskunft” and “Qualitätskliniken.de”. The “AOK-Gesundheitsnavigator” and “Weisse Liste” both provide information on hospitals and home care, with the former also covering GPs and outpatient specialists. Both dashboards use quality indicators retrieved from monitoring systems such as the Institute for Quality and Transparency in Healthcare (IQTiG). For home and long-term care, the “AOK-Gesundheitsnavigator” also publishes results from the “Medizinische Dienst Bund” monitoring system. Finally, the “Arzt-Auskunft” dashboard focuses on GPs and outpatient specialist, psychiatric and rehabilitative care, while “Qualitätskliniken.de” concentrates on rehabilitative care.

Furthermore, for the **Netherlands**, we investigated one monitoring system (“Zorginstituut”) and two dashboards (“Zorgkaart” and “Ziekenhuischeck”). The “Zorginstituut Nederland” monitoring system covers all healthcare areas except GPs and outpatient specialists, while the “Zorgkaart Nederland” dashboard covers all healthcare areas, and the “Ziekenhuischeck” dashboard only covers hospitals (somatic care). The quality of care is monitored by various organizations, for which the “Zorginstituut” provides standards for measuring quality, develops quality standards, and organizes the collection of quality information from providers active in all healthcare areas except GPs and outpatient specialists. The “Zorgkaart” is a dashboard established by the Dutch Patient Federation focusing on patient reviews and experiences. Another dashboard is “Ziekenhuischeck”, a website where patients can compare hospitals based on various quality indicators covering all quality dimensions.

For the **USA**, we included one monitoring system (Centers for Medicare and Medicaid Services (CMS)), and one dashboard (Medicare). The CMS monitoring system covers all healthcare areas except for GPs and outpatient specialists, while the Medicare dashboard covers all healthcare areas. The US healthcare system is largely based on private health insurance coverage, but the government provides coverage for certain groups, such as seniors (Medicare) and low-income individuals (Medicaid). Medicare provides a dashboard to report quality indicators on various aspects of quality of care such as patient outcomes, patient satisfaction, the use of preventive services, as well as payment and the value of care. The CMS is the federal agency responsible for overseeing the Medicare and Medicaid programs, setting standards for providers, and monitoring quality of care. While other monitoring systems and dashboards exist in the USA, we focused on Medicare and the CMS as they are examples of sophisticated, mature monitoring systems/ dashboards. Regarding monitoring, publishing, and visualizing quality information of providers, it is noteworthy that the USA benefits from over 30 years of experience rendering it a valuable example for this report and future projects.

Additionally, we investigated two dashboards from **Australia** and one from **Sweden**. In Australia, the MyHospitals dashboard provides information on the performance of public and private hospitals across the country, while the Australasian Rehabilitation Outcomes Centre (AROC) collects and analyzes data on rehabilitation outcomes to help providers improve their quality. In Sweden, the National Board of Health and Welfare (“Socialstyrelsen”) is responsible for monitoring and evaluating the quality of health services and has developed “Äldreguiden”, a dashboard that provides quality information on elderly care services across the country, including nursing homes, home care, and assisted living facilities.

For **Switzerland**, we focused on two dashboards, namely the Swiss Inpatient Quality Indicators (CH-IQI) published by the Federal Office for Public Health (FOPH), and “Welches-spital.ch” and the initiative of the National Association for Quality Development in Hospitals and Clinics (ANQ). The CH-IQIs focus on the healthcare area hospitals (somatic care). CH-IQIs are based on inpatient billing data that are routinely collected by all hospitals providing insights into the outcome quality of various procedures. The ANQ is responsible for measuring and supporting the improvement of the quality of acute somatic care, psychiatric care, and rehabilitative care using a range of process and outcome quality indicators as well as patient experience measures. We classified the ANQ as both a monitoring system and a dashboard as it exhibits characteristics of both. Regarding “Welches-spital.ch”, we focused on analyzing their efforts towards publishing quality information of hospitals (somatic care) as this information is most prominent on the “Welches-spital.ch” website (the website also (selectively) publishes quality information for rehabilitative care centers and psychiatric care hospitals). “Welches-spital.ch” uses quality information from the ANQ and CH-IQIs and adds other

quality information, e.g., patient reviews collected on the website. “Welches-spital.ch” combines quality indicators to create composite scores, overall ratings, and rankings both for single episodes of care/ procedures and at the hospital level – yet the dashboard’s methods are strongly debated by experts.

In the following chapters, monitoring systems/ dashboards will be presented grouped by country using the profile template described in chapter 2.1. From each profile, some information will be highlighted followed by exemplary screenshots of the website and/ or report constituting the monitoring system/ dashboard (for more detailed information, see A: Information collection template).

2.2.3 England

For England, we investigated one monitoring system and three dashboards (Table 1).

Table 1: Overview of investigated monitoring systems/ dashboards from England

Country	Source (monitoring system/ dashboard name)	Type	Healthcare area					No. of covered healthcare areas per source
			GPs and outpatient specialists	Hospitals (somatic care)	Psychiatric Care	Rehabilitation and "non-physician" health services	Home and long term care	
England	Care Quality Commission	Monitoring	✓	✓	✓	✓	✓	5
	NHS Choice	Dashboard	✓	✓	✓			3
	PHIN	Dashboard	✓	✓				2
	MyNHS/ medical registries	Dashboard		✓				1
No. of sources per healthcare area			3	4	2	1	1	

The monitoring system CQC covers all healthcare areas. The PHIN dashboard covers the healthcare areas GPs and outpatient specialists and hospitals (somatic care), NHS Choices covers GPs and outpatient specialists, hospitals (somatic care), and psychiatric care, and the National Joint Registry (example for MyNHS/ medical registries) covers hospitals (somatic care).

In England, quality of care is monitored and reported through several regulatory bodies, such as the CQC, an independent regulator responsible for health and social care quality. The CQC conducts inspections of providers and publishes the results on its website, evaluating the quality of care delivered by the provider, including patient safety, effectiveness, caring, responsiveness, and leadership. The CQC ensures that basic standards of quality are met, and it acts as a "firefighting system", according to the interviewees. The overall rating given by the CQC is often reported in the English dashboards we investigated. That is the case for the PHIN, responsible for reporting on quality of care in the private sector. The PHIN provides information on the performance of private providers, including clinical outcomes, patient experience, and safety indicators, available to the public, enabling them to make informed decisions when selecting private providers.

Furthermore, the NHS plays a key role in reporting quality of care. The NHS Choices website provides patients with information on physicians' practices, hospitals, and psychiatric care providers. Reported information includes patient feedback and waiting times. With respect to another NHS initiative, the now-closed MyNHS website used to provide information on hospital quality. Now it only links to data from the Clinical Outcomes Publications providing quality measures at individual consultant, team, and unit levels using national clinical audit and administrative data from medical registries. For example, one such website is the National Joint Registry (NJR) that we describe as an example in this report for how medical registry data are used to inform about quality.

Finally, we also collected information for two more dashboards in the information collection template, namely the [Quality and Outcomes Framework \(QOF\) - NHS Digital](#) and [NHS Digital PROMs](#) covering GPs and outpatient physicians and hospitals respectively. We do not present these two dashboards in this report, however, due to the very limited useability of both dashboards (in essence, both are online Microsoft Power BI reports). Accordingly, we report all information collected in the information collection template for these two dashboards in gray font color to indicate that they are slightly out-of-scope.

Figure 6: England –CQC

Country: England

Healthcare area: GPs and outpatient specialist, Hospitals (somatic care), Psychiatric Care, Rehabilitation and "non-physician" health services, Home and long-term care

Type: Monitoring system

Form: Open Website & report

Objectives: Monitor performance, Inform provider choice, Provider benchmarking, Other

Target audience: Health policy makers, General public, patients, caregivers/ relatives

Number of data sources: 1

Funding: Funded publicly, Funded by foundation, Funded by members, Funded by insurance(s)

Ownership: Public

Regulation: National regulation

Visualization and use: Raw data, Tables, Comparisons, Filters, Graphs, Drill down

Content	GPs and outpatient specialist	Hospitals (somatic care)	Psychiatric Care	Rehabilitation and "non-physician" health services	Home and long-term care
Composite ¹	●	●	●	●	●
Structural quality	●	●	●	●	●
Process quality	●	●	●	●	●
Outcome quality	●	●	●	●	●
Patient-reported outcome	○	○	○	○	○
Patient-reported experiences ²	●	●	●	●	●

Methodology explained in detail:

Data sources: Primary data, Secondary data, Data is validated

Timeliness (How old is the data?): t-0 to t-n

Collection frequency: Data collected continuously

Explanations: Statistical comparisons not available, Sample sizes not shown, Small samples not assessable, Detailed explanation of methodology

Legend: ● Included, ○ Not included

Footnote: 1) Composite measure for overall quality of a provider combining/ summarizing all quality dimension 2) There are no patient-reported experience indicators considered / reported; rather, service quality aspects are taken into account during monitoring/ auditing

The CQC is the independent regulator of health and adult social care in England. In this role, it conducts audits of providers from all healthcare areas. The results of these audits are published online as elaborated, downloadable reports. Aggregated results are also reported on the [CQC website](#). Patients, relatives, or caregivers might use this aggregated quality information to find a suitable provider. Still, we classified the CQC website and reports as a monitoring system due to three reasons: (1) the CQC aims at ensuring a minimum standard level of quality, (2) the auditing results are used by other dashboards as data source, and (3) experts' view was that the CQC website is not widely used by patients and not perceived as a dashboard.

By law, the CQC can and must inspect all providers. According to one interviewed expert, the CQC does not have the resources to inspect all providers regularly. Indeed, according to another expert, the CQC prioritizes providers with potentially inferior quality and re-inspects when low quality was found. In addition to auditing all services, the CQC conducts focused inspections on individual services such as surgery, critical care, or emergency services.

After inspection, each provider receives one overall grade ("Outstanding", "Good", "Requires improvement", "Inadequate"). This grade is based on the evaluation of services along five quality categories: (1) "Safe" (2) "Effective" (3) "Caring" (4) "Responsive" (5) "Well-led". The CQC uses data gathered by other organizations, including patient survey data and feedback, but their results are not published by the CQC. The only "data source" used for the CQC rating is the results of the inspection process itself. Inspection results along the above-mentioned five quality categories do not strictly follow the common quality dimensions (structure, process, outcome, patient-reported quality measures). Still, as we aimed to collect information in a standardized way, we categorized "Safe" as process quality, "Effective" as outcome quality, and the other categories as "patient-reported" experiences. In fact, the categories "Caring", "Responsive", and "Well-led" are not patient-reported yet patient reports are considered during auditing and all three categories resemble closely what patients are usually asked to reflect on when rating providers' service quality. Lastly, offered medical

specialties and special services are indicated on the CQC website and in the report (structural quality).

Figure 7: CQC – Screenshots from search interface, search result list, and provider details

The figure consists of three vertically stacked screenshots from the Care Quality Commission (CQC) website.

Top Screenshot: Search Interface
 The top screenshot shows the CQC homepage with a search bar and navigation menu. The search bar contains the text "Search for a health or social care service". Below the search bar are three input fields: "Type" (set to "All services"), "Service name or specialism (optional)" (with the example "For example York Hospital or maternity"), and "Location and distance (optional)" (set to "Town, city or postcode" and "10 miles radius").

Middle Screenshot: Search Results
 The middle screenshot shows the search results for "The York Hospital". On the left is a filter menu with categories like "All services (285)", "Care homes (42)", "Hospitals (11)", and "Overall rating" (set to "Good (7)"). The main content area shows "List view" and "Map view" options, a "Sort by Relevance" dropdown, and the search result for "The York Hospital (0.7 miles away)" with an overall rating of "Good". Below the hospital name are details: "Wigginton Road, York, North Yorkshire, YO31 8HE (01904) 725610" and "Provided and run by: York and Scarborough Teaching Hospitals NHS Foundation Trust". A list of services is shown with their respective ratings: "Medical care (including older people's care)", "Services for children & young people", "Critical care", "End of life care", and "Maternity and gynaecology".

Bottom Screenshot: Provider Overview
 The bottom screenshot shows the "Overview" page for "The York Hospital". It includes a "Latest inspection summary" (inspection on 30 and 31 March 2022, report published 9 June 2022) and a table of inspection findings:

Category	Rating
Safe	Requires improvement
Effective	Good
Caring	Good
Responsive	Good
Well-led	Good

At the bottom of the overview page, there is a link to "Download full inspection report for The York Hospital - PDF - (opens in new window)" published on 9 June 2022.

Source: Screenshots taken from the CQC Website ([Link](#), [Link](#), [Link](#)).

Figure 8: England – NHS Choices

The screenshot shows the NHS Choices dashboard for England. At the top, there are four main sections: Country (England), Healthcare area (GPs and outpatient specialist, Hospitals, Psychiatric Care, Home and long-term care, Rehabilitation), Type (Dashboard), and Form (Open Website). The NHS Choices logo is on the right.

Objectives:

- Monitor performance
- Inform provider choice
- Provider benchmarking
- Other

Target audience:

- General public, patients, caregivers/ relatives

Number of data sources: 2

Funding: Funded publicly

- Funded by foundation
- Funded by members
- Funded by insurance(s)

Ownership: Public

Regulation: National regulation

Visualization and use:

- Raw data
- Tables
- Comparisons
- Filters
- Graphs
- Drill down

Content:

- Composite¹
- Structural quality
- Process quality
- Outcome quality
- Patient-reported outcome
- Patient-reported experiences

Methodology explained in detail:

- Primary data
- Secondary data
- Data is not validated

Timeliness (How old is the data?):

t-0 to t-3

Collection frequency:

- Data collected continually

Explanations:

- Statistical comparisons not available
- Sample sizes not relevant
- Small samples not relevant
- Methodology explained superficially

Legend:

- Included
- Not included
- GPs and outpatient specialist
- Hospitals (somatic care)
- Psychiatric Care
- Home and long-term care
- Rehabilitation and "non-physician" health services

1) Composite measure for overall quality of a provider combining summarizing all quality dimension

NHS England is the publicly funded healthcare system of England, and it runs and funds the NHS Choices dashboard. With the primary goal of informing provider choice, the dashboard is designed for use by the general public, patients, caregivers, and relatives. The NHS Choices dashboard covers GPs and outpatient specialists, hospitals (somatic care), and psychiatric care.

The screenshots below reveal that visualization is basic, displaying a brief description of the healthcare facility, contact information, and star ratings (one to five stars) made by patients based on their experience. Patients furthermore have the possibility to leave an experience report on the website. In addition to patients' ratings, NHS Choices reports the CQC overall inspection rating for providers where this rating is available (cf. above). While the CQC inspection rating is validated, patient ratings and reports are not validated before publication.

The CQC rating's timeliness is contingent upon the inspection date (cf. above), and patient ratings are published continuously, i.e., once patients make them. Overall, the methodological approach of NHS Choices is explained only superficially and how the CQC rates providers is not explained on the NHS Choices website. Only a link to the CQC website is provided.

The NHS Choices dashboard provides basic quality information, i.e., the CQC rating (where available) and patient reviews. Incidentally, patient ratings are not averaged, i.e., there is no overall recommendation rate or score or something similar. Each patient rating rather stands for itself. Consequentially, NHS Choices does not offer statistical comparisons (e.g., comparison to national average) or comparisons between providers. Accordingly, interviewed experts compared the dashboard to a "healthcare TripAdvisor".

Figure 9: NHS Choices – Screenshots from search interface, search result list, and provider details

The screenshot shows the NHS Choices search interface. At the top is the NHS logo and a search bar. Below the logo are navigation links: Health A-Z, Live Well, Mental health, Care and support, Pregnancy, and NHS services. A yellow banner contains the text "Advice about NHS strikes" and a link "Find out what to do during the NHS industrial action from NHS England". Below this is a breadcrumb trail: Home > NHS Services > Hospitals. The main heading is "Find a hospital". There is a text input field with the placeholder "Enter a town, city or postcode in England". Below the input field are two buttons: a green "Search" button and a grey "Use your location" button.

The screenshot shows the search results for "Hospitals near London". The heading is "Hospitals near London". There are three results listed, each with a distance from London:

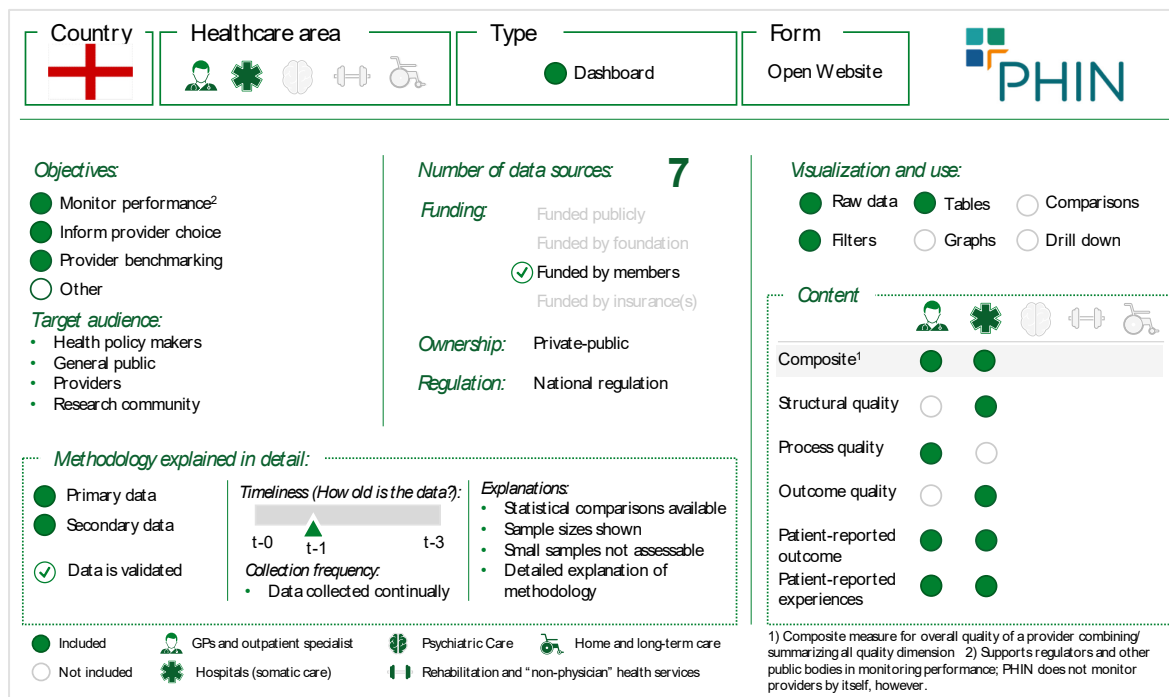
- 0.8 miles away: **St Thomas'**
Westminster Bridge Road, London, SE1 7EH
020 7188 7188
[Map and directions](#)
- 0.8 miles away: **Cuh At St Thomas' Hospital**
249 Westminster Bridge Road, London, SE1 7EH
[Map and directions](#)
- 1 mile away: **Royal National ENT and Eastman Dental**

The screenshot shows the provider details for "St Thomas' Hospital". The heading is "St Thomas' Overview". There is a list of navigation links: Overview, Departments and services, Facilities, Ratings and reviews, and Leave a review. Below this is a "Contact us" section with two columns of information:

<p>Address</p> <p>Westminster Bridge Road London SE1 7EH</p> <p>Get directions (opens in Google Maps)</p>	<p>Phone</p> <p>020 7188 7188</p> <p>Online</p> <p>Visit Hospital website Send email to Hospital</p>
--	--

Source: Screenshots taken from the NHS Choices Website ([Link](#), [Link](#), [Link](#)).

Figure 10: England –PHIN



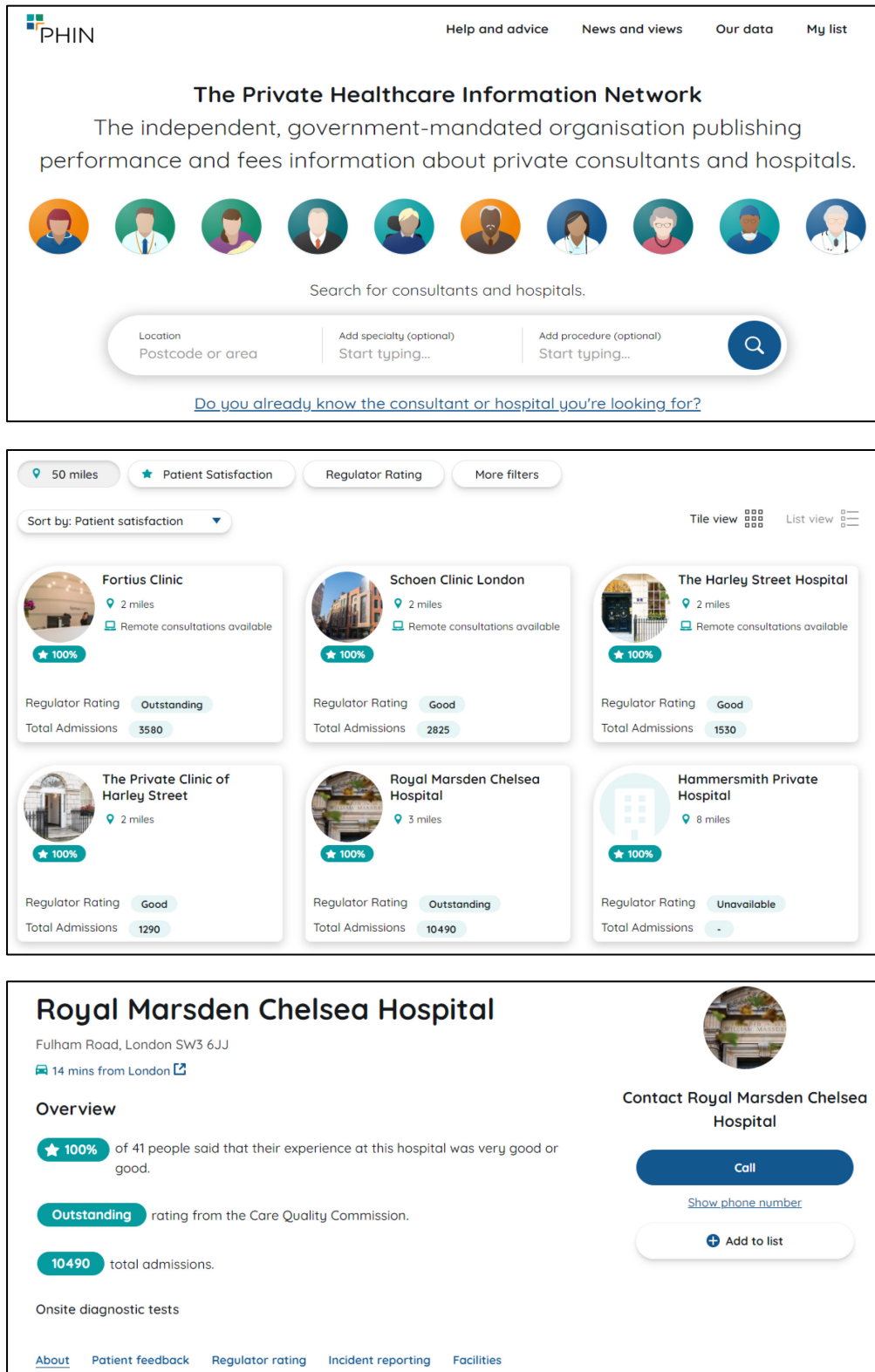
The PHIN is an independent, not-for-profit organization in England that collects, analyzes, and publishes data on the quality and safety of private healthcare services. The PHIN is mandated by the government to collect and publish information on safety, quality, and costs of private hospitals and of consultants in order to inform provider choice. Additionally, a raw data download allows providers to benchmark themselves. The PHIN does not offer a separate provider dashboard, however. The PHIN works closely with hospitals, researchers, regulators, and other public bodies to help improve standards of care and to monitor performance. Still, we do not classify the PHIN as a monitoring system according to our definition as the PHIN only supplies information; it does not undertake own actions and cannot request quality improvement measures.

The website offers a comprehensive presentation of hospital quality performance based on six categories, namely “Overview”, “About”, “Patient Feedback”, “Regulator Rating” (this is the CQC rating, cf. Above), “Incident Reporting”, and “Facilities”. Regarding consultants (i.e., outpatient specialists in the context of our report), not the same level of detail is reported (Regulator Rating, Incident Reporting, and Facilities are not available). The “Overview” section encompasses an overall patient-experience rating, the CQC rating (where available), and total admissions. The “About” section provides a brief description of the healthcare service and is followed by the “Patient Feedback” section, which presents detailed results of the patient survey. The “Regulator Rating” section displays the CQC rating, along with a link to the inspection report. The “Incident Reporting” section provides data on any incidents of care. The last section, “Facilities”, presents structural information on infrastructure and medical equipment.

In terms of data sources, the PHIN incorporates both primary and secondary data sources. The platform provides unfettered access to seven data sources, encompassing volume and length of stay, patient feedback, hospital reported adverse events, infections, health improvement, and never events. Information from outpatient specialists is obtained from their affiliated hospitals. All the data featured on the dashboard are grounded on a 12-month reporting period, unless specified otherwise.

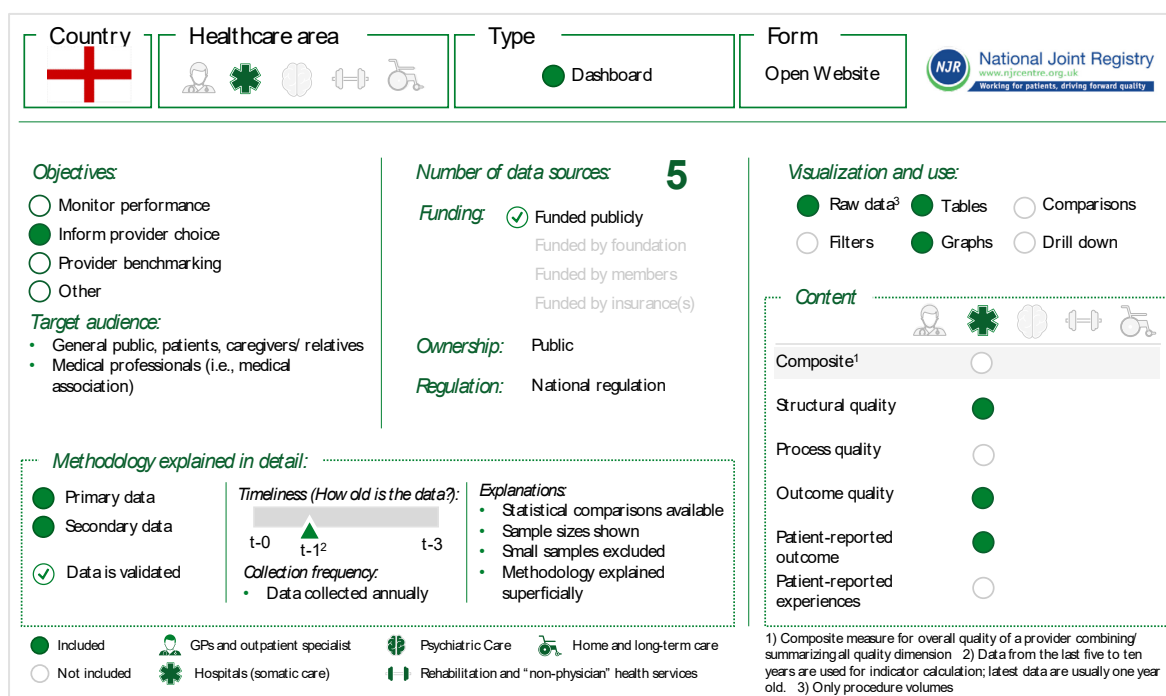
Furthermore, the data are gathered on an ongoing basis and the data from the dashboard metrics are not older than one year.

Figure 11: PHIN – Screenshots from search interface, search result list, and provider details



Source: Screenshots taken from the PHIN Website ([Link](#), [Link](#), [Link](#)).

Figure 12: England – MyNHS/ medical registries: Example of the NJR



One expert stated that MyNHS used to be a role-model for reporting hospital quality in detail. Today, this information is not available anymore because the MyNHS website was closed. The reason for this is, as indicated by experts and also stated on the MyNHS website, that the costs for running the website were not justified by its utility, i.e., an insufficient number of patients actually used the website.

MyNHS now redirects to the Clinical Outcomes Publications website reporting (quality) information at individual consultant (i.e., outpatient specialist in the context of our report), team, and hospital level using national clinical audit and administrative data from medical registries. As there are over thirty websites, we can only present one example here, that is the NJR, a dashboard reporting quality information for hip and knee replacement surgery at the hospital level (additionally descriptive data for shoulder, elbow, and ankle replacement surgery).

The NJR allows patients and their families and caregivers to view hospital quality information for hip and knee replacement surgery to make comparisons between hospitals in a given region with the objective to inform provider choice. Raw data downloads of procedure volumes are available, yet no quality data can be downloaded, e.g., for providers to benchmark themselves with their peers. The NJR displays hospital profiles showing the total number and type of procedures performed by a hospital over a 12- or 36-month period. The dashboard reports indicators on structural quality, outcome quality (risk-adjusted indicators such as the hospital risk adjusted 90-day mortality ratio) and PROMs (e.g., Oxford Hip Score, European Quality of Life 5 Dimensions score (EQ-5D)).

The NJR collects primary data from hospitals. Patients have to consent to having their personal data recorded in the registry. Primary data received from hospitals are validated towards their data quality by the NJR. In addition, the dashboard utilizes four other national datasets: the Hospital Episodes Statistics, the Patient Episode Data (only Wales), Patient Reported Outcome Measures, and Civil Registration Data. Usually, the latest data are from the last year. Additionally, all available data from the last five to ten years are used calculate indicators.

Figure 13: NJR – Screenshots from search interface, search result list, and provider details

NJR Surgeon and Hospital Profile
 for hip, knee, ankle, elbow and shoulder joint replacement surgery

I want to look at a surgeon or hospital by:

The information I have to hand
 Fill in one or more of the fields below:

Consultant Name
 Consultant General Medical Council Code (GMC)
 Hospital Name

Region
 Alternatively you can also search by clicking a region:

SEARCH

An A-Z listing:

Region: London

Select the Hospital of your choice from the list below to view the list of consultants.

NHS hospitals

Hospital	Surgeries Offered
Barnet Hospital	H, K, E, S
Central Middlesex Hospital	H, K, E, S
Charing Cross Hospital	H, K, A, E, S
Chase Farm Hospital	H, K, A, E, S
Chelsea and Westminster Hospital	H, K, E, S
Croydon University Hospital	H, K, E, S
Ealing Hospital	H
Epsom Hospital	K, E, S
Gateway Surgical Centre	H, K, A, E, S
Guy's Hospital	H, K, A, E, S
Ullingdon Hospital	H, K, E, S

Key :
 H Hip surgery
 K Knee surgery
 A Ankle surgery
 E Elbow surgery
 S Shoulder surgery

Hospital: Chase Farm Hospital
 Royal Free London NHS Foundation Trust

- ▶ SURGEONS WITH ACTIVITY RECORDED IN NJR
- ▶ 12-MONTH PRACTICE PROFILE (1 YEAR)
- ▶ 36-MONTH PRACTICE PROFILE (3 YEAR)
- ▶ HIPS
- ▶ KNEES
- ▶ ANKLES
- ▶ SHOULDERS
- ▶ QUALITY OF THE INFORMATION SUBMITTED BY THIS HOSPITAL

Source: Screenshots taken from the NJR Website ([Link](#), [Link](#), [Link](#)).

2.2.4 France

For France, we investigated one monitoring system and two dashboards (Table 2).

Table 2: Overview of investigated monitoring systems/ dashboards from France

Country	Source (monitoring system/ dashboard name)	Type	Healthcare area					No. of covered healthcare areas per source
			GPs and outpatient specialists	Hospitals (somatic care)	Psychiatric Care	Rehabilitation and "non-physician" health services	Home and long term care	
France	La certification des établissements de santé	Monitoring		✓	✓	✓		3
	QualiScope	Dashboard		✓	✓	✓		3
	Le Guide Santé	Dashboard		✓				1
No. of sources per healthcare area				3	2	2		

The monitoring system (“La certification des établissements de santé”) and the dashboard (QualiScope) from the HAS cover all healthcare areas except GPs and outpatient specialists and home and long-term care, and the dashboard “Le Guide Santé” only covers hospitals (somatic care).

In France, quality of care is closely monitored to ensure that all patients receive a minimum level of quality. The HAS is responsible for monitoring quality of care and thus organizes and oversees audits, resulting in a certification (“La certification des établissements de santé”) if providers meet the required standards. The HAS uses a rigorous evaluation process for auditing of provider quality and safety. The evaluation process includes, among others, a review of the facility's organizational structure, staff qualifications, the availability of medical equipment, and the quality of care processes. The HAS also evaluates the facility's management systems, patient safety protocols, infection prevention, and control measures. In addition to the HAS certification, the French government has established the QualiScope dashboard to report provider quality from various quality dimensions (process and outcome quality, certification grade, patient satisfaction).

Furthermore, there are privately owned websites that provide dashboards to the general public such as “Le Guide Santé”. The website offers a hospital directory, along with information on their specialties, locations, and contact information. Concerning quality information, “Le Guide Santé” essentially uses quality information from QualiScope and the monitoring results from “La certification des établissements de santé”. It also adds a few own indicators, yet it remains unclear where these indicators are sourced from and how they were calculated.

Finally, weekly magazines such as “Le Figaro” or “Le Point” also publish paperback “dashboards” in the form of rankings. The interviewed expert mentioned that these dashboards can have considerable impact on public opinion on hospital quality in France. As these paperback “dashboards”/ rankings were not available to us, we did not include them in our information collection.

Figure 14: France –HAS: La certification des établissements de santé

Country: France

Healthcare area: Hospitals (somatic care)

Type: Monitoring system

Form: Open Report

Objectives:

- Monitor performance
- Inform provider choice
- Provider benchmarking
- Other

Target audience:

- Health policy makers
- Providers (adjacent sector)

Number of data sources: 1

Funding: Funded publicly

- Funded by foundation
- Funded by members
- Funded by insurance(s)

Ownership: Public

Regulation: National regulation

Visualization and use:

- Raw data
- Tables
- Comparisons
- Filters
- Graphs
- Drill down

Content:

	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Composite ¹	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Structural quality	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Process quality	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Outcome quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Patient-reported outcomes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Patient-reported experiences ²	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

Methodology explained in detail:

- Primary data
- Secondary data
- Data is validated

Timeliness (How old is the data?): t-0 to t-4

Collection frequency: Data collected every four years during an inspection

Explanations:

- Statistical comparisons not assessable
- Sample sizes not relevant
- Small samples not relevant
- Detailed explanation of methodology

Legend:

- Included
- Not included
- GPs and outpatient specialist
- Hospitals (somatic care)
- Psychiatric Care
- Rehabilitation and "non-physician" health services
- Home and long-term care

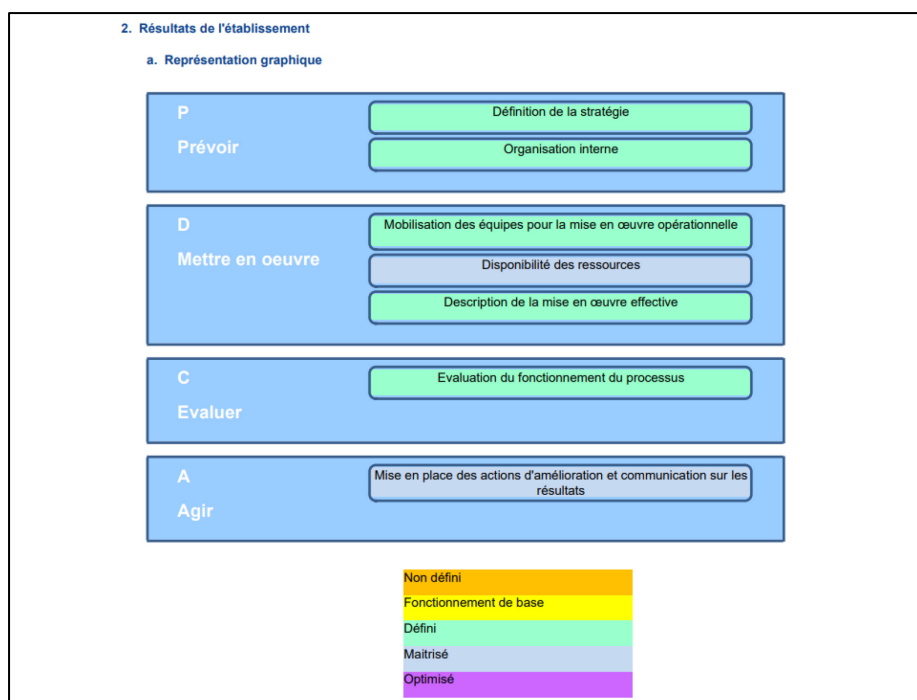
1) Composite measure for overall quality of a provider combining/ summarizing all quality dimension 2) There are no patient-reported experience indicators considered / reported; rather, service quality aspects are taken into account during monitoring / auditing

The HAS certification process is compulsory for all providers (“établissements de santé”) in France, both public and private, covering all healthcare areas except GPs and outpatient specialists and home and long-term care (only high-level long-term care centers part of hospitals are monitored). The certification’s objective is to ensure a minimum standard level of safety and quality. Audits are conducted every four years by trained professionals appointed by the HAS. The evaluation result is a standardized, elaborate report, a certification grade and possibly recommended and/ or mandatory quality improvement measures.

All auditing standards and criteria are described in the “Référentiel”. The Référentiel defines 90 generic criteria relevant for all providers and measured at provider level, and 42 criteria specific to a certain healthcare area/ service (e.g., “Psychiatrie et santé mentale”). The criteria are grouped in 15 objectives divided into three chapters: “Patient” (four objectives), “Care teams” (four objectives), “Institution” (seven objectives). The overall certification grade ranges from “A” (certified with distinction) to “B” (certified), to “C” (certified under condition), and finally to “D” (not certified). The certification grade is based on a provider’s performance towards fulfilling the defined objectives per chapter. Providers are audited and certified every four years. Accordingly, available reports and certification grades can be up to four years old. If certified under conditions (certification grade “C”), a new audit is conducted within six to twelve months after the initial audit and within twelve to 24 months if a provider was not certified (certification grade “D”). Providers are informed of audits at least three months in advance. According to the interviewed expert, providers use this time to prepare for the audit.

The defined criteria do not follow conventional quality dimensions. As we aim to standardize information (cf. CQC), we grouped the criteria for “Care teams” as process quality as these resemble process quality indicators most closely (e.g., Criterion 2.1-06: “The appropriateness of antibiotic prescriptions is argued and reassessed”). Moreover, the criteria for “Patient” and some of the criteria for “Institution” assess service quality aspects. Thus, we labelled them as “patient-reported experiences” as such indicators rate a provider’s service quality (from patients’ perspective), well-aware that they are not patient-reported (cf. footnote 2 in Figure 14).

Figure 15: Le certification de établissements – Screenshots from report’s first page, provider’s inspection results, and list of criteria from the “Référentiel”



Les critères

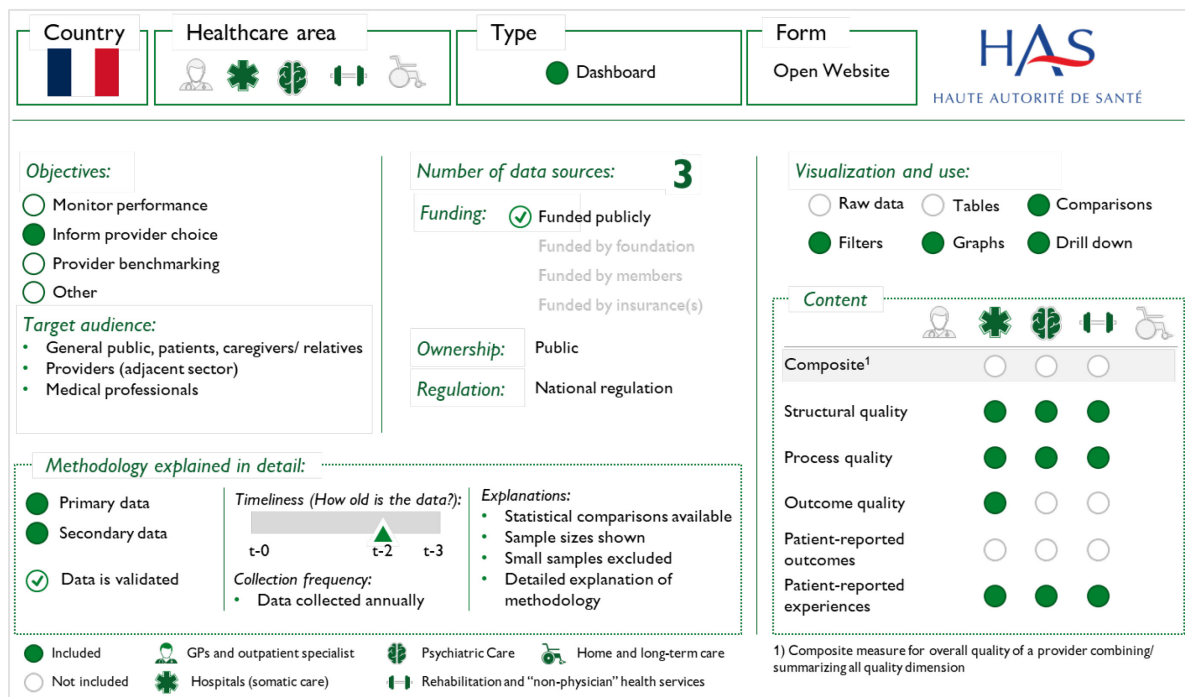
Légendes

N° critère	Description	Niveau d'exigence standard	N° critère	Description	Niveau d'exigence avancé
N° critère	Description	Niveau d'exigence impératif	IQSS	Description	Critère avec IQSS

Chapitres	Objectifs	Critères	Champs d'application	Page
		1.1-01 Le patient reçoit une information claire et adaptée à son degré de discernement sur son état de santé, les hypothèses et confirmations diagnostiques [IQSS]	Tout l'établissement	45
		1.1-02 Le patient est impliqué, s'il le souhaite, dans l'évaluation bénéficiéristique de toute décision majeure pour sa prise en charge	Tout l'établissement	46
		1.1-03 Le patient exprime son consentement libre et éclairé sur son projet de soins et ses modalités	Tout l'établissement	47
		1.1-04 L'enfant ou l'adolescent est invité à exprimer son avis sur le projet de soins	Enfant et adolescent	48
		1.1-05 Le patient bénéficie de messages renforçant sa capacité à agir pour sa santé	Tout l'établissement	49
		1.1-06 Le patient bénéficie d'actions pour devenir acteur de sa prise en charge [IQSS]	Tout l'établissement	50
		1.1-07 Les futurs parents discutent d'un projet de naissance avec l'équipe soignante dès le début de la grossesse	Maternité	51

Source: Screenshots taken from Référentiel and exemplary certification report ([Link](#), [Link](#), [Link](#)).

Figure 16: France –HAS: QualiScope



The QualiScope dashboards reports quality information of providers from all healthcare areas except GPs and outpatient specialists and home and long-term care. The dashboard's main objective is to support patients in making an informed provider choice. On the website, providers from adjacent healthcare areas are also explicitly named as target audience as they guide patients in making their provider choice. Moreover, the dashboard lists medical professionals educating themselves of the quality they deliver as target audience.

The published quality information is taken from three sources: "La certification des établissements de santé", the "measurement of quality and safety indicators", and the "accreditation of doctors and medical teams for high-risk specialties". The dashboard shows the certification grade along with how a provider did in in all relevant quality objectives of the certification process (cf. above). Additional quality indicators are divided into five areas: outpatient surgery delivered by hospitals and clinics ("chirurgie ambulatoire"), acute somatic care ("médecine, chirurgie, obstétrique"), rehabilitative care ("soins de suite et de readaptation"), hospitalization at home ("hospitalisation à domicile"), and psychiatric care ("santé mentale"). They are collected every year and validated by the HAS. Results of providers are compared to the results of their peer group using color-coded distribution bars. Moreover, single providers can be compared using the "comparateur". Moreover, the dashboard provides filters, graphs, and drill down options, and the methodology used for measuring quality indicators is explained in detail.

There is no overall rating for providers. Only individual quality indicators and the certification grade are presented on the website. For each of the above-mentioned five areas, there are several indicators for process quality and/ or outcome quality (sometimes risk-adjusted) and also PREMs. For instance, for "médecine, chirurgie, obstétrique", 43 PREMs are defined including a patient satisfaction score and six risk-adjusted outcome quality indicators (all for knee and hip replacements). PREMs are collected in detail covering overall recommendation and satisfaction scores, medical care, nursing care, and organization and service. Lastly, structural quality information in the form of the offered medical specialties and the certification grade are reported.

Figure 17: QualiScope – Screenshots from search interface, search result list, and provider details



Source: Screenshots taken from the QualiScope Website ([Link](#), [Link](#), [Link](#)).

Figure 18: France – Le Guide Santé

The screenshot shows the Le Guide Santé dashboard interface. At the top, there are four main filter sections: Country (France), Healthcare area (with icons for various medical specialties), Type (Dashboard), and Form (Open Website). The main content area is divided into several sections:

- Objectives:** Includes radio buttons for Monitor performance, Inform provider choice (selected), Provider benchmarking, and Other.
- Target audience:** Includes a bullet point for General public, patients, caregivers/ relatives.
- Number of data sources:** 6.
- Funding:** Includes radio buttons for Funded publicly, Funded by foundation, Funded by members, Funded by insurance(s), and Business Model (checked).
- Ownership:** Private for profit.
- Regulation:** No regulation.
- Visualization and use:** Includes radio buttons for Raw data, Tables, Comparisons, Filters, Graphs (selected), and Drill down.
- Content:** A table showing quality dimensions with status indicators:

Quality Dimension	Status
Composite ¹	<input type="radio"/>
Structural quality	<input checked="" type="radio"/>
Process quality	<input checked="" type="radio"/>
Outcome quality	<input type="radio"/>
Patient-reported outcome	<input type="radio"/>
Patient-reported experiences	<input checked="" type="radio"/>
- Methodology explained in detail:** Includes radio buttons for Primary data, Secondary data, and Data is validated (checked). It also features a 'Timeliness' section with a timeline from t-0 to t-3, and an 'Explanations' section listing issues like 'Statistical comparisons not available' and 'Methodology not explained'.
- Collection frequency:** Data collected annually.
- Legend:** Includes icons for Inclusion/Exclusion and various healthcare areas like GPs, Psychiatric Care, Home care, etc.

¹) Composite measure for overall quality of a provider combining summarizing all quality dimension

“Le Guide Santé” is a dashboard that provides quality information of French hospitals. It uses some of the PREMs from QualiScope, the HAS certification grade, and a few “own” quality indicators such as the caesarian section rate of obstetric departments. In addition, the website provides health news, e.g., written by health professionals or results from public health surveys. The main objective is to inform provider choice and the target audience is the general public, patients, and caregivers/relatives.

The dashboard presents information collected by the HAS and QualiScope with simple donut charts without drill down options limiting the possibility to learn about how the indicator was calculated. “Le Guide Santé” does not provide information on methodology, statistical comparisons, e.g., to the national average, are not available (only some donut charts are in red which might mean below-average results), and it is not assessable how small sample sizes are handled. The dashboard uses validated primary and secondary data. The data are collected on an annual basis. Quality indicators are reported with a time lag of two years and HAS inspection results according to the timing of the inspection (cf. above). “Le Guide Santé” is a private for-profit company with a business model (selling of advertisement space and offering services to commercial enterprises, yet it remains unclear what services exactly).

“Le Guide Santé” reports structural quality information (e.g., heavy medical equipment, or medical specialties offered, and the HAS certification grade), own process quality indicators such as the rate of cancer patients evaluated in an interdisciplinary tumor conference, and two PREMs (satisfaction and recommendation) taken from QualiScope.

Figure 19: Le Guide Santé – Screenshots from search interface, search result list, & provider details

Le Guide Santé
LE PORTAIL SANTÉ DE RÉFÉRENCE

Le Guide : hôpitaux et cliniques Actualités Santé, Bien-être

Le guide des hôpitaux et cliniques de France

Recherchez parmi les 1335 établissements MCO (médecine, chirurgie, obstétrique) de France

Où ? ville, code postal, région

RECHERCHER

Rechercher par régions, départements

Groupe Hospitalier Diaconesses Croix Saint-Simon - site Hôpital de la Croix Saint-Simon

125 rue d'Avron - 75020 Paris 20e arrondissement

SCANNER

Assistance Publique - Hôpitaux de Paris - site Hôpital Tenon

4 rue de la Chine - 75020 Paris 20e arrondissement

IRM SCANNER SCINTIGRAPHIE TEP-SCAN

Assistance Publique - Hôpitaux de Paris - site Hôpital Tenon

4 rue de la Chine - 75020 Paris 20e arrondissement

01 56 01 70 00

Itinéraire
<http://tenon.aphp.fr/>

Satisfaction
71%
Mesure de la satisfaction des patients hospitalisés (enquête e-Satis)

Chiffres-clés

Certification
B
Évaluation externe de la qualité et de la sécurité des soins

RCP
98%
Proportion de nouveaux patients atteints de cancer ayant bénéficié d'un avis émis en réunion de concertation pluridisciplinaire

Taux de recommandation
53%
% de patients hospitalisés qui recommanderaient l'établissement à leurs proches

Taux de césarienne
25%
Nombre d'accouchements réalisés par césarienne rapporté au nombre d'accouchements total effectués

Nombre de naissances
2594

Équipements lourds d'imagerie médicale

IRM SCANNER
SCINTIGRAPHIE TEP-SCAN

Source: Screenshots taken from the “Le Guide Santé” Website ([Link](#), [Link](#), [Link](#)).

2.2.6 Germany

For Germany, we investigated three monitoring systems and four dashboards (Table 3).

Table 3: Overview of investigated monitoring systems/ dashboards from Germany

Country	Source (monitoring system/ dashboard name)	Type	Healthcare area					No. of covered healthcare areas per source
			GPs and outpatient specialists	Hospitals (somatic care)	Psychiatric Care	Rehabilitation and "non-physician" health services	Home and long term care	
Germany	Externe stationäre Qualitätssicherung	Monitoring		✓				1
	Deutsche Rentenversicherung Bund	Monitoring				✓		1
	Medizinischer Dienst Bund	Monitoring					✓	1
	Arzt-Auskunft	Dashboard	✓		✓	✓		3
	AOK-Gesundheitsnavigator	Dashboard	✓	✓			✓	3
	Weisse Liste	Dashboard		✓			✓	2
	Qualitätskliniken.de	Dashboard				✓		1
No. of sources per healthcare area			2	3	1	3	3	

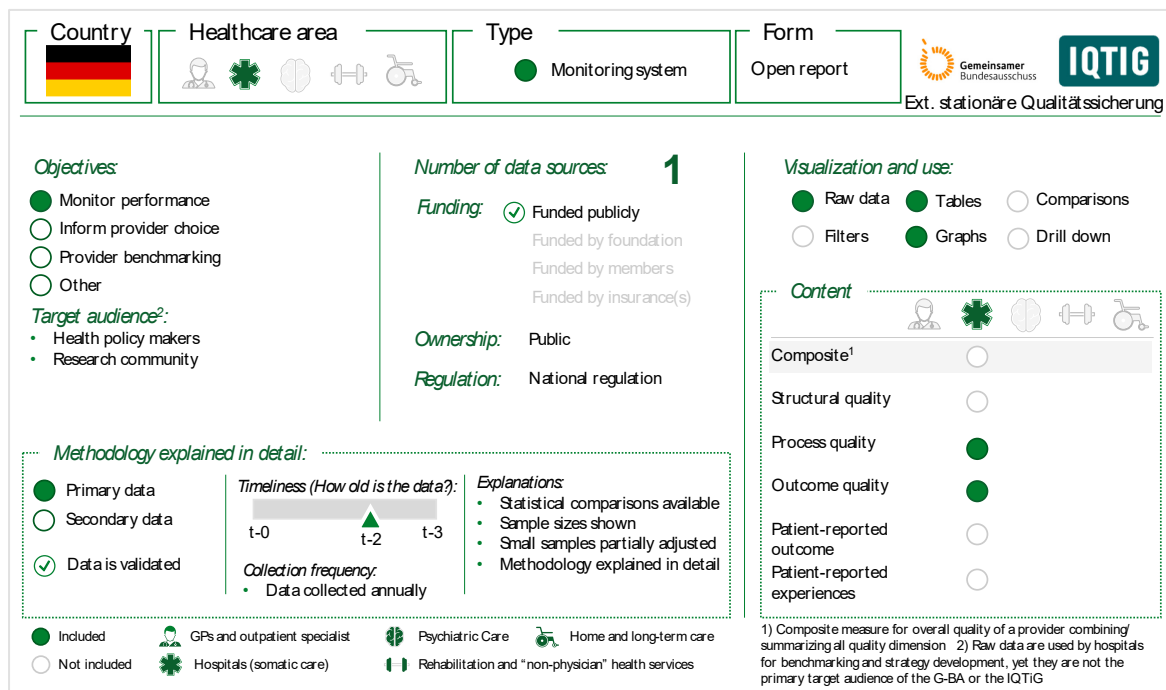
Monitoring systems cover one healthcare area each, namely hospitals (somatic care), home and long-term care, rehabilitation and non-physician health services. Regarding dashboards, "Arzt-Auskunft" and the AOK-Gesundheitsnavigator both cover three healthcare areas, "Weisse Liste" two, and "Qualitätskliniken.de" one.

Regarding monitoring systems, auditing organizations receive a legal mandate, namely the federal association of the pension insurance ("Deutsche Rentenversicherung Bund"), the federal association of the medical service of the statutory sickness funds and nursing care insurances ("Medizinischer Dienst Bund"), and the IQTiG responsible for the "externe stationäre Qualitätssicherung" monitoring program. Information collected for these monitoring systems were taken from reports, expert interviews, our topic experts' own knowledge, and/ or the organizations' websites.

In the case of the "externe stationäre Qualitätssicherung", the IQTiG publishes so-called "quality reports" summarizing the most important results on national level. Besides, the AOK-Gesundheitsnavigator (hospital search) and the "Weisse Liste" (hospital finder) both use various quality indicators from this monitoring system (the "Weisse Liste" also develops own composite outcome quality scores based on IQTiG indicators). Similarly, the AOK-Gesundheitsnavigator (care navigator) publishes results from the Medizinische Dienst Bund monitoring system. Moreover, we learned from an expert that the Medizinische Dienst Bund will launch its own quality dashboard in the second half of 2023. Likewise, another expert indicated that the "Deutsche Rentenversicherung Bund" will launch its own dashboard in July 2023.

With respect to dashboards, the dashboards we investigated are representative examples for a number of similar dashboards available in Germany. For instance, the two dashboards we investigated for GPs and outpatient specialists, namely the "AOK-Gesundheitsnavigator" (physician search) and "Arzt-Auskunft", publish only very limited quality information. In this regard, they are representative for at least three more fairly known "quality" dashboards: [Doctolib](#), [jameda](#), and [KBV Suche](#). With regards to hospitals, the Federal Joint Commission provides an overview of quality dashboards (see [Link](#)). Of these, many are run by statutory sickness funds (e.g., [TK Klinikführer](#)) and/ or based on the "Weisse Liste" (hospital finder) website. Similarly, other statutory sickness funds besides the AOK offer quality dashboards for home and long-term care (e.g., [BARMER Pflegelotse](#)), publishing results from the "Medizinischer Dienst Bund" audits.

Figure 20: Germany – Externe stationäre Qualitätssicherung



The “externe stationäre Qualitätssicherung” is based on German national law. According to this law, the Federal Joint Commission (“Gemeinsamer Bundesausschuss”, G-BA) shall continually monitor the quality of hospital care. To this end, it mandates the IQTiG to develop, collect, and analyze process and outcome quality indicators suitable to evaluate the inpatient stay for 24 episodes of care/ procedures structured into twelve treatment areas (e.g., pacemaker implementation, change, and revision/ explantation along with three more procedures for cardiology). If the IQTiG detects inferior quality, it conducts “structured dialogues” with the concerned provider to understand reasons for low quality and to develop quality improvement measures. Besides, selected indicators for obstetrics and gynecology can be used by states (“Bundesländer”) as quality requirements in hospital capacity planning. So far, no state has issued such requirements, however.

The G-BA publishes the raw data collected by providers on its website where it is downloadable upon request. Moreover, the IQTiG publishes an overall “Quality Report” summarizing main findings on a national level as well as single reports per episode of care with more detailed results but statements about single providers are not made. All reports are openly available online. Primary addressees are health policy makers. The research community also uses the data for analyses and the reports as reference.

Data are collected annually, and published quality information is two years old. The data are primarily collected for the above-described monitoring purposes but also used by various dashboards as secondary data source (cf. “AOK Gesundheitsnavigator”, “Weisse Liste”). In its reports, the IQTiG presents tables including all indicators and additional analyses, tables, and graphs for indicators where inferior quality was detected. Process quality indicators are, for instance, the preoperative time for femoral fracture patients or indicators targeting indication quality like adherence to medical guidelines for selecting the right pacemaker system. Some outcome quality indicators are risk-adjusted (age, sex, and other characteristics such as medical scores), e.g., standardized inpatient mortality ratios. An example for a non-risk-adjusted indicator is “Neurological complications after elective/urgent coronary and aortic valve surgery”.

Figure 21: Externe stationäre Qualitätssicherung – Impressions from IQTiG quality report



Tabelle 1: Qualitätsindikatoren mit besonderem Handlungsbedarf im Erfassungsjahr 2019

QS-Verfahren	ID	Bezeichnung des Indikators
Ambulant erworbene Pneumonie	50722	Bestimmung der Atemfrequenz bei Aufnahme
	2028	Vollständige Bestimmung klinischer Stabilitätskriterien bis zur Entlassung
Implantierbare Defibrillatoren	50055	Leitlinienkonforme Indikation
Mammachirurgie	51370	Zeitlicher Abstand von unter 7 Tagen zwischen Diagnose und Operation
	51846	Prätherapeutische histologische Diagnosesicherung
	52279	Intraoperative Präparatradiografie oder intraoperative Präparatsonografie bei sonografischer Drahtmarkierung
Geburtshilfe	318	Anwesenheit eines Pädiaters bei Frühgeburten
	52249	Verhältnis der beobachteten zur erwarteten Rate (O/E) an Kaiserschnittgeburten
Neonatalogie	50069	Verhältnis der beobachteten zur erwarteten Rate (O/E) an sehr kleinen Frühgeborenen mit einer Aufnahmetemperatur unter 36,0 °C
	50074	Verhältnis der beobachteten zur erwarteten Rate (O/E) an Risiko-Lebendgeborenen mit einer Aufnahmetemperatur unter 36,0 °C
Hüftgelenknahe Femurfraktur mit osteosynthetischer Versorgung	54030	Präoperative Verweildauer
Hüftendoprothesenversorgung	54003	Präoperative Verweildauer

Pflege: Dekubitusprophylaxe

Ergebnisse auf Ebene der Patientinnen und Patienten

ID	Bezeichnung des Indikators	2018		2019		Tendenz
		Ergebnis	Ergebnis	Fälle		
				Zähler (O / E)*	Nenner**	
52009	Verhältnis der beobachteten zur erwarteten Rate (O / E) an Patientinnen und Patienten mit mindestens einem stationär erworbenen Dekubitalulcus (ohne Dekubitalulcera Grad/Kategorie 1)	1,06	0,99	64.756 0,37 %	65.446 0,37 %	17.644.961 ↔
52010	Alle Patientinnen und Patienten mit mindestens einem stationär erworbenen Dekubitalulcus Grad/Kategorie 4	0,01 %	0,00 %		869	17.644.961 ↔

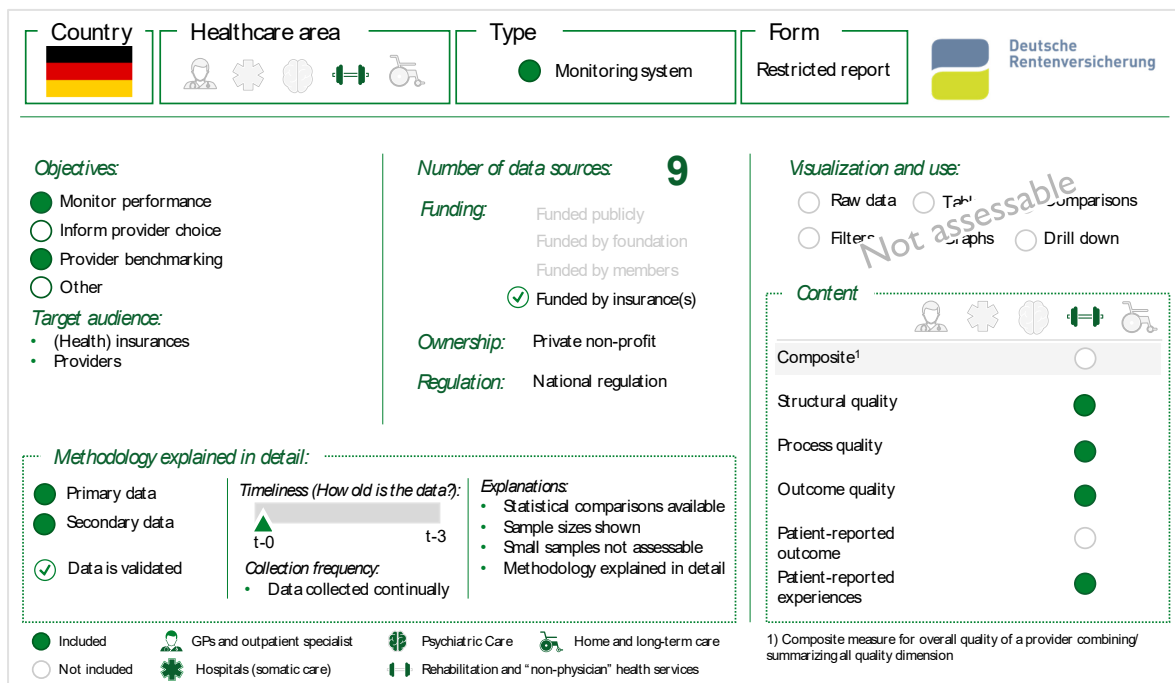
* bei risikoadjustierten Qualitätsindikatoren
** bei risikoadjustierten Qualitätsindikatoren: Anzahl in Grundgesamtheit

Ergebnisse auf Ebene der Krankenhäuser

ID	Bezeichnung des Indikators	Referenzbereich	2019		Einordnung	
			gesamt	auffällig (rechnerisch)	veröffentlichungspflichtig***	besonderer Handlungsbedarf
52009	Verhältnis der beobachteten zur erwarteten Rate (O / E) an Patientinnen und Patienten mit mindestens einem stationär erworbenen Dekubitalulcus (ohne Dekubitalulcera Grad/Kategorie 1)	≤ 2.13 (95. Perzentil)	1.907	94	■	-
52010	Alle Patientinnen und Patienten mit mindestens einem stationär erworbenen Dekubitalulcus Grad/Kategorie 4	Sentinel Event	1.907	466	■	-

Source: Screenshot taken from “Qualitätsreport 2020” by the IQTiG (p. 1, p.8, p. 16).

Figure 22: Germany – Deutsche Rentenversicherung Bund



The German Pension Fund (“Deutsche Rentenversicherung”) is responsible for financing large parts of the rehabilitative care sector in Germany. The federal association “Deutsche Rentenversicherung Bund” monitors the quality of rehabilitative care centers. Results from the monitoring process are directed at insurances (i.e., the “Deutsche Rentenversicherung” itself), and at providers enabling benchmarking. The “Deutsche Rentenversicherung Bund” monitors quality using different quality assurance measures such as audits, inspections, and surveys. These measures are designed to ensure that providers meet pre-defined quality standards.

The results from the monitoring process are shared with both the rehabilitation clinics and state pension insurances in the form of reports. The data used are both primary and secondary, and all data are validated. The reports cover structural, process, and outcome quality. PROMs, obtained through surveys administered by the “Deutsche Rentenversicherung Bund” are also included for selected patient groups. The interviewed expert indicated that reports provide statistical comparisons, report sample sizes, and acknowledge the potential limitations of small sample sizes.

While a template outlining the structure of the report is available, the precise content and access to the report remain restricted. Thus, there was limited information available for our information collection and some aspects such as visualization could not be assessed at all.

Figure 23: Deutsche Rentenversicherung Bund – Screenshots from homepage, the overview of the procedures for quality monitoring and the report template

Deutsche Rentenversicherung

Prävention Reha Rente Beratung & Kontakt Experten Über uns & Presse Online-Dienste

Suchbegriff

Ein Leben lang für Sie da - mit Sicherheit!

Instrumente und Verfahren der Reha-Qualitätssicherung

Deutsche Rentenversicherung Rehabilitation – mit Sicherheit Qualität

Reha-Therapiestandards
Evidenzbasierte Mindestanforderungen an die therapeutische Versorgung

Leistungserbringung in der beruflichen Reha (LBR)

Therapeutische Versorgung (KTL)
Informationen zu Leistungsmenge, -dauer und -verteilung

Strukturanforderungen/Strukturerhebung
Personelle, technische, räumliche Struktur und interne Kommunikation

Rehabilitandenstruktur
Soziodemografische und krankheitsbezogene Merkmale der Rehabilitanden

Reha-Therapiestandards
Evidenzbasierte Mindestanforderungen an die therapeutische Versorgung

Leistungserbringung in der beruflichen Reha (LBR)

Therapeutische Versorgung (KTL)
Informationen zu Leistungsmenge, -dauer und -verteilung

Strukturanforderungen/Strukturerhebung
Personelle, technische, räumliche Struktur und interne Kommunikation

Rehabilitandenstruktur
Soziodemografische und krankheitsbezogene Merkmale der Rehabilitanden

Peer Review
Begutachtung durch geschulte Fachkollegen

Teilnehmerbefragung
Teilnehmerzufriedenheit

Rehabilitandenbefragung
Rehabilitandenzufriedenheit, subjektiver Behandlungserfolg

Sozialmedizinischer Status nach beruflicher Bildung
im 6., 12. und 24. Monat nach der Reha

Sozialmedizinischer Verlauf nach medizinischer Reha
2 Jahre nach der Reha

Visitationen in medizinischen Reha-Einrichtungen

Abschluss und Teilnehmerstruktur der beruflichen Bildung
Ergebnis der Maßnahme, Leistungsketten

QS der beruflichen Rehabilitation (LTA)
QS der medizinischen Rehabilitation

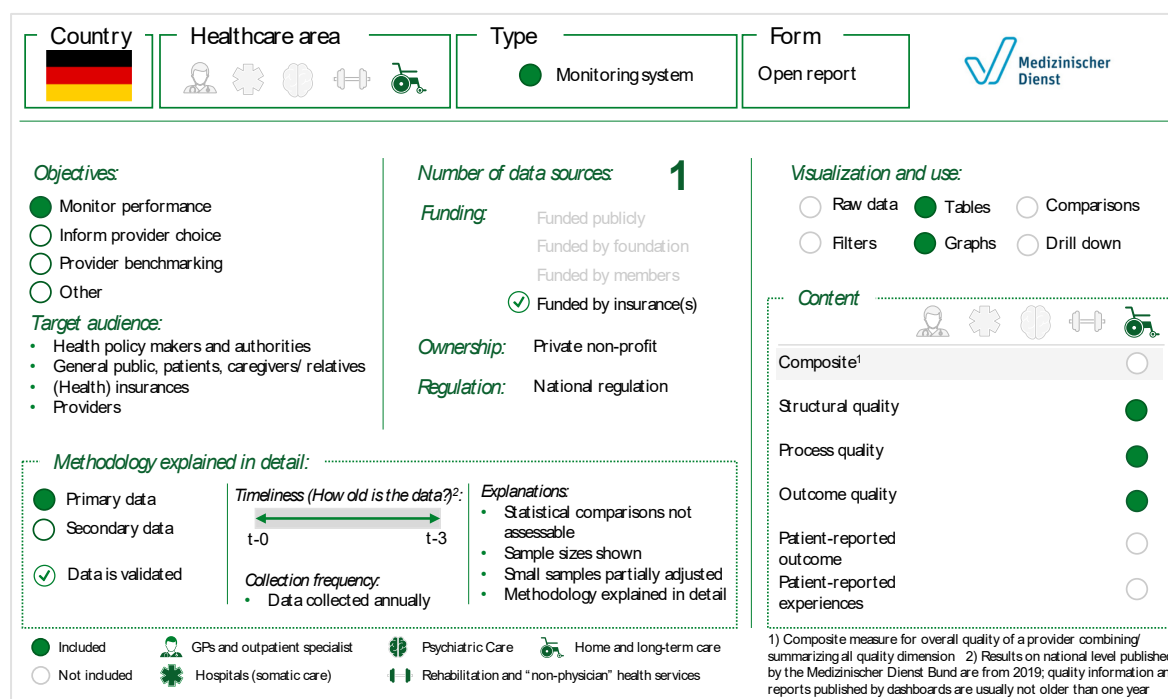
Reha-Qualitätssicherung der Deutschen Rentenversicherung

Ergebnis (Abschluss) der beruflichen Bildungsleistungen – Bericht 2013

→ Bericht zur Qualitätssicherung bei LTA
→ Abschluss der Leistungen im Jahr 2012

Source: Screenshot taken from “Deutsche Rentenversicherung” website and Flyer ([Link](#), [Link](#), [Link](#)).

Figure 24: Germany – Medizinischer Dienst Bund



The “Medizinischer Dienst Bund” (“medical service”) is the federal head organization of all “Medizinischer Dienst” state organizations. All “Medizinischer Dienst” organizations are funded and mandated by their respective regional associations of statutory sickness funds and nursing care insurances. Their tasks vary by healthcare area. Regarding home and long-term care, their main task is to monitor the quality of facilities and services (out- and inpatient). To this end, an evaluation methodology is used in audits (new methodology since Nov 2019). The state organizations conduct 90% of the audits on a yearly basis, supported by the audit service of the federation of private health insurances responsible for the remaining 10% of audits.

In audits, the care for nine residents per facility is checked in detail. When selecting residents, three subgroups with two residents each must be considered. Subgroups are defined by residents’ mobility level and their level of cognitive and communicative skills. The remaining three residents are picked randomly. Quality is assessed and reported for four areas: (1) Support with mobility and self-care, (2) Support with the coping with sickness- and therapy-induced challenges and liabilities, (3) Support with organizing daily life and social contacts, and (4) Support in special care situations. Each area consists of three to four quality aspects (e.g., 2.2 Pain management) rated from four points (no or little quality deficiencies) to one point (severe quality deficiencies). Depending on the quality area and the selected residents, auditors might not be able to include all nine residents in their assessment. As auditing is done on a yearly basis, providers receive their report as soon as it is available and likewise, quality information and reports published by dashboards are usually not older than one year.

Reports of single facilities are not published on the website(s) of the “Medizinischer Dienst Bund” or state organizations. There are five quality dashboards, however, that use the results of the auditing process and publish reports. We included one such dashboard (cf. below: AOK care navigator). The “Medizinischer Dienst Bund” publishes results at the national level along with the employed methodology and more detailed quality ratings ranging from A (No irregularities) to D (Deficits with negative consequences). The latest report includes results from 2019. The interviewed expert

mentioned that updated results and additional, newly developed indicators will be published 2023 both as a report and on a new dashboard.

Figure 25: Medizinischer Dienst Bund – Impressions from report



QUALITÄTSPRÜFUNGEN IN DER STATIONÄREN PFLEGE AB DEM 1. NOVEMBER 2019

Tabelle 28:
Stationäre Pflege neu – QB 1 Unterstützung bei der Mobilität und Selbstversorgung
(Bewertung je Qualitätsaspekt in Prozent)

Untersuchte Personen		18.842				
Nr.	Qualitätsaspekt*	Qualitätsaspekt relevant bei	A) Keine Auffälligkeiten	B) Auffälligkeiten	C) Defizit mit Risiko	D) Defizit mit negativer Folge
1.1	Unterstützung bei der Mobilität	91,8	76,6	9,2	12,5	5,1
1.2	Unterstützung bei der Ernährung und Flüssigkeitsversorgung	76,7	86,9	4,5	6,7	2,6
1.3	Unterstützung bei Kontinenzverlust, Kontinenzförderung	82,4	87,1	5,8	6,7	0,9
1.4	Unterstützung bei der Körperpflege	89,3	87,5	4,0	5,9	3,1

*Mehrfachbewertung je Qualitätsaspekt möglich

3.6.1.2 Qualitätsbereich 2: Unterstützung bei der Bewältigung von krankheits- und therapiebedingten Anforderungen und Belastungen

Zum Qualitätsbereich 2 gehören die folgenden Qualitätsaspekte:

2.1 Medikamentöse Therapie

QUALITÄTSPRÜFUNGEN IN DER STATIONÄREN PFLEGE AB DEM 1. NOVEMBER 2019

3.6.2 Einrichtungsbezogene Struktur- und Prozessqualität in der stationären Pflege

Der Qualitätsbereich 6 umfasst einrichtungsbezogene Qualitätsaspekte. Dem Qualitätsbereich sind die folgenden Qualitätsaspekte zugeordnet:

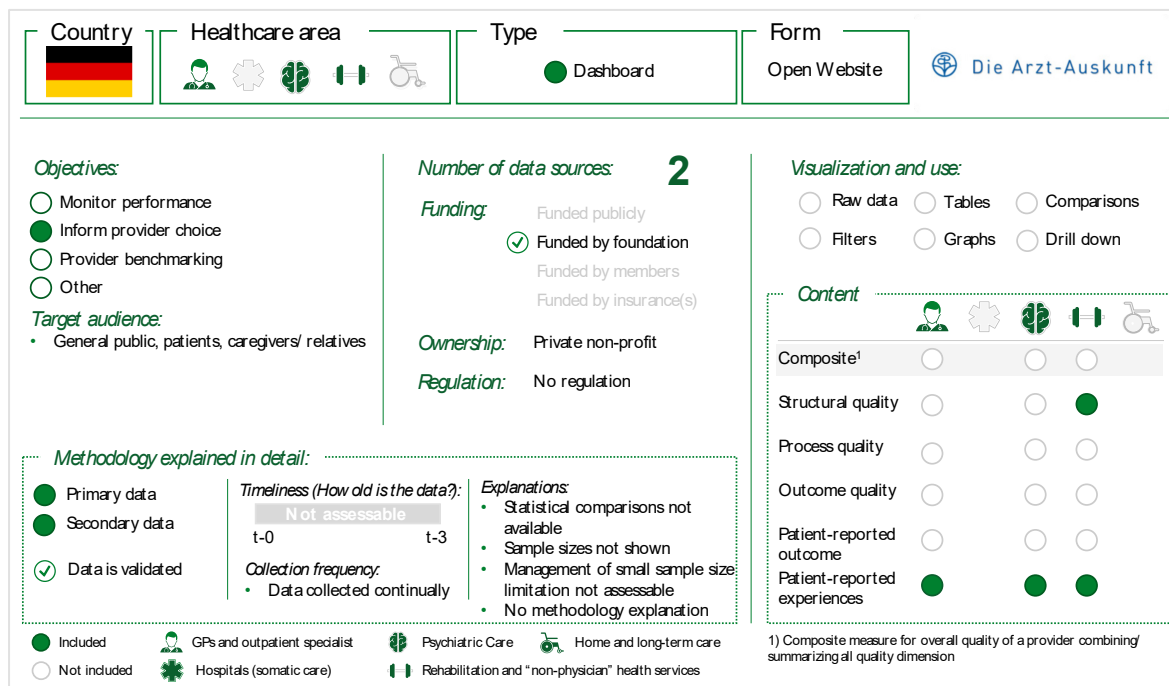
6.1 Qualifikation und Aufgabenwahrnehmung durch die verantwortliche Pflegefachkraft
6.2 Begleitung Sterbender und ihrer Angehörigen
6.3 Maßnahmen zur Vermeidung und zur Behebung von Qualitätsdefiziten

Diese Qualitätsaspekte sind wiederum mit Kriterien unterlegt. Bei diesen Kriterien wird bewertet, ob diese erfüllt (ja) oder nicht erfüllt sind (nein).

Source: Screenshot taken from [6. Pflegebericht des MDS](#) (p. 1, p. 66).

Annotation: Note that we focused on the evaluation of inpatient long-term care facilities. The “Medizinischer Dienst” also audits home and outpatient care service providers (cf. pp. 78 of the [6. Pflegebericht des MDS](#)).

Figure 26: Germany – Arzt-Auskunft



The dashboard “Arzt-Auskunft” is run and funded by the Foundation “Stiftung Gesundheit”. The dashboard uses secondary data from the «Strukturverzeichnis der medizinischen Versorgung» (“Structural directory of medical care”) and collects own patient experience ratings and reports (primary data). Patient ratings and reports are made available continually, i.e., shortly after patients have given them after a quality check by “Arzt-Auskunft”. Thus, patient experience data are in many cases quite recent but also include data from previous years. We could not assess, however, how old the data are, how quality indicators are calculated, and how many ratings were needed/ used to derive overall scores, as the website does not provide methodological explanations. Similarly, we could not assess if quality indicators were not calculated when sample sizes are too small.

The website publishes information of GP and outpatient specialist practices, psychological psychotherapists, rehabilitative care centers, and physiotherapists. Information is also published for hospitals, but we did not include this healthcare area in our information collection as information is provided on single medical department level (e.g., internal medicine, general surgery, cardiology, etc.). “Arzt-Auskunft” provides contact information, and also other information categories, such as waiting times, appointment management, and information on infrastructure and access (e.g., wheelchair access). The only quality-related information are star ratings for “patient satisfaction” (GPs and outpatient services, psychological psychotherapists) and “patient service” (all healthcare areas except for physiotherapists). These composite scores seem to be derived from six questions part of the “Arzt-Auskunft” questionnaire. We cannot confirm this, however, as no methodological information is available. For physiotherapists, no quality information is provided. For rehabilitative care centers, quality management certificates are indicated (e.g., DIN ISO 900x).

As stated in the overview chapter for Germany, there are various “quality” dashboards like “Arzt-Auskunft” available in Germany and other countries, usually with a focus on GPs and outpatient specialists. We included “Arzt-Auskunft” as an example for such dashboards.

Figure 27: Arzt-Auskunft – Screenshots from search result list, and provider details

Arzt-Auskunft Für Ärzte

Treffer für Allgemeinmedizin in köln

Angezeigt werden die nächstliegenden Adressen im Umkreis von 1.6 Km

Ihre Suchkriterien: **Allgemeinmedizin** **köln** Suchkriterien ändern Karte ausblenden / anzeigen

Praxis Dr. Dieter Berger

[Herr Dr. med. Dr. med. dent. Dieter Berger](#) Zur Detailseite

Facharzt für Allgemeinmedizin Empfehlung geben

0.1 km
An der Münze 10
50668 Köln

02 21 / 7 32 55 45

Gemeinschaftspraxis

[Frau Dr. med. Bita Kermani](#) Zur Detailseite

Fachärztin für Allgemeinmedizin Empfehlung geben

0.2 km
Clever Straße 18
50668 Köln

Arzt-Auskunft Für Ärzte

Treffer für Allgemeinmedizin in köln / Herr Dieter Berger

Dr. med. Dr. med. dent. Dieter Berger Weitere Ärzt:innen für Allgemeinmedizin in Köln

Facharzt für Allgemeinmedizin in Köln Empfehlung geben

Kontaktdaten

An der Münze 10
50668 Köln

02 21 / 7 32 55 45

www.dr-dieter-berger.de

Sprechzeiten:

Montag	08:00 - 12:00
Dienstag	08:00 - 12:00 / 14:00 - 18:00
Mittwoch	08:00 - 12:00
Donnerstag	08:00 - 12:00
Freitag	08:00 - 12:00

Sonstige Sprechzeiten:
telefonische Sprechzeiten: Montag bis Freitag 12:00 bis 12:30 Uhr
Abendsprechstunde für Berufstätige nach Vereinbarung
weitere Termine für die Sprechstunde nach Vereinbarung
Termine für die Sprechstunde nur nach Vereinbarung

Lage der Praxis

50°57'06.8"N 6°57'56.6"E
View larger map

Empfehlungen

★★★★★
Patientenzufriedenheit

★★★★☆
Patientenservices

Empfehlungen

★★★★★
Patientenzufriedenheit

★★★★☆
Patientenservices

Fachgebiet Alle Merkmale öffnen / schließen

Psychologischer Psychotherapeut/Psychotherapeutin

Weitere Hinweise

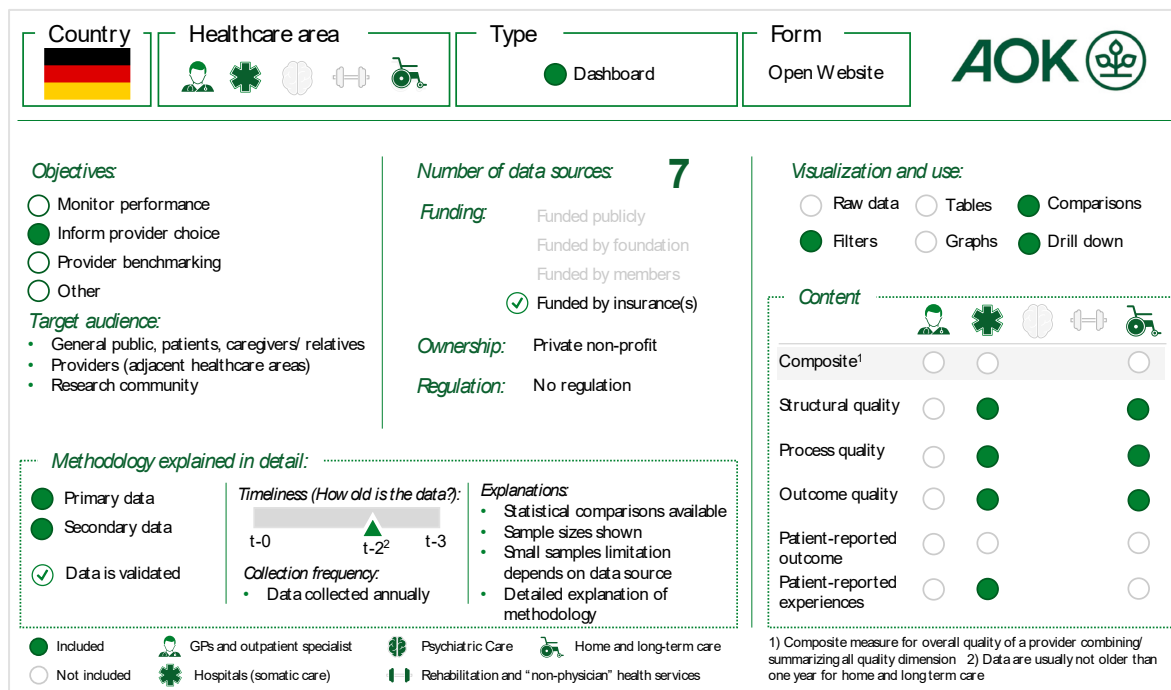
Praxis befindet sich am Ebertplatz, für gehbehinderte Patienten zugänglich

[Adresse ändern](#)

Abrechnungsart	+
Terminvergabe	+
Wartezeit in der Praxis	+
Patientenservices	+
geeignet für Menschen mit eingeschränkter Mobilität	+
geeignet für Rollstuhlfahrer	+
geeignet für Menschen mit Hörbehinderung	+
geeignet für Menschen mit Sehbehinderung	+
Organisation	+

Source: Screenshot taken from ["Arzt-Auskunft" physician search](#) and [psychological psychotherapists search](#).

Figure 28: Germany – AOK Gesundheitsnavigator



The “AOK Gesundheitsnavigator” is a collection of search platforms for outpatient care (our focus were GPs and outpatient specialists, [physician search](#)), hospitals ([hospital search](#)), and long-term care facilities ([care navigator](#)). It is funded and run by the AOK, a group of non-profit statutory sickness funds.

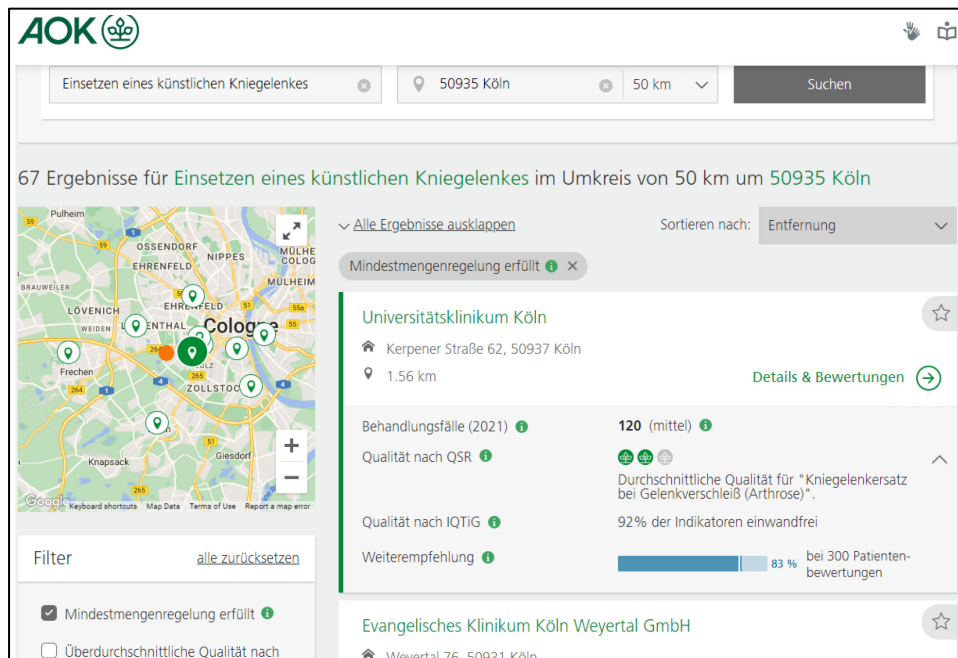
The “AOK Gesundheitsnavigator” draws data from up to seven data sources (hospitals), including external data (e.g., certification data from medical associations) to support patients in their provider choice. To this end, the dashboard also explicitly addresses providers from adjacent healthcare areas. For instance, for the hospital search, GPs and outpatient specialists are named as target audience to support their patients in choosing the most appropriate hospital.

For somatic inpatient care, the AOK calculates and presents own risk-adjusted outcome quality indicators for 13 procedures/ episodes of care (e.g., knee replacement for arthrosis, radical prostatectomy for prostate carcinoma, inguinal hernia repair, cholecystectomy for gall stones, appendectomy for appendicitis, surgery for femoral fracture, etc.). For each procedure, a composite measure is displayed in the form of “life-trees”, i.e., three green trees mean that the hospital is among the top 20%, two trees mean medium quality (between bottom 20% and top 20%), and one tree means inferior quality (bottom 20%). These composite measures condense several single indicators. Results for these indicators can be viewed when drilling down on a single provider. Moreover, the dashboard shows an overall recommendation rate and satisfaction rates for physicians, nurses, and organization and service at the hospital level. Furthermore, process and outcome quality indicators from the “externe stationäre Qualitätssicherung” program are shown. All quality information is two years old and updated annually.

For GPs and outpatient physicians, there is no quality information available. The only quality-like information is the medical specialties offered in the selected practice. Accordingly, the “AOK Gesundheitsnavigator” (physician search) resembles more an “online telephone book”. Regarding home and long-term care, the care navigator provides structural quality and most importantly process and outcome quality information from the monitoring program of the “Medizinischer Dienst Bund” and

from self-reported indicators (“care results”). These data are usually not older than one year (cf. above: “Medizinischer Dienst Bund”).

Figure 29: AOK Gesundheitsnavigator – Screenshots from search result list, and provider details



Ergebnisse für »Kniegelenkersatz bei Gelenkverschleiß (Arthrose)«

Qualität nach QSR

Durchschnittliche Qualität für "Kniegelenkersatz bei Gelenkverschleiß (Arthrose)".

Nach einer Operation in diesem Krankenhaus ist die Wahrscheinlichkeit von Komplikationen ähnlich hoch wie in anderen Krankenhäusern.

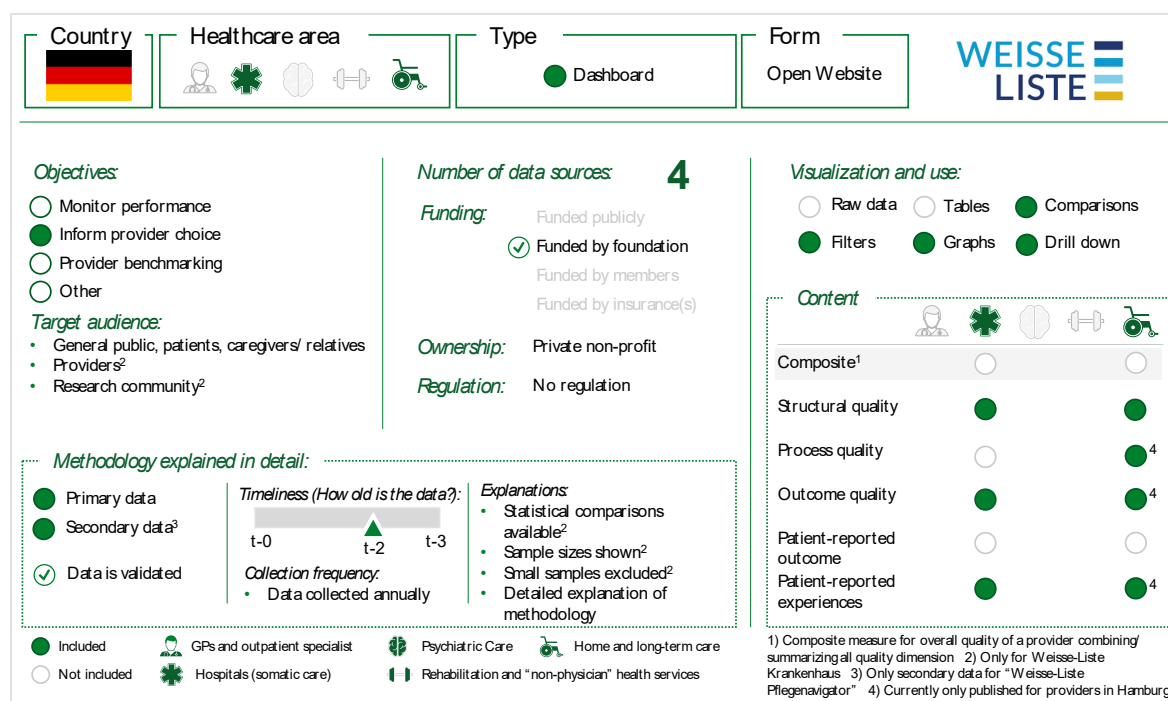
Qualitätsindikator	Ergebnis	Erläuterung
Ungeplante Folge-Operation bis zu 365 Tage nach dem Eingriff	0	Durchschnittliche Qualität Nach einer Operation in diesem Krankenhaus ist die Wahrscheinlichkeit einer ungeplanten Folgeoperation ähnlich hoch wie in den meisten anderen Krankenhäusern.
Chirurgische Komplikationen innerhalb von 90 bzw. 365 Tagen nach dem Eingriff	0	Durchschnittliche Qualität Nach einer Operation in diesem Krankenhaus ist die Wahrscheinlichkeit einer chirurgischen Komplikation ähnlich hoch wie in den meisten anderen Krankenhäusern.
Sterblichkeit innerhalb von 90 Tagen nach dem Eingriff	0	Durchschnittliche Qualität Nach einer Operation in diesem Krankenhaus ist die Wahrscheinlichkeit zu sterben ähnlich hoch wie in den meisten anderen Krankenhäusern.

Einbezogene AOK-Behandlungsfälle: 46 (2018-2020) [Detailwerte einblenden](#)

Qualität nach IQTiG

Source: Screenshot taken from “[AOK Gesundheitsnavigator](#)” (Krankenhaussuche).

Figure 30: Germany – Weisse Liste



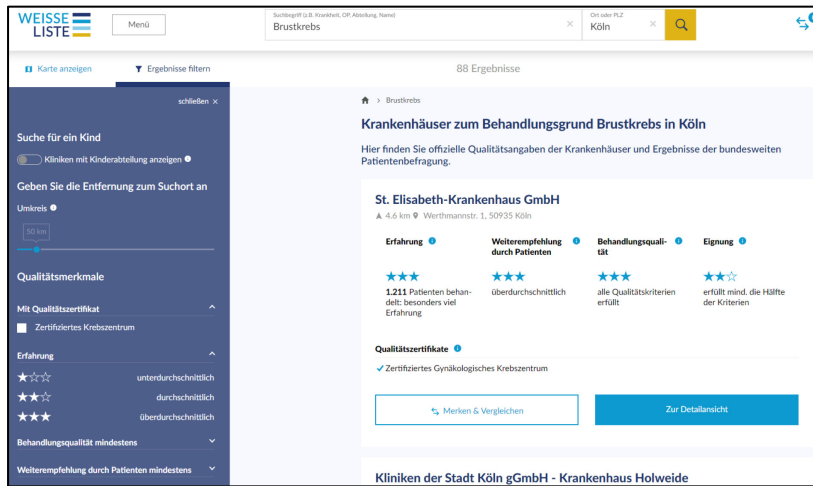
The "Weisse Liste" is a website accessible for everyone, funded and run by the Bertelsmann foundation. It publishes quality information for hospitals ([hospital finder](#)) and long-term care facilities ([care facility finder](#)). Its aim is to inform patients where to find the most appropriate care. Similar to the "AOK Gesundheitsnavigator" (hospital search), the "Weisse Liste" hospital finder is explicitly addressed at GPs and outpatient physicians to support their patients in finding the most appropriate hospital. Also similar to the "AOK Gesundheitsnavigator" (hospital search), researchers can make a request access to some of the raw data primarily collected with the support of the "Weisse Liste", namely data from patient experience questionnaires (in the case of the AOK, researchers can apply for access to risk-adjusted outcome quality indicators, as well as to claims data on insuree level).

For hospitals, the "Weisse Liste" publishes two structural quality composite scores ("experience", i.e., procedure volume, and "qualification" in terms of personnel and technical appliances) and two outcome quality composite scores ("treatment quality" and "patient safety and hygiene", both consisting of several indicators from the "externe stationäre Qualitätssicherung"). Quality is rated in the form of stars, with three stars representing the highest and one the lowest quality. Moreover, certifications from medical associations are shown where available. Lastly, patient-reported experiences are presented with star ratings for overall recommendation, medical care, nursing care, and organization and service. For all dimensions, users can drill down and see star ratings for single aspects of service quality, e.g., how well patients felt informed by physicians or nurses. In addition, the "Weisse Liste" publishes patient reports.

With respect to long-term care facilities, for all regions except for Hamburg, only basic information on what kind of care, and what care levels are offered, and the amount of monthly co-payment is published along with facilities' contact information. For facilities in Hamburg, collection, and publication of additional quality information is required by state law. Structural quality in the form of officially checked staffing levels and qualification, service quality as reported by residents' relatives, and selected information of the quality monitoring by the "Medizinischer Dienst Bund" are provided.

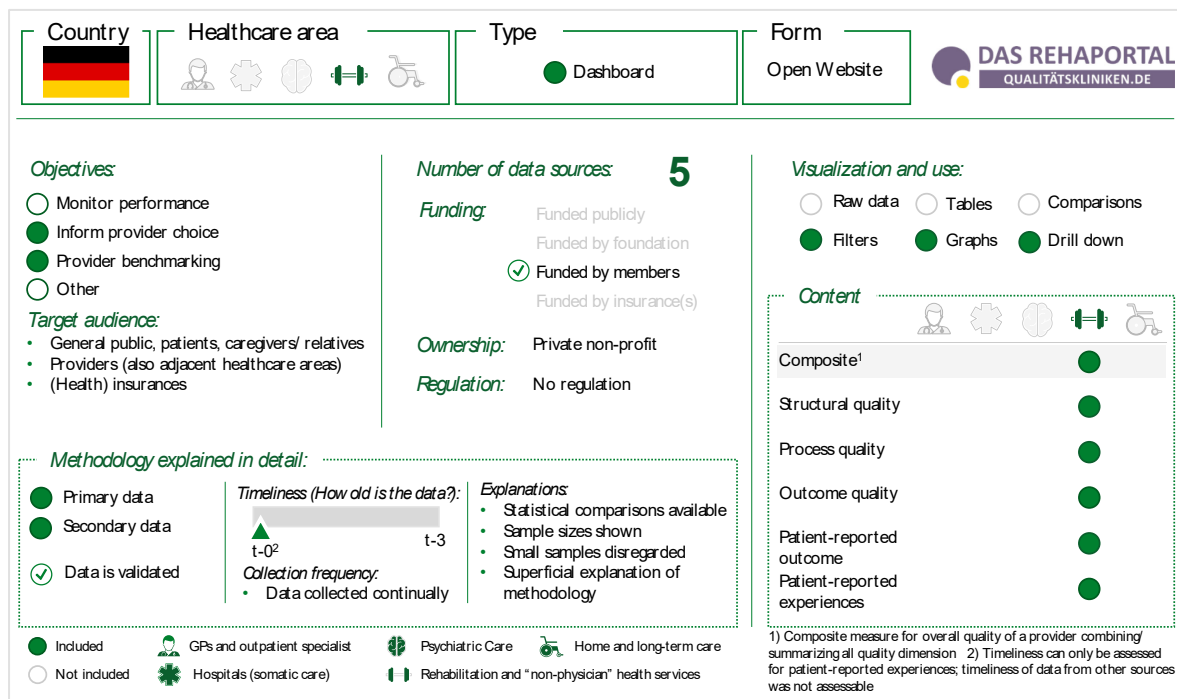
In fact, the “Weisse Liste” states that it should have access to monitoring results of all states, yet currently, this is not the case (see [explanation](#)).

Figure 31: Weisse Liste – Screenshots from search result list, and provider details



Source: Screenshot taken from [“Weisse Liste” hospital finder](#) and [care facility finder](#).

Figure 32: Germany – Qualitätskliniken.de (Das Rehaportal)



The quality dashboard “Qualitätskliniken.de” is a cooperation of healthcare companies running rehabilitative care centers and self-funded by its members. Its main aim is to inform patients about the quality of rehabilitative care centers and to support them in their provider choice. Besides, it serves as a benchmarking platform for its members. Moreover, “Qualitätskliniken.de” states that their information could also be valuable for payers and that it should be used by providers from adjacent healthcare areas, e.g., by hospitals for discharge management.

Overall, “Qualitätskliniken.de” draws data from five sources. Four are primary data collected by “Qualitätskliniken.de” itself with the main goal of using it for own reporting (e.g., PREMs, and PROMs). For outcome quality indicators, the dashboard uses reports from health insurances and the German pension insurance. Timeliness of data could only be assessed for PREMs, which is collected continuously and is not older than 12 months. PROM-data seems to be from three pilot studies conducted by the university medical center of Hamburg between 2018 and 2021. For the quality categories “organizational quality”, and “patient safety”, “Qualitätskliniken.de” states that members must provide the most recent data, and for “treatment quality” that insurances’ latest report is used. Nevertheless, it remains unclear how old exactly data might be.

Regarding visualization, the dashboard features filters to support the search for suitable rehabilitative care centers and donut charts for all quality categories and 100% bar charts for indicator results. For each quality category, a composite score is provided. One can drill down on each quality category to view the results for single indicators. The overall composite score summarizes all four quality categories “organizational quality”, “patient safety”, “treatment quality”, and “patient satisfaction” weighing each category equally. “Treatment quality” includes outcome quality indicators. “Patient safety” contains a number of process quality indicators, such as “Management of the norovirus”. “Organizational quality” and “patient satisfaction” contain 26 single service quality indicators reported by patients. Finally, “Qualitätskliniken.de” reports rates representing PROM-improvements of the selected provider relative to its peer group for three orthopedic, two psychiatric, and three cancer episodes of care.

Figure 33: Qualitätskliniken.de – Screenshots from search interface, result list, and provider details

DAS REHAPORTAL
Qualitätskliniken.de

REHASUCHE | News | Erkrankungen | Behandlungen | Patienteninformationen | Qualitätsmessung

REHAKLINIKEN SUCHE UND VERGLEICHEN

ÜBER 1.600 REHAKLINIKEN UND BEWERTUNGEN VON 72.000 PATIENT:INNEN

Klinikname, Krankheit oder ICD | PLZ oder Ort | Bundesweit | Alle | Suchen

Fachgebiet | Spezielle Angebote | Zimmer | Kostenträger | Sprachen

Wie gut sind orthopädische Rehakliniken in Deutschland?

Jedes Jahr werden in Deutschlands Rehakliniken rund eine halbe Million Patienten aufgrund orthopädischer Erkrankungen behandelt. **Chronische Rückenschmerzen** sind neben **Hüft- und Kniegelenksverletzungen** der absolute Spitzenreiter. Die Behandlungserfolge fallen jedoch unterschiedlich aus.

Zusammen mit dem Universitätsklinikum Hamburg-Eppendorf hat Qualitätskliniken.de mehr als 3.000 Patienten nach ihren persönlichen Reha-Erfolgen befragt und dazu international anerkannte Messinstrumente genutzt: Patient Reported Outcomes (PROs). Die Fragebögen wurden wissenschaftlich ausgewertet und zu

+ Mehr

Sortieren: Gesamtwert Orthopädie | Suchergebnis: 1 - 10 von 22 Ergebnissen | Liste | Karte

VAMED Rehaklinik Bad Grönenbach
87730 Bad Grönenbach

Gesamtwert Orthopädie: 100%

Hüftgelenkersatz: 100%

Kniegelenkersatz: 100%

Rückenschmerzen: 100%

Behandelte Patient:innen pro Jahr gesamt: 3.017

Kind Ambulant Mutter-Kind Stationär

Details

VAMED Rehaklinik Damp
24351 Ostseebad Damp

Gesamtwert Orthopädie: 95%

Hüftgelenkersatz: 95%

Kniegelenkersatz: 92%

Rückenschmerzen: 96%

Behandelte Patient:innen pro Jahr gesamt: 9.985

Kind Ambulant Mutter-Kind Stationär

Details

Qualitätsbewertung

Die Fachbereich für Psychosomatik, Psychotherapie und psychiatrische Rehabilitation wurde von Das Rehaportal mit 84% von möglichen 100% bewertet. Die beste Rehaklinik konnte 89% erreichen. Die Ergebnisse der Fachabteilung sind hier im Detail einsehbar.

Ø 81% / Max: 89%
Im Vergleich zu 48 Kliniken.

Messung	Ø	Max	Ergebnis
Behandlungsqualität	68%	81%	66%
Patientensicherheit	92%	100%	97%
Patientenzufriedenheit	68%	92%	72%
Organisationsqualität	98%	100%	100%

Ergebnisqualität

In dieser Fachabteilung konnten wir noch genauer hinschauen und die Ergebnisqualität bei konkreten Krankheiten bewerten. Dazu haben wir die Patient:innen in der Rehaklinik zum Beginn und am Ende der Reha zu ihrem Gesundheitszustand befragt.

Ø 92%

Krankheit	Ergebnis
Depressionen	92%
Angsterkrankungen	91%

Source: Screenshot taken from "Qualitätskliniken.de" ([Link](#), [Link](#), [Link](#)).

2.2.7 Netherlands

For the Netherlands, we investigated one monitoring systems and two dashboards (Table 4).

Table 4: Overview of investigated monitoring systems/ dashboards from the Netherlands

Country	Source (monitoring system/ dashboard name)	Type	Healthcare area					No. of covered healthcare areas per source
			GPs and outpatient specialists	Hospitals (somatic care)	Psychiatric Care	Rehabilitation and "non-physician" health services	Home and long term care	
Netherlands	Zorginstituut	Monitoring		✓	✓	✓	✓	4
	Zorgkaart Nederland	Dashboard	✓	✓	✓	✓	✓	5
	Ziekenhuischeck	Dashboard		✓				1
No. of sources per healthcare area			1	3	2	2	2	

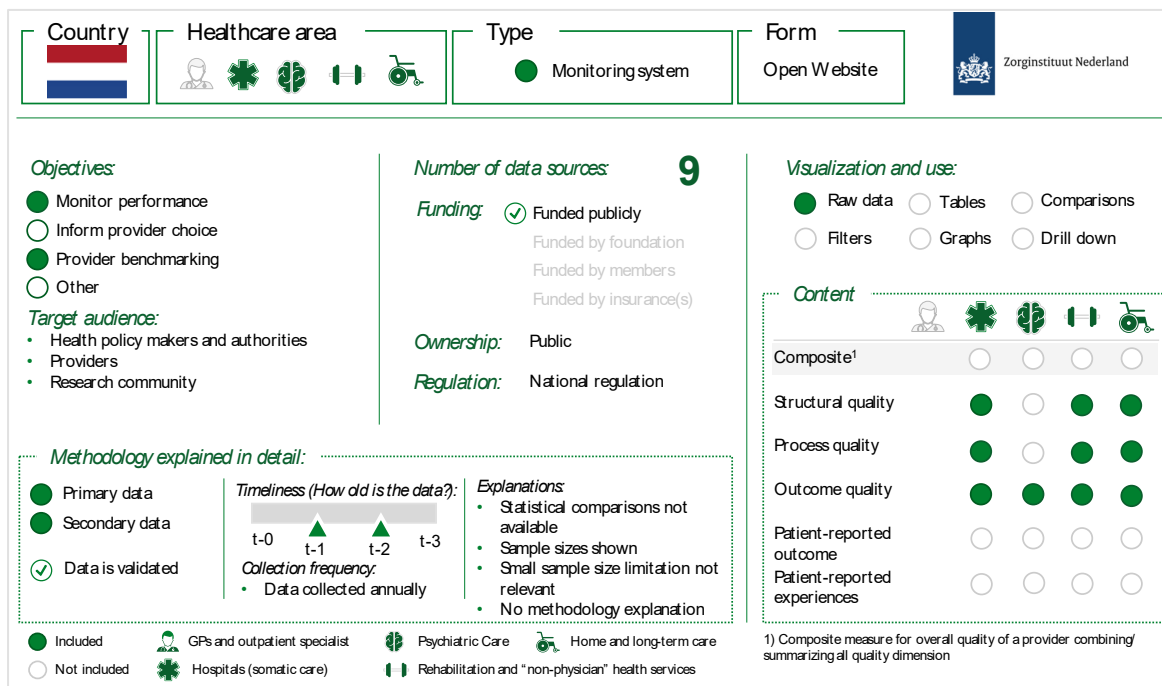
The "Zorginstituut" monitoring system covers all healthcare areas except GPs and outpatient specialists, while the "Zorgkaart Nederland" dashboard covers all healthcare areas and the "Ziekenhuischeck" dashboard only covers hospitals (somatic care).

The healthcare system in the Netherlands is based on a universal and mandatory health insurance system. There is a basic health insurance package that covers essential medical care, including GP visits, hospital care, and prescription drugs. People can also choose to purchase additional coverage for services not covered by the basic health insurance package. The Dutch government regulates the healthcare system and oversees its quality by setting healthcare standards, coordinating healthcare policy, and implementing quality control measures.

Quality of healthcare in the Netherlands is monitored by various organizations, including the "Zorginstituut Nederland" (Dutch Healthcare Institute). The "Zorginstituut" is responsible for setting standards for the measurement and collection of quality information and for publishing collected quality data per provider on its website as a download. The "Zorginstituut" itself does not monitor quality but cooperates with other organizations, such as the Dutch Healthcare Inspectorate ("Inspectie Gezondheidszorg en Jeugd"), and the Dutch National Institute for Public Health and the Environment ("Rijksinstituut voor Volksgezondheid en Milieu"), which collects and analyzes data on the health of the Dutch population.

One way the public can access information on the quality of healthcare services in the Netherlands is through "Zorgkaart Nederland" (Healthcare Map Netherlands). "Zorgkaart" is an online platform where patients can rate and review providers. In addition, "Zorgkaart" offers a provider dashboard called "Zorgkaart package for providers". With this dashboard, providers can view their average rating and the total number of (verified) patient ratings and they can compare themselves to their peers. However, this dashboard was not included in this report because information is not accessible (restricted paywall) and hence, the font for this dashboard in the information collection template is colored in gray. Another dashboard is "Ziekenhuischeck" (Hospital Check). "Ziekenhuischeck" is a website where patients can compare hospitals based on various quality indicators, such as the number of surgeries performed, different complication rates, overall risk-adjusted hospital mortality, and patient satisfaction ratings.

Figure 34: Netherlands – Zorginstituut



“Zorginstituut Nederland” is a governmental body in the Netherlands assuming an independent position between the Ministry of Health, Welfare and Sport, health insurers, providers, and patient organizations. Its main objective is to monitor performance in all areas of the Dutch healthcare system, except GPs/outpatient specialists. Its website provides raw data aimed primarily at health authorities such as the Dutch Healthcare Inspectorate. Providers can use the data to benchmark themselves with their peers/ competitors and researchers can utilize the data for scientific analyses.

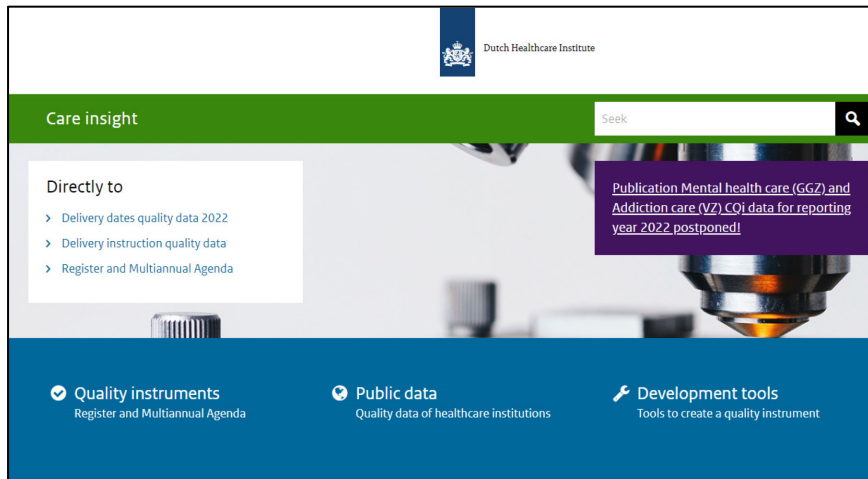
Ultimately, the “Zorginstituut” does not monitor quality itself but supports quality monitoring by defining standards for the collection and measurement of quality information and quality standards. The actual monitoring is conducted by other bodies such as the Dutch Healthcare Inspectorate or, according to one interviewed expert, results might be used for health service supply contracting by health insurances. Moreover, according to the same expert, there are no plans from the “Zorginstituut” to develop a dashboard for the public.

“Zorginstituut” provides validated primary and secondary data that are collected annually. The data are typically published with a one- or two-year time lag. Most data are self-reported. One interviewed expert stated that the data quality used to be rather low, but that quality has improved recently. There are hundreds of quality indicators for hospitals (somatic care) covering structural quality (mostly procedure volumes), process quality, and outcome quality (e.g., mortality, complications, re-interventions). For the other healthcare areas, also a substantial number of quality indicators are reported including information on structural, process, and outcome quality (only outcome quality in the case of psychiatric care).

To give one additional insight from one expert interview, the Dutch Ministry of Health used to monitor quality at national level on a grand scale. Results were published in the “Health Care Performance Report” (latest version from 2014). It provided a comprehensive overview of the performance of the Dutch healthcare system, highlighting challenges, and opportunities for improvement, targeting policymakers, healthcare professionals, researchers, and the general public. A large, multi-sourced

database was utilized for the report's development. It was discontinued, however, as its utility did not seem to outweigh its compilation costs anymore.

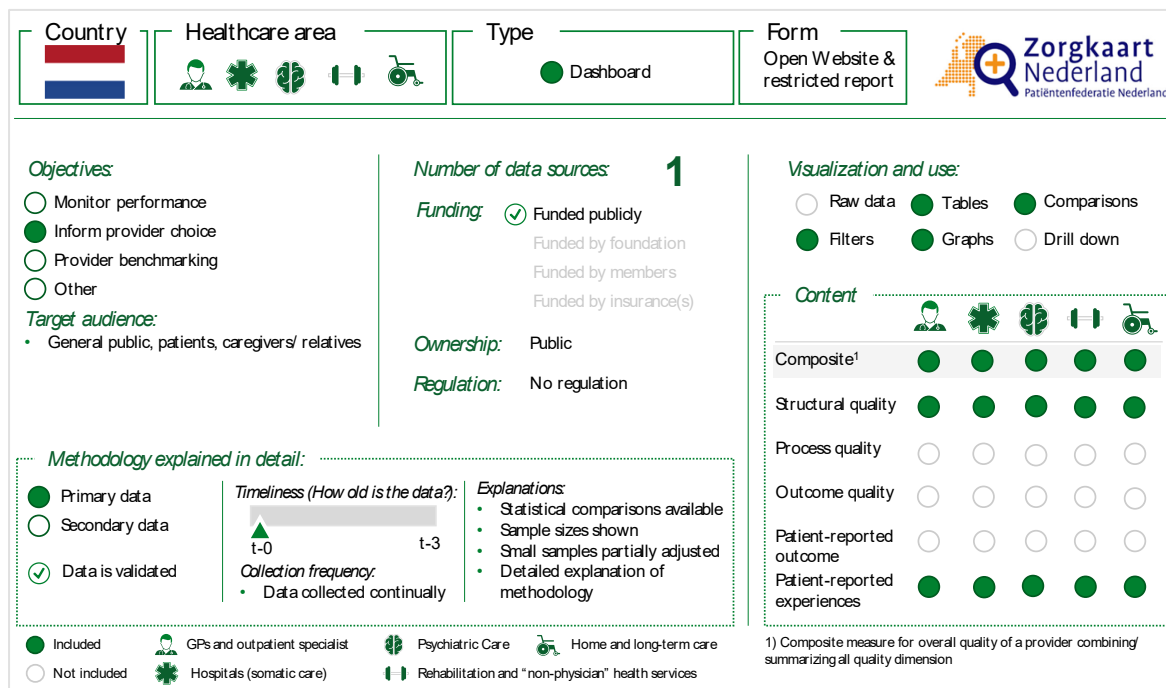
Figure 35: Zorginstituut – Screenshots from main page, search result list, and open data details



Jaam	Thema	IndicatorCod	Indic	IndicatorNaam	IndicatorEen	Indicator	Indicati	Telli
1	Algemeen	INID014247	1	1.1	Hoeveel klinische opnamen had u in het v	Tekst	Structuur	555
2	Algemeen	INID014248	2	1.2	Voor hoeveel patiënten heeft u een polikl	Tekst	Structuur	2958
3	Algemeen	INID014249	3	1.3	Hoeveel klinische patiënten heeft u ontsla	Tekst	Structuur	554
4	Medicatieveiligheid - Elektronisch voorschrijven	INID013285	4	2.1.1	Wordt er op 31 december van het verslagjaar	Tekst	Structuur	Ja
5	Medicatieveiligheid - Elektronisch voorschrijven	INID013286	6	2.1.3	Zijn er op 31 december van het verslagjaar	JaNee	Structuur	Ja
6	Medicatieveiligheid - Elektronisch voorschrijven	INID014449	8	2.1.5	Behandelt u kinderen jonger dan 12 jaar?	JaNee	Structuur	Ja
7	Medicatieveiligheid - Elektronisch voorschrijven	INID013287	9	2.1.6	Indien ja op vraag 2.1.5: In welke mate vir	Tekst	Structuur	In meer dan 95 pro
8	Medicatieveiligheid - Medicatieverificatie opname	INID009953	11	2.2.1	Is het percentage patiënten bij wie bij opr	Tekst	Proces	Ja
9	Medicatieveiligheid - Medicatieverificatie opname	INID014263	12	2.2.2	Indien ja op vraag 2.2.1: Wat is het aantal	Aantal	Proces	555
10	Medicatieveiligheid - Medicatieverificatie opname	INID009954	13	2.2.3	Indien ja op vraag 2.2.1: Bij welke percent	Percentage	Proces	100.00 555 5
11	Medicatieveiligheid - Medicatieverificatie ontslag	INID014265	15	2.3.1	Is het percentage patiënten bij wie bij ont	Tekst	Proces	Ja

Source: Screenshots taken from the “Zorginstituut” Website ([Link](#), [Link](#), [Link](#)).

Figure 36: Netherlands – Zorgkaart Nederland

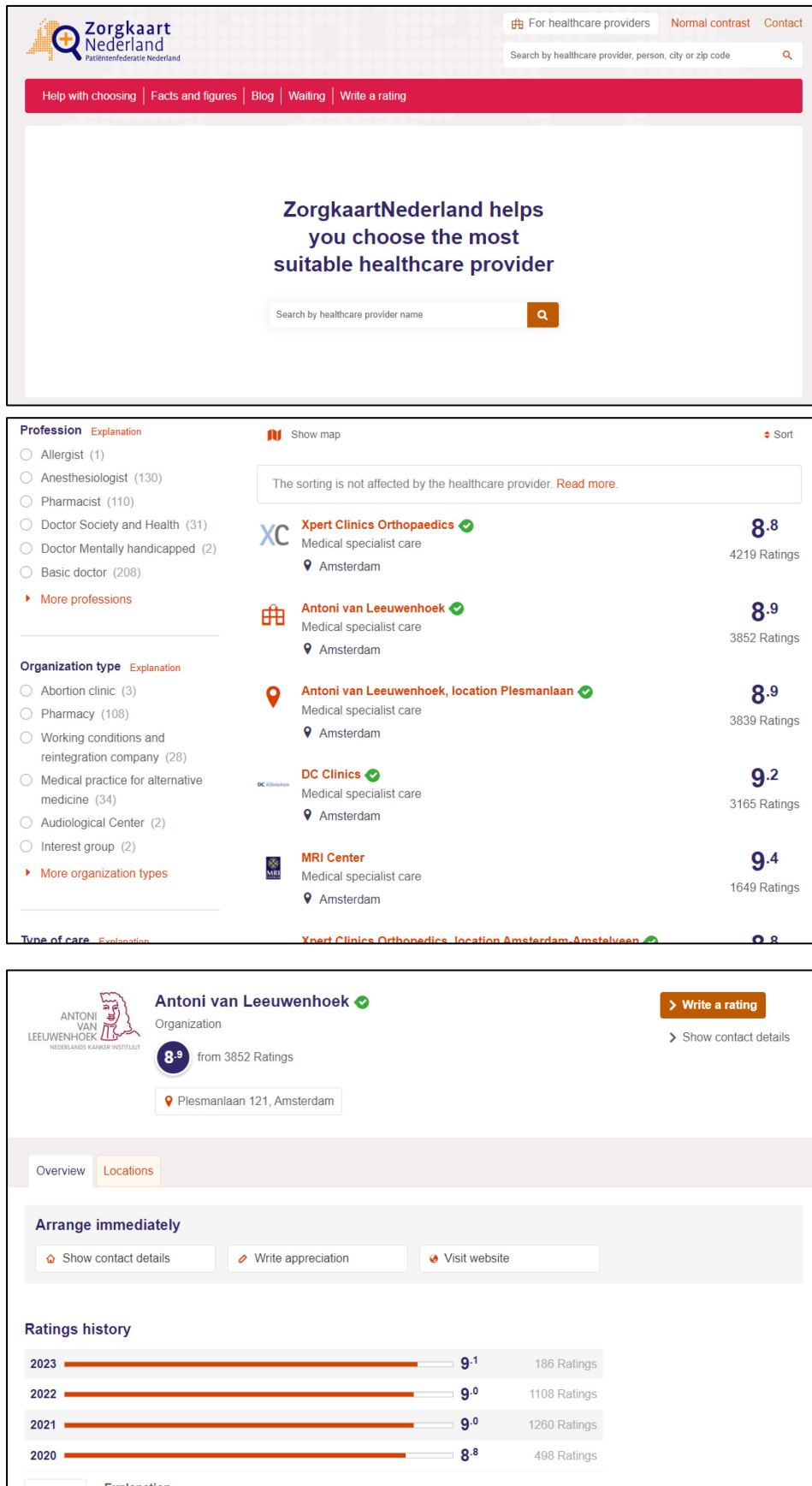


“Zorgkaart” is a website in the Netherlands that publishes patient ratings and feedback reports for providers of all healthcare areas. The main objective of the dashboard is to inform the general public, patients, and caregivers/ relatives on what provider to choose. The website was developed by the Dutch Patient Federation (umbrella organization of all Dutch patient organizations).

Patients can use “Zorgkaart” to search for providers and services reading reviews and ratings from other patients and they can also leave their own reviews and ratings. In addition to patient ratings and reviews, “Zorgkaart” also provides (structural) information such as location, contact information, and areas of specialization. Patient reviews are validated and collected continually. Statistical comparisons are not available, but users can sort search results by the average patient rating. Ratings are on a scale from 0 (lowest quality) to 10 (highest quality). An overall score per provider is calculated by averaging all individual ratings. The number of given ratings is shown, yet in many cases, this number is quite low, especially for GPs and outpatient practitioners. If no rating is given, no overall score is calculated. If less than nine ratings for individual care providers and 30 ratings for healthcare institutions have been given in the last four years, the average overall score is shown in gray font color. Moreover, it is indicated below the figure that the provider has not yet received sufficient ratings. Lastly, tables, filters, graphs, and comparisons between providers are available to visualize the data and support provider search.

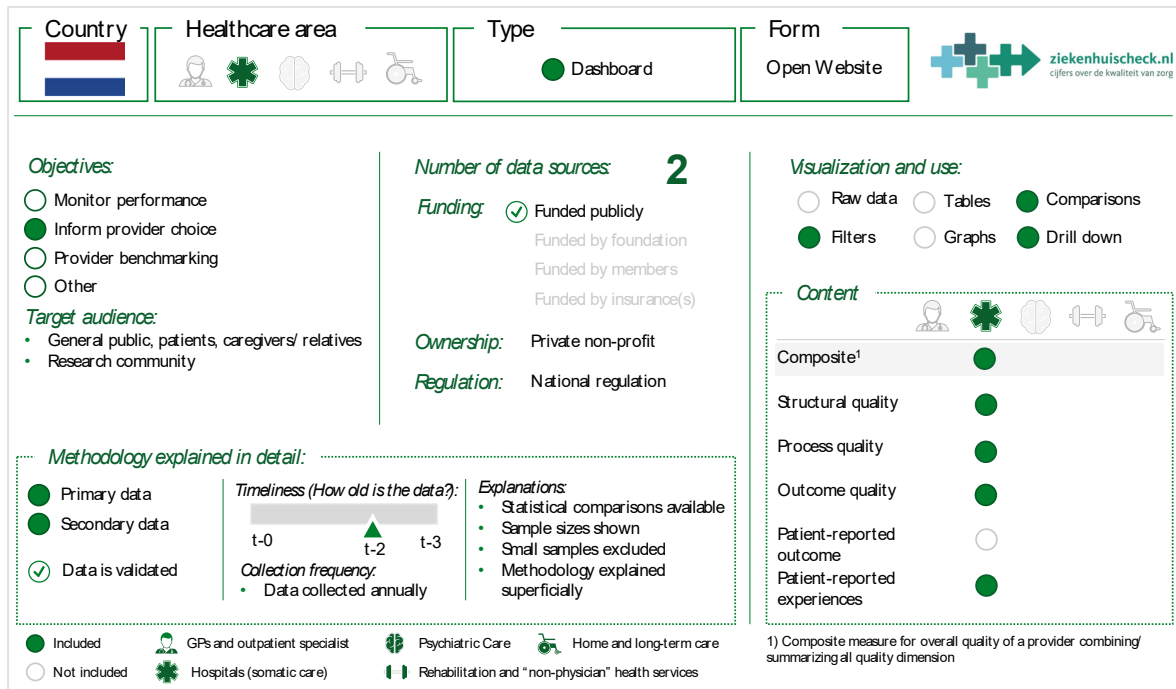
According to one interviewed expert, data reliability on “Zorgkaart” is questionable. According to the expert, individuals who are content with a provider’s services are unlikely to engage in online rating activities. Consequently, an inherent bias towards negative evaluations may be perceived on the website. Similarly, it could also be argued that patients’ very content with their care are more likely to rate their provider. Also, it is worth noting that hospital services typically garner a larger volume of ratings compared to General Practitioners. These elements can create unreliable composite measures in the dashboard. Ultimately, the expert stated that “Zorgkaart” might be valuable to sort out “bad apples”, but it should not be viewed as a dashboard objectively rating (medical) quality of providers.

Figure 37: Zorgkaart – Screenshots from search interface, search result list, and provider details



Source: Screenshots taken from the “Zorgkaart” Website ([Link](#), [Link](#), [Link](#)).

Figure 38: Netherlands – Ziekenhuischeck

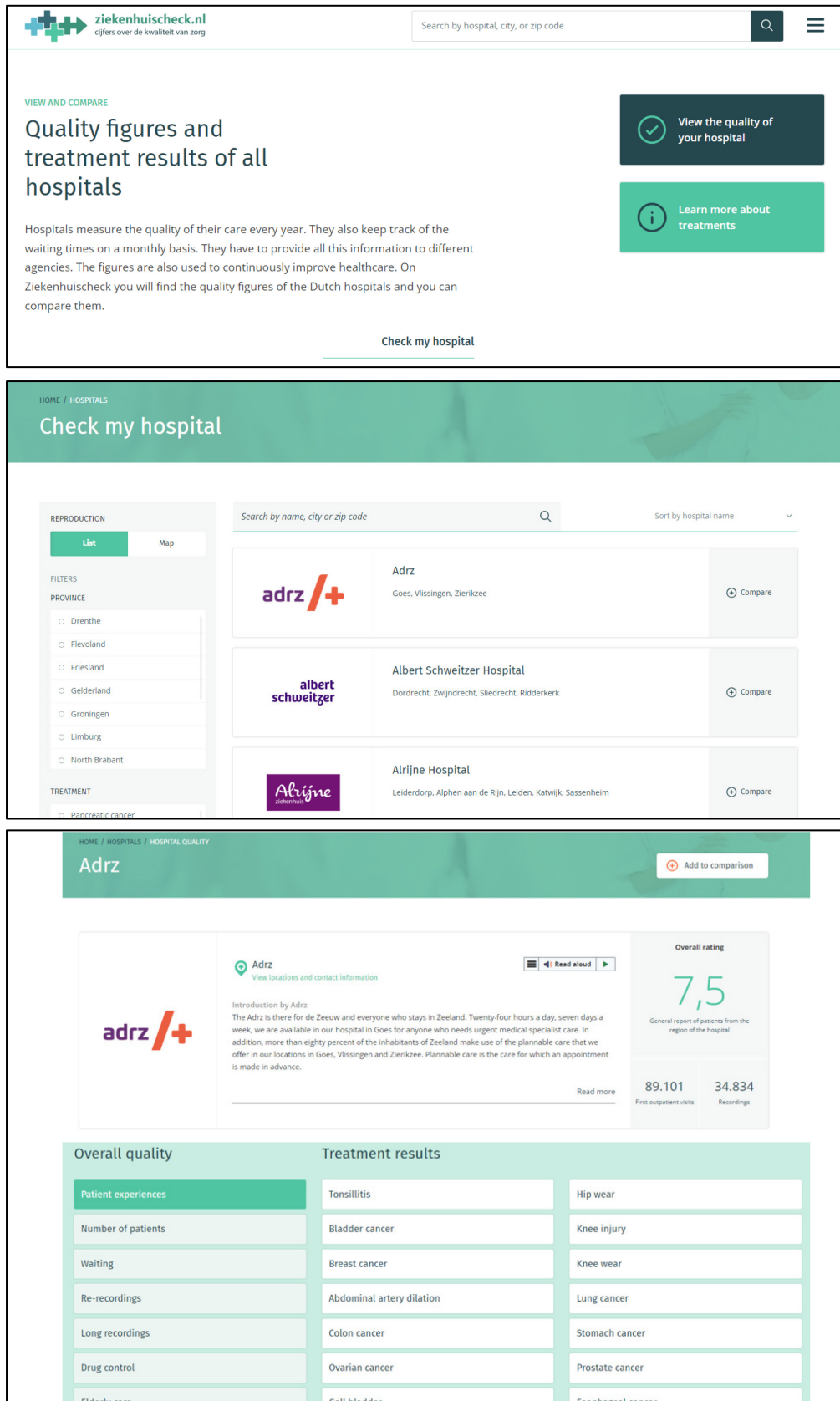


The “Ziekenhuischeck” dashboard is an open website in the Netherlands that provides quality information of hospitals (somatic care). The website is developed by the Dutch Health Care Authority, an independent government agency that regulates the Dutch healthcare market. The target audience is the general public, patients, caregiver/relatives, providers, and the research community.

“Ziekenhuischeck” is designed to provide patients with information that can help them make more informed decisions about their hospital care. The website provides information on hospital quality indicators, such as infection rates, waiting times, and patient satisfaction scores, which patients can use to compare different hospitals. The website also provides information on hospital facilities, such as the number of beds and the types of services offered. In addition to providing information on hospital quality indicators, “Ziekenhuischeck” also allows patients to rate and review their hospitals. “Ziekenhuischeck” also publishes overall risk-adjusted hospital mortality ratios (so-called Hospital Standard Mortality Ratio) which, according to one interviewed expert, are highly debated by experts.

In terms of data, “Ziekenhuischeck” uses two main data sources: datasets from the “Zorginstituut” and their own questionnaires called the Patient Experience Monitor. The website thus uses validated primary and secondary data that are collected annually. Data are usually published with a two-year time lag. Many statistical comparisons are available, sample sizes are reported, and small sample sizes are correctly excluded. The visualization of the data includes filters, drill downs and comparisons option of quality indicators between hospitals.

Figure 39: Ziekenhuischeck – Screenshots from search interface, search result list, and provider details



Source: Screenshots taken from the “Ziekenhuischeck” Website ([Link](#), [Link](#), [Link](#)).

2.2.8 USA

For the USA, we investigated one monitoring systems and one dashboard (Table 5).

Table 5: Overview of investigated monitoring systems/ dashboards from the USA

Country	Source (monitoring system/ dashboard name)	Type	Healthcare area					No. of covered healthcare areas per source
			GPs and outpatient specialists	Hospitals (somatic care)	Psychiatric Care	Rehabilitation and "non-physician" health services	Home and long term care	
USA	CMS.gov	Monitoring		✓	✓	✓	✓	4
	Medicare: Dashboard	Dashboard	✓	✓	✓	✓	✓	5
No. of sources per healthcare area			1	2	2	2	2	

The healthcare system in the United States is a complex network of private and public entities providing medical care to patients. It is largely based on private health insurance coverage. The government only provides coverage for certain groups, such as seniors and people with certain disabilities or chronic conditions (Medicare) and low-income individuals (Medicaid). When it comes to monitoring, publishing and visualizing quality information of providers, the USA benefits from over 30 years of experience, rendering it a valuable source for this report and also future projects. Despite the availability of many elaborate quality initiatives, especially on health insurance level, we must focus on the CMS.gov as an exemplary monitoring system and the Medicare website as an exemplary dashboard in this report.

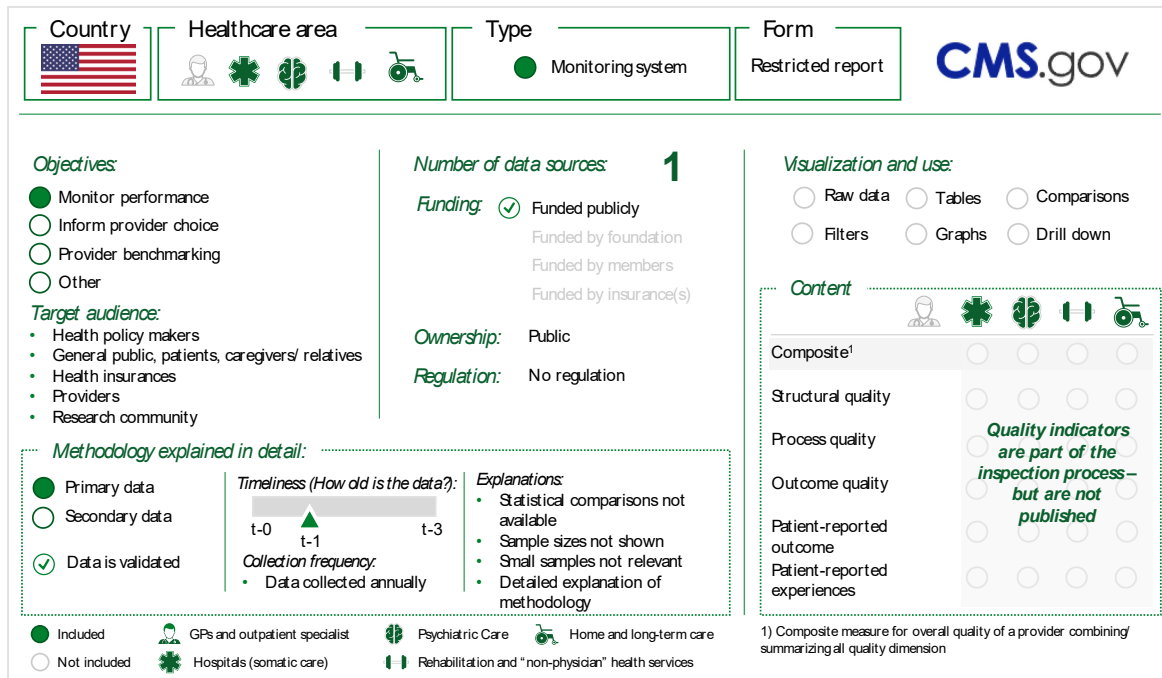
The CMS is the federal agency that runs the federal health insurance programs Medicare and Medicaid. Their monitoring system covers all healthcare areas except GPs and outpatient specialists. The CMS set standards for providers on quality, monitors these indicators and certifies providers by so called "inspections". In the case a provider does not pass the inspection and does not comply with proposed improvement measures, the CMS exclude the provider from their list, in which case the provider will not be reimbursed for treating patients covered by Medicare or Medicaid.

Furthermore, the CMS monitor quality of care in the USA through various programs and initiatives, such as the Quality Payment Program, the Hospital Value-Based Purchasing Program, the Hospital-Acquired Conditions Reduction Program, and the Hospital Readmission Reduction Program. The aim of these initiatives is to incentivize improvements in care delivery and promote transparency and accountability in the healthcare system.

The Medicare website utilizes the quality information of the CMS in combination with data from several other sources, e.g., patient experience surveys, to provide a dashboard to inform on provider quality and price. All healthcare areas are covered, though to a different level of granularity. While for GPs and outpatient specialists only superficial information is available, Medicare publishes and visualizes data on various aspects of quality of care, such as patient outcomes, patient satisfaction, the use of preventive services, and payment and value of care for the other healthcare areas.

Apart from CMS and Medicare, another institution is noteworthy because it has been active in quality measurements for decades: The Agency for Healthcare Research and Quality (AHRQ) is a federal agency responsible for improving the quality, safety, efficiency, and effectiveness of healthcare in the USA. The AHRQ conducts research, develops quality indicators, and promotes evidence-based practices to improve quality of care. AHRQ develops quality indicators through a rigorous process that involves reviewing scientific literature, consulting with experts, and analyzing data. These indicators are used to measure and monitor the quality of healthcare services provided to patients, to identify areas where improvements are needed, and to develop interventions to improve the quality of care.

Figure 40: USA – CMS.gov



The CMS maintains oversight for compliance with the health and safety standards for acute and continuing care providers including hospitals, nursing homes, home health agencies, end-stage renal disease facilities, hospices, and other facilities serving Medicare and Medicaid beneficiaries. This certification process is called the survey (inspection) process and is conducted by the individual State Survey Agencies on behalf of the CMS (under the agreements of Section 1864 of the Social Security Act). The inspection and certification process are transparently documented (see Figure 41) on the website.

The main objective of the inspection is to monitor the performance of the providers on the Medicare/ Medicaid list. The inspection is performed for hospitals, psychiatric facilities, rehabilitation facilities, and home and long-term care facilities. A specific inspection for GPs and outpatient specialists has not been found. The inspection is mandatory for providers to be on the Medicare/ Medicaid list and non-compliance with standards or not passing the inspection leads to the exclusion from the list. Although, providers cannot be exempted from general care provision, the CMS stops reimbursing the provider for patients insured under Medicare/ Medicaid. Following a termination of a provider, the CMS is obliged to publish a termination note, which is publicly accessible on their website (see Figure 41).

Collection frequency is based on inspection dates, which take place every twelve to 18 months without prior announcement. While the CMS formulates a broad definition of their performance standards, performance measures and performance criteria ([Link](#)), detailed quality indicators used to justify inspection results are not published. However, the CMS clarifies that performance measures are not static, but refinement occurs continuously based on field experience. They furthermore state that all standards for adequate performance of providers are measured against predefined thresholds. Unfortunately, these thresholds are not publicly available.

Figure 41: CMS.gov – Screenshots from main website, operations manual and termination notices

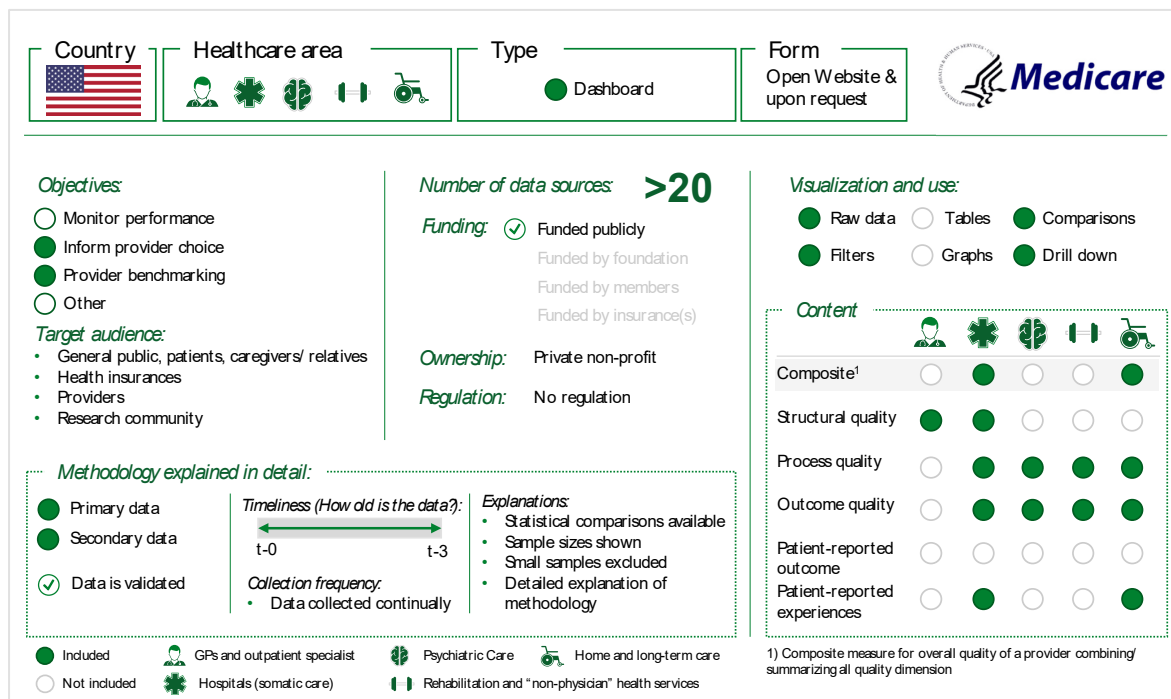
The screenshot shows the CMS.gov homepage. At the top, it identifies itself as an official website of the United States government. The main navigation includes links for Medicare, Medicaid/CHIP, Medicare-Medicaid Coordination, Private Insurance, Innovation Center, Regulations & Guidance, Research, Statistics, Data & Systems, and Outreach & Education. A search bar is located in the top right corner. Below the navigation, the 'Medicare' section is highlighted with a yellow bar. It features a search bar with the placeholder text 'Start typing to filter links'. Below this, a paragraph states: 'People with Medicare, family members, and caregivers should visit Medicare.gov, the Official U.S. Government Site for People with Medicare, for the latest information on Medicare enrollment, benefits, and other helpful tools.' There are two columns of links: 'Medicare - General Information' (including Medicare Program - General Information, New Medicare Card, Beneficiary Notices Initiative (BNI), Medicare Approved Facilities/Trials/Registries, Medicare Summary Notices, and Telehealth) and 'Medicare Advantage' (including Medicare Advantage Applications and Plan Payment). A 'Medicare Contracting' section includes links for Medicare Administrative Contractors and Contractor Provider Customer Service Program - General Information. On the right side, there is a 'CMS news' section with three press releases: 'HHS Releases Initial Guidance for Historic Medicare Drug Price Negotiation Program for Price Applicability Year 2026' (Mar 15, 2023), 'Inflation Reduction Act Tamps Down on Prescription Drug Price Increases Above Inflation' (Mar 15, 2023), and 'Readout: Administrator Brooks-LaSure and CMS' (Mar 03, 2023).



The screenshot shows the 'Termination Notices' page on CMS.gov. The page has a left-hand navigation menu with links for 'Quality, Safety & Oversight - General Information', 'Nursing Homes', 'Spotlight', 'Accreditation of Advanced Diagnostic Imaging Suppliers', 'Accreditation of Medicare Certified Providers & Suppliers', 'CMS National Background Check Program', and 'Civil Monetary Penalties (Annual Adjustments)'. The main content area is titled 'Termination Notices' and contains the following text: 'Regulations for providers and suppliers require CMS to notify the public of Medicare terminations prior to effectuation of the termination. We will be posting the legal notice of termination on this page. All notices of termination for facilities will be posted for six months on the public website.' Below this text is a 'Downloads' section with a yellow download icon. It lists four PDF documents: 'Tennessee - Douglas Post-Acute And Rehabilitation Center-03-20-2023 (PDF)', 'North Carolina - Peak Resources Charlotte-03-15-2023 (PDF)', 'Kentucky - Parkview Post-Acute and Rehabilitation Center - 02.16.2023 (PDF)', and 'Florida - Monticello Care Center - 02.15.2023 (PDF)'.

Source: Screenshot taken from cms.gov ([Link](#), [Link](#), [Link](#)).

Figure 42: USA – Medicare.gov

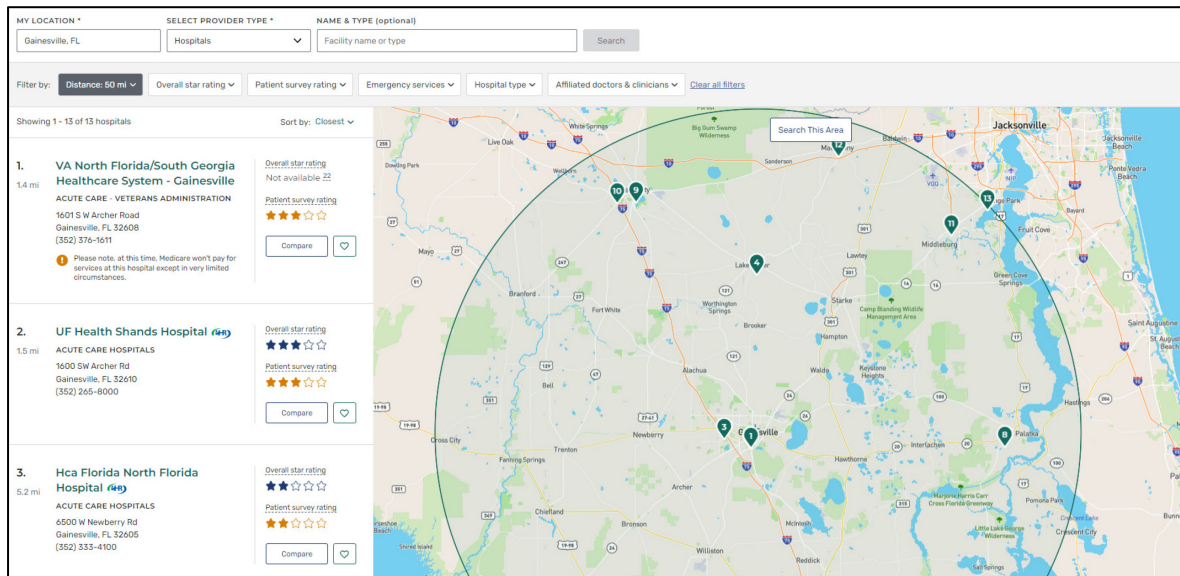
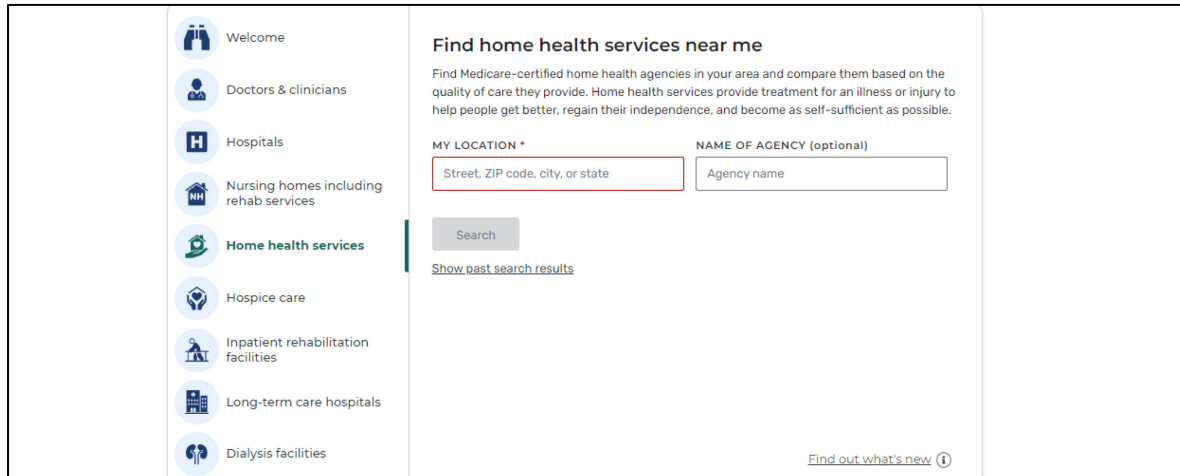


The CMS, the federal agency that runs the Medicare, in cooperation with other stakeholders created the tool “Medicare.gov”. Initially, the dashboard was to inform patients enrolled in Medicare. The dashboard is open to the general public and can thus also be used by other patients. Besides the objective to inform provider choice, “Medicare.gov” also enables provider benchmarking. They do so for all healthcare areas of interest, laboratories, nursing homes and dialysis facilities.

The dashboard was created by pooling information from eight original provider comparison sites, at least one for each healthcare area. Target audiences are the general public, patients, caregivers/ relatives, health insurers, providers, and the research community. For the research community it is especially interesting that “Medicare.gov” also provides the underlying datasets. Data are merged from dozens of sources (e.g., display of the hospital comparison draws from 70 datasets provided by more than ten sources). The datasets are downloadable ([Link](#)) and connectable to third-party databases via Rest-API. The methodology, data validation and data sources are explained in detail on the website, separately for each healthcare area ([Link](#)). Most data are updated either quarterly or annually, depending on the data source and provider information are updated once new data are available.

The degree of available quality information for provider comparison varies considerably between healthcare areas. While quality information for hospitals and home and long-term care are very rich, reaching from overall star ratings (see Figure 43), to ratings on quality and on patient experience, the GP and outpatient specialist comparison is based on more superficial information on infrastructure and certifications. Quality assessments are mostly shown on aggregate level with the option to drill down to detailed indicators. Results per provider for each quality indicator are also available and can be downloaded. When searching for the most suited provider users are able to filter, and see their search results with overall rating, distance, potential “red flags”, and located on a map. When selecting several providers, detailed comparisons are available. Additionally, as the only dashboard investigated by us, Medicare shows information on payment and the value of care.

Figure 43: Medicare.gov – Screenshots of the search interface, result list, and provider comparison



	VA North Florida/South Georgia Healthcare... 1601 S W Archer Road Gainesville, FL 32608	UF Health Shands Hospital 1601 S W Archer Rd Gainesville, FL 32610	Hca Florida North Florida Hospital 6500 W Newberry Rd Gainesville, FL 32605
Overview			
Distance from Gainesville, FL	1.4 miles	1.5 miles	5.2 miles
Overall star rating	Not available ??	★★★★☆	★★★★☆
Patient survey rating	★★★★☆	★★★★☆	★★★★☆
Hospital type	Acute Care - Veterans Administration	Acute Care Hospitals	Acute Care Hospitals
Provides emergency services?	Yes	Yes	Yes
Save this provider	Save to Favorites	Save to Favorites	Save to Favorites
Patient survey rating			
Timely & effective care			
Complications & deaths			
Unplanned hospital visits			
Maternal health			
Psychiatric unit services			

Source: Screenshot taken from “medicare.gov” ([link](#), [link](#), [link](#)).

2.2.9 Selective results from other countries: Australia and Sweden

For Australia and Sweden, we analyzed three dashboards (Table 6).

Table 6: Overview of investigated monitoring systems/ dashboards from Australia and Sweden

Country	Source (monitoring system/ dashboard name)	Type	Healthcare area				No. of covered healthcare areas per source
			GPs and outpatient specialists	Hospitals (somatic care)	Psychiatric Care	Rehabilitation and "non-physician" health services	
Australia	MyHospitals	Dashboard		✓			1
	AROC	Dashboard				✓	1
	No. of sources per healthcare area			1		1	
Sweden	Äldreguiden	Dashboard				✓	1
	No. of sources per healthcare area					1	

MyHospitals covers hospitals (somatic care), the AROC focuses on rehabilitative care, and "Äldreguiden" covers home and long-term care.

Australia

Australia has a universal healthcare system, which is publicly funded and provides access to medical services. The Australian healthcare system is managed by both federal and state/territory governments, with the federal government having the primary responsibility for funding and policy direction.

In Australia, quality of care is reported to the public through various channels, including MyHospitals. This dashboard provides information on the performance of public and private hospitals across Australia, including data on patient experiences, waiting times, and clinical outcomes. The platform is managed by the Australian Institute of Health and Welfare (AIHW) and is designed to help patients make informed decisions about where to seek care.

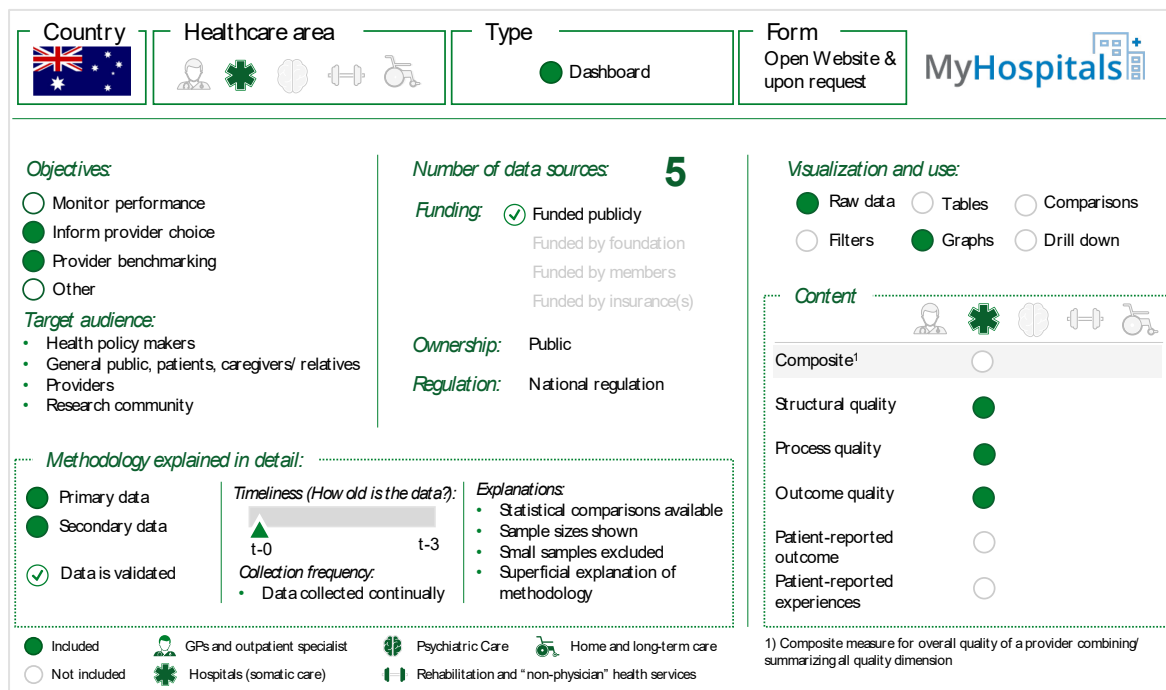
AROC is an example for a provider dashboard. AROC is a not-for-profit organization that collects and analyzes data on rehabilitation outcomes to help providers improve their quality of care. AROC's data include information on patient demographics, diagnoses, treatment plans, and outcomes, which can be used to identify areas for improvement in rehabilitative care. The organization also provides benchmarking reports to participating facilities, enabling them to compare their performance against national standards.

Sweden

Sweden has a publicly funded healthcare system that provides universal access to medical services, hospital treatment, and prescription medicines. The healthcare system is managed by regional authorities and funded by taxes, with the Swedish government setting national policies and standards.

Quality of care is monitored and reported to the public in Sweden through various organizations, mainly the National Board of Health and Welfare ("Socialstyrelsen"). "Socialstyrelsen" is responsible for monitoring and evaluating the quality of healthcare services in Sweden and collecting data on healthcare outcomes. From the data collected, "Socialstyrelsen" developed "Äldreguiden", a dashboard that provides information and ratings on elderly care services across the country, including nursing homes, home care, and assisted living facilities. The platform allows users to search for and compare care facilities based on criteria such as location, availability, and quality of care. "Äldreguiden" is designed to help elderly citizens and their families make informed decisions about their care.

Figure 44: Australia – MyHospitals

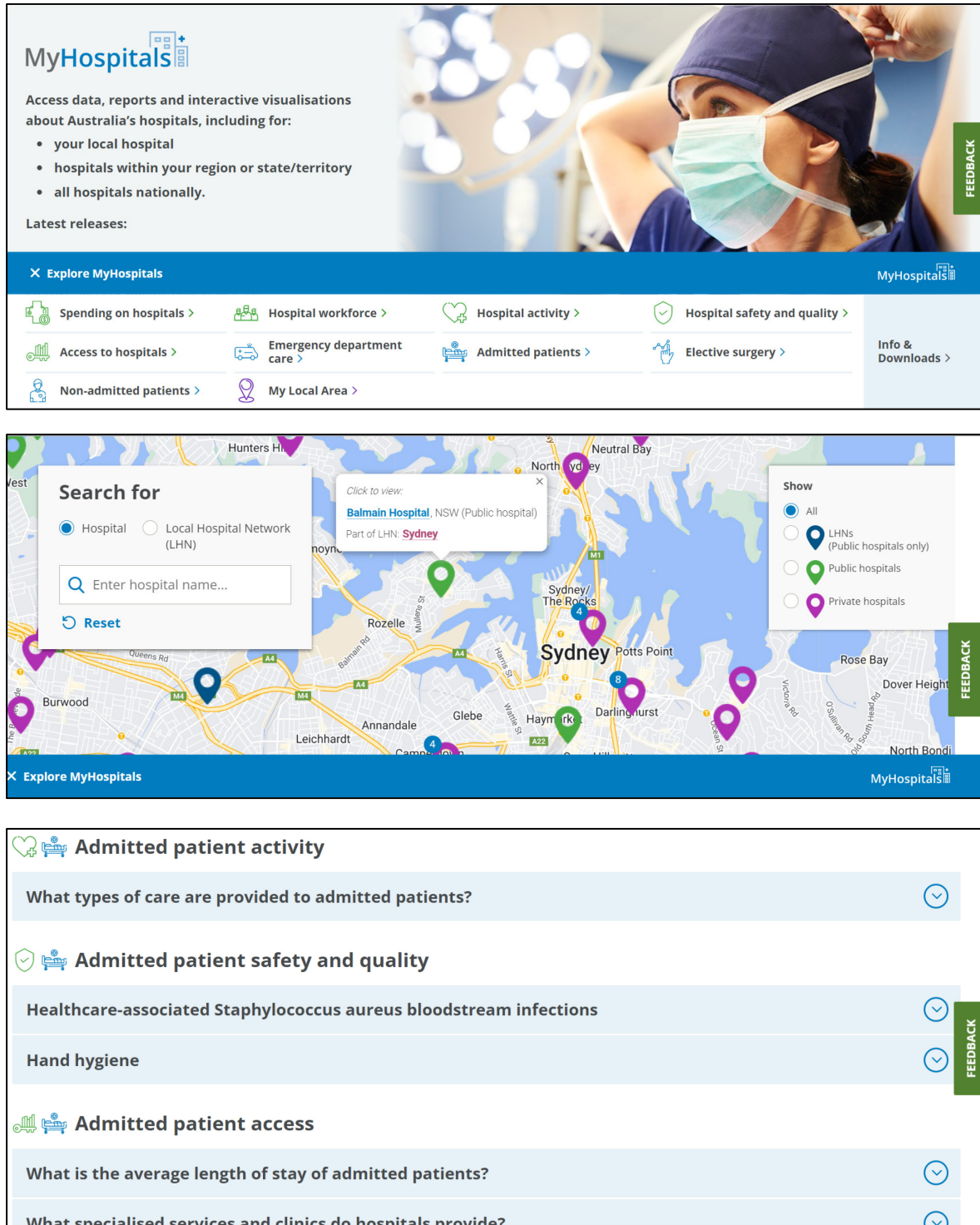


MyHospital is a web-based platform developed by the AIHW, part of the Australian Government, to provide information on the performance of public hospitals across Australia. The main objectives are to inform provider choice and to allow provider benchmarking. The dashboard is an integral component of the website of the AIHW. Data pertaining to hospitals are collated from information supplied by various states and territories to the AIHW, in accordance with the National Health Information Agreement. The dashboard is funded publicly, and healthcare services have to be assessed under a national accreditation program.

MyHospital is aimed at a wide range of users, including patients, the general public, providers, policymakers, and researchers. The website allows users to compare the performance of hospitals across different states and territories, as well as over time. MyHospitals uses validated primary and secondary data that are collected annually by the Australian government. The timeliness of the data is t-0 but can be older depending on the dataset. Statistical comparisons are available, sample size is shown, and small samples are correctly excluded. The dashboard offers comparative analysis against peer values and national benchmarks. Raw data downloads, which may be utilized for benchmarking by providers, are accessible. In cases where data are not publicly available, a request can be made. Notably, the AIHW levies charges for such requests on an hourly basis, solely to recover costs.

The dashboard does not provide composite measures, PROMs, or PREMs. Most "indicators" are procedure volumes or length of stay for different patient groups/ medical specialties. However, there are also some presented indicators and all structural, process and outcome quality dimensions are depicted. To visualize the data, the dashboard presents graphs very difficult to understand from the perspective of the general public or patient. While the website has a lot of information, the efficacy of the user interface is questionable.

Figure 45: MyHospitals – Screenshots from search interface and provider details



Source: Screenshot taken from the Australian Institute of Health and Welfare ([link](#), [link](#), [link](#)).

Figure 46: Australia –AROC

Country: Australia

Healthcare area: [Icons: Person, Cross, Brain, Wheelchair, Stethoscope]

Type: Dashboard

Form: Open Website & upon request

AROC: australasian rehabilitation outcomes centre

Objectives:

- Monitor performance
- Inform provider choice
- Provider benchmarking
- Other

Target audience:

- Providers
- Medical professionals

Number of data sources: 3

Funding:

- Funded publicly
- Funded by foundation
- Funded by members
- Funded by insurance(s)

Ownership: Private non-profit

Regulation: National regulation

Visualization and use:

- Raw data
- Tables
- Comparisons
- Filters
- Graphs
- Drill down

Content:

- Composite¹
- Structural quality
- Process quality
- Outcome quality
- Patient-reported outcome
- Patient-reported experiences

Methodology explained in detail:

- Primary data
- Secondary data
- Data is validated

Timeliness (How old is the data?):

t-0 t-2 t-3

Collection frequency:

- Data collected continually

Explanations:

- Statistical comparisons available
- Sample sizes shown
- Small samples excluded
- Superficial explanation of methodology

Legend:

- Included
- Not included
- GPs and outpatient specialist
- Hospitals (somatic care)
- Psychiatric Care
- Rehabilitation and "non-physician" health services
- Home and long-term care

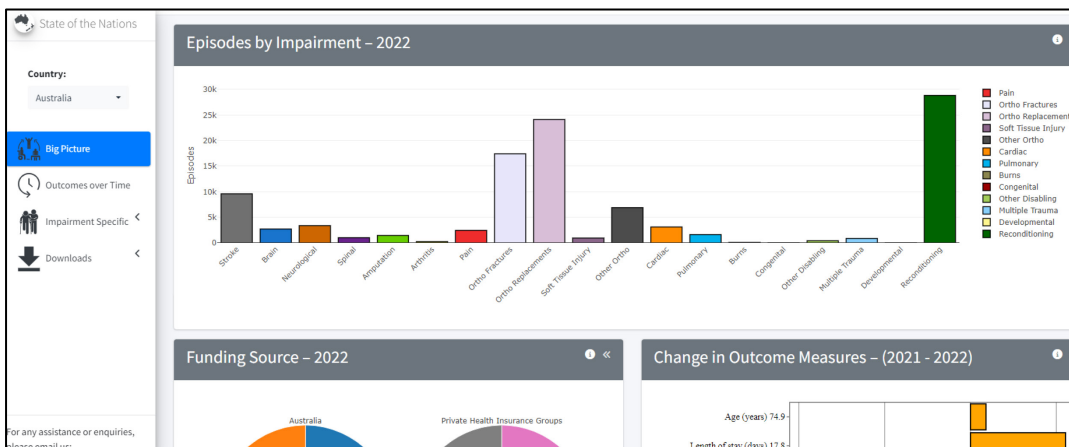
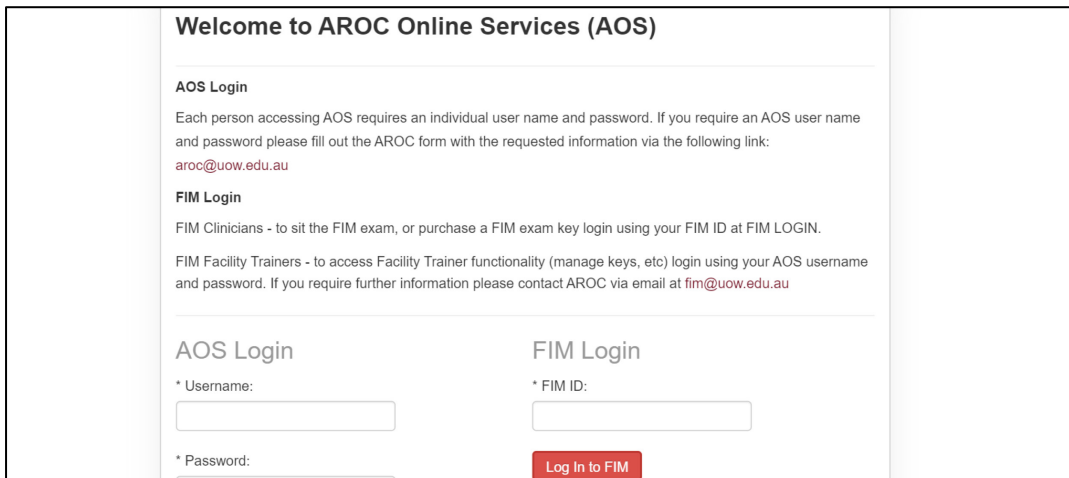
1) Composite measure for overall quality of a provider combining summarizing all quality dimension

The AROC is a non-for-profit organization that collects and reports on clinical outcome data from rehabilitation services in Australia and New Zealand. They present rehabilitation data useful for provider benchmarking and the target audience are providers and medical professionals. In order to have access to the datasets, you need to register as a member.

To allow provider benchmarking, AROC collects standardized data on patients' functional outcomes and PREMs and uses these data to produce reports that allow rehabilitation providers to benchmark their performance against national and international standards. AROC collects data on a range of rehabilitation programs, including those that focus on stroke, traumatic brain injury, spinal cord injury, amputations, orthopedic conditions, and burns. It also collects data on specialized rehabilitation programs for children and adolescents. Rehabilitation providers can submit data through an online portal.

Data are validated, and continually collected. The timeliness is t-2, statistical comparisons are available, sample sizes and small samples are correctly excluded. Their largest data collection is the Inpatient dataset, but AROC also collects ambulatory rehabilitation data as well as pediatric rehabilitation data. Finally, AROC also releases a live reporting application, the State of Nations. This application provides a 'big picture' look at rehabilitation in Australia and New Zealand. Users can interact with the plots and figures as well as modify the focus year and country with several drop-down menus and options.

Figure 47: AROC – Screenshots from home interface, login page, and “State of Nation” overview



Source: Screenshot taken from the AROC Website ([link](#), [link](#), [link](#)).

Figure 48: Sweden – Äldriguiden

“Äldriguiden.se” is a comparison website from the Swedish National Board of Health and Welfare. This website is open for everyone, but primarily targets elderly people in need of care or their relatives to inform provider choice. The website provides information on nursing homes as well as home care services. While the Dashboard is provided by “Äldriguiden.se”, the underlying data originate from two surveys (answered by users/ patients ([link](#)), and providers ([link](#))) conducted by the National Board of Health and Welfare, and statistics data from “Socialstyrelsen.se”.

The dashboard enables elderly people and their relatives to search for nursing homes or home care services in their geographical area. Via filters, users can select whether they look for home care services or nursing homes, which municipality and neighborhood they live in and whether the providers have other characteristics (e.g., public vs. private). Further they can compare up to three providers on basic information, structural quality such as personnel quota, and PREMs (see Figure 49). It is further possible to drill down into the data, yet raw data is only available via “Socialstyrelsen.se”.

Data are collected annually and uploaded continuously, as no risk-adjustment of data is necessary. Each provider is obliged to provide data, whether public or private. The methodology is only superficially explained, but indicators are easy to understand and do not require much calculation explanation.

Sweden was primarily looked at for dashboards concerning home and long-term care. However, the underlying data platform also collects and publishes data for other healthcare areas such as the hospital sector. The collected quality information, however, are not displayed on “Äldriguiden.se”, but can be accessed via “Socialstyrelsen.se”.

Figure 49: Äldriguiden – Screenshots from search interface and provider details

Find & compare elderly care

Start by choosing the type of elderly care you want to compare.

Home service Accommodation

Read more about home care, accommodation and other interventions in elderly care [here](#).

Select municipality

Stockholm

Select neighborhoods:

Rinkeby Coffin (17) Kungsholmen (15) Enskede Årsta Vantör (16) Hägersten Liljeholmen (26)
 Spånga Tensta (12) Norrmalm (11) Sharpener (12) Skärholmen (12)
 Hässelby Vällingby (18) Östermalm (24) Firstborn (9)
 Brake (18) Södermalm (25) Älvsjö (0)

Choose orientation ⓘ Choose director form ⓘ

2 chosen Director form (All displayed)

	Academy Care AB	Attendo Home service Bromma
General information		
Municipality/district	Brake	Brake
Targeting	Personal care, Service efforts	Data not available
Directing form	Individual	Individual
Overall review		
Percentage of people who are very or fairly satisfied with this home service	82%	79%
Influence and participation		
Percentage of people who think they can always or usually influence when the staff will come	69%	70%

Source: Screenshot taken from “aldreguiden.se” ([link](#), [link](#)).

2.2.10 Switzerland

For Switzerland, we investigated one monitoring system and three dashboards (Table 7).

Table 7: Overview of investigated monitoring systems/ dashboards from Switzerland

Country	Source (monitoring system/ dashboard name)	Type	Healthcare area					No. of covered healthcare areas per source
			GPs and outpatient specialists	Hospitals (somatic care)	Psychiatric Care	Rehabilitation and "non-physician" health services	Home and long term care	
Switzerland	ANQ	Monitoring & Dashboard		✓	✓	✓		3
	CH-IQI	Dashboard		✓				1
	Welches-spital	Dashboard		✓				1
No. of sources per healthcare area				3	1	1		

We classified the ANQ as both a monitoring system and a dashboard as it exhibits characteristics of both. The ANQ covers three healthcare areas, namely hospitals (somatic care), psychiatric care, and rehabilitative care. The CH-IQI dashboard and "Welches-spital.ch" focus on hospitals (somatic care). "Welches-spital.ch" also reports the quality of rehabilitative care centers and psychiatric care of hospitals in some instances. However, for our assessment, we focused on hospitals (somatic care) as it is most prominent on the website.

In Switzerland, the primary responsibility for organizing health services - and thus monitoring their quality - lies with the cantons. This constitutes a major difference regarding the monitoring and reporting of quality when compared to other countries where this responsibility often lies primarily at the national level. In consequence of the cantons' responsibility for quality monitoring, various approaches from a number of cantons for different healthcare areas exist. Basel-City, Zurich, and Bern – amongst others – actively monitor the quality of hospitals, for instance. In Ticino, to name another example, initiatives exist to monitor the quality of home and long-term care.

In the context of this report, collecting information on these cantonal monitoring systems proved difficult because the information is not openly accessible. In consequence, for each healthcare area-canton combination, at least one expert interview would have to be conducted if we had aimed to include all cantons. This would have proven impossible given the project timeline and budget. Alternatively, we could have included one or two examples which we deliberately did not. The main reason for this is that selecting such (an) example(s) will always remain arbitrary and/ or could potentially sidetrack important content discussions. Still, we included some information on one initiative from Ticino in the information collection template in gray font color to give a first impression of what cantonal initiatives could look like.

Moreover, we will briefly outline current and planned initiatives from the two cantons Zurich and Basel-City. In Zurich, indicators for outcome quality and partially also indication quality are used for monitoring the quality of care of hospitals (primarily acute somatic care). Regulators' main goal is to initiate a quality dialogue with providers not meeting set requirements. In addition, so-called quality circles have been established for selected procedures (e.g., radical prostatectomies, and colorectal surgery; hip and knee replacement currently in development). If providers do not meet quality standards, the regulator will ask the provider for a statement explaining reasons for inferior quality and plans for quality development. Additionally, peer reviews might be suggested. If a provider still does not manage to improve, related unlimited service mandates might be converted to provisional service mandates or eventually be revoked entirely. Regarding Basel-City, the health directorate monitors provider quality in acute somatic care, psychiatric care, and rehabilitative care for Base-City, Basel-Countryside, Solothurn, and Zug. Regulators use ANQ indicators, standardized mortality

ratios, patient safety indicators, and patient complaints to engage providers in structured quality dialogues that are usually preceded by a statement by the provider outlining reasons for quality deficiencies and measures for quality improvement. The dialogues are used to agree on improvement measures such as preventive measures for bedsores (decubitus), e.g., special mattresses, or antibiotics prophylaxis. If improvements are not realized, unlimited service mandates might be converted to provisional mandates. Moreover, Basel-City has been heading quality measurement with PROMs. In a first step, PROMs were measured for hip and knee replacement patients to gain insights into indication quality. Building on this project, in a second step, it is now mandatory for all providers to collect PROMs, where adequate, for procedures that are part of their assigned service mandates. Lastly, several cantons (such as Basel-City) use the Qlize! software including, for instance, readmission rates and patient safety indicators (cf. the section on ANQ below).

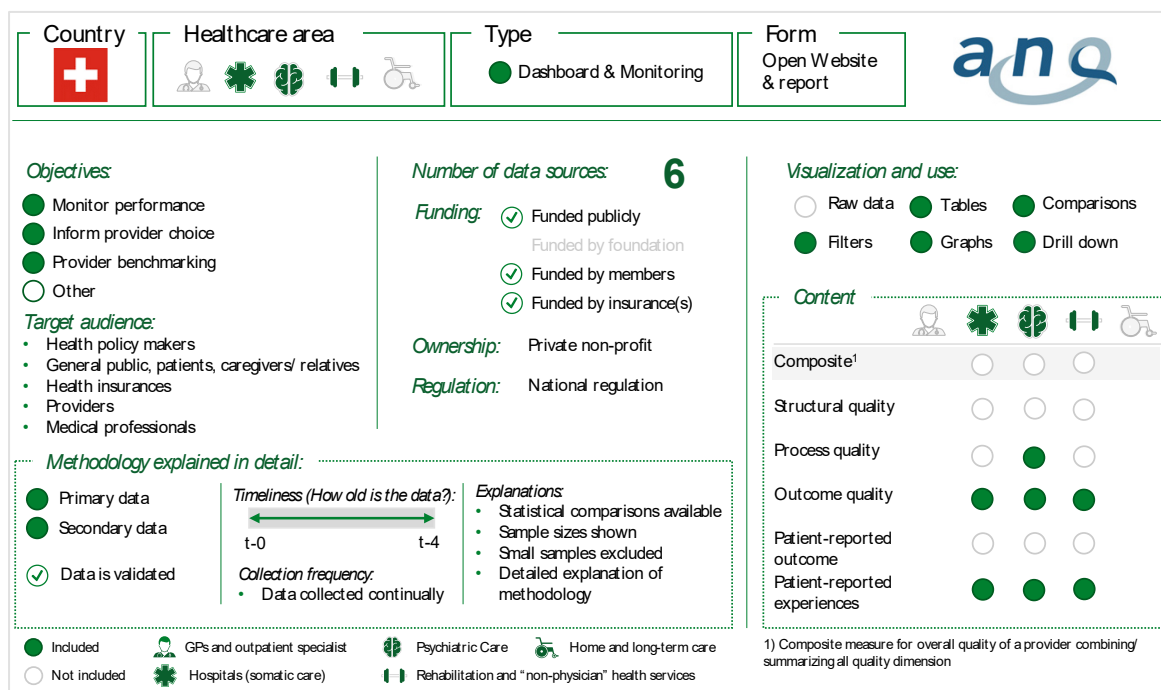
With respect to the other investigated monitoring systems/ dashboards, the ANQ is responsible for measuring and supporting the quality development for acute somatic care, psychiatric care, and rehabilitative care. ANQ measurements include a range of process and outcome quality as well as patient experience indicators. In most cases, outcome quality is risk-adjusted using comprehensive risk-adjustment models.

The CH-IQIs are published by the FOPH on its website. The IQIs were originally developed in the USA and later refined in Germany and imported by Switzerland. CH-IQIs are based on inpatient billing data that are routinely collected by all hospitals. Cases can thus only be observed during their inpatient stay, as the name “Inpatient Quality Indicators” implies.

Additionally, we present an example of an initiative without legal mandate, namely the dashboard “Welches-spital.ch”. This online platform draws quality information from the ANQ and CH-IQI and adds other quality information, e.g., patient reviews collected on the website. “Welches-spital.ch” combines quality indicators to create composite scores, overall ratings, and rankings both for single episodes of care/ procedures and at the hospital level – yet the dashboard’s methods are strongly debated by experts.

Besides, in Switzerland, there are also dashboards established and run by health insurances (in cooperation with consumer organizations) such as [Spitalfinder](#), or by the Swiss Hospital Association H+ [Spitalinfo](#). As these use the CH-IQIs and ANQ as main sources, we did not compile separate profiles for them. Still, we included Spitalfinder in the information collection template in grey color as representative for these dashboards.

Figure 50: Switzerland – ANQ



The ANQ is a private non-profit organization established in Switzerland in 2009. The ANQ's primary goal is to promote quality improvement in Swiss healthcare facilities by measuring and reporting quality for inpatient somatic care, rehabilitative care, and psychiatric care. The ANQ is an "association" ("Nationaler Qualitätsverein" / "Association nationale") consisting of cantons, (health) insurance associations (santésuisse, curafutura, accident insurances), and the federal hospital association H+. These members finance the ANQ's organizational structure. Providers are obligated by law ("Nationale Qualitätsverträge") to contribute data for quality indicator calculation and evaluation and to finance these evaluations.

In line with its member structure, the ANQ has several objectives. Cantons and payers can use the quality indicators for quality monitoring, providers can use the indicators for benchmarking, and finally, the website is open to the general public enabling patients to use quality information for their provider choice. Thus, the ANQ exhibits characteristics of both a monitoring system and a dashboard.

For data collection and evaluation, the ANQ cooperates with external partners. Partners collect data from secondary sources (e.g., hospital routine data) or conduct primary data collection, e.g., with questionnaires in the case of PREMs. The ANQ provides detailed explanations of the methodology used for data collection and data analysis in the form of downloadable reports. Generally, partners follow comprehensive, rigid methodological protocols respecting, among others, the most common limitations such as small sample sizes. The most recent published quality information usually is one to two years old. In some cases (e.g., falls/ decubitus), the last data collection dates back four years. All data are validated rigorously.

For most quality indicators, the ANQ publishes results of all providers in the form of funnel plots including a benchmark (e.g., adjusted average or 1.0 risk-adjusted ratio) and confidence intervals at the 5%-significance level. Low-quality providers with results beyond the confidence interval are graphically distinguished with a distinct color and symbol (e.g., red triangle). The graphs are interactive, meaning that if one hovers over one provider, additional details such as the procedure

volume/ sample size used for this provider, or the concrete quality indicator result are shown. Lastly, the ANQ provides reports at the national level and for single providers.

Measured and published outcome quality indicators for inpatient somatic care include surgical site infections for 16 procedures (e.g., appendectomy, caesarian section, colon surgery, rectum surgery, cholecystectomy, hysterectomy, heart surgery, hip replacement, etc.), rehospitalizations, and 2-year revision rates for primary hip and knee replacement. For rehabilitative care, medical scores and quality of life indicators are measured, e.g., health-related quality of life (MacNew Heart-questionnaire) for cardiologic rehabilitation, level of functionality for daily activities (ADL-score), etc. Lastly, for psychiatric care, the ANQ reports "symptom burden" from both health professionals' and patients' point of view and "measures restricting patient freedom". We classified the latter as process quality and the former as outcome quality. Lastly, for all three healthcare areas, the ANQ reports PREMs rating patients' satisfaction with their treatment ("How do you rate the quality of your treatment?"), with medical staff (e.g., "Did you have the opportunity to ask questions?"), and with the organization and service (e.g., "How do you rate the organization of your hospital stay?").

Lastly, we give a brief description of a current initiative involving the ANQ and its members as it underscores the versatile application of the ANQ indicators both for quality monitoring and benchmarking. At the end of 2022, the ANQ started a new nationwide quality monitoring initiative focusing on unplanned hospital readmissions across various patient populations. The initiative uses 13 quality indicators that have been developed by the University of Lucerne in a project financed by Innosuisse (the Swiss Innovation Agency) in collaboration with several hospital partners (incl. the university hospitals of Zurich, Basel, and Bern, as well as the Hirslanden group). In addition to the quality indicators, a quality monitoring software (Qlize!) has been developed as part of this project, which the ANQ now provides to all Swiss hospitals and cantonal health authorities. It allows detailed statistical comparisons together with a variety of tables, graphs, filters, and drill down options to compare observed quality results with expected outcomes.

The initiative not only uses data from the Federal Statistical Office, but it also allows hospitals and cantons to analyze their own most recent data for up-to-date and in-depth evaluations of single hospital stays. This way, the hospitals and cantons can focus improvement efforts on cases where an adverse event occurred, especially if the patient had a low risk for such an event. The initiative currently concentrates on unplanned readmissions only, but the ANQ considers including additional quality indicators on in-hospital complications and mortality in the future. In parallel, several cantonal health authorities (e.g., Berne, Basel-City, Basel-Countryside, Solothurn, etc.) are currently assessing the inclusion of this new source of information into their quality monitoring and hospital service mandate planning. Selected quality information will also be made available to the general public annually in a dashboard and as performance reports on the ANQ website starting in autumn 2023.

Figure 51: ANQ – Screenshots from search interface, results, exemplary quality indicator & software

The screenshot shows the ANQ website search interface. At the top, there are navigation links for 'PROFESSIONALS', 'PARTNER', 'MEDIA', and 'PATIENTEN'. Below this is the ANQ logo and a search bar with the text 'Q SUCHEN'. The main heading is 'MESSERGERBNISS AKUTSOMATIK'. There are three main category buttons: 'AKUTSOMATIK', 'PSYCHIATRIE', and 'REHABILITATION'. A sidebar on the right contains 'ANQ GLOSSAR' and 'SCHEMATA'.

Postoperative Wundinfektionen Swissnoso 2021

1 Auswahl Messung 2 Auswahl Messjahr 3 Spitalsuche

Suche nach Spital

LISTE DER TEILNEHMENDEN SPITÄLER

Spital / Spitalgruppe	Standort	Ort
Swiss Medical Network SA	Clínique de Montchoisi	Lausanne
Spital Uster		Uster

Grafik 2: NNIS-adjustierte Infektionsrate für Appendektomien Kinder/Jugendliche, < 16 Jahre

VOLLBILD ANZEIGEN PDF

Adjustierte Infektionsrate (%)

Anzahl eingeschlossener Eingriffe

— 99.8%-Limite — 95%-Limite — Durchschnittliche Rate ○ Adjustierte Rate / Spital

Legende

ANQ-Kommentar zum dargestellten Vergleich (Grafik 2)

Olize!

Auswahlmöglichkeiten: **Beobachtete Rate** / **Beobachtete Rate**

Verteilung nach Hauptkostenstellen

Hauptkostenstelle	Anteil
K100 Chirurgie	~45%
K100 Innere Medizin	~35%
K100 Spinalchirurgie	~15%
K100 Zahnklinik	~5%
K100 Orthopädie	~2%
K100 Dermatologie	~1%
K100 Intensivstation	~1%
K100 Medizinisch	~1%
K100 Radiologie	~1%

DRG-Liegestatus

Langzeitlieger: 0.1%
Kurzzeitlieger: 0.1%
Normallieger: 99.8%

Zeitliche Entwicklung

Beobachtete Rate: 21'999
Beobachtete Rate: 1'777

Alters- und Geschlechtsverteilung

Alter	Anteil
0-4 Jahre	~1%
5-9 Jahre	~1%
10-14 Jahre	~1%
15-19 Jahre	~1%
20-24 Jahre	~1%
25-29 Jahre	~1%
30-34 Jahre	~1%
35-39 Jahre	~1%
40-44 Jahre	~1%
45-49 Jahre	~1%
50-54 Jahre	~1%
55-59 Jahre	~1%
60-64 Jahre	~1%
65-69 Jahre	~1%
70-74 Jahre	~1%
75-79 Jahre	~1%
80-84 Jahre	~1%
85-89 Jahre	~1%
90-94 Jahre	~1%
95-99 Jahre	~1%

Indikatoren nach Ergebnis

Ergebnis	Anteil
Träger mit Verletzung	~1%
Keine Verletzung	~99%

Source: Screenshots taken from ANQ website and software provided to hospitals and cantons ([link](#), [link](#), [link](#), [link](#)).

Figure 52: Switzerland – CH-IQI

Country 	Healthcare area 	Type <input checked="" type="radio"/> Dashboard	Form Open Website ²	Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra												
Objectives: <input type="radio"/> Monitor performance <input checked="" type="radio"/> Inform provider choice <input checked="" type="radio"/> Provider benchmarking <input type="radio"/> Other Target audience: <ul style="list-style-type: none"> Health policy makers and authorities General public, patients, caregivers/ relatives Providers Research community 	Number of data sources: 1 Funding: <input checked="" type="checkbox"/> Funded publicly Funded by foundation Funded by members Funded by insurance(s) Ownership: Public Regulation: National regulation	Visualization and use: <input checked="" type="radio"/> Raw data <input checked="" type="radio"/> Tables <input checked="" type="radio"/> Comparisons <input type="radio"/> Filters <input type="radio"/> Graphs <input type="radio"/> Drill down	Content <table border="1"> <tr> <td>Composite¹</td> <td><input type="radio"/></td> </tr> <tr> <td>Structural quality</td> <td><input checked="" type="radio"/></td> </tr> <tr> <td>Process quality</td> <td><input type="radio"/></td> </tr> <tr> <td>Outcome quality</td> <td><input checked="" type="radio"/></td> </tr> <tr> <td>Patient-reported outcome</td> <td><input type="radio"/></td> </tr> <tr> <td>Patient-reported experiences</td> <td><input type="radio"/></td> </tr> </table>		Composite ¹	<input type="radio"/>	Structural quality	<input checked="" type="radio"/>	Process quality	<input type="radio"/>	Outcome quality	<input checked="" type="radio"/>	Patient-reported outcome	<input type="radio"/>	Patient-reported experiences	<input type="radio"/>
Composite ¹	<input type="radio"/>															
Structural quality	<input checked="" type="radio"/>															
Process quality	<input type="radio"/>															
Outcome quality	<input checked="" type="radio"/>															
Patient-reported outcome	<input type="radio"/>															
Patient-reported experiences	<input type="radio"/>															
Methodology explained in detail: <input type="radio"/> Primary data <input checked="" type="radio"/> Secondary data <input checked="" type="checkbox"/> Data is validated		Timeliness (How old is the data?): t-0 t-2 t-3 ▲ Collection frequency: • Data collected annually	Explanations: <ul style="list-style-type: none"> Statistical comparisons available Sample sizes shown Small samples excluded Detailed explanation of methodology 													
<input checked="" type="radio"/> Included <input type="radio"/> Not included <input checked="" type="checkbox"/> GPs and outpatient specialist <input type="checkbox"/> Hospitals (somatic care)		<input checked="" type="checkbox"/> Psychiatric Care <input type="checkbox"/> Rehabilitation and "non-physician" health services <input type="checkbox"/> Home and long-term care		1) Composite measure for overall quality of a provider combining summarizing all quality dimension; 2) It is also possible to download an overall report or on hospital level; data downloads also possible												

CH-IQIs are published by the FOPH on its website (data download and hospital comparator). The IQIs were originally developed in the USA and later refined in Germany and imported by Switzerland. CH-IQIs are based on inpatient billing data that are routinely collected by all hospitals. Cases can thus only be observed during their inpatient stay, as the name “Inpatient Quality Indicators” implies.

The aim of the FOPH is to support patients in their hospital choice. Moreover, the data downloads can be used by hospitals for benchmarking purposes and researchers can use the data for scientific analyses. Lastly, health policy makers and authorities can use the data for monitoring purposes. Due to the limited timeline of this project, we could not investigate in detail how exactly this information is used, however. Moreover, as the FOPH itself does not use the data for monitoring, we did not classify the CH-IQI initiative as a monitoring system per se.

Quality indicators are reported for 65 conditions/ procedures grouped into 15 episodes of care. Each condition/ procedure is described by at least one and up to 32 indicators (e.g., “A – Heart diseases” → “A.1 Acute Myocardial Infarction” → “A.1.1.M Main diagnosis Acute Myocardial Infarction (age > 19 years), mortality”). Depending on the condition/ procedure, quality indicators include procedure volumes, procedure type rates (e.g., cesarean section rate), mortality, length of stay, transfer rates, and “special” information (e.g., Average Barthel-Index at admission for geriatric patients).

Data can be compared for a maximum of five quality indicators between a maximum of five hospitals (see Figure 53) and are then displayed in tables. It is further possible to download reports and raw data for specific hospitals and an overall report for all Swiss hospitals. The methodology of calculating the reported CH-IQIs is explained in detail highlighting, for instance, the adequate use of indicators and their strengths and weaknesses. Data are published with a two-year time-lag, and mortality is risk-adjusted (however, only age and sex are considered as risk-adjustment factors). Specifications of the CH-IQI system are refined in a coordinated process between Switzerland, Germany, and Austria. This also enables a comparison between the three countries.

Figure 53: CH-IQI – Screenshots from main page, hospital comparator, and comparison details

Vergleich zwischen Spitätern und Indikatoren

Die Vergleiche beschränken sich auf maximal fünf Spitäler und maximal fünf Indikatoren.

Spital 1	HFR - Hôpital fribourgeois, Fribourg ändern
Spital 2	Kantonsspital St. Gallen, St. Gallen ändern
Spital 3	bestimmen
Spital 4	
Spital 5	
Indikator 1	HD Herzinfarkt, Alter 65-84, Mortalität ändern
Indikator 2	bestimmen
Indikator 3	
Indikator 4	
Indikator 5	

[vergleichen](#)

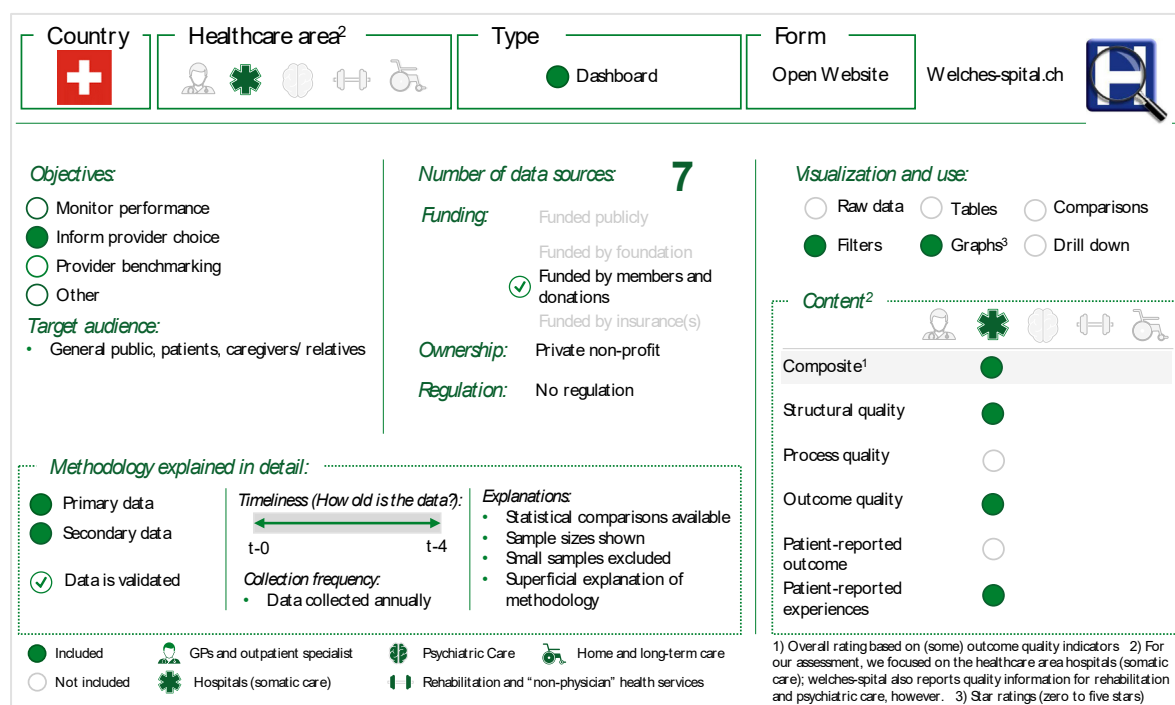
A.1.4.M HD Herzinfarkt, Alter 65-84

	Anzahl Fälle	Anzahl Todesfälle	Mortalität beobachtet (%)	Mortalität erwartet (%)	SMR
2020 CH-IQI Version 5.2					
HFR - Hôpital fribourgeois	216	7	3,2 %	4,8 %	0,7
Kantonsspital St. Gallen	373	19	5,1 %	4,7 %	1,1
2019 CH-IQI Version 5.2					
HFR - Hôpital fribourgeois	225	10	4,4 %	4,7 %	0,9
Kantonsspital St. Gallen	424	31	7,3 %	4,7 %	1,6
	Anzahl Fälle	Anzahl Todesfälle	Mortalität beobachtet (%)	Mortalität erwartet (%)	SMR

[alle verfügbaren Jahre anzeigen](#) | [Abfrage ändern](#)

Source: Screenshot taken from the ADMIN Website ([link](#), [link](#), [link](#)).

Figure 54: Switzerland – Welches-spital.ch



“Welches-spital.ch” is a private initiative of the non-profit and independent association “Spitalvergleich Schweiz”. It is self-funded by members (seemingly primarily private persons) and donations. The dashboard is directed at the general public, patients, and caregivers/ relatives providing quality information of hospitals (somatic care), rehabilitative care centers, and psychiatric care hospitals to support provider choice. For our assessment, we focused on the healthcare area hospitals (somatic care) as it is shown most prominently on the website.

The dashboard uses three data sources from the ANQ and two from the FOPH. Additionally, it conducted two surveys rating the “outcome quality” of hospitals from health professionals’ point of view (for obstetrics among midwives and for hip replacement surgery among physiotherapists). In fact, the ratings are rather professional recommendations (e.g., also collected in Germany by the Focus magazine) than outcome quality indicators. From the FOPH, CH-IQIs for mortality and procedure volume are used. From the ANQ, all quality indicators are used (e.g., surgical site infection rates, unplanned rehospitalizations, etc.). For patient satisfaction, “Welches-spital.ch” only uses the first question of the ANQ questionnaire (“How do you rate the treatment quality from doctors and nurses?”), however. Lastly, “Welches-spital.ch” also collects own patient experience reports including star ratings (zero to five stars).

Timeliness of data, data collection frequency, and data validation are according to the used sources. Own patient experience reports are collected continually and also seem to be verified. Statistical comparisons are displayed as star ratings of single or a combination of several quality indicators. “Welches-spital.ch” tries to normaltransform indicator results to allow “intuitive” statistical comparisons of a provider’s results to the overall sample – a practice strongly debated by experts. Users cannot drill down on single indicators, i.e., the actual indicator value is not accessible, only the star rating. Sample sizes are shown, and small sample sizes are excluded (this already happens at the ANQ indicator and CH-IQI calculation). There are some methodological explanations provided yet some details remain unclear (e.g., calculation of overall ratings/ composite scores). Lastly, to

support searches, “Welches-spital.ch” provides filters including weights for what quality information is most important to the user.

Figure 55: Welches-spital.ch – Screenshots from search interface, search result list, and provider details



Kantonsspital Aarau
Akutsomatik, Tellstrasse 15, 5001, Aarau

Stiftung Spital Muri
Akutsomatik, Spitalstrasse 144, 5630, Muri AG

Universitätsspital Basel (USB)
Akutsomatik, Hebelstrasse 32, 4056, Basel

Welches-spital.ch ist von der Stiftung Health On the Net zertifiziert.
Welches-spital.ch wurde durch die Health On the Net (HON) Foundation geprüft und hat das HONcode Zertifikat erhalten....

Spitalwahl während der Corona-Pandemie
Wer derzeit eine Spitalbehandlung benötigt, sollte die allfällige Belastung der Spitäler mit Corona-Behandlungen...

Spital Uster

Kantonsspital St. Gallen (Standort St. Gallen)

Pros	Cons
<ul style="list-style-type: none"> + Viele Daten zur Ergebnis-Qualität + Signifikant i besseres Ergebnis bei Spital-Dekubitus + Signifikant besseres Ergebnis bei Ergebnisqualität Geburt (Spital / Klinik) + Signifikant besseres Ergebnis bei Patientenzufriedenheit Akutsomatik 	<ul style="list-style-type: none"> - Ein signifikant schlechteres Ergebnis bei einer eingriffsspezifischen Messung

Ergebnisqualität:

Gesamtwert über alle 23 Kennzahlen zur Ergebnisqualität **i** ★☆☆☆☆ 1,6

Alle weiteren Kennzahlen (Strukturqualität **i):**

Source: Screenshot taken from the “Welches-spital.ch” Website ([link](#), [link](#), [link](#)).

2.3 Synthesis of main findings

2.3.1 Regional coverage

All monitoring systems/ dashboards we investigated cover all regions of the respective country¹². Accordingly, almost all monitoring systems/ dashboards cover 100% of the providers active in their country (exception: the dashboard “Le Guide Santé” seems to cover only roughly 40-45% of French hospitals).

2.3.2 Healthcare coverage

For three of the eight selected countries, we investigated one monitoring system and/ or dashboard covering at least four or even all five healthcare areas: The “Zorgkaart” and “Zorginstituut” for the Netherlands, Medicare and CMS for the USA, and the CQC for England. The amount and detail of quality information varies greatly between these monitoring systems/ dashboards. “Zorgkaart”, for instance, is a dashboard run by patient organizations focusing on patient experience ratings and reports. It does not report any kind of medical quality information, such as outcome quality. The Medicare dashboard, on the other hand, combines several data sources for each healthcare area with the aim to provide holistic quality information of providers, profiting from more than 30 years of public reporting experience. In England, extensive auditing is performed to assess criteria along standardized quality categories and areas. The residual monitoring systems/ dashboards usually focus on one or two or in some cases on three healthcare areas (e.g., QualiScope or “AOK Gesundheitsnavigator”).

2.3.3 Target audiences

Regarding target audiences, the monitoring systems we investigated are mostly aimed at (and organized by) health policy makers, health authorities, or government agencies. For Germany, we investigated two monitoring systems aimed at insurances and run by insurance-associated organizations based on a legal mandate (“Deutsche Rentenversicherung Bund” for rehabilitative care and “Medizinischer Dienst Bund” for long-term care). A special example constitutes the monitoring system of the CMS in the USA. Failing to pass inspections and non-compliance to quality improvement plans can eventually lead to an exclusion from the Medicare list. Consequently, providers which are not on the list are not eligible for remuneration for Medicare patients. Sanctions in other monitoring systems are not as severe (e.g., CQC or “La certification des établissements de santé” by the HAS).

Dashboards commonly target the general public, patients, and caregivers/ relatives. Some dashboards, such as the “AOK Gesundheitsnavigator” (hospital search) or QualiScope, explicitly name providers in adjacent healthcare sectors, like GPs and outpatient specialists, as target audience, to enable them to advise patients in their provider choice. Other dashboards additionally

¹² In Switzerland, quality monitoring is frequently done on cantonal level. However, as information on such monitoring systems is not openly accessible and as we did not want to arbitrarily pick (an) example(s), we do not include quality monitoring on cantonal level in this report.

(or exclusively such as AROC in Australia) offer provider portals, i.e., for a fee. Providers can sign up for an account allowing them to view analyses and/ or receive reports benchmarking their quality performance with their peers/ competitors.

2.3.4 Form/ presentation and access

In line with typical target audiences, the details of monitoring systems are not openly accessible. For instance, for outsiders it often remains unclear how exactly information is collected and rated (e.g., CQC) or how single providers performed (e.g., “Medizinischer Dienst Bund”). Often, raw data showing quality indicator results per provider are not openly available (e.g., “La certification des établissements de santé”). Monitoring results are usually published in the form of a report. The “Zorginstituut”, on the contrary, offers raw data downloads, but does not provide a report or some other form of aggregated analysis or results. Indeed, according to the interviewed Dutch experts, this is because the “Zorginstituut” itself is primarily responsible for collecting and documenting the data. The actual monitoring is conducted by other bodies such as the Dutch Healthcare Inspectorate or results might be used for health service supply contracting by health insurances.

We exclusively investigated dashboards that used websites with unrestricted access for the reporting of quality information. This is in line with dashboards’ main target audience, i.e., the general public. Still, as we learned from one French expert, dashboards do not necessarily need to use websites but could also be published in analogue form, e.g., as special issue of a weekly journal. Similar initiatives also exist in other countries (e.g., [Newsweek](#) in the USA, [Focus](#) in Germany).

2.3.5 Data sources

The dashboards that we investigated use on average three to four data sources. One of these data sources might be data gathered for or during quality monitoring organized by an institution independent of the organization providing the dashboard (exception: CMS and Medicare). In Germany, for instance, for the quality monitoring of hospitals as part of the “externe stationäre Qualitätssicherung” program, data are collected via quality report cards by hospitals and quality indicators are analyzed by the IQTiG for monitoring purposes. These data are not only used for monitoring purposes, however, but selected quality information is published on dashboards, such as the “AOK Gesundheitsnavigator” (hospital search) or the “Weisse Liste” (hospital finder). Likewise, the certification grade (A, B, C, or D) resulting from the obligatory certification process conducted in the context of “La certification des établissements de santé” in France, is published both on QualiScope and “Le Guide Santé”. However, both QualiScope and “Le Guide Santé” as well as the German dashboards use additional data sources, such as results from patient experience questionnaires and patient surveys and/ or claims data.

In contrast, the monitoring systems we investigated usually generate primary data for their monitoring purposes. “La certification des établissements de santé”, the CQC, the “Deutsche Rentenversicherung Bund”, the “Medizinischer Dienst Bund”, and the CMS all carry out auditing processes. In these auditing processes, data are collected, often according to pre-defined criteria. In some cases, secondary data sources are used during the audit and/ or, for instance in the case of “La certification des établissements de santé”, the usage of outcome quality information by care teams is assessed. For the “Zorginstituut” and the “externe stationäre Qualitätssicherung”, providers

must supply data via self-reporting, i.e., also for these non-auditing monitoring approaches, primary data are collected.

2.3.6 Participation

In almost all cases, providers could not choose to be part of a dashboard or to be monitored. We only found two dashboards where participation was (partially) voluntary, namely the Australian provider benchmarking dashboard AROC and the “Qualitätskliniken.de” dashboard aimed at patients. Both dashboards are run by “associations” that providers can choose to join and that their members offer services such as detailed benchmarking and analyses.

2.3.7 Funding and ownership

Most commonly, monitoring systems are funded publicly by grants, subsidies, or federal budgets (e.g., “La certification des établissements de santé”). The “Deutsche Rentenversicherung Bund”, the “Medizinischer Dienst Bund”, and the CMS are all financed by insurances, namely the German pension insurance, all German statutory sickness funds and nursing care insurances, and Medicare, respectively. Concerning dashboards, funding is quite diverse. Many receive public funding, but some are financed by insurances (e.g., “AOK Gesundheitsnavigator”), by foundations (e.g., “Weisse Liste”) or (at least partially) by their members (e.g., ANQ). Lastly, ownership usually corresponds to the funding source.

2.3.8 Availability of methodological explanations

The different monitoring systems/ dashboards follow very different methodological approaches. Of the 26 monitoring systems/ dashboards, 23 provide a description of their approach (14 provide very detailed, eight rather superficial information) while three do not explain their methodology at all. For instance, “Le Guide Santé” does not indicate its data sources, it does not report sample sizes, and it does not convey who conducts patient surveys or how they are conducted. “Qualitätskliniken.de”, as another example, does provide some information on its website, such as what the different quality categories mean. For details, such as how indicators were calculated and assessed, “Qualitätskliniken.de” refers to other organizations and provides external links. Similarly, “Welches-pital.ch” refers to the ANQ and FOPH concerning details on the methodology for calculating quality indicators and only briefly explains own quality information collection and calculation of overall ratings/ composite scores.

2.3.9 Risk-adjustment

When outcome quality is published, usually some kind of risk-adjustment is performed. Sometimes, this risk-adjustment is rather simplistic (only adjustment for age and sex, e.g., for CH-IQIs) and sometimes a variety of patient risk factors are accounted for (e.g., Medicare). Most commonly, age, sex, and (some) co-morbidities or medical score(s) are considered. Some monitoring systems/ dashboards also consider other factors such as patients’ surgical history, weight loss, or a perioperative risk classification score developed by the American Society of Anesthesiologists (known as the ASA classification).

2.3.10 Timeliness and frequency of data collection

Usually, quality information is collected continuously or annually and most commonly, it is published with a two-year time lag (t-2). With “continuously”, we mean in this context, that there are no set time frames in which new data are collected, analyzed, and published. Rather, in the case of monitoring systems, for instance, monitoring organizations audit providers continuously over years and publish results once they become available. In most cases, each provider is audited regularly (e.g., at least every four years or sooner in the case of inferior quality for “La certification des établissements de santé”), i.e., new quality information for some providers is posted “continuously”. We found similar approaches for patient reviews. As most dashboards utilize data from various sources, however, both annual as well as continuous, provider-dependent updates are common for dashboards. Concerning timeliness of displayed information, when quality information is collected continuously, the most recent data might be from the same year (t-0) and the least recent up to the maximum number of years in which auditing processes are conducted. In the case of the CQC, however, data can actually be up to ten years old or even older as no strict intervals for auditing are set.

2.3.11 Reporting sample sizes and handling of small sample sizes

The majority of monitoring systems/ dashboards report the number of cases included for the calculation of quality indicators (or sample sizes are not relevant, e.g., for some auditing tasks). Similarly, most monitoring systems/ dashboards exclude providers, and no quality indicator value is calculated, if the sample size is deemed too small. “Too small” is defined by each monitoring system/ dashboard individually, depending on the specific context of the calculated indicator. Generally, this is meaningful insofar that the specific context is one factor determining what minimum sample size should be used. Still, there are examples where the minimum number of cases needed for calculation or the standard sample size are rather small and thus, are debated by experts (e.g., quality indicators based on auditing of care for nine residents of long-term care facilities in the case of “Medizinischer Dienst Bund” or patient ratings for “Zorgkaart”). Moreover, there are examples where the sample size is not reported at all (e.g., “Le Guide Santé”) or when “adjustments” for small sample sizes are made (e.g., “Zorgkaart” colors average provider ratings in gray if the total number of individual ratings is below a certain number).

2.3.12 Visualization and use

Most dashboards offer some tools to support the understanding of quality information. Six of the 26 monitoring systems/ dashboards offer raw data downloads (all six are dashboards except “Zorginstituut”). Five out of 26 monitoring systems/ dashboards provide tables, thirteen show some kind of graph (e.g., “QualiScope” shows a provider’s score per certification category in a spider-web diagram; others show star ratings such as “Weisse Liste” or other visual scores). For nine out of the 18 dashboards, filters can be used to find preferred providers. Furthermore, nine of the 18 dashboards feature comparisons. This means that providers can be added to a comparison list and quality indicators can then be compared in tabular form. Lastly, seven of the 18 dashboards offer drill down options. For instance, in the case of the “AOK Gesundheitsnavigator” (hospital search), the underlying individual quality indicator values comprising the composite risk-adjusted outcome quality score (shown as icons, so-called life trees) can be viewed when drilling down.

2.3.13 Budget information

We did not manage to find information on the budget needed to conduct quality monitoring or required to create and run a dashboard for the vast majority of cases. Nevertheless, we found that approaches differ greatly in their intensity, effort, and thus, most probably in cost. A dashboard such as “Zorgkaart” publishing patient feedback using a standard website indubitably creates much smaller costs than an elaborate monitoring system evaluating every provider in almost all healthcare areas like “La certification des établissements de santé”. Generally speaking, the costs will depend on the type of initiative (monitoring with audits, monitoring without audits, dashboard), scope and regularity (e.g., all providers monitored every four years vs. irregular monitoring of selected providers), the amount and variety of quality information, the number of activities carried out (data collection, analysis, publication), the methodological rigor, and the form of publication.

2.3.14 Contents (indicators)

Some monitoring systems/ dashboards report an overall rating at provider level. This overall rating can be based on patient recommendations/ ratings (e.g., “Zorgkaart”, or PHIN), outcome quality, or a composite score of different quality dimensions (e.g., “Qualitätskliniken.de”). In the case of monitoring systems, it is the result of a rigid certification and auditing process (e.g., “La certification des établissements de santé”, or CQC).

PREMs, or some form of patient rating or review, are the most frequently reported quality dimension. Recommendation scores or rates are very common, but also categories of patient experiences are frequently reported (medical care, nursing/ auxiliary care, organization, and service), often with several sub-dimensions (e.g., patient safety, food, rooms, discharge management, admissions, communication, etc.).

PROMs are included in only a few dashboards. In fact, for hospitals (somatic care), we only found PROMs published in England. We believe this is because England is the only country with a national PROM data collection program. In other countries, PROMs are often also measured but only by single providers, or provider clubs/ groups. Besides England, the German dashboard “Qualitätskliniken.de”, focusing on rehabilitative care, publishes PROM-related quality indicators for eight episodes of care (knee replacement, hip replacement, back pain, depression, anxiety, prostate cancer, colon cancer, breast cancer). “Qualitätskliniken.de” does not report the actual PROM-scores or their change between baseline and last questionnaire (usually at 6- or 12-months post-intervention / treatment), however, but rates representing PROM-score improvements of the selected provider relative to the provider’s peer group.

For GPs and outpatient specialists, mostly structural quality and PREMs are reported. PHIN is the only dashboard reporting outcome quality indicators for outpatient specialists. Indubitably, this is due to the nature of the English healthcare system where consultants active in outpatient practices perform surgeries on their patients in cooperating hospitals. Results of these surgeries can then be linked to outpatient specialists.

With respect to hospitals (somatic care), there are examples for the reporting of quality indicators of all quality dimensions. Usually, structural quality is considered. Most commonly, procedure volumes, certifications, and qualifications of medical professionals/ offered medical specialties are provided. An example for the reporting of indication and process quality is the “AOK Gesundheitsnavigator” (hospital search), which provides the results of different indicators of the “externe stationäre

Qualitätssicherung”, e.g., “The planned surgery for primary knee replacement was medically indicated”. In terms of outcome quality, there are numerous examples of monitoring systems/ dashboards using and/ or reporting risk-adjusted and/ or not-risk-adjusted indicators. Some indicators only consider the inpatient period, others also post-surgery, outpatient periods. Medicare is certainly the most comprehensive dashboard with respect to the quantity and quality of outcome quality indicators reporting dozens of validated indicators covering a broad range of episodes of care. Lastly, QualiScope is a good example for elaborate reporting of PREMs. More specifically, QualiScope reports one recommendation rate at provider level and a patient satisfaction based on six sub-dimensions rating medical care, nursing care, and organization and service.

Concerning psychiatric care, most monitoring systems/ dashboards report structural quality. Moreover, four monitoring systems/ dashboards publish process quality indicators (ANQ, QualiScope, “Zorginstituut”, Medicare). Outcome quality is rarely reported. Only the CMS uses the “Outcome and Assessment Information Set” for their quality monitoring in psychiatric care. Lastly, patient experience is reported by five dashboards (ANQ, NHS Choices, QualiScope, “Zorgkaart”, “Arzt-Auskunft”).

Regarding rehabilitative care and non-physician healthcare services, monitoring systems/ dashboards use indicators from several quality dimensions. The majority of monitoring systems/ dashboards report structural quality and patient experience indicators. Process and outcome quality indicators are also reported in some cases. Medicare, for instance, reports quality indicators such as the change in patients' ability to move around. ANQ and AROC report the length of stay of patients, and AROC also uses standardized rehabilitative care scores to assess outcome quality. QualiScope, on the other hand, reports several process quality indicators such as “Quality of discharge letter” and individualized care plans.

Lastly, with regards to home and long-term care, quality indicators of all quality dimensions are reported by the monitoring systems/ dashboards we investigated. Note that in many cases, quality indicators are either for home or for long-term care. In Germany, for instance, the “Medizinische Dienst Bund” closely monitors long-term care facilities and outpatient as well as home care. Results from this monitoring process are used by dashboards such as the “AOK Gesundheitsnavigator” (care navigator). Examples for outcome quality indicators are “Development of decubitus”, “Severe consequences after a fall”, and “Involuntary weight loss”.

3 Stakeholder dialogues

3.1 Methods

3.1.1 Stakeholder groups and organizations

To reach the goal of the stakeholder dialogues, we needed to identify potential users of both a monitoring system and a quality dashboard. Thus, in a first step, we defined stakeholder groups of the healthcare system. In a second step, we identified relevant organizations and experts representing these groups to participate in the dialogues.

We defined the following stakeholder groups as most relevant for a healthcare system:

- Patients
- Relatives and informal caregivers
- Insured persons, citizens, the general public
- Health authorities and policy makers
- Providers and medical professionals
- Health insurances
- Research community / academia
- Expert organizations (e.g., ANQ, EQUAM)
- Industry partners (e.g., healthcare software providers, laboratory medicine, etc.)
- Others (e.g., Swiss Armed Forces)

To identify the right organizations and experts and to conform with the first project task, i.e., the information collection, we divided the healthcare system into five parts: General practitioners (GPs) and outpatient specialists¹³, hospitals (somatic care), psychiatric care, rehabilitative care and non-physician health services, and home and long-term care.

We expected that there would be significant overlaps between stakeholders' expectations and demands across these healthcare areas. Still, we conducted one stakeholder dialogue per healthcare area (1) to be able to include as many organizations and experts as possible, and (2) to identify requirements linked specifically to each healthcare area.

In addition to the five healthcare area workshops, we conducted two workshops with patients, relatives, and the general public (i.e., "general public workshops") due to three reasons: First, monitoring provider quality ultimately benefits the recipients of that quality, i.e., patients and in a broader sense their relatives and "everyone" (the general public). Second, public reporting of provider quality (i.e., the "dashboard") primarily aims to provide patients, their relatives, and "everyone" with suited information to make the "right" choice for where to receive care. Third, we aimed to provide an open and safe environment for these stakeholder groups to voice their concerns, expectations, and demands. Including them in the same dialogue as the healthcare area experts might have impeded this. As representatives of patients, relatives, and the general public usually are

¹³ For the purpose of the stakeholder dialogue, the healthcare area was re-named "ambulatory care" to make it more open for stakeholder groups such as non-physician medical professionals.

medical laypersons and often do not have deep knowledge of the healthcare system and the interconnections of patient pathways,¹⁴ they might have been reluctant to discuss their opinions with (medical) experts working in healthcare.

Representatives for the stakeholder groups health authorities and policy makers, providers and medical professionals, health insurances, the research community / academia, expert organizations, industry partners, and others (as well as patient representatives and relative representatives) were invited to the five healthcare area workshops (see invited organizations in Table 8).

Table 8: Overview of invited organizations and number of representatives per stakeholder group

Stakeholder group	Organization	No. of representatives
Providers and medical professionals	H+ Die Spitäler der Schweiz	3
	Associazione Locarnese e Valmaggese di Ass. e Cura a Domicilio	2
	senesuisse	1
	HUG - Hôpitaux universitaires de Genève	1
	Insel Gruppe	1
	Luzerner Kantonsspital	1
	Universitäre Psychiatrische Dienste Bern	1
	Forel Klinik AG	1
	Luzerner Psychiatrie	1
	Réseau Santé Région Lausanne	1
	mediX Zürich	1
	Medbase Gruppe	1
	Association Spitex privée Suisse ASPS	1
	Spitex Schweiz	1
	Schweizer Berufsverband der Pflegefachfrauen und Pflegefachmänner - L'Association suisse des infirmières et infirmiers	1
	Schweizerischer Verband Medizinischer Praxis-Fachpersonen	1
	CURAVIVA	1
	pharmaSuisse	1
	Total	21
IT 0 0 0 0	Departement Gesundheit und Soziales Kanton Aargau	3

¹⁴ It became evident in the group discussions, however, that participants with chronic and/ or long-lasting, complex diseases had acquired medical knowledge about their condition and understood many aspects of the healthcare system very well without working in healthcare themselves.

Stakeholder group	Organization	No. of representatives
	État de Vaud	2
	Federal Office of Public Health	2
	Repubblica e Cantone Ticino	1
	Gesundheitsdirektion Kanton Zürich	1
	Service de la santé publique du canton de Neuchâtel	1
	Gesundheitsdirektion Kanton Zug	1
	Gesundheitsdepartement des Kantons Basel-Stadt	1
	Total	12
Health insurances	santésuisse	5
	Swica Gesundheitsorganisation	2
	Curafutura	2
	Concordia	1
	CSS	1
	Total	11
Research community / academia ¹	Unisanté Lausanne	1
	University of Bern	1
	University of Lucerne	1
	University of Zurich	1
	Zürcher Hochschule für Angewandte Wissenschaften	1
	Total	5
Industry partners	BESA QSys AG	1
	TMR Triangle Micro Research AG	1
	concret AG	1
	FAMH Die medizinischen Laboratorien der Schweiz	1
	Total	4
Expert organizations	ANQ	3
	EQUAM Stiftung (Schweiz)	1
	Total	4
Patients	Schweizerische Stiftung - SPO Patientenorganisation	1
	Total²	1
Relative s/inf. caregivers	Dachverband der Vereinigungen von Angehörigen psychisch Kranker	1
	Total	1
Other	Swiss Armed Forces	1

Stakeholder group	Organization	No. of representatives
	Total	1
Total number of participants (all workshops)		60

Annotations: (1) Experts from the listed universities were different from the topic experts of the project team. (2) Patient representatives were explicitly invited to all workshops but could often not participate due to time restrictions. Still, as the general public workshop focused on the patient's perspective, this essential stakeholder group could be considered appropriately.

When selecting representatives and experts for the workshops, we considered two factors: First, we aimed for a balance of German- and French-speakers (and also Italian-speakers for home and long-term care) in each workshop and across all workshops. Similarly, we tried to include representatives from different parts of the country and from different cantons. To support this mix of languages and regions, the five healthcare area workshops were held in different cities (cf. below), and one general public workshop was conducted in the French-speaking part (Lausanne) and the other one in the German-speaking part of Switzerland (St. Gallen).

Second, for each workshop, we intended for a well-balanced mix of representatives from different groups. For each stakeholder dialogue, the number of participating representatives per group is provided in the introduction of each stakeholder dialogue summary (see Supplements C through G).

3.1.2 Workshop organization

Aspects of the workshop organization that might influence the stakeholder dialogues' results are the invitation and recruitment strategy and when workshops were held.

Regarding the identification of experts for the healthcare area workshops, we used the project team's personal network. In a second step, we confirmed a short-list of organizations and experts to be contacted with the project sponsor, i.e., the FQC. Organizations were in most cases contacted centrally, meaning that the project management office contacted, for instance, the director's office of an organization asking if one or more experts would be available and willing to participate in one or more healthcare area workshops. In some cases, if personal contacts of team members, e.g., from academia, were to be invited, the expert was contacted directly. In four cases, experts asked to be included in the workshops as they had heard of the project and its goal and wanted to contribute.

Participants for the healthcare area workshops were invited between the end of January and mid-April depending on the number of positive responses per workshop, i.e., how fast the available slots were filled. Ten to 13 experts participated per workshop and all healthcare area workshops were held in May:

- Wednesday, May 3, 2023, Lucerne: Rehabilitative care and non-physician health services, 10 participants
- Friday, May 5, 2023, Bern: Hospitals (somatic care), 12 participants
- Tuesday, May 9, 2023, Zurich: Psychiatric care, 13 participants
- Wednesday, May 10, 2023, Zurich: GPs and outpatient specialists, 12 participants
- Tuesday, May 23, 2023, Lugano: Home and long-term care, 13 participants

Stakeholders were invited for dinner the evening before the workshop to allow them to get to know each other before the workshop, creating an atmosphere that would be conducive to the dialogue.

Depending on the workshop, between one third to all participants followed this invitation. The project management team from the SLHS and the University of St. Gallen and most group facilitators were also present at the dinners.

Regarding general public workshops, workshops were composed of the following groups:

- Persons with chronic conditions (examples of chronic diseases are asthma, diabetes, chronic obstructive pulmonary disease, coronary heart disease, dementia)
- Persons that have recently suffered from an acute disease and/ or that have received elective surgery/ treatment within the last six months, e.g., cancer patients after a surgery or inpatient treatment, orthopedic patients (hip or knee replacement, sports injuries, etc.), or women that have recently given birth
- Patient representatives
- Relatives of patients and informal caregivers such as spouses, partners, parents, siblings, daughter/ son, etc.
- Citizens, taxpayers, the general public

Participants often associated themselves with several of the above groups and naturally, all participants were part of the last group “citizens, taxpayers, the general public”. The exact number of representatives per group is given in the introduction of the two summaries of the general public workshops (see Supplements H and I). Please note that these summaries are in French and German respectively, according to the language spoken during the workshop.

Regarding the recruitment strategy, all participants of the workshop in Lausanne (thirteen participants) and most of the participants of the workshop in St. Gallen (nine of twelve participants) were recruited using advertisements on social media (Facebook, Instagram, and LinkedIn). Three participants for the St. Gallen workshop were recruited through the personal network of the team at the University of St. Gallen. All participants of the general public workshops received a CHF 80.00 gift card at an online retailer of their choice as a compensation for the workshop. This was communicated in the social media advertising.

The general public workshop in St. Gallen was held on Tuesday, June 06, 2023, and twelve out of 17 registered persons participated in the workshop. For Lausanne, two workshops had to be held, as only two of 17 registered persons participated in the first workshop on Friday, June 23, 2023. In the second workshop on Wednesday, July 12, 2023, ten of 12 registered persons participated, with one additional registration and participation on the day of the workshop, resulting in a total of 13 participants for the general public workshop(s) in Lausanne. For all workshops, age groups, and educational backgrounds were well-mixed, yet a clear majority of participants was female (12 out of 13 in Lausanne, 8 out of 12 in St. Gallen). For more information on participant demographics, see the introductions of Supplements H and I.

3.1.3 Workshop agendas and guidelines for workshop facilitation

Stakeholder dialogues are structured, moderated, guided, and open exchanges of knowledge and opinions. To ensure such exchanges, we relied on current practices from the scientific literature when developing guidelines for workshop facilitation and the workshop agendas [5–9].

Agenda for healthcare area workshops

In preparation of the healthcare area workshops, online information sessions were offered informing participants about project goals and about basic concepts of quality measurement, monitoring, and public reporting needed to follow the in-person workshops. We offered four different slots¹⁵, and recordings were provided to all stakeholders. Sessions were held in English or German according to the participating stakeholders' needs. The concrete agenda and slides presented in the online information sessions are provided as a supplement to this report (see B: Presentation used for online information events).

Each healthcare area workshop followed the same agenda (Table 9):

Table 9: Agenda for healthcare area workshops

Time slot	Agenda item
09:00 - 09:30	<i>Welcome coffee</i>
09:30 - 10:00	Welcome and introduction <ul style="list-style-type: none">• Overview of the day and agenda• Recap of contents discussed during the online information events• Short introduction of the participants
10:00 - 10:50	Group discussions <ul style="list-style-type: none">• From your perspective, what quality information needs to be monitored and reported in the field of <i><healthcare area>?</i>• What are the most important criteria for the selection of quality indicators in your view?
10:50 - 11:10	<i>Coffee break</i>
11:10 - 12:10	Group discussions (cont'd)
12:10 - 13:00	Moderated discussion in the plenary
13:00 - 14:00	<i>Lunch</i>
14:00 - 15:40	Reflection workshop <ul style="list-style-type: none">• Review and discussion of two to three exemplary dashboards found during the information collection• Rating of exemplary dashboards according to quality information needs defined in group discussions during the morning• Co-development of recommendations
15:40 - 16:00	Moderated discussion in the plenary
16:00 - 16:30	<i>Coffee break</i>
16:30 - 17:00	Final reflections on quality information needs
17:00 - 17:15	Closing and next steps

¹⁵ One online information session was held Tuesday, April 25, 2023, two on Wednesday, April 26, 2023, and one on Tuesday, May 02, 2023.

In essence, the workshops were divided into two parts: A group discussion and a “reflection workshop”. For both the group discussion and the reflection workshop, participants were divided into groups of three to six people, depending on the total number of participants. We aimed to form groups of native speakers to prevent language barriers. Thus, spoken languages in the groups were Italian, French, and German, depending on group participants. The moderation of the workshop was in English or German, depending on workshop participants.

The goal of the group discussion was to answer the following two guiding questions, linked to the overarching project question: (1) “From your perspective, what quality information needs to be monitored and reported in the field of <healthcare area>?” and (2) “What are the most important criteria for the selection of quality indicators in your view?” Discussions were moderated by a group facilitator. Facilitators additionally aimed to cover several other questions relating to the project’s overarching question of “Who should and wants to use the monitoring systems, who wants to use a dashboard and to what purpose?”. Group discussions were held for roughly 2 to 2.5 hours followed by a plenary discussion and summary of approximately 45 to 50 minutes.

The second part of the stakeholder dialogue was a reflection workshop on exemplary quality dashboards found during the information collection from January to March 2023. The goal of the reflection workshop was to analyze how these examples matched the expectations the stakeholders had developed and defined in the group discussions. Moreover, by experiencing the role of “dashboard users”, experts could reflect on how well (or not) their expectations are met in practice and whether existing dashboards (or at least some of their parts) can provide effective quality transparency. This way, we envisaged to enable experts to sharpen their recommendations for public reporting of quality information but also for quality monitoring.

Where necessary, workshops with groups of five or six participants were reorganized in smaller groups for the reflection workshop. Groups investigated at least two and up to three of four dashboards chosen for a workshop (see Table 3).

Table 10: Overview of exemplary quality dashboards investigated during reflection workshops

	GPs & outpatient specialists	Hospitals (somatic care)	Psychiatric care	Rehabil. care & non-phys. health serv.	Home & long-term care
QualiScope ¹ (France)	✓	✓	✓	✓	
Zorgkaart (the Netherlands)	✓		✓	✓	✓
Medicare (USA)		✓	✓		✓
AOK-Gesundh.nav. ² (Germany)	✓				✓
ANQ (Switzerland)			✓	✓	

	GPs & outpatient specialists	Hospitals (somatic care)	Psychiatric care	Rehabil. care & non-phys. health serv.	Home & long-term care
NHS Choices (UK)	✓				
Le Guide Sante (France)		✓			
Ziekenhuischeck (the Netherlands)		✓			
Qualitätskliniken.de (Germany)				✓	
Äldreguiden (Sweden)					✓

Annotations: (1) QualiScope was investigated during the workshop for GPs and outpatient specialists but does not contain information specific for this healthcare area. As there were no other appropriate examples for this healthcare area, we still included QualiScope in the workshop as an example for a comprehensive, national, centralistic dashboard (and underlying monitoring process, cf. chapter 2.2). (2) The AOK-Gesundheitsnavigator contains specific searches for several healthcare areas (e.g., the [hospital search](#)). For the workshops, we used the [physician search](#), and the [care navigator](#).

The dashboards, which a group investigated were pre-assigned to that group by the session facilitator beforehand (see the supplementary workshop summaries for details). We chose dashboards for each healthcare area workshop that included quality information for that respective area (exception: QualiScope for GPs & outpatient specialists, see annotation (1) below Table 10). Moreover, we aimed to combine dashboards with different characteristics to be reviewed by the experts.

At the end of the reflection workshop, participants were asked to rate the different exemplary quality dashboards using an online survey tool. The results of this survey and the underlying arguments were then discussed in a plenary session of approximately 30 to 45 minutes.

Regarding the survey results, please keep in mind that these are not representative for stakeholder groups represented at the workshops, not least due to the very small number of votes per dashboards in some cases. Thus, the results merely reflect the impression of the experts that were part of the workshops. Accordingly, the survey results as such are deliberately not included in the results section but only in the workshop summaries supplied as supplements to this report (cf. above). Nevertheless, the insights generated from the ratings and the following plenary discussions are valuable results drawn from the workshops presented in the next chapter.

Agenda for general public workshops

The general public workshops were planned to last three hours. Similar to the healthcare area workshops, the workshop consisted of two parts, i.e., a group discussion and a reflection workshop (Table 11):

Table 11: Agenda for general public workshops

Time slot	Agenda item
14:30 - 15:00	<i>Welcome coffee</i>
15:00 - 15:15	Welcome and introduction <ul style="list-style-type: none"> • Overview of the agenda • Short introduction to the project and its goals
15:15 - 16:20	Group discussions <ul style="list-style-type: none"> • From your perspective, what is “good quality” in healthcare? • What is your quality information need for choosing a provider, e.g., a family doctor, hospital, psychiatry, rehabilitative care center, physiotherapist, or long-term care facility?
16:20 - 16:45	Moderated discussion in the plenary
16:45 - 17:00	<i>Coffee break</i>
17:00 - 17:40	Reflection workshop <ul style="list-style-type: none"> • Review and discussion of two to three exemplary dashboards used in other countries • Rating of exemplary dashboards according to quality information needs defined in group discussions • Co-development of recommendations
17:40 - 17:55	Moderated discussion in the plenary
17:55 - 18:00	Closing and next steps
Start 18:00	<i>Apéro</i>

In essence, the group discussions of the general public workshops were structured like those of the healthcare area workshops. The main distinctions were that firstly, the guiding questions were more basic and general. Secondly, group facilitators asked fewer additional questions but gave sufficient room for participants to share their experiences with the Swiss healthcare system.

Regarding the reflection workshop, the participants were asked to investigate at least three out of the following five dashboards: [Medicare](#) (USA), [QualiScope](#) (France), [AOK-Gesundheitsnavigator \(hospital search\)](#) (Germany), [Ziekenhuischeck](#) (the Netherlands) und [Zorgkaart Nederland](#) (the Netherlands). It was planned that participants could investigate each website for roughly 10 to 15 min. After investigation, participants were asked to rate the websites using an online survey tool. Survey results and underlying reasons for ratings were discussed in a plenary session of 15 min, followed by closing and next steps.

Lastly, less time was planned for the group discussion and the reflection workshop compared to the healthcare area workshops as participants could not be expected to spend an entire day at the workshop due to work and other time conflicts. We also expected discussions to be faster compared to the healthcare area workshops as participants belonged to stakeholder groups with very similar interests.

Guidelines for workshop facilitation

Regarding guidelines for workshop facilitation, we defined four roles for each workshop: session facilitator, group facilitators, notetakers, and session organizers (see Table 15 in the appendix for an overview per workshop). In some cases, one person could take on multiple roles.

Group facilitators moderated group discussions and reflection workshops. They were responsible for creating a conversational space where all stakeholders could voice their concerns, thoughts, and ideas, i.e., fully participate in the discussion. Correspondingly, group facilitators ensured that each stakeholder contributed to both parts of the workshop and that groups were not influenced too strongly by the view of the most outspoken and active stakeholder(s). This was essential as the opinions, ideas, and concerns of all invited stakeholder groups had to be collected to be able to answer the project's overarching question. Lastly, group facilitators were to collect the most important discussion points of the group discussion on a flipchart and present these points in 5-10 min to kick off the first plenary discussion. During the reflection workshop, group facilitators assisted workshop participants if they needed help or had questions but otherwise aimed to stay as neutral as possible, i.e., in an observing role.

Notetakers took detailed notes during both the group discussions and the reflection workshop. Where appropriate, they could contribute by asking questions to clarify certain points made by the stakeholders but otherwise they stayed in their note-taking role. Moreover, they were in charge of recording all parts of the workshops. Lastly, one notetaker per workshop was responsible for developing the first draft of a workshop summary that was sent out to all participants after the workshop. These drafts were revised by the topic expert responsible for the healthcare area and the session facilitator (only the session facilitator for the general public workshops). Stakeholders were also invited to provide feedback on these summaries which were then finalized by the respective notetaker and the session facilitator.

The session facilitator was responsible for the welcome and introduction session with regards to presenting contents, for timekeeping, for all plenary discussions, for supporting group discussions and the reflection workshops where needed, and for reaching the goal of the workshops in general. Moreover, the session facilitator had to ensure that the workshop summary sent to participants after the workshop contained all key take-aways and main discussion points. Lastly, the session facilitator co-developed workshop agendas and guidelines.

Lastly, the session organizer(s) managed all administrative matters before, during, and after each workshop. Tasks included the invitation of participants, organization of the online information sessions, conference rooms, hotels, and meals, screens for the reflection workshop, name tags, distribution of workshop summaries, etc. Moreover, the SLHS project lead was responsible for drafting agendas, developing workshop guidelines, and presenting the agenda and introducing workshop participants at the beginning of the healthcare area workshops.

3.2 Results

In a first step, we present the key take-aways from the healthcare area workshops and the general public workshops separately. In a second step, we synthesize the results of both types of workshops.

Please note that we only present key take-aways derived from the discussions. For more detailed information on main discussion points, and for perceived strengths and weaknesses and ratings of investigated exemplary dashboards, see Supplements C through I.

3.2.1 Healthcare area workshops

Regarding a **monitoring system**, providers expressed a clear interest to use a standardized, methodologically-sound monitoring system containing timely structural, process, and outcome quality indicators at patient/ case level. Regulators, i.e., the stakeholder group health authorities and policy makers, expressed that they should and want to have access to this monitoring system.

However, the term “monitoring” and also “dashboard” seemed to have slightly different meanings to stakeholders depending on their perspective. In fact, the discussions showed that providers are willing to be monitored by regulators on (outcome) quality indicators that they can influence and are accountable for when supported by a “provider dashboard”, i.e., a quality management tool containing raw data at patient/ case level connecting outcomes with structures and processes. In essence, for providers, it proved essential that they are in a position where they can actually act on and improve the quality that is monitored by regulators.

From the view of regulators, they also need a tool to actively monitor providers, yet the required level of detail is broader, e.g., outcome quality aggregated per provider would be a good first step to initiate a dialogue with respect to quality. Some stakeholders from regulating organizations/ authorities expressed that they would like “automated” support, e.g., thresholds for acceptable quality, when analyzing and using the quality information of the monitoring system. Besides, also for many regulators, standardization of monitoring efforts and methodologies is a meaningful goal.

Lastly, there was no clear vote for or against payers, i.e., the stakeholder group health insurances, to participate in quality monitoring or not. In some workshops, the compromise was expressed that health insurances could have access to more aggregated data but not to raw data. In one workshop, it was suggested that payers could support quality monitoring by sharing claims data which could then be used for the intersectoral investigation of patient pathways.

There was also no final consensus regarding what measures should be taken if a provider missed quality monitoring goals. Most stakeholders stressed, however, that (financial) sanctions could be detrimental for quality improvement and that, at least as a first step, constructive dialogues should be conducted and that insufficient providers should be assisted with quality improvement, e.g., with peer reviews.

Concerning the publication of quality information (“**dashboard**”), patients and the general public (i.e., “everyone”) clearly emerged as the main target group. However, it was strongly debated how and for what purpose patients, being medical laypersons, could use a quality dashboard and what contents a quality dashboard should display. While experts largely agreed that the most important quality dimension for monitoring was outcome quality (exact specification depending on the monitored healthcare area), outcome quality indicators (and especially risk-adjusted outcome quality indicators) were seen as not fitting for publication by many experts. Still, other experts stressed that the public and patients expect to be informed on the (outcome) quality of providers and that there must be a way to visualize and explain also intricate, complex outcome quality indicators. Other quality dimensions, e.g., service quality in the form of patient satisfaction indicators were seen as potentially valuable in many workshops. Employee satisfaction and alternative indicators for work atmosphere

such as turnover rates were also seen as potentially valuable and easily understandable for patients. Ultimately, many experts agreed that a dashboard would need to be designed from the patient's perspective involving focus groups and that it could eventually serve as a support tool for choosing a provider. Lastly, in many workshops, the referring physician was seen as a potential moderator for using a quality dashboard, explaining quality information, and supporting patients in finding the right care based on data.

Apart from these insights relating to the project's overarching question, many related questions were discussed in the workshops. We structured the key take-aways to these questions along three topics: (1) Quality measurement, (2) Quality monitoring, and (3) Public reporting ("Dashboard"). Figure 56 gives an overview of the key take-aways from all healthcare area workshops. "Key take-away" means that a topic was discussed at length in the respective workshop. Accordingly, if there is no checkmark for a certain key take-away and workshop, this does not necessarily mean that this topic was not touched upon or discussed in one of the groups at the workshop or that it is not important for the respective healthcare area.

Lastly, apart from the summary and key take-aways presented here, many additional discussion points were collected from the stakeholder dialogues. For instance, stakeholders named a list of quality indicators they deem important and suitable (or not) for quality monitoring and public reporting. Still, we can only highlight the most strongly discussed topics here and otherwise have to direct to the summaries of the stakeholder dialogues provided as Supplements C through G.

Figure 56: Key take-aways from healthcare area workshops

	GPs & outpatient specialists	Hospitals (somatic care)	Psychiatric care	Rehabilitative care and non-physician health services	Home and long term care	Total number of mentions	
(1) Quality measurement	(a) Usage of existing data: For quality measurement, existing data sources should be used	✓	✓	✓	●	✓	4
	(b) Building on existing initiatives: Numerous Swiss initiatives already exist that future efforts should build upon	✓	✓	●	✓	✓	4
	(c) Intersectoral quality measurement: Quality should be measured across the full spectrum of the care pathway	●	●	✓	✓	●	2
(2) Quality Monitoring	(a) Actionability: Providers need to be able to use collected information for quality development and improvement	●	✓	✓	✓	✓	4
	(b) Focus on outcome quality: Outcome quality is what ultimately counts and should thus be in focus	✓	●	✓	✓	●	3
	(c) Accountability: Only quality information that a provider is in fact accountable for should be monitored (and published)	●	✓	✓	●	●	2
(3) Public reporting ("Dashboard")	(a) Tailored information: The presented quality information must fit to the user's/ patient's needs	✓	✓	✓	✓	✓	5
	(b) Understandability: The information provided should be comprehensible for all	✓	✓	✓	✓	✓	5
	(c) Patient centeredness: The primary focus of public reporting / dashboards should be on the patient's needs	●	●	✓	✓	✓	3
	(d) Engaging visualization: The visual representation of quality metrics should be designed to engage users	●	●	✓	✓	●	2

Category 1: Recognized as a key take-away during the dialogue 

Category 2: Not recognized as a key take-away during dialogue 

Annotation: "Key take-away" means that a topic was discussed at length in the respective workshop. Accordingly, if there is no checkmark for a certain key take-away and workshop, this does not necessarily mean that this topic was not touched upon or discussed in one of the groups at the workshop or that it is not important for the respective healthcare area.

Quality measurement

Regarding quality measurement, the first key take-away that emerged during the healthcare area workshops is **usage of existing data** for quality measurements and interoperability of data sources. The driving logic behind this key take-away is that documentation efforts should be minimized without harming data quality. Routine data (administrative, billing, clinical), for instance the medical statistic of Swiss hospitals or the data collected in clinic or hospital information systems, exhibit high data quality as they are primarily used for patient treatment, billing or some other primary purpose that do not allow for flawed data. Moreover, they are collected anyway, i.e., for their primary purpose.

During the GPs & outpatient specialists/ ambulatory care stakeholder dialogue, participants strongly emphasized the importance of increasing the usage of existing data in ambulatory care for quality measurements. They acknowledged that healthcare professionals routinely document a substantial

amount of data that can be utilized for quality monitoring and public reporting. Therefore, recommended efforts were to enhance the accessibility, interoperability, and availability of this existing data. In the somatic care stakeholder dialogue, participants also emphasized the preference for utilizing already existing data, such as routine data, for quality monitoring and public reporting, to avoid burdening providers with unnecessary extra documentation work. They highlighted the need for bundled data reporting, keeping documentation time and effort manageable for providers. In the psychiatric care stakeholder dialogue, participants echoed similar sentiments regarding drawing on existing data sources. Moreover, participants emphasized the importance of establishing a comprehensive "data dictionary" of existing and useable data sources. Such a data dictionary could streamline data collection efforts, unburden providers, and increase acceptance by the responsible workforce. Moreover, when defining and selecting quality indicators for quality monitoring (and also for public reporting), the data dictionary could be used as a starting point. More concretely, indicators should only be selected if they can be calculated from data already collected rather than defining new quality indicators needing new documentation. It was also recognized that interoperability of IT-systems is essential for data availability and for minimizing documentation efforts. Valuable data that is currently underutilized, such as discharge reports in inpatient psychiatric care, were highlighted as an opportunity for structured evaluation. Lastly, participants in the home and long-term care stakeholder dialogue also emphasized the need for using existing data sources.

The second key take-away is that (central) quality measurement should **build on existing initiatives**, which emphasizes that Switzerland already has a multitude of established initiatives in the area of quality measurement. Future endeavors should leverage and expand upon these existing foundations. Examples include national programs such as ANQ but also initiatives by single providers, provider groups, medical associations, and physician networks.

In the GPs and outpatient specialist stakeholder dialogue, participants recognized the presence of small-scale initiatives focused on quality improvement in ambulatory care, suggesting that these initiatives can serve as a basis for developing larger-scale and national initiatives. In the hospital (somatic care) stakeholder dialogue, participants highlighted the opportunity of utilizing data from medical registries documented in various systems and structures, as a possible source for quality monitoring and dashboard development. Moreover, some participants pointed out that certain provider groups have already developed own quality monitoring systems (e.g., with PROMs) that could serve as a basis for national endeavors. In the rehabilitative care stakeholder dialogue, participants acknowledged the existence of numerous quality initiatives within Switzerland and beyond, with validated indicators serving as a solid foundation for a standardized monitoring system. They argued for connecting and integrating existing measurement systems to streamline data collection and reporting processes. Similarly, in the home and long-term care stakeholder dialogue, participants acknowledged the presence of voluntary or canton- or institution-promoted initiatives for quality reporting and monitoring. They reported on the fragmented nature of quality data in the sector. Still, they highlighted the potential of these existing initiatives to form the basis for overarching initiatives and improve the standardization of national-level quality data collection¹⁶.

The third key take-away is **intersectoral quality measurement**, meaning the need for quality measurements to encompass the entire continuum of care, i.e., patient pathway across healthcare areas and sectors. In the psychiatric care stakeholder dialogue, participants recognized the

¹⁶ Currently, this is being addressed in the national implementation project <https://www.curaviva.ch/Fachwissen/Medizinische-Qualitaetsindikatoren/PR0oS/>.

significance of intersectoral quality measurement, as mid- to long-term outcomes in psychiatric care depend not only on a single provider within one sector, but on all providers across various sectors. Therefore, quality indicators must be able to assess quality along the entire care pathway, considering the rotation of psychiatric patients between inpatient and outpatient providers. Similarly, in the rehabilitative care stakeholder dialogue, intersectoral quality measurement was extensively discussed. It was acknowledged that rehabilitation extends beyond the rehabilitative care center, with the focus on measuring the improvement achieved between the beginning and end of rehabilitative therapy. Thus, intersectoral quality measurement becomes essential to evaluate the entire diagnostic and treatment process to understand how different sectors are interconnected, and what provider is accountable for what part of the measured quality. Indeed, participants pointed out that the evaluation of individual providers must still be feasible.

Quality monitoring

Concerning quality monitoring, the first key take-away is **actionability**, emphasizing the critical need for providers to effectively utilize collected information for quality development and improvement purposes. In the hospitals (somatic care) stakeholder dialogue, participants extensively discussed the concept of actionability, emphasizing the necessity for quality monitoring systems to link information from different dimensions of quality on a patient or case level (e.g., connect structure and process quality with outcome quality indicators). Timely feedback was deemed essential for providers to monitor and take immediate action, leading to real-time quality improvements by identifying and addressing cases that fall below quality standards. Structural and process quality indicators were identified as valuable tools for identifying systemic issues and barriers within the healthcare system that may impact the delivery of high-quality care. In the psychiatric care stakeholder dialogue, participants stressed the importance of timely information triggering and enabling providers to utilize the information for improving their quality of care. In the rehabilitative care stakeholder dialogue, providers emphasized the importance of up-to-date data for defining and implementing improvement measures promptly. Outcomes that are based on outdated indicators pose challenges for quality development, as it becomes unclear if structures and processes have remained the same. Lastly, in the home and long-term care stakeholder dialogue, participants highlighted the need for collected quality information to serve as a foundation for quality improvement efforts, with measured quality indicators being suitable for providers to address and improve upon.

Evidently, a common theme in all workshops was that providers need timely data describing outcomes (i.e., what happened to the patient) as well as structures and processes (i.e., who treated the patient with what tools and how). Monitoring by regulators (and possibly also payers) should then focus on the same outcome quality indicators that are scrutinized and addressed for development and improvement by providers.

The second key take-away highlights the significance of **focusing on outcome quality** for (external) quality monitoring, emphasizing that outcome quality ultimately is what counts for patients. In the context of the GPs and outpatient specialist stakeholder dialogue, participants highlighted that existing small-scale quality improvement initiatives, such as practice networks and the Swiss Society of General and Internal Medicine, already utilize quality information, predominantly focusing on process indicators and adherence to guidelines. However, while process quality and guideline adherence were deemed important, it was argued that future efforts should shift towards placing greater emphasis on outcome quality to avoid losing sight of the type of quality most relevant for patients (and the healthcare system as a whole). In the psychiatric care stakeholder dialogue,

participants stressed that outcome quality measures are particularly crucial for psychiatric care, suggesting regional-level assessment independent of individual providers due to the interconnectedness of outpatient and inpatient services. Key outcome quality indicators in psychiatric care encompass symptom load, re-hospitalization rates, medication errors, PROMs, suicide rates and attempts, return to work and social life, and the use of freedom-restricting measures. Similarly, in the rehabilitative care stakeholder dialogue, the primary focus was on achieving positive outcomes and goal orientation in rehabilitation to enhance the quality of life for patients.

The third key take-away is **accountability**, emphasizing the importance of collecting, monitoring, and publishing only quality information that providers are accountable for. This key take-away is closely linked to actionability but also intersectoral quality measurement. In the hospitals (somatic care) stakeholder dialogue, participants emphasized that measures taken by providers and potentially by policymakers should influence the measured and monitored quality. If quality development measures do not lead to quality improvement for larger parts of the provider landscape, providers might not be able to influence the measured quality, i.e., they are not accountable for it. This topic was discussed in a similar context in the psychiatric care stakeholder dialogue. Another aspect linked to accountability discussed during the workshops is that monitored quality indicators should on the one hand, not change too often over time yet, on the other hand, once sufficient quality improvement has been achieved by most providers, new indicators should be defined. Many participants agreed that defining new indicators does not only trigger continuous quality development and improvement but also ensures that inadvertent monitoring and reporting incentives (i.e., focusing too strongly only on monitored quality) are reduced. Lastly, by regularly defining new indicators for monitoring, (outcome) quality is targeted more holistically, as single indicators can always only capture some aspects of quality that a provider is accountable for.

Public reporting / dashboards

Regarding public reporting and dashboards, the first key take-away highlights the importance of **tailored information**, emphasizing that the presented information should be personalized to each patient's specific needs and circumstances. This was mainly discussed in the context of the reflection workshops investigating exemplary quality dashboards. In the GPs and outpatient specialist stakeholder dialogue, participants stressed the importance of enabling patients to easily find providers that best suit their individual requirements, starting from a sickness or treatment. The information provided should avoid overwhelming patients with irrelevant details and instead focus on displaying the availability and expertise of suitable specialists in close proximity. Similarly, in the hospitals (somatic care) stakeholder dialogue, participants emphasized the importance of tailoring information to the patient, considering factors such as age, sex, co-morbidities, and acute or chronic health problems via case vignettes or "patients like me" scenarios. This targeted approach to information provision was also echoed in the psychiatric care and rehabilitative care stakeholder dialogues, where participants agreed that dashboards should display only the relevant indicators related to a patient's specific health problem rather than overwhelming them with a random list of all available indicators. The home and long-term care stakeholder dialogue participants also underscored the need for tailored information that aligns with the unique needs of each patient/resident.

The second key take-away is **understandability**, stating that the information provided should be easily comprehensible to individuals regardless of their familiarity with quality indicators and of their educational background. This key take-away is closely connected to both patient-centeredness and

visualization, following below. In the GPs and outpatient specialist stakeholder dialogue, participants recognized the necessity for patients to easily grasp the information presented on the dashboard, avoiding overwhelming them with excessive and irrelevant details. Indeed, in the hospitals (somatic care) stakeholder dialogue, concerns were raised about the potential for misinterpretation or confusion due to the complexity and information overload that accurate and reliable data may bring. Some stakeholders expressed skepticism regarding patient dashboards, emphasizing the need to carefully balance the costs and benefits. Moreover, the contents, i.e., type and number as well as (scientific) reliability and validity of published quality indicators, should be assessed carefully. In the psychiatric care stakeholder dialogue, participants also agreed that the information displayed on the dashboard should be understandable to patients and their relatives, who often make the provider choice for their loved ones. Similarly, in the rehabilitative care stakeholder dialogue, participants stressed the importance of providing clear explanations for all quality indicators and measurements. In the home and long-term care stakeholder dialogue, participants concurred that indicators should be easily comprehensible, enabling patients and their relatives to compare providers based on (service) quality, distance, and care needs.

The third key take-away is that a dashboard needs to be **patient-centered**, highlighting that the primary emphasis of public reporting should revolve around meeting patients' information needs. This topic was discussed in length in the psychiatric care, rehabilitative care, and home and long-term care stakeholder dialogues and also touched upon in the hospital (somatic care) stakeholder dialogue. This key take-away is closely linked to tailored information, and understandability and visualization. Apart from what is reported for these key take-aways, in the context of patient centeredness of dashboards, stakeholders stressed that for a patient, care does not stop in one sector, e.g., after receiving surgery, but continues, e.g., with rehabilitative treatment. Thus, patients are interested what patient pathway, i.e., what sequence of providers, will yield the highest quality treatment. Moreover, relevant quality dimensions might differ between healthcare areas from the patient's perspective. For instance, service quality might be more relevant for long-term care than for inpatient treatment.

The fourth key take-away highlights the importance of **engaging visualizations**, emphasizing that visual representations of quality indicators should be thoughtfully designed to capture and maintain the user's interest. Still, visualization should not be too simplistic, infantilizing the patient and oversimplifying results. In the psychiatric care stakeholder dialogue, participants stressed the importance of visualizations that make quality information easily understandable, engaging, and visually appealing to a broad audience, while also including the functionality to objectively compare different providers. It was emphasized that the visualizations should not patronize or treat the patient in an infantilizing manner. Additionally, participants argued for the inclusion of a drill-down feature that enables users to delve into the data for more detailed exploration. Similarly, in the rehabilitative care stakeholder dialogue, participants reiterated the importance of visualizations that are not overly simplistic but still maintain comprehensibility. The visualizations should facilitate meaningful comparisons between different providers without distorting the actual meaning of the measured quality. In the other workshops, visualization was also briefly discussed yet other topics such as understandability in general, and patient centered public reporting were discussed in more detail.

Healthcare area specific take-aways

In the following paragraphs, some key take-aways that were only discussed in one workshop or that had special importance for one healthcare area are highlighted.

Regarding the **GPs and outpatient specialists/ ambulatory care** stakeholder dialogue, the usefulness and user-friendliness of dashboards for ambulatory care from other countries was seen as unsatisfactory. There was almost no quality information published specific for ambulatory care. Thus, from the point of view of the participants, these examples can hardly be used as a starting point for the development of a dashboard for ambulatory care delivered by GPs and outpatient specialists in Switzerland.

With regards to the **hospitals (somatic care)** stakeholder dialogue, participants were very skeptical regarding a quality dashboard aimed at patients, especially if it should contain (risk-adjusted) outcome quality indicators. Many of the participants pointed out that the statistical and medical knowledge required for understanding the quality indicators and values shown for single providers cannot be expected from laymen. Even for the healthcare experts present at the workshop, examples from other countries containing lots of quality information, such as the Medicare or the Ziekenhuischeck dashboards, were difficult to understand in the available time per dashboard (15-20 min) during the reflection workshop. It was argued that patients would and often cannot take the necessary time to understand the provided information, let alone the underlying methodology, even if it is transparently explained on the website. At the same time, many participants feared that simplifications in quality indicator measurement, calculation, and/ or visualization might entail drawbacks in the form of oversimplification trying to deliver “easy answers to complex issues”. Thus, especially outcome quality information should be left for experts to investigate and to improve during quality monitoring. Other, more intuitive quality dimensions and indicators could be used for public reporting, yet the cost-benefit ratio would have to be assessed carefully.

Concerning the **psychiatric care** stakeholder dialogue, participants stressed repeatedly that the care level, especially for psychiatric outpatient and day care, varies greatly in Switzerland. In the view of many participants, there are clearly underserved regions. This impacts the attainable quality for inpatient psychiatric treatment as psychiatric patients require care not only during their hospital stay but also afterwards. If this care cannot be delivered, patients are more likely to experience continuous worsening of their mental health state and thus to be re-admitted to the hospital, potentially leading to negative quality measured for this hospital. Thus, some participants suggested measuring quality independent of sectors and, for monitoring purposes, possibly independent of single providers but rather at regional level. Lastly, participants pointed out that the freedom of choice for psychiatric patients or the number of choices is smaller as compared to other healthcare areas. This is due to two reasons: (1) patients' mental health state potentially influences their choice, and (2) proximity to the patient's home and known surroundings is essential and functioning in daily life in one's own home an integral part of (mid- to long-term) psychiatric therapy.

With respect to the **rehabilitative care and non-physician health services** stakeholder dialogue, intersectoral quality measurement was particularly stressed. Participants repeatedly pointed out that the rehabilitation outcome is the improvement between the beginning and end of the rehabilitative therapy which does not end after inpatient rehabilitation. Therefore, the whole recovery pathway should be considered as well as linkages to pre-rehabilitation treatment (e.g., surgery or other inpatient treatment in hospitals). Additionally, incentives were named as a possibility to increase providers' motivation in participating in quality monitoring initiatives and in working on quality development. During the workshop, consequences from quality monitoring were discussed. Most participants seemed to agree that when working on quality improvement, all acting parties (providers, regulators, potentially also payers) should take part in a quality dialogue on how quality can concretely be improved or maintained for a particular provider. Coercive measures and sanctions

from top-down were deemed counter-productive by most participants. Lastly, skepticism towards “unfiltered” public reporting of quality information was also voiced in this workshop along the same arguments as in the hospitals (somatic care) stakeholder dialogue. Methodological complexity and oversimplification were seen as major issues, as e.g., discussed when investigating the website Qualitätskliniken.de using rather confusing provider rankings potentially leading to suboptimal provider choices.

In **home and long-term care**, the objectives for quality measurement and development are inherently different to the other healthcare areas. In nursing homes, patients are often not expected to regain their health but rather to be accompanied appropriately at the end of their life. Therefore, service quality indicators are specifically important for this healthcare area. Additionally, care delivered in a stable environment by the same medical professionals is an essential aspect of quality of care and when measuring quality, the whole caregiving environment (where relatives play an important role) needs to be considered. Lastly, the freedom of choice is limited for long-term care (i.e., nursing homes) as (1) closeness to one’s relatives and home as well as (2) financing regulations impede many elders to choose a nursing home in e.g., Zurich if they are from Bellinzona.

3.2.2 General public workshops

First and foremost, participants at both workshops implicitly showed that they expect a certain (high) **quality standard from providers** and the healthcare system, regardless of location and disease to be treated or treatment offered. Many participants were not aware of (medical) quality variation, especially if they have not yet had a (strong) need for care (e.g., for a chronic condition).

Still, participants **expect transparent public reporting** of (quality) information from a trustable source to support their provider choice. Some participants expect outcome quality such as mortality and complication rates or PROMs as well as process quality (e.g., medical guidelines adherence) to be published. Additionally, most participants were interested in other provider-related information such as specialization (e.g., procedure volumes, qualification of staff, research focus of specialists in the case of rare diseases, chronic diseases, or complex, prolonged treatment), free capacity and waiting time / waiting lists (e.g., for a therapy spot or elective surgery, but also waiting times at emergency departments), patient satisfaction (Lausanne), and staff satisfaction/ work atmosphere (St. Gallen). Incidentally, other information such as accessibility for handicapped persons, language spoken by the medical staff, and financial considerations, such as insurance coverage, were also important for some participants. Lastly, some participants stressed that their information need would be different for schedulable, elective versus emergency care as is their degree of choosing freely.

The workshops also showed, that supporting provider choice does “not only” require providing information concerning (medical) quality and other information to patients, relatives, and the general public. Indeed, participants frequently voiced how confusing and difficult they experienced their **“entry” into the healthcare system**. For instance, many participants explained that once they experience symptoms, they are unsure whom to contact, and where to find information. In addition, they are unaware that they are in a position to choose a provider deliberately and independently and often also felt like they lacked the time to understand how to choose. Moreover, some participants described that the reason why it might be beneficial to choose one provider rather than another, and how to get (quality) information relevant for one’s choice is not evident when entering the healthcare system. Participants expect from a dashboard and public reporting that they are empowered to understand the healthcare system and the options of their patient journey. Lastly, most participants

voiced that they want to be more involved by referring physicians or other medical professionals when choosing the next provider and/ or when choosing a treatment (“Shared Decision Making”).

Apart from this summary of insights relating to the project’s overarching question, a myriad of related questions was discussed in the workshops. We structured the key take-aways to these questions along two topics: (1) Requirements for public reporting and decision support, and (2) “Quality” measurement and information need. Figure 57 gives an overview of the key take-aways from all general public workshops. “Key take-away” means that a topic was discussed at length in the respective workshop. Accordingly, if there is no checkmark for a certain key take-away and workshop, this does not necessarily mean that this topic was not touched upon or discussed in one of the groups at the workshop.

Lastly, apart from the summary and key take-aways presented here, many additional discussion points were collected. Still, we can only highlight the most strongly discussed topics here and otherwise refer to the summaries of the general public workshops provided as Supplements H and I.

Figure 57: Key take-aways from general public workshops

		Lausanne	SG	
(1) Requirements for public reporting & decision support	(a) Patient centeredness and involvement: The patient should be the primary focus of public reporting and the published information should allow the patient to be involved in the decision-making process.	✓	✓	2
	(b) "Entry" into healthcare system: The "entry" into the healthcare system is confusing and public reporting should give patients better guidance.	✓	✓	2
	(c) Awareness of choice: The patient should be informed about available public reporting tools to access healthcare system quality information.	✓	✓	2
	(d) Personalization of quality information: Information should be personalized according to patients' need, e.g., focused on the disease or treatment they are seeking care for.	✓	✓	2
	(e) Coordination and "steering" of patient care: Public reporting should provide information on what a patient's care pathway could look like and show the quality of all involved providers.	✓	●	1
(2) "Quality measurement" and information need	(a) Location/ proximity: The provider is situated in close proximity to the patient.	✓	✓	2
	(b) Free capacity and waiting lists: Information regarding the providers' acceptance of new patients, as well as the status of their waiting lists.	✓	✓	2
	(c) Word-of-mouth from relatives/ friends: Information from friend or family member often determine the patients' provider choice.	✓	✓	2
	(d) Suggestion from (family) doctor/ referring physician: The patient's choice is substantially influenced by the recommendations of the family doctor or referring physician.	✓	✓	2
	(e) Specialization and competence of medical staff: The specializations available and the level of competence of the medical staff should be published. The level of competence of the medical staff should also be subjected to continuous improvement.	✓	✓	2
	(f) Patient satisfaction: The patient's satisfaction is a fundamental indicator for quality, although subjectivity needs to be considered.	✓	●	1
	(g) Work atmosphere: The work atmosphere is a crucial indicator for quality as it is directly linked to the patient' treatment.	●	✓	1
	(h) Outcome quality: Importance of publishing outcome quality indicators such as mortality rates or complications (e.g., wound infection rates).	●	✓	1
	(i) Medical guideline adherence: The degree to which healthcare providers follow established clinical guidelines in their practice should be measured.	●	✓	1
	(j) Others such as accessibility and spoken languages, coverage from insurance	✓	●	1

Category 1: Recognized as a key take-away during the dialogue
 Category 2: Not recognized as a key take-away during dialogue



Annotation: "Key take-away" means that a topic was discussed at length in the respective workshop. Accordingly, if there is no checkmark for a certain key take-away and workshop, this does not necessarily mean

that this topic was not touched upon or discussed in one of the groups at the workshop or that it is not important for the respective healthcare area.

Requirements for public reporting and decision support

The first key take-away regarding requirements for public reporting and the support of patients' provider choice is that publication of (quality) information should **center around patients' needs**. Published information should enable **patients to be involved** in decisions regarding where best to seek care ("provider choice") and also whether to receive treatment (or not). More specifically, in the workshop in Lausanne, participants for instance highlighted that patients ask for medical professionals to take sufficient time to discuss treatment and provider choices with them. The participants voiced that they want to and need to be able to discuss with physicians and medical professionals on eye-level and that a dashboard (or other patient-centered digital application) can support them in this endeavor. Likewise, in the workshop in St. Gallen, participants also highlighted the importance of patient involvement, particularly for individuals with chronic or prolonged illnesses (e.g., complex cancer or neurological conditions). These individuals often become experts in managing their own conditions over time due to continuous engagement with their health situation. Still, they voiced the need to be able to learn about their disease and where to seek care in an easier, faster way. In both workshops, many participants expressed that they want to be empowered to make self-determined decisions and to act more independently.

The second key take-away highlights that public reporting should support patients in their **"entry" into the healthcare system**. Participants from both workshops mentioned that the "entry" into the healthcare system is often confusing, in part because of the difficulty to find relevant information on their specific need for care. The insurance model plays a central role (e.g., general practitioner model vs. telemedicine model), since this predefines patients' entry route. In the workshop in St. Gallen, participants expressed the desire for central coordinators, such as telemedicine specialists and primary care physicians, to have access to quality information. This would enable them to provide quality-oriented guidance to patients in making informed choices when entering the healthcare system. In the workshop in Lausanne, participants stated that a hotline could be set up for patients to ask questions when seeking care.

The third key take-away is that the participants often reported a lack of **awareness** about available public reporting tools, which hinders a deliberate and independent choice of provider. Therefore, participants from both workshops highlighted the need for patients to be better informed about available public reporting tools. In the workshop in St. Gallen, several participants highlighted the need for patients to have a sense of "self-determination" in their healthcare choices, emphasizing the need for patients to be aware of the available public reporting tools. This need was particularly pronounced for individuals dealing with chronic or long-term illnesses, as they often find themselves regularly seeking suitable providers. In the workshop in Lausanne, participants also emphasized the necessity for increased public awareness about public reporting tools. They proposed that medical staff could play an important role in accomplishing this by directly informing patients about the existence and benefits of such tools.

The fourth key take-away is that public reporting should support the **coordination and "steering" of patients** through their care pathway. Participants of the workshop in Lausanne stated that health services should be coordinated effectively among various providers. Ultimately, patients do not choose a single provider but a treatment and care pathway that involves multiple providers. In addition, participants stated that providers should conduct regular controls, allowing healthcare

professionals to assess the patient's health status until complete recovery. Public reporting should therefore provide support for the entire patient's pathway and allow comparability between different providers of different sectors according to the health need of the patient. This continuous oversight would guarantee that the treatment is suited to the patient's needs, offer the opportunity to detect potential complications or necessary adjustments, and could potentially also establish an active line of communication between the patient and the different providers.

The fifth key take-away highlights the importance of **personalized quality information**, emphasizing that the presented information in public reporting should be personalized to each patient's specific needs and circumstances. Participants from the workshop in Lausanne highlighted that this can be achieved by using filters, personalized searches, artificial intelligence, and other technologies to ensure that the data is adapted to meet the specific requirements of each patient. This focus on personalized information empowers patients to make informed decisions that are tailored to their specific medical situation and enhances their ability to navigate the healthcare system effectively. In both workshops, the dashboard AOK Gesundheitsnavigator (hospital search) was most liked of all investigated exemplary dashboards as it allowed to start searches by typing in a specific disease (e.g., diabetes type 2) or treatment (e.g., colon resection). Moreover, based on this disease or treatment, only quality information relevant for this search is shown. Lastly, there are various filters and a map included.

“Quality measurement” and information need

For the participants of both workshops, one of the main factors influencing patients' provider choice is the importance of **location, or proximity**. The distance to the provider plays a crucial role, particularly for elective procedures, as in these instances, a deliberate choice of a provider is feasible as compared to severe emergencies, where the freedom of choice is greatly limited. Furthermore, for those with chronic illnesses, the distance, especially to outpatient specialists, was also deemed essential. Frequent visits are medically necessary for these individuals, thus leading to regular travel times for appointments, making proximity a critical factor to consider.

Moreover, participants from both workshops agreed that information on which providers, first and foremost specialists, have **free capacity** is essential. For instance, choosing a primary care physician can be challenging as it is not immediately clear which practices are accepting new patients. This need for transparency becomes even more relevant for those with chronic illnesses. The same is true when scheduling elective, i.e., planned operations, where hospitals may have varying lengths of **waiting lists**. From the participants' perspective, the publication of such waiting lists specified by disease or procedure would be welcomed and seen as a highly relevant decision factor. Lastly, real-life waiting times in physician practices and emergency departments were also mentioned as helpful, especially in the general public workshop in Lausanne (e.g., application EchoSOS).

Participants also underlined the influence of **word-of-mouth from relatives and friends**, and **suggestions from the (family) doctor or referring physician** in the patient's decision-making process. However, it is important to note that the more complex and specific the illness, the more in-depth the participants seem to engage with the choice of the provider. For example, a strategy mentioned for rarer diseases was to look at the main research areas of specialists. This means that when dealing with more complex or rare conditions, patients or caregivers tend to spend more time and effort choosing their provider, including looking into specialists known for their expertise in the particular disease.

Building on this, participants underlined the importance of **specialization and competence of medical staff**. In the workshop in Lausanne, participants mentioned that having a list of specialized doctors available at a certain provider based on their acquired qualifications and expertise would be beneficial. They also recommended publishing doctors' diplomas to increase transparency and enable patients to assess their level of competence. Additionally, participants emphasized the necessity for continuous training for doctors and all medical staff to ensure high levels of competence, both medical and interpersonal. Lastly, the continuity of treatment by (the same) qualified and interpersonally competent staff was also mentioned frequently during the workshop in St. Gallen as some participants had experienced that treating physicians and nurses changed very frequently during a hospital stay or over the course of a treatment (e.g., oncologic treatment) leading to information loss and repeated explanations.

Thereafter, participants of the workshop in Lausanne emphasized the importance of **patient satisfaction** needed for a holistic picture of care delivery. Participants acknowledged that patient satisfaction might be subjective to some degree, but most still agreed that it is an important aspect of the overall provider assessment.

Another important factor influencing patients' provider choice and thus a quality information need mentioned by participants of the workshop in St. Gallen was **work atmosphere**. The rationale behind this indicator from the participants' perspective was that the work atmosphere in hospitals, clinics, and so on, could directly impact the treatment of patients. Their assumption was that a conducive working environment would reflect positively on patient care. Some participants of the workshop in St. Gallen also mentioned that they would appreciate the publication of **outcome quality** indicators such as mortality rates, complications (e.g., wound infection rate), or information from PROMs like the expected improvement in quality of life. It was also noted in this context that the evaluation should not only focus on the quality of a specific service (e.g., operation), but also the quality of the preceding and subsequent processes. Participants emphasized the importance of an encompassing evaluation that considers the entirety of the patient's journey, from preliminary procedures to aftercare, as patients do not choose a provider, but a set of providers involved in their treatment. Moreover, **medical guideline adherence**, which refers to the execution of diagnostic and therapeutic processes according to medical standards, was mentioned by single participants as an important reference point. This was mentioned by participants who had undergone prolonged treatment of complex diseases. These individuals reflected that they had acquired the necessary insight into the healthcare system to be able to judge the importance of providers following established clinical guidelines to ensure the best possible patient outcomes.

Finally, participants of the workshop in Lausanne also mentioned **other important information** that could be included in a dashboard such as accessibility, languages spoken by medical professionals, or insurance coverage.

3.3 Synthesis of main findings

According to their roles and perspectives, the stakeholder dialogues underscored that experts and patients, relatives, and the general public have different expectations concerning both quality monitoring and public reporting of (quality) information (“dashboards”).

Participants of the healthcare area workshops had clear demands regarding who should be involved in quality monitoring and what quality monitoring should look like, not least because quality is already being monitored by various cantons, often supported by expert organizations, for almost all healthcare areas. The main consensus among stakeholders was that, ultimately, quality measurement and monitoring cannot be its own end but must be used for quality development and improvement. For that purpose, experts agreed that a main focus should lie on outcome quality and where needed process quality. In addition, quality information used for quality monitoring should be actionable for providers by being up-to-date and including information at a high level of detail (e.g., at patient/ case level) to allow for targeted improvement efforts. Moreover, stakeholders expressed that, wherever possible, existing data sources should be used, and existing initiatives should be built upon. Lastly, provider representatives seemed generally open to constructive quality monitoring by regulators.

With regards to public reporting of quality, e.g., in the form of a “dashboard”, participants of the healthcare area workshops were skeptical or cautious regarding the publication of risk-adjusted outcome quality. Their main concern was that complex indicators (in medical and statistical terms) would not be understood by laypersons. If such information were published, it should be presented in a way that is understandable for the general public. Furthermore, many experts agreed that referring physicians could potentially play a key role in assisting patients in understanding and using published quality information. Additionally, several other issues need to be considered according to experts, such as intersectoral interdependencies of quality. Concerning other quality dimensions besides risk-adjusted outcome quality, e.g., PREMs and PROMs, experts were less concerned. Lastly, some experts suggested reporting structural quality information, such as specialization (e.g., procedure volume), and other aspects related to quality easily understandable by medical laypersons such as staff satisfaction.

Participants of the general public workshops expect that providers offer a certain standard of medical quality, yet many participants were not aware of medical quality variation or assumed variations to be insignificant in Switzerland, i.e., they assume there may be a “top-5 group” but generally, all providers “*will do a good job*”. They formulated a clear demand for public reporting of quality and other provider-related information. The workshops showed that for making a choice for or against a provider (or a treatment), their needs exceed information on quality: a dashboard should be a tool that guides them through the healthcare system, enables them to make decisions together with physicians and medical professionals, and ultimately, helps them recover and heal faster and better.

When confronted with symptoms, patients need assistance entering the healthcare system, they are not aware of their options and that they can execute a deliberate provider choice. Patients, relatives, and the general public thus demand a (virtual) “coach” for assisting all elements of their provider choice covering their entire patient pathway, not only one sector, and specific to their disease and need for care. Regarding quality information, most participants did not clearly demand (risk-adjusted) outcome quality as their information need but more basic or simply other types of quality or quality-related information such as a list of specialists for a certain disease (e.g., number of treated patients / procedure volume, acquired qualifications, research focus), staff satisfaction and turnover, free capacity and waiting times/ lists, and patient satisfaction. Most participants named friends and family and the referring physician and/ or general practitioner as main source for provider suggestions and location/ proximity as the or at least one of the main decision factors.

Overlaps between the expert stakeholder groups and the medical layperson stakeholder groups (patients, relatives, and the general public) regarding public reporting were that (risk-adjusted)

outcome quality seemingly is not their focus or should not be in focus for public reporting but that other, more understandable indicators (e.g., free capacities and waiting lists, staff and patient satisfaction) are important information needs. Furthermore, representatives of all groups see the referring physician or some other medical professional as the linchpin of entering the healthcare system and making an informed, deliberate provider choice.

Regarding the investigation of exemplary dashboards, none of the investigated exemplary dashboards could fully convince a majority of the participating experts regarding their own quality information needs or as decision support for patients. Still, experts appreciated some parts and aspects of dashboards such as [Medicare](#) (USA), [Ziekenhuischeck](#) (the Netherlands), [AOK Gesundheitsnavigator](#) (Germany), and to a lesser extent [QualiScope](#) (France). The main consensus was that the design of a dashboard needs to be patient-centered involving users in the design process. In line with this, the representatives of the stakeholder groups patients, relatives, and the general public favored the [AOK Gesundheitsnavigator \(hospital search\)](#) most strongly as it was the only one of the five investigated dashboards that lets users start with the disease, they are seeking care for, or the treatment, they plan to receive. The website then only provides information for providers actually treating this disease or offering that treatment and only the quality information relevant for the users' specific health problem is shown.

4 Summary of main findings

4.1 Information collection

Investigated monitoring systems and dashboards are very heterogeneous concerning their objectives, target audience, form, content (indicators), and structure and processes of data collection and processing. As a summary, we want to highlight the main distinctions and overlaps regarding their contents here. Main distinctions and overlaps of the other criteria are reported in chapter 2.3.

Some monitoring systems/ dashboards report an **overall rating** at provider level. For dashboards, we found overall ratings to be based on patient recommendations/ ratings (e.g., “Zorgkaart”, or PHIN), outcome quality, or a composite score of different quality dimensions (e.g., “Qualitätskliniken.de”). In the case of monitoring systems, overall ratings are the result of a rigid certification and auditing process (e.g., “La certification des établissements de santé”, or CQC).

PREMs, or some form of patient rating or review, are the most frequently reported quality dimension. Recommendation scores or rates are very common, but also categories of patient experiences are frequently reported (medical care, nursing/ auxiliary care, organization, and service), often with several sub-dimensions (e.g., patient safety, food, rooms, discharge management, admissions, communication, etc.).

PROMs are included in only a few dashboards. In fact, for hospitals (somatic care), we only found PROMs published in England. We believe this is because England is the only country with a national PROM data collection program. In other countries, PROMs are often also measured but only by single providers, or provider clubs/ groups. Besides England, the German dashboard “Qualitätskliniken.de”, focusing on rehabilitative care, publishes PROM-related quality indicators for eight indications (knee replacement, hip replacement, back pain, depression, anxiety, prostate cancer, colon cancer, breast cancer). “Qualitätskliniken.de” does not report the actual PROM-scores or their change between baseline and last questionnaire (usually at 6- or 12-months post-intervention / treatment), but rates representing PROM-score improvements of the selected provider relative to the provider’s peer group.

For **GPs and outpatient specialists**, mostly structural quality and PREMs are reported. PHIN is the only dashboard reporting outcome quality indicators for outpatient specialists. Indubitably, this is due to the nature of the English healthcare system where consultants active in outpatient practices perform surgeries on their patients in cooperating hospitals. Results of these surgeries can then be linked to outpatient specialists.

With respect to **hospitals (somatic care)**, there are examples for the reporting of indicators of all quality dimensions. Usually, structural quality is considered. Most commonly, procedure volumes, certifications, and qualifications of medical professionals/ offered medical specialties are provided. An example for the reporting of indication and process quality is the “AOK Gesundheitsnavigator” (hospital search), which provides the results of different indicators of the “externe stationäre Qualitätssicherung”, e.g., “The planned surgery for primary knee replacement was medically indicated”. In terms of outcome quality, there are numerous examples of monitoring systems/ dashboards using and/ or reporting risk-adjusted and/ or not-risk-adjusted indicators. Some indicators only consider the inpatient period, others also post-surgery, outpatient periods. Medicare

is certainly the most comprehensive dashboard with respect to the quantity and quality of outcome quality indicators reporting dozens of validated indicators covering a broad range of episodes of care. Lastly, QualiScope is a good example for elaborated reporting of PREMs. More specifically, QualiScope reports a recommendation rate at provider level and a patient satisfaction based on six sub-dimensions rating medical care, nursing care, and organization and service.

Concerning **psychiatric care**, most monitoring systems/ dashboards report structural quality. Moreover, four monitoring systems/ dashboards publish process quality indicators (ANQ, QualiScope, “Zorginstituut”, Medicare). Outcome quality is rarely reported. Only the CMS uses the “Outcome and Assessment Information Set” for their quality monitoring in psychiatric care. Lastly, patient experience is reported by five dashboards (ANQ, NHS Choices, QualiScope, “Zorgkaart”, “Arzt-Auskunft”).

Regarding **rehabilitative care** and non-physician healthcare services, monitoring systems/ dashboards use indicators from several quality dimensions. The majority of monitoring systems/ dashboards report structural quality and patient experience indicators. Process and outcome quality indicators are also reported in some cases. Medicare, for instance, reports quality indicators such as the change in patients' ability to move around. ANQ and AROC report the length of stay of patients, and AROC also uses standardized rehabilitative care scores to assess outcome quality. QualiScope, on the other hand, reports several process quality indicators such as “Quality of discharge letter” and individualized care plans.

Lastly, with regards to **home and long-term care**, quality indicators of all quality dimensions are reported by the monitoring systems/ dashboards we investigated. Note that in many cases, quality indicators are either for home or for long-term care. In Germany, for instance, the “Medizinische Dienst Bund” closely monitors long-term care facilities and outpatient as well as home care. Results from this monitoring process are used by dashboards such as the “AOK Gesundheitsnavigator” (care navigator). Examples for outcome quality indicators are “Development of decubitus”, “Severe consequences after a fall”, and “Involuntary weight loss”.

4.2 Stakeholder Dialogues

During the **healthcare area workshops**, providers stressed repeatedly that a quality monitoring's main objective should be quality development and improvement. Hence, they expressed a clear interest in using a standardized, methodologically-sound monitoring system containing timely structural, process, and outcome quality indicators at patient/ case level. Regulators expressed that they should and want to have access to the data and results of this monitoring system. While patient/ case level data would be interesting for some regulators, others require data and analyses on a more aggregated level including “automated” controls, such as thresholds for acceptable quality. There was no consensus regarding what measures to take if a provider missed quality monitoring goals. Still, many experts stressed that top-down sanctions might prevent quality improvement, and that constructive measures such as “quality dialogues” and peer-reviews would better support quality development and improvement. Generally, providers support monitoring by regulators as long as quality is measured in a way that enables them to act and improve and as long as regulators constructively support improvement efforts. Moreover, providers and also some regulators repeatedly stressed that standardization of monitoring efforts and methodologies, especially

regarding documentation and usage of existing data sources, is essential. Stakeholders agreed that, wherever possible, existing data sources should primarily be used and monitoring efforts should be built on existing initiatives. Lastly, there was no clear vote for or against payers to participate in quality monitoring or not. A compromise suggested in one workshop was that payers could have limited access, e.g., only to more aggregated data/ analyses. In another workshop, it was suggested that payers could support quality monitoring by sharing claims data which could then be used for the intersectoral investigation of patient pathways.

For the publication of quality information (“dashboard”), patients, relatives, and the general public clearly emerged as the main target group in the healthcare area workshops. However, it was unclear how and for what purpose patients should be able to use a quality dashboard and what contents a quality dashboard should contain. While experts largely agreed that the most important quality dimension for monitoring was outcome quality, this dimension was seen as not fitting for public reporting, as some participants feared that medical laypersons might not be capable of interpreting the information correctly. Other experts stressed that the general public and patients expect to be informed on the (outcome) quality of providers and that there must be a way to visualize and explain intricate, complex outcome quality indicators. Besides outcome quality, other quality dimensions were seen as potentially valuable in many workshops (e.g., service quality, staff satisfaction). Ultimately, many experts agreed that a dashboard would need to be designed from the patient’s perspective and that the referring physician could be a moderator for using this quality dashboard. Lastly, some providers understood the term “dashboard” as a tool for providers visualizing the data and analyses of the quality monitoring system.

In the **general public workshops**, participants at both workshops showed that they expect a certain (high) quality standard from providers and the healthcare system. At the same time, many participants - especially those who have not yet had a need for care or are suffering from a chronic condition - were not aware of (medical) quality variation. Consequentially, they had not realized the potential relevance of a deliberate choice as to where to seek care. Rather, they expect to find a (high) standard of quality of care at any provider. This presents the clear task for quality monitoring to ensure that providers fulfill quality standards and continuously develop and improve quality.

Regarding dashboards, participants expect transparent public reporting of (quality) information from a trustworthy source to support their provider choice. Most participants were interested in quality and other provider-related information such as specialization (e.g., number of treatments/ procedure volume, staff qualifications, research focus), free capacity and waiting time/ waiting lists, patient satisfaction (Lausanne), and staff satisfaction/ work atmosphere (St. Gallen). Single participants at the workshop in St. Gallen also expected outcome quality and process quality to be reported publicly. Lastly, some participants stressed that their information needs would be different for plannable, elective versus emergency care as is their degree of choosing freely.

The general public workshops also showed that participants are often overwhelmed by how confusing and difficult they experience their “entry” into the healthcare system. “Whom to contact when experiencing symptoms”, “where to find relevant information” and “how to choose a provider” are some of the unclear points for some participants. Participants expect from a dashboard and public reporting that they are empowered to understand the healthcare system and options for their patient journey, i.e., the quality of all providers involved in their care rather than a single provider active in one sector. Lastly, most participants voiced that they want to be more involved by referring physicians or other medical professionals when choosing the next provider and/ or when choosing a treatment (“shared decision making”). Lastly, most participants named friends and family and the

referring physician and/ or general practitioner as main source for provider suggestions and location/ proximity as the or at least one of the main decision factors.

5 Recommendations

The following recommendations are based on the findings of both the information collection and the stakeholder dialogues. Our recommendations further expand upon the presented findings and aim to enhance quality monitoring and transparency empowering both providers and patients. Given the project's inherent characteristics, the recommendations are shaped by input from stakeholders with diverse professional backgrounds. Additionally, our insights from prior research are reflected in the recommendations.

We present seven recommendations. The initial three pertain to establishing a quality monitoring system, the fourth recommendation covers aspects of both quality monitoring and public reporting and the final three recommendations center around public reporting and the implementation of a dashboard.

Recommendation (I): Quality monitoring should be a collaborative effort between providers and regulators, with the shared goal of developing and improving quality of care across all healthcare areas.

During the stakeholder dialogues, most provider representatives reported that they are already actively involved in the development and improvement of quality of care – often by their own initiatives. In this regard, the stakeholder dialogues clearly emphasized that providers see it as their job to continuously refine their care processes and structures to ensure the delivery of the highest possible quality of care to their patients.

Participants of the public dialogues indicated that they expected a comparable and high standard of quality of care from providers. However, it also became evident that a significant number of participants lacked awareness regarding the disparities in quality among different providers. Hence, achieving quality transparency, particularly for elective procedures where patients have the ability to actively choose among providers, is imperative (cf. Recommendation (V)). Furthermore, the quality of emergency care, where patients frequently lack an active choice option, should be overseen by cantonal and federal regulators to ensure a consistently high level of quality.

In light of this, our recommendation is for providers to collaborate closely with regulators at both the cantonal and federal levels in implementing quality monitoring measures. This collaborative approach will contribute to bridging the gap between public expectations and the actual quality of care delivered.

Additionally, most provider representatives would be receptive to working with regulators on quality development and monitoring, provided specific requirements are met. These include, for instance, the containment or even reduction of documentation work and effort, mutually agreed quality measurement, and a clear agreement on the goal of quality development and improvement. Joint monitoring initiatives for quality development and improvement should not be limited to specific sectors. This is also essential for intersectoral quality measurement (cf. next recommendation).

Recommendation (II): Quality monitoring should focus on outcome quality and, where necessary, process quality, considering intersectoral interdependencies.

The healthcare area workshops underscored the consensus among stakeholders that outcome quality is the most crucial quality dimension. Therefore, when feasible, the emphasis of quality monitoring should be on improving outcomes. Still, there are certain limitations in terms of measurement and indicator availability that stakeholders pointed out. For instance, certain outcomes are shaped not solely by a single provider, but by all providers involved in a patient's care journey. Additionally, for a wide array of treatments, specific outcome indicators might not be readily available. Therefore, process quality should also be considered, where necessary. For instance, in psychiatric care, a psychiatric hospital might discharge a patient suffering from depression after successful inpatient therapy. Still, this patient might have to be re-admitted to the hospital a few weeks later because of suboptimal outpatient care. In such scenarios, a process quality indicator, like the proportion of patients with subsequent outpatient treatment, could be measured.

The above example illustrates our recommendation of intersectoral quality measurement (i.e., how well a patient recovered or was treated over the course of their entire care journey). Intersectoral quality measurement may include patient-reported outcome measures to better capture patient priorities and quality assessment at regional and/ or care network level.

Dashboards and monitoring systems that could serve as sources for outcome (and process) quality indicators are Medicare, CMS, AOK Gesundheitsnavigator (hospital search and care navigator), Ziekenhuischeck, ANQ, Äldreguiden, and the Canadian Institute for Health Information. Furthermore, CMS provides the [Services Measures Inventory Tool](#), an extensive database containing over 500 indicators designed for measuring and overseeing the quality of care.

Recommendation (III): Quality monitoring should use up-to-date data at a high level of detail.

Providers aim to swiftly derive lessons from quality monitoring. This requires prompt analysis, ideally conducted immediately after documentation and data availability, rather than waiting for one or two years. Analyses with time-lagged observational data on an aggregated level might be sufficient for quality monitoring by regulators to detect problems. Still, they are not suitable for providers for active quality development and improvement.

Therefore, we recommend that quality monitoring should use up-to-date data at a high level of detail. Stakeholders, particularly providers and medical professionals, stressed the necessity to understand the relationships between structures, processes, and outcomes at patient/ case level to develop and improve quality. This entails the timely provision of relevant data and the ability to conduct analyses at patient/ case level.

Recommendation (IV): Quality monitoring and public reporting should leverage existing data sources and initiatives. Sources and initiatives should be mapped.

We recommend leveraging existing data sources for quality monitoring and public reporting. Stakeholders consistently highlighted the extensive documentation efforts that are already being undertaken on a regular basis. Data from various sources could (theoretically) be used (e.g., registries, claims data, data from practice and clinical information systems) more strongly. Stakeholders suggested mapping existing data sources available at providers, provider groups, and health insurances to build an inventory, minimize (additional) documentation effort and thus ensure efficient usage of existing data sources.

Stakeholders mentioned numerous initiatives and the information collection demonstrated that there are valid quality monitoring and measurement initiatives in Switzerland. These include efforts from

providers, cantons, and other organizations. Similar to the mapping of existing data sources, stakeholders suggested mapping existing initiatives including current and planned developments.

These mapping exercises are useful as a basis for selecting quality indicators to be used for quality monitoring and public reporting. Performing "gap analyses" between the identified data sources/initiatives, and the need for quality information might reveal the necessity to create new indicators. Such gap analyses would optimally be conducted by expert panels, which then agree on a minimum set of quality indicators to be measured per healthcare area. Providers could be mandated to deliver a minimum set of indicators, while having the option to voluntarily measure and publish additional quality information. Furthermore, it might be necessary to require software suppliers to provide interoperable interfaces to a centralized "quality information collection" database. This could unburden providers from data collection and data processing tasks, which stakeholders have extensively pointed out as a main roadblock. Next steps could include the design of pilot projects for selected medical disciplines to test whether this recommendation is feasible.

Additionally, a national central data management organization as single point of contact to and from providers could reduce the effort of coordinating and performing data collection and data transfer for quality information. Currently, providers usually must coordinate the delivery of (marginally) different data to different organizations at different times, creating an unnecessary burden. Existing initiatives as well as central quality monitoring and public reporting could draw from a central database and support its further development. However, the realization of this recommendation rests on the interoperability of information systems, the willingness of different organizations/ collectors (including health insurance companies) to collaborate and share data, and the regulative framework.

Recommendation (V): A dashboard designed for public reporting should be created targeting patients and their relatives, who could be assisted by referring physicians. A dashboard's goal should be to facilitate informed decisions regarding where to seek care and to provide easy access to the healthcare system.

We recommend building a dashboard as participants of the general public workshops voiced a clear demand for public reporting of (quality) information. The target audience should be patients and their relatives as this was the consensus at all stakeholder dialogues. Moreover, most investigated dashboards from Switzerland and abroad also primarily target these groups.

We recommend that referring physicians support patients and their relatives when using the dashboard as several stakeholders raised concerns that certain quality information, (e.g., outcome quality), are difficult to understand without medical knowledge. Moreover, referring physicians could make patients aware that they have a choice, which many are unaware of, as indicated by general public workshop participants. Hence, we recommend marketing the dashboard to both patients and referring physicians.

To ensure the understanding of complex indicators, we also recommend that visualization and website design should be patient-centered, involving potential users in the design process (i.e., patients, patient relatives, and possibly also referring physicians). One dashboard that might serve as an example in this regard seems to be the AOK Gesundheitsnavigator (hospital search) as it was rated most positively by stakeholders.

Further, we recommend that a dashboard should have two main aims: (1) to facilitate optimal provider choices and (2) to facilitate accessing the healthcare system. The general public workshops showed that users of a dashboard, want to be supported at the individual points of their care pathway with different types of information. Examples for individuals with varying information needs are (1) a

person with symptoms but without confirmed diagnosis, (2) a person with a diagnosis but without a treatment decision, and (3) a person with both a diagnosis and treatment decision. Illustrative inquiries that the dashboard could address for these distinct individuals include:

- (I) For a person with symptoms:
 - a) Should I contact someone? Are my symptoms “severe enough”?
 - b) Who/which care institution can I contact to get a diagnosis?
 - c) Who has the capacity to accept me as a patient?
 - d) Who is qualified to make the right diagnosis?
- (II) For a person with confirmed diagnosis but without treatment decision:
 - a) What treatments are available for my diagnosis?
 - b) What treatment options am I eligible for?
 - c) What are the advantages and disadvantages (e.g., risks and side-effects) and level of evidence (efficacy and effectiveness) of each treatment option?
- (III) For a person with confirmed diagnosis and treatment:
 - a) Which provider is best suited to perform the planned treatment (in various pre-defined catchment areas)?

We provide these examples to demonstrate the varying information needs of individuals, as participants in all stakeholder dialogues were not completely satisfied with the dashboards presented during the reflection workshop segment of the dialogues.

This recommendation is universal across healthcare areas. Thus, a dashboard serving the two outlined aims would not be limited to certain healthcare areas but could potentially encompass all providers of a health system.

Recommendation (VI): Public reporting should make quality information easily understandable. Only quality relevant to patients should be presented.

We recommend focusing public reporting on understandable quality dimensions that are most relevant to patients for two reasons. Firstly, participants of the healthcare area workshops perceived a risk that (outcome) quality information can be misinterpreted without medical and/ or statistical knowledge. Secondly, participants of the general public workshops mentioned capacities, waiting lists, and specialization/ qualification to be the most relevant (quality) information. Although outcome quality, continuity of care, staff satisfaction and patient satisfaction were deemed important, they were discussed in less detail or only at one workshop.

We recommend that more complex types of quality, such as risk-adjusted outcome quality as discussed in the healthcare area workshops, be accompanied by intuitive visualization and detailed methodological explanations. These aids can help overcome problems with comprehensibility and educate patients about the importance of outcome quality in making informed provider choices.

As was discussed in the general public workshop in Lausanne, public reporting should provide information on potential patient care pathways and ensure transparency of all providers involved in a patient’s journey. We recommend testing whether the referring physician could potentially help patients to understand their care options and complex medical information, as well as outcome indicators of different providers.

Public reporting in Switzerland can use examples from other countries. For instance, QualiScope visualizes the results of the monitoring system “La certification des établissements de santé” with a spider web graph and coloring. Still, some participants were overwhelmed by the amount of information and did not understand the underlying scoring system. “La certification des établissements de santé” considers many of the quality aspects mentioned by participants of the general public workshops, such as several criteria for staff satisfaction, cooperation, work atmosphere, and leadership. Besides, participants of the general public workshops rated the hospital search of the AOK Gesundheitsnavigator the highest of all dashboards. Reasons were that the website visualizes quality information intuitively and on an aggregated level, including risk-adjusted outcome quality, and that users can easily navigate to find more detailed information. Another reason was that searches could be started from a disease or treatment. Lastly, simplified websites that only conveyed limited quality information, such as Zorgkaart, were disliked by stakeholder dialogue participants.

Recommendation (VII): Personalized searches should be a key dashboard feature, possibly facilitated through the use of latest technologies.

We recommend the personalization of user searches as the stakeholder dialogues showed that when looking for (quality) information, participants expected to find information suiting their personal health situation (“patient-centeredness”).

Examples of dashboards not letting users personalize their searches are Medicare, Ziekenhuischeck, and QualiScope. Although, all three websites show methodologically sound quality indicators, both experts as well as participants of the general public workshops reported being overwhelmed by the amount of information. They also expressed confusion as to why they were shown information they did not need or intend to look for.

Implementing simple filters, and intelligent searches (i.e., starting with a diagnosis or treatment, cf. AOK Gesundheitsnavigator), could be a good first step to personalize searches. It might also be worth considering more sophisticated personalization of user searches, such as an AI-run chatbot as some participants of the general public workshops pointed out familiarity with such solutions. Building on recommendation (V), one question could be, for instance, “Do you know your sickness?”. Depending on the response, the user might encounter different (quality) information. Users could still have the option to explore more in-depth quality information they are personally interested in.

As a last note, to verify and validate recommendations and test underlying hypotheses, additional (qualitative) research may be necessary. For instance, when designing a public reporting website, it is essential to investigate potential users’ preferences and needs (e.g., usability and user experience research for feedback on user journeys and potential friction points). Another example for potentially beneficial additional research is to develop and conduct surveys to verify statements of certain stakeholder groups.

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Appendix I: Information collection

Figure 58: Project structure and identified SLHS topic experts

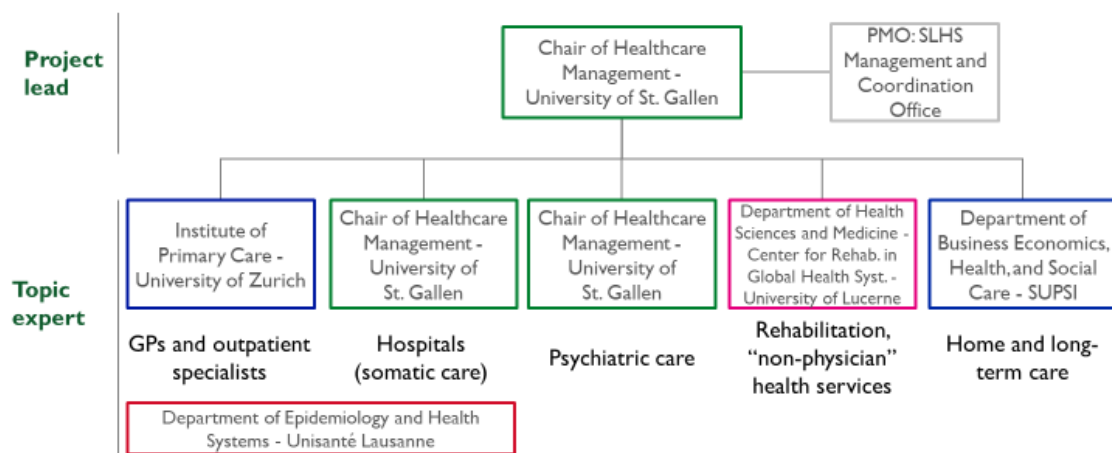
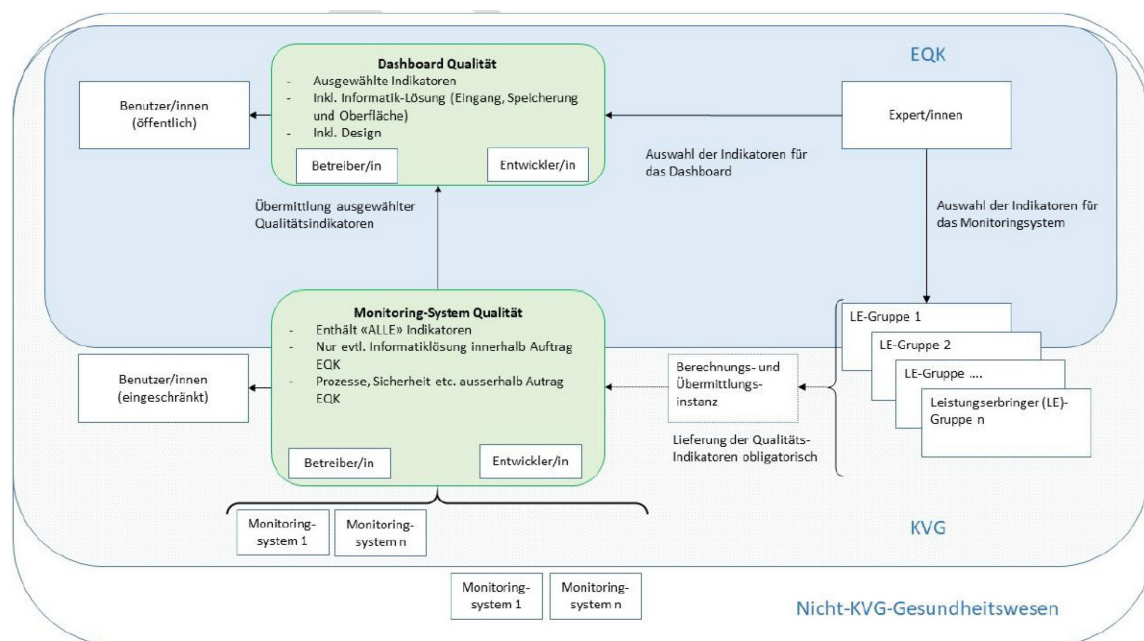


Figure 59: Legal mandate of the Federal Quality Commission and basic description of a monitoring system and a dashboard



Source: Request for quotation by the FQC

Table 12: Topic experts per healthcare area

	<i>GPs and outpatient specialists</i>	<i>Hospitals (somatic care)</i>	<i>Psychiatric care</i>	<i>Rehabilitation and non-physician health services</i>	<i>Home and long-term care</i>
<i>University of Zurich</i>	Jakob Burgstaller				
<i>Unisanté Lausanne</i>	Isabelle Peytreman Bridevaux	Isabelle Peytreman Bridevaux			
<i>University of St. Gallen</i>		Alexander Geissler Justus Vogel David Kuklinski	Alexander Geissler Justus Vogel David Kuklinski		
<i>University of Lucerne</i>		Michael Havranek		Carla Sabriego	
<i>University of Applied Sciences and Arts of Southern Switzerland</i>					Carlo De Pietro

Table 13: Interviewed experts per country and healthcare area

	<i>England</i>	<i>France</i>	<i>Germany</i>	<i>Netherlands</i>	<i>Switzerland</i>
<i>GPs and outpatient specialists</i>	Prof. Dr. Steven Campbell			Prof. Dr. Gert Westert	
<i>Hospitals (somatic care)</i>	Prof. Dr. Nils Gutacker	Prof. Dr. Cyrille Collin		Prof. Dr. Cordula Wagner	
<i>Psychiatric care</i>					
<i>Rehabilitation and non-physician healthcare services</i>			Alissia Seibert		Luise Menzi
<i>Home and long-term care</i>			Jürgen Brüggemann		

Table 14: List of monitoring systems/ dashboards by country, type, and healthcare area

Country	Source (monitoring system/ dashboard name)	Type	Healthcare area					No. of covered healthcare areas per source
			GPs and outpatient specialists	Hospitals (somatic care)	Psychiatric Care	Rehabilitation and "non-physician" health services	Home and long term care	
Switzerland	ANQ	Monitoring & Dashboard		✓	✓	✓		3
	CH-IQI	Dashboard		✓				1
	Welches-spital	Dashboard		✓				1
No. of sources per healthcare area				3	1	1		
England	Care Quality Commission	Monitoring	✓	✓	✓	✓	✓	5
	NHS Choice	Dashboard	✓	✓	✓			3
	PHIN	Dashboard	✓	✓				2
	MyNHS/ medical registries	Dashboard		✓				1
No. of sources per healthcare area			3	4	2	1	1	
France	La certification des établissements de santé	Monitoring		✓	✓	✓		3
	QualiScope	Dashboard		✓	✓	✓		3
	Le Guide Santé	Dashboard		✓				1
No. of sources per healthcare area				3	2	2		
Germany	Externe stationäre Qualitätssicherung	Monitoring		✓				1
	Deutsche Rentenversicherung Bund	Monitoring				✓		1
	Medizinischer Dienst Bund	Monitoring					✓	1
	Arzt-Auskunft	Dashboard	✓		✓	✓		3
	AOK-Gesundheitsnavigator	Dashboard	✓	✓			✓	3
	Weisse Liste	Dashboard		✓			✓	2
	Qualitätskliniken.de	Dashboard				✓		1
	No. of sources per healthcare area			2	3	1	3	3
Netherlands	Zorginstituut	Monitoring		✓	✓	✓	✓	4
	Zorgkaart Nederland	Dashboard	✓	✓	✓	✓	✓	5
	Ziekenhuischeck	Dashboard		✓				1
No. of sources per healthcare area			1	3	2	2	2	
USA	CMS.gov	Monitoring		✓	✓	✓	✓	4
	Medicare: Dashboard	Dashboard	✓	✓	✓	✓	✓	5
No. of sources per healthcare area			1	2	2	2	2	
Australia	MyHospitals	Dashboard		✓				1
	AROC	Dashboard				✓		1
No. of sources per healthcare area				1		1		
Sweden	Aldreguiden	Dashboard					✓	1
No. of sources per healthcare area							1	
Total no. of sources per healthcare area			7	19	10	12	9	

Appendix II: Stakeholder dialogues

Table 15: Overview of facilitators and notetakers per workshop

	Group facilitators	Notetakers	Session facilitator	Session organizer(s)
GPs & outpatient specialists	PD Dr. Jakob Burgstaller Prof. Dr. Alexander Geissler Dr. Sarah Mantwill	Tanja Kasper Maxime Sapin Levy Jäger	Dr. Justus Vogel	Dr. Sarah Mantwill
Hospitals (somatic care)	Prof. Dr. Alexander Geissler Dr. Dr. Michael Havranek/ Dr. David Kuklinski Prof. Dr. Isabelle Peytremann-Bridevaux	Johannes Cordier Maxime Sapin Carla Walker	Dr. Justus Vogel	Dr. Sarah Mantwill
Psychiatric care	Prof. Dr. Alexander Geissler Dr. Sarah Mantwill Dr. David Kuklinski	Carla Walker Maxime Sapin Manuel Yanez	Dr. Justus Vogel	Dr. Sarah Mantwill
Rehabil. care & non-phys. health serv.	Dr. Sarah Mantwill Prof. Dr. Carla Sabriego Dr. Justus Vogel	Tanja Kasper Maxime Sapin Manuel Yanez	Dr. Justus Vogel	Dr. Sarah Mantwill/ Vera Emmenegger
Home & long-term care	Dr. Sarah Mantwill Dr. David Kuklinski Prof. Dr. Carlo De Pietro	Irene Salvi Maxime Sapin Carla Walker	Dr. Justus Vogel	Dr. Sarah Mantwill
General public workshop St. Gallen	Prof. Dr. Alexander Geissler Dr. Justus Vogel	Maxime Sapin Carla Walker	Dr. Justus Vogel	Dr. Sarah Mantwill/ Maxime Sapin/ Dr. Justus Vogel
General public workshop Lausanne	Leila Beganovic Maxime Sapin	Leila Beganovic Dr. Sarah Mantwill Maxime Sapin	Maxime Sapin	Dr. Sarah Mantwill/ Maxime Sapin/ Dr. Justus Vogel

List of supplements

All supplements are available as separate files:

A: Information collection template

Supplement_A_230831_Information_collection.

B: Presentation used for online information events

Supplement_B_230425_26_0502_Info_Session_Stakeholder_Dialogues.

C: Summary stakeholder dialogue Ambulatory Care

Supplement_C_230720_Summary_Stakeholder_Dialogue_Ambulatory_Care.

D: Summary stakeholder dialogue Hospitals (somatic care)

Supplement_D_230720_Summary_Stakeholder_Dialogue_Hospitals_somatic_care.

E: Summary stakeholder dialogue Psychiatric Care

Supplement_E_230720_Summary_Stakeholder_Dialogue_Psychiatric_Care.

F: Summary stakeholder dialogue Rehabilitative Care and Non-Physician Health Services

Supplement_F_230720_Summary_Stakeholder_Dialogue_Rehabilitative_Care.

G: Summary stakeholder dialogue Home and Long-Term Care

Supplement_G_230720_Summary_Stakeholder_Dialogue_Home_and_Long_Term_Care.

H: Summary stakeholder dialogue patients, relatives, general public – St. Gallen

Supplement_H_230720_Zusammenfassung_Stakeholder_Dialogue_St.Gallen.

I: Summary stakeholder dialogue patients, relatives, general public – Lausanne

Supplement_I_230720_Résumé_Stakeholder_Dialogue_Lausanne.

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SLHS Management and Coordination Office: Department of Health Sciences and Medicine ○

University of Lucerne ○ Frohburgstrasse 3 ○ 6002 Lucerne ○ Switzerland

Email: slhs@unilu.ch