Zurich University
of Applied Sciences

School of
Health Sciences

Quality Indicators for Occupational Therapy: A Scoping Review

Current state of research

Thomas Ballmer, MScOT
Sara Frey, MScOT
Prof. Dr. phil. Brigitte E. Gantschnig, MScOT
Research and Development, Institute of Occupational Therapy, School of Health Sciences, ZHAW Zurich University of Applied Sciences

on behalf of the
Ergotherapie Verband Schweiz/ Association Suisse de l'Ergothérapie/ Associazione Svizzera dell'Ergoterapia (EVS/ASE)

Winterthur, 27.10.2023

Table of Content

List of Tables

List of Figures

1 Abstract

Background: Occupational therapists are increasingly asked to demonstrate the effectiveness, appropriateness, and efficiency of their interventions to funding bodies. As part of the negotiations on the new contractual quality agreements between the Swiss Association of Occupational Therapy (EVS/ASE) and the Swiss associations of health insurers Santésuisse and Curafutura, EVS/ASE submitted a request for financial assistance to the Federal Quality Commission (FQC) for the purpose of developing a uniform platform for collecting occupational therapy quality indicator data, online. In connection with this request, the FQC has asked for an overview of currently known quality indicators that are used to demonstrate effectiveness, appropriateness, and efficiency of occupational therapy interventions to funding bodies. The aim of this study is to establish which quality indicators are used internationally to demonstrate the effectiveness, appropriateness, and/ or efficiency of occupational therapy interventions to funding bodies.

Method: To achieve the aim of this study, we conducted a scoping review. We limited our search to Europe and the English-speaking world. To search for suitable literature, we used specialized databases from medicine, health sciences, and related fields, including CINAHL Complete and MEDLINE, as well as free internet search via Google. Furthermore, we contacted several national occupational therapy associations and other international contacts of the EVS/ASE to ask for access to documents found within this search that were only accessible to association members.

Results: The screening process resulted in 32 studies and documents from six national contexts. We identified and described process-level indicators, functional outcome indicators, an outcome indicator based on individual goal attainment, the goal attainment scale (GAS,) and PRO-Ergo, a patient reported experience measure (PREM).

Findings: There was little information on the use of quality indicators to demonstrate the effectiveness, appropriateness, and efficiency of occupational therapy services to funding bodies in Europe and the English-speaking world that was openly available. The identified process indicators were in most cases not specific to occupational therapy interventions. Functional outcome indicators were highly specific to certain client groups or health conditions and partially appropriate for use in occupational therapy. The GAS was found to be a highly customizable measure which allowed an evaluation on the body structure and function levels as well as activity and participation levels. PRO-Ergo was focused on the clients' subjective view and their experience with occupational therapy interventions.

Conclusions: All identified quality indicators have their advantages and disadvantages. Process-level indicators specific to occupational therapy could be a chance to foster the use of best practice methods. GAS and PRO-Ergo seem to be the most versatile assessment, allowing an evaluation on the level of participation and activity. Functional outcome indicators that cover a broad area of client problems may be useful additional quality indicators for some areas of practice.

2 Background

Article 32 of the Swiss Federal Act on Health Insurance (HIA; Art. 32, para 1) stipulates that services financed by compulsory health insurance must meet the criteria of effectiveness, appropriateness, and efficiency. To ensure this, it is necessary to define indicators that allow these criteria to be verified. The HIA (Art. 58 et seq.) and the Ordinance on Compulsory Health Care (OAMal; Art. 77, para 1), which was revised in 2021, oblige service providers and health insurers to enter into nationwide contractual agreements on quality development. These quality contracts regulate, among other things, the measurement of quality, and therefore require the definition of suitable quality indicators.

The Swiss Association of Occupational Therapy (EVS/ASE), like the other professional associations of the health care professions, is currently in negotiations with the Swiss health insurance associations *Santésuisse* and *Curafutura* about new contractual quality agreements in order to comply with the revised articles 58 et seq. HIA and article 77 OAMal (Petrig et al., 2021). In this context, the creation of an electronic platform is planned, which will allow the online entry of quality indicators by occupational therapists. Among other things, this will replace a previous online platform that is technically outdated and no longer functional (Carroz & Petrig, 2021). The new platform will be used to record quality indicator data at the process level (such as the recording of quality development measures, e.g., the implementation of quality circles) as well as indicator data at the outcome level (primarily regarding patient safety and effectiveness). For the recording of patient safety, a connection to the *Critical Incident Reporting & Reacting NETwork* (CIRRNET), a national platform for the reporting of critical incidents in health care provision maintained by the independent foundation *Patient Safety Switzerland*, is planned. As an outcome indicator for the *effectiveness* of occupational therapy services, the Goal Attainment Scale (GAS) has been used since 2011, within the framework of an existing quality agreement between the tariff partners (Petrig et al., 2021). The GAS is a standardized, valid, and reliable assessment that expresses the degree of achievement of individual treatment goals in a numerical value (Kiresuk et al., 1994). For more than 10 years, occupational therapists have been one of the few professions in the Swiss health care system that already fulfil the requirements for quality assurance to a large extent (Petrig et al., 2021).

As part of the negotiations on the new contractual quality agreements, the EVS/ASE, with the support of the health insurance associations, submitted a request for financial assistance to the Federal Quality Commission (FQC) for the purpose of developing a uniform platform for collecting occupational therapy quality indicator data online. In connection with this request from the EVS/ASE, the FQC has asked for an overview of currently known quality indicators that are used to demonstrate effectiveness, appropriateness, and efficiency of occupational therapy interventions to funding bodies.

The Occupational Therapy Research Unit of the Zurich University of Applied Sciences (ZHAW) has been tasked by the EVS/ASE with developing such an overview. The aim of this report is to establish which quality indicators are used internationally (focusing on Europe and the English-speaking world) to demonstrate the effectiveness, appropriateness, and/or efficiency of occupational therapy interventions to funding bodies and, if applicable, whether experience exists regarding the suitability of these quality indicators.

3 Method

3.1 Theoretical Framework

Occupational therapists are increasingly asked to demonstrate the effectiveness, appropriateness, and efficiency of their interventions for person with acute and/or chronic conditions to funding bodies, not only in Switzerland (reflected in the new Federal Law on Health Professions that will come into force in 2020), but also worldwide (World Federation of Occupational Therapists, 2023). In order to foster the development and the use of quality indicators appropriate to occupational therapy practice, the World Federation of Occupational Therapy (WFOT) has developed the *Quality Indicators Framework* (2023). The framework conceptualizes different types of quality indicators for occupational therapy using a matrix whose vertical axis consists of quality dimensions, while the horizontal axis represents quality perspectives (see *Table 1*).

In the *Structure* column, the availability of the appropriate number of competent occupational therapists in the right place at the right time is addressed, as well as the question of "whether other types of physical, financial, technical, and social resources necessary to provide quality occupational therapy services are continuously available in an economic, socially and environmentally sustainable manner" (World Federation of Occupational Therapists, 2023, p. 3). As the column name implies, these questions are situated on a structural level and regard questions of health care policy and workforce planning. In the *Process* column, "the ability of intended users to access occupational therapy" (World Federation of Occupational Therapists, 2023, p. 3) also seems situated more in that era, while the categories *optimal use of resources* as well as *success in attaining occupational therapy goals* in the *Outcome* column directly refer to the effectiveness and efficiency of occupational therapy interventions. Lastly, *Satisfaction throughout service delivery* addresses the client perspective, while *Incidents resulting in harm* addresses patient safety and critical incidents.

In compiling an overview of currently known quality indicators for occupational therapy, we used this matrix as a guide for the identification of indicators. For the contractual agreement on quality, the columns *Process* and *Outcome* and the rows *Efficiency, Effectiveness, Person-Centeredness,* and *Safety* are most relevant, while the column *Structure*, as laid out above, is situated more on a health and educational policy level. For our study, we will, however, not search for indicators that are concerned with patient safety, as the EVS/ASE already plans to connect their platform to CIRRNET.

Table 1

WFOT Quality Indicator Framework

	Structure	**Process**	**Outcome**
Appropriateness: Right service, person, place, time	Availability of competent occupational therapists.		
Sustainability: Access to resources without compromising future availability	Long term supply of resources.		
Accessibility: Ease in obtaining services		Ability to access service	
Efficiency: Use of resources for maximum results		Optimal use of resources.	
Effectiveness: Evidence-informed services for those who benefit			Success in attaining occupational therapy goals.
Person-Centeredness: Experiences of receiving service			Satisfaction throughout service delivery.
Safety: Reduction of risk and avoidance of harm			Incidents resulting in harm

Note: based on the guide to the WFOT QUEST Quality Evaluation Strategy Tool (World Federation of Occupational Therapists, 2023).

3.2 Scoping Review

To answer the question which quality indicators are used internationally to demonstrate the effectiveness, appropriateness, and efficiency of occupational therapy interventions for persons with acute and/or chronic health conditions to funding bodies, we conducted a literature review. Since we assumed the available literature on the topic to not be primarily comprised of scientific studies, but to also include other documents of diverse provenance (e.g., strategy documents, magazine articles), we chose the *scoping review* method. Scoping reviews are similar to conventional systematic literature reviews but allow for greater flexibility in terms of the types of texts included (Peterson et al., 2017).

Data collection

We conducted our scoping review based on the Joanna Briggs Institute manual on evidence synthesis (Peters et al., 2017). After formulating the research question, we defined initial relevant keywords (see *Table 2*), inclusion and exclusion categories. To search for suitable literature, we used specialized databases from medicine, health sciences, and related fields, including CINAHL Complete and MEDLINE, as well as free internet search via Google. Furthermore, in collaboration with the Swiss Association of Occupational Therapy (EVS/ASE), we contacted several national occupational therapy associations, as well as other international contacts of the EVS/ASE, to ask for

access to documents found within this search that were only accessible to association members.

Table 2

Search Terms used in the document search.

"Quality indicators"			"Occupational therapy"		
Keywords		Subject Headings	Keywords		Subject Headings
English	German		English	German	
quality indicator* quality assurance quality management quality measure* clinical indicator* efficacy efficiency impact evidence indication index	Qualitätsindikator* Qualitätssicherung Qualitätsmanagement Wirksamkeit Effektivität Zweckmässigkeit Evidenz	Quality Indicators Quality Assurance Guideline Adherence Quality of Health Care Quality Assessment Health Status Indicators Clinical Indicators Quality of Care Research	occupational therap*	Ergotherap*	Occupational Therapy Research, Occupational Therapy Occupational Therapy Practice Occupational Therapy Service Occupational Therapy Practice, Research-Based Occupational Therapy Practice, Evidence-Based Occupational Therapy Assessment
"Reimbursement"			"Funding bodies"		
Keywords		Subject Headings	Keyword		Subject Heading
English	German		English	German	
reimbursement remuneration payment	Vergütung Finanzierung	Reimbursement, Incentive Insurance, Health, Reimbursement	funding* insurance	Kostenträger Versicherung* Krankenkasse* Pflegekasse*	Insurance Insurance, Health, Reimbursement Government Agency

Data analysis

We screened the documents we found using the online platform Covidence (Veritas Health Innovation, 2023). The selection process was carried out by two researchers. In a first step, we screened titles and abstracts of documents and included or excluded the documents based on defined criteria (see *Table 3*). To resolve conflicts between the two reviewers regarding inclusion or exclusion, we consulted a third team member. In the following step, we applied the same procedure for the included full texts. This time, the two reviewers discussed any disagreements and decided about inclusion or exclusion of the given document. Then, we extracted data relevant to the research question from the documents and synthesized the data.

Table 3

Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
The study or document concerns quality indicators (e.g., assessments, measures, etc.) that are used to demonstrate the effectiveness, appropriateness, and/or efficiency of occupational therapy towards funding bodies (e.g., insurance companies).	The study or document is older than 2000.
The study or document is in German or English (machine translatable documents in other languages can be included).	The study or document concerns other types of quality assurance (e.g., internal to organizations or associations) or indicators used for other purposes (e.g., national registries).
The study or document refers to Europe, North America, Australia and/or New Zealand	

4 Results

The screening process resulted in 32 studies and documents from six national contexts. In Figure 1, the screening process is visualized. In Table 4, the number of documents and studies per country and a short description of the relevant quality indicators (if any) identified is provided. Although we used due diligence in our search process, it is highly likely that some relevant documents were neither openly available on the internet nor the subject of articles in specialized databases. We can, therefore, not claim to give a complete overview on all quality indicators used in the areas in question.

Figure 1

Screening process studies and documents

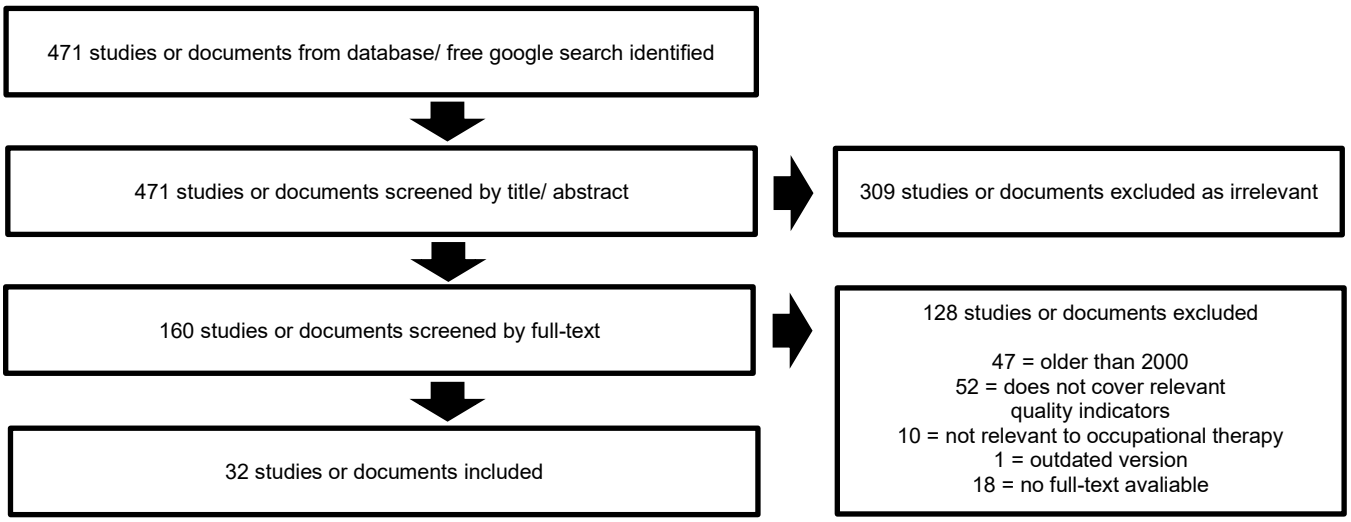

Table 4

Countries for which relevant documents and/or indicators were identified.

Country	Documents	Additional communication (e.g., with representatives of professional associations)	Quality indicators identified
USA	18	no	Various (MEDICARE reporting indicator sets)
Switzerland	3	no	Goal Attainment Scale
UK	1	no	NICE Indicator List
Canada	1	yes (collaborators in development of WFOT quality indicators framework)	Quality Improvement Plan for Ontario Health Teams (QIPOH) Indicator List
Germany	3	yes (representatives of professional association)	None
Netherlands	1	yes (additional international contact)	PROM
International or multiple countries	5	no	None
Total	**32**		

4.1 USA

Most documents identified in our review were situated in the US-American context and were concerned with the provision of quality indicators to demonstrate effectiveness, appropriateness, and/or efficiency of health care services to Medicare. Medicare is a public health insurance program that provides health care coverage for Americans 65 years old or older and certain younger people with disabilities (U.S. Centers for Medicare and Medicaid Services, 2023). Medicare consists of three parts that cover hospital insurance (part A), medical insurance (part B) and prescription drug coverage (part C). In the available documents, mainly two reimbursement systems were described: the *Merit-Based Payment System* (MIPS) and the *Outcome and Assessment Information Set* (OASIS), which will be the focus of our analysis. Other similar systems, namely the Minimum Data Set and the CARE-tool used in hospital settings, were also mentioned (Centers for Medicare & Medicaid Services, 2022d; Mor, 2004; Pardasaney et al., 2018; Trundy-Whitten, 2018). Private insurers have their own criteria for reimbursement, but they are laid out less transparently than in the case of Medicare (AETNA, 2023; OPTUM, 2020)

Merit-Based Incentive Payment System (MIPS)

The Merit-Based Incentive Payment System (MIPS) is the main reimbursement system currently in use for reimbursing health care services provided to patients covered under Medicare. MIPS is concerned with the reimbursement of part B services. It is part of the Quality Payment Program (QPP) that is based on the Medicare Access and CHIP Reauthorization Act (MACRA) of 2015. The aim of establishing QPP was to base reimbursement more on quality of care (Valenzano, 2019). Eligible health care professions include physicians, nurse practitioners, occupational therapists, physical therapists, and several other professions.

The structure of MIPS

Under MIPS, clinicians yearly report data in four areas: *quality, improvement activities, promoting interoperability*, and *cost*. *Cost* is calculated automatically based on claims submitted to Medicare. In *promoting interoperability*, clinicians report on a set of measures and objectives connected to digitization (e.g., use of electronic health records, e-prescribing). In the area *improvement activities*, clinicians have to attest to between 2 and 4 predefined activities that improve access to care, enhance client engagement, and/or improve processes. Finally, in the area *quality*, clinicians are asked to provide at least six quality measures, one of which must be an outcome measure or another high priority measure. These measures must be provided for a minimum of 70% of treated patients over the respective 12-month period (Centers for Medicare & Medicaid Services, 2022c). CMS has defined measures suitable for physical and occupational therapists (see *Table 5*). However, it has

been proposed that quality indicators that are less generic and more reflective of the contribution of occupational therapists be developed and included (Leland et al., 2015).

Table 5

2023 MIPS quality measures for physical therapy/ occupational therapy

Measure title	Measure Nr.	Measure type
Urinary Incontinence: Assessment of Presence or Absence of Urinary Incontinence in Women Aged 65 Years and Older	048	Process
Urinary Incontinence: Plan of Care for Urinary Incontinence in Women Aged 65 Years and Older	050	Process – High Priority
Diabetes Mellitus: Diabetic Foot and Ankle Care, Peripheral Neuropathy – Neurological Evaluation	126	Process
Diabetes Mellitus: Diabetic Foot and Ankle Care, Ulcer Prevention – Evaluation of Footwear	127	Process
Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan	128	Process
Documentation of Current Medications in the Medical Record	130	Process – High Priority
Preventive Care and Screening: Screening for Depression and Follow-Up Plan	134	Process
Falls: Plan of Care	155	Process – High Priority
Rheumatoid Arthritis (RA): Functional Status Assessment	178	Process
Elder Maltreatment Screen and Follow-Up Plan	181	Process – High Priority
Functional Outcome Assessment	182	Process – High Priority
Functional Status Change for Patients with Knee Impairments	217	Patient-Reported Outcome-Based Performance Measure – High Priority
Functional Status Change for Patients with Hip Impairments	218	Patient-Reported Outcome-Based Performance Measure – High Priority
Functional Status Change for Patients with Lower Leg, Foot or Ankle Impairments	219	Patient-Reported Outcome-Based Performance Measure – High Priority
Functional Status Change for Patients with Low Back Impairments	220	Patient-Reported Outcome-Based Performance Measure – High Priority
Functional Status Change for Patients with Shoulder Impairments	221	Patient-Reported Outcome-Based Performance Measure – High Priority
Functional Status Change for Patients with Elbow, Wrist or Hand Impairments	222	Patient-Reported Outcome-Based Performance Measure – High Priority
Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention	226	Process
Dementia: Cognitive Assessment	281	[not described]
Dementia Associated Behavioral and Psychiatric Symptoms Screening and Management	283	Process
Dementia: Safety Concern Screening and Follow-Up for Patients with Dementia	286	Process – High Priority
Dementia: Education and Support of Caregivers for Patients with Dementia	288	Process – High Priority
Falls: Screening for Future Fall Risk	318	[not described]
Functional Status Change for Patients with Neck Impairments	478	Patient-Reported Outcome-Based Performance Measure – High Priority
Screening for Social Drivers of Health	487	Process – High Priority

Notes: adapted from Centers for Medicare and Medicaid Services (2022b)

MIPS-scores and consequences for reimbursement

Each MIPS area is scored individually. For instance, the *quality* area is scored based on the completeness of the required data and their quality in relationship to benchmarks. These benchmarks are based on performance data from a baseline period (usually two years prior to the reporting year). The area scores are weighted and transformed into a total MIPS score between 0 and 100 points. Clinicians that score below 75 points will suffer a negative payment adjustment

through Medicare of up to -9%. Clinicians that score 75 points and above will receive a positive payment adjustment. The factor depends on statutory budget neutrality requirements (i.e., how much money is available under an existing budget). If a clinician scores 89% or above, they will receive an additional positive payment adjustment for exceptional performance, with the factor again depending on budget neutrality requirements (Centers for Medicare & Medicaid Services, 2022c).

As of 2020, occupational therapists only needed to report in the MIPS areas *quality* and *performance improvement.* These areas were, therefore, reweighted so that quality accounted for 85% and performance improvement for 15% of the total MIPS score (American Occupational Therapy Association, 2019; Byars, 2019).

Experiences with MIPS

The MIPS requires a lot of reporting and has been described as at times “tedious” (Valenzano, 2019). In 2021, 3.31% of clinicians suffered a negative payment adjustment, while 86.12% achieved a positive payment adjustment, with 77.86% achieving an additional adjustment for exceptional performance. As the number of eligible clinicians changed drastically between 2020 and 2021 due to changes in eligibility rules, it is difficult to compare 2021 data with earlier years (Centers for Medicare & Medicaid Services, 2022a). The Covid-19-pandemic is another factor that makes it harder to draw conclusions on the performance of the new system.

Section GG Self-Care (Activities of Daily Living) and Mobility Items

The *Section GG Self-Care (Activities of Daily Living) and Mobility Items* form is a form used over different settings (skilled nursing facilities, home health care, inpatient rehabilitation) to evaluate self-care skills and activities of daily living (see *Figure 2*). While it is not an explicit occupational therapy assessment - the *Centers for Medicare and Medicaid Services* solely state that it should be coded by *qualified clinicians* (Centers for Medicare & Medicaid Services, 2023) – it is often used by occupational therapists, and occupational therapists have been urged to demonstrate their contribution to the interprofessional team by claiming this task (American Occupational Therapy Association, 2019; Leland et al., 2015).

Figure 2

Items included in the *Section GG Self-Care (Activities of Daily Living) and Mobility Items* form

Self-Care Items (Assessment Item GG 0130*)**

	Admission	Goal	Discharge	Item	Definition
A				**Eating**	The ability to use suitable utensils to bring food to the mouth and swallow food once the meal is presented on a table/tray. Includes modified food consistency.
B				**Oral hygiene**	The ability to use suitable items to clean teeth. Dentures: The ability to remove and replace dentures from and to mouth, and manage equipment for soaking and rinsing.
C				**Toilet hygiene**	The ability to maintain perineal hygiene, adjust clothes before and after using toilet, commode, bedpan, or urinal. If managing ostomy, include wiping opening but not managing equipment.
D				**Wash upper body****	The ability to wash, rinse, and dry the face, hands, chest and arms while sitting in a chair or bed.
E				**Shower/bathe self***	The ability to bathe self in shower or tub, including washing, rinsing, and drying self. Does not include transferring in/out of tub/shower, washing of back or hair.
F				**Upper body dressing***	The ability to dress and undress above the waist, including fasteners.
G				**Lower body dressing***	The ability to dress and undress below the waist, including fasteners. Does not include footwear.
H				**Putting on/taking off footwear***	The ability to put on and take off socks and shoes or other footwear that are appropriate for safe mobility, including fasteners.

Notes: the form is rated on a 6 to 1 scale with 6 = Independent; 5 = Setup; 4 = Supervision/Touching; 3 = Partial Assistance; 2 = Substantial Assistance; 1= Dependent; additionally, the following codes are used: 07 =Refused; 09 = Not Applicable; 10 = Not attempted due to environment limitations; 88 = Not attempted due to medical condition/safety

4.2 Switzerland

Goal Attainment Scale

In Switzerland, there has been a contractual quality agreement between the Swiss Association of Occupational Therapy (EVS/ASE) and the associations of private insurances dating back to 2011 (Santésuisse, 2021). Since 2019, this agreement has been expanded to include not only general health insurance, but also accident, disability, and military insurance cases. The effectiveness of occupational therapy services is demonstrated using the Goal Attainment Scale (GAS; Kiresuk et al., 1994) as a quality indicator. GAS is a standardized, valid, and reliable assessment that expresses the degree of achievement of individually set goals in a numerical value from -2 (worse outcome than expected) to +2 (much better outcome than expected) (see *Figure 3*).

Figure 3

Example of a completed Goal Attainment Scale

Patient data (for confidentiality reasons, please only enter case number)

Case number: 1 | Gender: x male ( ) female (please check "x") | Year of Birth: 1963 (please enter as 4 digits, e.g., 1964)

Diagnosis (please enter): status after complex injury with partial amputation of dig. III - V on the right side

Please enter area:	Area 1: (please enter) Everyday activities (sensitivity)	Area 2: (please enter) Everyday activities (range of motion, strength)	Area 3: (please enter) Anxiety/ acceptance	Area 4: (please enter)	Area 5: (please enter)
+2 = outcome much better than expected	Client uses affected hand daily in heavy manual activities on the farm and drives car, tractor as well as moped.	Client uses all his tools, even for power strenuous tasks.	Client is comfortable going to the restaurant in the village without a bandage as well as back to the city.		
+1 = outcome better than expected	Client uses the affected hand daily in light manual activities on the farm, cannot stand the vibrations when driving a car, tractor or moped.	Client has achieved sufficient fist grip to be able to hold narrow tool handles for easy tasks.	Client is comfortable going to the pub even without a bandage and uses the affected hand when greeting (handshake)		
0 = goal / expected change	Client spontaneously uses affected hand to wash and dress, does not yet drive a vehicle	Client has achieved sufficient fist grip to hold most of his tools. He still lacks strength.	Client looks at his hand spontaneously and massages the finger stumps daily. He is comfortable going to the pub with a bandage.		
-1 = no change	Client sporadically uses his affected hand in washing and dressing at the encouragement of his wife.	Client lacks sufficient fist grip to hold most of his tools.	Client dares to look at his hand and let his wife massage it, because he does not dare to do it himself. He is comfortable going to the pub with a bandage.		
-2 = outcome worse than expected	Client does not tolerate touching the affected fingers and never uses the affected hand in everyday life.	Client can hardly grasp anything in everyday life with the affected hand because the mobility in the base and middle joints of the fingers is insufficient.	Client is ashamed of his disfigured hand, does not look at his hand and is not comfortable going to the village pub anymore.		
Value:	-1	0	1	Please enter numbers	-2, -1, 0, 1 or 2

Note: adapted from ErgotherapeutInnen-Verband Schweiz (2022).

All self-employed occupational therapists as well as occupational therapy organizations and their employees are obliged to record five cases with the GAS and document them on an online platform each year. 10 cases per language region are randomly selected and checked for content quality. Reasons for non-participation or incomplete participation must be declared on the online platform. Unjustified non-participation can be sanctioned (Petrig et al., 2021). The implementation of this procedure was accompanied by a research project evaluating the quality and content of goal setting by Swiss occupational therapists (Page et al., 2015).

Experiences with GAS

In 2020, 2159 occupational therapists were registered on the online platform, documenting 8106 clients (Petrig et al., 2021). The number of registered therapists has continuously risen from 2016, when there were 1265, to 2020. Reported outcomes have remained stable in this time frame. Goals seem to have been set in a realistic, measurable manner. These results have been deemed as positive by representatives of all contractual parties (Petrig et al., 2021).

4.3 The Netherlands

PRO-Ergo Questionnaire (Patiented Reported Experience Measure)

While information on the use of quality indicators for reimbursement by Dutch occupational therapist was not to be found online using our search terms, representatives of the Dutch professional association that were contacted directly by the EVS/ASE reported that they are not asked to provide quality indicators to funding bodies (EVS/ASE, 24.10.2023, personal communication). However, it was also reported to us through personal contacts (J. Leenders, 8.9.2023, personal communication) that some Dutch insurance companies do require occupational therapists to provide the PRO-Ergo questionnaire, a patient reported experience measure (PREM) that includes a number of statements on activities, self-management, social environment, and satisfaction with occupational therapy services that are rated on a scale of 0 to 10 (see *Table 6*).

Table 6

Questions included in PRO-Ergo used by some Dutch occupational therapists

1. I can carry out my daily activities as I want.
2. I am satisfied with performing my daily activities indoors, with or without with help/ aids (e.g., washing, dressing, cooking, cleaning, hobbies).
3. I am satisfied with my participation in activities outside the home, with or without help/ aids (e.g., shopping, outings, work, school, appointments).
4. I have insight into the possibilities and limitations resulting from my condition/ disease.
5. I ask for help, when I need it (e.g., in doing everyday things).
6. I can indicate my limits.
7. I am satisfied with the way I distribute my energy so that I can carry out my daily activities.
8. I accept the consequences of my condition/ disease.
9. I can (practically) cope with the consequences of my condition/ disease.
10. My environment (partner/neighbours) accepts the consequences of my condition/ disease.
11. My environment (partner/next-of-kin) can (practically) cope with the consequences of my condition/ disease.
12. Because of occupational therapy, I can do my daily activities better.
13. I would recommend others with similar symptoms to get occupational therapy.

Note: taken from Ergotherapie Nederland (2017); translated by the authors.

Unfortunately, we could not identify any descriptions of experiences with this measure.

Apart from this, occupational therapists' role in reimbursement for therapeutic aids is described in the identified literature, including standardised measures for funding bodies. However, this does not

concern the reimbursement of occupational therapy services themselves (Hubert, 2003).

4.4 Other countries

Apart from USA, Switzerland, and the Netherlands, little information was available on quality indicators used by occupational therapists to demonstrate the effectiveness, appropriateness, and/or efficiency of their services to funding bodies. For the UK and some Canadian provinces, we found the use of more general quality indicators that are non-specific to occupational therapy and mainly process-level, e.g., “The percentage of patients with hypertension aged 16 to 74 years in whom there is an annual assessment of physical activity, using GPPAQ, in the preceding 15 months” and similar (National Institute for Health and Care Excellence, 2023; Ontario Health, 2022). In Germany, occupational therapists are not providing quality indicators to funding bodies in the outpatient sector, while the indicators used in the inpatient sector are limited to the amount and/ or duration of occupational therapy sessions (Deutscher Verband Ergotherapie, personal communication, June 22, 2023). However, the development of quality indicators is a stated goal of the German professional association of occupational therapists (DVE), as stated in a current position paper (Deutscher Verband Ergotherapie, 2022a, 2022b), and has been for several years (Deutscher Verband Ergotherapie, 2014). Representatives of the Swedish professional association that were contacted directly by the EVS/ASE reported that they are not asked to provide quality indicators to funding bodies (EVS/ASE, 24.10.2023, personal communication).

5. Discussion

The aim of this scoping review was to establish which quality indicators are used nationally and internationally (focusing on Europe and the English-speaking world) to demonstrate the effectiveness, appropriateness, and/or efficiency of occupational therapy interventions to funding bodies and, if applicable, whether experience exists regarding the suitability of these quality indicators. There was comparatively little information that was openly available, which could mean that quality indicators for this purpose are either not in widespread use, that information on their use is not very accessible, or both. While we can, therefore, not claim to give a complete overview on all quality indicators used in Europe and the English-speaking world, the reporting systems that we have identified in our opinion do show a certain breadth of the possible use of quality indicators in this field. In essence, we identified two reporting systems that utilise process-level indicators, two that utilise outcome-level indicators, and one the utilises both types of indicators. *Table 7* visualizes how these systems can be organized within the WFOT Quality Indicator Framework.

Process-level indicators

The process-level indicators identified as part of the NICE menu of indicators (National Institute for Health and Care Excellence, 2023) and the Quality Improvement Plan for Ontario Health Teams (QIPOH) indicator list (Ontario Health, 2022) mainly concern the percentage of clients over a certain reporting period for whom a certain intervention, procedure, test or similar has been carried out. The process-level indicators on the *2023 MIPS Quality Measures List* (Centers for Medicare & Medicaid Services, 2022b) for physical therapy and occupational therapy serve the same purpose, but on the individual client level (i.e., has a certain intervention, procedure, test or similar been carried out for this client). This allows the responsible agencies or funding bodies to assess the degree to which the reporting professionals or institutions are adhering to best practice guidelines or similar, either in general (NICE, QIPOH) or on an individual level (MIPS).

However, the NICE menu of indicators and the QIPOH indicator list include few if any quality indicators that are appropriate to reflect occupational therapy interventions. The process-level indicators in the MIPS Quality Measures List are more appropriate and specific to occupational therapy. However, they are also very specific to certain client groups and/ or health conditions (e.g., “Rheumatoid Arthritis (RA): Functional Status Assessment”).

Outcome indicators

Unlike process-level indicators, outcome indicators necessarily operate on an individual client level. The outcome indicators on the *2023 MIPS Quality Measures List* (Centers for Medicare & Medicaid

Services, 2022b) for physical therapy/ occupational therapy are very well suited to record the outcomes of occupational therapy interventions, but also very specific to certain client groups and/ or health conditions (e.g., “Functional Status Change for Patients with Elbow, Wrist or Hand Impairments”). The Section GG Self-Care (Activities of Daily Living) and Mobility Items form, on the other hand, is not specific to certain client groups and/ or health conditions, but appropriate for all clients that have problems in performing activities of daily living (ADL) – which is a key domain for occupational therapy (American Occupational Therapy Association, 2020). In content and scoring, Section GG is very similar to ADL assessment forms like the Barthel index (Mahoney & Barthel, 1965), that, while not necessarily specific to occupational therapy, are also commonly used by occupational therapists.

The GAS (Kiresuk et al., 1994) works on a different level than the outcome indicators included in the MIPS and the Section GG form as it does not measure objective functional change, but *goal attainment*. This has several advantages. As demonstrated in Figure 3, this does not only make it possible to assess functional change on the level of activity and participation (e.g., “Client has achieved sufficient fist grip to be able to hold narrow tool handles for easy tasks") beyond ADLs, but also to assess facets of change relevant to clients that are not considered by strictly functional assessments, like psychosocial aspects (e.g., “Client is comfortable going to the pub even without a bandage and uses the affected hand when greeting (handshake)”). Another advantage is that it is not specific to a certain client group or a specific health condition, but that it can be used as a generic assessment across all domains of occupational therapy (and, potentially, other professions).

While the GAS relies on specific, measureable goals (Kiresuk et al., 1994), PRO-Ergo is, as a PREM, by definition a subjective assessment. It assesses not only the subjective outcome of an intervention, but also the client’s satisfaction with that intervention. Patient-centredness is a key domain in the Federal Council’s goals for quality development 2022-2024, which states: “Health care providers record the preferences, needs and values of individual patients […] They regularly demonstrate that they have taken these into account and especially that they have implemented findings from Patient Reported Experience Measures (PREMs). The quality contract partners chose the quality measurements within the scope of the quality contracts in order to ensure that the service providers take into account the preferences, needs and values of the patients in the provision of services [translation by authors]” (Bundesrat, 2022, p. 13). While GAS is client- or patient-centered in the collaborative setting of goals, PRO-Ergo is fully focused on the client’s subjective experience of the intervention and its outcome.

Table 7

Identified quality indicators organized using the WFOT *Quality Indicator Framework*

	Structure	Process	Outcome
Appropriateness: Right service, person, place, time			
Sustainability: Access to resources without compromising future availability			
Accessibility: Ease in obtaining services			
Efficiency: Use of resources for maximum results		NICE indicator list (UK) QIPOH indicator list (CAN) MIPS process indicators (USA)	
Effectiveness: Evidence-informed services for those who benefit			Goal Attainment Scale (CH) MIPS outcome indicators (USA) Section GG Self-Care and Mobility Items (USA)
Person-Centerdness: Experiences of receiving service			Patient Reported Experience Measure (NL)
Safety: Reduction of risk and avoidance of harm			

Note: based on the guide to the WFOT QUEST Quality Evaluation Strategy Tool (World Federation of Occupational Therapists, 2023)

To synthesize these findings, all indicators we have identified in the literature have advantages and disadvantages. Process-level indicators allow the responsible agencies or funding bodies to assess the degree to which the reporting professionals or institutions are adhering to best practice. However, using these with occupational therapists would necessitate the creation of specific process-level indicators for this purpose, based on guidelines for best practice.

Specific functional outcomes like the ones included in the MIPS Quality Indicator List (Centers for Medicare & Medicaid Services, 2022b) are an appropriate way to demonstrate functional change as an outcome of an occupational therapy intervention for persons with acute and/or chronic health conditions. They are, however, often highly specific to certain client groups and health conditions. To utilize this kind of functional outcomes for quality indication for occupational therapy across the board, there would need to be a large pool of items to draw from to cover the breadth of occupational therapy practice. In contrast, Section GG (Centers for Medicare & Medicaid Services, 2023), an assessment used for the evaluation of ADL skills, is more general. It or a similar assessment could possibly be used across all fields that require an assessment of ADL.

The GAS (Kiresuk et al., 1994) and PRO-Ergo (Ergotherapie Nederland, 2017) have the advantage that they are usable across all fields of practice and client groups, provided that certain clients are not able to participate in the assessment process (e.g., persons with severe dementia), necessitating the involvement of proxies (e.g., significant others). Both make it possible to assess outcomes on the activity and participation level. Between the two assessments, GAS is the more labour-intensive, as individual collaborative goals have to be defined with the clients.

6. Conclusion

There was relatively little information on the use of quality indicators to demonstrate the effectiveness, appropriateness, and efficiency of occupational therapy services to funding bodies in Europe and the English-speaking world that was openly available. This could mean that the use of such quality indicators is either not that widespread, that information on their use is not very accessible, or both.

Among the quality indicators we identified for this report, all have their advantages and disadvantages. The establishment of process-level indicators specific to occupational therapy could be a chance to foster the use of best practice methods, based on available evidence or existing guidelines (see, e.g., Weise, 2016).

In terms of outcome indicators, GAS and PRO-Ergo seem to be the most versatile assessments, while also taking into account the Federal Council's call for patient-centredness in quality assurance (Bundesrat, 2022). Also, they allow an evaluation on the level of activity and participation (e.g., in work and employment), not solely on the level of body functions and structures (e.g., musculoskeletal functions). As the goals in the GAS are formulated indvidually, these can include the activity and participation levels as well as body function and structure levels.

While functional outcome indicators (e.g., change in range of motion) present easily understandable data, they are often highly specific to certain client groups and/ or health conditions. The definition of functional outcome indicators for every possible client group or health condition may be a disproportionate effort. However, functional outcome indicators that cover a broad area of client problems, like *Section GG* (Centers for Medicare & Medicaid Services, 2023) or a similar assessment of ADL, may be useful additional quality indicators for some areas of practice.

8. References

AETNA. (2023). *Occupational Therapy—Medical Clinical Policy Bulletins*. https://www.aetna.com/cpb/medical/data/200_299/0250.html

American Occupational Therapy Association. (2020). Occupational Therapy Practice Framework: Domain and Process—Fourth Edition. *The American Journal of Occupational Therapy*, *74*(Supplement_2), 7412410010p1-7412410010p87. https://doi.org/10.5014/ajot.2020.74S2001

American Occupational Therapy Association. (2019, December 9). *Quality Payment Program (QPP) Merit-based Incentive Payment System (MIPS) Changes for 2020 | AOTA*. https://www.aota.org/advocacy/advocacy-news/2019/quality-payment-program-merit-based-incentive-payment-system-changes-2020

Bundesrat. (2022). *Ziele des Bundesrates zur Qualitätsentwicklung für die Jahre 2022–2024*. Bundesamt für Gesundheit. file:///C:/Users/balh/Downloads/BAG_Vierjahresziele_DE.pdf

Byars, G. (2019, February 12). *Expressing the Unique Value of Occupational Therapy – Utah Occupational Therapy Association*. https://utahotassociation.org/expressing-the-unique-value-of-occupational-therapy/

Carroz, C., & Petrig, A. (2021). *Mitteilung betreffend Erhebung Ergebnisqualität 2022/2023 (GAS) und den Verhandlungen des neuen Qualitätsvertrags KVG-Art. 58a*. https://www.ergotherapie.ch/attachments/content/mitteilung_erhebunggas_mrz22.pdf

Centers for Medicare & Medicaid Services. (2022a). *2021 Quality Payment Program Experience Report*. Department of Health and Human Services. https://qpp-cm-prod-content.s3.amazonaws.com/uploads/2433/2021%20QPP%20Experience%20Report.pdf

Centers for Medicare & Medicaid Services. (2022b). *2023 MIPS Quality Measures List*. https://qpp-cm-prod-content.s3.amazonaws.com/uploads/2217/2023%20MIPS%20Quality%20Measures%20List.xlsx

Centers for Medicare & Medicaid Services. (2022c). *Merit-based Incentive Payment System (MIPS)—Traditional MIPS Scoring Guide for the 2022 Performance Year*. Department of Health and Human Services. https://qpp-cm-prod-content.s3.amazonaws.com/uploads/1970/2022%20Traditional%20MIPS%20Scoring%20Guide.pdf

Centers for Medicare & Medicaid Services. (2022d). *Outcome Assessment Information Set Version E (OASIS-E)*. https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HomeHealthQualityInits/HHQIOASISUserManual

Centers for Medicare & Medicaid Services. (2023). *Coding Section GG Self-Care & Mobility Activities Included on the Post-Acute Care Item Sets: Key Questions to Consider When Coding*. https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-

Instruments/HomeHealthQualityInits/Downloads/GG-Self-Care-and-Mobility-Activities-Decision-Tree.pdf

Deutscher Verband Ergotherapie. (2014). Geschäftsbericht 2013. *DVE aktuell*, *2014*(01).

Deutscher Verband Ergotherapie. (2022a). *Perspektiven DVE/ Ergotherapie 2029*. https://dve.info/resources/pdf/dve/ziele/4632-perspektiven-2029/file

Deutscher Verband Ergotherapie. (2022b). *Schwerpunkte des DVE 2023*. https://dve.info/resources/pdf/dve/ziele/4892-dve-schwerpunkt-2023/file

ErgotherapeutInnen-Verband Schweiz. (2022). *Qualität in der Ergotherapie*. https://www.ergotherapie.ch/verband/qualitaetsmanagement/

Ergotherapie Nederland. (2017). *Pro-Ergo Vragenlijst—Ergotherapie*. https://info.ergotherapie.nl/file/download/default/1CF999424EEE153BDFDD1492DF344DFE/170705%20PRO-Ergo%20VERSIE%20juli%202017.pdf

Hubert, M. (2003). [The practice of needs assessment for the supply with technical aids in The Netherlands]. *Die Praxis Der Bedarfsermittlung Zur Hilfsmittelversorgung in Den Niederlanden.*, *42*(1), 52–59. Ovid MEDLINE(R) <2003 to 2004>.

Kiresuk, T. J., Smith, A. E., & Cardillo, J. E. (1994). *Goal attainment scaling: Applications, theory, and measurement.*

Leland, N. E., Crum, K., Phipps, S., Roberts, P., & Gage, B. (2015). Advancing the Value and Quality of Occupational Therapy in Health Service Delivery. *The American Journal of Occupational Therapy*, *69*(1), 6901090010p1-6901090010p7. https://doi.org/10.5014/ajot.2015.691001

Mahoney, F. I., & Barthel, D. W. (1965). Functional evaluation: The Barthel Index. *Maryland State Medical Journal*, *14*, 61–65.

Mor, V. (2004). A comprehensive clinical assessment tool to inform policy and practice: Applications of the minimum data set. *Medical Care*, *42*(4 Suppl), III50-9. Ovid MEDLINE(R) <2003 to 2004>.

National Institute for Health and Care Excellence. (2023). *Indicator development programme: The NICE menu of indicators*. https://www.nice.org.uk/standards-and-indicators/indicators

Ontario Health. (2022). *Collaborative Quality Improvement Plan*. https://e-qip.ca/wp-content/uploads/2022/01/cQIP_OHT_Indicators_Technical_Specifications_EN.pdf

OPTUM. (2020). *Physical Therapy and Occupational Therapy Initial Evaluation and Reevaluation Reimbursement Policy*. https://www.myoptumhealthphysicalhealth.com/Documents/Reimbursement%20Policies/0044_PT_OTReimbursementPolicy.pdf

Pardasaney, P. K., Deutsch, A., Iriondo-Perez, J., Ingber, M. J., & McMullen, T. (2018). Measuring Inpatient Rehabilitation Facility Quality of Care: Discharge Self-Care Functional Status Quality Measure. *Archives of Physical Medicine and Rehabilitation*, *99*(6), 1035–1041. Ovid MEDLINE(R) <2018>. https://doi.org/10.1016/j.apmr.2017.02.023

Petrig, A., Walther, R., Siegenthaler-Taschanz, K., Roth, F., Deppeler, S., & Züger, I. (2021).

Bericht der Paritätischen Kommission Qualität EVS/SRK/santésuisse 2020.

Santésuisse. (2021). *Messprogramm in der Ergotherapie unterstützt kontinuierliche Qualitätsverbesserung*. https://www.santesuisse.ch/politik-medien/themen/qualitaet#content-tab-5

Trundy-Whitten, L. (2018). *New Patient Driven Payment Model from CMS*. https://www.berrydunn.com/news-detail/new-patient-driven-payment-model-from-cmswhat-to-expect-and-what-to-do

U.S. Centers for Medicare and Medicaid Services. (2023). *What's Medicare?* https://www.medicare.gov/what-medicare-covers/your-medicare-coverage-choices/whats-medicare

Valenzano, M. (2019, August 29). *Is MIPS Good or Bad for PTs, OTs & SLPs? Your Medicare Update.* FOXRehab. https://www.foxrehab.org/mips-documentation-patient-care/

Veritas Health Innovation. (2023). *Covidence systematic review software* [Computer software]. www.covidence.org

Weise, A. (2016). Ergotherapeutische Leitlinien. *Ergotherapie*, *2016*(9), 7.

World Federation of Occupational Therapists. (2023). *QUEST Quality Evaluation Strategy Tool: An essential guide for using quality indicators in occupational therapy*. https://wfot.org/checkout/23421/30025