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## **Development of a Quality Indicator Framework for Occupational Therapy**

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### **Abstract**

Occupational therapists are increasingly expected to implement and monitor indicators of occupational therapy quality performance. Goals of quality measurement and improvement include enhancing satisfaction of the end-user, optimising the efficient use of resources and improving health outcomes. A Quality Indicator (QI) Framework with 56 generic indicators was developed for occupational therapy by the World Federation of Occupational Therapists for selecting, organizing and reporting on quality indicators in a structured and meaningful way. A consultation involving 46 occupational therapists from 21 countries indicated the QI Framework shows promise to help occupational therapists select relevant and useful measures to evaluate their occupational therapy services. Work will therefore continue to further evaluate and refine the QI Framework, as well as develop resources to support the implementation and use of the tool.

Keywords: evaluation; performance measurement; quality improvement; professional issues

3388 words

## Introduction

The importance of quality measurement is paramount as health and social systems experience significant shifts and transformations, driven by factors such as rising costs, changing demographics, service inequities, increasing litigation and inadequate accountability (Arah, Westert, Hurst & Klazinga, 2006; Kotter, Bloziki & Scherer, 2012). Monitoring of quality indicators is central to a system's sustainability, responsiveness and capacity to drive improvements to attain tangible results (Truchon, 2017). Goals of quality measurement and improvement include enhancing satisfaction of the end-user, optimising the efficient use of resources and improving health outcomes (Berwick, Nolan & Whittingdon, 2008).

The use of accurate and appropriate measures to evaluate the quality of service provided by occupational therapists is essential to promote the implementation of evidence-based decisions that lead to desired health outcomes. Effective evidence-based decision-making in occupational therapy is dependent upon critical thinking and problem solving, awareness of end-user needs and priorities, as well as consideration of data gathered through objective measurement (Kröger et al, 2007). Opportunity exists for advancing the profession by using quality measurement to demonstrate how occupational therapy contributes to desired population outcomes within our changing environment. Conversely, if efforts are not taken to demonstrate value, occupational therapy is at risk of becoming marginalized (Leland, Crum, Phipps, Roberts, & Gage, 2015; Olin et al, 2014; Sandhu, Furniss, & Metzler, 2018).

Quality performance in occupational therapy relates to the degree to which services increase the likelihood of desired outcomes and are consistent with professional knowledge and evidence-based practice (Hanefeld, Powell-Jackson & Balabanova, 2017; Mainz, 2003). Occupational therapists are increasingly expected, as part of their professional obligations, to implement and monitor indicators of occupational therapy service to improve quality performance (Leland et al, 2015; Roberts & Robinson, 2014; Sandhu, Furniss, & Metzler, 2018; Swedish Association of Occupational Therapists, 2011). Indicators provide a quantitative measure of quality service at a specific point in

time. Reviewing performance measurements over time promotes transparency and accountability by allowing the impact of changes to improve quality of occupational therapy services to be evaluated (Laverdure, McCann, McLoone, Moore & Reed, 2018).

As quality is a broad and subjective term, many factors may potentially be measured when using indicators to evaluate occupational therapy services. However, no gold standard exists for quality indicator selection and development (Kotter et al, 2012). The use of a conceptual framework is recommended in the research literature as a useful device for selecting, organizing and reporting on quality indicators in a structured and meaningful way (Arah, Klazinga, Delnoij, Ten Asbroek, & Custers, 2003; Arah et al, 2006; Brown, 2009; Grimmer et al, 2014). The absence of such a framework may result in the inconsistent and potentially inappropriate use of an eclectic mix of indicators, with no clear rationale for their selection (Brown, 2009).

An occupational therapy Quality Indicator (QI) Framework was developed as an initiative of the World Federation of Occupational Therapists (WFOT), with a purpose of providing a guide for occupational therapists practicing in countries around the world to select a coherent, relevant and balanced set of quality indicators to monitor and improve the quality of services they provide. This paper describes the development and design of the Quality Indicator (QI) Framework, discusses the results of an initial consultation regarding the utility of the tool and outlines next steps for further development of the Framework.

### Development of the QI Framework

The development of the QI Framework was initiated following a WFOT review of the use of quality indicators in health care. This review identified several recommendations for future work on the topic for the occupational therapy profession, including a project to define an international set of indicators that describe quality occupational therapy in an interdisciplinary practice context. An international working group with eleven members was assembled to work on the project in early 2017 with representation of occupational

therapists with experience with quality measurement from diverse geographic and practice areas. Meetings of the group were held by Skype on a monthly basis to complete the work of the project. The efforts of the working group culminated in the development of the draft QI Framework described in this paper.

### Design of the WFOT QI Framework

The WFOT QI Framework provides a basket of indicators from which occupational therapists may choose to evaluate quality. A systematic process is used with the QI Framework to ensure consideration of elements of quality most relevant to an occupational therapy practice setting for selecting and monitoring indicators. By providing a comprehensive range of indicators for quality issues of importance to the occupational therapy profession, the QI Framework provides choice for measuring service quality using indicators that represent areas of greatest priority to occupational therapists and the end recipients of their services.

The QI Framework is outlined using a matrix model design, with *quality dimensions* described along the horizontal plane and *quality perspectives* defined on the vertical axis (Table One). The QI Framework therefore outlines what aspects or dimensions of quality of an occupational therapy service require measurement, as well as defines different perspectives for determining how quality is measured (Arah et al, 2003; Arah et al, 2006). Generic indicators for measuring quality of occupational therapy services are identified for each cell of the Framework. Indicators review quality at an aggregate level and are explicitly defined, usually expressed as a number or percentage relating to a performance standard.

Insert Table One

To ensure that QI Framework measures are consistent with the basic tenets of occupational therapy, the following assumptions are made regarding the services monitored by the indicators:

- Occupational therapy promotes health and well-being through occupation (WFOT, 2010a);
- Occupational therapy promotes an inclusive society in which all persons benefit from equitable opportunities for participation (adapted from WFOT, 2010b); and
- Occupational therapy operates within a systems approach to influence the interaction of person, environment and occupation for the enhancement of occupational participation (WFOT, 2010a).

### Quality Dimensions

*Quality dimensions* are definable and measurable aspects of health services that are related to restoring, improving or maintaining health (Arah et al, 2006). Quality dimensions identified in the research literature were reviewed by the WFOT Expert Working Group to select those most relevant to occupational therapy services to include in the QI Framework. The selected dimensions are listed in Table Two.

### Insert Table Two

For the purposes of the QI Framework, the quality dimension of *accessibility* refers to the ease of obtaining occupational therapy services from a physical, financial or social perspective (Kelley & Hurst, 2006). *Appropriateness* requires that the right occupational therapy services are delivered by the right person, at the right time, to the right person in the right place (De Schreye, Houttekier, Deliens, & Cohen, 2017; Kelley & Hurst, 2006). The optimal use of resources in occupational therapy to yield maximum benefits is needed for the quality of *efficiency* (Arah et al, 2006). *Effectiveness* is the degree of achieving desired outcomes that is dependent on the provision of evidence-based services consistent with occupation-focused and strength-based enablement principles of occupational therapy practice to those who could benefit (Arah et al, 2003; Kelley & Hurst, 2006).

The ability to meet legitimate expectations of the end recipient for occupational therapy services is considered under the quality dimension of *person-centredness*. Person-centredness requires that the experience of receiving occupational therapy services is

considered from the standpoint of the end recipient of the service (Arah et al, 2006). This perspective is congruent with the humanist philosophy that guides occupational therapy practice to establish a person-centred relationship with the individuals, families, groups, communities, organisations and populations served by the profession (WFOT, 2010a). A wide variety of terms are used in occupational therapy practice to describe the end recipients of occupational therapy services; in naming the quality dimension as *person-centred*, it is acknowledged that *person* may be used interchangeably with patient, client, consumer, service user or any other term that is best suited for the occupational therapy service.

The quality dimension of *safety* considers the degree to which risk enablement and avoidance of harm is considered in the provision of occupational therapy services (Arah et al, 2006; Kelley & Hurst, 2006). Lastly, inclusion of *sustainability* as a quality dimension reflects the increasing importance of quality initiatives that maximise continued improvement and extend quality occupational therapy services into the future, by using resources to deliver health care today without compromising the health of current or future generations (WFOT, 2018). Sustainable practices address economic, social, as well as environmental agendas and reflect core occupational therapy values and beliefs regarding client-centredness, empowerment and preventative intervention (WFOT, 2012).

### Quality Perspectives

Consistent with the Donabedian model of health quality (1966), it is expected that occupational therapy indicators measure quality by evaluating structure, process or outcome. Each type of indicator evaluates quality from a different perspective, as outlined in Table Four (Ayanian & Markel, 2016; Donabedian, 1966; Schiff & Rucker, 2001). *Structure* indicators assess environmental factors and resources required to deliver quality occupational therapy services; *process* indicators evaluate how occupational therapy is delivered to ensure quality service; and *outcome* indicators measure changes occurring as the result of occupational therapy intervention (adapted from Donabedian, 1966).

Each type of indicator has inherent advantages and disadvantages for effective quality measurement. For example, structural indicators such as the presence of required resources for quality service may be easier to measure in some contexts, but do not ensure use of appropriate process to attain quality outcomes. Indicators that measure process are useful only to the degree that the processes measured are known to be needed and appropriate for the outcomes desired. Measurement of outcomes may be complicated by difficulties in isolating the variable under investigation from other potential influencing factors (Hanefeld et al, 2017; Kelley & Hurst, 2006). A perceived lack of control over the results of outcome indicators therefore may result in limited efforts towards quality improvement (Gort, Broekhuis & Regts, 2013).

### Generic Indicators

The development of a QI Framework for occupational therapy by the WFOT international working group was challenged by the wide array of practice areas and populations served by occupational therapists, as well as the differences in the way occupational therapy is provided around the world as result of factors such as government policy and resource allocation. The QI Framework therefore identifies high level, *generic* indicators that may be applicable to the services provided by all occupational therapists, regardless of location, settings and populations served. The generic indicators are appropriate for practice in areas of differing levels of economic development, from low income countries to highly resourced nations. The indicators reflect the profession's beliefs in the value of occupation and the importance of occupational performance and engagement (WFOT 2010a). The indicators are also relevant from a population, organization, team and/or individual perspective regarding the quality of services provided.

The QI Framework includes 56 generic indicators. The indicators are outlined for each of the seven quality dimensions from the perspective of structure, process and outcome, Given the challenges of measuring quality and the diversity of occupational therapy practice, a variety of structure, process and outcome indicators are provided to offer



choices for how quality of occupational therapy services may be measured for each dimension. As an example, an indicator evaluating structure to assess person-centredness of occupational therapy services may determine the availability of staff and resources to enable shared decision-making, informed choice and enabling participation in occupational interventions. Process indicators for the same quality dimension may examine audit findings regarding compliance of occupational therapists with approaching all persons receiving their services with respect. Outcomes assessed may include the percentage of service recipients that report occupational therapists treat them with respect, kindness, compassion, understanding and honesty. Additional examples of generic indicators for different quality dimensions are outlined in Table Three.

Insert Table Three

#### Implementation of Quality Indicators

A multi-step process is recommended to use the QI Framework to identify and implement the use of quality indicators in an occupational therapy practice setting, as outlined in Figure One. The process involves consideration of priority issues within a practice in order to identify indicators that have greatest relevance for promoting quality performance. Essential elements of the process include: specifying a clear purpose and goals for the quality indicators; incorporating evidence, expertise and end user perspectives while considering context and variation; and identifying data collection and management processes (Bobrovitz, Parrilla, Santana, Straus, & Stelfox, 2013; Gort et al, 2013).

Insert Figure One

#### Step One: Describe the practice

The first step of the quality indicator implementation process involves explicitly defining an occupational therapy practice. This step is critical to ensure a common and consistent understanding of the services to be monitored by the quality indicators. The practice is described by considering factors such as the mission of the organization, population(s) served, type of service(s) offered, practice location(s), setting(s) and

practitioners involved in service delivery. High risk, high volume and high impact activities are identified because of their potential significant influence on quality of service.

#### Step Two: Understand the context

A SWOT analysis examines Strengths (favourable attributes contributing to the mission); Weaknesses (internal factors impeding quality and service); Opportunities (beneficial external factors and trends); and Threats (external conditions that could cause harm or weaken chances to be successful). A SWOT analysis undertaken in step two is critical to understanding the context in which the practice operates and examining the internal and external factors that impact the quality of occupational therapy services provided.

#### Step Three: Identify quality goals

The results of the SWOT analysis are used in step three to determine the goals and priorities of the occupational therapy practice for quality monitoring and improvement. The priorities may address how risks and threats to service quality can be avoided. Priorities can also build on strengths to develop opportunities identified in the SWOT analysis to improve service.

#### Step Four: Select generic indicators

Step four involves identifying the generic indicators most appropriate for monitoring the identified priority quality goals. Each of the quality dimensions in the quality framework is reviewed during this step for relevance and importance in monitoring quality goals and priorities. Generic indicators may be selected relating to structure, process and outcome to evaluate different perspectives of the issue.

#### Step Five: Define practice-specific SMART indicators

In step five, selected generic indicators are explicitly defined as *practice specific indicators*. Practice specific indicators meet the unique needs of the occupational therapy practice and reflect factors such as the quality priorities of the setting,

perspectives of end-users, research evidence, consensus opinion, requirements and expectations of the national or regional health system, as well as the data and data measurement resources available to monitor quality issues.

To be effective in driving change for quality improvement, practice specific indicators must include a number of key characteristics. For example, the indicator must be a valid measure that provides useful information regarding an important factor that influences the quality of occupational therapy service (Laverdure et al, 2018). The indicator must be clearly stated to allow reliability over time and among different evaluators and settings (Kotter et al, 2012). Actionability and controllability are also important considerations to ensure opportunity for change in the factors that influence quality performance (Gort et al, 2013; Mainz, 2003). Desirable elements of practice specific indicators to promote quality occupational therapy services are summarized using the *SMART* acronym in Table Four. The concept of *SMART* is well recognized internationally (Macleod, 2012) and is used to promote understanding and use of the criteria.

Insert Table Four

#### Step Six: Implement indicators and trend data

The sixth and final step involves implementing the measurement of the SMART practice specific indicators to monitor the quality of service provided by an occupational therapy practice. The indicators are first trialed and refined as necessary to ensure data collection is feasible and the information obtained is valid and reliable. The development of an implementation strategy is recommended for the successful real-life application of quality indicators (Kotter et al, 2012). Monitoring of the indicator data can then assess the scope of the priority quality issues and identify trends that may be shaped by different factors. Through regular review of indicator results, the impact of implementing quality improvement initiatives can be measured.

#### Consultation Study

To obtain feedback regarding the potential utility of the draft QI Framework, a consultation was undertaken by members of the international working group at the 2018 WFOT Congress held in Cape Town, South Africa. During the two-hour workshop, volunteer participants were given the opportunity to work in small groups to use the draft QI Framework to develop practice specific indicators for a quality priority in their practice. A written feedback form completed after the workshop was used to collect information from participants regarding the potential use of the tool. The form requested demographic information regarding the role, practice setting and home country of each participant. A five-point Likert scale was used to rate the potential utility of the QI Framework, with higher scores representing greater usefulness. Participants were also given opportunity to provide comments regarding the QI Framework.

Completed feedback forms were received from all 46 delegates that participated in the consultation. The data collected indicated participants attended from a cross-section of 21 low, medium and high-income countries. Many participants had multiple roles in their occupational therapy practice. Fifty-seven percent of participants worked in clinical practice, with 24 percent identifying as managers or administrators. Forty percent of participants were educators and 13 percent had research roles. The primary practice setting of the participants was most frequently an educational facility (33 percent), followed by community practice (26 percent), acute care (22 percent), rehabilitation facility (15 percent), private practice (11 percent) and other settings (13 percent).

While participants were noted to vary significantly in their knowledge and background regarding quality measurement, all small groups were successful in completing the exercise to identify practice specific indicators using the QI Framework for their identified quality issue. When asked to rate the potential usefulness of the QI Framework, an average rating of 4/5 was provided by participants. Positive comments related to the potential for use of the framework to promote quality practice; allow comparison of practice across jurisdictions; collect culturally responsive and sensitive data; and provide evidence to support the value of occupational therapy when speaking with funders and administrators. Concerns that may limit use of the tool included:

difficulties understanding concepts associated with quality measurement; and the need for time and money to implement the use of quality indicators. Some participants stated that additional education and support was needed for them to be comfortable with using the QI Framework.

Feedback from this initial consultation did not necessitate substantive revision of the design and content of the draft QI Framework, although it was recognized by the Expert Working Group that additional pilot testing of the Framework was necessary to receive additional input. Suggestions of the participants were utilized for the design of educational resources for use during the pilot testing, including the development of a QI Framework Manual.

### Next steps

More intensive pilot testing of the QI Framework is planned by the international project working group. Objectives for the pilot testing include trialing the use of the QI Framework in diverse locations around the world with occupational therapists from different types of practice settings. Feedback provided by the participants will be used to further refine the QI Framework and the supporting resources to assist occupational therapists with design and implementation of quality indicators for their practice.

### Summary and Conclusions

Occupational therapists want and need to evaluate the quality of services they provide. In a climate of change within the health and social systems that occupational therapists operate, the provision of objective data is integral to position the profession to provide valued and required services. The QI Framework provides a tool and process to ensure a comprehensive review of issues that may impact the provision of quality occupational therapy services.

The results of an initial consultation regarding the QI Framework indicates that the tool shows promise in helping occupational therapists select relevant and useful measures

to evaluate occupational therapy services. The work of the WFOT Expert Working Group therefore will continue to further evaluate and refine this tool. Next steps in the evaluation of the QI Framework include pilot testing of the tool in varied occupational therapy practice settings around the world, plus development of resources to support its implementation and use. Through continued work on the QI Framework, it is hoped that occupational therapists will be enabled to meet their obligations to improve service provision and demonstrate accountability for the quality of occupational therapy they provide.

Tables

Table One: Quality Indicators Framework

Quality Dimensions								
Quality Perspectives		Accessibility	Appropriateness	Effectiveness	Efficiency	Person-centredness	Safety	Sustainability
	Structure							
	Process							
	Outcome							

Table Two: Quality Dimensions

<b>Accessibility</b>	The ease in <u>obtaining occupational therapy services</u> from a physical, financial or social perspective.
<b>Appropriateness</b>	The degree to which <u>right</u> occupational therapy services are delivered by the <u>right</u> person, at the <u>right</u> time, to the <u>right</u> person in the <u>right</u> place.
<b>Effectiveness</b>	The degree of <u>achieving desirable outcomes</u> , given the correct provision of evidence-based and occupation-focused health care services to all who could benefit.
<b>Efficiency</b>	The <u>optimal use</u> of resources in occupational therapy to yield maximum benefits.
<b>Person-Centredness</b>	The <u>experience</u> of receiving occupational therapy services from the perspective of the end recipient of the service.
<b>Safety</b>	The degree of <u>reduction of risk and avoidance of harm</u> in the provision of occupational therapy services.
<b>Sustainability</b>	The use of resources for occupational therapy services <u>without compromising the health</u> of current or future generations.



Table Three: Sample Generic Indicators

Quality Dimensions								
Quality Perspectives		Accessibility	Appropriateness	Effectiveness	Efficiency	Person-centredness	Safety	Sustainability
	Structure		Percentage of occupational therapists participating in continuing professional development.					
	Process				Compliance with productivity expectations.			
	Outcome						Frequency of incidents involving a breach of duty of care.	

Figure One – Quality Indicator Implementation Process

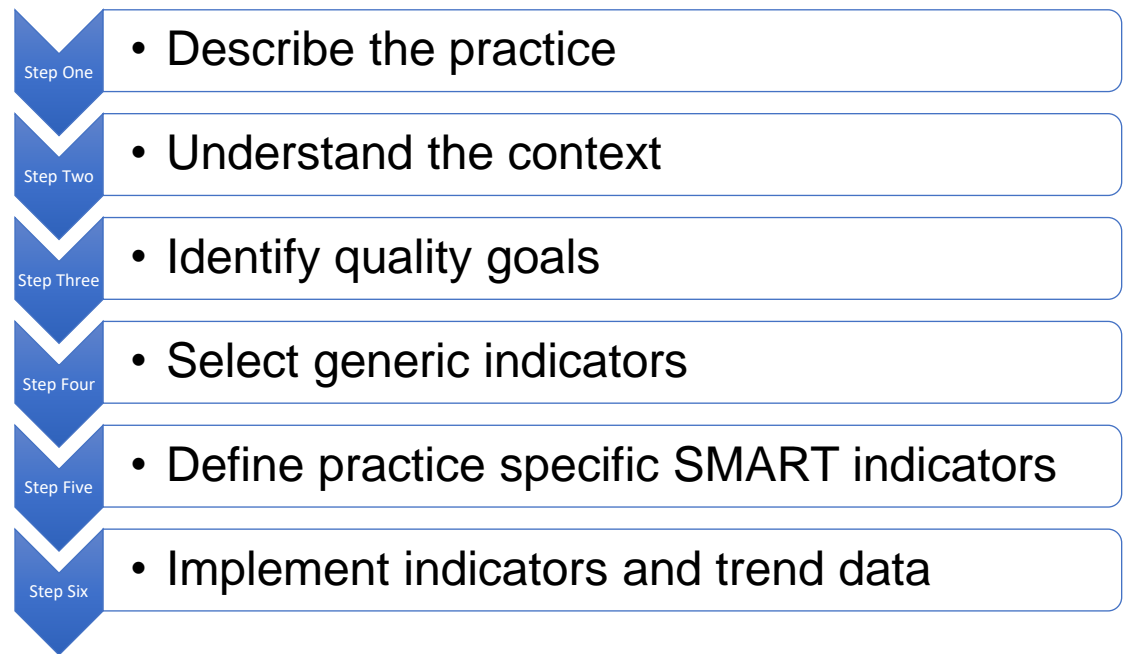


Table Four: Quality Indicator SMART Criteria

SMART Criterion	Description
Specific	<ul style="list-style-type: none"> <li>• The indicator is well defined and clear;</li> <li>• “What”, “why”, “who”, “where” and “when” are explained.</li> </ul>
Measurable	<ul style="list-style-type: none"> <li>• The chosen measure is valid, reliable and discriminates well, with high specificity and sensitivity;</li> <li>• The cost or burden of measurement is acceptable;</li> <li>• Comparable data is available regionally, nationally and/or internationally.</li> </ul>
Agreed upon	<ul style="list-style-type: none"> <li>• The indicator is based on a standard of care;</li> <li>• Strong evidence exists that what is measured affects important outcomes as measured by high quality research;</li> <li>• When scientific evidence is lacking, the standard is determined by an expert panel in a consensus process based on experience.</li> </ul>
Relevant	<ul style="list-style-type: none"> <li>• The indicator provides useful information;</li> <li>• Variability exists in the performance of the measure.</li> </ul>
Timely	<ul style="list-style-type: none"> <li>• The indicator addresses issues of current and future importance;</li> <li>• Opportunity currently exists to influence change or maintenance of a current standard of service is critical.</li> </ul>

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