DENTAL QUALITY ALLIANCE™
Improving Oral Health Through Measurement

Request for Proposal

Patient Reported Outcome Performance Measures (PRO-PMs) based on Oral Health Related Quality of Life (OHRQoL)

Project Name: Testing Dental Quality Alliance (DQA) PRO-PMs

Deadline for Receipt of Proposals: March 15th, 2024, 5 PM CENTRAL

Earliest Possible Award Date: May 15th, 2024

Issued by: The Dental Quality Alliance (DQA)

Questions: dqa@ada.org

Project Overview

The Dental Quality Alliance (DQA) is seeking proposals, including timeline and budget, to conduct feasibility, reliability and validity testing that further refines DQA-developed patient-reported outcome performance measures (PRO-PMs) as system, program or plan-level PRO-PMs. The innovative PRO-PMs are derived from the Oral Health Impact Profile (OHIP)-5, which is a short, validated survey instrument that is increasingly being used to assess oral health outcomes based on patient report.

The DQA has identified PRO-PMs as a gap in oral healthcare quality measurement and aims to address this gap by developing PRO-PMs. The focus of this RFP is to develop PRO-PMs that are intended to be used as **oral healthcare quality measures for the adult population, with measurement at the program (e.g., Medicare/Medicaid) and plan level**. Criteria for feasibility, reliability and validity of PRO-PMs established by the National Quality Forum (NQF) will be adapted at the state/program/plan level to serve as a basis for evaluating proposals submitted in response to this RFP.[1] [2] [3]

The DQA requests proposals from diverse stakeholders, as well as organizations that have an interest in dental quality measurement, with the capability to conduct testing of PRO-PM feasibility, reliability, and validity at the plan and program levels.

Project Scope

The DQA is seeking proposals that will:

1. Test the feasibility, reliability, validity, and interpretability/usability of **6 PRO-PMs as program and plan population health status quality measures for the adult population** derived from the OHIP-5: five measures corresponding to the individual items in the OHIP-5, and one composite measure, respectively. Include data such that at least 4 entities can be compared. [The sample size of patients within each entity should be proposed by the respondent as part of the testing methodology.]
2. Include both program-level (e.g., Medicaid, Medicare) and plan-level data with separate testing at each level.
3. Include commercially-insured, Medicaid-covered, and uninsured populations with evaluation of the measure performance by coverage type.
4. Include sufficient age representation across the adult population such that measure performance can be evaluated for both Medicare (65 years and older) and non-Medicare eligible populations (18-64 years).
5. Stratify performance scores by population characteristics, such as age, race, ethnicity, and geographic location.

Notes:

1. This project will require survey-based data collection. Data previously collected may be considered if it is demonstrated to meet testing criteria.
2. The primary focus of the project is a point-in-time comparison between reporting entities rather than assessing performance over time. However, the DQA wishes to understand the feasibility of assessments of performance over time. If the respondent wishes to further validate measures to assess performance over time, such proposals are welcome; however, the budgetary and time frame impacts [needed for repeated surveys] should be clearly indicated.
3. No specific budget is included in this RFP. Each proposal will be evaluated independently based on data collection needs, appropriateness and completeness of testing methodology, and experience of identified project personnel. Proposed budget should be aligned with effort noted in proposal. The DQA does not support indirect costs.

Project Goals

Propose and implement testing methodology to:

1. Test each individual item of the OHIP-5 and a single composite summary score as distinct performance measures (for a total of 6 measures)) and evaluate the appropriateness for use at the program and plan levels as indicators of population health status.
2. Establish the validity, reliability and feasibility of the PRO-PMs at the population level as: (1) required: a point in time health status measure for comparisons between populations (e.g., between 2 state Medicaid programs) and (2) optional: to assess change over time for a program or plan.
3. Establish the interpretability of the measure score at the population level.[4]

Notes:

- **Prior to starting data collection and testing on the full sample, pilot testing is needed to evaluate the appropriate recall period** used in the OHIP-5 question wording (i.e., asking the survey respondents to consider the past 1 month versus 12 months). Specifically, recall periods of 1 month and 12 months should be evaluated.
- Although explicit testing of comparisons over time is not required, the project team may wish to assess the recall period used OHIP-5 question wording relative to the repeated measurement intervals (i.e., how often the survey is conducted to evaluate performance over time) identified as being feasible for performance measure purposes. For example, if feasibility suggests administering the survey annually (versus more often), does this influence the assessment of the recall period?
- The criteria for feasibility, reliability and validity of PRO-PMs established by the National Quality Forum (NQF) should guide the testing methodology and evaluation of results.[1 2 3]

Project Deliverables

1. Gain IRB approvals.
2. Protocols for testing oral health PRO-PMs at the program and plan levels that include data collection and testing methodologies. Protocols may be guided by existing methodologies,[2] but should be tailored to oral health care performance measurement for dentistry (taking into account the characteristics of dental care delivery, organization and data systems) at the program and plan levels.
3. Weekly updates to DQA staff on progress each week.
4. Twice monthly updates to DQA Committee. This partnership ensures that knowledge gathered through an iterative testing process is used to refine and finalize the measure specifications. Measure specifications provided may be considered as draft. Testing is expected to be an iterative process to allow the findings as they occur to inform next steps as well as to identify where modifications may be needed. Please think about an integrated and iterative approach to evaluating feasibility, reliability and validity rather than viewing these as separate and distinct phases.
5. Reports of the testing results on the feasibility, validity, reliability, interpretability of the PRO-PM measure scores and applicability at the program and plan levels as population health status indicators as (1) a point in time health status measure comparing measured entities (required) as well as (2) comparisons between entities and to assess change over time for a measured entity (optional).
6. Reports will include but are not limited to an interim report that will go out for public comment and a comprehensive final report that includes all testing protocols, all data results (interim and final), and findings.
7. Final measure specifications for any measures that pass established criteria.
8. Presentation of interim and final findings at DQA meetings.
9. Collaborating with the DQA staff, publish the results of the project in peer-review journals.

Eligibility Information/required qualifications

a) Eligible applicants should have and describe:

- affiliation with an organization that allows for the required data collection (or access to appropriate data), data management, and implementation of testing protocols, including an Institutional Review Board that can review and approve the study;
- teams and partnerships that include appropriate expertise (e.g., experience with survey-based OHRQOL measurement, quality measurement development or testing, analytic methods described in proposal, etc.);
- previous experience testing measures or conducting similar research; and
- ability to implement testing protocols and produce the required reports.

b) Optional:

- Preference will be given to applicants that demonstrate experience and track record in patient reported outcomes.
- Have experience in data management, analytics, data collection of large sample sizes, big data analyses and data collection tools (example REDCap, Qualtrics, etc.), particularly with respect to patient-reported data.
- Demonstrate similar experience with respect to instrument reliability and validity of PROMS in clinical applications.

Guidelines for information to be included in proposals

- Name and contact information of principal investigator
- Biographical sketches of PI and proposed co-investigators
- Proposed methodology with sampling methodologies and statistical tests that will be used (not to exceed 12 pages double spaced with 1" margins. Use Appendices for bio sketches, references etc.)
- Detailed budget
- Proposed timeline with milestones
- Letters of support from co-investigators and project partners
- Conflict of Interest declaration

DQA Background

The Dental Quality Alliance is an organization of major stakeholders in oral health care delivery that uses a collaborative approach to develop oral health care measures. The mission of the DQA is to advance performance measurement as a means to improve oral health, patient care, and safety through a consensus-building process.

Oral healthcare measures are routinely being used in quality improvement and accountability initiatives. The DQA has developed both adult and pediatric measures. DQA measures, to date, have primarily been specified to be calculated using claims data. They have been designed for use by public programs (e.g., Medicaid and CHIP), state Marketplaces, dental benefits administrators, and managed care organizations. DQA measures have been formally adopted by the Centers for Medicare and Medicaid Services, the Health Resources and Services Administration, state Medicaid programs, and state Marketplaces.

Most of the current DQA measures, as well as other dental measures, address utilization and processes of care due to limitations of claims data for measuring outcomes.[5 7] This project aims to advance quality measurement by developing patient-reported outcomes-based performance measures.

More information on the DQA, its members, and its quality measurement activities can be accessed at the DQA website (www.ada.org/dqa).

OHIP-5 as the Basis for PRO-PM Development

The increasing emphasis on patient-centered care has been accompanied by increasing interest in developing measures, particularly outcome measures, based on patient-reported data. The NQF notes that patients are an important source of information with respect to various dimensions of care.[2] The National Quality Measures Clearinghouse (NQMC) defined an outcome quality measure as "a health state of a patient resulting from healthcare". Patient-reported outcomes have been identified as important for measuring outcomes that are meaningful to patients, engaging patients in their care and promoting shared decision making.

Despite the increasing emphasis on patient-centered and outcomes-focused measurement, patient-reported outcome measures are not widely used for routine quality assessment in clinical care. The DQA's interest in exploring patient-reported measurement stemmed in large part from the lack of outcome measures and the difficulty in measuring oral healthcare outcomes using currently available clinical record, administrative, or claims data.

The DQA intends to follow the NQF definitions for the following concepts:

- *Patient-reported outcome (PRO):* information on the patient, told by the patient, without interpretation
- *Patient-reported outcome measure (PROM):* instrument or tool used to collect information told by the patient without interpretation
- *Patient-reported outcome-based performance measure (PRO-PM)*: way to aggregate the information collected from a PROM into a reliable and valid measure of performance.

There are several survey instruments, or patient-reported outcome measures (PROMs), that collect oral health outcome-related information from patients. After conducting an environmental scan and reviewing the different survey instruments,[8] the DQA selected the Oral Health Impact Profile (OHIP)-5 as the instrument, or Patient Reported Outcome Measure (PROM), to serve as the basis for developing a PRO-based Performance Measure (PRO-PM).

Different versions of the Oral Health Impact Profile OHIP [4 6 7] have been widely used as an OHRQoL instrument globally and the psychometric properties of dimensionality, reliability, and validity in the adult general population have been validated.[8] The OHIP-5 is also included in the CMS Medicare Current Beneficiary Survey.

The OHIP-5[11] is a short version of the OHIP that is comprised of five questions that correspond to four domains of oral health: “Orofacial pain (painful aching)”; “Orofacial Appearance (uncomfortable about appearance)”; “Oral function (difficulty chewing)”; Oral function (less flavor in food)”; and “Psychosocial Impact (difficulty doing usual jobs)”. The OHIP-5 has one composite score. The OHIP-5 was selected for this project because it captures oral healthcare outcomes important to patients using a short survey that is expected to be more feasible to implement than longer questionnaires.

Research Objectives

The testing effort must support refining and finalizing the measure specifications. Table 1 below provides a list of the testing requirements that must be addressed in the proposal and answered through the testing effort with empirical data generated through this project. **The proposal must describe in detail how the researchers plan to address each requirement**.

This document provides guidance regarding the testing of the PRO-PM recommended by the Dental Quality Alliance (DQA). Table 1 provides an overview of the considerations that need to be addressed to test the feasibility, validity, reliability, and usability of PRO-PMs.

Definitions:

Feasibility

A measure will be considered feasible if the data necessary to score the measure are readily available or can be collected without undue burden.

Reliability

Reliability is the degree to which the measure is free from random error.[2] Reliability testing demonstrates the measure data elements are repeatable, producing the same results a high proportion of the time when assessed in the same population in the same time period and/or that the measure score is precise.[3] Good reliability allows for meaningful comparisons across programs and plans.

Validity

Validity demonstrates extent to which a measure truly measures that which it is intended and designed to measure. Face validity can be established though expert consensus. Evidence from the literature for comparable measurements or empirical evaluations of correlations to related concepts can provide additional support.

Usability

Assessing usability assures that the information produced by the measure is meaningful, understandable, and useful to the intended audience. More information is available from the NQF.[3]

Table 1. Testing Requirements

Process	Requirement
Methodology for data collection and evaluation	• Assess & document whether the empirical data, literature and/or guidelines related to OHIP-5 support the measure concept. • Use the NQF Attribute Grid for PROMs to ensure and document that the OHIP-5 has been sufficiently tested and forms an appropriate basis for developing PRO-PMs.[11] • Describe additional demographic data that will be collected that can be used to stratify the measure scores by patient characteristics to enable evaluation of disparities as well as the need for addressing case mix differences when comparing performance scores. At a minimum, age, gender, race, ethnicity, and geographic location should be considered. • Describe the methodology, including sample size and sampling, to conduct a pilot test to evaluate the appropriate recall interval for use in the OHIP-5 survey instrument. Recall periods of 1 and 12 months should be evaluated. • Describe how OHIP-5 data will be collected: ○ Describe the population that will be used for testing. Collection of data across a minimum of 4 entities/programs is required. Ideally, commercially insured, Medicaid-covered, and uninsured populations will be included with separate evaluations by coverage type. ○ Describe how minimum enrollment criteria for denominator inclusion will be evaluated to balance sufficient experience in the plan or program for outcomes-based measurement with potential reductions in generalizability due to denominator dropout with longer enrollment requirements. ○ Describe the sampling methodology that will be used to promote a patient sample that is representative of the target population for each measured entity (e.g., each program or plan included). Include power calculations or other statistical support for the proposed sample size(s). ○ Describe the mode(s) of administration. If more than one mode is used, describe how the equivalency of the performance scores will be assessed. ○ Describe the strategies that will be used to promote acceptable response rates and promote a representative sample. • Describe additional characteristics of survey methodology, including timeline of collection, data quality control methods, and data completeness assessments.

	• Describe the methods used to assess the representativeness of the respondents to the target population. • Describe the process for ensuring that all data elements necessary to define numerator, denominator and exclusions will be collected and recorded. • If proposing to use previously collected data, describe the methods used to collect the data (addressing the above considerations of sampling methodology, modes of administration, response rates, data quality control, etc.) and the applicability of these data for a program/plan level measure focused on adults. • Provide plan for gaining IRB approvals to ensure HIPAA compliance and patient confidentiality.
Feasibility, Reliability, and Validity Testing	• Testing will include each of the five items in the OHIP-5 as performance measures as well as the overall composite as a performance measure, for a total of 6 PRO-PMs. • Review evaluation criteria set forth by NQF to assess validity, reliability, feasibility, and usability as established and laid out in the NQF evaluation criteria.[9] **Feasibility** • Describe how burdens to data collection and analysis before and during testing will be assessed. • Consider the burdens both to the program/plan and to patients. • Offer recommendations to minimize burden. **Composite Construct** • Starting with OHIP-5 research to date, evaluate the contribution of each item to the composite score – why each item should be included in the composite • Using the data collected for this project, evaluate the performance gap for each item and the composite overall. • Based on OHIP-5 research to date, make recommendations for how the composite score should be calculated and measured to produce an **entity-level performance score**. Describe the weighting of the individual items included in the composite and the rationale for the approach. **Reliability** • Describe the statistical methods that will be used to evaluate the reliability of the performance score, including evaluation of consistency, repeatability/reproducibility, and measurement error. **Validity** • Describe the methods that will be used to demonstrate validity of the composite and individual item measure scores (e.g., will construct validity be assessed – if so, describe the methodology that will be used).

	• Describe how the extent of missing data/nonresponse will be assessed and how missing data will be handled to reduce bias. Note that assessments/reports of missing data should be included in testing reports. • Evaluate whether there should be any exclusion criteria for the measure and propose testing for evaluating any proposed exclusions. • Describe the methods that will be used to evaluate the ability of the measure to identify statistically significant and meaningful differences in performance scores between programs and between plans as well as differences in performance scores for the same entity over time. • Describe the methods that will be used to evaluate differences in performance by population characteristics such as age (<65 and 65+ at a minimum), race, ethnicity, geographic location (e.g. rural; urban), socioeconomic status (e.g. premium or income category) and Stratification by Payer type (e.g. Medicaid, private commercial benefit programs, uninsured). • Evaluate whether differences in case/risk mix need to be addressed in reporting performance scores and the corresponding strategies for doing so. It is essential to balance both fair reporting between entities with avoiding masking disparities. • Describe how you will assess the interpretability of the measure and measure score – are the measure rationale and results easily understand by users of the measure?
Project risk and mitigation	• Describe anticipated and possible project risks and how you plan to mitigate them (e.g., access to data, IRB approval, timeline concerns, etc.)

Draft Measure Descriptions

Note: These are draft descriptions. All aspects of the measure must be evaluated and tested, including denominator details, numerator details, composite scoring, threshold identification for performance measurement, and minimum enrollment criteria.

Measure Description for Composite score

Percentage of enrollees who report a score of less than a threshold score (e.g.,10) on the OHIP-5 summary score with a recall of 1month/12 months (recall period to be evaluated through pilot testing).

Numerator: Number of enrollees in the denominator whose OHIP-5 assessment score during the reporting period is equal or less than 10 **("occasionally" or "hardly ever" or "never")**

Denominator: Number of individuals 18 years and older enrolled in the program for at least 11 out of 12 months during the reporting period.

Measure Descriptions for Individual scores

OHIP-5: Pain related question (Have you had painful aching in your mouth?)

Measure Description

Percentage of enrollees who report a score of less than a threshold score (e.g.,2) on the OHIP-5 pain-related score question with a recall of 1month/12 months (recall period to be evaluated through pilot testing).

Numerator: Number of enrollees in the denominator whose OHIP-5 assessment score during the reporting period is equal or less than 2 **("occasionally" or "hardly ever" or "never")**

Denominator: Number of individuals 18 years and older enrolled in the program for at least 11 out of 12 months during the reporting period.

OHIP-5: Function-related question (Have you had difficulty chewing any foods because of problems with your teeth, mouth, dentures or jaws?)

Measure Description

Percentage of enrollees who report a score of less than a threshold score (e.g.,2) on the OHIP-5 function-related score question with a recall of 1month/12 months (recall period to be evaluated through pilot testing).

Numerator: Number of enrollees in the denominator whose OHIP-5 assessment score during the reporting period is equal or less than 2 **("occasionally" or "hardly ever" or "never")**

Denominator: Number of individuals 18 years and older enrolled in the program for at least 11 out of 12 months during the reporting period.

OHIP-5: Appearance-related question (Have you felt uncomfortable about the appearance of your teeth, mouth, dentures or jaws?)

Measure Description
Percentage of enrollees who report a score of less than a threshold score (e.g.,2) on the OHIP-5 appearance-related score question with a recall of 1month/12 months (recall period to be evaluated through pilot testing).

Numerator: Number of enrollees in the denominator whose OHIP-5 assessment score during the reporting period is equal or less than 2 **("occasionally" or "hardly ever" or "never")**

Denominator: Number of individuals 18 years and older enrolled in the program for at least 11 out of 12 months during the reporting period.

OHIP-5: Psychosocial-related question (Have you had difficulty doing your usual jobs because of problems with your teeth, mouth, dentures or jaws?)

Measure Description
Percentage of enrollees who report a score of less than a threshold score (e.g.,2) on the OHIP-5 psychosocial-related score question with a recall of 1month/12 months (recall period to be evaluated through pilot testing).

Numerator: Number of enrollees in the denominator whose OHIP-5 assessment score during the reporting period is equal or less than 2 **("occasionally" or "hardly ever" or "never")**

Denominator: Number of individuals 18 years and older enrolled in the program for at least 11 out of 12 months during the reporting period.

OHIP-5: Oral-function related question (Have you felt that there has been less flavor in your food because of problems with your teeth, mouth, dentures or jaws?)

Measure Description
Percentage of enrollees who report a score of less than a threshold score (e.g.,2) on the OHIP-5 oral function-related score question with a recall of 12 months.

Numerator: Number of enrollees in the denominator whose OHIP-5 assessment score during the reporting period is equal or less than 2 **("occasionally" or "hardly ever" or "never")**

Denominator: Number of individuals 18 years and older enrolled in the program for at least 11 out of 12 months during the reporting period.

Terms

Neither this RFP nor any responses hereto shall be considered a binding offer or agreement. If the DQA (through the ADA) and any responding Respondent decide to pursue a business relationship for any or all of the services or equipment specified in this RFP, the parties will negotiate the terms and conditions of a definitive, binding written agreement which shall be executed by the parties. Until and unless a definitive written agreement is executed, DQA shall have no obligation with respect to any Respondent in connection with this RFP.

This RFP is not an offer to contract, but rather an invitation to a Respondent to submit a bid. Submission of a proposal or bid in response to this RFP does not obligate the DQA to award a contract to a Respondent or to any Respondent, even if all requirements stated in this RFP are met. The DQA (through the ADA) reserves the right to contract with a Respondent for reasons other than lowest price. Any final agreement between ADA (on behalf of the DQA) and Respondent will contain additional terms and conditions regarding the provision of services or equipment described in this RFP. Any final agreement shall be a written instrument executed by duly authorized representatives of the parties.

Respondent's RFP response shall be an offer by Respondent which may be accepted by the DQA. The pricing, terms, and conditions stated in Respondent's response must remain valid for a period of one hundred twenty (120) days after submission of the RFP to the DQA.

This RFP and Respondent's response shall be deemed confidential DQA information. Any discussions that the Respondent may wish to initiate regarding this RFP should be undertaken only between the Respondent and DQA. Respondents are not to share any information gathered either in conversation or in proposals with any third parties, including but not limited to other business organizations, subsidiaries, partners or competitive companies without prior written permission from the DQA.

The DQA reserves the right to accept or reject a Respondent's bid or proposal to this RFP for any reason and to enter into discussions and/or negotiations with one or more qualified Respondents at the same time, if such action is in the best interest of the DQA.

The DQA reserves the right to select a limited number of Respondents to make a "Best and Final Offer" for the services or equipment which are the subject of this RFP. Respondents selected to provide a "Best and Final Offer" shall be based on Respondent qualifications, the submitted proposal and responsiveness as determined solely by the DQA.

All Respondent's costs and expenses incurred in the preparation and delivery of any bids or proposals (response) in response to this RFP are Respondent's sole responsibility.

Applicants should limit the budget to direct costs. Indirect and F & A costs are not allowed.

The DQA reserves the right to award contracts to more than one Respondent for each of the services identified in this RFP.

All submissions by Respondents shall become the sole and exclusive property of the DQA (through the ADA) and will not be returned by the DQA or ADA to Respondents.

References

[1] Measure Evaluation Criteria and Guidance for Evaluation Measures for Endorsement. National Quality Forum. September 2021. Accessed November 14, 2023. https://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=88439

[2] Patient Reported Outcomes (PROs) in Performance Measurement. National Quality Forum. January 2013. Accessed November 14, 2023. http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=72537

[3] Building a Roadmap from Patient-Reported outcome Measures to Patient-reported outcome Performance Measures. Complete project documents. National Quality Forum. November 2022. Accessed November 14, 2023. https://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=93903

[4] Kopec JA. How to Improve Interpretability of Patient-Reported Outcome Measures for Clinical Use: A Perspective on Measuring Abilities and Feelings. Patient Relat Outcome Meas. 2022 Mar 25;13:69-77. doi: 10.2147/PROM.S355679. PMID: 35370429; PMCID: PMC8965336.

[5] Righolt AJ, Sidorenkov G, Faggion CM, Jr., Listl S, Duijster D. Quality measures for dental care: A systematic review. Community Dent Oral Epidemiol. 2019;47(1):12-23.

[6] DQA Environmental Scan of Patient-Reported Oral Healthcare Measurement. November 2020. Environmental scan of patient reported oral healthcare measurement (ada.org)

[7] Lopez, R., Baelum, V. Spanish version of the Oral Health Impact Profile (OHIP-Sp). *BMC Oral Health* **6**, 11 (2006). https://doi.org/10.1186/1472-6831-6-11

[8] John MT, Patrick DL, Slade GD. The German version of the Oral Health Impact Profile--translation and psychometric properties. Eur J Oral Sci. 2002 Dec;110(6):425-33. doi: 10.1034/j.1600-0722.2002.21363.x. PMID: 12507215.

[9] Naik A, John MT, Kohli N, Self K, Flynn P. Validation of the English-language version of 5-item Oral Health Impact Profile. J Prosthodont Res. 2016 Apr;60(2):85-91. doi: 10.1016/j.jpor.2015.12.003. Epub 2016 Jan 11. PMID: 26795728; PMCID: PMC4841723.