An introduction to MSF360: a multi-source feedback program

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Terminology

Colleagues	Physicians who work with the physician being assessed. They may include peers as well as physicians who provide other services to the physician's patients.
Co-workers	Healthcare professionals who work with the physician (e.g., nurses, pharmacists, dieticians). They may also include office support staff who have knowledge of the physician's interactions with patients and others.
Facilitator/Coach	A facilitator or coach enables or guides individuals to explore their data. They also play a facilitative role in guiding the physician to identify improvement opportunities arising from their data, identify goals, and co-develop an action plan to meet these goals.
Formative assessment	Assessment designed to provide data for learning; i.e., that the individual can use for their own learning and improvement.
Instruments	Tools that are used for assessment purposes. In this case, the multi-source questionnaires would be instruments.
Items	Individual questions asked of respondents on a survey.
Reviewers	Participants or individuals who complete surveys on behalf of the physician being assessed. In the case of MSF360, reviewers would be colleagues, co-workers and patients.
Source	This refers to the individual (self) or group that provided the data. For MSF360, the sources are self, patient, peer physicians and healthcare professionals (who are not physicians). Sources are aggregated for anonymity.
Summative assessment	Data provided for evaluation purposes that allow the individual's institution or organization to make high-stakes decisions about the individual's performance.

Abbreviations/Acronyms

CanMEDS	CanMEDS is a framework that identifies and describes the abilities physicians are required to effectively meet the healthcare needs of the people they serve. It has been adopted by the Royal College of Physicians and Surgeons of Canada (RCPSC) as CanMEDS, and by the College of Family Physicians of Canada (CFPC) as CanMEDS$_{FM}$. The framework includes seven roles: medical expert, communicator, collaborator, leader, health advocate, scholar and professional.
CFPC	College of Family Physicians of Canada
CPSA	College of Physicians & Surgeons of Alberta
MCC	Medical Council of Canada
MCC 360	Name given to the MCC's 360 or multi-source feedback instruments and program
MSF	Multi-source feedback
MSF360	Name given to the MSF program of the College of Physicians & Surgeons of Alberta, effective 2026
PAR	Physician Achievement Review. Name given to CPSA's original MSF program, which operated prior to its redevelopment and renaming by the MCC.
RCPSC	Royal College of Physicians and Surgeons of Canada

1. Who is this guide intended for?

This monograph is primarily intended as a guide for organizations that have adopted or are considering adoption of the College of Physicians & Surgeons of Alberta MSF360 tools to provide multi-source feedback to physicians and other healthcare professionals. While developed over several iterations for physicians, it can also be applicable to other healthcare professionals including nurse practitioners, counselors, pharmacists and others providing care to patients.

It may also be of interest to the participants in the MSF360 assessment including the physicians themselves as well as the physician's medical colleagues and co-workers (e.g., nurses, pharmacists, physiotherapists and office staff) and the patients of physicians who may serve as reviewers.

2. What is multi-source feedback (MSF)?

Multi-source feedback (MSF) is a questionnaire-based feedback initiative that draws on questionnaires completed by those who interact with the physician to provide data about workplace behaviors. Generally, MSF systems have four components: (1) questionnaires about a physician's observable workplace behaviors drawn from interacting with the physician (e.g., other physicians, nurses, dieticians and patients) along with a self-assessment questionnaire, (2) the collation of the data aggregated by source for anonymity and confidentiality, (3) the aggregated data from all respondents , including self-assessment data, provided to the physician for reflection upon their practice strengths, opportunities for improvement and planning for change and (4) the physician's meeting with a trained facilitator to review the data, have a feedback conversation and develop an action plan.[1,2]

While MSF tools can assess many activities performed by physicians, they appear most suitable for assessing communicator, collaborator and professional CanMEDS roles. Those interacting with the physician can provide data about observable behaviors. They don't involve the types of guessing that might accrue when respondents are asked about roles such as leadership, health advocate, scholar or medical expert which may not be experienced or observed by all respondents. Further, communication, professionalism and collaboration are critical to patient safety. It is known that poor communication and interprofessional collaboration with patients, physician colleagues and non-physician co-workers, and unprofessional behaviour, negatively influence patient care, safety and outcomes.[3-7]

3. What are the key components of a multi-source feedback program?

There are several components to MSF360:

Questionnaires

MSF360 has three different questionnaires:

- Self-assessment questionnaire that the physician completes
- Patient questionnaire
- Colleague and co-worker questionnaires, which are identical

The self-assessment questionnaire has 50 items, the colleague/co-worker questionnaire has approximately 30 items and the patient survey 26 items. All questionnaires have closed-answer questions that are answered numerically using a four-point strongly disagree to strongly agree scale, along with an 'unable to assess' (UA) option. There are open-ended questions for narrative responses and elaboration on other data provided.

Colleagues and co-workers are asked to respond to questions about the physician's communication, collaboration, professionalism, support for others in the workplace, cultural safety and power imbalance. The patient questionnaire focuses primarily on communication, explanations about their condition or care, respect and shared decision-making. The self-assessment questionnaire is more detailed, requiring the physician to reflect on their workplace behaviors and interactions with patients, colleagues and co-workers. All questionnaires provide an opportunity for free-text comments. Respondents are asked what the provider does well, could do better and could do to promote a more culturally welcoming environment. They are encouraged to provide detailed feedback and advised that the comments will be provided verbatim, although anonymous.

Collection of questionnaire data and aggregation of data

The physicians participating in the program will provide names, emails and phone numbers for colleagues and co-workers. In some settings, the physicians will be able to select their respondents from pre-populated lists within the survey tool or from contacts provided by their organization. Patients will be selected by the physician (or their office staff) and will have the option of a paper form which can be filled in and submitted in their office or home and returned or a QR code leading them to a secure website.

Once a physician's data is received by CPSA, it will be aggregated by source so the physician receives separate data for patients, colleagues and co-workers, and their self-assessment data. Aggregation ensures the anonymity of responses and enables the physician to receive a single report that provides the perspective from each reviewer group, as well as comparator data where the items on questionnaires are identical. The reviewers' free-text comments will be provided verbatim.

The report

Physicians will receive an extensive report that contains graphical and numerical data at both an individual level as well as a comparator level for each source and each item as well as aggregate data for each of the CanMEDS roles and cultural safety/humility. That way physicians can examine their own data in a variety of ways.

The report begins with an overview of CanMEDS and how data is to be interpreted. There are graphs that show the physician's data for each of the CanMEDS and cultural safety/humility components on an aggregate level. Comparator data allows the physician to examine their self ratings with mean scores provided by other sources for items that are the same. The open-ended comments provide the physician with their own self data as well as the data provided by source related to questions about what the physician does well, could do better and could do to promote a more culturally caring environment. There are tools included that facilitate reflection on the material and the creation of learning/action plans. The appendices provide data ranges for the CanMEDS roles and cultural safety/humility by source.

Facilitated feedback conversation, coaching, development of an action plan and follow-up

Facilitation is important in MSF work. Physicians should meet with a facilitator/coach to have a feedback conversation about their MSF360 report, what it means to them and to plan for its use. The purpose of the feedback conversation is to review the report, explore the physician's reactions to the assessment data, identify strengths and opportunities for improvement and co-develop an action plan. The action plan will describe the key intended changes the physician plans to make over the next six to 12 months, including information about resources needed to support the changes, enablers and barriers, and what success will look like.

4. Why is multi-source feedback an important component of an organization's quality improvement program?

Multi-source feedback provides data about physician practice that is difficult to obtain through other sources. It describes the relationships physicians have with those with whom they interact. Specifically, it can highlight strengths and identify opportunities for improvement in interpersonal and interprofessional relationships with patients and colleagues, including communication, collaboration professional behaviors and cultural safety/humility. Colleagues, co-workers and patients also have an opportunity to elaborate on the scores they provide as well as their observations in the workplace in an anonymous way. While other sources of data (e.g., administrative data, medical record audits, observation of the physician in real time) can also inform the physician, particularly about aspects of their clinical practice, such approaches require different resources and don't assess interpersonal interactions.

5. What is the evidence supporting MSF360 and a multi-source feedback program?

From PAR to MCC 360 to MSF360

MSF360 is a natural evolution of the original PAR program in Alberta that began in the late 1990's with the College of Physicians & Surgeons of Alberta. Early research established that the instruments provided evidence of validity and reliability at an overall and an individual level.[8] Several subsequent studies drawing on PAR data demonstrated that the tools could identify physicians at lower levels of performance, that physicians would act upon the information and unique instruments that maintained similar items could be developed across specialties with similar evidence for reliability and validity.[9-11] When adopted for use in Nova Scotia (NSPAR) there was confirmatory evidence for validity and reliability.[12]

During the early years of the PAR program, it was clear that greatest levels of acceptance and action occurred for physicians who trusted the ability of their patients and colleagues to provide the data.[12] Many physicians had difficulty interpreting the data without comments that supported or reinforced the numeric data. An opportunity was provided for respondents to add comments in a study which tested two versions of inquiry for narrative comments.[13] This was adopted into the PAR program and subsequently into the MCC 360.

Work was also undertaken by the PAR program drawing on the R2C2 model for feedback in which a trained facilitator had a discussion with a physician to develop an action plan.[14,15] In the R2C2 model, the facilitator establishes a relationship with the physician, engages the physician's reactions and reflections, determines potential content for change and finally they co-develop an action plan which should be followed up later to determine whether the planned changes had been made.[1,14,15]

Data related to the benefits of the R2C2 model in conjunction with the questionnaires were assessed under the Medical Council of Canada in its adoption of the MCC 360 in two studies. In the first study, the researchers found that there was significant overlap between high frequency words on the questionnaires and rater comments suggesting that the items identified areas for respondents' comments. They also found that the goals physicians cited in their action plans were related to respondent comments and high frequency words in facilitator reports.[16] In the second study, which looked at outcomes (e.g., implementation of action plans), two patterns were revealed. Physicians who implemented all of their plans within six months received feedback with consistent messaging (from both questionnaires and comments), reviewed their data ahead of facilitation, co-constructed plan(s) with the facilitator and had fewer risk factors associated with competence/dyscompetence. Conversely, physicians who were unable to implement plans had data with fewer repeated messages and did not incorporate these into plans, had difficult plans, or needed to involve others. These plans were largely physician lead (vs being co-lead with the facilitator). They were physicians at higher risk for dyscompetence related to age (over 70), international school of graduation, were in solo practice or were in transition (e.g., changing practice locations or practice focus).[17]

When the MCC 360 along with R2C2 facilitated discussions were evaluated in Newfoundland, respondents felt the process empowered them to "reflect" on their practices, affirm what they were doing well, and, for some, identify opportunities for further and ongoing professional development.[18]

The development of the MSF360 through its iterations as PAR and as MCC 360 are outlined in Appendix 1. These iterations supported the decisions to adopt narrative data (comments) and the R2C2 coaching and change model to coach for change and require follow-up as a component of the program.

The broader context of MSF research

MSF research has been conducted outside of and within medicine for decades.[19] In medicine, studies have focused on undergraduates, resident physicians and licensed physicians.[2] As Stevens' et al[20] concluded from their review of eight systematic reviews of MSF:

> *This review has demonstrated that the evidence base supporting the statistical and psychometric properties of MSF is sufficient. The internal structural validity of MSF has been repeatedly tested, with feedback instruments often demonstrated to be statistically reliable methods of performance assessment. What is also apparent, although the size of the evidence base is smaller, is that the results of MSF assessments often correlate highly with other WBA methods. Finally, sufficient evidence also exists to demonstrate that MSF is a feasible method of assessing medical performance in terms of cost, time, and response rates.*[20]

Similarly, Ashworth et al.'s[21] review of MSF and its psychometrics found that publications over the past 50 years or more in the business and health literature support MSF for quality improvement purposes. However, their review also identified the variability in the research conducted. They

noted that researchers don't meet consistent standards for the assessment of validity and reliability, don't carry over key findings in the development of tools from other studies, and there is a lack of evidence for meaningful sustained behavior change. These are certainly concerns as each organization implementing MSF will have its own goals in research and evaluation. Nonetheless, the attention taken by CPSA and MCC in their evaluations leading to the MSF360 has mitigated these challenges.

Both reviews[20,21] identified the need to ensure that MSF supports positive and sustainable changes in practice. Such evidence is being found in outcome studies in which physicians receive quantitative and qualitative data along with a facilitated discussion.[17,18]

A definitive approach to guide the argument for reliability and validity is beyond the scope of this monograph. Research teams have been guided in their assessments of validity by drawing on Messick's seminal approach, Norcini et al's Framework for Good Assessment and by Kane's structured arguments for validity.[2,] Information and references to various studies can be found elsewhere.[1,2] The publications cited point to the developing evidence in examining adoption of instruments in different contexts, whether ratings differ by source, comparisons of self-to other ratings, associations with other assessment, comparisons of ratings over time to determine improvement, how observers interpret questions and respond to them, perceptions about aspects of instruments (e.g., feasibility, utility and impact), changes made, specificity of narrative data, and the role facilitators (or coaches).[2]

In addition to the research done to ensure that the instruments are psychometrically sound, there are several studies that speak to the criticality of coaching with MSF through a focussed and facilitated discussion.[22-24] In one study that involved PULSE 360, a leadership teamwork assessment tool, provided varying degrees of intervention (report only, debriefing only, and debriefing and development. They found that those who had all three levels of intervention including debriefing and development had the greatest changes on their leadership teamwork scores. This held across medical and surgical disciplines.[24] A European study involving residents found that topics were more likely to be discussed as strengths during the feedback conversation if scale-based ratings were high and there were many favourable comments on an item. Topics were more likely to be discussed as areas for improvement if the number of unfavourable comments was high. Topics with many (favourable and unfavourable) comments and topics discussed as an area for improvement were more likely to result in learning goals.[25]

The R2C2 model has been adopted across different disciplines, levels of training and practice as well as in different countries.[14,15,26,27] This includes undergraduate MD students, residents, and physicians,[14,15,26] as well as nurses and nurse practitioners[22,28,29], early career veterinarians[30] and dental students[31]. While a scoping review is underway at present to establish its efficacy across studies, the model has been found to be effective in fostering a productive, reflective feedback and coaching conversation focused on development and in facilitating the collaborative development of a change plan.[14,17] Similarly, for residents, the model has been shown to be helpful in providing structured feedback and coaching.[26, 32] In summary, R2C2 is an impactful tool for debriefing feedback with the individual and facilitating their understanding of their results. Moreover, when paired with the support of a certified executive coach, the participant will have a more meaningful comprehension of their feedback and how to improve their communication, collaboration and professionalism.[24] The coach can help guide participants in reflective action planning for development based on their received feedback.

6. What are the critical aspects in considering MSF360 for your College or organization?

Organizational readiness and buy-in

MSF360 is a quality improvement tool for the professionals working under the auspices of the regulatory authority or institution. It is a formative, low-stakes assessment intended to guide learning and change, particularly related to communication, collaboration and professional and cultural safety/humility. While it may lead to other levels of assessment, in and of itself, it is intended to be used for quality improvement. It is not a summative assessment of a performance.

As a quality improvement tool, consideration of how this tool might be useful to practitioners is warranted. Will it supplement or replace other information sources about practitioners? MSF360 will need to be seen as 'value-added' and not another burden.

Early in the process a review of the items on the questionnaires and the report will be important in establishing the applicability for the organization considering adoption. This may be done by a senior committee, a competence committee or other structure within the organization. This stage helps with buy-in as the program is implemented.

The organization at all levels—organizational executives or governing bodies (boards/councils/committees especially those involved with competence and its assessment and other personnel—need to buy-into the program and support it. MSF are long-term initiatives that require full support.[2,33,34]

Leadership team and its role

For a new program, it will be helpful to have a leadership team with oversight. They should meet regularly. Depending on the organization, this might include people responsible for leading and administering the program. There should be communications experts available to ensure consistent messaging through newsletters, FAQs, and other sources. The communications person may also need to be able to re-direct or address questions from media should that occur. Should an evaluation by the organization be planned, someone with expertise in evaluation should also sit on the committee.

The leadership team will be called upon to discuss issues that arise during implementation. They will need to determine how the results will be used and who will have access to them. Importantly, they will need to guide the facilitation process including the training, appointment and of facilitators/coaches, and management of the coaching program.[2,33,34]

7. Summary

MSF360 builds on the strengths of the original PAR and MCC 360 programs. It is a quality improvement tool for formative, not summative assessment and should be used to guide learning and development. As a quality improvement tool, it can be combined with other assessment tools to guide the physician or facilitate organizational decision making. Aspects that were identified as needing improvement, particularly the addition of narrative comments and the inclusion of a facilitator who can assist the physician interpret their data have been integrated into the program. MSF instruments have demonstrated validity and reliability over many studies drawing on PAR as well as other MSF tools. The use of R2C2 to facilitate feedback and coaching conversations based on the MSF results promotes greater levels of reflection and

encouragement to develop sustainable action plans that can be implemented and monitored. The recommendation is to seek support from a certified executive coach to support personal development based on MSF360 results. As with any new initiative, it is important to examine the tool and consider how it will be used and evaluated.

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Appendix 1

A historical, annotated bibliography pertaining to the development and evolution of the MSF360.

The Original PAR Instrument

Hall W, Violato C, Lewkonia R, Lockyer J, Fidler H, Toews J, Jennett P, Donoff M, Moores D. Assessment of physician performance in Alberta: the physician achievement review. CMAJ. 1999 Jul 13;161(1):52-7. PMID: 10420867; PMCID: PMC1232653. https://pubmed.ncbi.nlm.nih.gov/10420867/

- This was the original 'PAR' study that demonstrated that questionnaires for the physician themselves (self), their medical colleagues, non-medical co-workers and patients could be used for quality improvement purposes to assess physicians and provide feedback. The pilot of 308 physician volunteers showed reliability and good evidence of validity.
- This original study was followed up with several other studies across several disciplines (surgery, anesthesia, pediatrics, medicine, psychiatry, pathology and radiology) showing similar evidence of reliability and validity. Other studies demonstrated the longitudinal impact of undergraduate curriculum (University of Alberta, University of Calgary, and other Canadian schools) demonstrated differences in performance on PAR, particularly related to communication skills. A final study showed an association between academic appointments and clinical performance. These studies were published in peer review journals between 1999 and 2016.

NSPAR (Nova Scotia) Evaluation of the PAR Instrument

Sargeant JM, Mann KV, Ferrier SN, Langille DB, Muirhead PD, Hayes VM, Sinclair DE. Responses of rural family physicians and their colleague and coworker raters to a multi-source feedback process: a pilot study. Acad Med. 2003 Oct;78(10 Suppl):S42-4. doi: 10.1097/00001888-200310001-00014. PMID: 14557092. https://pubmed.ncbi.nlm.nih.gov/14557092/

- This evaluation study in Nova Scotia included 142 physicians who used the PAR instrument. The study revealed that familiarity and the ability to observe the physician affected physician acceptance of ratings. It contributed to the evidence for the validity of the PAR instruments in a different context.

Role for Comments on PAR Instruments

Lockyer JM, Sargeant J, Richards SH, Campbell JL, Rivera LA. Multisource Feedback and Narrative Comments: Polarity, Specificity, Actionability, and CanMEDS Roles. J Contin Educ Health Prof. 2018 Winter;38(1):32-40. doi: 10.1097/CEH.0000000000000183. PMID: 29329147. https://pubmed.ncbi.nlm.nih.gov/29329147/

- Comments were added to the PAR instruments and tested amongst 222 family physician, surgical and medical specialists eliciting narrative feedback (in addition to the quantitative data) from medical colleagues, non-medical co-workers and patients. Two formats were used with responses tested for polarity (positive, negative or neutral), specificity (precision and detail) and actionability (ability to use feedback to direct future activity). The study revealed differences based on wording of the questions but both versions resulted in narrative comments. Several studies

including Sargeant et al. (2003) indicated that physicians had difficulty interpreting and using their numerical data and would find qualitative data helpful to them.

Role for Follow-up Structured Discussions, Feedback and Coaching

Lewkonia R, Flook N, Donoff M, Lockyer J. Family physician practice visits arising from the Alberta Physician Achievement Review. BMC Med Educ. 2013 Sep 9;13:121. doi: 10.1186/1472-6920-13-121. PMID: 24010980; PMCID: PMC3846577
https://pubmed.ncbi.nlm.nih.gov/24010980/

- This retrospective study examined the narrative practice visit reports for 51 physicians whose assessment scores were significantly lower than their peer group. Problems in the practice environment including isolation and diagnostic conclusions reached with incomplete clinical evidence were identified. The physician visits helped physicians make changes in practice.

Sargeant J, Lockyer J, Mann K, Holmboe E, Silver I, Armson H, Driessen E, MacLeod T, Yen W, Ross K, Power M. Facilitated Reflective Performance Feedback: Developing an Evidence- and Theory-Based Model That Builds Relationship, Explores Reactions and Content, and Coaches for Performance Change (R2C2). Acad Med. 2015 Dec;90(12):1698-706. doi: 10.1097/ACM.0000000000000809. PMID: 26200584.
https://pubmed.ncbi.nlm.nih.gov/26200584/

- This was the first examination of the R2C2 model in which facilitators held discussions with people receiving feedback in a four-stage process that included building a relationship, exploring reactions, exploring content and coaching for performance change. This research and later research with the model involving residents, undergraduate physicians, nurses and other professionals demonstrated that facilitators could engage physicians in committing to making changes in practice. This lead to the incorporation of the R2C2 model into the MCC 360 approach.

MCC 360

Roy M, Kain N, Touchie C. Exploring Content Relationships Among Components of a Multisource Feedback Program. J Contin Educ Health Prof. 2022 Oct 1;42(4):243-248. doi: 10.1097/CEH.0000000000000398. Epub 2021 Oct 1. PMID: 34609355.
https://pubmed.ncbi.nlm.nih.gov/34609355/

- Drawing on data from the MCC 360 for colleagues, co-workers, patients and self the study explored how the content of the feedback program supported the elicitation of feedback into a quality improvement plan for change. Researchers drew on survey items, rater comments, facilitator reports and action plans for 159 physicians to explore common words and relationships among data sources. Found that the overlap between high frequency words in surveys and rater comments was substantial. Goals in action plans were related to respondent comments and high frequency words in facilitator reports. Provides evidence of validity.

Roy M, Lockyer J, Touchie C. Family Physician Quality Improvement Plans: A Realist Inquiry Into What Works, for Whom, Under What Circumstances. J Contin Educ Health Prof. 2023 Summer 01;43(3):155-163. doi: 10.1097/CEH.0000000000000454. Epub 2022 Jul 6. PMID: 37638679. https://pubmed.ncbi.nlm.nih.gov/37638679/

- This realist evaluation study drew on data from the MCC 360 for 50 physicians to determine relationships between action plan completion status (outcomes) and MSF ratings, MSF comments, and prescribing data (resource mechanisms); a report summarizing the conversation between a facilitator and the physician (reasoning mechanism); and practice risk factors (context). Two patterns were revealed. Physicians who implemented all of their plans within 6 moths received feedback with consistent messaging, reviewed data ahead of facilitation, co-constructed plan(s) with the facilitator and had few risks to competence (dyscompetence). Physicians who were unable to implement plans had data with fewer repeated messages and did not incorporate these into plans, had difficult plans, or needed to involve others and were physicians lead and were at higher risk for dyscompetence.

Appendix 2: other resources

- Continuing professional development and medical education, Faculty of Medicine Dalhousie University R2C2 feedback and coaching resources R2C2 feedback and coaching resources - Continuing Professional Development and Medical Education - Dalhousie University https://medicine.dal.ca/departments/core-units/cpd/faculty-development/R2C2.html
- Holmboe ES and Durning S, Practical guide to the assessment of clinical competence, 3rd edition, Philadelphia: Elsevier 2025. Chapter 12 focuses on Multisource Feedback (Lockyer JM) and Chapter 14 on Feedback and Coaching (Sargeant J).