

CPSNL Physician Peer Review Program (PPR-NL)



Physician Peer Review Program (PPR-NL) Risk and Support Factors in Medical Practice

Introduction

A variety of factors may influence the quality of a physician's practice. Broadly speaking, these factors can be considered to be physician-related (e.g., age or gender) or practice related (e.g., patient volume or professional isolation). Some factors pose a risk, while others are supportive of practice quality over time.

A recent research review, conducted on behalf of Canadian medical regulators, identified more than 900 published articles relevant to this issue. Even so, our understanding of the various factors that either place a practice at risk or conversely protect against it, is incomplete. While the presence of risk and supportive factors is clear, their relative strength (*i.e.*, the magnitude of positive or negative influence) and the ways in which they interact (*i.e.*, whether they potentially reinforce or mitigate one another) are less well understood.

Current consensus is that practice risk and support factors are only predictive in a general sense, and that factors tend to exert their influence over time. The impact of any one factor on an individual physician's practice is difficult to quantify and is never absolute. As an example, although physician performance tends to decline with advancing age, the degree to which this happens varies and is undoubtedly influenced by other factors, including physician health, education, practice environment, practice scope, and degree of professional isolation.

Ultimately, each physician's factor profile is unique. For this reason, it is important that individual physicians be alert to the various factors at play in their practice and take steps to reduce risks and optimize supports wherever possible; doing so can avoid care becoming compromised.

From a systems perspective, attention to physician factors, both collectively and individually, has the potential to benefit care quality. Health authorities could use an understanding of risk and supportive factors to help optimize service delivery models or policy – for example, by choosing multidisciplinary over single-practitioner clinics or reducing on-call demands for older physicians. In circumstances where risk is unavoidable, such as for a geographically isolated practitioner, specific mitigating strategies and supports could be put in place. It is likely that most physicians have an

intuitive understanding of risks and supports to practice. If so, systems strategies that mitigate practice risk might actually have a positive effect on the recruitment and retention of physicians to challenging practice circumstances.

Medical regulators in Canada also have an interest in physician factors. All Canadian regulatory authorities have a mandate to promote quality in practice, usually through a combination of programming approaches, including some form of practice assessment program. Some regulators are already using physician factors, either alone or in combination, to direct their quality initiatives. The Collège des Médecins du Québec uses multi-factor rubrics to direct the activities of its quality assurance programs. In Nova Scotia, physicians' selection into different categories of the College of Physicians and Surgeons of Nova Scotia's Physician Peer Review program is determined, in part, by a review of a physician factor profile. The peer assessment component of Manitoba's Quality Improvement Program operates in a similar manner. Several other provincial regulators are either using or considering factors as a means of prioritizing physicians for quality programs or directing the nature of a physician's practice assessment.

Newfoundland and Labrador's Physician Peer Review Program – Role of Physician Factors

The College of Physicians and Surgeons of Newfoundland and Labrador (CPSNL) takes physician factors into account when allocating the resources of its Physician Peer Review program (PPR-NL). An analysis of risk and supportive factors is used to decide the nature of each physician's participation in the program. Physicians with relatively more risk than supportive factors in practice may be assigned to a Category 2 review (review of submitted practice information and off-site chart review) or a Category 3 review (review of submitted practice information, and on-site office visit by a CPSNL peer assessor). Physicians with a majority of supportive factors may be assigned to a Category 1 review (review of submitted practice information, and provision of quality improvement supports).

This document will provide CPSNL peer assessors, as well as program participants, with a qualitative overview of important risk and supportive factors. It is not intended to be a comprehensive review of the academic literature in this area; however, source articles of potential interest to the reader are listed in Appendix A. Appendix B provides a quick-reference summary of important factors.

Risk Factors for Practice Quality

1. Advancing Physician Age and Time-in-Practice

Physician age and 'time in practice' are highly correlated and may be considered together. The risk to practice quality associated with physician aging is multifactorial and complex. It is important to note that advancing physician age is more commonly associated with other risk factors such as male gender, solo practice, or lack of certification. However, when these potentially confounding factors are accounted for, there remains a consistent and significant negative correlation between advancing age and practice quality.

The decline in performance for an older physician may be thought of in terms of three broad domains:

- (1) Currency of the physician's knowledge base: The practice risk associated with advancing age relates to the currency of the physician's knowledge base. Medical knowledge changes rapidly. Without specific efforts to keep current, time in practice will inevitably erode competence, regardless of the practitioner's age. Because memory tends to decline with age, this risk to currency in knowledge may accelerate over time.
- (2) Cognitive decline: The cognitive decline that occurs with aging is well-established, though there is considerable individual variation in terms of when and how this is manifests. Beginning as early as the sixth decade of life, it may impact memory and clinical reasoning. While the impact of aging on a physician's practice will certainly vary, it would be unrealistic to assume that any practice will be entirely immune.

It is likely that age and work experience confer some benefits on some aspects of practice. Research shows that older, experienced physicians may actually be better at making certain decisions or diagnoses, particularly when pattern recognition plays a key role. Conversely, these same physicians may be at greater risk for making errors when faced with ambiguous presentations or unfamiliar conditions. The reason appears to be a reduced ability to engage complex reasoning skills, resulting in a flawed reliance of pattern recognition, leading to premature diagnostic closure. In simpler terms, older physicians may function very effectively in familiar circumstances, when managing typical examples of a condition. Faced with rare or unfamiliar conditions, or conditions manifesting in an atypical manner, they are at greater risk for making mistakes.

- (3) Physical and physiologic changes: Such changes are another variable consequence of aging. Balance, strength, manual dexterity, visual and auditory acuity all decline with age. To a varying extent, each may be relevant to a physician's performance in practice.

While there is no specific antidote to aging, mitigating strategies of particular relevance to the older physician may include:

- Paying particular attention to your physical and mental well-being;
- Reducing the pace of practice;
- Allowing more time for decision making, particularly in uncertain circumstances;
- Avoiding practice environments with a high degree of diagnostic uncertainty, *e.g.*, episodic or emergency care;
- Avoiding shift work, particularly night shifts, whenever possible;
- Reducing practice scope to focus on areas of strength and familiarity;
- Employing memory aids, algorithms and point-of-care resources;
- Wherever possible, working and interacting clinically with capable colleagues and learners; and
- Making specific additional efforts to stay current through continuing professional development.

2. Professional Transitions / Changes in Scope of Practice

Scope of practice is often thought of in terms of the numbers and types of patients cared for, the conditions commonly encountered, and the procedures performed in practice. Beyond this traditional view, scope should also consider the environment (facility and community) in which care is provided, the colleagues with whom one collaborates, and the material resources available. Finally, some physicians may have academic (education or research) or administrative aspects of scope.

To a varying degree, any change in a physician's scope of practice may pose a risk to quality. Minor changes, such as modifying your approach to a surgical procedure may be reasonably straightforward. Others, such as moving from the practice of General Surgery to Family Medicine are complex and fraught with risk.

Using a broad definition, professional transitions may be thought of as a change in scope of practice. Examples of significant transitions would include moving between: residency training and independent practice, one health care facility and another, countries or cultures, and full practice towards retirement. All may carry significant risks to practice quality, and therefore merit careful planning and support.

Physicians making a major change to their practice scope are, in most jurisdictions, required to consult with their regulatory authority (College). When planning for a change in scope of practice, the following represents a general approach to reducing risk:

- Take the time to identify what skills or competencies are required to function safely in the new environment. Consider not only the Medical Expert competencies required, but also those required to be an effective Leader, Communicator, or Collaborator;
- Create and follow a formal plan for training and orientation, addressing these required competencies;

- Identify valid forms of assessment (e.g. feedback from others, outcomes data), necessary to measure and modify your performance during and after the transition; and,
- If necessary, engage a competent mentor or supervisor.

3. Male Gender

Male gender is, for obvious reasons, a controversial risk factor for the provision of quality care. In part, this may be a reflection of the degree to which male gender may be confounded by variables such as age, practice location, and specialty. Irrespective of these factors, male gender is frequently identified as an independent predictor for poor outcomes in practice assessments conducted for a variety of purposes. Furthermore, research studies on practice indicate a higher risk for male physicians in a number of important adverse measures, including increased volume of disciplinary complaints, non-compliance with practice guidelines, poor record keeping, and poor attention to professional development.

Supportive factors relevant to male gender are largely speculative and may be general in nature. For example, it is known that physician communication is a frequent cause of disciplinary complaints. Male physicians may therefore wish to consider their communication style with patients, particularly when addressing an adverse event. Specific attention to record keeping would also seem warranted.

4. Poor Performance in Certifying or Licensure Examinations

Full licensure in Canada requires that a physician hold both the Licentiate of the Medical Council of Canada (LMCC) and certification by one of our certifying colleges, typically the Royal College of Physicians and Surgeons of Canada (RCPSC) or the College of Family Physicians of Canada (CFPC). Some, but by no means all, international jurisdictions have similar certifying or licensure examinations.

There is good evidence correlating poor performance in national examinations, or lack of specialty certification, with poor performance in various aspects of practice. Negative outcomes include a greater likelihood of disciplinary complaints, incorrect diagnoses, poor performance on practice assessments, and adverse patient outcomes. It is important to note that adverse outcomes are not necessarily directly related or limited to specific areas of poor examination performance. In this respect, poor exam performance may be a general flag for poor practice.

Mitigating the risks of poor examination performance is challenging. Licensing and certifying examinations are not designed to be reliably diagnostic of a physician's specific strengths or weaknesses. Consequently, they may offer little concrete guidance to test takers in terms of further professional development.

Nonetheless, both passing and failing candidates are well advised to take note of the examination domains in which they performed poorly. Physicians who have repeatedly failed examinations should look for patterns of strength and weakness over time; weaknesses consistently identified over multiple attempts at an examination are more likely to be valid and worthy of attention.

A healthy approach to continuing professional development, ideally guided by assessment and data from practice, is a physician's best defence against gaps in skill or knowledge.

5. Practice Volume

Numerous studies have been published linking improved outcomes, particularly for medical procedures, to higher volume in practice. Implicit in this is that the practitioner has been trained to perform the procedure in the correct manner. Conversely, low volume practices may not offer sufficient exposure to refine and maintain one's skill.

What is not clear is how overall practice volume (*i.e.*, patients seen per hour or days worked per week) correlates with outcome. In part, this is due to difficulty in defining a "high" or "low" volume practice from one specialty or practice context to another. Identified outliers (*i.e.*, unusually high or low patient numbers per unit of time) likely carry corresponding risk. This risk may be more pronounced for older practitioners, whose ability to cope safely with high volumes is more limited. Conversely, very low volume or intermittent practice may lead to erosion of skills and lower standards of care.

Mitigating strategies will vary:

- Be aware of practice norms and apply caution if you are an outlier in terms of either very high volume or low volume practice;
- Be aware that there may be a lower competence limit for some procedures/types of care;
- Engage with peers and follow established guidelines for procedural practice;
- Tailor volume to physician factors (*e.g.*, age or wellness) and context (*e.g.*, patient complexity or practice resources); and,
- Seek educational strategies, such as simulation, to manage risk related to clinical scenarios or procedures not commonly encountered.

6. Training Outside the Current Practice Jurisdiction

Multiple studies have addressed the risk associated with having trained outside one's current practice jurisdiction; typically in another country. However, the consistency and strength of association is unclear. In part, this is likely due to the significant differences in

training between and even within jurisdictions. Although in some circumstances risk may be a quality-of-training issue, it is likely that there are numerous other factors at work in what for many physicians constitutes a major change in scope of practice. Constituent issues may include:

- Changes in the types of conditions encountered;
- Differences in available resources;
- Relative lack of professional contacts/professional isolation;
- Practicing in a new/secondary language;
- Cultural differences; and,
- Different expectations for professional behaviour.

Mitigation strategies are outlined above, in the section on changing scope of practice.

Support Factors for Practice Quality

Physician Wellness

Human – and therefore physician – performance is necessarily linked with physical and mental well-being. This is by no means unique to the practice of medicine.

As a physician, you are arguably your practice's most valuable resource and central to the quality of care provided. While the majority of physicians enjoy the practice of medicine, it is time-consuming and sometimes stressful. Professionalism in medicine often requires placing the needs of patients ahead of your own needs. However, doing this exclusively, and over a long period of time is unlikely to benefit either party.

Wellness strategies are not unique to medical practice. They include:

- Paying attention to work-life balance, including time for family, friends and self;
- Exercising regularly;
- Having regular, nutritious meals;
- Paying attention to sleep hygiene, particularly around on-call and shift work;
- Practising mindfulness;
- Attending to preventive and active health issues through your own physician(s); and
- Adapting workload and scope to accommodate physical and mental health, stress and aging.

Peer Engagement

Numerous studies have identified a negative correlation between professional isolation and quality of practice. Professional isolation should be considered less in terms of

geography and more in terms of the number and types of interactions with medical colleagues in the course of your work. Using this definition, it is easy to see that an urban physician may, in some circumstances, be more professionally isolated than their counterpart in a rural setting.

Regular interactions with medical colleagues and trainees – particularly in the clinical environment – provide a strong opportunity and stimulus for learning. New knowledge and ideas are exchanged. Outdated assumptions and practices may be challenged. Consultations with competent peers, whether formal or informal, are an important way of either affirming an approach to patient care or raising appropriate alternatives. Conversely, the absence of regular professional interaction creates an environment in which a good practice may stagnate over time, become outdated or fall into poor habits.

Examples of beneficial professional interactions include:

- Collaborative patient care (e.g., multidisciplinary teams or units);
- Clinical and non-clinical teaching of (or by) others; and
- Interactive professional development (e.g., rounds, journal clubs, on-line discussion forums).

Some physicians' practice circumstances do not readily allow for daily interaction with peers through collaborative practice. In such cases it may be necessary and appropriate to seek out collegial interaction through other activities, such as:

- Interactive professional development (as above);
- Volunteering to participate in standard setting exercises or the assessment of peers (e.g., acting as a peer reviewer, writing test items, volunteering as an observer or examiner for a local examination);
- Hosting trainees in your practice;
- Spending time in another physician's practice (Operating room assist, observation of care); and,
- Seeking feedback on your approach to care, such as from consultants to whom you regularly refer.

Continuing Professional Development (CPD)

As referenced above, medical knowledge and best practices change at an extraordinary rate. As such, CPD is not only a support for quality practice but is arguably essential to maintaining quality over time. All medical regulators in Canada require that physicians participate in a recognized CPD framework as a condition of licensure.

It is critical to note that simply participating in CPD and logging credits may have only a modest effect on practice quality. In part, this may reflect how physicians choose their CPD activities. Physicians frequently pursue CPD in areas for which they have a specific interest and may already excel. However, CPD is more likely to be impactful when it is undertaken to address an identified gap in a relevant aspect of practice.

Practice assessment is key to effective professional development. Physicians too often rely on intuition when identifying their strengths and weaknesses in practice. The unfortunate reality is that all human beings, not just physicians, are quite limited in their ability to identify the things they do poorly. Seeking external sources of assessment or feedback is far more likely to drive effective learning and practice change but is not commonly used. Obtaining external data can be challenging and time consuming, but a culture of quality improvement is making this easier over time.

Using external assessment methods to identify weaknesses, drive learning and assess the impact of change are key elements of a quality improvement (QI) approach.

The educational literature does offer some guidance on how to maximize the impact of CPD on practice quality, including using a QI strategy:

- Choose CPD activities because of their clear relevance to your scope of practice, rather than out of habit, ease of access or pleasant geography.
- Think broadly about the competencies necessary to practice effectively, including your “nonmedical expert” roles. Your ability to communicate with patients, manage a practice or critically appraise an article in the literature may be just as important.
- Use data, feedback from others, formal and informal practice assessments (e.g., self-audit, peer review) to identify performance gaps and then deliberately seek out CPD resources to address them. Again, assess your practice broadly, not just your medical expertise.
- Consider what sort of learning environments you find most effective and seek them out. Most likely, different learning environments will be identified to fill different needs.
- While unaccredited activities such as self-directed reading may be of benefit, include high quality accredited activities in your CPD plan.
- Include interactive group activities in your learning. Group learning is a form of peer engagement, offering opportunities to debate, contrast or reinforce approaches to practice.
- Develop and execute a specific plan to incorporate new learning into practice. Will new resources be required? Will successful change require the engagement of others? What might get in your way?
- Assess the impact of any practice change on quality and outcomes. What does the feedback or data tell you? Did you achieve the desired effect? If not, consider what further action may be required.

The Action Plan activity in the final stages of the CPSNL’s peer assessment program will involve identifying a practice change or learning opportunity and will incorporate some of the above points.

Summary

Physician and practice-related factors undoubtedly influence the quality of medical care. Although we can identify factors that either pose a risk to or support practice quality over time, their relative influence and interactions are incompletely understood.

A physician's factors profile is certainly unique and subject to change over time. Individually, physicians must remain alert to their factors profile, taking steps to mitigate risk and promote quality wherever possible. From a systems perspective, attention to risk and supportive factors provides an opportunity to support at-risk physicians and improve care quality.

Appendix A

Articles and Resources of Potential Interest

Wenghofer E et al, Factors Affecting Physician Performance: Implications for Performance Improvement and Governance. Healthcare Policy, Vol. 5, No. 2, 2009

Eva KW, The Aging Physician: Changes in Cognitive Processing and Their Impact on Medical Practice. Academic Medicine, Vol. 77, No. 10 / Oct supplement 2002

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