

Improving Compliance with Regulatory Standards Using Predictive Screening and Onsite Performance Assessments

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Abstract

Introduction

Performance assessments, applied in the context of health profession regulation, are an effective quality assurance tool that allow regulators to examine the performance of their registrants in everyday practice, ensuring the public's trust in a profession is maintained. While performance assessment can be an important, risk-based approach for regulators, it can also be time-consuming and potentially cost-prohibitive. There are numerous practice assessment methodologies in the literature, but no articles currently reflect the success or failure of *predictive screening* as a first step in reviewing registrant performance.

Methods:

This paper describes a project undertaken by the College of Speech and Hearing Health Professionals of British Columbia (CSHBC), between 2018 and 2020, to develop and validate performance assessment screening followed by validation with onsite performance assessments and remediation where appropriate for the profession of hearing instrument dispensing.

Outcomes:

This paper shows that a predictive screening tool can be developed and validated as a first step in a performance assessment process that results in high inter-screener reliability and high reliability with performance assessment outcomes. The report also describes how registrant compliance with required practice standards can be improved significantly via a combined screening and assessment process. CSHBC project outcomes confirm that validated screening can be highly predictive of registrants' clinical performance as well as compliance with required regulatory practice standards. CSHBC project outcomes confirm that validated screening can be highly predictive of registrants' clinical performance as well as compliance with required regulatory practice standards. Finally, project outcomes also show that the methodology is a viable option for checking registrant compliance with standards over time, as well as reviewing registrants on a random audit and/or a referral basis.

Discussion:

The methods and outcomes of this project can be replicated for any regulated health profession. Increasing public demand for safe, ethical, and competent health services are likely to make performance assessments more important in the future.

Keywords

Health professional regulation, predictive screening, performance assessment, practice review, compliance with regulatory standards

CSHBC is the regulatory body for the professions of audiology, hearing instrument dispensing, and speech-language pathology in the province of British Columbia, Canada. In 2018, the College was one of nineteen health regulatory colleges in BC governed by the *Health Professions Act* (the “Act”). As outlined in [section 16 \(1\)](#) of the Act, the College is mandated to enforce professional and clinical practice standards across its three professions in the public interest.

CSHBC is also legislated by the Speech and Hearing Health Professionals Regulation, which:

- establishes the College;
- sets the scopes of practice for the professions of audiology, hearing instruments dispensing, and speech-language pathology;
- prescribes the professional titles reserved for the exclusive use of CSHBC registrants; and
- sets the limits and conditions on restricted activities prescribed by the Regulation

The College’s public interest mandate under the Act and associated regulations includes:

- setting registration standards for entry-to-practice licensure as well as higher-risk activities requiring certification;
- ensuring professional and clinical practice standards are maintained through enforcement of the College’s Quality Assurance & Professional Practice (QAPP) Program;
- investigating complaints alleging clinical incompetence and/or professional misconduct; and
- where necessary taking disciplinary action where complaint investigations cannot be resolved by consent.

CSHBC is governed by a board of directors and has four statutory committees under its bylaws including the QAPP Committee. In support of the duties and powers of the QAPP Committee established under sections 26.1 and 26.2 of the Act, the Committee is tasked with:

- developing and reviewing standards of practice and clinical decision support tools (CDSTs) to ensure College registrants provide safe, ethical, and competent care to the public, including standards of practice for registrants granted certified practice certificates for activities deemed higher risk by BC’s Ministry of Health and as prescribed in regulation;
- developing and reviewing requirements for certified practice certificates (certification programs);
- establishing and maintaining a QAPP Program to ensure registrants maintain competence to practice over time. Registrants demonstrate continued competency by obtaining and reporting a minimum number of continuing education and profession-specific practice hours, and through assessing the professional performance of registrants within the clinical setting.

In support of the College’s QAPP Program, the College bylaws provide the legal authority to conduct onsite performance assessments and registrants have a duty to participate and remediate all deficiencies.

The Problem

In 2018, CSHBC 's QAPP Program, tasked with ensuring registrants' competence was maintained throughout the lifespan of their professional careers, included modules designed to ensure registrants' continuing competency for professional knowledge and recency of practice hours but lacked the capacity to assess a registrant's performance in real, clinical settings. As a small regulatory authority mandated to regulate three professions and a considerable number of certification programs across a small registrant base (approximately 2,100 registrants), the College has faced unique and significant fiscal challenges since it was established in 2009. When contemplating incorporation of a performance assessment module into its QAPP Program, a large mandate combined with a small registrant base, hence a limited source of revenue, meant the College had to carefully weigh program costs against the potential risk of harm by not establishing such a measure. The chosen measure would need to safeguard the public's trust in the College's three professions by ensuring registrant compliance with required professional and clinical practice standards. Despite the uniqueness of the College's three health professions, it was believed that the same performance assessment module and measures could be modified and applied to each profession.

Project Alternatives

According to Shavelson (2009), "competence is a physical or intellectual ability, skill, or both; is a performance capacity to do as well as to know; is conducted under standardized conditions and judged by some level of performance standard". (p. 44) The College's QAPP Program required a measure to determine the acceptable level of performance, or in this case compliance with practice standards.

Shavelson (2009) indicates that "those whose performance falls at about a certain level is declared competent and those who fall below are not competent and involves the notion of improvement in a person's underlying level or ability or skills is not fixed but malleable" (p.46). With this principle in mind, the College considered four main alternatives for a performance measure based on a literature review, an environmental scan of BC regulatory college programs, and measures in place for the speech and hearing health professions across Canada. The four measures included self-assessment, supervised practice, online examinations, and peer performance assessments.

Self-Assessment Measures

The first measure examined was registrant self-assessment. According to Andrade (2010), "self-assessment is the act of monitoring one's processes and products to make adjustments that deepened learning and enhance performance. Self-assessment is most beneficial in terms of both achievement and self-regulated learning when it is used formatively and supported by training." (p.10).

Two regulatory colleges in BC used portfolios, a subset of self-assessment, as a performance measure. According to the literature, portfolio assessments are limited in their application. According to Shavelson, Klein, and Benjamin (2009), self-assessment measures such as portfolios are "not standardized, not feasible for large-scale assessment due to administration and scoring problems, and potentially biased" (p.1).

CSHBC concluded that in the context of its three professions, it would be difficult to determine whether a registrant's interpretation of the standards of practice and the application of those standards in everyday practice was accurate and/or compliant by using a self-assessment methodology in isolation.

Supervised Practice Measure

Among speech and hearing health profession regulators across Canada, supervised practice was observed in one Canadian jurisdiction. In that province, newly licensed speech and hearing health professionals must complete a period of supervised practice to ensure competent performance. This option was ultimately rejected by the College for two reasons: first, due to the College's inability to amend its provisional registration classification, and second, because it was determined there would be significant problems recruiting an adequate number of qualified supervisors in rural and remote locations of BC.

Online Examination Measure

At the time, the College of Dental Hygienists of BC's (CDHBC) quality assurance regime included a performance assessment tool in the form of an online, open book assessment that all registrants were required to complete once every 5 years. According to CDHBC, the tool was built on the premise that one "cannot rely on what you learned when you graduated, and knowledge is subject to rapid change and information becomes obsolete in 2-5 years" (p.5).

In addition, the College of Occupational Therapists of BC (COTBC) and the College of Physical Therapists of BC (CPTBC) used online, revalidation examinations. At the time, these competency-based scenario examinations were to be reviewed and potentially replaced with more performance-based review program modules.

Performance Assessments and Combined Measures

Onsite performance assessments exist in various forms across BC. The College of Pharmacists of BC (CPBC) reviews pharmacies and individual pharmacists. The review of regulated pharmacy professionals is authorized under the College's bylaws and is conducted by a team of "Compliance Officers." The results are confidential between the individual and the College. The College's performance assessment tool combines observation (action), registrant recall (the 'how *did* you?'), recall charts, and process descriptions (the 'how *would* you?'). Pharmacy professionals have the option of completing a self-assessment prior to their performance review.

The College of Physicians and Surgeons of BC's (CPSBC) Physician Enhancement Program is based on peer assessment and is based on the Calgary-Cambridge model. There is a complex relationship between competence and performance. According to Rethans *et al* (2002), "what you do in a test situation and what do you do in practice are two different things" (p. 903). The Physician Enhancement Program uses a three-stage model to assess doctors in practice. According to the CPSBC, the process is one of continuous quality improvement aimed at raising the general level of performance.

In 2018, nurse practitioners in BC were registered with the College of Registered Nurses of BC (CRNBC). At that time, the College had a multi-pronged performance assessment module that included:

- A self-assessment questionnaire with peer feedback about practice;
- A professional development plan based on the registrant's assessment and feedback received; and
- A summary of professional development activities completed over the previous year.

Summary of Alternatives

In summary, no other Canadian speech and hearing regulator had a comprehensive performance assessment program that the College could model after while meeting its established mandate in an effective and cost-effective manner. To develop a recommended alternative, CSHBC had to consider the merits of other existing programs from BC and other regulated jurisdictions in Canada. At the planning stage, there was an opportunity to develop a unique performance assessment module provided the module was fiscally viable for the College.

The regulatory literature was limited regarding the use of predictive screening for performance assessments. The health care literature abounded with references regarding the effectiveness of predictive screenings for health care conditions such as screenings used for identifying the possible presence of hearing loss, cancer, and cognitive status. It was hypothesized that if a profession-specific screening tool could be developed and validated, performance assessment could become a viable, cost-effective option, i.e., by identifying only those registrants who would benefit from an onsite performance assessment. While a validated screening tool would not identify the specific issues or the seriousness of a registrant's performance, it *would* indicate that further assessment was warranted. A screening program would also provide insight into the current registrant compliance rates with required professional and clinical practice standards, potentially provide demographic trends, and target practice standards that may be problematic for a number of registrants.

Recommended Alternative

Having completed the research and analysis, and weighed the assorted options, CSHBC's QAPP Committee and staff recommended the College develop a cost-effective, performance assessment program which included the positive aspects of self-assessment (e.g., screening submissions selected by registrants), peer review by qualified and trained profession-specific assessors and had aspects of registrant participation in remediation planning and compliance. The recommended module would be complementary to the existing QAPP Program components such as current professional development credits. The problem of cost remained an important consideration, given the prohibitive cost of conducting in-person, province-wide reviews for all registrants.

In 2018, the College's QAPP Committee recommended to the Board of Directors that CSHBC proceed with the development of an onsite, performance assessment module, beginning with a pilot research project to determine whether predictive screening was a viable strategy to mitigate the costs while still ensuring the desired outcomes. The Board of Directors approved the recommendation, and a full business case was developed to design the project and conduct a pilot for the profession of hearing instrument dispensing. Given Registered Hearing Instrument Practitioners (RHIPs) represented the smallest portion of the registrant base, included the most homogeneous client populations and clinical contexts, and included the smallest number of certification requirements, this profession was chosen to be the first cohort for the research

project and validation of a predictive screening tool would be required prior to assessing all eligible RHIPs.

Design Phase

The design portion of the project, developed by college staff, included development of a business case that projected preliminary cost estimates for the pilot phase as well as the main review of all eligible RHIPs. A working group was established to develop a screening tool which targeted entry to practice competencies as well as a comprehensive practice assessment tool. All screening and assessment tool requirements were based on 'must do' components of the standards of practice and were in alignment with the entry level competencies outlined in CSHBC's provincial Hearing Instrument Dispensing Competency Profile. The comprehensive project methodology was developed to allow for establishing inter-screener reliability, determining whether the screener's background was relevant to the process, and for the purpose of validating the screening tool when the screening outcomes were compared to the onsite performance assessment outcomes. Table 1 summarizes the key aspects of the business case recommended for Board approval by the QAPP Committee.

Table 1: Business Case Summary for the Hearing Instrument Dispensing (HID) Performance Assessment Project

Category	Components	Comments
Design phase	<p>Develop business case, project cost estimates, develop pilot design</p> <p>Establish a working group to develop project objectives</p> <p>Working group to develop:</p> <ul style="list-style-type: none"> ▪ screening and practice assessment tools ▪ QAPP screener and assessor qualifications ▪ demographics and registrant feedback forms ▪ communications plan ▪ profession-specific panel roles, responsibilities, and composition <p>Prepare budget estimates for the pilot phase and based on the pilot results, project the potential costs of proceeding to all eligible RHIPs.</p>	<p>Based on entry to practice competencies in practice standards in the HID Competency Profile and the College standards of practice</p> <p>Communication plan to include:</p> <ul style="list-style-type: none"> ▪ General communications specific to randomly selected pilot group ▪ Website content ▪ Notice to profession ▪ College Public Engagement Forum (PEF) information ▪ Bulk email content ▪ Provincial health authority, post-secondary educational institution meetings ▪ Registrant consults as required ▪ Key communication components to include process, rationale, mandatory requirements, including mandatory compliance and remediation requirements, confidentiality, and completion notification
Pilot project	<p>Randomly select 30 fully registered RHIPs</p> <p>Recruit and train QAPP screeners</p> <p>Recruit, select, and train QAPP assessors</p>	<p>Eligible participants must be full registrants and see clients in practice; those on leave were deferred and those in non-client roles were moved to an administrative group for future review</p>

	<p>Develop Screening submission requirements and set timelines for submission</p> <p>Communicate with pilot registrants</p> <p>Notify pilot participants of the screening submission and demographic form requirements, as well as their assigned assessor for the onsite assessment</p> <p>Select and train the profession-specific panel members</p> <p>Convene the panel as required</p> <p>Enter and analyze pilot data for results and demographic trends</p> <p>Analyze:</p> <ul style="list-style-type: none"> ▪ Inter-screener reliability ▪ Validation of screening results versus assessment outcomes ▪ Demographic trends ▪ Screening fail rate ▪ Remediation compliance ▪ Current compliance rates <p>Meet with QAPP assessors for revisions and review registrant feedback for suggestions</p> <p>Send completion letters to pilot participants that had completed the pilot process, including any required remediation</p>	<p>Concurrent screening and assessment (review) process was possible because screenings were performed anonymously</p> <p>Meet and present findings to all stakeholders and the Board of Directors for information and future direction</p>
<p>Main group of practicing RHIPs</p>	<p>Determine the total number of eligible registrants</p> <p>Notify all RHIPs as per the communication plan</p> <p>Organize groups of 15-20 RHIPs for manageability</p>	<p>Groupings for manageability and coordination</p> <p>Communication plan is ongoing and individualized as needed</p>

	<p>Screen submissions first -- only where a registrant failed the initial screening would there be an onsite assessment</p> <p>Track and review all outcomes and demographics for each group and analyze data as per the pilot phase</p>	
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The working group also developed the performance assessment tool which included required elements for ten key areas of practice and a comprehensive scoring system which was revised after the pilot project, based on assessor feedback and recommendations. The key elements for review included:

- Equipment, Supplies and Calibration;
- Client Documentation;
- Assessment Parameters;
- Ear Impressions;
- Hearing Aid Fitting & Verification;
- Client Follow-up;
- Sales Agreements;
- Client Safety;
- Client Environment;
- Use of Communication Health Assistants (CHAs); and
- Other Areas of Practice.

Table 2 shows the level of risk based on a registrant’s Performance Assessment score. The scoring system was revised post design phase to incorporate registrant and assessor feedback and suggestions for improvement.

Table 2: Performance Assessment Scoring System

SCORING INSTRUCTIONS:

Based on the QAPP assessor summary, circle the score for this review. If the score is in the green zone, submit the report to the College and the registrant. If the score is in the cautionary zone, you must decide whether you need the profession specific QAPP Panel’s (the “Panel’s”) assistance in developing a remediation plan and support for the registrant. All scores in the red alert zone must be forwarded to the Panel for input and planning. **Send the assessor’s report, including the summary and scoring, to the College, and instruct the registrant to send you (assessor) their proof of completion by the agreed date(s) for remediations.**

STANDARD RECOMMENDATIONS:	MAJOR CONCERNS:
1-2 recommendations, score: <u>1</u>	1 major concern, score: <u>5</u>
3-4 recommendations, score: <u>2</u>	2 major concerns, score: <u>6</u>
5-6 recommendations, score: <u>3</u>	3 major concerns, score: <u>7</u>
7 or more recommendations, score: <u>4</u>	4 or more major concerns, score: <u>8</u>

STANDARD RECOMMENDATIONS + MAJOR CONCERNS = TOTAL SCORE (see scoring grid below):

TOTAL SCORE = 0
NO RISK

No recommendations, concerns, or follow-up required

TOTAL SCORE = 1-2
LOW RISK

Recommendations and remediation plan are developed between the QAPP Assessor and the registrant

TOTAL SCORE = 3-4
CAUTION

Recommendations and remediation plan are at the QAPP Assessor's discretion, based on established criteria. The assessor can choose to develop the remediation plan with the registrant OR refer the matter to the QAPP Panel

Q1: Are the standard recommendations simple and straightforward to remediate?

Q2: Is the registrant capable of implementing the remediation plan on their own or with a colleague?

Q3: Is there evidence of systemic issues that may benefit from practice review supervision?

TOTAL SCORE = 5 or more
ALERT

The QAPP Assessor's report is referred to the QAPP Panel for the development and approval of the remediation plan, timelines, and necessary supports

Registrant reviews with scores in the “caution” category may be sent to the Panel for assistance at the discretion of the assessor. All registrant reviews in the “alert” category must be sent to the Panel.

All pilot participants were required to complete a demographic form to collect key information regarding registrants’ years of practice, level of education, practice setting, and whether they worked alone or with other registrants. At the end of the project, this information would enable the College to examine any correlations or trends between registrant demographics and the registrant’s outcomes on their performance assessments.

Remediation

The registrant’s score, together with assessor’s decision-making, determined how remediation plans would proceed. Any scores in the green zone, either requiring no remediation or minimal remediation, were agreed to by the assessor and the registrant. Cautionary scores (orange zone) require a decision by the assessor as to whether the registrant could complete a remediation plan on their own without additional support or intervention. Registrants with a cautionary score that were concerning to the assessor, or registrants who received a red zone score, were referred to the Panel. The Panel was tasked with developing the remediation plan, and staff were required to forward the plan to the registrant-to obtain agreement to comply with the plan. The Panel was comprised of RHIPs, and public representatives trained to review assessment reports and develop remediation plans. The Panel determined any potential specific limitations on the registrant’s practice until remediation was successfully completed and had discretion to assign a QAPP profession-specific Practice Review Supervisor (PRS) if they believed the registrant required additional support and supervision during the remediation process. The level and duration of supervision was case specific, and the level of risk involved. For example, in complex situations where remediation included additional coursework, practice on a clinical activity, and verification of competence, and where the registrant was in solo practice in a rural area, the Panel could assign a PRS to oversee the process.

Practice Review Supervisors

Practice Review Supervisors (PRSs) are accountable to the QAPP Committee of the College. This accountability may be delegated to the Panel. PRSs are appointed by the College to support an individual registrant in their remediation of a sizable number of recommendations or major concerns. The PRS oversees the registrant’s remediation plan and ensures that the registrant understands the goals, objectives, and timelines of their plan. The PRS is responsible for submitting a final completion report to the Panel or notifying the Panel of an incomplete remediation plan and the reason(s) the plan is not complete.

The Panel had a roster of qualified PRSs available to them to ensure that there was no conflict of interest between registrants and supervisors. PRSs are integral to the remediation process, especially in terms of cases that are complex, serious, and high-risk. They oversee the supervision of a registrant in the remediation of multiple standard recommendations and/or major concerns identified by an assessor and supported by the Panel.

PRSs are experts in clinical supervision and are responsible for supervising the acquisition of new registrant skills and remediating substandard practice skills. “Supervision” may include, but

is not limited to, observing, directing, overseeing, evaluating, reviewing, and monitoring someone else's clinically related performance, in the regulatory context. PRSs may be required to provide training, observe practical competencies, and provide formal and informal constructive feedback. PRSs were required to use skills from multiple sub-roles including as an educator, facilitator, mentor, or advisor.

Completion of the Performance Assessment Process

Each registrant who underwent the performance assessment process received a completion letter at the appropriate point in their process. Letters of completion were issued where the participant's screening results were a pass and where there were no recommendations for remediation following an onsite performance assessment. All other registrants received a letter of completion when their remediations were verified as completed by the assessor or the Panel.

Referrals to the Inquiry Committee

Any registrant who was either unwilling or unable to participate in the performance assessment process, as required by the Act and the College Bylaws, was referred to the Inquiry committee for investigation and possible disciplinary action. Registrants who were unwilling or unable to remediate identified deficiencies were also referred to the Inquiry Committee.

Timeline

The working group of 12 subject matter experts took 9 months to design the pilot project and design the projects tools. It was important that all clinical practice areas and settings be reflected within the working group. College staff drafted the final recommended tools and forms for use in the pilot project.

Screener Selection and Training

Once all screening and assessment tools were finalized, College staff recruited and trained 6 QAPP screeners to run the screening portion of the pilot project. Thirty randomly selected RHIPs were provided specific clinical documents to redact and submit for anonymous screening. Participants were each screened by 3 screeners. The trained screeners assigned to each file consisted of one RHIP, 1 health professional who was not an RHIP, and 1 other non-health care professional. Each pilot participant was given 30 days to submit their screening material, extension requests were considered on a case-by-case basis where the registrant required more than 30 days.

Performance Assessment Assessors

College staff developed the qualifications to recruit, select, and subsequently train the QAPP profession specific assessors for the project. The screenings and onsite performance assessments could proceed concurrently as screenings were performed anonymously. Once the assessors were selected and trained, they were assigned to pilot participants, provided neither the registrant nor the assessor identified a real or perceived conflict of interest. If a conflict was declared by either party, the assessor assignment was changed. The assessors were able to accept assignments according to their availability and geographic location.

Communication

Communication with registrants began early in the pilot project, prior to the selection of the thirty pilot registrants. This was a new requirement for RHIPs that was approached cautiously and via several methods including broad email communications, posting information to the College website, in-person presentations at key forums (e.g., professional association convention, the College's Public Engagement Forum) and by personal communication as requested by employers or registrants.

Communication was ongoing with all screeners, assessors, and PRSs via virtual meetings, emails, posted notices to the profession, and in-person sessions.

At the conclusion of the pilot project, feedback was collected from all assessors and participants. Adjustments were made to the screening tool, assessor report and scoring system, and any associated forms based on the collective feedback. An in-person debriefing session was held with all assessors, screeners, and Panel members to review the proposed changes to project tools, lessons learned, and any challenges and successes that were encountered during the project. Recommended changes were implemented prior to assessing the balance of all eligible RHIPs.

Assessment of all Eligible RHIPs

At the conclusion of the pilot project, there were 350 RHIPs eligible for the performance assessment program. RHIPs who were not in clinical practice or were on leave were excluded from the main project and would be added to a subsequent group if their eligibility changed.

Eligible RHIPs were organized into groups of 15 to 20 for data management, labor, and logistical purposes. Each registrant was screened using the newly validated screening tool and were only assessed if they did not pass the newly validated screening process.

At the conclusion of all assessments, the demographic information was analyzed for significant trends. The overall screening failure rate was calculated and the screening outcomes versus the performance assessment outcomes were compared. The outcomes were tracked for remediation trends and the major issues for the Panel were analyzed in depth. At the conclusion of the project, the overall compliance rates with practice standards were compared to the starting point.

Outcomes

Project Challenges and Unintended Consequences

Despite a multi-faceted communication approach, during the early phases of the project, registrants were fearful of the process and the implications for their license and ability to continue in their practice. This impacted registrant openness and willingness to fully engage in the process. Over time, misinformation spread amongst the professional community that the project had not been designed to 'take away their license.'

There was also fear that there may be stigma associated with not passing the screening and being referred for assessment. The message that a screening referral only meant that further assessment was warranted and did not delineate the issues or their severity, was especially important for registrant perceptions. Words such as 'fail' the screening were avoided. The screening result was

either a ‘pass’ or ‘refer for assessment.’ It was critically important to communicate that all results were confidential and would not be shared with employers unless the registrant provided their consent. Maintaining confidentiality was key to establishing trust and cooperation with registrants.

Registrant feedback forms were provided to all participants and their completion was voluntary. Over 80% of performance assessment participants returned their feedback forms. The return rate was extraordinarily high and was overwhelmingly positive regarding all aspects of the program including the professionalism and knowledge of the QAPP assessors. Participants also had constructive ideas about the future directions for performance assessments.

After the pilot project, several of the participants became involved in the next phase of the project and became involved in other College committee work.

Prior to the performance assessments, RHIPs were the smallest cohort of CSHBC registrants, yet were respondents in a disproportionately high percentage of college complaint investigations. Following the project, the number of complaint investigations naming an RHIP as a respondent briefly dropped to zero, and that number has remained comparatively low since the implementation of performance assessments for hearing instrument dispensing.

Screening Outcomes

First, and most importantly, the screening tool was validated. There were no false negatives as no participants who passed the screening showed deficiencies in the onsite assessment stage during the pilot phase of the project. There was one false positive where a registrant passed the screening but was inadvertently referred for an assessment but did not have any recommendations for remediation. Of note, the screening results were predictive of those requiring a performance assessment with 99.8% certainty.

Second, the inter-screener reliability rate was 100% across screeners. Outcome results showed that it was not statistically significant whether the screener was a RHIP, another health professional, or from an unrelated, non-health background; however, it was relevant for the purposes of administrative efficiency -- although screeners from all three categories arrived at the same results, the RHIP screeners were significantly faster in performing their assigned screenings than the other health professionals and the non-clinical screeners. The results indicated that anyone can be trained to screen; however, screeners from the same professional background were the most efficient and therefore the most cost effective.

Rate of Referral for Onsite Performance Assessment

The referral rate for performance assessment, based on the screening results, was higher than anticipated.

Out of 350 eligible RHIPs who were screened, the referral rate for onsite assessment was 60% (209/350). The pilot outcomes results showed that registrants who passed the screening (141) missed no elements on the screening tool. The pass rate of 40% was significantly lower than expected, indicating a low, overall compliance rate with the required practice standards.

There were trends regarding the screening elements that were not performed by registrants or were performed incorrectly. The four areas most likely requiring remediation pertained to client consent, sales agreements, supplies and equipment, and client records. There were also 2 HID assessment parameters that were frequently performed incorrectly including performing Real Ear to Coupler Difference (RECD) and accurately identifying medical red flags.

The number of standard recommendations for remediation amongst RHIPs assessed ranged from one to eight. The average number of recommendations for remediation was four per registrant. It was important for internal use to calculate the number of registrants missing specific elements so that internal corrective actions could be taken where warranted such as the addition of a new client consent standard.

There were 19 registrants with scores that were considered of significant public risk and who were referred to the Panel for cautionary or alert level scores. This represented 9% of the total number of registrants assessed, which was not statistically surprising. Eighteen of these 19 registrants successfully completed their remediation plans and the nineteenth registrant opted to retire from practice.

Demographic Trends

Demographic outcomes across all RHIPs did not show a significant correlation with a single demographic variable and those registrants with cautionary or alert level assessment scores. Level of education ranged from certificates to doctorate degrees and was not significant in the outcomes. Location of practice (urban, rural, or remote), age, and years of practice were not significant variables. That said there was a moderately strong correlation when age of the registrant and *solo* practice demographics were combined ($r=.69$).

Shift in Compliance with Practice Standards

At the outset of the Performance Assessment project, 60% of RHIPs were in compliance with all required professional and clinical practice standards. By the conclusion of the project, 100% of practicing RHIPs were meeting the College's target performance expectations.

Recommendations and Future Research Directions

In 2019, based on assessor and registrant feedback, as well as analysis of the performance assessment outcomes for the profession of hearing instrument dispensing, the Board directed that all new RHIPs be screened within their first 2 years of practice. Once screening tools for the professions of speech-language pathology (pilot phase currently underway to be completed in 2023) and audiology are validated, the policy will be applied across all 3 of the College's professions. This is a proactive/preventative strategy that will assist new clinicians in their understanding and application of required professional and clinical practice standards. The College licenses approximately 150 new registrants per year, making performance assessments for those that fail the initial screening a manageable option for the College across its three professions.

Recommendations for future CSHBC direction include:

1. Following completion of performance assessments for the profession of hearing instrument dispensing, a new practice standard and companion clinical practice guideline

for client consent were developed for all registrants, and a new online learning module for client consent was launched.

2. Feedback from participants suggested that a one-time performance assessment is inadequate. Random audits are recommended so that registrants know that a subsequent review may occur at any time throughout their career.
3. The QAPP Committee should accept referrals from other statutory committees (e.g., the Inquiry Committee) and self-referrals at registrant cost should also be considered. This will assist registrants who have been identified as having possible practice concerns, have been away from practice for a significant period of time, or are transitioning to a completely different area of clinical practice.
4. Similar predictive screening and performance assessment programs should be developed for the professions of audiology and speech-language pathology. Given the prohibitive cost of assessing all registrants, assessing only those registrants who do not pass an initial screening within their first two years of practice, as well as a selection of other registrants through a random audit, was recommended as the most viable option.
5. Proactive, pre-emptive, and ongoing communication is essential to the success of a performance assessment program. Registrant and employer engagement is necessary to the program's success. Communication plans need to be ongoing and updated frequently and presented to registrants in a variety of ways.
6. The evolution of practice means that the performance assessment tools must incorporate new and updated standards into the assessment process; for example, the new practice standard for Indigenous Cultural Safety, Cultural Humility, & Anti-Racism, as well as post-pandemic infection control measures.

Considerations for future regulatory research may include the following:

1. Assessment of clinic sites where health care services are provided. There are numerous elements required for safe, effective workplaces and there are health care examples where the sites are reviewed and, in some instances, formally accredited.
2. There may be an opportunity to collaborate with other regulated health care professions to develop a review assessment tool for inter-professional collaborative practice (ICP). Existing practice standards for ICP could form the basis of the required elements for registrants who provide team-based, client care. An inter-professional screening tool could be developed and validated that would be applicable to all regulated health care professionals.
3. Facilitation of performance assessments for registrants currently in clinical support roles including educators, supervisors, managers, and other roles is required. While such registrants may not currently have their own clients, in the absence of limits and conditions on their registration, they are nevertheless licensed to practice the full scope of the profession. Assessment methodologies such as the use of mock clients and simulation may be suitable for these registrants.

In conclusion, predictive screenings and subsequent onsite performance assessments are viable regulatory options for determining and improving compliance with regulatory practice standards. Further, they can be delivered in a relatively cost-effective manner that ensures that the public's

trust in a regulated health profession is maintained, and the public's right to safe, ethical, and competent care is safeguarded.

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