

QAP Evaluation Report

For Registered Dental Hygienists

Category: Quality Assurance

Source: CDHBC

September 1, 2022

Territorial acknowledgement

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College of Dental Hygienists
of British Columbia

CDHBC Quality Assurance Program: Feedback Reported, Evaluation and Future Directions



MARCH 2018

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Executive Summary

Regulatory expectations and requirements across many disciplines and jurisdictions have moved beyond conventional continuing education programs toward models that also incorporate methods of assessing practitioners in order to provide the public with a level of assurance of quality practice. In addition, these models are meant to be supportive and collaborative in nature, while guiding the learning of the professional. Amendments to the *Health Professions Act* have established a need for the regulators of BC health professions to develop programs for this purpose. After a number of years of program planning and development, the College of Dental Hygienists of BC (CDHBC) piloted its Quality Assurance Program (QAP) in 2012 and officially launched in 2013. The program is based on completion of an online open-book Assessment Tool, which provides feedback to registrants on areas of foundational dental hygiene knowledge in which they need to dedicate a portion of their continuing competence activities and ongoing learning over the course of a five-year cycle. Registrants are also required to complete an online Jurisprudence Education Module, which encompasses regulatory topics and ethics, once per QAP cycle.

CDHBC has been committed to gathering feedback and information about the program in a number of ways since its inception in 2012, and this aligns with one of the program's seven Guiding Principles (see Appendix A). Following completion of the Assessment Tool, members of each cohort have been asked to complete a survey to provide feedback about their experience and the preparation strategies they used. The questions on the Assessment Tool are also coded to align with one of the program's twenty-one content categories, and this information has been analyzed to ascertain whether any trends in performance on the Assessment Tool exist by content area and/or registrant demographics. The information gathered from the exit surveys and the Assessment Tool question analysis has been reviewed annually.

Additionally, the end of 2016 marked a significant milestone for the QAP, with the completion of the 2012 pilot cohort's first five-year cycle using the Online Learning Plan platform and the start of their second cycle. Given that their experience in the program had come full circle at this juncture, the CDHBC Board recognized that this was a natural time to conduct a more fulsome review of the program. As such, the pilot cohort was asked to complete a unique exit survey following their completion of the Assessment Tool in 2017, to comprehensively capture their perspective on the Assessment Tool, as well as their experience with the Online Learning Plan and the program overall. They were also invited to participate in focus group sessions to explore the feedback in greater depth.

From the information that has been gathered formally and informally about the QAP, a number of themes emerge, including areas that are working well, and areas that can be improved upon. The Assessment Tool consistently performs well as a user-friendly platform, and the majority of registrants who have taken it feel that it includes an appropriate number of questions, is of sufficient duration for completion, and contains questions that represent the fundamentals of dental hygiene practice. Feedback concerning the clarity or target audience for certain questions is considered during the question selection process which takes place every two years (see full report for additional information). Overall, the consistency, objectivity and validity of the Assessment Tool adds strength to the College's ability to demonstrate to the public that a reliable quality assurance mechanism is being undertaken by BC dental hygienists, in the interest of providing safe and ethical care.

CDHBC has concluded that the Assessment Tool will continue to serve as the primary method of assessment for the program. However, the feedback from registrants' experiences with the Online Learning Plan platform has identified important ways in which it can be streamlined, along with changes to make it easier to navigate and more intuitive to use. Therefore, CDHBC will begin a project to update and enhance the Online Learning Plan platform to improve its ease of use for registrants. Additionally, the Jurisprudence Education Module will also be revisited to create a more engaging and interactive experience for registrants and to incorporate updates in regulatory content. Lastly, if proposed changes to the CDHBC bylaws and the *Dental Hygienists Regulation* are approved by the provincial government, CDHBC will develop a 'BC Module' to address issues specific to the practice of dental hygiene in BC that the Assessment Tool does not fully encompass.

Registrants' feedback about the QAP has been greatly appreciated. It has been carefully considered as CDHBC has evaluated the program at its five-year milestone and examined options for a path forward. However, any feedback from registrants is always tempered with the mandate of the College. The goal of public protection will always remain at the heart of any and all evaluations of the QAP to ensure it is achieving its foremost purpose of assuring that registrants are current and competent to provide safe and ethical care to British Columbians. Feedback mechanisms and evaluation will continue to be incorporated as the QAP moves into the future while upholding its original Guiding Principles.



Background

Changes to the legislation that governs the ongoing competence of regulated BC health professionals began to take place in 2003 when the *Health Professions Amendment Act (Bill 62)* was passed. Under this legislation, section 26.1(1) was added to the *Health Professions Act*, which requires the Colleges to establish a quality assurance program (QAP). This section was not immediately brought into force, in order to allow the Colleges time to develop appropriate programs. However, the expectation of the government is that programs will incorporate a measure or assessment component in order to provide assurance of public safety.

In 2005 the College of Dental Hygienists of British Columbia's (CDHBC) Quality Assurance Committee began investigating options for the development of a program that would fulfill the legislative requirements expected to be brought into force. In 2008 CDHBC conducted a survey of registrants to seek input on quality assurance measures and a vision for the future program. Responses were received from 1206 BC dental hygienists, which represented 49% of the registrant base at that time. Respondents indicated that the most important considerations for the College in developing a new QAP should be effectiveness at promoting continuing professional excellence, and the time and commitment required of registrants to participate in the program. Ninety-one percent of respondents also supported mandatory continuing education requirements, which aligned with CDHBC's Continuing Competency (CC) program that had been in place since the College was established in 1995.

The option to self-select continuing education topics and activities provides for autonomy and pursuit of professional interests. However, sole reliance on this model poses challenges because research literature demonstrates that humans may not self-assess well when identifying learning needs.¹⁻² Even when one's self-awareness of a learning need is accurate, other factors such as convenience of continuing education offerings may override when selecting professional development activities.³ With these and many other factors in mind, the Quality Assurance Committee considered several methods of assessment for the future QAP, including self and/or peer reviews, professional portfolios, onsite inspections, and periodic re-examinations.

By 2010, the CDHBC Quality Assurance Committee and Board had approved a project plan for the development of a QAP, including a Vision and a set of Guiding Principles. The Vision for the QAP is for a program that:

- Is fair, transparent and defensible, and above all, ensures protection of the public.
- Will ensure that all registrants are practicing dental hygiene at a safe and acceptable level of competence by incorporating reliable methods of practice assessment and professional development.
- Will be reasonable to administer and manageable to participate in.

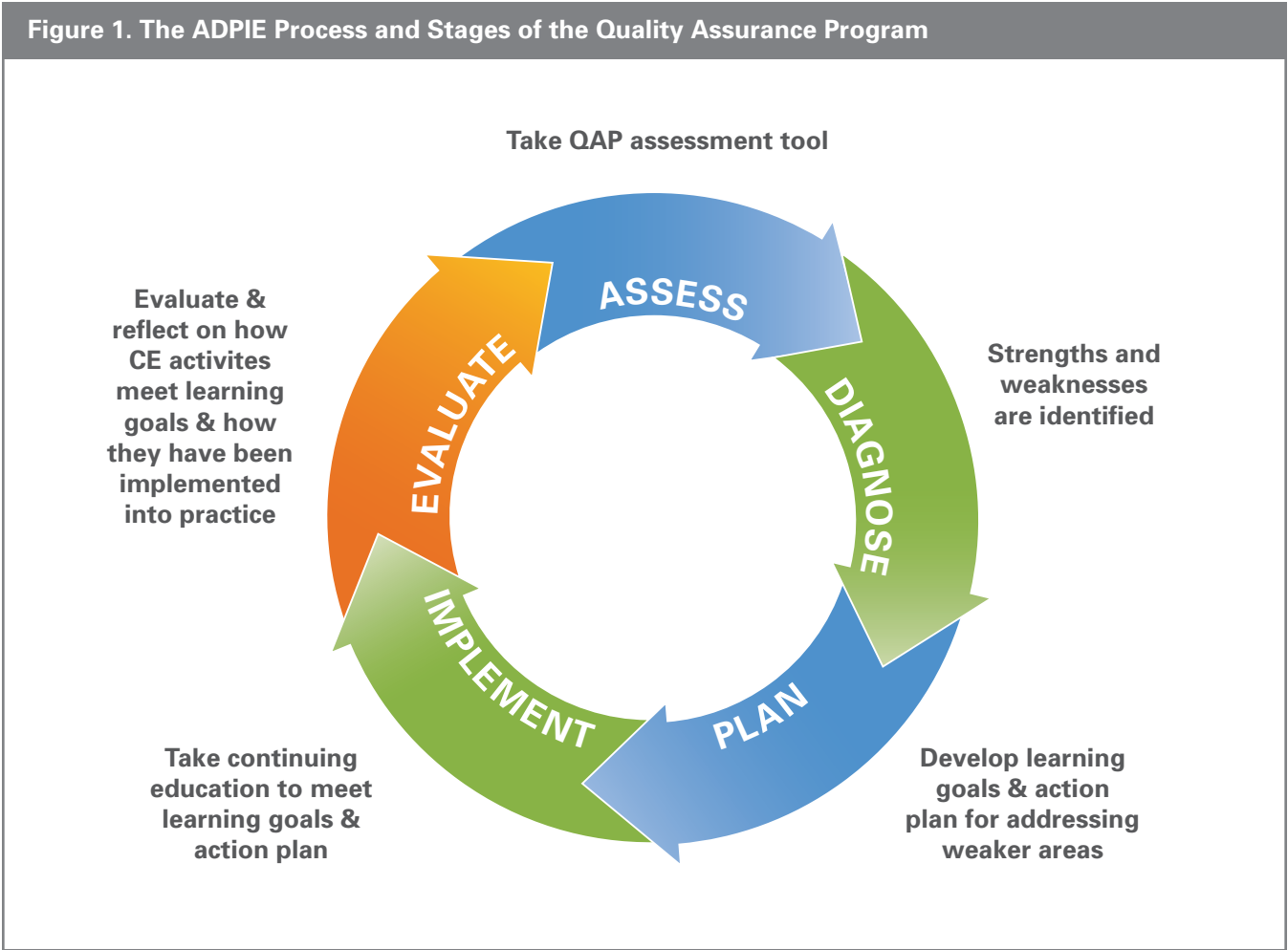
The Guiding Principles are statements that reflect the fundamental values and beliefs underpinning the QAP and collectively they serve as a beacon during each stage of the program's development and evaluation. They were identified at the outset in order to develop a program that fits well with the profession of dental hygiene, considers the attributes that are unique to the profession, and provides opportunity for quality improvement (professional development) while meeting the College's mandate of public protection. The expanded QAP Guiding Principles can be found in Appendix A; however, they are summarized in this section as follows:

1. The goal of the QAP is public protection.
2. The QAP will be evidence-based and cost effective.
3. Maintaining and enhancing competence is the responsibility of the registrant.
4. All dental hygienists registered in practicing categories will be required to participate in the QAP.
5. The materials that inform registrants about the QAP will be clear, concise and accessible.
6. Participation in the QAP is intended to be reasonable and manageable for registrants.
7. The QAP will be evaluated regularly.

From the Vision and Guiding Principles established in 2010, the CDHBC QAP was developed, including the following components:

1. **Jurisprudence Education Module (JEM)** – this online educational module includes content on relevant legislation and regulations, registrant responsibilities, scope of practice topics, ethics and jurisprudence. It is eligible for CC credits and must be completed once per QAP cycle.
2. **Assessment Tool** – a 75-question open book assessment that is taken online. The Assessment Tool provides feedback to registrants on their knowledge of foundational dental hygiene competencies. This feedback is incorporated into a guided learning plan for those who successfully meet the threshold of the Assessment Tool. Those who do not meet the threshold on the first attempt are provided with a second attempt. If a registrant does not meet the threshold in two attempts they enter the Professional Performance Assessment process, where they are paired with a QAP Assessor. The Assessor conducts an on-site practice assessment and helps to develop appropriate learning goals and strategies for learning.
3. **Online Learning Plan (OLP)** – this is comprised of a) the Guided Learning Plan where registrants develop learning goals, action plans and activities to address learning needs identified from the Assessment Tool, and reflect on their learning, and b) the Self-Directed Learning Plan where registrants track professional development activities taken outside of the Guided Learning Plan, and may also opt to create learning goals and reflect on learning.
4. **Continuing Competency (CC) Activities** – 75 CC credits of professional development and continuing education activity options from the CC Framework which was updated and expanded in 2013 to reflect current educational modalities. Of note, with the transition to the QAP, the cycle duration for completing CC credits was extended from 3 years to 5 years in order to balance the time and cost that registrants expend on the Assessment Tool.

The stages of a QAP cycle experienced by registrants have been modelled on the Assess, Diagnose, Plan, Implement, and Evaluate (ADPIE) process of care that underpins contemporary dental hygiene practice, as demonstrated below:



In 2012, CDHBC registrants were invited to participate in a QAP pilot cohort prior to the program’s official launch in 2013, and 99 registrants opted in. This pilot cohort completed their first QAP cycle in December 2016, and started their second QAP cycle by taking a subsequent version of the Assessment Tool in January and February of 2017.

Program Evaluation

The process of developing the Quality Assurance Program has also followed a path similar to the ADPIE process of care, as follows:

Table 1. QAP ADPIE Development Process	
Assess	Review research and grey literature to consider viable quality assurance options (e.g. strengths, limitations, costs, time commitment for participation) and recognize limitations of reliance on a solely self-selected mandatory continuing education program, consult registrants (e.g. 2008 CDHBC survey) and stakeholders.
Diagnose	Identify the Vision and Guiding Principles for a program that provides the public with assurance of current and competent practice by BC dental hygienists, and incorporates a method of assessment.
Plan	Establish a project plan for the QAP that incorporates program policies, registrant resources and communications strategies.
Implement	Develop and launch the components of the program, in keeping with the Vision, Guiding Principles and project plan.
Evaluate	Obtain information about the program that is useful for ongoing program operation, and identify areas for future planning and improvements.

In keeping with the spirit of ADPIE and Guiding Principle #7, the Assessment Tool has been evaluated annually since its inception. Additionally, a special resolution calling for a review of the Assessment Tool as a measure of practice assessment was presented and passed at the 2014 CDHBC Annual General Meeting. While the special resolution was not binding, the Board acknowledged the feedback received and committed to undertake a fulsome review of the Assessment Tool along with the Online Learning Plan. After further consideration, the Board determined that the most natural time to engage this review would be after the initial QAP pilot cohort had completed its first five-year cycle so that information could be gathered once their experience in the program had come full circle.

The next section reports on each of the ways that the program has been reviewed and evaluated.

Assessment Tool – Development Process and Analysis of Questions by Content Subcategory

The College partners with the National Dental Hygiene Certification Board (NDHCB) to develop and administer the Assessment Tool for the QAP. The questions for the Assessment Tool are selected to align with the NDHCB's exam Blueprint, which captures the foundational areas of dental hygiene practice that are included in the [Entry-to-Practice Competencies and Standards for Canadian Dental Hygienists](#). The items on the Assessment Tool are owned by the NDHCB and are psychometrically validated.

The questions selected for the Assessment Tool are also coded to align with the QAP content subcategories, which are used to provide registrants with feedback from their performance on the Assessment Tool and inform their Guided Learning Plans. The College has contracted an independent research firm to conduct an analysis of how registrants perform on the Assessment Tool by content category and subcategory since the QAP officially launched in 2013. This analysis identifies the subcategories where registrants perform the strongest as well as the weakest. This information is useful for the College to be able to convey to external stakeholders such as continuing education providers and conference organizers where a possible demand for CC opportunities related to a particular subcategory may exist. The analysis by content subcategory is presented in combined cohorts (2013/2014, 2015/2016, and 2017) which reflect three different versions of the Assessment Tool data and can be found in Appendix B.

The analysis of content subcategories has also been examined to ascertain whether any differences in performance on content subcategories can be related to registrant demographic factors, such as practice setting, years of experience, place of education, and level of education (diploma or degree). In the early years of the program, significant correlations were not observed. In 2016 and 2017 some limited observations were noted; however, they did not necessarily re-emerge year over year. Some examples are as follows:

- In the 2016 cohort, registrants with less than five years of experience were more likely than more experienced registrants to answer radiography knowledge and interpretations correctly (<5 years: 83% correct, 5-9 years: 78%, 10-19 years: 74%, 20+ years: 72%).
- In the 2016 cohort, registrants educated within Canada were more likely to answer public health questions (including programming and client advocacy) correctly (84% versus 66%), as were registrants with a degree-level of education (degree: 90%, diploma: 82%).
- In the 2017 cohort, registrants with 20+ years of experience were more likely to answer general and oral microbiology & infection control questions correctly (84% versus 77%), as were those with a degree or higher (degree or higher: 91%, diploma: 78%).
- In the 2017 cohort, registrants educated outside of Canada or within BC achieved a higher overall score on the Assessment Tool (outside Canada: 86%, BC: 85%, the Prairies: 81%, East Coast: 80%, Ontario 80%).

While these examples show certain correlations that were observed in more recent annual cohort analyses, these findings cannot be projected to all cohorts or registrants (and therefore a margin of error does not apply to these results). Meaningful differences among subgroups of interest (demographic factors previously listed) are based on changes to the calculated average score of each content subcategory and the number of registrants represented in each demographic group. Continued future data collection and analysis of subsequent cohort performances may provide further insight on how performance may relate to registrant demographics. A positive aspect of this analysis in the interim time is that the data to date does not depict concerning gaps in registrants' foundational knowledge based on demographic factors.

Annual Assessment Tool Exit Surveys – Registrant Perspectives

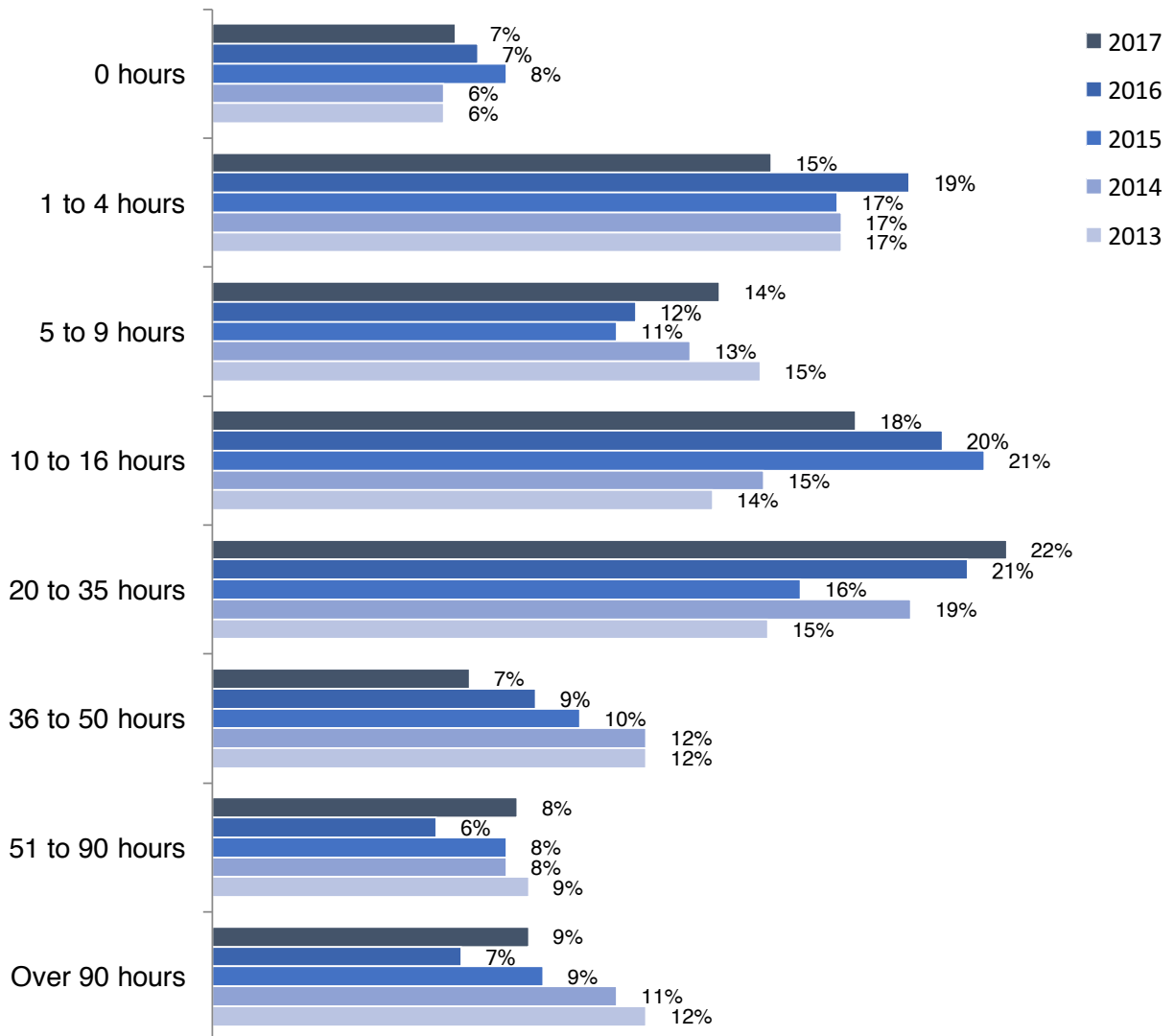
After taking the Assessment Tool, registrants are asked to share their perspective by completing an exit survey that is conducted by an independent research firm. This survey asks about personal preparation methods, use of the QAP Information Guide, and experience and satisfaction with the Assessment Tool itself. Response rates have been high, with 77- 88% of QAP cohort registrants partaking each year.

The data collected from the annual exit surveys indicates that between 75-82% of respondents have found the QAP Information Guide useful in preparing to take the Assessment Tool. A significant majority of respondents (between 74-84% annually) have used one or more resource materials for preparation that were suggested in the QAP Information Guide. From those suggested, the resources most commonly used for preparation were:

- Review of Darby & Walsh's *Dental Hygiene Theory and Practice* (80-82%)
- Completion of the NDHCB 'Prep Test' (49-63%)
- Malamed's *Handbook of Local Anaesthesia* (52-59%)
- Review of the QAP Content Categories/Subcategories and the NDHCB Competency Profile provided in the Information Guide (42-56%)

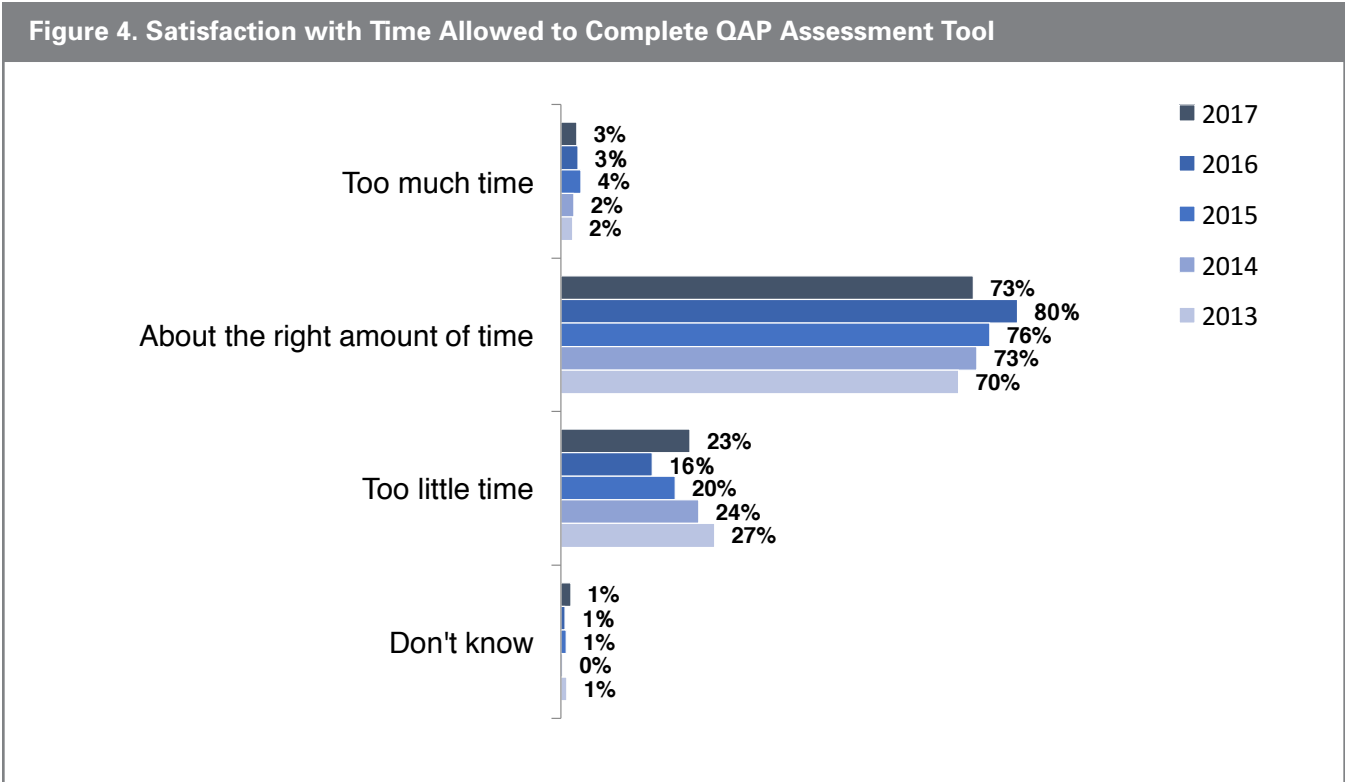
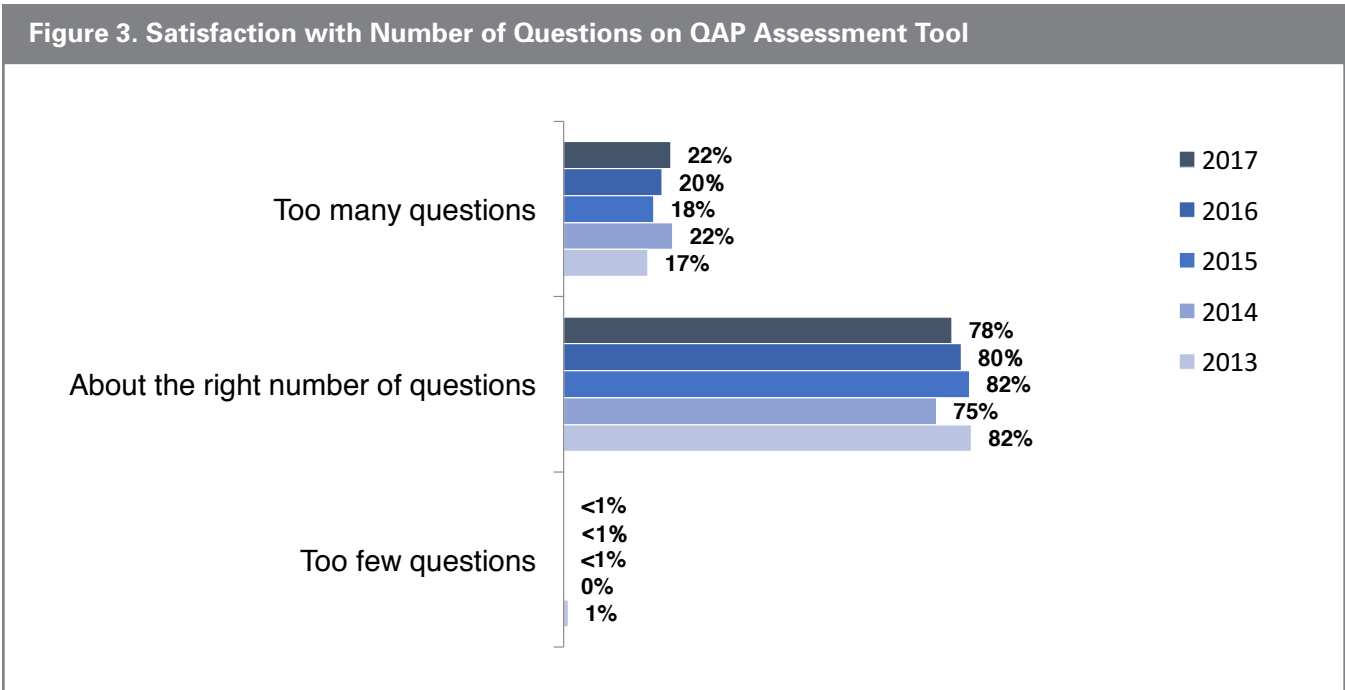
The data reported in the exit surveys depicts a wide range in the amount of time that registrants spend preparing to take the Assessment Tool. Interestingly, preparation time does not correlate with performance on the Assessment Tool, which suggests that preparation requirements are reliant upon the individual. The distribution of preparation time reported by exit survey respondents is shown on the following page.

Figure 2. Reported Preparation Time Allotment



The Assessment Tool has performed well from a technology perspective, with 96+ % of respondents annually indicating they have found it to be a user-friendly interface. Additionally, between 77% and 83% of each cohort indicated that they used the Assessment Tool Tutorial prior to taking the Assessment Tool, and between 86% and 92% of those who used it felt it was helpful. Following completion of the Assessment Tool, registrants are provided with the opportunity to review questions that were answered incorrectly along with the rationale for each available option, and 93+ % of respondents indicated that this process has been helpful.

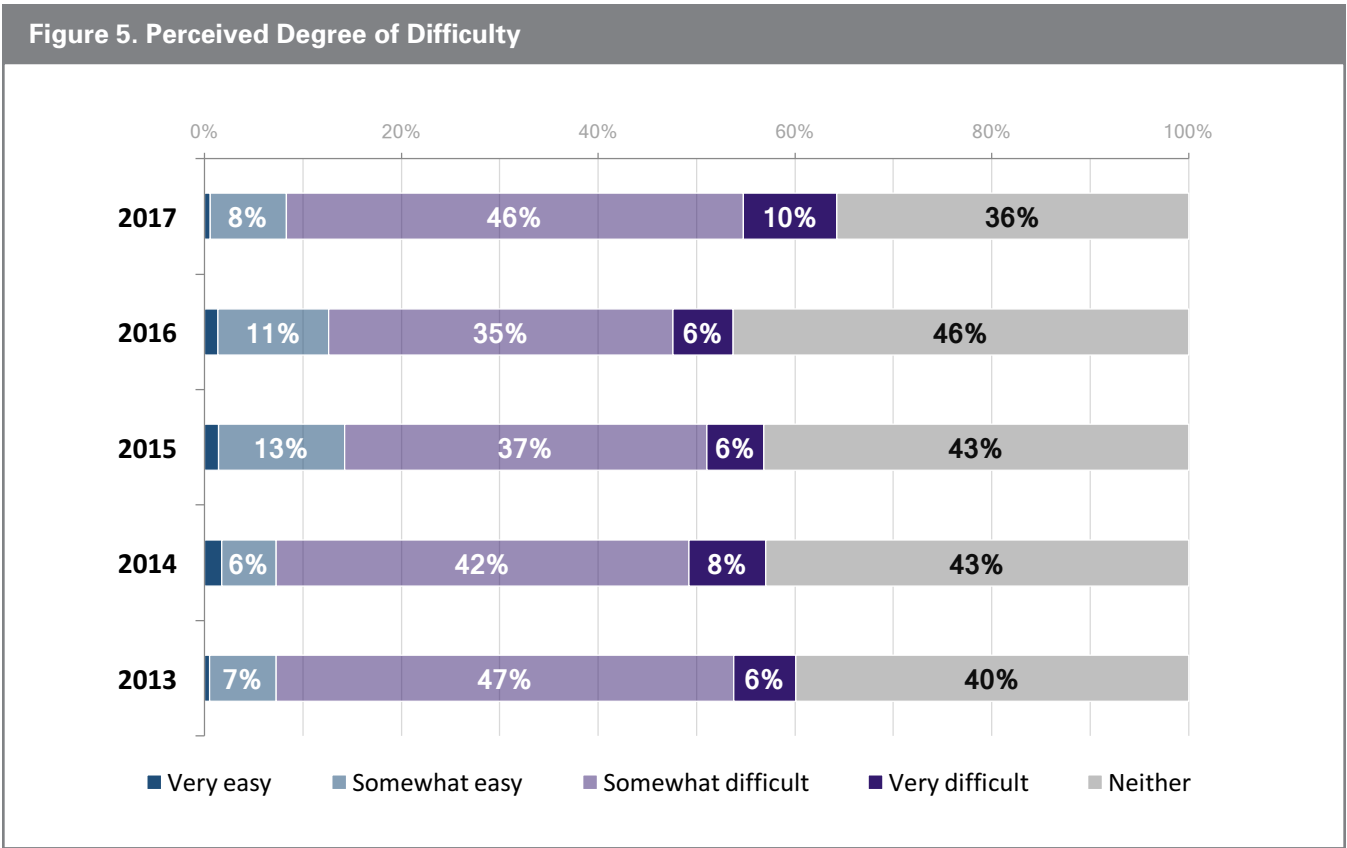
In terms of satisfaction with the assessment process, the majority of respondents over the past five cohorts have felt that the Assessment Tool asks the right number of questions, and that the 2.5-hour time limit is adequate for its completion. Represented by cohort, this data is as follows:



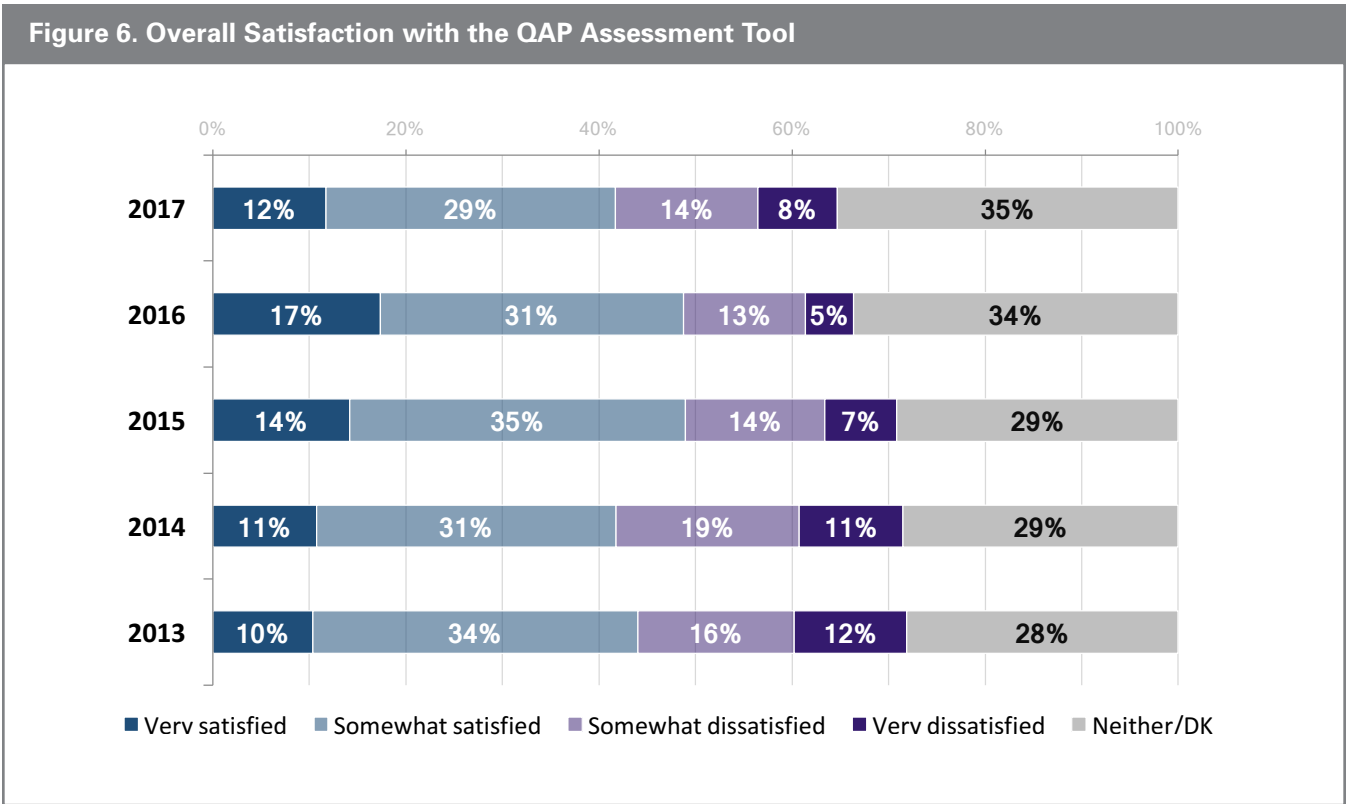
The majority of respondents have indicated they feel that the content on the Assessment Tool is a fair representation of the fundamentals of dental hygiene practice, with the data by cohort as follows:

Table 2. Level of Agreement that Questions Assess Fundamentals of Dental Hygiene Practice (by cohort)					
Year	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Neutral/ Don't Know
2017	14%	46%	16%	6%	19%
2016	19%	48%	13%	3%	16%
2015	17%	48%	13%	5%	17%
2014	11%	44%	18%	10%	17%
2013	14%	49%	15%	6%	16%

In terms of the Assessment Tool’s degree of challenge, the largest segments of respondents have indicated that it is somewhat difficult, or neither easy/difficult to complete, with the results as follows:



The exit survey has also asked registrants about their overall satisfaction with the Assessment Tool, and the majority of respondents are either satisfied or neutral, with the data per cohort as follows:



Lastly, in 2017 the exit survey also began inviting suggestions from respondents for changes or improvements that could be applied to the Assessment Tool. The top responses received were: no changes suggested (24% of respondents), to clarify the wording of the Assessment Tool questions (17% of respondents), or to clarify the answer choices presented on the Assessment Tool (16% of respondents).

The College has heard comments regarding the clarity of questions and answer choices on the Assessment Tool, both informally and formally. The College has taken this feedback into account as questions are selected for each new version of the Assessment Tool, with the continuing goal of ensuring that the questions are clear and as reflective of real world practice as possible. Additional information on this and the question selection process can be found in the Discussion section of this report.

Pilot Cohort Data

Additional measures were taken by the College to obtain data and feedback from the 2012 Pilot Cohort once their experience with the program had come full circle and they were starting their second QAP cycle. Registrants in this cohort were asked to complete a unique exit survey upon completion of the Assessment Tool in 2017, which also encompassed their experience with the Online Learning Plan platform in their preceding QAP cycle. They were also asked to participate in focus group sessions to further explore their overall experience with the QAP. The findings from the unique exit surveys and focus groups are reported separately below.

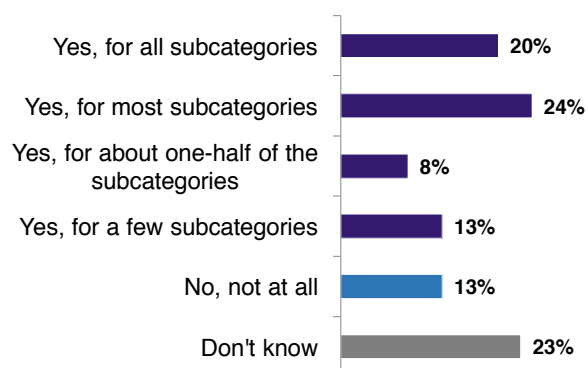
Pilot Cohort 2017 Unique Exit Survey

In January and February 2017 there were 93 registrants from the original 2012 pilot cohort who entered their second QAP cycle. 71 of these registrants completed the unique exit survey after taking their second cycle Assessment Tool. All of the registrants who completed the survey passed the Assessment Tool, and the average score was 85%.

Of the respondents, 43 reported preparing to take the Assessment Tool in a similar manner as when they'd completed it five years prior. Of the 28 respondents (39%) who prepared by one or more different strategies for their second cycle, 15 indicated that they bought or reviewed literature, 5 used the BCDHA self-study modules, 4 took the NDHCB's Prep Test, and 3 reported that they studied more than they had prior to their first cycle. Conversely, 5 of these respondents indicated that they did not study to prepare for their second cycle. Caution should be exercised in drawing broad conclusions from this data on preparation strategies due to the small number of registrants upon which it is based (n = 28).

Ninety-seven percent of the pilot cohort respondents felt that the Assessment Tool is user-friendly, which is similar to the registrants in other cohorts. Of this group, 68% agreed that the content on the Assessment Tool is a fair representation of the fundamentals of dental hygiene practice, while 4% neither agreed or disagreed, and 28% disagreed. The pilot cohort was also asked to reflect on whether they could see a relationship between their answers on the 2012 version of the Assessment Tool and the content subcategories that were populated in their first cycle Guided Learning Plans. The majority could see this relationship for at least half of their assigned subcategories, with the results as follows:

Figure 7. QAP Pilot Cohort Reflection on Alignment of QAP Assessment Tool Results and the Guided Learning Plan Subcategories



This survey asked the pilot cohort how easy or difficult it had been for them to find and complete learning activities for the content subcategories in their required Guided Learning Plan during their first QAP cycle. Fifty-one percent felt it was easy, 20% reported it was neither easy or difficult, and 30% reported it was difficult. The feedback from this survey indicated that ease of access to learning resources, such as courses or textbooks, plays a notable role in whether respondents found completing their learning activities easy or difficult. This was related to physical access, as well as cost considerations, and was reported as a greater challenge from those who live outside the Lower Mainland. However, this sentiment was not reflected by geographic differences in the pilot cohort's average or median scores on their second cycle Assessment Tool.

The survey asked the pilot cohort whether they agreed that the process of creating goals and action plans, completing activities for their Guided Learning Plan, and reflecting on their learning benefitted their professional development in dental hygiene. Fifty-two percent agreed that this was beneficial, 18% neither agreed or disagreed, 28% disagreed, and 1% were unsure. Positive feedback about completing the Guided Learning Plans indicated that some members of the pilot cohort felt the process was generally useful, helped to identify strengths and weaknesses, and served as a good refresher. Negative feedback indicated that some felt the Guided Learning Plan was too time consuming to complete, that the online platform was too complex, that the process hadn't helped some as they'd expected or needed, and a small percentage who indicated that courses weren't readily accessible. In addition to the mandatory Guided Learning Plan, the survey asked whether members of the pilot cohort had opted to develop Self-Directed Learning Plans with goals, and 66% indicated that they had.

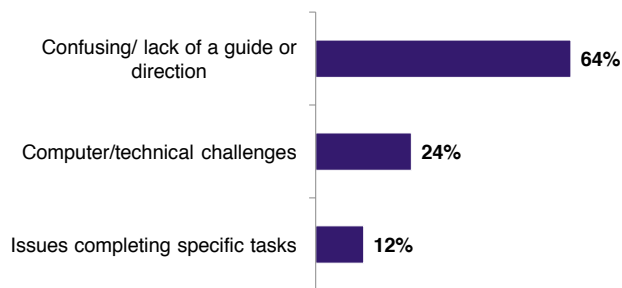
The survey also asked whether the pilot cohort had any difficulties in navigating the Online Learning Plan as a whole. Thirty-nine percent indicated that they had experienced difficulties, while 61% had not. The themes described by those who had experienced difficulties pertained to confusion and/or a perceived lack of direction, computer challenges, and problems with the process of marking goals as "complete". This data is captured to the right:

The survey also explored the types of available resources that members of the pilot cohort had used when looking for information or assistance with navigating the Online Learning Plan. The majority used the QAP Information

Guide (54%), followed by the links to "Help Resources" within the Online Learning Plan platform (18%), the College's Online Learning Plan webinars (17%), and other options such as calling the College for assistance (11%).

Lastly, in order to assist registrants in locating learning opportunities to address their Guided Learning Plans, in 2016 the College began liaising with organizers of the annual Pacific Dental Conference and the Thompson Okanagan Dental Society Meeting to have the conference programs include a coding of the sessions aligned with the QAP content subcategories, as applicable. The pilot cohort survey asked whether members had attended one of these major annual dental conferences in 2016, and whether the session coding had been helpful. Thirty-eight percent indicated they had attended the Pacific Dental Conference, 11% attended the Thompson Okanagan Dental Society Meeting, 7% attended both, and 44% did not attend either conference. Of those who attended these conferences in 2016, 38% indicated they found the session coding useful, 18% did not find it useful, and 45% did not recall session coding in the conference program(s). This information is helpful so that the College can establish more effective communications to inform registrants of the coding availability.

Figure 8. Challenges Experienced with the Online Learning Plan



Pilot Cohort Focus Groups

All members of the pilot cohort were invited to further share their perspectives by participating in one of two focus group sessions that were conducted by an independent research firm and held in Vancouver in March 2017. Those who live outside of the Lower Mainland were also invited to participate in in-depth interviews by telephone. In total, 13 members of the pilot cohort agreed to participate in this additional feedback process. A number of perspectives and themes emerged during these sessions, which are informative. However, a degree of caution needs to be exercised in concluding that the results can be projected to the broader population of dental hygienists based on the limited number of participants.

During these sessions, it was evident that the participants understood the purpose of the program as part of the College's mandate of public protection, and that a quality assurance program is required by government. For example, one participant commented that some colleagues pursue training in areas of practice they are already strong in, rather than addressing relevant challenges or weaknesses in their practice.

"To ensure that hygienists of all levels, and who have been practicing for many years are up to standards. To ensure public safety."

Despite understanding the purpose and necessity of the QAP, some questioned the format of the program that the College has developed to fulfill the requirement under the *Health Professions Act* and the time commitment for participation.

"This is a great way of putting everyone on an equal playing field and there are hygienists that need to be challenged. I believe in the program, it is just a lot of extra work."

A number of participants indicated they felt that the process of taking the Assessment Tool was stressful, either due to some apprehension about how they would perform or concern about the cost if they needed to undertake a second attempt. However, there was acknowledgement that only a limited number of options exist to conduct a measure of assessment for the province's nearly 4000 dental hygienists, and the Assessment Tool was viewed as cost effective.

There was general acknowledgment that the Assessment Tool is good and that the platform is easy to use.

"It's foundational knowledge."

"I do find that in knowing those areas where I needed a refresher by taking the test, that was great."

"Thought it was straightforward and easy to use. Bookmark at top: super helpful."

However, some participants commented about the relevance or clarity of some of the questions, while some participants were simply opposed to the Assessment Tool overall.

"I'm a believer in the process. The test: I question how relevant some of the questions are? Some of the questions are ambiguous..."

A small number of participants misunderstood that the Self-Directed Learning Plan area is optional to complete; however, most understood that only the Guided Learning Plan is mandatory. There were mixed responses received about the value of the Self-Directed Learning Plan area. Some participants liked that it was up to their discretion whether to use this area and felt that it was valuable, while others preferred not to allocate time on it. Similarly, mixed feedback was received about reflecting on learning, for both the self-directed and guided learning areas. Some participants found the reflection aspect challenging or unnecessary while others felt it easy and provided a chance to consolidate their learning.

“The most beneficial part was the reflection on the goal set. I don’t know if I needed a test to determine my weaknesses. But as a professional, I like that there is a level of integrity.”

“I found that reflecting on it [self-directed learning] solidified the information learned.”

Almost all of the participants indicated that they understood the connection between the feedback they received from the Assessment Tool and the use of a Guided Learning Plan to focus some of their professional development activities. There was general agreement that the Guided Learning Plan is beneficial to participants’ professional development.

“It identified my weakness. Then I would go and research it.”

“It was difficult first time around. Now I feel more comfortable with my approach.”

When asked about the Online Learning Plan, participants indicated that it can be complex to navigate, confusing, and potentially time consuming. While the platform includes links to a number of “Help Resources” and short tutorial videos, some participants commented that the location of these resources was not obvious. Some also reported problems with saving information entered and/or marking Guided Learning Plan goals as ‘complete’.

“You click and it doesn’t take you where you expect it to.”

“I had a hard time with it. Then I lost my reflection [entry] a couple of times.”

“Just a better, simpler layout. What goal are you setting? How did you achieve it? How did you learn from that?”

“It is not an easy-to-follow website. So it was trial by error and it took a lot of time and they keep asking for the same thing over and over.”

“Greater simplicity would be good. It is very time consuming.”

“The writing is small. Didn’t see the help resources.”

The single biggest issue that was discussed in these sessions was that participants felt frustration with the Online Learning Plan platform.

Discussion

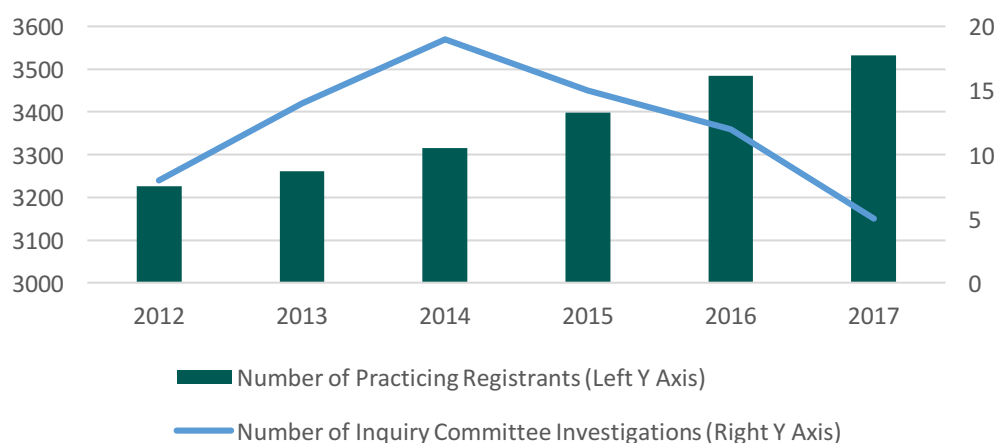
A key feature of the QAP is that it is intended to be supportive in nature. If a registrant is unsuccessful on two attempts of the Assessment Tool, this triggers an on-site Professional Performance Assessment with a QAP Assessor who works with the registrant to develop a customized learning plan to address areas of concern that may be identified. Feedback from registrants who have undergone the Professional Performance Review process has indicated that this opportunity has produced positive changes in their practice to better serve their clients and meet the College's Practice Standards. One registrant provided the following summary of their experience working with an Assessor:

"My experience with the QAP in office assessment was surprisingly pleasant. All of my preconceived ideas of how negative the experience would be really made me nervous since I thought my credibility as a hygienist would be compromised. It wasn't at all. It actually turned out to be a great way to have all my questions, concerns, and areas I felt I could use some improvement reviewed. Guidelines were made, my assessor talked about her experiences, I talked about mine, and together we compared ways to improve my practice. She helped me conjure up some tasks that would assist me in better understanding my areas needed for improvement, reviewed standard of practice, ethical responsibility, and left the rest up to me. By the end of our first meeting I felt I knew what I needed to do in order to grow and be the best hygienist I could be."

Both the Assessment Tool and the Professional Performance Assessment process aim to support registrant's competence and ability to practice according to the College's established standards preventively, **before** harm occurs. The QAP differs in this respect from the Inquiry and Discipline processes established under the *Health Professions Act*. These are complaints-driven processes that take effect **after** a formal concern has arisen and are more punitive by nature.

It is interesting to note that from 2012 to 2017 the number of practicing dental hygienists in BC increased by approximately 9%. Yet over these same years, the College has not seen a proportionate increase in the number of complaints and investigations undertaken by the Inquiry Committee. The numbers of practicing registrants and volume of investigations by the Inquiry Committee are depicted in the graph below. However, it is important to recognize that multiple factors affect the number of investigations undertaken each year. This information is not intended to depict a cause and effect relationship or predict future trends, but rather, is an informal observation during the early years of the QAP.

Figure 9. Practicing Registrants and Volume of Inquiry Committee Investigations by Year



Through the formal measures that have been used to evaluate the QAP, a wealth of information has been gathered about the program, and much of it is in keeping with feedback that the College Board, Quality Assurance Committee, and staff hear throughout the course of their duties. Registrants' perspectives are appreciated and have been heard.

The information gathered indicates that there are a number of positive aspects of the QAP that are working well. For example, the Assessment Tool platform is viewed as being user friendly, with a number of supports and resources available. Most of those who have taken the Assessment Tool feel that it contains an appropriate number of questions, that the questions generally represent the fundamentals of dental hygiene practice, and that they are provided with an appropriate amount of time to complete it. The average annual score on the Assessment Tool from the 2013 to 2017 cohorts has ranged from 83-86%, with 95-99% of registrants having successfully completed the Assessment Tool on their first attempt each year.

With all that said, some of the feedback from the Assessment Tool has related to the clarity of the questions within the Assessment Tool question bank. Additionally, the College acknowledges that NDHCB's typical target audience of new graduates differs from the dental hygienists taking the Assessment Tool who typically have 3-30+ years of practice experience. These concerns have been taken to heart, particularly since the initial version of the Assessment Tool was developed. While the College does not have full control over the items that exist in the NDHCB's question bank, concerted efforts are made to address these concerns during the question selection process that takes place every two years.

When a new version of the Assessment Tool is put together, questions are selected by a committee made up of dental hygienists. The committee aims to avoid questions that may be perceived as ambiguous, and to choose questions that reflect everyday dental hygiene practice, rather than obscure or rarely encountered scenarios. The committee will continue to maintain that focus when selecting questions in future. Once questions are selected, the committee employs a widely used method of standard setting, the Angoff Method, to set the threshold between successful and unsuccessful. As part of the Angoff Method, the committee evaluates the percentage of **experienced** registrants that are predicted to answer each question correctly, assuming a minimally competent level.

The proportion of registrants who have indicated on the exit surveys that they are neutral or disagree that the questions represent the fundamentals of dental hygiene practice is interesting, given the Assessment Tool's connection with the NDHCB's exam Blueprint and the national dental hygiene competencies. It is possible that some registrants have interpreted this question to be asking whether the questions are a fair representation of the fundamentals of **their** dental hygiene practice. It would be valuable to point out that the CDHBC registration categories allow all registrants to be able to practice their full scope of practice, regardless of their chosen practice context or setting. For example, if a registrant practices in public health or administration, they may not feel that the breadth and scope of the Assessment Tool best represents the bulk of their practice. However, they are responsible for remaining current in their evidence-based foundational knowledge since the registration categories allow for movement across the range of practice settings. This is underscored in QAP Guiding Principles #3 and #4.

In terms of the level of difficulty, the College feels that it is important for the Assessment Tool to be sufficiently challenging when assessing registrants at an entry level of competence, in order to ensure that the feedback generated for the Online Learning Plans is meaningful and appropriate. If a majority felt that it was too easy, then this would detract from the Assessment Tool's credibility.

By a similar token, security measures are also necessary in order to preserve the Assessment Tool's credibility, and to deter unethical conduct. The security measures employed have been monitored since the program's inception. The College has historically put substantial weight on its trust in registrants to act as professionals and conduct themselves accordingly when taking the Assessment Tool. However, in 2015 security concerns came to the College's attention when it appeared that 30 registrants may have violated the terms of the Assessment Tool's security agreement by taking the Tool in pairs or groups. The circumstances of these registrants were investigated by the Quality Assurance Committee and letters of explanation were requested. Ultimately the Assessment Tool results for 10 registrants were invalidated and they had to re-take the Assessment Tool in supervised (proctored) settings.

Additionally, the circumstances of two registrants who took the Assessment Tool in 2016 were forwarded to the Inquiry Committee for further investigation. These registrants agreed to sign consent orders with a number of terms, including a commitment to not repeat the conduct of colluding on the Assessment Tool and to write essays reflecting on their experience, which were published in [Access](#). The College will continue to monitor security issues and to evaluate the measures that are in place in conjunction with the Assessment Tool.

The College acknowledges that some registrants may find the process of taking the Assessment Tool stressful. Regardless of the method of assessment used, there is likely to be some level of stress noted by individuals when they are being evaluated. However, some of that stress can be moderated by understanding that the QAP is not intended to be a punitive program and that the Assessment Tool is not a 'high stakes' licensing assessment. Registrants do not lose their license to practice after an unsuccessful attempt on the Assessment Tool. Rather, the program provides the opportunity for a second attempt on the Assessment Tool, and for supportive remediation if a second attempt is also unsuccessful. This underscores the program's non-punitive nature.

The College also recognizes that a number of registrants have encountered stressful or frustrating experiences with using the Online Learning Plan platform following completion of the Assessment Tool. Many suggestions and ideas have been brought forward for ways that the Online Learning Plan can be simplified, streamlined and made more intuitive to use. The feedback also indicates that the supports and 'Help' resources for the Online Learning Plan should be easier for registrants to find and use. The College understands that the Online Learning Plan is an important area where improvements can be made and is committed to doing so, as this relates to QAP Guiding Principle #5.

Next Steps and Conclusion

The College has heard from dialogue with registrants, has reviewed the feedback that has been gathered from each of these methods, and has considered whether alternate or additional facets should be incorporated into the QAP. The College concluded that the Assessment Tool is less burdensome and costly for registrants than other methods of assessment such as on-site inspections, which upholds QAP Guiding Principles #2 and #6. Additionally, cost effectiveness for registrants is particularly evident when the extended five-year cycle for obtaining continuing competency credits is considered. Also of note, is that the Assessment Tool does not impact on a registrant's workplace, which is felt to be an important consideration for the culture of the profession.

The College also concluded that the consistency, objectivity and validity of the Assessment Tool adds strength to the College's ability to demonstrate to the public that a reliable quality assurance mechanism is being undertaken by BC dental hygienists, in the interest of providing safe and ethical care. This is the core purpose of the program and is underscored in QAP Guiding Principle #1. This also demonstrates the professionalism and accountability that BC dental hygienists uphold.

The Colleges places substantial value on the feedback that has been received about the clarity of some questions on the Assessment Tool and the functionality of the Online Learning Plan platform. While the Assessment Tool will continue to serve as the primary method of assessment for the QAP, the College will continue to maintain a focus on incorporating questions that are as clear and relevant to everyday dental hygiene practice as possible. The College will also begin a project to improve the Online Learning Plan platform to better recognize the needs of adult learners and support their ongoing education. The evaluation of the Assessment Tool and the Online Learning Plan will remain ongoing, in keeping with QAP Guiding Principle #7. Additionally, while not the primary focus of this report, the Jurisprudence Education Module will also be revisited to incorporate updates in regulatory content and to create a more engaging and interactive experience for registrants.

Lastly, since the QAP was first implemented, the College has developed a proposal for changes to the regulations and bylaws that affect dental hygiene practice. Most notably, if the proposal is accepted by the government, regulations related to the 365-day rule and the supervision requirement for the administration of local anaesthesia will be removed. In addition, changes to registration categories have been proposed, including the creation of a Dental Hygiene Practitioner class that may include an option to carry out limited prescribing of drugs that are related to dental hygiene practice. As part of this project plan, should these changes come into force, the College will develop a 'BC Module' to address issues specific to the proposed regulation and bylaws changes that the current Assessment Tool does not fully encompass.

Table 3. QAP Initiatives and Target Dates

Quality Assurance Program Initiatives:	Timeline Targeted:
Development and launch of an updated and enhanced Jurisprudence Education Module	March 2018
Redevelopment and launch of the Online Learning Plan platform	March 2019
Development and launch of a 'BC Module' to reflect proposed regulation and bylaw changes	Future 2019, pending outcome of proposal to government

These are exciting times for the dental hygiene profession in BC. The QAP will continue to grow and evolve along with the profession. The QAP helps demonstrate to government and the public that BC dental hygienists are current and competent in their practice, and the importance of this measure of assurance should not be underestimated.

References

1. Ewa K, Regehr G. “I’ll never play professional football” and other fallacies of self-assessment. J Contin Educ Health Prof. 2008 Winter;28(1):14-9.
2. Davis D, Maxmanian P, Fordis M, Van Harrison R, Thorpe K, Perrier L. Accuracy of physician self-assessment compared with observed measures of competence. JAMA. 2006;296(9):1094-1102.
3. Asadoorian J, Locker D. Quality assurance programming in Canada: an investigation into the fulfillment of dental hygiene requirements in British Columbia and Ontario. CJDH. 2005 Jul-Aug;39(4):168-174.

Appendix A – CDHBC QAP Guiding Principles

1. The Goal of the Quality Assurance Program is public protection.

- The mandate of the College is to protect the public by developing, regulating, and advocating safe and ethical dental hygiene practice.
- The QAP is designed to ensure that registrants maintain a safe level of practice which will promote public safety and confidence.

2. The Quality Assurance Program will be evidence-based and cost effective.

- The QAP will use proven methods and levels of practice assessment that strike a balance between efficiency and effectiveness and can be managed with available CDHBC resources.

3. Maintaining and enhancing competence is the responsibility of the registrant.

- The profession of dental hygiene embraces life-long learning.
- Under the Health Professions Act and Bylaws registrants are responsible for ensuring that their practice is evidence-based and current which includes addressing emerging issues and incorporating advances in technology into their practice.

4. All dental hygienists registered in practicing categories will be required to participate in the Quality Assurance Program.

- Accountability is an essential characteristic of a self-regulating profession.
- The College acknowledges that dental hygienists have a variety of practice settings however the entry-level competencies are the foundation of all dental hygiene practice.
- It is important to note that registration provides registrants with the ability to practice the entire scope of practice.

5. The materials that inform registrants about the Quality Assurance Program will be clear, concise and accessible.

- Registrants will be provided with useful tools that provide feedback and support.
- Materials will clearly explain the process and policies.

6. Participation in the Quality Assurance Program is intended to be reasonable and manageable for registrants.

- The College recognizes the diversity of dental hygiene practice and practice settings.
- The program will not present an unreasonable burden to registrants.

7. The Quality Assurance Program will be evaluated regularly.

- Feedback will be collected and evaluated in order to ensure that the QAP continues to meet the needs of the public and registrants.
- Advances in research and technology will be considered and incorporated as appropriate.

Appendix B – Assessment Tool Performance by Cohort and Content Subcategory

Figure 10. Registrants' Performance Within the Biological Sciences Content Category

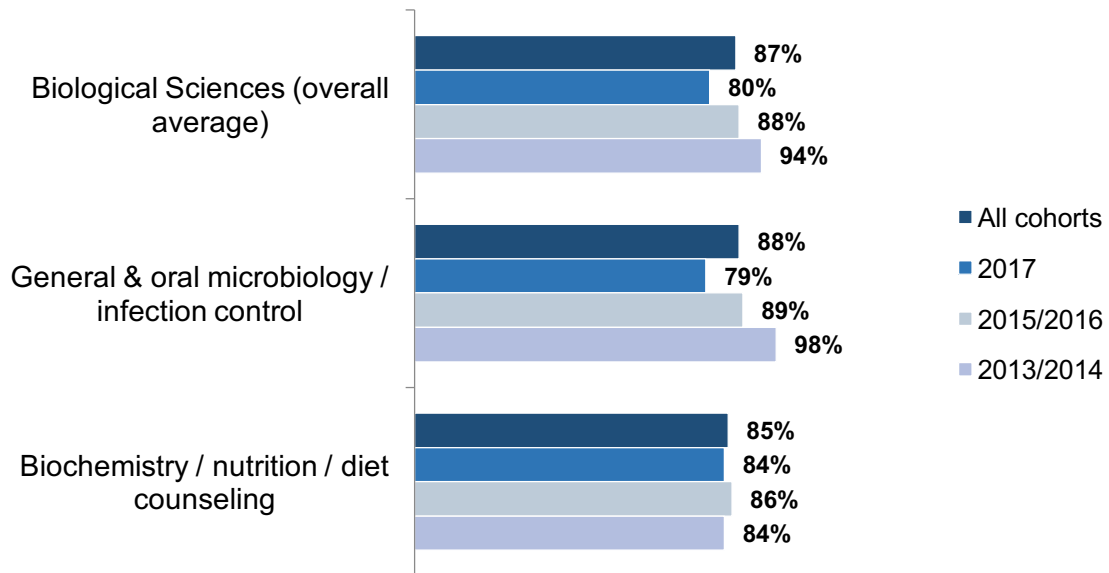


Figure 11. Registrants' Performance Within the Social Sciences Content Category

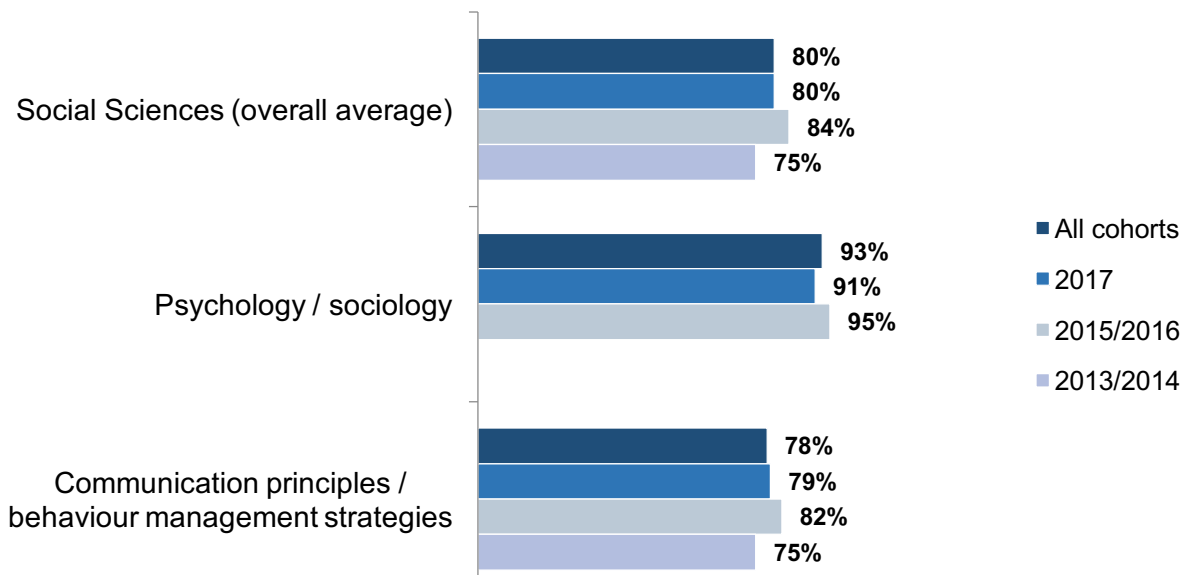


Figure 12. Registrants' Performance Within the Dental Sciences Content Category

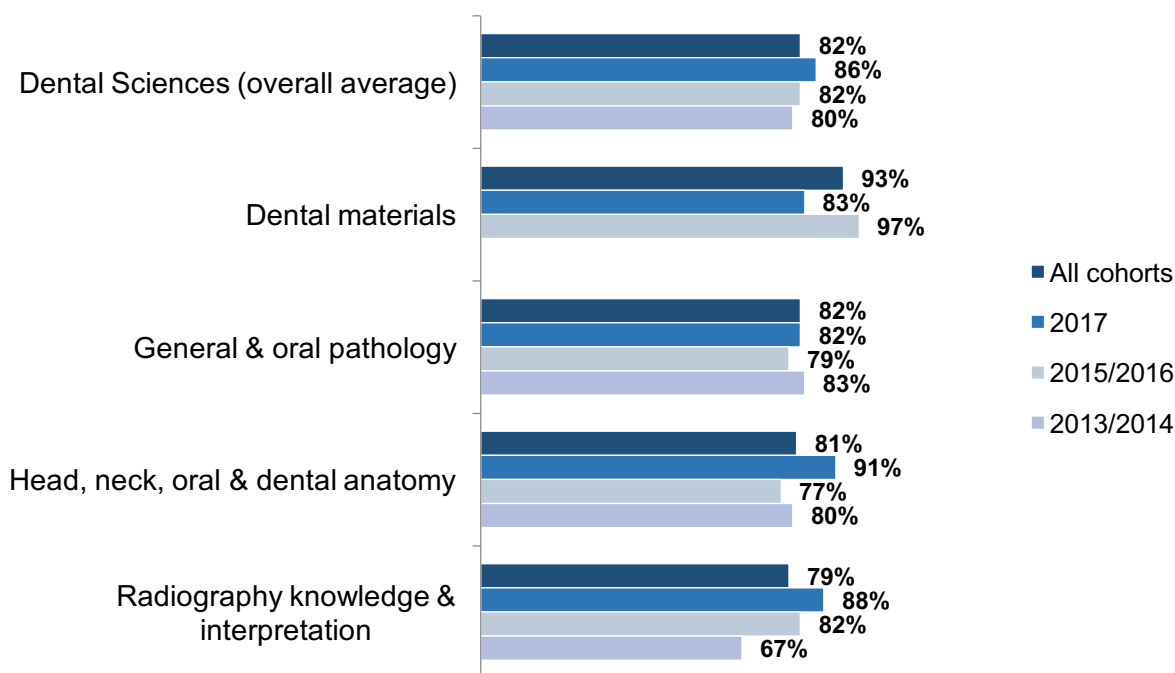


Figure 13. Registrants' Performance Within the Community Content Category

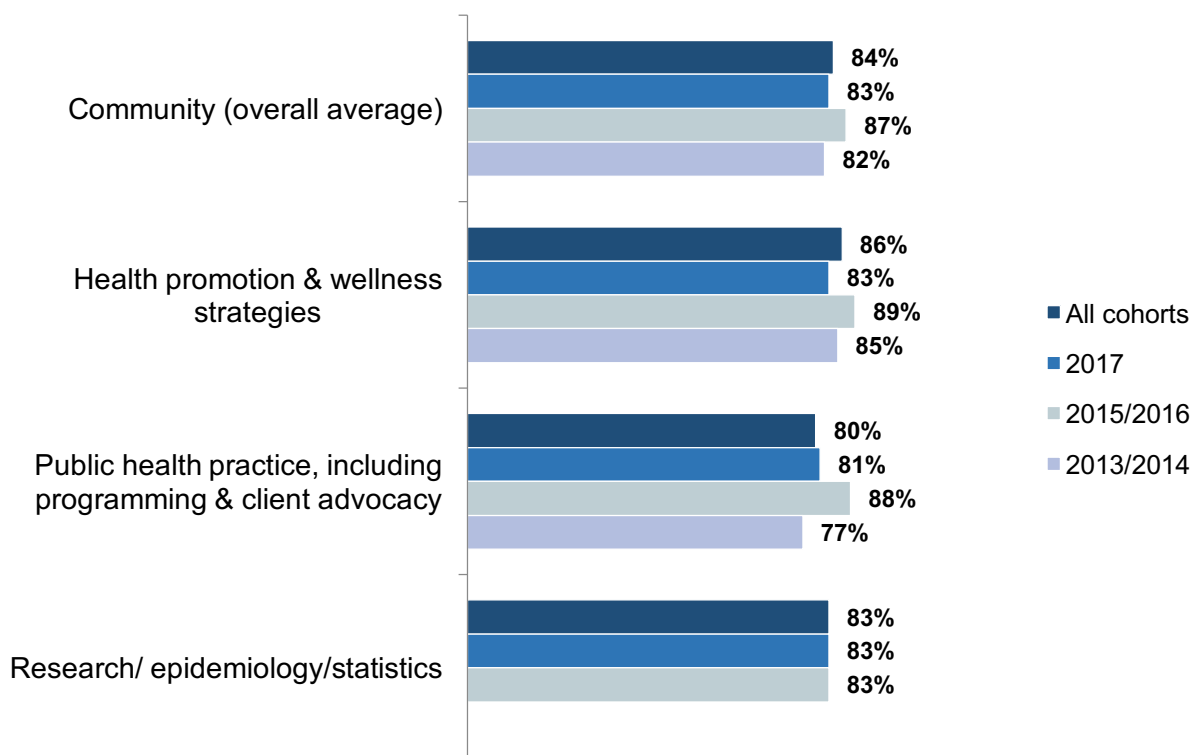


Figure 14. Registrants' Performance Within the Dental Hygiene Clinical Practice Content Category

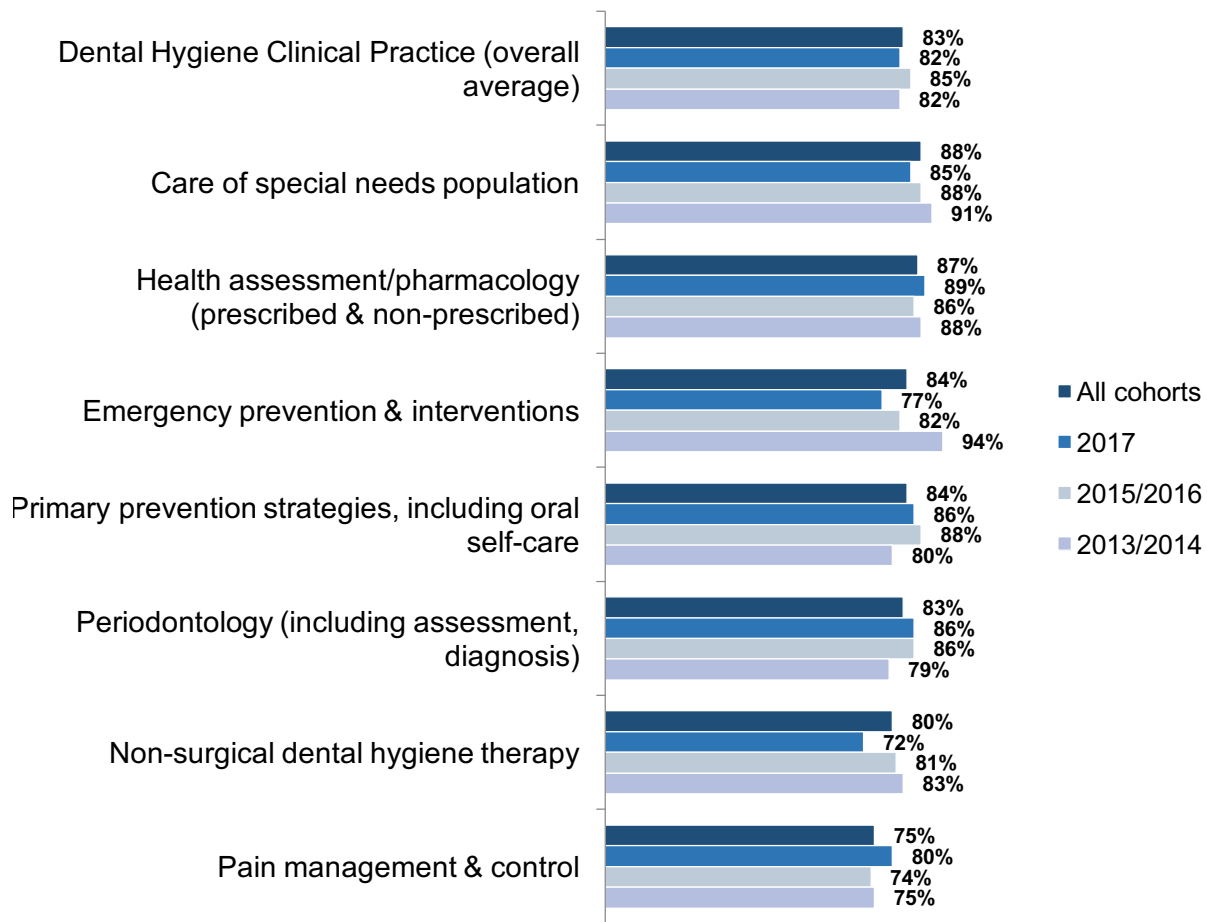


Figure 15. Registrants' Performance Within the Professional Issues Content Category

