Research

Interprofessional Education in Dental Hygiene Programs and CODA Standards: Dental Hygiene Program Directors' Perspectives

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Abstract

Purpose: The Patient Protection and Affordable Care Act changed the paradigm of health care delivery by addressing interprofessional education (IPE) and care (IPC). These considerations, combined with evolving dental hygiene (DH) workforce models, challenge DH educators and clinicians alike to embrace IPE and IPC. The objectives of this study were to determine DH program directors' perceptions of the importance of IPE, to assess current and planned activities related to Commission on Dental Accreditation (CODA) standards that imply competency in IPE, and assessment of outcomes.

Methods: Email addresses of the 322 entry-level, DH program directors in the United States were obtained from the American Dental Hygienists' Association and a web-based survey was developed based on the American Dental Education Association Team Study Group on Interprofessional Education. Descriptive statistics were computed for the responses to the closed ended questions and answers to open-ended questions were transcribed and thematically coded.

Results: A response rate of 30% (N = 102) was obtained from the DH program directors. While the respondents indicated that they personally considered IPE to be important, one-third reported that IPE was not a priority for their academic institution. The majority of current IPE activities related to the 2014 CODA Standards 2-17, 2-26 and 2-19 were clinic-based (Standards 2-17 and 2-19: N=49; Standard 2-19: N=64). Fewer classroom-based activities were reported (N=12 vs. N=25). The respondents planned 27 clinic-based, 9 classroom-based and 51 other future IPE-related activities. Competency assessment was mostly determined with clinic-based activities (N=43) and other activities such as rubrics (N=16) and the development of IPE assessment tools (N=10). Thirty-three respondents named positive aspects of IPE and 13 saw IPE as relevant for the dental hygiene profession.

Conclusion: Accountable accreditation standards have been identified as the driver of change for incorporating IPE, making an explicit IPE standard for dental hygiene education an important agenda item for the profession.

Keywords: dental hygiene, accreditation, dental hygiene education, dental hygiene program, interprofessional education, interprofessional care

This manuscript supports the NDHRA priority area, **Professional development: Education** (evaluation).

Introduction

The Patient Protection and Affordable Care Act changed the paradigm of health care delivery in the U.S. by embracing interprofessional education (IPE) and interprofessional care (IPC), following the recommendations of the World Health Organization, the Institute of Medicine, and the Interprofessional Education Collaboration.[1,2] IPE has been defined as students from at least two disciplines having courses together either discretely or across the entire curriculum[3]. IPC in health care is the optimal provision of patient care because of the contributions of different areas of specialization and the use of evidence-based decision making[4,5]. This paradigm shift is significant for the dental hygiene profession because it stresses the importance of interprofessional team efforts in disease prevention and patient care.

IPE and IPC are meant to improve patient outcomes through coordinated care which includes shared input from various behavioral and health care disciplines[2,6]. Each discipline offers a unique perspective and expertise that may be overlooked by a single health care provider. Students therefore need to be educated to analyze information from a variety of health care perspectives in order to develop holistic, individual treatment plans.[7]

The Role of Dental Hygiene in IPC

Dental hygiene is well suited to contribute to IPC because its role is preventive in nature, with a

significant educational background in analyzing the impact of systemic conditions and medications on oral health. Dental hygienists also implement treatment plans and evaluate their outcomes, which is required in the Commission on Dental Accreditation (CODA) Accreditation Standards for Dental Hygiene Education Programs.[4,5] Three accreditation standards imply that dental hygienists should provide oral health care in a manner that is harmonious with patients' other health care needs through collaboration with other health care providers when necessary. Specifically, current CODA Standard 2-13 refers to the dental hygiene process of care (DHPOC), including the collection of all medical and dental history data and the delivery of patient-centered care.[4] The collection of pertinent medical information can often lead to consultations with other health care providers in order to provide optimal, patient-centered care. This may mean interacting with a pharmacist to obtain information about specific medications, or a physician to discuss appropriate care based on particular medical conditions. Such communications are covered by current Standard 2-15 which specifically requires the dental hygiene graduate to be competent in effectively communicating with other members of the health care teams.[4] Competency in these two standards allows for the provision of the comprehensive patient care and management required in current Standard 2-23.[4]

Additionally, the opportunities for dental hygiene providers to contribute are increasing in community centers and other health care institutions due to the expansion of licensure scope into areas of less supervised settings.[8] The engagement of dental hygienists in IPC with medicine, and other behavioral and allied health disciplines for the delivery of oral health care in primary care settings has the potential to improve health outcomes for patients.[6] IPC can also lead to increased respect among the members of the various disciplines involved, a necessity for practice in the new health care paradigm.[9] Dental hygienists will need the appropriate education to effectively integrate into interdisciplinary health teams and be accepted as an important part of a preventive approach to patient care.[8]

Best Practices

While IPE is still a developing concept in dental education, some best practices have been identified.[3] Two common themes for best practice that have emerged for successful IPE ventures are structure and preparedness. Other best practices include: 1) a leader or co-leaders, 2) a full, continuous experience rather than a one-off course, 3) incorporation of student feedback, 4) a progressive immersion across the curriculum, and 5) administrative support.[3] Additionally, assessments can be used to evaluate student readiness for engagement, as well as the measure their IPE experience. The Readiness for Interprofessional Learning Scale (RIPLS)[10] is an instrument that can be used to measure student readiness for IPE[10], while the Interdisciplinary Education Perception Scale[11] can be used to measure outcomes post-IPE engagement as developed by Formicola et al., in 2012.[3]

Forming IPE partnerships has been found to help build opportunities to become part of such teams. These partnerships have been identified as a must for the paradigm shift needed in dental and dental hygiene education. Wilder et al. reported that regardless of whether engagement is achieved through inclusion in previously developed IPE programs, establishing IPE initiatives within the individual institutions, or forming partnerships with community stakeholders, the lack of opportunities must be overcome.[12] Additionally, Bennett, et al found that support from institutional administration at the dean level and above has been consistently identified as being imperative to the success of integrating IPE into curricula.[13]

Barriers

Barriers to IPE are not confined to dental hygiene, and have been found consistently in other disciplines across the literature. Barriers frequently include lack of understanding amongst health care disciplines about other disciplines[14], and the prospect of the need for significant allocation.[7] Lack of support from institutional administrators needed to address resistance to change by both faculty and staff, and the significant allocation of institutional resources to manage the details of these changes have been identified as major obstacles to implementing IPE.[13] These matters have been further complicated by the individual accreditation requirements for each discipline involved in an IPE program.[13]

IPE has become an explicit accreditation standard for the majority of health care disciplines. Zorek and Raehl reported the list of health disciplines with IPE as an educational accreditation requirement includes medicine, dentistry, baccalaureate and advanced nursing programs, physician assistant programs, occupational therapy, pharmacy, physical therapy, and public health.[1] While IPE has become an explicit requirement for dentistry, the vast majority of interprofessional efforts have been confined to medicine and other allied health care professions.[15]

This presents an even larger challenge for the dental hygiene profession because IPE is only implicitly mentioned in the CODA Accreditation Standards for Dental Hygiene Education Programs. The inclusion of IPE in the accreditation standards of health disciplines has been noted as an imperative mechanism for its successful integration.[1] Because curricula are often driven by accreditation standards, they they motivate change.[1] Therefore, the lack of accountable IPE standards may present a significant barrier to the incorporation of IPE into dental hygiene education. Results from a recent survey of dental hygiene program directors in the U.S. found that very few programs are engaging in IPE endeavors

Table I: Overview of the program characteristics of the responding dental hygiene programs

Program characteristics	Frequencies or: Mean	Percentages or: SD / Range
Educational setting where the undergraduate dental hygiene program is located:	**N**	**%**
- Community or junior college	55	54%
- University or 4-year college	16	16%
- Dental School	13	13%
- School of Allied Health Sciences	10	10%
- Technical college	7	7%
- For profit career college	1	1%
Type of degree granted:	**N**	**%**
- Associate degree	81	81%
- Baccalaureate degree	30	29%
- Diploma/certificate	3	3%
- Master's degree	3	3%
Program has:	**N**	**%**
- an undergraduate program only	93	81%
- an undergraduate and a graduate program	9	9%
Number of students that graduate per year from the undergraduate programs	**Mean** 24.92	**SD/Range** 10.515
Program length in number of months of the undergraduate programs	**Mean** 25.80	SD/**Range** 6.04 18.48

that can be defined as true IPE activities.[16] Therefore, central questions to be addressed should include the dental hygiene program's level of engagement in IPE, how the IPE engagement takes place, any challenges encountered with IPE, and whether the graduates are successfully prepared for IPC.

Given the implicit nature of the Accreditation Standards for Dental Hygiene Education Programs related to IPE, the objectives of this study were to determine (a) dental hygiene program directors' attitudes concerning the relevance of IPE, (b) current IPE activities as well as IPE activities planned for future implementation in the curriculum, and (c) the methods used to perform IPE-related outcomes assessments.

Methods and Materials

This study was determined to be exempt from Institutional Review Board (IRB) oversight by the IRB for the Behavioral and Health Sciences at the University of Michigan in Ann Arbor, MI (HUM#00083956). Recruitment emails were sent to the directors of the 322 entry-level dental hygiene programs in the United States. The program director emails were obtained from the American Dental Hygienists' Association website. The recruitment email contained a web link to an anonymous electronic survey adapted from a survey previously used by the American Dental Education Association (ADEA) Team Study Group on Interprofessional Education to investigate IPE activities in U.S. and Canadian dental schools.[3] An electronic, revised version of the survey used by the American Dental Education Association (ADEA) Team Study Group on Interprofessional Education, which had previously been used to investigate IPE activities in U.S. and Canadian dental schools[10] was sent to all program directors individually using University of Michigan lessons. Permission to adapt this survey was obtained from Dr. Allan J. Formicola, head of the ADEA Study Group.

Respondents were asked to consider the 2014 CODA Standards 2-17, 2-19, and 2-26, which were implicitly relevant to IPE[4,17] in relation to the questions: 1) which current IPE activities were included in their curricula, 2) which future IPE activities were planned, and 3) how outcomes were assessed. Figure 1 shows the 2014 and current CODA Standards for Dental Hygiene Education Programs.[4,17]

Statistical Analysis: SPSS (Version 21.0. IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Armonk, NY: IBM Corp.) was used to analyze the data. Descriptive statistics such as percentages and means were computed to provide an overview of the responses to the closed ended questions (see Table I and Figure 2). Answers to open-ended questions were transcribed and thematically coded by the authors. Major categories and sub-categories were identified, inconsistencies between the coders discussed and resolved, and the frequencies of responses in each subcategory were determined.

Results

A response rate of 30% (N=102) was obtained. Table I provides an overview of the program characteristics of the 102 responding dental hygiene programs. The majority of responses were from directors of programs at community or 2-year colleges that granted an associate degree.

Figure 2 provides an overview of the reported importance of IPE

Figure 1: Overview of the CODA Standards of Interest

CODA Standards for Dental Hygiene Education Programs	Standard # prior to 2014[1]	Current Standard #	Comparable Standards for Predoctoral Dental Education
Providing the dental hygiene process of care which includes: a) Comprehensive collection of patient data to identify the physical and oral health status; d) Provision of patient-centered treatment and evidence-based care in a manner minimizing risk and optimizing oral health; f) Complete and accurate recording of all documentation relevant to patient care.	**Standard 2-17**	**Standard 2-13**	**2-23** At a minimum, graduates **must** be competent in providing oral health care within the scope of general dentistry, as defined by the school, including: a. patient assessment, diagnosis, comprehensive treatment planning, prognosis, and informed consent;
Graduates **must** be competent in interpersonal and communication skills to effectively interact with diverse population groups and other members of the health care team.	**Standard 2-19**	**Standard 2-15**	**2-19** Graduates **must** be competent in communicating and collaborating with other members of the health care team to facilitate the provision of health care.
Graduates **must** be competent in problem solving strategies related to comprehensive patient care and management of patients.	**Standard 2-26**	**Standard 2-23**	**2-9** Graduates **must** be competent in the use of critical thinking and problem-solving, including their use in the comprehensive care of patients, scientific inquiry and research methodology.

Legend: 1 CODA Standard numbers at the time of data collection differed from the current Standard numbers.

to the program directors themselves, their academic institution, and the dental hygiene profession in the U.S. While the majority reported IPE as important both personally (58%), and for the dental hygiene profession at large (57%), only 40% thought it was important for their academic institution.

Table II provides an overview of the open-ended responses concerning current and planned IPE activities related to the DH accreditation standards that imply interprofessional interactions. Current IPE activities were centrally connected to clinic-based activities (Current Standards 2-13 & 2-15: N=49/Current Standard 2-22: N=64) and to a lesser degree to classroom-based activities (N=12 vs. N=25, respectively). Specific clinical activities were: outside medical consults, consults with staff or volunteer dentists in the clinic (N=19), and the treatment of patients at enrichment sites or volunteer

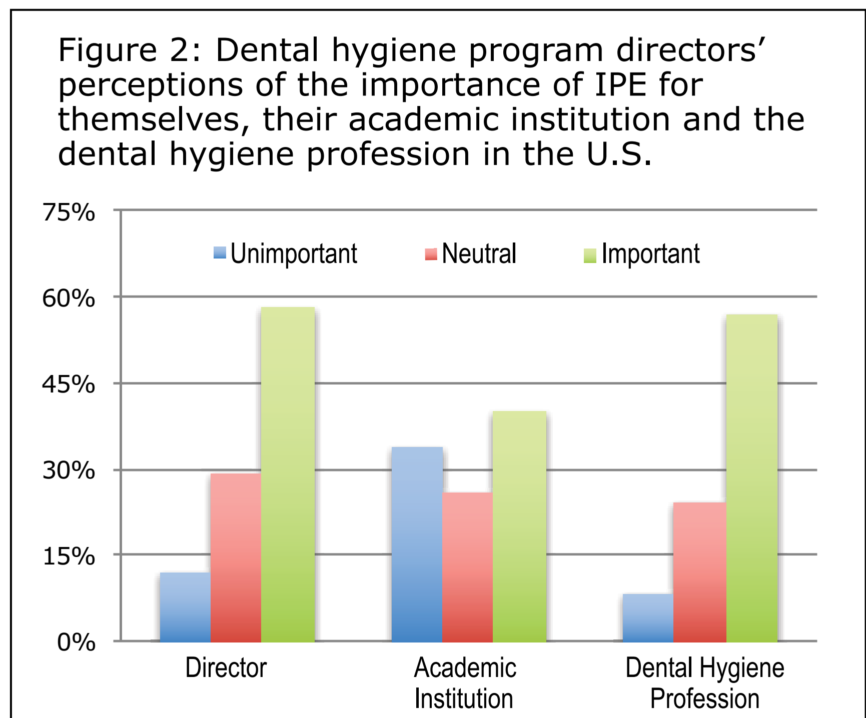

Figure 2: Dental hygiene program directors' perceptions of the importance of IPE for themselves, their academic institution and the dental hygiene profession in the U.S.

Table II: Frequencies of open-ended responses concerning the programs' **current** IPE activities and future IPE activities **in preparation** related to current CODA standards 2-13 & 2-22 and 2-15

Clinic-based activities:	**Current activities related to current Standard**			**Future activities in preparation related to current Standard**		
	2-13 & 2-22*	**2-15**	**Total**	**2-13 & 2-22***	**2-15**	**Total**
Clinical activities	12	21	33	6	7	13
Contacting other health professions outside DH Clinic	7	15	22	0	0	0
Clinical interprofessional consults in clinic	11	8	19	0	0	0
Off campus clinical	5	7	12	0	0	0
Community-based activities & Service learning activities	8	2	10	1	5	6
Faculty Assessment	0	5	5	0	0	0
Collect patient data for each student	3	0	3	0	0	0
Simulation	0	3	3	2	1	3
Long or intermediate-term care facilities	1	1	2	0	0	0
Comprehensive care clinic	1	0	1	0	0	0
Group practice	1	0	1	0	0	0
Oral, written & computer skills in clinic	0	1	1	0	0	0
Student self-assessment	0	1	1	0	0	0
Enrichment/rotations	0	0	0	0	4	4
Objective standardized clinical examinations (OSCE)	0	0	0	1	0	1
TOTAL:	***49***	***64***	***113***	***10***	***17***	***27***
Classroom-based activities						
Research presentation	0	8	8	0	0	0
Classroom-based activities	3	3	6	0	0	0
Activities with other disciplines	0	5	5	0	0	0
Communications courses	0	4	4	0	2	2
Community courses	0	4	4	0	3	3
Case-based activities	3	0	3	4	0	4
Simulation	3	0	3	0	0	0
Week long health profession student orientation	2	0	2	0	0	0
CPR class	1	0	1	0	0	0
Diversity training	0	1	1	0	0	0
TOTAL:	***12***	***25***	***37***	***4***	***5***	***9***
Other activities						
IPE projects planned / investigated	0	0	0	18	19	37
Compliant	10	3	13	0	0	0
"Career" fair presentations	1	-	1	0	0	0
Portfolios	1	-	1	0	0	0
TOTAL:	***12***	***3***	***15***	***18***	***19***	***37***
No activities						
None / Not sure	12	6	18	19	15	34
In discussions with administration	1	1	2	0	0	0
TOTAL:	***13***	***7***	***20***	***19***	***15***	***34***

Legend: *See Figure 1 for an explanation of the CODA Standard numbers.

projects. Faculty assessment of student clinical performance, and collecting patient data for each student were also mentioned as clinic-based IPE activities. Classroom-based activities such as research pre-sentations and communication courses were relatively less frequently mentioned. When asked in which way their programs were preparing future IPE activities related to these standards, 37 programs reported planning mostly clinic-based IPE activities. Thirteen program directors simply stated they were compliant with the standards.

In regards to IPE outcomes assessment related to these CODA standards, faculty evaluation of students' clinical performance (N=25) was most frequently reported. The most commonly used outcomes assessment of classroom-based IPE activities were rubrics (N=16), and reflections (N=9). Over 20% of respondents reported they did not assess IPE-related efforts related to these standards, and 5% were unsure if they were assessed.

Program directors were asked about the challenges related to IPE they currently encounter, and those they expect to encounter in the future. Table IV provides an overview of the responses regarding these perceived barriers. Some of the top barriers reported were (a) curriculum overload (76%), (b) faculty calibration (48%), and (c) outcomes assessments (32%). Open-ended responses raised concerns such as inexperienced faculty, the newness of IPE, gaps in the literature, and lack of cooperation from other disciplines.

DISCUSSION

IPE is likely to become an imperative part of dental hygiene education in the future. This is largely due to the expanding scope of practice of dental hygienists in evolving new workforce models, and the new health care delivery system paradigm which has increasingly focused on prevention, coordinated care, and health outcomes. Given this expected trajectory, it is encouraging that the majority of the dental hygiene program directors in this study embraced IPE as important for themselves and the dental hygiene profession in the U.S. at large. A relatively lower percentage of respondents reported that IPE was also considered important by their institutional administration. This may explain why IPE is still not represented in all dental hygiene programs.[16]

Impact of Accreditation Standards

A major contributor to this underrepresentation is the fact that IPE is not explicitly mentioned in the current CODA Accreditation Standards for Dental Hygiene Education Programs (see Figure 1). Standards 2-13, 2-15, and 2-23 all have implications for IPC, in that they require the comprehensive collection of patient information. Standard 2-15 requires graduates to be competent in interpersonal and communication skills for interactions with *other members of the health care team*.[4] A comparison of the standards for dental hygiene education with predoctoral dental education shows a clear parallelism. However, the predoctoral dental education standards explicitly require IPE. Dental Standard 1-9 states, "The dental school must [sic] show evidence of interaction with other components of the higher education, health care education and/or health care delivery systems."[18] This is a direct statement that requires accountability in accreditation reporting. The parallel standards dental and dental hygiene education share have been noted in the literature as having implications for IPE[1], making it seemingly important for dental hygiene educators to embrace IPE.

Dental hygiene educators must understand the definition of IPE, and the implications within the accreditation standards. This study demonstrated that the implicit nature of IPE in the dental hygiene education standards is not recognized. Responses to the (a) current IPE activities, (b) planned IPE activities, and (c) outcomes assessments of the IPE activities that were reported by the dental hygiene directors as related to these three standards highlighted this lack of understanding. The majority of activities reported were not true IPE activities. True IPE activities incorporate shared work in clinical patient care, and are embedded across the curriculum.[19]

In regards to assessing outcomes related to Standards 2-13, 2-22 and 2-15, respondents felt that they were compliant with these standards in general, but their responses were not necessarily tied to assessing IPE-related outcomes in this context. While 17% reported they have not assessed IPE efforts from the perspective of these standards, others reported chart audits, classroom participation grades, and National Board Dental Hygiene Examination scores as outcomes assessments for IPE. This reiterates the importance of the need for an explicit IPE standard.

Barriers and Solutions

Table IV notes the specific barriers reported by program directors, which are consistent with those found in the literature. Time is invariably one of the largest challenges noted across disciplines. This has notably included lack of understanding by other health care disciplines, which has continued to be a barrier to establishing engagement in interdisciplinary education.[14] Lack of proactive measures on the part of administrators needed to address resistance to change by both faculty and staff, and the significant allocation of institutional resources to manage the details of these changes have been identified as major obstacles to implementing IPE in the literature.[13] Understanding of these barriers must be complemented with an understanding of best practices.

Support from institutional administration is a key component in the successful integration of IPE.[13] Failure to have equal support across administrative units weakens any IPE initiative from the start. Integration and curriculum overhaul require the use

of valuable faculty and institutional resources that are frequently already overtaxed.

Lack of faculty understanding and calibration is also a significant barrier to successful integration of IPE.[14] This is a new and emerging field in dental hygiene, requiring education of the educator. IPE is a culture change, and must therefore be handled accordingly. Best practices indicate that faculty involved in interdisciplinary education must have a clear understanding of the different roles of the other disciplines involved to maximize the educational experience.[14] In addition, faculty must feel like invested stakeholders in IPE initiatives. It is imperative that institutions invest heavily in educating their faculty about all aspects of IPE, focusing particularly on the role faculty will play in this process.[12] Without the appropriate support and resources, attempts to implement a new interdisciplinary curriculum will be fraught with difficulties.[7]

Additionally, curriculum development must include measureable outcomes for students based on agreed upon benchmarks amongst the disciplines.[6] The assessment of outcomes is essential to any IPE initiative, but a large undertaking beyond student outcomes alone. Because IPE includes students, faculty, and patients, outcomes must be assessed for all participants involved in IPE activities.[20]

Finally, forming IPE partnerships has been found to help build opportunities to become part of such teams. These partnerships have been identified as a must for a paradigm shift in dental and dental hygiene education. Whether engagement is achieved through inclusion in already developed IPE programs, establishing IPE initiatives at their institution, or forming partnerships with community stake-holders, the lack of opportunities must be overcome.[12] Lack of engagement with other disciplines has frequently resulted in misconceptions regarding the education and scope of practice of other health professions.[21] These misconceptions have created hierarchies that are difficult barriers to surmount in creating IPE efforts as well as clinical practice.

This has often been the case for dental hygiene. Ateah et al. demonstrated negative perceptions of a particular discipline affect both the manner in which other professions engage with members of this discipline, and the professional identity of members of that particular discipline.[21] Therefore, the proactive addressing of individual discipline misconceptions is also a best practice.[17] Under-standing the scope of practice and education of students' own profession, as well as that of those they are engaging with, is an important tool for effective IPE.[19] The recognition of the importance of oral health to overall health is creating obvious and natural

Table III: Frequencies of open-ended responses concerning the programs' outcome assessment activities related to CODA standards 2-13 & 2-22 and 2-15

Clinic-based activities	2-13 & 2-22	2-15	Total
Faculty evaluation of students	12	13	25
Clinic	3	8	11
Student self-assessment	1	2	3
Community outreach/service learning	2	-	2
Chart audits	1	1	2
Consultations	1	-	1
Simulation	1	-	1
TOTAL:	***21***	***24***	***45***
Classroom-based activities			
Reflection exercises	2	7	9
Community course	-	3	3
Classroom work	-	2	2
Participation grade	2	-	2
TOTAL:	***4***	***12***	***16***
Other activities			
Rubrics	10	6	16
Developing IPE assessments	4	6	10
Compliant	3	3	6
Student surveys	2	4	6
Projects	3	2	5
Reflection exercises	2	-	2
National board scores	1	-	1
Web portfolio	-	1	1
TOTAL:	***25***	***22***	***47***
No activities			
Have not assessed	17	6	23
Do not know	2	3	5
Lack of oral health understanding hinders	1	-	1
TOTAL:	***20***	***9***	***29***

Legend: *See Figure 1 for an explanation of the CODA Standards

Table IV: Frequencies of responses concerning barriers to IPE

Open-Ended Responses Regarding Perceived Barriers to IPE	Percentages Numbers of responses
- Lack of experience	5
- IPE is a new concept / not well defined / lack of evidence	3
- Lack of support or value from institution/ college / program	2
- Difficulty securing other discipline cooperation / discipline silos	2
- Dental Hygiene not considered important in IPE efforts	1
- Fear	1
- Financial barriers	1
- Lack of tools to implement easily	1
- Limited opportunities to engage in IPE	1
- Logistics of making IPE a reality	1
- Not enough IPE within dentistry to reach out to other disciplines yet	1
- Students do not work with students outside of college	1
- Time / schedules a barrier	1
Total number of barriers:	***21***

interdisciplinary education and collaboration opportunities for dental hygiene education and practice.[8]

This study had several limitations. First, due to the self-reporting nature of survey instruments, bias can be introduced, limiting the validity of the findings. Second, the response rate is also somewhat low, representing around one-third of dental hygiene education programs. Additionally, respondents may have consisted of those who are most interested and engaged in IPE, making it difficult to generalize the findings.

In summary, the new paradigm of IPE is recognized as valuable to the future of dental hygiene by program directors. IPE is especially important for the dental hygiene profession given its changing scope of practice, within the evolving health care delivery system. Dental hygiene educators and their programs are well placed to collaborate with other health and social/behavioral disciplines, to include oral health in the primary care setting. Unfortunately, dental hygiene is notably absent from those health and social/behavioral professions with accountable accreditation standards for IPE. This is a significant barrier to engaging in the new health care paradigm that includes IPE. While this and other barriers are a reality, the body of evidence to support IPE, and best practices for its implementation continues to grow. Dental hygiene educators and the profession in general must understand the true definition of IPE and IPC, barriers, and best practices of IPE in order to engage in IPC. While best practices are key to the successful implementation of IPE, accreditation standards have been solidly noted as the driver of change in the incorporation of IPE into already existing health education curricula. Therefore, the explicit requirement of IPE in CODA dental hygiene standards must become an agenda item in order for dental hygiene to stay consistent with other health and social/behavioral professions.

Conclusions

The majority of dental hygiene program directors in the U.S. consider IPE as important for themselves and the dental hygiene community at large. However, only about 40% responded that their own academic institution considers IPE as important. Given that dental hygiene CODA Standards do not explicitly include IPE, it is not surprising that not all programs engage in genuine IPE efforts or plan to include IPE activities in the future. In addition, IPE related outcomes assessments are also not performed in all programs.

Acknowledgments

We want to thank Dean Emeritus Dr Allan Formicola and the American Dental Education Association Team Study Group on Interprofessional Education for allowing us to utilize the ADEA IPE survey and adapt it for use with dental hygiene program directors.

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