

# Are dental students well-equipped to deal with difficult communication situations?

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## In brief

Identifies clinical dental students' levels of confidence in a range of communication scenarios to assist in highlighting areas requiring further attention.

Shows that communication scenarios such as those involving the interaction of HPV, oral cancer, systemic disease and dental neglect were found to be most challenging according to students. HPV-related scenarios were deemed to be most difficult.

Suggests the General Dental Council and programme directors that formulate education curricula should consider including outcomes related to HPV, oropharyngeal cancer and its vaccine.

**Introduction** Communication is considered one of the cornerstones of clinical dentistry and is underpinned in the General Dental Council's Standards for the dental team. Communicating effectively with patients allows for more accurate identification of a patient's presenting complaint, better patient satisfaction, concordance, influences emotional and physical wellbeing, reduces dental anxiety and contributes to the satisfaction of both the patient and clinician. Identifying the clinical students' levels of confidence in a range of communication scenarios will help to highlight topics in which communication is strong and areas where there is a need for both didactic and communication scenario-based teaching. **Methodology** A paper-based, non-incentivised anonymised questionnaire was delivered to the clinical dental students of years 3, 4 and 5 of a five-year undergraduate dental programme in a single UK institution. Dental students' self-reported confidence, or lack thereof, in dealing with various dental-themed communication scenarios were determined. A total of 167 students completed the questionnaire, comprising of 60 year 3 students, 51 year 4 students and 55 year 5 students. There were 57 males and 109 females in total. The data were analysed as a single cohort. **Results** Confidence in dental-themed scenarios across all years was reported at more than 78%. With respect to smoking, alcohol and cancer-themed scenarios, confidence was rated at 75%, 59% and 59% respectively. However, confidence was reported at only 27% for dental neglect and 14% for HPV-related scenarios. **Conclusion** Dental programmes must offer students a range of communication skill scenarios in a safe and simulated environment involving not just traditional dental scenarios, but more complex scenarios, that are deemed more difficult to broach involving the interaction of HPV, oral cancer, systemic disease and dental neglect. Compared to all other domains that were examined, students reported confidence in dealing with HPV-related scenarios most difficult. The General Dental Council and programme directors that formulate education curricula should consider including outcomes related to HPV, oropharyngeal cancer and its vaccine.

## Introduction

Communication is considered one of the cornerstones of clinical dentistry and is underpinned in the General Dental Council's (GDCv) Standards for the dental team.<sup>1</sup> Poor

communication is an implicating factor in many complaints and legal proceedings against dental care professionals.<sup>2</sup>

Communicating effectively with patients allows for more accurate identification of a patient's presenting complaint, better patient satisfaction, concordance, reduces dental anxiety and influences emotional and physical wellbeing.<sup>3</sup> It has been recognised that deficiencies in communication skills training can lead to high psychological morbidity, emotional burnout, depersonalisation and low personal accomplishment.<sup>4</sup> Training in communication skills has been shown to develop a sustainable improvement in both objective and subjective ratings in a number of clinical situations.<sup>5</sup>

It has long been established that the dental team has a pivotal role in public health

promotion. Key areas in health promotion with regards to sugar intake, tooth brushing, fluoride benefits and smoking cessation have been the pillars of health education for dentists.<sup>6</sup> In the 80s, human papilloma virus (HPV) was suggested<sup>7</sup> as an aetiological factor in cancers of the oropharynx and reviews since published have helped confirm this relationship.<sup>8,9</sup> This has created a potential new role for dentists in addition to their regular health promotion messages.

Evidence is emerging to support the use of the HPV vaccine to protect against oropharyngeal carcinoma (OPC).<sup>10</sup> This highlights the importance of the potential new role for dental professionals in this area of health promotion. Despite this recent awareness of the role of HPV in OPC, the current GDC learning outcomes

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for dental students fails to categorise HPV as a risk factor alongside the well-established risk factors of alcohol and tobacco consumption.<sup>11</sup> Evidence suggests that dental professionals are poorly equipped in counselling patients on the risk factors for transmission of HPV and vaccination against the virus.<sup>12</sup>

Similarly, dealing with dental neglect and referral to social workers, reducing alcohol intake or smoking cessation for promotion of oral health are also challenging communication scenarios that need to be undertaken with a sensitive approach in order to maintain patient dignity.<sup>13,14</sup> Often, these conversations are initiated with the aim of benefitting the patient's oral health, but clearly the effects are far reaching and important benefits exist in the holistic care of the patient.<sup>15</sup> Tooth loss has many effects on both oral and general health. Early loss of the adult dentition is linked to an increased risk of chronic inflammatory changes of gastric mucosa, increased risk of non-insulin dependent diabetes, decreased intake of high fibre foods and a subsequent negative effect on quality of life.<sup>16</sup>

Within oral health-related quality of life domains, tooth loss leads to impaired mastication, denture trauma, cosmetic concerns and negative self-perceptions. There is a further negative effect on the patient's social life and day-to-day activities. Compromised oral function has been linked to decreased self-esteem and a decline in psychosocial well-being. Appropriate communication with patients and those with parental responsibility regarding factors leading to early tooth loss will help to reduce the aforementioned negative effects of tooth loss.<sup>17</sup>

The consensus of research affirms that non-milk extrinsic sugars (NMES) are highly cariogenic.<sup>18</sup> Reducing the frequency of intake of these sugars results in reduced incidence of dental caries, as well as a benefit in general health. It is vital that the dental team is well versed in dealing with the growing problem and the challenges it faces.<sup>19</sup>

Identifying the levels of confidence among clinical dental students will highlight areas in which communication is strong and those where where further communication skills teaching could be required.

## Aim

To determine the confidence among clinical dental students in years 3, 4 and 5 in dealing with difficult dental communication scenarios.

**Table 1** A table showing the gender and year group demographics by return rate of each population

	Males	Females	No response	Total
3rd year	18	42	6	66
4th year	21	30	20	71
5th year	18	37	19	74
<b>Total</b>	57	109	35	163

**Table 2** A table showing the grouping of questions by topic used for further analysis

Group	Confident 3rd year students	Confident 5th year students	Confidence improvement
Dental	32	52	20
Systemic	45	41	-4
Oral cancer	30	44	14
HPV	23	17	-6
Neglect	9	20	11
Smoking	54	45	-9
<b>Total</b>	193	219	26

## Setting and population

Final three years of a single UK dental school.

## Ethical approval

Ethical approval was obtained via the University of Bristol, Faculty of Medicine & Dentistry Ethics Committee on 28 May 2014. Identification number 7,944.

## Methods

A paper-based non-incentivised anonymised questionnaire was delivered to the clinical dental students (year 3, 4 and 5) of a five-year undergraduate dental programme in a single UK dental institution towards the end of the academic year or very early into the next academic year. These clinical years were selected as it is in these clinical years that patient interaction occurs. Demographic information gathered included year group and gender.

The questionnaire asked students to determine their level of confidence, on a four-point likert scale (very confident; confident; quite confident; not confident), in relation to communication in various dental scenarios. These include: 1) smoking cessation to reduce risk of systemic disease, oral cancer or periodontal disease; 2) a failed restoration in a tooth that now needs to be extracted; 3)

reducing intake of sugar to reduce caries risk; 4) reduction in alcohol consumption to reduce risk of oral cancer; 5) improving oral hygiene as part of the treatment of a patient with periodontal disease; 6) participation in HPV vaccination programmes; 7) transmission of HPV infection in relation to oral health; and 8) referral to a social worker for a child who has signs of dental neglect.

Results were collated and organised into year group, scenario and groups of scenario. Results were analysed to look at how student confidence changes within each grouping of scenario with seniority. Then, as a single cohort, responses were organised by how confident the students reported to be. Visual representations of the data were created to show how confidence was reported for each scenario, grouped by type.

## Results

Table 1 displays the return rate by year and gender as well as the numbers of those who did not respond. A total of 163 questionnaires were returned from the 211 students across the three clinical years representing a return rate of 77%. Returns were gained from 60 students (91%) in third year (18 males, 42 females, from 66 students in total). In fourth year, 51 students (72%) returned the questionnaire (21

**Table 3** A table showing the confidence progression in years between 3rd and 5th year by each group of scenarios. Confidence was defined as the sum of those answering 'confident' and 'very confident'

Number	Group	Question
1	Dental	A failed restoration in a tooth that now needs to be extracted
2		Reducing the intake of sugar to help reduce the risk of caries
3		Improving oral hygiene as part of the treatment of a patient with periodontal disease
4		Smoking cessation to help reduce the risk of periodontal disease
5	Oral cancer	Reduction in alcohol consumption to reduce the risk of oral cancer
6		Smoking cessation to help reduce the risk of oral cancer
7	HPV	Advising participation in the HPV vaccination programmes to reduce the risk of HPV infection
8		Discussing the risks of HPV infection in relation to oral health
9	Systemic	Smoking cessation to help reduce the risk of systemic disease
10	Neglect	A referral to social work for a child who has signs of neglect
4	Smoking	Smoking cessation to help reduce the risk of periodontal disease
6		Smoking cessation to help reduce the risk of oral cancer
9		Smoking cessation to help reduce the risk of systemic disease

males, 30 females, from 71 students in total). In fifth year, 55 students (74%) returned the questionnaire (18 males, 37 females, out of 74 students in total). All respondents answered all questions. Data from the questions were analysed individually and grouped related to their core communication issue (Table 2).

Table 3 shows how confidence in each type of scenario (for example, oral cancer, HPV and so on) changed with students progressing through the dental school. Confidence was taken to be the sum of those students who responded as either 'confident' or 'very confident' in the questionnaire. It highlights that, as a general trend, students become more confident as time goes on, however, a closer look highlights how this is not equal for each scenario grouping. Strongest confidence increases were shown in the dental and oral cancer groups and the confidence slightly decreased in the HPV, systemic and smoking groups.

Figures 1–5 show the proportion of students who were either 'very confident' or 'confident', and 'quite confident' or 'not at all confident' for each scenario.

## Discussion

The results of this study show clear trends in key areas. Among all year groups and with seniority there is widespread confidence in communicating with patients on familiar topics

related to periodontal disease, dental caries and breaking bad news with regards to the extraction of a tooth due to a failed restoration. The scenario relating to smoking cessation in the prevention of periodontal disease, oral cancer and systemic disease shows varying levels of confidence. Students were 14% less confident in providing smoking cessation for oral cancer or systemic disease than they were in providing that advice in relation to periodontal disease (11% less than confident).

For those scenarios where students were confident, it is worth assessing how much relevance dental students give to each of the topics. Given that the core teaching of dentistry involves caries, periodontal health, oral hygiene and so on, there is likely to be a high perceived level of importance and understanding of these topics. Smoking and tobacco use, however, are much less central to the practice of dentistry, so one may expect poorer understanding and lower perceived importance among dental students. However, Anders et al. discovered that over 80% of students (N = 179) agreed that the dental profession has a responsibility to educate patients about the risks of tobacco use and to encourage patients to quit.<sup>26</sup> This perceived importance may go some way to explaining the confidence that dental students hold for communicating about tobacco and smoking (76 to 90%) confidence. Additional teaching regarding smoking and smoking

cessation will increase student understanding and may help to further increase confidence when communicating about these scenarios.

There is a marked transition in these levels of confidence as we move away from these familiar, traditional scenarios and towards topics that students may well not have broached with patients before. The most marked findings of this study are the low confidence levels in approaching the subjects of dental neglect and counselling patients on the oncogenic effects of HPV. Only 14% of students felt confident in discussing the risks of HPV in relation to oral health and 16% on advising on HPV vaccination programmes. These findings were mirrored in scenarios relating to dental neglect, with only 27% of students stating they were confident in referring a child to a social worker for signs of dental neglect.

Looking back to the relevance dental students ascribe to these topics, it may be important to note that oral sex, orally-transmitted HPV and oropharyngeal carcinoma are not mentioned in the 'What Must Be Taught' section of the Sex and Relationships Education (SRE) curriculum in the UK.<sup>27</sup> Contraception must be taught but with no mention of disease prevention. This lack of awareness and attitude to oral sex as 'not sex' could contribute to the unfamiliarity and perceived unimportance that dental students have of oral HPV, which hinders students' ability to empathise, understand and communicate with a patient. Certainly, this division between oral sex and sex has been public as far back as 1999 when the editor for the Journal of the American Medical Association (JAMA) was sacked for 'fast-tracking' a paper condoning the dichotomy.<sup>28</sup> It may be beneficial to launch an enquiry into the teaching of oral sex as a separate and potentially dangerous entity, even as early as secondary school.

Further trends in the data are seen when assessing the confidence that students have during their progression through dental school. In alignment with the above, traditional dental-related scenarios follow the predictable trend of increasing confidence with time. Interesting trends are seen with HPV, smoking and oral cancer discussion scenarios; there appears to be a confidence decrease. This could be attributed to the intrinsic unreliability of a questionnaire, however, it is likely to be associated with the timing of the study. The third year students would have just been examined in the Human Disease module. Issues and consequences dealing with HPV,

Fig. 1 Self-reported confidence at dental-related communication scenarios

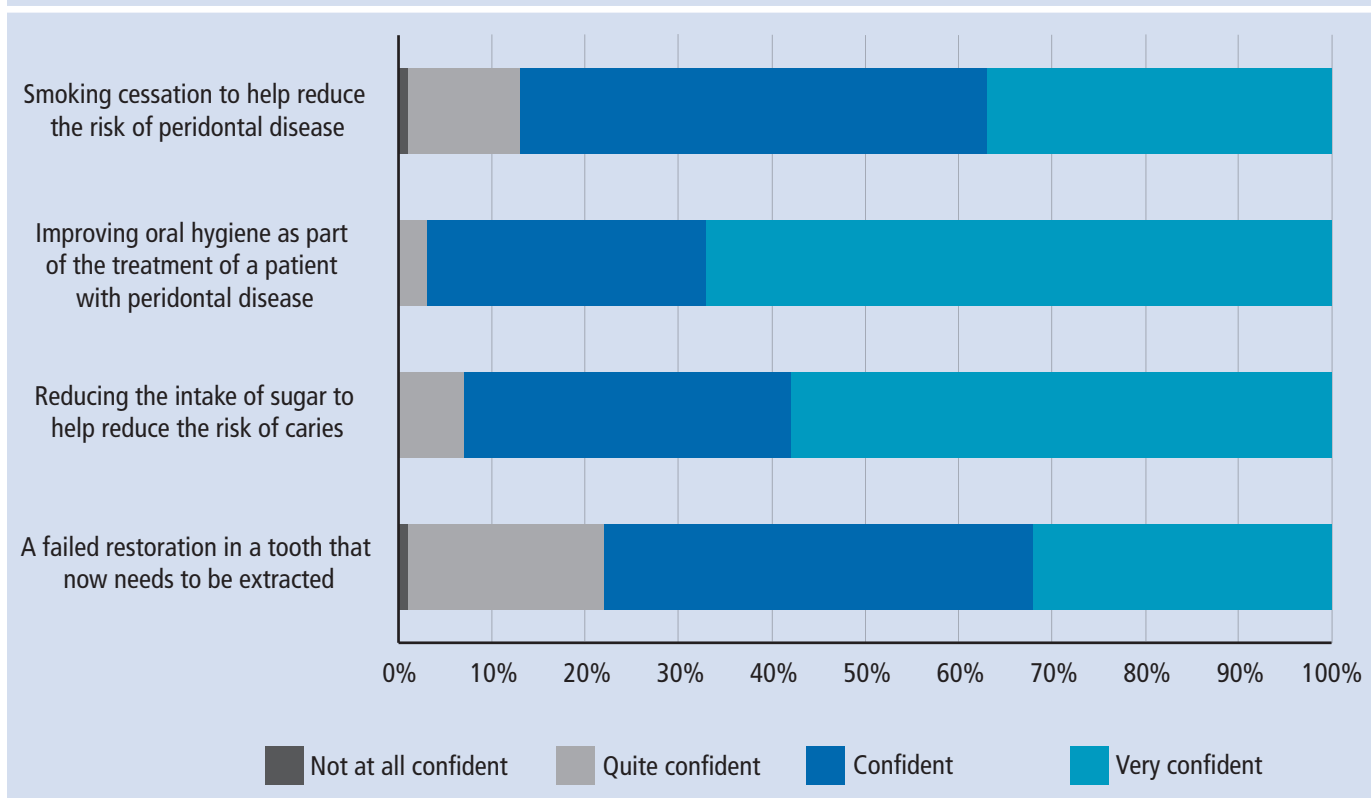
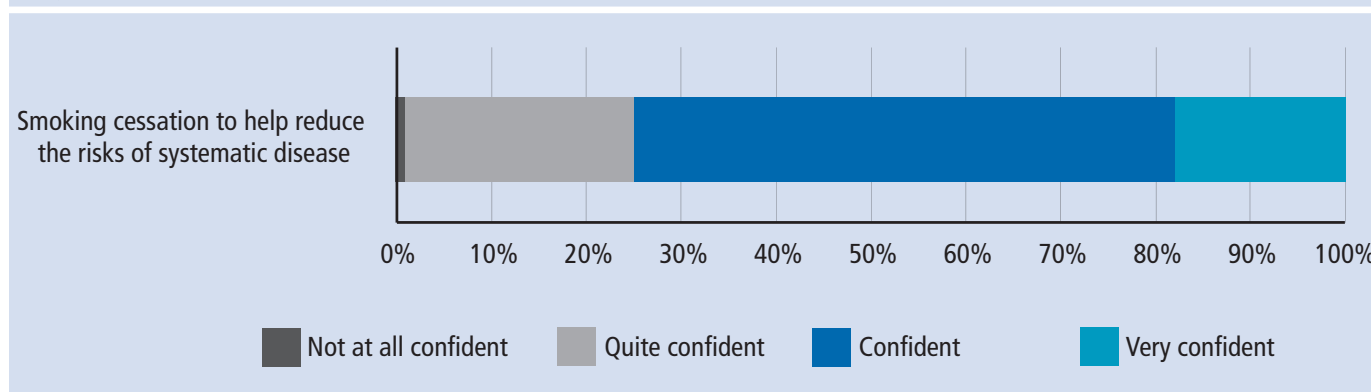


Fig. 2 Self-reported confidence at systemic disease-related communication scenarios



cancer and smoking are fresh in the heads of these students. A revisit of this teaching in final year could have a large benefit for little staff effort.

Although our study shows there are defined areas in which communication skills and didactic teaching can be implemented, it is not without limitations.

One limitation of this study includes the single population that we have questioned. In future studies it would be prudent to include multiple dental schools from across the country. The population in the study was predominately female, representing 109 of the 166 (66%) respondents. Daley and colleagues have shown that dentists are uncomfortable

with discussing sexual health-related diseases with patients, particularly male dentists talking to female patients.<sup>12</sup> These gender differences did not seem to influence the responses in our study, which for both genders showed low confidence in HPV scenarios; 83% in females and 86% in males. This may relate to our constrained sample.

Students also found communication skills scenarios relating to alcohol, smoking and oral cancer less straightforward. In this study, 60% of students were confident or very confident discussing alcohol and oral cancer, but 75% of the same group were confident or very confident when discussing smoking and oral cancer. This suggests

that the familiarisation with the framework of providing smoking cessation has provided a basis which students can utilise in relating to its harmful effects in oral cancer. If a framework in guiding patients to reducing their risk of HPV exposure was formulated, this could potentially have a similar effect in producing confidence through structure.

This may also apply to the lack of established guidance regarding the HPV vaccine in prevention of OPC. Without guidance from NICE (National Institute of Health and Clinical Excellence) or other regulatory bodies, and in a highly litigious profession, it is unreasonable for dentists to be confident in approaching this subject,<sup>12</sup> especially without further training.

Fig. 3 Self-reported confidence at oral cancer-related scenarios

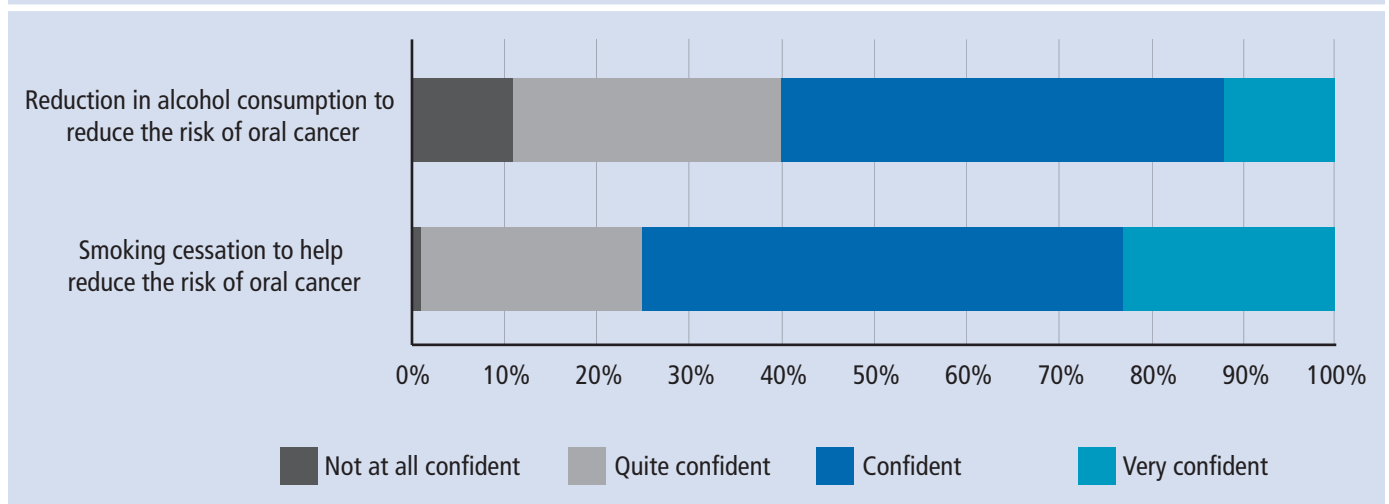


Fig. 4 Self-reported confidence at HPV-related communication scenarios

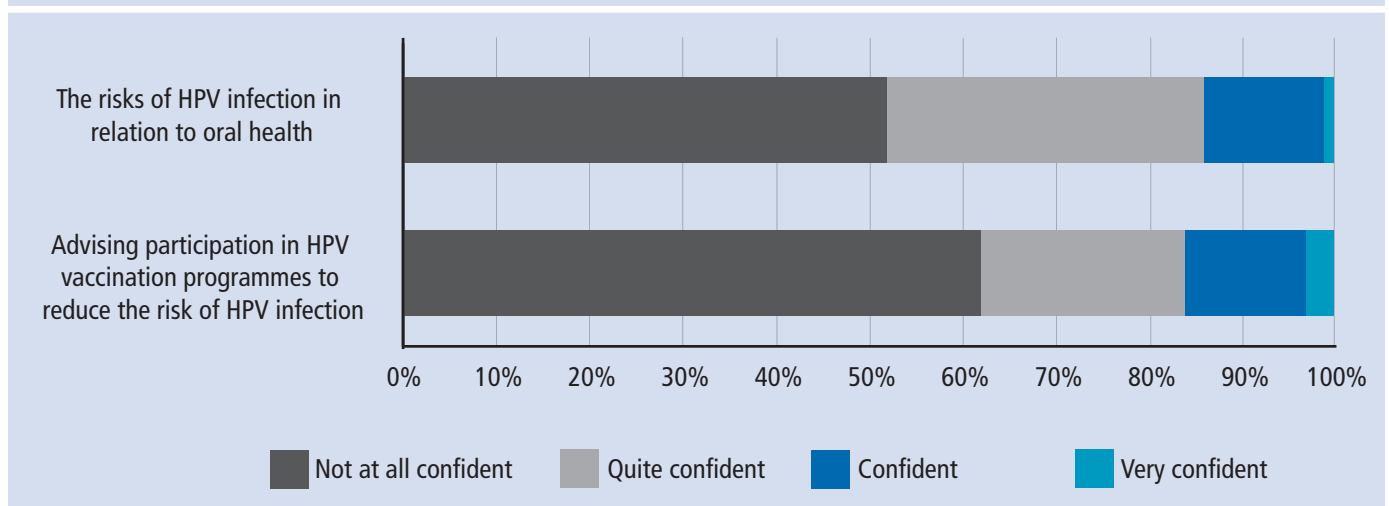
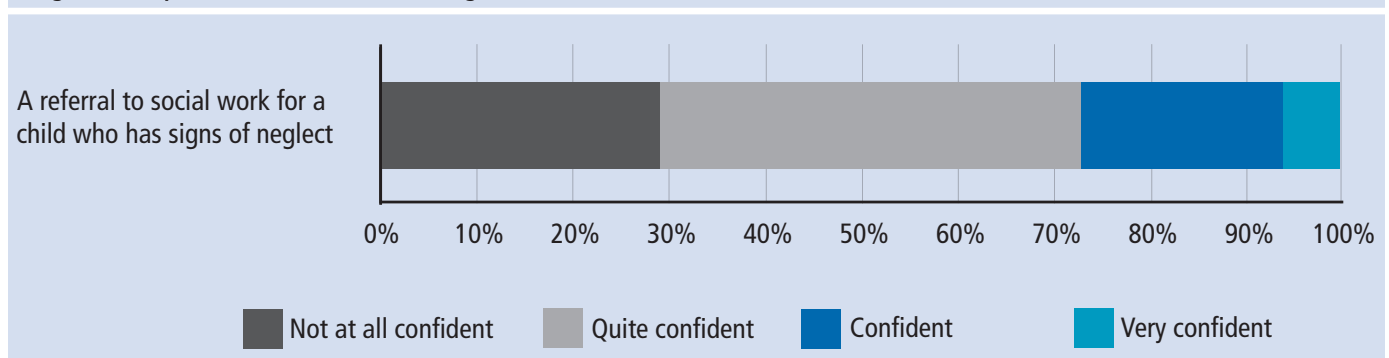


Fig. 5 Self-reported confidence at dental neglect-related communication scenario



In addition to this, dentists have historically been well placed in providing preventative advice, but they have never taken on the role of providing advice on vaccinations.<sup>21</sup> Our study reflects this with only 16% of dental students stating they were 'very confident' or 'confident' about initiating a conversation on HPV and its vaccination, and only 14% were

'very confident' or 'confident' about conversations of HPV and its relation to oral disease. Indeed, the notion of engaging in this conversation with an 11-year-old child and her parent at the time of maxillary canine eruption, for instance, still holds significant barriers.

Discussing issues related to dental neglect with a parent of a child can be difficult and

awkward. However, all dental staff should be comfortable with bringing this up, as clearly failing to identify a child at risk has far reaching consequences,<sup>22,23</sup> and may lead to the child coming to severe harm.<sup>24</sup> In our cohort, 27% of students were confident or above in this area. Students will rarely come into contact with cases of dental neglect throughout their

programmes.<sup>23</sup> However, it is an issue that is well covered in the paediatric dental curriculum.<sup>25</sup> Our results suggest that dental students may benefit from further focused communication skills teaching in this area.

We have also not explored the reasoning behind the students' lack of confidence in these specific areas. Further study in this area may unearth social and educational explanations for the lack of confidence in students. After determining these, it would be possible to act on this with both specific teaching, or re-teaching, in these areas and arming regulatory bodies with the ammunition needed to build guidelines or frameworks.

As awareness among the public of HPV-related OPC increases, dentists will play a key role in counselling patients on preventative advice and discussing the HPV vaccine. Dentists are in a prime position to offer this advice as they regularly examine the upper aerodigestive tract including the oral cavity and oropharynx, and are well versed in providing preventative advice. They are among the most frequently visited healthcare profession in the UK. The latest statistics published in February 2017 by the NHS Information Centre showed that 28.9 million people (around 45% of the UK population) accessed NHS dental care in the 24 months ending 31 December 2016.<sup>20</sup>

## Conclusions

Dental programmes must offer students a range of communication skill scenarios in a safe and simulated environment involving not just simple dental scenarios, but more complex scenarios involving HPV, oral cancer, systemic disease and dental neglect.

In comparison to all other areas examined, students found dealing with HPV the most difficult. The General Dental Council together with programme directors for dentistry that produce education curricula should include outcomes relating to HPV and its vaccine. However, implementation of this is very much dependent on the establishment of national guidelines and frameworks.

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