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Challenging Dentistry to Recognize and Respond to Family Violence

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ABSTRACT Few studies have examined efforts to engage the dental community about roles and responsibilities in recognizing and responding to family violence through targeted educational programs. Evaluation of the Dental Professionals Against Violence course showed 1,213 dental professionals gained knowledge and confidence about identifying and appropriately responding where abuse/violence in patients was suspected. Practice changes included increased awareness of signs and symptoms of abuse among patients and application of the training materials for office staff.

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Because the majority of physical injuries from domestic and other forms of interpersonal violence are inflicted to the head and face, such as chipped or fractured teeth, and attempted strangulation marks on the neck, and evidence that many victims interact with dental care providers, dental professionals are in an excellent position to recognize such abuse.[1-3] As legislatively mandated health care reporters in California, dental professionals have the responsibility and legal obligation of reporting suspected cases of child abuse and neglect, and domestic violence where physical assault has occurred. While a growing number of dental providers recognize their responsibilities regarding neglect and abuse, lack of training in dealing with these issues is a major barrier to patient screening and reporting.

This study examined the impact of the Dental Professionals Against Violence training program conducted statewide by the California Dental Association Foundation in 2004-2006. The program challenged the dental community to become collaborative partners in identifying and responding to suspected abuse and neglect, and provided training in how to recognize such signs and symptoms.

Background

The dental profession in California has a history of supporting educational programs to promote recognition and intervention in family violence. In 1994, the Prevent Abuse and Neglect through Dental Awareness program, developed in 1992 by Delta Dental of Missouri, was introduced by Delta Dental of California and provided education to dental professionals. In 1997, the California Dental Association began administering the California PANDA program and expanded it to include elder abuse/neglect and domestic violence. Between 1994 and 2003, more than 10,000 individuals were educated through presentations, semi-

nars, and workshops. In 2003, the work was enhanced and expanded when Blue Shield of California, Blue Shield of California Foundation, and Dental Benefit Providers partnered with the California Dental Association Foundation to create DPAV and provide major funding support. The DPAV curriculum is one of only two such extensive family violence curricula for dental professionals in the country; the other is the University of Minnesota School of Dentistry.[4]

Training Strategy

Grant funding support enabled the program to expand by including a recruitment strategy to attract members from local dental and allied dental societies to become trainers to ensure continuity of the program. Train-the-trainer workshops were offered twice a year at the CDA's spring and fall Scientific Sessions. Trainers delivered the DPAV educational course in two formats: four-hour, in-person seminars (e.g., Scientific Sessions, local dental society meetings), and online through a hosted Web cast service. Continuing education units were offered for dental professionals taking the course.

Study Goals

The expected outcomes for the training course were increased awareness about the extent of family violence and knowledge to recognize it; and increased ability, confidence, and vigilance in reporting it when it is suspected.

METHODS

A purposeful review of the published literature with research findings, policy, and practice implications related directly to the DPAV goals informed the study design and helped to identify items for inclusion in the survey instrument. Several key informants were consulted during the planning phase for data collection, and again at the end of the study to obtain their perspectives about the effectiveness of the program. These individuals included a well-known expert and trainer in the field, and a recognized forensic medical expert and former director of a university medical center domestic violence education program.

> **PARTICIPANTS WERE** in agreement that being a mandated reporter was an appropriate intervention for the dental profession.

Data from DPAV course participants were obtained through written, self-administered survey/post-tests taken at the end of the training session. Along with demographic and practice information, true/false post-test questions based on the course curriculum were incorporated into the survey instrument. A pretest for baseline knowledge was not used as it was expected to provide little value-added information to justify the additional time for completion during the course. Participants self-rated knowledge, perception of acquired skills and confidence level change after taking the training. Using a repeated measures statistical design with the very same questions, it was possible to determine the extent to which course information was retained by the participants.

A protocol for administering the survey to course participants was developed for trainers. Trainers distributed, monitored, collected, and mailed the completed surveys in prepaid mailers to the evaluators. To allow for anonymity in turning in a completed survey/post-test when the course was delivered by a peer, such as during a dental society dinner, the instrument was constructed for participants to detach the personal information sheet and turn it in separately from the survey. Surveys from DPAV course participants were received between September 2004 and March 2006. All participants with readable fax numbers or e-mail addresses who were eligible based on length of time since taking the DPAV course were sent the follow-up survey approximately six months after the course.

Although a mechanism had been created for online course takers to also participate in the evaluation — and "dummy data" confirmed the system had the capacity to collect the survey data when the online course went "live" — technical problems resolved too late by the host company resulted in too few surveys being retrievable from the Web site. Consequently, data from online course takers are not included in this paper.

A survey for the dental professionals who had delivered at least one training session during the project period was sent to them at the end of the project. Twelve individuals met this criterion and returned completed surveys. The purpose was to obtain trainer perspectives about the effectiveness of the course curriculum and materials and feedback for improvement.

A detailed coding scheme and Excel spreadsheets were created for the surveys. The data were cleaned and entered in the spreadsheets and analyzed using SPSS Version 14.0.

TABLE 1

Number of Years Practicing in Profession

Length of practice	N	Percent
Less than 1 year	44	3.6%
1 to 4 years	177	14.6%
5 to 9 years	183	15.1%
10 to 20 years	351	28.9%
21 or more years	371	30.6%
Subtotal	1126	92.8%
Did not report	87	7.2%
Total	1213	

TABLE 2

Extent of Agreement About Being a Mandated Reporter

Profession	*n*	*M*	*SD*
Dentist	244	3.11	.97
Allied	611	3.01	1.19
Other	158	3.18	1.14
Did not report	70	2.31	1.21
Total sample	1083	3.01	1.15

Note: Total sample does not include the 108 surveys that were missing a page with this question.

FINDINGS

The Study Sample

A total of 21 dental professionals were trained as DPAV trainers in two train-the-trainer formats; however, only 12 of these individuals actually delivered a training session during the project period. The DPAV course was offered in 38 training sessions across the state. Usable surveys/post-tests were returned by 1,213 California dental professionals who attended one of the DPAV trainings between September 2004 and March 2006 and completed a survey, constituting the course participant study sample.

The Study Sample

Dentists comprised about 22 percent of the sample and allied dental professionals (hygienists and assistants) represented 58 percent. About 14 percent of the sample marked "other" (e.g., front office staff, nurses) and 6 percent did not report their profession. Eight of 10 course participants were women, which would be expected with such a high percentage of allied dental participants.

The data on number of years in practice were broken into the categories shown in **TABLE 1**. Approximately one-third of the participants had one to nine years of experience; close to one-third had 10 to 20 years; and another nearly one-third had more than 21 years of practice. Only 3.6 percent of the respondents had worked in their profession for less than a year. The highest number of years in practice was 49.

Attitude About the Role of Mandated Reporter

Participants were in agreement that being a mandated reporter was an appropriate intervention for the dental profession. On a four-point scale with 4 as "strongly agree," the mean response was 3.01 (SD=.1.15) (**TABLE 2**). There were no significant differences in how dentists, allied professionals, and others felt about their role as a mandated reporter. However, there were statistically significant differences between the group of individuals who did not report their profession and everyone else, $F(3, 1079)=10.42$, $p < .001$. The individuals who did not report their profession tended to agree less with the appropriateness of being a mandated reporter. Although male participants had a higher extent of agreement than female participants, the differences were not statistically significant.

Experience in Identifying and Responding to Abuse

The dental professionals reported making very little observation or taking action in the six months prior to taking the DPAV course regarding the number of cases where abuse/violence had been suspected; where a referral was made; and where a report was filed concerning violence directed at children, domestic partners, and elders/dependent adults. With regard to *suspected* child abuse, the vast majority (88 percent) believed they saw no patients with any evidence; about 7 percent indicated they believed they saw one such patient and about 2 percent thought they saw two. Almost 90 percent believed they saw no patients with evidence of suspected domestic/partner abuse; about 6 percent indicated they believed they saw one such patient; and about 2 percent indicated they saw two. Approximately 91 percent believed they saw no elderly/dependent patients with evidence of suspected abuse or neglect; and about 5 percent indicated they believed they saw one such patient (**TABLE 3**).

There were fewer patients reported where referrals were made when abuse/

TABLE 3

Number of Patients Where Provider Suspected Violence

Number of Patients Seen	Child Abuse/Neglect	Domestic/Partner Violence	Elder or Dependent Abuse/Neglect
	n (%)	n (%)	n (%)
0	1064 (87.7%)	1091 (89.9%)	1106 (91.2%)
1	86 (7.1%)	71 (5.9%)	64 (5.3%)
2	22 (1.8%)	23 (1.9%)	14 (1.2%)
3	5 (.4%)	4 (.3%)	4 (.3%)
4	5 (.4%)	3 (.2%)	1 (.1%)
5	4 (.3%)	—	4 (.3%)
6	5 (.4%)	1 (.1%)	1 (.1%)
10	3 (.2%)	1 (.1%)	1 (.1%)
15	1 (.1%)	1 (.1%)	—
Subtotal	1195 (98.5%)	1195 (98.5%)	1195 (98.5%)
Did not respond	18 (1.5%)	18 (1.5%)	18 (1.5%)
Total	1213	1213	1213

TABLE 4

Number of Patients Where Provider Made a Referral Based on Suspicion

Number of Patients Seen	Child Abuse/Neglect	Domestic/Partner Violence	Elder or Dependent Abuse/Neglect
	n (%)	n (%)	n (%)
0	1071 (96.9%)	1076 (97.4%)	1089 (98.6%)
1	17 (1.5%)	13 (1.2%)	4 (.4%)
2	4 (.4%)	3 (.3%)	—
3	1 (<1%)	—	—
4	1 (<1%)	1 (<1%)	—
10	1 (<1%)	1 (<1%)	—
Subtotal	1095 (99.1%)	1094 (99.0%)	1093 (98.9%)
Did not respond	10 (.9%)	11 (1%)	12 (1.1%)
Total	1105*	1105*	1105*

*Total sample does not include the 108 surveys that were sent out without this question.

violence was suspected than the number of suspected cases. The greatest majority of participants (approximately 97 percent) made no referrals for suspected child abuse/neglect, and about 1.5 percent indicated they made one such referral; 97.4 percent made no referrals for suspected domestic partner violence; and about 1 percent indicated they made one such referral; and almost 99 percent made no referrals for suspected elder or dependent abuse/neglect (TABLE 4).

TABLE 5 shows the number of patients for whom the provider made a report based on suspicion of abuse. Nearly 98 percent did not file reports on patients for suspected child abuse/neglect, and about 1 percent indicated they filed one report.

Regarding suspected domestic/partner violence, nearly 99 percent did not file reports on patients for this purpose, and less than 1 percent indicated they filed one report. Likewise, for suspected elder or dependent abuse/neglect, approximately 99 percent did not file reports on patients for this purpose, and less than 1 percent indicated that they filed one report.

How Much Did Dental Professionals Learn from the Course?

Course participants self-rated their level of knowledge about recognizing signs of abuse and how to take appropriate action prior to taking the course and right after completing it. (The post-test questions assessed their actual post-training knowledge based on the content of the course curriculum.) The participants as a group reported a statistically significant increase in their perceived knowledge level on every one of the items ($p < .001$) as a result of taking the course (TABLE 6). They reported knowing relatively little about this material prior to the course (mean scale values in the range of 2.5) but by its completion, thought they had learned a moderate amount of information about all of these topics (mean scale values in the range of 3.0).

All of the groups reporting their profession reported statistically significant ($p < .05$) increases in self-perceived knowledge level on each of the items (FIGURE 1). This pattern was quite different from the group that did not report their profession. This latter group indicated significantly less perceived knowledge than the other groups on almost all of the items. They indicated they were less knowledgeable at the end of the course than they were at the start. This knowledge rating decrease was statistically significant for items regarding reporting domestic partner and elder abuse, making patient referrals,

TABLE 5

Number of Patients Where Provider Filed a Report Based on Suspicion

Number of patients seen	Child Abuse/Neglect	Domestic/Partner Violence	Elder or Dependent Abuse/Neglect
	n (%)	n (%)	n (%)
0	1078 (97.6%)	1090 (98.6%)	1093 (98.9%)
1	13 (1.2%)	4 (.4%)	2 (.2%)
2	2 (.2%)	1 (< .1%)	—
3	2 (.2%)	—	—
Subtotal	1095 (99.1%)	1095 (99.1%)	1095 (99.1%)
Did not respond	10 (.9%)	10 (.9%)	10 (.9%)
Total	1105*	1105*	1105*

.*Total sample does not include the 108 surveys that were sent out without this question.

and recognizing signs and symptoms. Prior to the training, both dentists and allied health professionals believed they were least knowledgeable about how to make referrals and most knowledgeable (although still not at a high level) about recognizing signs and symptoms of abuse, with hygienists and assistants reporting slightly higher levels of knowledge about both of these items than dentists.

Course Post-test

Overall, participants answered the post-test questions slightly more than 80 percent correct, but with considerable variability (**TABLE 7**). Respondents obtained almost 90 percent or better on four of the questions ("a," "c," "d," and "i"). They obtained between 86 percent and 88 percent on questions "h" and "j"; and 77 percent correct on question "f." Respondents performed more poorly on the remaining three items, scoring 68 percent, 59 percent, and 51 percent correct on items "e" (at what step to fill out a report); "b" (incidence of domestic violence); and "g" (immunity from liability). The only statistically significant differences among the professions groups were associated with questions "d" and "h" ($p < .05$). Dentists did significantly better than the allied professionals and others on question "d," increased risk for abuse for patients with physical or mental disability; they also did significantly better than the allied professionals and those who "Did Not Report" on question "h," most abuse survivors wanting to be asked about it by their health care provider.

The reliability of the post-test (as assessed by Cronbach's alpha coefficient) was .533. This relatively low value suggests the items do not comprise a homogeneous content domain (i.e., they tap into relatively independent domains of knowledge). This indicates the respondents differentially learned different aspects of the course, and not that there was an inherent weakness in any of questions. Even though all topics were each appropriately chosen to be in the course, they are not truly related even if they might be seen that way by course participants. The reliability value means one should pay more attention to the individual items and how they test knowledge of specific content area than to the performance on the test as a whole.

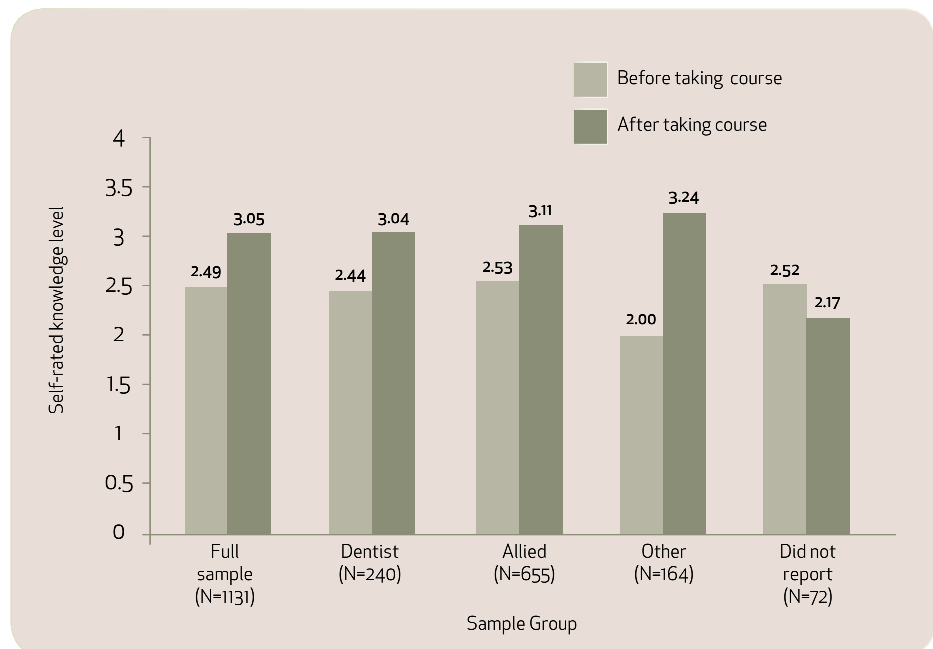

FIGURE 1. Composite means for knowledge level before and after taking the DPAV course

Confidence in Applying What Was Learned

The participants also answered questions about their comfort level or confidence after taking the course in carrying out various functions associated with being a mandated reporter. A scale value of 3 (on a four-point scale) on these questions was associated with the anchor of "somewhat comfortable." Although the differences in functions were not

TABLE 6

Self-reported Knowledge Before and After Training, Full Sample

Item*		Before Taking the Course		After Taking the Course	
	n	*M*	*SD*	*M*	*SD*
Knowing how to make a patient referral to or obtaining information from community resources	1124	2.40	.91	3.01	1.15
Knowing the liabilities and protections for mandated reporters	1107	2.44	.89	3.05	1.21
Knowing how/where to report elder/dependent adult abuse	1124	2.44	.88	3.04	1.20
Knowing how/where to report domestic/partner violence	1126	2.48	.85	3.05	1.20
Knowing how/where to report child abuse/neglect	1126	2.50	.85	3.06	1.23
Knowing the legal responsibilities of reporting	1125	2.55	.87	3.08	1.23
Knowing how to recognize signs and symptoms of abuse/neglect	1123	2.63	.68	3.05	1.22
Total average for all knowledge items	1131	2.49	.71	3.05	1.17

Note. Scale from 1 for "none" to 4 for "a great deal."

*Items are ordered from the largest mean difference to the smallest mean difference.

statistically significant (responses averaged between 2.86 and 3.01), the ability participants seemed the most comfortable with was in recognizing signs and symptoms of abuse/neglect. The area in which they were least comfortable was in asking patients, presumably directly, about abuse when it was suspected.

Participant Feedback About the Course

The respondents as a whole were very positive in their assessment of both the presenters and the value of the course (**TABLE 8**). However, there were significant differences ($p < .05$) between the groups of those that did and did not disclose their profession. Consistently, the "Did Not Report" group was substantially more negative in their evaluations of the presenter and course than the other three groups who were more positive in their evaluations. The three disclosed groups did not differ significantly from one another in their ratings of the course.

Virtually all (97.4 percent) of the participants planned to recommend the course to a colleague. Only two (<1 percent) individuals responded "no" but did not offer a reason. (The remaining 2.4 percent did not answer the question.)

Recommendations for Improving DPAV

A total of 218 comments were obtained in recommendations to improve the course. About one-quarter of the feedback involved audio-visual issues (e.g., use more pictures), and another one-quarter suggested change in the course content or course materials (e.g., role play asking a patient about suspected abuse). While 4.6 percent thought the course was too long, 11 percent indicated that it was too short. Close to 20 percent of the participants thought that the course was excellent in its current form and did not require any change.

Attitude About Training in Abuse as a CE Requirement

Approximately two-thirds of the respondents supported the idea that abuse training should be a continuing education requirement for licensure. While a higher percentage of allied professionals than dentists supported this requirement for C.E., the differences were not statistically different based on a chi square test.

Perceived Effectiveness of the Course Materials

Eight of the 12 trainers who had delivered one or more DPAV training sessions responded to the written survey and believed the materials were simple to use in teaching the major curriculum topics. The trainers also validated the appropriateness of the course materials (PowerPoint slides, handouts) for participant learning, particularly in recognizing signs and symptoms of abuse and neglect. The areas perceived to be somewhat less easy to use and less effective for participant learning were related to the legal responsibilities of reporting, and the liabilities and protections for mandated reporters.

Curriculum Review

An outside, critical review of the DPAV curriculum for content analysis, format, and ease of use was commissioned by the CDAF in summer 2005.[5] The review focused particularly on the online presentation of the course. Overall, the analysis concluded the DPAV curriculum was well-done and well-designed. The content was considered to be accurate, appropriate for the stated goals and helpful, with only a few missing items noted and corrections needed. Specific and detailed recommendations concerning the online

TABLE 7

Post-test Questions (Scored as T/F): Percentage Correct, Full Sample, and by Profession

Item	Full Sample (N=1105)*	Dentist (n=247)	Allied (n=620)	Other (n=166)	Did Not Report (n=72)
a. Making a report is not an accusation; it's reporting observations or facts.	97.9%	97.6%	98.1%	98.2%	97.2%
b. Domestic violence affects at least 1 out of every 10 American families.	59.2%	53.8%	61.1%	62.7%	52.8%
c. Abusers/care providers may avoid the same physician, but return to the same dentist.	94.8%	97.2%	94.4%	93.4%	93.1%
d. Mental and physical disabilities increase patient risk for abuse/neglect.	95.6%	98.8%	95.5%	92.8%	91.7%
e. The first step when suspecting child, adult, or elder abuse is filing a written report.	67.7%	73.7%	67.3%	63.9%	59.7%
f. Health care provider/patient privilege is not applicable in reporting suspected abuse.	76.6%	80.6%	77.6%	69.9%	69.4%
g. A mandated reporter is immune from civil or criminal liability and cannot be sued.	50.9%	53.9%	51.9%	44.6%	45.8%
h. Most survivors of abuse report wanting their health care provider to ask them privately about abuse.	85.9%	91.9%	85.2%	83.1%	77.8%
i. Failure to make a mandatory report is a misdemeanor, punishable by imprisonment, fine, or both.	93.8%	96.0%	93.4%	94.0%	88.9%
j. Radiographs and photographs of suspected child abuse require parental permission per state law.	88.0%	87.5%	88.6%	88.0%	84.7%
Test as a whole	*81.0%*	*83.1%*	*81.3%*	*79.0%*	*76.1%*

*108 surveys missing these questions were excluded from the data analysis.

presentation, particularly the many slides, attention to attribution, and participant handouts and other course materials were made. The in-depth examination was expected to be useful for making further refinements to the curriculum.

DISCUSSION AND RECOMMENDATIONS

Although there has been increasing research on intimate partner violence and other types of family violence and intervention by medical professionals, few studies have examined efforts to engage the dental community about their role and responsibilities through targeted educational programs. The authors' evaluation of DPAV is consistent with other studies indicating dentists and allied dental professionals who take such a course gain knowledge and confidence about identifying and appropriately responding in cases where abuse/violence in patients is suspected.[6,7]

DPAV generated a systematic change in how dental professionals viewed their role and responsibility relative to violence and neglect in their patients. All of the participants generally supported the proposition that mandated reporting was an appropriate intervention for the dental profession. They also supported training in this topic as a continuing education requirement. Because participants mostly correctly answered the post-test question "abusers/care providers may avoid the same physician, but return to the same dentist," implies an understanding among these participants that dental professionals can be in an excellent position to recognize suspected abuse/violence.

The authors' findings that awareness and confidence increased among course participants are consistent with the significant differences in knowledge gain after taking the course. The least amount of difference in self-reported knowledge before and after taking the course of how to recognize signs and symptoms of abuse/neglect probably reflected providers' belief that they already had a handle on this prior to the course. However, participants reported few numbers of patients in the previous six months where they actually suspected, referred somewhere for, and reported abuse/violence. (The number of cases regarding children was higher than for domestic partners and the elderly, perhaps reflecting a greater sensitivity to mandated reporting for child abuse or the proportion of that age group in the practices.)

Key areas of the curriculum that needed more focus by trainers included addressing legal immunity within the context of providers' fears about lawsuits; making clearer the magnitude of

TABLE 8

Evaluation of the Course, Full Sample, and by Profession

Item	Full Sample		Dentist		Allied		Other		Did Not Report	
	N	*M*	*n*	*M*	*n*	*M*	*n*	*M*	*n*	*M*
The presenter was knowledgeable.	1196	3.18	252	3.22	699	3.22	173	3.35	72	2.31
The presentation style/format was effective for learning.	1198	3.12	253	3.07	700	3.18	173	3.29	72	2.36
The course content was relevant for dental professionals.	1194	3.15	253	3.14	697	3.19	173	3.32	71	2.35
I learned information that was new to me.	1196	3.10	253	3.08	700	3.15	172	3.22	71	2.39
The course take-home materials will be useful to me.	1186	3.12	250	3.13	693	3.15	173	3.29	70	2.24
I learned information and skills I will implement in my practice.	1186	3.10	253	3.09	692	3.13	173	3.28	68	2.32
This course was worthwhile.	1194	3.13	253	3.10	697	3.18	173	3.34	71	2.31
Average for course evaluation items	*1199*	*3.13*	*253*	*3.12*	*701*	*3.17*	*173*	*3.30*	*72*	*2.34*

Note. Scale from 1 for "strongly disagree" to 4 for "strongly agree."

domestic/partner violence in society; and reviewing the required steps when child, adult, or elder abuse is suspected (i.e., report immediately by phone *then* file a written report within the specified number of days). As evidenced by these results, there is a common misbelief among dental and other health care professionals that one cannot be sued when there is immunity from liability, such as for mandated reporters, although that is not the case. Any provider can be sued by anyone, although no subsequent legal action occurs. Knowledge of this and other legal factors associated with mandated reporting needed to be more heavily emphasized in the curriculum.[8,9]

Similarly, future course participants may need to be reminded the incidence of domestic violence is much more common than people think, affecting one of every four families, not one of every 10 as falsely stated in the post-test question.

The participants' greater confidence about their ability to recognize clinical signs and symptoms of abuse and lesser comfort in asking patients about it directly also has important implications for the curriculum. Although sample assessment questions were included in the course curriculum, incorporating role playing into the training and creating scripts that can be practiced at home and used in the office, as suggested by some respondents, may be a good idea for bolstering the professionals' confidence in appropriately intervening when abuse is suspected.

The vast majority of respondents indicated they had no contact with patients in the prior six months who they believed might have been victims of abuse. Perhaps their memories were accurate, even without the benefit of having taken the course to aid in making these estimates. Following the course, dental professionals may have increased their vigilance and recognition skills, but it is not possible to know this or about other desirable practice changes. A follow-up attempt with the DPAV participants six months after taking the course was not successful (e.g., missing or inaccurate contact information, failure to respond to the faxed and e-mailed follow-up survey).

Overall, participants provided very positive feedback about the DPAV course and made constructive recommendations for improvements. We cannot explain the relationship between some participants' failure to indicate their profession and their consistently more negative opinions about the course — as well as their lower level of agreement about the appropriateness of mandated reporting for the dental profession. It may be that such individuals were unhappy about having to complete a survey/post-test or took the course under duress, which influenced their outlook about the course or evaluation topics. The value of the program and effectiveness of the course materials for learning was also corroborated by the key informants and the dental professionals who were trained as DPAV trainers.

The authors' findings also have wider implications for preservice dental education. The authors believe the full scope of the DPAV material should be formally integrated into the curricula of the five California dental schools, as well as the hygiene and assisting programs, as a fundamental part of the didactic instruction. While the dental schools have begun to teach some form of mandated reporter responsibility, it seems clear that raising students' awareness about the incidence of interpersonal violence, how to recognize signs and symptoms among their patients, and make appropriate referrals to community resources is essential for

engaging them early in understanding their unique role and carrying out their responsibilities. Interactive tutorials are one such model for significantly improving dental students' knowledge of and attitudes toward the topic.[10]

Having 21 trainers distributed statewide is a very powerful resource as local people are now available to initiate or respond to requests for trainings. Some of these trainers were educators so it is likely they will integrate the DPAV material into their teaching efforts. This training cadre will also continue to be a resource for information. Anecdotal information from trainers indicated that some have received follow-up telephone calls from course participants saying they had suspicious cases and/or were still not quite sure what their responsibilities were and asking for consultation. Other callers have requested additional information about specific course topics or materials.

There were other noteworthy ripple effects attributable to DPAV and the grant funding. Two issues of the *Journal of the California Dental Association* (May and April 2004) dedicated to the topic were a result as was publication of *Enhancing Dental Professionals' Response to Domestic Violence*, a six-page folio published by the National Health Resource Center on Domestic Violence.[11] Also of significance is the recent approval by the California Dental Board that mandatory reporter laws, as they relate to dental professionals, will be included in the required California Dental Practice Act continuing education program; DPAV is the model for this portion of the CDPA curriculum.

Several study limitations must be noted. Effectively evaluating the impact of this training program would have been greatly enhanced by the ability to measure changes in reported incidences of abuse and neglect, particularly in counties where the greatest concentration of training participants came from. However, abuse/neglect data are not available in California by type of mandated reporter such as dentists despite reporting forms that contain "occupation" (e.g., Report of Suspected Dependent Adult/Elder Abuse, Soc. 341) or "title/reporter category" (e.g., Suspected Child Abuse Report, SS 8572) of the reporter. Conversations with officials in the California Attorney General's Office Crime and Violence Prevention Center, California Department of Social Services Office of Child Abuse Prevention, Department of Justice, and a county district attorney's office confirmed this lack of baseline data. Given the large number of dental providers who were reached with this program — and the recent addition to the California Dental Practice Act training program — it is likely the reported cases of suspected neglect and abuse by dental professionals will increase. However, this information will not be available to future evaluations unless the data on occupation of reporter is collected and available from an appropriate state agency. A second limitation was our inability to follow up six months later with a sufficient number of participants, making it difficult to generalize, and limiting the findings about the program's longer-term impact.

> **THERE IS A COMMON** misbelief among dental and other health care professionals that one cannot be sued when there is immunity from liability.

While most awareness has commonly stopped at the child abuse problem, DPAV served to enlighten dental professionals about the broader problem of elder/dependent adult and intimate partner violence and their role in recognizing and stopping the cycle of abuse. Future support should be available to continue the momentum created by this important program in beginning to change dental practice. ■■■■

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