# The Exposure of Medical and Dental Students to the Disorder of Cleft Palate

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## Introduction

Because of the medical and dental problems associated with cleft palate, it is important that medical and dental students be exposed to basic information on this disorder as well as to proper treatment procedures and clinical experiences with cleft palate patients. In an attempt to provide sufficient exposure to cleft palate for medical and dental students at the West Virginia University Medical Center, a questionnaire was constructed and circulated to assess their knowledge of this disorder as well as the amount of their present clinical experiences with cleft palate patients.

THE CLEFT PALATE QUESTIONNAIRE. The questionnaire consisted of a variety of types of questions, including multiple-choice, true-false, and short essays. The areas covered in the questionnaire included the following: (1) definitions of *cleft palate*, *submucous cleft palate*, and *pharyngeal flap*; (2) the incidence of cleft palate in the United States; (3) racial and sex differences in the incidence of cleft palate; (4) the presence of speech, hearing, psychological, and intellectual problems in the cleft palate palate patients; (6) professional specialists who should be included as members of the cleft palate team; and (7) information on the exposure of the student to the disorder of cleft palate, including coursework, outside readings, and clinical experiences. The questionnaire contained a total of four parts and 22 items.

The questionnaire was completed by a total of 173 medical students and 199 dental students at the West Virginia University Medical Center, Morgantown, West Virginia. All four classes were included in the study, as shown in Table 1. The table indicates that for both medical and dental groups, a larger number of lowerclassmen than upperclassmen completed

A paper based on this study was presented at the Thirty-First Annual Meeting of the American Cleft Palate Association, Oklahoma City, Oklahoma, May 9–12, 1973.

class	medicine	dentistry				
I	56	60				
II	63	53				
III	35	49				
IV	19	37				
Total	173	199				

TABLE 1. Number of medical and dental students who completed the cleft palate questionnaire.

the questionnaire. However, this finding is to be expected because of the attrition rate in medical and dental schools from the freshman to the senior classes.

## Results

KNOWLEDGE OF CLEFT PALATE. The results of the students' responses to items 1–16 of the questionnaire are summarized in Table 2. The table indicates the following:

- 1. 43% of the medical students and 50% of the dental students did not know that the factors responsible for the occurrence of congenital cleft palate become operative during the first trimester of pregnancy.
- 2. 35% of all medical students and 42% of all dental students tested did not know that the incidence of occurrence of cleft palate differs for males and females.
- 3. 32% of the medical students and 44% of the dental students did not know that children with cleft palate have a higher incidence of hearing loss than those in the non-cleft population.
- 4. 92% of the medical students and 99% of the dental students who completed the questionnaire erroneously believed that the majority of cleft palate children develop a *cleft palate personality* composed of abnormal psychological adjustments.
- 5. 47% of the medical students and 46% of the dental students tested were not aware that the ultimate aim of the rehabilitative treatment of the cleft palate patient was improvement in the patient's speech.
- 6. 57% of the medical students and 44% of the dental students could not correctly define the term submucous cleft palate.
- 7. The term *pharyngeal flap* could not be satisfactorily explained by 85% of the medical students and 90% of the dental students.
- 8. 66% of the medical students and 76% of the dental students tested did not know why secondary surgical procedures were employed on cleft palate patients.

# 308 Lass and others

item description	medicine						dentistry				
		II	III	IV	total	Ι	II	III	IV	total	
part A											
1. time of onset of cleft palate	46	48	71	63	57	72	30	57	43	50	
2. incidence of cleft palate in											
U. S. A	38	32	46	58	44	28	30	20	38	29	
3. racial incidence of cleft pal-											
ate	7	3	8	5	6	10	8	10	8	9	
4. incidence of speech problems											
in cleft palate persons	23	14	31	26	29	17	8	10	14	12	
part B											
5. occurrence of cleft lip with											
cleft palate	91	90	94	95	92	80	92	96	94	90	
6. sex differences in incidence									00	*0	
of cleft palate	52	62	177	68	65	30	45	96	60	58	
7. intelligence of cleft palate		71	00	00	00	00	0.0	70	61	00	
persons	11	11	89	90	82	80	83	10	81	80	
8. Incluence of nearing loss in	61	50	00	62	60	70	40	50	46	56	
0 newshologiesl problems and	01	- 59	09	05	08	10	49	- 59	40	50	
9. psychological problems and	19	12	2	5	8	2	0	2	0	1	
10 ultimate aim of rehabilita-	14	10	U U	0	0	2		2	0	1	
tion in cleft nalate	48	63	60	42	53	45	62	55	54	54	
11 incidence of delayed lan-	10	00	00		00	10	02		01	01	
guage in cleft palate	78	86	83	90	84	93	92	88	97	92	
nart C					01				0.		
12. definition of <i>cleft palate</i>	75	86	89	79	82	93	96	98	95	96	
13. definition of submucous cleft											
palate	34	48	57	32	43	45	64	55	60	56	
14. definition of pharyngeal flap.	4	6	23	26	15	0	4	8	30	10	
15. reasons for secondary surgi-											
cal procedures	16	43	40	37	34	10	28	35	22	24	
16. members of team			•		(See T	able	1)				

TABLE 2. Percentage of correct responses by medical and dental students to items 1–16 on the cleft palate questionnaire.

- 9. 92% of the medical students and 90% of the dental students were aware that a cleft of the palate does not always include a cleft of the lip as well.
- 10. 82% of the medical students and 80% of the dental students who completed the questionnaire knew that children with cleft palate do not necessarily have below average intelligence.
- 11. On item %16 of the questionnaire, when asked to list those professionals who should be members of the cleft palate team, 21% of the medical students and 11% of the dental students omitted the speech pathologist; 62% of the medical students and 84% of the dental students omitted the otolaryngologist; 99% of the medical students and 63% of the dental students omitted the prosthodontist; 75% of

the medical students and 64% of the dental students omitted the psychologist (although the overwhelming majority of both groups believed that the cleft palate individual develops an abnormal *cleft palate personality*).

- 12. In general, medical students did better on these parts of the questionnaire than did the dental students tested. Higher percentages of correct responses were obtained by medical students on 10 of the 15 items. However, the dental students did somewhat better on defining the terms *cleft palate*, *submucous cleft palate*, and *pharyngeal flap* than the medical students who completed the questionnaire.
- 13. Although the senior medical and dental students did better on some of the items than the lower-classmen, they still exhibited an apparent lack of basic information on cleft palate. For example, 68% of the senior medical students and 40% of the senior dental students could not correctly define submucous cleft palate; 74% of the seniors in medicine and 70% of those in dentistry did not know what a pharyngeal flap was; 63% of the senior medical students and 78% of the senior dental students did not know why secondary surgical procedures are employed on cleft palate patients.

EXPOSURE TO CLEFT PALATE. Table 3 contains the results of the students' responses to items 17–22 on the questionnaire. These findings can be summarized as follows:

1. 33% of the medical students and 18% of the dental students had never seen a cleft of the palate.

item Josepittion	medicine						dentistry				
uem aescripiion		II	III	IV	total	I	II	III	IV	total	
part D											
17. have you ever seen a cleft of	55	65	74	74	67	82	81	60	05	89	
18 have you ever known an in-	00	05	14	74	07	04	01	09	90	64	
dividual with a cleft palate?	46	52	51	68	54	72	51	65	65	63	
19. does any member of your											
family have a cleft palate?	0	0	0	0	0	5	0	0	3	2	
20. have you ever worked with a											
cleft palate patient in your	Q	8	26	39	10	7	8	6	14	Q	
21 has the topic of cleft palate	9		20	02	10	· '			11	0	
ever been covered in your											
coursework?	11	94	63	53	55	100	100	100	97	99	
22. have you ever done any read-											
ing on the topic of cleft pal-										~~~	
ate?	16	36	20	26	24	58	57	80	32	57	

TABLE 3. Percentage of "Yes" responses of the medical and dental students to items 17-22 on the cleft palate questionnaire.

# 310 Lass and others

- 2. 81% of all medical students and 91% of all dental students who completed the questionnaire had never had any clinical experiences with cleft palate patients.
- 3. While 45% of the medical students had never had the topic of cleft palate included in their coursework, 99% of the dental students indicated that it was discussed in at least one of their courses.
- 4. 76% of the students in medicine and 43% of those in dentistry had never done any reading on the topic of cleft palate.
- 5. Of the senior medical students, 26% had never seen a cleft of the palate, 68% had never worked clinically with a cleft palate patient, 47% had never had the topic of cleft palate included in their coursework, and 74% had never done any reading on cleft palate.
- 6. Of the senior dental students, only 5% had never seen a cleft of the palate, while 86% had never worked clinically with a cleft palate patient, and 68% had never done any reading on the topic of cleft palate. Almost all seniors had the topic of cleft palate discussed in their coursework in dental school.
- 7. The medical students in the study appear to have more clinical exposure to cleft palate patients than the dental students; however, the dental students have more coverage of the topic of cleft palate in their courses and have done more reading on cleft palate.

#### Discussion

These findings indicate a deficiency in basic knowledge of the disorder of cleft palate and its accompanying associated problems by both medical and dental students at West Virginia University. They also indicate that this lack of basic information is not surprising in light of the inadequate amount of exposure to this disorder that these students receive in both the classroom and clinic. Furthermore, the frequency with which physicians and dentists come into contact with cleft palate patients and the importance of proper early referrals, make these findings of much concern to those of us involved in the training of such professionals.

Appropriate steps are currently being planned and will be implemented in the near future to increase the exposure of medical and dental students at West Virginia University to the disorder of cleft palate. In addition, we are planning to extend this questionnaire study to include medical and dental students at other universities in the United States in an attempt to determine if such deficiencies reflect a national trend. If so, appropriate measures should be taken at other medical and dental schools as well to insure more exposure for their students in both the classroom and clinic to the disorder of cleft palate.

### Summary

In an attempt to assess the knowledge and clinical experiences of medical and dental students at the West Virginia University Medical Center to the disorder of cleft palate, a questionnaire was constructed and circulated to 173 medical students and 199 dental students. Results of their responses indicate a deficiency in basic information on this disorder resulting from inadequate clinical and classroom exposure to cleft palate. Implications of these findings for the proper treatment and referral of cleft palate patients are discussed.

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