

## Child reaction to protective garb at the first dental visit

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### Introduction

The use of masks, gloves, and protective eyewear as a means of infection control in the dental office has been mandated by both the federal government and organized dentistry. Compliance among dental practitioners has increased, but a significant number of general practitioners and pediatric dentists still resist the use of protective garb while treating children. Some assume that these items interfere with establishing rapport by restricting normal communication. The introduction of "appearance altering devices" adds a new variable into the complex problem of child management in the dental office. Just how negative, or perhaps positive, a factor barrier garb is when treating children remains unknown. The objective of this study was to investigate children's acceptance of masks, gloves, and goggles worn by the dentist at the first dental visit.

Bowden et al.<sup>1</sup> surveyed the general reaction of adult patients to the use of protective garb and reported 78.5% of those surveyed agreed that some combination of covering should be used when treating adults. When asked specifically about children's dental health care, 18% felt no gloves or goggles should be worn while treating children. The number of dentists who use barrier techniques varies around the country. Yablon et al.<sup>2</sup> reported fewer than half of the New York metropolitan area dentists surveyed used barrier techniques routinely. A survey of Minnesota dentists<sup>3</sup> in the same year found only 35% and a North Carolina study<sup>4</sup> reported 27% using barrier techniques routinely. A study of Connecticut pediatric dentists<sup>5</sup> produced a higher compliance rate for gloves (76%) and eyewear (86%), but only 35% for masks.

### Methods and materials

Only children with no history of a previous dental examination or treatment, aged 2 to 8 years (median age 4.2), were invited to participate. Thirty healthy pediatric dental patients (14 males and 16 females, with the median age of 4.4 years) were chosen. The same staff dental hygienist greeted each family and obtained a preliminary health history. She showed the child two photographs of the same operator (Fig), one with the operator in mask, gloves, and goggles and one without. The pictures

were left with the child and, after five minutes, the child was asked to select which picture represented how he or she wished the dentist to look. Three options were offered: 1) "I like picture No. 1" (mask, gloves, and goggles); 2) "I like picture No. 2" (no protective wear); or 3) "I do not care." After five minutes, the hygienist accompanied the patient to the operatory and seated the child. At this time she also assigned a pretreatment behavior rating based on the Frankl scale.<sup>6</sup> The hygienist was trained in assigning Frankl ratings; however, intrarater reliability was not measured. The dentist then demonstrated the mask, gloves, and protective eyewear to the patient using a standard brief explanation of the purpose of each item. The garbed hygienist then cleaned the child's teeth and applied topical fluoride, after which the garbed dentist was called to complete the examination. At the end of the visit, the child was shown the same pictures and asked to select again the one that represented how he or she wished the dentist be dressed. A second behavior rating was assigned by the hygienist at the end of the appointment.

### Results

The table contains a summary of the initial selections

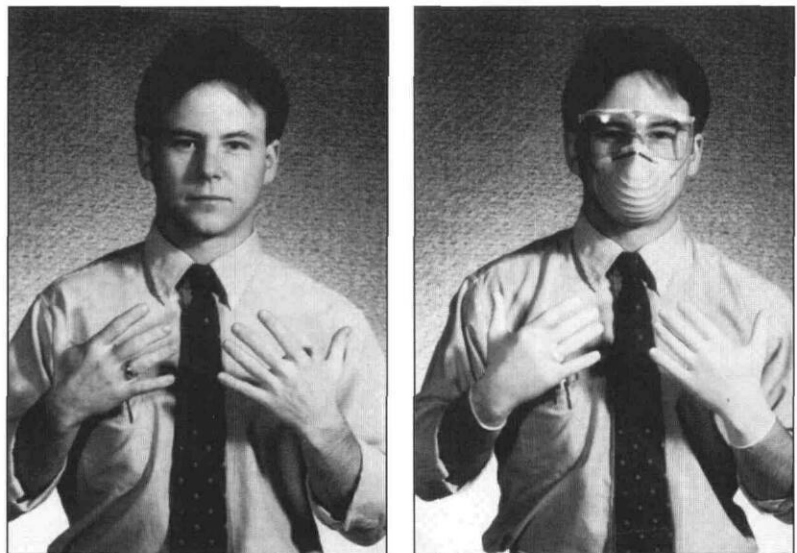


Fig. Dental operator with no protective garb (left), dental operator with protective garb (right).

**Table. Observed frequency of pre- and post-treatment selections as to patient preference for the dental operator with or without mask, gloves, and goggles**

<i>N</i> = 30	<i>Pretreatment</i>	<i>Post-treatment</i>
Mask, gloves, goggles	18 (60%)	16 (53%)
Bare	8 (26%)	9 (30%)
No preference	4 (13%)	5 (17%)

Chi-square = 0.562; *P* = 0.755; *df* = 2.

by the children. Initially, the majority (60%; *N* = 18) of the children chose the barrier-protected operator. Post-treatment selection was similar (53.3%; *N* = 16) with no significant difference observed by Chi-square analysis (0.561, *P* = 0.75, *df* = 2). Twelve children changed their selection, with equal numbers switching in each direction. The age of the patient did not affect the result, with nine children aged 2 to 5 changing their selection (five from barrier protection to none and four from none to protection.) Three children in the 6- to 8-year age group also switched equally, with one to barrier protection, one to none and one to no preference. The majority of children with poor behavior (Frankl one and two) selected no preference (57%; *N* = 4). Only one child selected no preference in the Frankl three and four groups.

## Discussion

The results of this study suggest that children have no strong aversion to mask, gloves, and protective eyewear use by the dental operator. We did not attempt to evaluate other attitudes of the children toward these items, however. It would appear that protective garb alone does not

interfere with the child's initial impression of the dental team. The impact of wearing protective garb on poorly behaved children cannot be determined from this study due to the small sample size. However, the majority of children in this category had no preference as to which illustration of

the operator they preferred.

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1. Bowden JR, Scully C, Bell CJ, Levers H: Cross-infection control: attitudes of patients toward the wearing of gloves and masks by dentists in the United Kingdom in 1987. *Oral Surg Oral Med Oral Pathol* 67:45-48, 1989.
2. Yablon P, Spiegel RS, Wolf MC, Maykow KP: Dentists' attitudes concerning infection control and occupational health hazards. *J Am Colleg Dent* 55:35-40, 1988 Spring.
3. DiAngelis AJ, Martens LV, Little JW, Hastreiter RJ: Infection control practices of Minnesota dentists: changes during 1 year. *J Am Dent Assoc* 118:299-303, 1989.
4. Rosen S, Mlakar L, Crawford JJ, Schaefer ME: Comparison of infection control procedures in dental offices between 1985 and 1986. *J Dent Res* 66: Abst 446, 162, 1987.
5. Edelstein B: Survey of infection control behaviors of pediatric dentists. *J Dent Res* 68: Abst 934, 298, 1989.
6. Frankl SN, Shiere FR, Fogels HR: Should the parent remain with the child in the dental operatory? *J Dent Child* 29:150-63, 1962.