

HANDLING EVALUATION OF A NOVEL DENTINE BONDING SYSTEM BY UK DENTAL PRACTITIONERS

R.J.CRISP^{1*} & F J T BURKE¹ (¹University of Birmingham School of Dentistry, UK)

Program number 150

INTRODUCTION

In 1993 saw the establishment of a group of UK-wide dental practitioners, the PREP (Product Research and Evaluation by Practitioners) Panel¹, prepared to complete evaluations of new materials and techniques in a practice environment, to give 'feedback' to manufacturers

To date, over 35 evaluations, including handling evaluations and clinical trials^{2,3,4}, have been completed. The PREP panel presently has 25 members with an average time since graduation of 16 years.

MATERIAL

This evaluation assessed the handling properties, in clinical use in 12 UK dental practices, of a new non-etch dentine bonding system (DBS) requiring the mixing of two different coloured liquids to produce the distinctively coloured bonding liquid. (One Up Bond F, Tokuyama Dental Corporation, Tokyo, Japan)

METHOD

The twelve practitioners were selected at random from the PREP panel and supplied with a pack of the new material, full written instructions and a questionnaire. Three of the practitioners were female and the average time since graduation was 23 years, with a range of 10 to 40 years.

The 21question questionnaire was designed to provide background information on the use and choice of DBS materials, the handling and ease of use of One Up Bond F and the comparison of this material with pre-study DBS materials. The majority of answers were given on a visual analogue scale (VAS).

BACKGROUND INFORMATION

All the evaluators currently used DBS materials with 25% using as many as three systems.

The principle reasons for the choice of these materials were ease of use and good results.

The evaluators rated the pre-study DBS for **ease of use** by a VAS (where 1= difficult to use & 5 = easy to use) as follows:

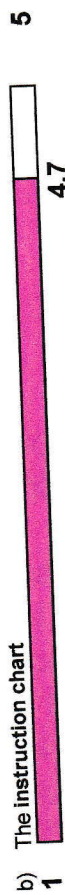


The number of dentine bonded restorations placed in a typical week was as tabulated below:

NUMBER OF RESTORATIONS	NUMBER OF EVALUATORS
<10	0
10-15	5
15-20	0
>20	7

EVALUATION OF ONE UP BOND F

The presentation of the material, and instruction chart were rated (on a VAS where 1 = poor and 5 = excellent) as follows:



The total number of restorations placed in this evaluation was 931.

All the evaluators stated that the colours of the 2 liquids facilitated mixing.

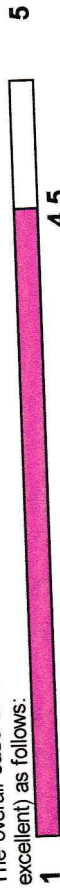
When the evaluators and their DSAs were asked to assess the **dispensing & handling** of the One Up Bond F liquids, the result was as follows: (on a VAS where 1 = inconvenient and 5 = convenient):



The evaluators assessment of the **viscosity** (on a VAS where 1= too viscous and 5 = too thin) of the mixed One up Bond F liquids was as follows:



The overall **ease of use** of the evaluated material was rated on a VAS (where 1 = poor & 5 = excellent) as follows:



The majority (75%) of evaluators stated that it was an advantage of the DBS being evaluated not to have to wash of phosphoric acid, and 42% felt that this system as faster to use than their pre-study DBS.

67% (n=8) of the evaluators stated they would purchase this system if priced at average cost. and the same number would recommend the material to colleagues.

CONCLUSION

This new DBS received high ratings when evaluated by 12 UK general dental practitioners. Ease of handling of materials may be considered helpful to achieving good results, and the system evaluated scored well for dispensing and handling convenience and scored higher for ease of use than the pre-trial materials

ACKNOWLEDGEMENT

The support of Tokuyama Dental Corporation, Tokyo, Japan is acknowledged. The authors also wish to thank the participating practitioners.

REFERENCES

1. Burke F J T, Wilson N H F. Introducing the PREP panel. Dent. Pract 1994; 32 (18): 30.
2. Crisp, R J and Burke, F J T. One-year clinical evaluation of compomer restorations placed in general practice. Quintessence Int. 2000; 31: 181-186
3. Burke F J T, Crisp R J, et al. One-year retrospective clinical evaluation of hybrid composite restorations placed in UK general practice. Quintessence Int. 2001; 32: 293-298
4. Burke F J T, Crisp R J et al. Clinical evaluation of Solitaire-2 restorations placed in United Kingdom general dental practices: 1-year report. Quintessence Int. 2003; 34:594-599