



THE DEVELOPMENT OF AN ORAL HEALTH SCREENING TOOL (OHST) FOR PEOPLE WITH CHRONIC DISABILITIES AND FOR OLDER PEOPLE WHO ARE DEPENDENT ON OTHERS FOR CARE

Marg Foulsum, Chief Speech Pathologist, Bethlehem Health Care Melbourne

AIMS & OBJECTIVES:

The aim of this project is to develop a valid and reliable oral health screening tool (OHST) and comprehensive instruction manual for use by health professionals and care workers working with people who have chronic disabilities and older people. Our objective is to have the tool incorporated into the general health assessment and review process of these client groups. The aim is also to provide researchers and clinicians with a clinical indicator and benchmarking tool for oral health.

Ethical approval for this project was granted by Bethlehem Health Care Research and Ethics Committee (att.1).

A reference group including representatives from Royal Dental Hospital of Victoria, Department of Human Services, Victorian Association of Health & Extended Care, Dental Health Services Victoria, Bethlehem Hospital and La Trobe University was established to oversee and support the project.

METHODOLOGY:

Key steps:

1. Develop draft oral health assessment tool and instruction manual
2. Inter-rater reliability study
3. Analysis and modification
4. Clinical trial
5. Final analysis and modification
6. Future directions – publication, marketing, circulation

1. Develop draft oral health assessment tool and instruction manual.

A working party comprising experts in the field of oral health and secretion management was formed. This group consisted of 10 health professionals from the fields of speech pathology, dentistry and nursing. The draft oral health assessment tool and instruction manual were developed and modified by this group.

2. Inter-rater reliability study

Two testers from six different facilities (n=12) participated in this stage. Each pair tested the same ten subjects from the target groups at their facility (n=60) using the draft OHST. Each individual tester completed an evaluation form (n=12) related to the content, layout, ease of use etc. of the OHST. One pair comprised a dentist and a speech pathologist to provide expert:novice reliability.

3. Analysis and modification

“A community of carers expressing love in action”

Bethlehem Health Care Inc
Registered No A0011233X
476 Kooyong Rd
Caulfield Vic 3162
ABN 55 836 187 048

Ph: 03 9596 2853
Fax: 03 9596 3576
www.bethlehem.org.au

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with values of hospitality, healing, stewardship and respect*

Quantitative results were analysed using the SPSS statistical analysis package. Nine parameters – tongue, lips, saliva, dentures, roof of mouth etc., gums, teeth, pain and oral hygiene independence – for 59 subjects tested by two different raters were analysed for inter-rater reliability using the correlation coefficient Spearman's ρ (rho). Spearman's ρ is used when at least one variable is measured on an ordinal scale and the other on an ordinal scale or higher. Ratings in this trial were both measured on an ordinal scale.

When all six rater pairs were included, all correlations were significant at the .01 level (att. 2). This remained true when the expert:novice pair were excluded.

The expert:novice pair in isolation showed .01 significance on dentures, gums, teeth and oral hygiene independence. .05 significance was reached on lips (att.3). Interestingly, the expert ratings were lower than the novice ratings on six of the nine parameters. This may be due to the experience of the expert regarding the degree of abnormality present in the general population and their ability to relate this to observations. It also highlights that novices may be more likely to identify minor abnormality and seek expert clarification.

Qualitative results from the tester evaluation forms were analysed (att. 4). 90% of testers found the OHST and instruction manual were easy to understand and use. 30% of testers provided feedback for minor changes. These were reviewed by the working party with appropriate changes being incorporated into the draft documents for the clinical trial phase.

4. *Clinical trial*

Information kits comprising an introductory letter, methodology outline (att. 5), ethics approval letter, plain language statement, consent form, sample oral health screening tool and sample evaluation form were sent to the nineteen facilities who had responded to the call for interested participants. Ten aged care facilities, two New Zealand hospitals and one New Zealand community facility, four Melbourne hospitals and one Melbourne residential care facility agreed to participate in the clinical trial

One tester from each of the aged care facilities and two testers from each participating hospital and the residential care facility will each assess ten subjects (n=170) and five "normal" subjects using the Oral Health Screening Tool (n=80). Each tester will also test five subjects from each target group using the Oral Assessment Guide (Eilers et al.) (n=85). Each tester will complete an evaluation form. Results will be statistically analysed for:

- Predictive validity (comparison with OAG)
- Discriminant validity (clinical vs. normal)
- Ease of use (tester evaluation)

5. *Final analysis and modification*

The clinical trial phase commenced in mid-April with data collection to be completed by May 31, 2002. Data analysis and final modification to the OHST will be completed by June 30, 2002.

6. *Future directions*

On completion, Bethlehem Health Care and the project co-ordinator will discuss publication and marketing of the Oral Health Screening Tool with the Department of Human Services.

BARRIERS & STRATEGIES:

Obstacles encountered included:

- Need to identify and conform to occupational health and safety standards
 - Disposable dental mirrors and face shields supplied in screening kits
- Delay in supply of screening kit items
 - Ordered well in advance for clinical trial
- Individual signed patient consent required by some facilities
 - Copy of approval letter from Bethlehem Research & Ethics Committee, plain language statement and a patient consent form were included in the information package distributed to interested participants prior to the clinical trial.
- Delay in receipt of data from participating centre
 - Telephone contact at mid-way point and just prior to expected completion date to encourage return of data within time frame
- Difficulty with accessing statistical analysis package
 - Accessed through working party connections with La Trobe University

SUSTAINABLE OUTCOMES:

It is anticipated that the outcome of this project will be a valid and reliable oral health screening tool and instruction booklet suitable for incorporation into the general health assessment and review processes for aged care and sub-acute facilities. Production, marketing and distribution will be through liaison between Bethlehem Health Care and Department of Human Services.

FUTURE DIRECTIONS:

- Specific oral hygiene procedure for older people and people with chronic disabilities to be included in the package
- Evaluation against a professional dental examination
- Use as a benchmarking tool for interventions

Draft copies of the OHST and Instruction Manual have been attached. (Att. 6 & 7)

**Marg Foulsum,
Project Coordinator,
Chief Speech Pathologist,
Bethlehem Health Care Melbourne.**