A teledentistry approach for oral health screening in nursing homes

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Background

• Face-to-face patient examinations are regarded as the most accurate method for correct oral health diagnosis.

• However, members of specific groups of the community are less likely to have seen a dentist in the past 12 months.

  • For example, the elderly (homebound or living in nursing homes).
Information from the Australian state of Victoria indicates that:

- only 11% percent of residents have seen a dentist in the past 12 months,
- few dentists available to provide dental care for residents of aged care facilities
- only half of Victoria dentists reported providing care to residents of RACFs, and spent on average only one hour per month providing care in this setting.

ICT provides opportunities to supplement traditional methods of oral diagnosis, delivery care and health promotion.
Objectives

1. evaluate the concordance between distance assessments (teledentistry) and face-to-face dental examination.
2. identify barriers to the implementation of this approach
3. provide recommendations towards wider implementation of this approach.
Methods

• An oral health professional was trained to manipulate an intraoral camera and use exiting ICT infrastructure to send the information for remote examination.

• A dentist performed a ‘virtual dental examination’ on a group of patients.

• This information will then be compared with a real-life dental examination performed in a dental surgery setting.
Methods

• Participants were asked to self-complete a questionnaire to assess barriers to the implementation of a teledentistry approach.

Concordance between real-time teledentistry* assessments and face-to-face examination

* http://www.youtube.com/watch?v=mFP3u_UBqKQ
Results

- 14 volunteers.

- Intra-examiner agreements:
  - Dental examination: Excellent (Kappa=0.94)
  - Periodontal examination: Good (Kappa=0.74)

- Patient expressed high levels of satisfaction with teledentistry.
Conclusions

• The proposed teledentistry approach using an intraoral camera proved to be feasible and reliable as an alternative to traditional oral health examination.

• Patients expressed high levels of satisfaction with the approach.
The **second stage:**

- A nursing home was recruited to participate in the study, and the teledentistry assistant at the home will assist in the virtual oral examination, with the oral health professional located at the Melbourne Dental School.

- Manual for the operation of intraoral cameras was prepared.
Future developments

This will lead to Stage 3 where a multi-State community-based trial of the technology.

- Economic modelling
- Qualitative evaluation

Stay tuned

Thanks!
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