The Implications for Poor Oral Health in the Elderly

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Dental Department

28th International Conference of Alzheimer’s International
18-20 April 2013, Taipei
The Looming Geriatric Dental Care Crisis

Brian Barrett  J Can Dent Assoc 2011;77:b2

• Originally used this title in a paper he published in 1998

The last 20 years have shown that the problem of geriatric dental care is here with a vengeance. The sad thing is that very little has changed in a practical manner to address the situation since that article was published.
From early childhood we are told how important it is to get into the habit of cleaning and caring for teeth and gums. This habit is not so easy to maintain for the elderly or those suffering from dementia, receiving radiotherapy to the head and neck as part of cancer management or for those with a variety of medical problems which have associated oral health implications.
Healthy Mouth, Healthy Ageing
ORAL HEALTH GUIDE FOR CAREGIVERS OF OLDER PEOPLE

Healthy Smiles
MINISTRY OF HEALTH
NEW ZEALAND DENTAL ASSOCIATION
More oral health care needed for ageing populations

Millions of elderly people across the globe are not getting the oral health care they need because governments are not aware enough of the problem. By 2025, there will about 1200 million people aged 65 years according to UN estimates. Failure to address oral health needs today could develop into a costly problem tomorrow.

IN FOCUS - Feature from the Bulletin
1 September 2005
Australia facing 'dementia avalanche'

Australia could be facing a shortage of more than 150,000 carers for dementia sufferers within 20 years, according to a new report.

Dementia costs world $600b a year: report

A new report has found the increasing number of people with dementia will have huge economic and social costs for health systems around the world.
Dementia Costs Surge Ahead of Heart Disease, Cancer

New England Journal of Medicine April 4 2013

• The cost of caring for people with dementia in the United States in 2010 was between $159 billion and $215 billion, according to one of the most comprehensive studies to date tallying costs of dementia care in the United States.
Ageing Population

• In the 1950’s and 60’s the average age of a new entrant into a Residential Aged Care Facility was around 70. The average age today in 2013 is around 83.

• In the 1950’s and 60s most Residential Aged Care Facility residents had no natural teeth remaining, whereas today most 80 year olds have some natural teeth present.
The rising prevalence of dementia will have dire consequences for Australia’s and the world’s health care systems and our quality of life, with the emphasis changing strikingly from cardiovascular disease and cancer to the neurodegenerative conditions, marking an important epidemiological transition.
but Why is maintaining good oral and dental health important for the elderly???
GERIATRIC GIANTS

Cognitive decline and delirium
Frailty
Incontinence
Falls
Medication compliance & pharmacokinetics
Hearing and vision impairment
Poor Oral Health
A New Geriatric Giant
Ventilator Associated Pneumonia (VAP)

A large US hospital provided oral care for patients to decrease risk factors for VAP. It aimed to save 100,000 patient lives by introducing 6 new changes in hospital protocols.

Oral care was one of the introduced changes as VAP impacts on mortality, morbidity and hospital costs.
Aspiration Pneumonia in the Elderly

- Pneumonia is the leading cause of death amongst the elderly and people who are chronically and terminally ill.

- Aspiration of pathogenic oral microorganisms is a risk factor for the elderly.
Oral health care and aspiration pneumonia in frail older people: a systematic literature review.

van der Maarel-Wierink et al. Gerontology March 2013

• Improvement of oral health care diminished the risk of developing aspiration pneumonia
• Improvement of oral health care diminished the risk of dying from aspiration pneumonia

Tooth brushing after each meal, cleaning dentures once a day, and professional oral health care once a week, seems the best intervention to...
The impact of having natural teeth on the Quality of Life (QoL) of frail dentulous older people.

Dominique Niesten et al. BMC Public Health 2012

• Having natural teeth generally had a positive effect on QoL
• Positive effects through pride and achievement, intactness, and sense of control were most apparent for the most severely frail

QoL of frail older people is positively influenced by natural teeth, and this effect seems to increase with increasing frailty. Preservation of teeth
Locals and residents queue for their daily dental care… and none escape!
Hygienists, young graduates and a commitment to caring and sharing… oral health is important to them!
Japanese aged care research has shown that better oral and dental health in the elderly leads to:

- Better nutrition
- Increased confidence
- Better socialization
- Better communication
- Better overall health
Mini implant (left) next to a traditional implant.
Bone Density indication in the ant maxilla using 3M MDI 18 mm x 2.9 mm mini implants. In the premolar region, the implants are 10 x 2.9 mm.
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<th>Dr Sign/Date</th>
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<td>1 po nocte</td>
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<td>EPILIM SYRP/200mg/5ml</td>
<td>6mL po nocte</td>
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<td>G</td>
<td>FEBRIDOL TAB/500mg</td>
<td>2 po tds PRN pain/fever</td>
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<td>PETRUS BISACODYL SUPP/10mg</td>
<td>1 PR bd PRN constipation</td>
<td>04/05/09</td>
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<td>POLYGEL DRY EYE GEL EYE-DRP/</td>
<td>Apply top bay PRN dry eye</td>
<td>04/05/09</td>
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# Oral Health Assessment Tool

<table>
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<tr>
<th>Resident:</th>
<th>Completed by:</th>
<th>Date:</th>
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- **Independent**
- **Needs reminding**
- **Needs supervision**
- **Needs full assistance**

- **Will not open mouth**
- **Grinding or chewing**
- **Bites**
- **Head faces down**
- **Excessive head movement**
- **Refuses treatment**
- **Cannot swallow well**
- **Will not take dentures out at night**

## Lips
- **Healthy**
  - Smooth, pink, moist

- **Changes**
  - Dry, chapped or red at corners

- **Unhealthy**
  - Swelling or lump, red/white/ulcerated bleeding/ulcerated at corners

- **Dental Referral**
  - Yes
  - No

## Natural Teeth
- **Healthy**
  - No decayed or broken teeth or roots

- **Changes**
  - 1-3 decayed or broken teeth/roots, or teeth very worn down

- **Unhealthy**
  - 4 or more decayed or broken teeth/roots or fewer than 4 teeth, or very worn down teeth

- **Dental Referral**
  - Yes
  - No

## Tongue
- **Healthy**
  - Normal moist, roughness, pink

- **Changes**
  - Patchy, fissured, red, coated

- **Unhealthy**
  - Patch that is red and/or white/ulcerated, swollen

- **Dental Referral**
  - Yes
  - No

## Dentures
- **Healthy**
  - No broken areas or teeth, worn regularly, and named

- **Changes**
  - 1 broken area or tooth, or worn 1-2 hours per day only or not named

- **Unhealthy**
  - 1 or more broken areas or teeth, denture missing/not worn, need adhesive, or not named

- **Dental Referral**
  - Yes
  - No

**Note:**
- *indicates more detailed examination needed.

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**44**
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<thead>
<tr>
<th>Gums and Oral Tissue</th>
<th>Oral Cleanliness</th>
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<tbody>
<tr>
<td>□ Moist, pink, smooth, no bleeding</td>
<td>□ Yes</td>
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<tr>
<td>□ Dry, shiny, rough, red, swollen, sore, one ulcer/sore</td>
<td>□ No</td>
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<tr>
<td>spot, sore under dentures</td>
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<tr>
<td>□ Swollen, bleeding, ulcers, white/red patches,</td>
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<tr>
<td>generalised redness under dentures *</td>
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<tr>
<td>□ Yes</td>
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<td>□ No</td>
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<thead>
<tr>
<th>Saliva</th>
<th>Dental Pain</th>
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</thead>
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<tr>
<td>□ Moist tissues watery and free flowing</td>
<td>□ Yes</td>
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<tr>
<td>□ Dry, sticky tissues, little saliva present, resident</td>
<td>□ No</td>
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<tr>
<td>thinks they have a dry mouth</td>
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<tr>
<td>□ Tissues parched and red, very little/no saliva present,</td>
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<td>saliva thick, resident thinks they have a dry mouth *</td>
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<td>□ Yes</td>
<td>□ No</td>
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<td>□ No</td>
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* Unhealthy signs usually indicate referral to a dentist is necessary

**Assessor Comments**
What can be done to improve the oral health of older people?

- Establish strong oral health regulations for the elderly
- Establish a specialised workforce in oral health care for older people
- Increase Aged Care funding
- Increased access to dentists and auxiliaries
- Improve coordination of services and information sharing
- Better communication and clinical attitude towards elderly
Forget about plaque when diagnosing Alzheimer’s Disease

MEDIA RELEASE: 02 Apr 2013

• Plaque, long considered to be the hallmark of Alzheimer’s disease, is one of the last events to occur in the Alzheimer’s brain
• Brain inflammation and cell loss may be an earlier indicator of disease pathology than plaque and an alternative target for treatment
Serum antibodies to periodontal pathogens are a risk factor for Alzheimer’s disease.

Pamela Sparks Stein et al. Alzheimer’s & Dementia 8 (2012) 196-203

• Baseline antibody levels to marker periodontopathic bacteria were higher in patients with Alzheimer’s disease compared to controls
Montefiore Oral Health Action Plan

MOHAP

$1 per day
MOHAP “Dashboard” - 1/4/11 – 18/3/13

In addition to the mandatory Oral Health Assessment Tool (OHAT) for all Residents, Montefiore introduced the Montefiore Oral Health Action Plan (MOHAP) to all new Residents entering Randwick from April 2011. In June 2012 MOHAP was rolled out to all Randwick residents & is a key component of our in-house dental services. Residents are charged an Oral Health Levy of $1/day as part of their advanced preventive oral care.

**Number of Residents on MOHAP**
- 2011: 21
- 2012: 27
- 2013: 27

**% of Total RW Residents on MOHAP**
- 2011: 8%
- 2012: 10%
- 2013: 10%

**% of New Residents entering RW & joining MOHAP**
- 2011: 44%
- 2012: 75%
- 2013: 94%

**Results & Discussion**
- In 2011, 21 (8%) Residents joined MOHAP, while in 2012, 138 (52%) joined of which 51 were new Residents entering RW.
- From 2011 to 2013 (year-to-date), new Resident uptake has increased from 44% to 94%.
- Since its launch 186 (70%) of our Residents have joined MOHAP.
- 27 (10%) Residents have deceased.
- 90% of SCU Residents are on MOHAP followed by 80% of NH, 73% of MT & 47% of Hostel.
- Overall positive feedback from Hostel Resident survey.
- Residents reported several improvements in oral health.

**Case Study 1:**
- % advanced treatments identified under MOHAP
- 2011: 26%
- 2012: 70%

**Case Study 2:**
- % MT & SCU MOHAP Residents identified with chronic issues not seen under OHAT
- MT: 44%
- SCU: 41%

**Resident Survey Results - 20% sample**
- Overall satisfaction: 50%
- Value for money: 60%
- Improvement noted: 50%

**Improvements noted by Residents since joining MOHAP**
- Less mouth pain: 43%
- Eat solid food more easily: 45%
- Less infections/problems in mouth: 9%
- Better dental health: 36%

**CASE STUDIES**
- Dentures & x-rays were the main advanced treatments required.
- Thanks to MOHAP, 41% & 44% of MT & SCU Residents were identified with chronic issues not reported under OHAT.
Delaying death leads to:

- Dementia and other systemic conditions
- Greater reliance on polypharmacy
- More medical and often surgical interventions
- Increased behavioral changes
- Greater reliance on family and carers

AND

Hugely increased costs to just stay alive
Oral pain and discomfort can be devastating, compounding psychosocial problems, disrupting family dynamics and frustrate nursing home staff and carers.

As appearance, function and comfort suffers so may the person's self esteem, dignity and confidence.