Aged Care Oral Health Outreach Program

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Abstract

Non-ambulatory residents in aged care facilities often obtain treatment only when emergencies as dentists don’t provide routine dental treatment in nursing homes and transport of these residents to local dental clinics is difficult because of the logistics involved. Hastings Macleay Oral Health planned and implemented a program to address the dental needs of non- and semi-ambulatory residents in aged care facilities using a dental van to perform comprehensive dental treatment on-site. This program, and a Sydney University Needs Analysis for a Mobile Dental Unit to service Residential Aged Care Facilities (RACFs), led to funding for a new Dental Van for the Mid North Coast Local Health District.

The problem

Australia is experiencing a booming aged population with higher rates of natural tooth retention.

Figure 1: RACF numbers

Figure 2: Dentate Edentate break-up

Figure 3: Dentate Edentate ratio trend

In the HM Network, this is demonstrated by the increase in the number of nursing homes from 17 in 2008 to 26 in 2011 (Figure 1). Aged care is one of the priority groups in all Oral Health Plans.1,2,3 Through our Smiles Alive program, where we trained RACF staff in resident oral hygiene maintenance and developed individual care plans, we found that the number of nursing home residents retaining natural teeth in their mouths is increasing every year (Figure 2). While all residents requiring dental treatment were given public oral health service and MCDDS information, non-ambulatory patients were unable to access any professional dental service for routine treatment.
Non- or semi-ambulatory residents in nursing homes have difficulty accessing dental services because of their disabilities. Often these residents obtain treatment only when emergencies arise as dentists don’t provide routine dental treatment in nursing homes. Organising resident transport to local dental clinics creates logistical issues for RACFs. Willing dentists are hampered by the lack of a basic set-up at RACFs that would enable quality dental treatment. Programs such as Smiles Alive and Better Oral Health for Residential Care trained nursing staff in oral hygiene maintenance of their residents; however they stopped short of actual dental treatment for those who need it.

Two nursing home facilities in NSW have dental chairs installed in them with one employing a dental hygienist; however, a cost benefit analysis needs to be done before implementing this elsewhere.

Dental health has been linked to general health in a large number of studies. Cardiac disease and aspiration pneumonia are now known to have periodontal disease as one of the etiologic factors. Aspiration pneumonia—which accounts for 15-48% of all infections in nursing homes, and has oral bacteria such as pseudomonas aeruginosa found in the gingival crevice as causative organisms—is a risk compounded by dysphagia, feeding problems and poor functional states. This is modifiable by improved oral health and hygiene. While a large proportion of the general population are ignorant of their own dental disease status, aged people are more disadvantaged because of saliva altering medication, disabilities and dementia.

The planning
The Network set a goal of developing a model to address oral health in the aged population as envisioned in all Oral Health Plans while achieving improved oral health in non-ambulatory residents in Booroongen nursing home.

Several meetings were held with Booroongen management and staff, including some with the NSW Chief Dental Officer and Area Clinical Director present, to explore the possibility of on-site treatment. The prospect of installing a dental chair in the RACF was first discussed. However, costs of installation and maintenance were considered disproportionate to the number of residents (60) in the RACF in spite of HM Oral Health offering a free dental chair and permitting it to be used by other services (e.g. podiatry).

The Chief Dental Officer, Clinical Director and the Network Senior Dental Officer met with the CEO of Durri AMS, who offered their dental van for any of our outreach services. Another meeting was held between the management of Durri and the Oral Health team to negotiate a Memorandum of Understanding for the use of the dental van.

The program
The HM dental health educator provided training on oral hygiene maintenance of residents for Booroongen staff. The educator then developed care plans for individual patients and used this informal assessment to select patients for further dental assessment. A dental team consisting of a dentist, dental assistant and the educator then went and did full dental assessments on the selected residents. Non- and semi-ambulatory patients were selected for on-site treatment and ambulatory patients were directed to the Kempsey public dental clinic if eligible or asked to utilise the Medicare Chronic Dental Diseases Scheme for comprehensive dental treatment.
A trial run of the dental van determined the ideal site for parking of the van, electricity access and patient transport into the van. The RACF provided a temporary ramp to move patients into the van.

The dental team then commenced treatment one day a month, getting each patient into the van and completing all the required dental treatment in one sitting. Of the 46 residents assessed and allocated individual care plans, 25 were dentate and 19 edentate. 24 were assessed as requiring dental treatment and 10 were selected for on-site treatment. 7 had their treatments completed, 1 unable to co-operate due to dementia and two treatments were postponed due to technical problems.
Outcomes and evaluation

Figure 3: Treatments provided

Eighteen restorations, twenty two extractions and seven scale and cleans were completed (Figure 3). There was marked improvement in the quality of life of most of the residents who had treatment with reports of decreased pain and discomfort, improved nutrition from eating better and improved mouth odour. There was even a report of one resident becoming clear of her chronic urinary tract infections following dental treatment. This positive feedback was not only from the staff and residents, but also from visiting family members.

A productivity analysis comparing the operator’s dollar productivity values and total treatment items during the days at Booroongen and at Kempsey District Hospital (KDH) Dental Clinic (Figures 4 & 5) showed that despite time spent getting the van to Booroongen, setting up, getting patients on and dealing with equipment problems, the average values at Booroongen were only slightly lower than at the clinic. This suggests that the program’s productivity would be comparable to that of KDH clinic if a fully operational van is used.

Figure 4: Dollar productivity

Figure 5: Treatment items total

The creation of a pathway for comprehensive dental care has reduced the complexity for RACF residents accessing oral health services and facilitated the management of dental problems before they become emergencies. Improved oral health care has also created a better patient journey through improving access to services, when and where needed. The program promoted oral health by educating nursing staff on residents’ oral health care. It built an outreach oral health team and proved the Network’s readiness for new risks and opportunities with a new innovative project that supported improved oral health care. The transferability of the program is such that other health care services could run similar programs for vulnerable clients in residential care facilities, and achieve quality outcomes. As operator productivity is not negatively affected by the provision of outreach services, this model could be adopted by any health care service.
**Sydney University study**

In 2012, Bachelor of Oral Health students from Sydney University did a survey of the local RACFs to assess the need for a mobile dental unit. The survey reported that 58% of RACF residents were non-ambulatory and 21% semi-ambulatory, making a total of 79% residents with mobility problems. 85% of the reasons for lack of routine dental visits were related to mobility, transport, health and access. The survey concluded that a mobile dental van was a much needed service.

**The good news**

The NSW Centre for Oral Health Strategy offered MNCLHD funding for a new Dental Van. This Dental Van has been purchased and manned and is being rolled out in RACFs across the LHD providing comprehensive dental treatment to all consenting residents. The LHD is exploring partnerships with volunteer private dentists to provide services through the van whenever it is available.

![Spencer—The new MNCLHD Dental Van](image)

**References**