



**title** Telehealth coaching in oral healthcare

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## introduction

Value-Based Health Care is increasingly being considered by governments and health service providers in Australia as they seek to improve patient outcomes and experiences while reducing wastage and cost. Rising health care costs mean that efficiency, doing more with less, will inevitably be a key driver. In oral health this requires a shift away from a supply driven health care system organised around volume, output and what clinicians prescribe, towards a patient-centred system organised around what patients need and value.

A team-based care initiative, using an initial intake and orientation program for patients, focussed on engagement and education, can help patients better understand oral disease, the implications of improved self-management and the available treatment options. Furthermore, this orientation program also enables the clinicians to better understand the needs, wants and motivations of the patient. Deploying trained dental assistants improves cost effectiveness with low-cost service delivery.

This approach is also well-suited to delivery by telehealth and in both individual and group format – further reducing service delivery cost.

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Dental Health Services Victoria [DHSV] is the pre-eminent Australian organisation in implementing Value-Based Health Care [VBHC] in oral health. Their leadership has received international recognition (Value Based Health Care Center Europe, 2020). The key component of DHSV's VBHC service design is an initial patient intake and orientation program. This team-based care initiative focusses on patient engagement and education to improve understanding of oral disease, self-management and available treatment options; it also enables the service provider to better understand the needs, wants and motivations of the patient. The patient intake and orientation program is coordinated and delivered by trained dental assistants, providing cost effectiveness through low-cost service delivery. The approach is well-suited to delivery by telehealth, reducing service delivery cost, in both individual and group format.

Patients progressing to receiving care from a dental provider are already well informed about their treatment options and have commenced on the path to improved oral hygiene and better selfcare. This optimises use of dental practitioner's time and resources through faster development and implementation of treatment plans and improved compliance with, and completion of, the plan.

The experience of implementing value-based dental care in the public sector has relevance and applicability to the private sector. In particular, waste is reduced with

fewer broken appointments, increased treatment plan acceptance, and better workforce and resource utilisation (Bourke and McAuliffe, 2020; DHSV, 2019).

The dramatic increase in the utilisation of telehealth during the COVID-19 pandemic in Australia, has been driven by the introduction of Medicare-funded services. These services have enjoyed high levels of uptake and strong support from both providers (O’Kane, 2020) and patients (Consumer Health Forum, 2020). There is opportunity to embed telehealth as a key component of comprehensive dentistry, as is now the case in primary care.

## value-based health care

Value in healthcare is defined as the health outcomes that are important to patients relative to the resources or costs required to deliver those outcomes (Woolcock, 2019). This definition reflects concepts first put forward by Porter and Teisberg (Porter and Teisberg, 2006).

The general principles of VBHC at the individual level are well recognised across the dental literature (Eckert, 2005) and this patient perspective has been recognised as distinct from the clinician perspective (Palla, 2017). The benefits of a VBHC approach in dentistry have been recognised as including increased patient compliance (Asimakopoulou et al., 2014) and more effective preventive dental care (Sbaraini et al., 2012).

Patients have a multidimensional view of healthcare outcomes where quality of life, capacity to work, family and community responsibilities are blended with the usual clinical data (World Economic Forum, 2017). A single metric for healthcare outcomes is not possible. Meaningful outcome measures require co-design with patients to determine which outcomes should be measured and how they should be measured, as well as validation for comprehensibility and content (Wiering et al., 2017).

In the 1990’s Australian dental public health researchers developed a range of instruments to measure the components of ‘quality of life’ that are related to oral health (Slade, 1997). This work was taken up by the International Consortium for Health Outcomes Measurement [ICHOM], in partnership with the World Dental Federation [FDI] to develop a minimum set of adult oral health measures that can be dependably and practically collected in dental surgeries whilst providing a sufficiently comprehensive report (FDI, 2018).

The Adult Oral Health Standard Set [AOHSS], resulting from the ICHOM and FDI collaboration, was launched in 2020 (Ni Riordain et al., 2020). The set is designed for use in general dental practice as well as in research, advocacy and for population oral

health. It combines patient reported outcome measures [n=25] such as oral pain, ability to speak and smile, with clinician reported outcomes measures [n=55] such as caries status, periodontal status and unplanned visits.

Patient-determined oral health outcome measures also have a role in providing information for non-dental healthcare providers and health administrators about a patient's oral health status.

## telehealth in dentistry

Telehealth has been applied to dentistry with clinician acceptance in a range of forms including screening, diagnosis, monitoring and trauma management (Daniel et al., 2013, Irving et al., 2018). Benefits to patients include improved access to care and specialist services, early diagnosis and referral, and reduced waiting times, travel time and associated opportunity costs. Benefits to providers include reduced travel time, improved quality and appropriateness of referrals, and improved access to specialised and specialist support (Mariño et al., 2014, Irving et al., 2018). Whilst tele-dentistry has been piloted in a number of public sector services in Australia, there is limited evidence of routine or ongoing use of the modalities.

The impact of COVID-19 has generated the emergence of tele-dentistry options locally and internationally, including on-line screening, treatment planning and referral (Dentist Online, Connect2D teledentistry, Patterson Dentistry).

## team based healthcare

Team-based healthcare has been defined as the collaboration between healthcare providers to 'accomplish shared goals within and across settings to achieve coordinated, high-quality care' (Schottenfeld et al., 2016). Teams can be composed from a range of disciplines, clinical and non-clinical, from across the healthcare system (Mitchell et al., 2008). The healthcare team often includes the patient and, potentially, their families and carers (Martin and Finn, 2011).

The integration of non-clinical support with healthcare teams enables efforts to manage social, cultural, economic and environmental determinants of health (Tierney et al., 2020). Team-based care is associated with improved clinician well-being (Welp and Manser, 2016), reduced burnout (Helfrich et al., 2014) and can deliver improved efficiency and reduced costs (Friedman and Berger, 2004, Jacob et al., 2015, Bodenheimer et al., 2014).

Barriers to the implementation of team-based healthcare include: the impact on existing workflows; a lack of integrated electronic health records; poor communication; payment systems that do not incentivise team-based care; regulatory requirements restricting scope of practice; professional hierarchies; poor integration within and between organisational systems; inadequate external accountability of service providers; uncommitted team members; and a lack of leadership (Rosen et al., 2018, Hepworth and Marley, 2010, Russell et al., 2018, O'Reilly et al., 2017, Australian Healthcare and Hospitals Association, 2020).

Team-based care in dentistry has been defined as 'an interchangeable mix of skills provided by those best suited to exercise them by virtue of their training and experience' (Harris and Haycox, 2001). A study of dental practices in NSW found that preventive oral healthcare became more sustainable if dental hygienists were part of the dental team and had charge of preventive care (Sbaraini et al., 2013). Patients of these practices reported stronger engagement with their oral health; they 'no longer felt trapped in a situation of having degenerating teeth' (Sbaraini et al., 2012). Dentists in these practices were able to undertake more complex restorative work and improve profitability (Sbaraini et al., 2013).

Dental assistants are routinely regarded as part of the dental team delivering chairside dental care and there are a broad range of examples over many years where they have undertaken other tasks within dental teams, including the provision of guidance and advice about oral health. In Scandinavia, dental assistants have been providing individual oral hygiene instruction as part of a team working in adult dental health for over 40 years (Söderholm et al., 1982, Hetland et al., 1982).

## health coaching

The modern concept of coaching as a behaviour change intervention initially emerged in the 1970s, following the publication of *The Inner Game* by Timothy Gallwey (<https://theinnergame.com/>). The approach was later applied to leadership and more recently health coaching has emerged as a discipline (Cinar, 2018). Health coaching represents a progressive move from more didactic health education which focusses on the transfer of information about a disease and 'good' behaviours to one which encourages behavioural change through a combination of strategies including motivational interviewing, goal setting and anticipatory guidance (Abhinav et al., 2017, Antoniadou & Varzakas, 2020).

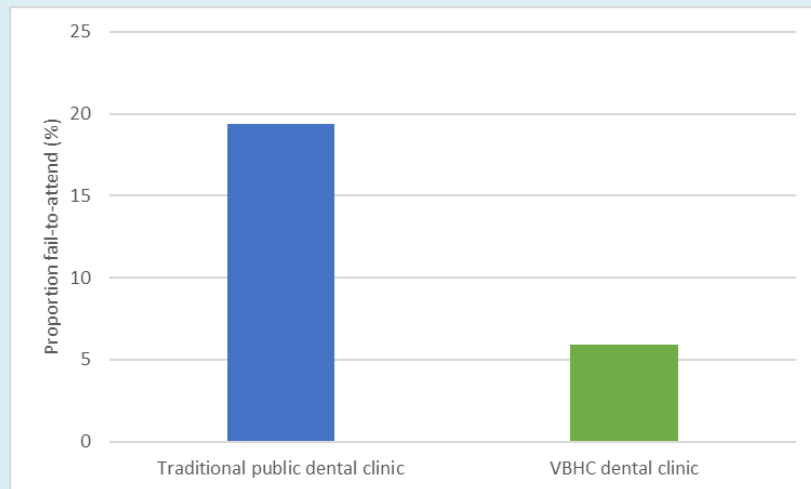
In Australia, reorientation of dental services to a preventive model has been promoted as a response to decrease current and future costs and to reduce the incidence of oral disease in those most at risk (Victorian Auditor-General's Office, 2016, Productivity Commission, 2017). Preventive care is described as fundamental to population level improvements in oral health in both editions of Australia's National Oral Health Plan (Australian Health Ministers' Conference, 2004, Council of Australian Governments Health Council, 2015). Vernon and Howard (2015) proposed a model of oral health coaching based on:

- an interactive assessment (both physical and psychological)
- a non-judgmental exploration of patients' knowledge, attitudes, and beliefs
- a mapping of patient behaviours that may contribute to disease progression
- gauging patient motivation
- tailoring health communication to encourage health-promoting behaviour change.

## discussion

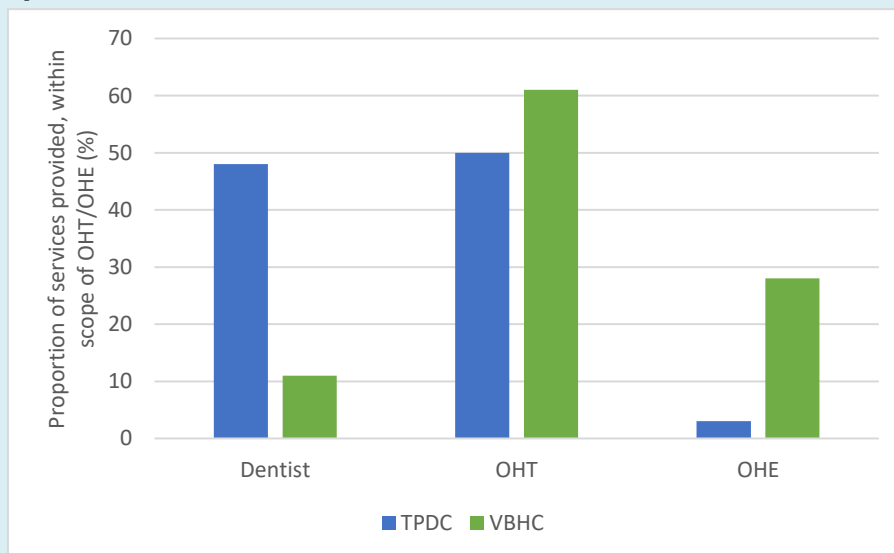
VBHC achieves patient-centred care by focusing on efficiency and outcomes that matter to patients. Telehealth provides a cost-effective delivery model that can improve access and reduce cost for patients. Team care makes efficient use of team members' skills and capacity and can align care to patients' needs. Health coaching responds to the patient's motivations and needs to facilitate positive behaviour change. The common elements of efficiency and patient-centeredness support the combination of these principles and interventions to optimise quality, value and outcomes.

The DHSV coaching program reflects the oral health coaching principles proposed by Vernon and Howard (2015). It explores patients' knowledge, attitudes and beliefs, assists patients to identify the factors and behaviours that have contributed to their health state, determines the level of interest in changing behaviours and develops tailored information and support to adopt changed behaviours. The coaching program continues while patients are waiting for an appointment and while aspects of oral hygiene and self-care are addressed. During this period information is provided about treatment options allowing a more informed treatment planning process to be undertaken with the patient. A major benefit has been improved service efficiency with a dramatic reduction in the number of patients not presenting for scheduled appointments, demonstrating increased engagement of patients in their care; see Figure 1 below.



**Figure 1:** Active care appointment fail-to-attend rates (DHSV, 2019)

When patients are informed about treatment options and aware of self-care processes, allocation to an appropriate member of the oral health team is possible. As a result, the clinical work performed by members of the oral health team better reflects the concept of work at the top of the skill set, i.e. dentists are spending less time providing care that could be provided by an oral health therapist, and dentists and therapists spend less time providing care that could be delivered by a suitably trained dental assistant [Figure 2].



**Figure 2:** Proportion of services within scope of OHT/OHE undertaken by dentists/oral health therapists [OHT] and oral health educators [OHE] in value-based healthcare clinics [VBHC] and traditional public dental clinics [TPDC] (DHSV, 2019)

DHSV patient feedback shows improved outcomes, experience and satisfaction. Furthermore, the program has been implemented within the same funding envelope and with the continued achievement of existing output-based performance measures.

### conclusion

The establishment of an oral health telehealth coaching program requires a combination of components including a suitably trained and certified workforce and a viable and sustainable funding model.

The Certificate IV in Dental Assisting [Oral Health Promotion] provides a dental assistant with the skills to undertake the role of an oral health coach. The predominant expense component for oral health coaching is labour, therefore, programs, regardless of delivery method, will be more cost efficient when delivered by trained dental assistants.

Participation in a coaching program increases attendance rates, and the complexity of services delivered during appointments. These benefits can increase fee-for-service derived revenue and offset the cost of program delivery.

Dental assistants with a Certificate IV in Dental Assisting [Oral Health Promotion] can deliver appropriate guidance and support to patients for a low-cost base oral health coaching program via video or audio teleconferencing. The return on investment could be maximised by engaging high risk patients with a greater opportunity to reduce care costs, but also but diverting the worried well from the higher cost clinic environment.

The low cost of program delivery, relative to the cost of the simplest restorative treatment, combined with increased service efficiency and the existing recognition of the value of preventive care, suggests that a cost benefit analysis of a telehealth oral health coaching program, delivered by trained dental assistants, is warranted.

### Declaration of interests

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