Quick chairside interventions to improve oral hygiene for dependent adults

Dependent adults, such as older adults with dementia and people with disabilities, make up about 10% of the Irish population. There are over 28,000 people registered with intellectual disabilities in Ireland alone. For people with disabilities, oral health can be difficult to achieve and the consequences may impact on them to a greater extent than on others. Oral diseases are often more prevalent and have poorer outcomes. Dental caries, for example, happens at similar rates to the general population, but tends to be treated by extraction among those with disabilities. Globally, periodontal disease can be up to nine times more prevalent among middle-aged adults with a disability, compared to the general population.[1-3] Combined, the increased prevalence and unfavourable management of these diseases leads to greater levels of tooth loss and ultimately to oral disability.[4] Dental pain can also go undiagnosed and present as challenging, even self-injurious, behaviours, among people with communication impairments. Reparative treatment by the dental team can often necessitate restrictive supports such as anaesthesia, sedation or clinical holding, which do make the treatment of oral disease possible, but also add moral challenges, waiting times and increased complexity of treatment.[5] Poor oral health may also have an impact on an individual's general health.

Barriers to oral health

There are multiple strands to preventing these poor outcomes for adults with disabilities, including removing plaque and maintaining a healthful diet. Given the central role of plaque in periodontal disease and caries, oral hygiene is the key to oral health for people with disabilities. The key to successful prevention and treatment of periodontal diseases is minimising periodontal inflammation levels lifelong. This can be achieved through effective personal oral hygiene and professional preventive care. However, in practice, this seemingly simple objective is proving elusive. There are many possible barriers to achieving this relating to carers in the home setting, where tooth brushing occurs, and in the dental setting, where risk-based oral hygiene interventions are delivered (**Figure 1**).

People with disabilities often live dependent lives where their choices and agency are diminished in ways that are unimaginable to most of us, unless, perhaps, we too have cared for vulnerable loved ones. For people who were born with disabilities or developed them young, the receipt of care can come to pave their journey through life, whereas for people who acquire impairments later (like dementia or frailty), a sense of incremental or even sudden dependency can derail hopes and expectations. Regardless of when one becomes vulnerable, dependency changes how day-to-day activities are planned and days are passed.

FIGURE 1: Possible barriers to effective oral hygiene in the home and dental settings for people with disabilities.

Oral hygiene might not seem a central focus in the long-term or immediate tasks of dependency and disablement. Surely there are more salient and immediate issues to attend to and resources are, as ever, scarce. There is the daily juggle of waking, cleaning, eating, dressing, toileting and just living, to focus carer energies. These basic human needs must compete with each other for each and every person the carer cares for, and with those of the carer themselves. In the grand juggling act of care, something will inevitably give and, unfortunately, oral hygiene is comparatively optional when prioritising other basic life necessities.

The behaviours of oral hygiene are subject to a dilemma, which leads to people placing short-term personal interests over long-term shared goals, despite the outcome ultimately being worse. So, despite carers wanting to maintain oral health in the long term, brushing is hard to get right and, if done effectively from a periodontic perspective at least, has to be repeated once every two or three days for life.[6] This deviation from the usual 'brush your teeth twice a day' mantra may seem odd at first, so it is worth a brief comment. Often, standards of care are measured by process rather than outcomes. The focus tends to be on how often carers clean teeth rather than how effectively. We do so adopting standards set for people without disabilities; that is, to brush twice a day and floss regularly. In the context of dependent care, this can be impossible, ineffective and demotivating. This may promote a dilution of resources, which contributes to regular ineffective tooth brushing. In essence, the expectation to meet the mouth care norms set for independent others creates a context where to do otherwise is a deviation from an acceptable standard. If we hold unrealistic expectations for carers, we colour deviations from this standard

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negatively rather than celebrate carers' creative solutions. If we fail to convey that we understand a carers' reality, we have no hope of supporting behaviour change to promote oral health. Often this requires collective action across carers over long periods. It is also bloody, smelly, invasive and, for many, disgusting. It can also elicit behavioural reactions and evoke a sense that the carer is causing pain. While we in the dental profession understand the nirvana that is chemo-mechanical disruption of plaque, for carers the task may seem thankless. There are many natural incentives to diminish the frequency and effectiveness of tooth brushing for dependent adults.

The collective action and short-term versus long-term dilemmas that dependent mouth care brings, and the subtle disincentives that abound, make the poor delivery of oral homecare almost unchangeable. Yet we as a profession must create a future where it is inconceivable that you would not brush teeth. A future where colleagues in care provision expect this of each other. A future where not brushing teeth is seen as neglectful and where limitless biscuit bowls on a table in the middle of the care home is seen as unimaginable.

Oral health professionals are also culpable in this grand failure. We do not incentivise our own professions to see people with disabilities, nor do we properly push prevention. Sure, we pay lip service, but we all know that prevention-led, equitable dental services are little more than pipe dreams gathering dust. No smiles. Gan sláinte.

Innovate for change

We do not need to hark back to the Ottawa Charter to tell us that there are lots of ways to bring change and enable our dependent patients and communities to enhance control over their oral hygiene, diet and oral health. Despite Trojan efforts, there is little hope to be gained from research in this field,[7] so we must innovate.

One approach that is recommended by the National Institute of Health and Care Excellence (NICE)[8] is mouthcare plans. Mouthcare plans are documented and agreed plans made with the person to meet their oral health goals. They aid planning and communication, which is especially important when there are multiple persons caring for an individual and where there are communication issues. In this article, we offer two examples of how the principles of mouthcare plans can be adopted by dental professionals, through quick chairside interventions that take either one or ten minutes. This is to fit in with the realities of busy practice and hopes to remove some barriers from dental teams in making efforts to improve homecare.

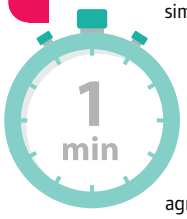
Both of these interventions apply the evidence-based resources that are available on www.brushmyteeth.ie in a structured way. Brushmyteeth.ie is a resource for patients and dental teams that shows people with impairments and their carers how to brush teeth and make mouthcare plans. These resources are designed to change behaviour by applying a number of behaviour change techniques (BCTs).[9] Generally speaking, these techniques are activated by modifying a carer's motivation, capability or opportunity[10] to provide or mediate mouthcare, and were designed after scouring the literature to find out what works, for whom, in what circumstances, and why.[11]

Panels 1 and **2** offer simple instructions in how to apply the techniques, and **Panel 3** shows a quick comparison of the two techniques.

PANEL 1

One-minute theory-based intervention:

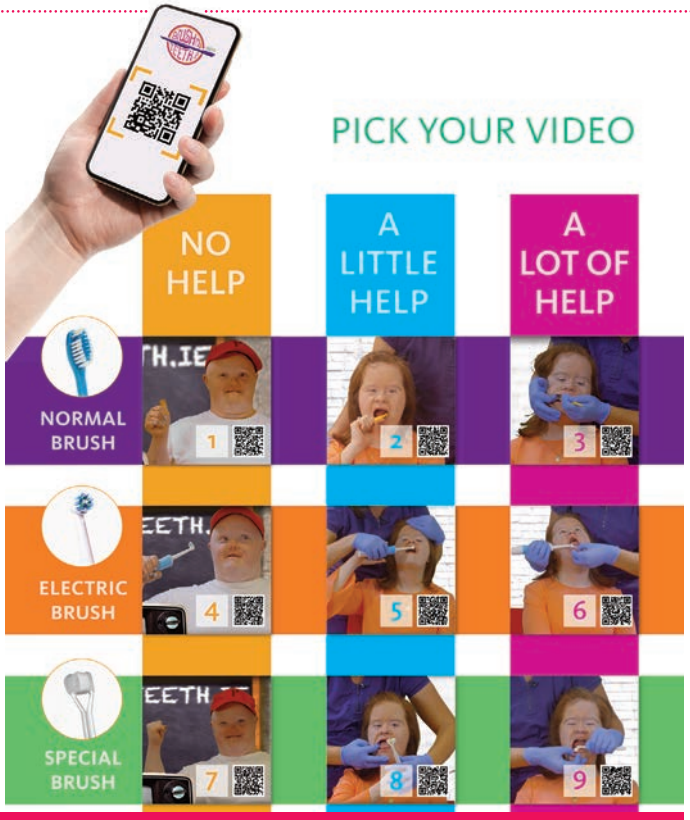
THE BRUSH PAD



Designed to be a quick and simple intervention to deliver advice to the whole care team and the patient at home, the brush pad is a pad of behavioural prescriptions that can be ripped off and given to the patient or their carer. It is similar to a prescription pad in form and function, with each behavioural prescription tailored for individual brushing. The page contains a link to nine videos, which can be accessed on www.brushmyteeth.ie. The dental team member simply circles the recommended video and gives the page to the patient to take home and watch with their care team within an agreed timeframe. The reason this works to change behaviour is that it motivates proper tooth brushing through prompting.

Procedure

1. Assess the patient's homecare needs.
2. Agree the best toothbrush from a choice of regular, electric or Barman's Special.
3. Agree the best level of support from a choice of low, medium and high support need.
4. Circle the corresponding video on the brush pad, tear the prescription and give to the patient/carer.
5. Prompt them to watch by a certain date.



TIP: You can order your brush pads free by filling out a feedback form on www.brushmyteeth.ie with your address, or by emailing macgiolla@dental.tcd.ie. If you run out, you can always write the video number on a sticky note instead.

PANEL 2

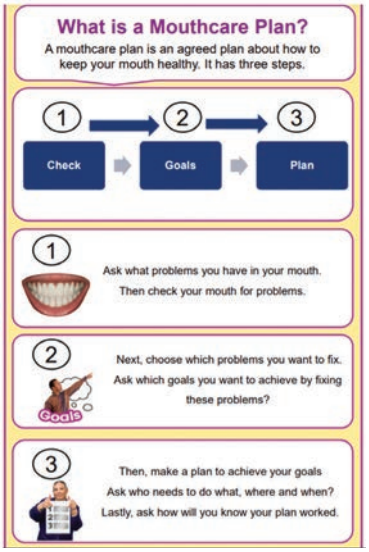
A ten-minute theory-based intervention

MOUTHCARE PLAN

Mouthcare plans are plans to keep a patient's mouth healthy and are made between the patient, carers and dental teams, although they can also be done without dental input. Mouthcare plans involve three main steps: assessment; goal setting; and, action planning. In this way they create a logical flow from problem to solution that promotes success. They allow for these steps to be communicated across care teams, promote accountability, and can be checked to see if they are successful or not. In this way, they are considered far more likely to change home care than shorter interventions, a reason why they have been recommended by the National Institute for Health and Care Excellence (NICE) in the UK, and others. The active ingredients of mouthcare plans from a behaviour change perspective are: goal setting; action planning; and, review behaviour goals.

Procedure

1. Print mouthcare plan.
2. Assess the patient's expressed and observed needs through history and examination.
3. Set goals based on the problems observed, such as "be free of tooth decay" or "have healthy gums".
4. Complete an action plan to meet the agreed goal, which may include brushing advice or dietary advice.
5. Give the completed mouthcare plan to the patient and set a review date.



TIP: We often allow the carer to fill in most of the care plan while assessing the patient, and fill in the blanks together to promote carer involvement and speed up the process.

PANEL 3

COMPARISON OF FEATURES OF BOTH INTERVENTIONS

(adopting a template for intervention, description and replication [TiDier] criteria).

	BRUSH PAD	MOUTHCARE PLAN
Materials	Brush-pad +/- toothbrush	Mouthcare plan +/- toothbrush
Provider	Dental care professional	Dental care professional with carer
Delivery	Face to face to patient or carer	Face to face to patient and carer
Location	In the dental surgery	In the dental surgery/at home
Time	One minute	Ten minutes
Barriers	Simple intervention triggered solely by a prompt	Complex intervention triggered through goal setting, action planning and reviewing behaviour goals
Evidence	Can ask patient by agreed time: did you watch the video?	Date set for review; evidence of outcomes documented in plan
Fidelity	Difficult to measure	Evidence of process outcomes
Next steps	Fill out a feedback form on www.brushmyteeth.ie with your address and request brush pads	Go to www.brushmyteeth.ie to download a mouthcare plan and practice

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