RESULTS

The 24 men and 57 women ranged in age from 26 to 35 years. The DIDL instrument revealed that appearance and eating and chewing were significantly improved after aligner treatment. Negative responses regarding pain, discomfort, and performance issues were not sufficiently strong to alter the clinical applicability.

On the PSQ, none of the factors ranked as a source of dissatisfaction. The most important factor was the doctor-patient relationship. The least important factors were psychological improvement and dental function.

The most common sources of dissatisfaction were food packing between the teeth and pain when cold or hot foods were consumed. However, these negative influences were not sufficient to reduce the overall positive experience for patients.

The doctor-patient relationship correlated significantly with situational aspects, dentofacial improvement, and residual elements. Higher patient satisfaction was related to phrases such as "the orthodontist treated me with respect," and "carefully explained what treatment would be like."

DISCUSSION

Overall, patients were satisfied with Invisalign treatment, especially in the areas of appearance and eating and chewing. Many aspects of patient satisfaction were tied to the doctor-patient relationship. The negative aspects of the experience included food packing between the teeth and pain when eating hot or cold foods.

Clinical Significance

Many positive responses were obtained in these surveys relating to satisfaction with appearance or improved ability to eat and chew. However, the factor that correlated with most of the areas of patient satisfaction was doctor-patient relationship. Patients did report some negative aspects of the clear orthodontic aligner care, including pain, bleeding gums, and stress at work while undergoing the treatment. These negative experiences were not sufficiently bothersome to affect the overall satisfaction level patients reported.

Pacheco-Pereira C, Brandelli J, Flores-Mir C: Patient satisfaction and quality of life changes after Invisalign treatment. *Am J Orthod Dentofacial Orthop* 153:834-841, 2018

Reprints available from C Pacheco-Pereira, School of Dentistry, Faculty of Medicine and Dentistry, 5-533 Edmonton Clinic Health Academy, 11405-87 Ave NW, Edmonton, AB T6G 1C9, Canada; e-mail: cppereir@ualberta.ca

PALLIATIVE CARE

Providing oral care for palliative care patients

BACKGROUND

Palliative care patients often have oral health complaints as their condition deteriorates, ranging from active dental caries to candidiasis and dry mouth. These oral health problems in a patient with an already compromised immune system can often precipitate further complications, so oral health needs must be an important part of end-of-life care. Often oral care for palliative care patients is insufficient. The oral care experiences of palliative care patients were documented from the viewpoint of their carers and other relatives.

METHODS

The data were gathered from blogs and discussion forums on public internet sites. Eight blogs and 8 discussion forums were identified after a search of blog platforms such as 'Tumblr' and 'Wordpress.' The findings were evaluated using thematic analysis.

RESULTS

Oral care was not the primary topic of any of the blogs or of 7 of the 8 discussion forums. All of the authors mentioned oral care, with their discussion thereafter classified as dealing with symptoms, procedures, or emotions.

Symptoms

Oral symptoms such as dry mouth and difficulty swallowing were mentioned explicitly or implicitly in 15 of the 16 sources. Most authors reported dry mouth, dry lips, and difficulty swallowing. A discussion forum on the side effects of chemotherapy and radiotherapy described loss of taste sensation, mouth ulcers, and mucositis, all of which were symptoms relatives could discern for themselves and could conceivably prepare for and address. However, most authors were reactive rather than proactive. The symptoms

observed were often considered distressing to the patient and relatives.

Procedures

All described oral care procedures, with the most common being use of a swab or sponge to clean and moisten the mouth. Ice chips and/or frozen juices were also used. In addition, lip balm was applied to relieve mouth dryness. Most descriptions did not provide details of the procedure. A discussion forum that offered more detail was begun by the wife of a cancer patient who was asking how to help her husband through chemotherapy and radiotherapy. The forum participants directed her to specific procedures to manage loss of taste sensation, painful mouth ulcers, difficulty swallowing, and mucositis. One blog described procedures as simply part of the hospice regulations, but they were being delivered at irregular times and could be dangerous for the patient.

Emotions

Participants tended to have a neutral attitude and feelings toward oral care procedures described as technical acts to address symptoms and provide routine care. However, many authors expressed their emotions related to oral care. One felt a general sense of anger toward the hospice staff and described the oral procedures as irregular, incorrect, and dangerous. One mentioned the disgust of some family members when she swabbed her grandmother's mouth, which was done to appease her family because they wanted the patient to be more comfortable. Other emotions included worry, guilt, and trauma. One author worried that her actions caused her father unnecessary distress. Another expressed guilt related to being unable to do anything to help as the loved one was dying a painful death.

The emotional responses could not be separated from the context of the reports. Most of the palliative care patients were terminally ill, which influenced the expressions of emotion.

DISCUSSION

Palliative care is designed to provide relief from pain, stress, and other symptoms. It's aimed at delivering a better quality of life for the terminally ill patient and his or her family. From the descriptions of oral care delivery and oral conditions given in these blogs and discussion forums, it appears that these patients are not receiving sufficient attention to their oral health needs. In addition, the families are not experiencing a better quality of life as they visit with their terminally ill relatives.

Clinical Significance

There is little information to guide oral care delivery to terminally ill patients. Some information has been suggested by the World Health Organization and the National Institute for Health and Care Excellence (NICE) in England, but these sources rely more on expert opinion than on any evidence-based guidance. These preliminary insights into the area of oral health for palliative care patients should spark others to perform the much needed research in this area so that oral care can be undertaken before the palliative care patient's quality of life becomes compromised by unaddressed or poorly addressed oral symptoms.

Bernardes Delgado M, Burns L, Quinn C, et al: Oral care of palliative care patients—Carers' and relatives' experiences. A qualitative study. *Br Dent J* 224:881-88, 2018

Reprints available from M Bernardes Delgado, Plymouth Univ, Peninsula Schools of Medicine and Dentistry, Dental School, Plymouth, UK; e-mail: mariadocarmo.bernardesdelgado@plymouth.ac.uk

PEDIATRIC DENTISTRY

Managing unerupted maxillary incisors

BACKGROUND

Often failure of eruption of the maxillary incisors is noticed in children age 7 to 9 years. Reasons for eruption failure include space loss, obstruction, and trauma. Although no high-quality randomized clinical trials have investigated treatment interventions for this problem, the clinical guidelines for the management of unerupted maxillary incisors in children were recently updated by the Clinical Governance Directorate of the British Orthodontic Society through the Faculty of Dental Surgery at the Royal College of Surgeons of England (FDSRCS Eng). A review of the diagnostic approach, management options, and recommendations for practice was offered.

DIAGNOSTIC CONSIDERATIONS

When more than 6 months has elapsed since a child's maxillary incisor has erupted, the maxillary incisors have not erupted more than 1 year after the mandibular incisors, or the normal eruption sequence has deviated significantly, the dental