

UNMET CARE NEEDS OF OLDER HOSPITALIZED PATIENTS WITH MAXILLOFACIAL DISEASES *NENAPLNENÉ POTREBY STARŠÍCH HOSPITALIZOVANÝCH PACIENTOV S MAXILOFACIÁLNYMI OCHORENAMI*

KOHANOVÁ Dominika^{1*}, VALENTÍNÝ Ján²

¹ Department of Nursing, Faculty of Social Sciences and Health Care, Constantine the Philosopher University in Nitra, Nitra, Slovak Republic

² Coronary Care Unit, Department of Acute Cardiology, The Central Slovak Institute for Cardiac and Vascular Diseases, Banská Bystrica, Slovak Republic

* corresponding author / korešpondenčný autor: dkohanova@ukf.sk

ABSTRACT

Background: Older age is associated with various changes and factors that may lead to unmet needs, which are highly individual and vary among older adults.

Objectives: To identify unmet care needs among older hospitalized patients with maxillofacial diseases.

Methods: Data were collected between April and October 2024, using the Camberwell Assessment of Need Short Appraisal Schedule – patient version (CANSAS-P). The sample consisted of 100 patients aged ≥ 60 years hospitalized in a selected maxillofacial surgery clinic. Data were analyzed using descriptive and inferential statistics.

Results: The mean number of unmet needs was 5.28 (SD = 4.75) out of a total of 22 domains. Statistically significant differences in unmet needs were found according to age, perceived health status, presence of chronic disease, use of a nasogastric tube or PEG, and the presence of hearing, mobility, swallowing, breathing, and verbal communication difficulties ($p \leq 0.05$).

Conclusion: This study highlights the need to better integrate geriatric principles into maxillofacial care. Addressing unmet needs requires not only clinical interventions but also better coordination between health and social care systems. Future efforts should focus on developing targeted care models and policies that ensure equitable access to supportive services for older patients.

Key words: Hospital care. Nursing care. Older patient. Unmet needs.

ABSTRAKT

Východiská: Vyšší vek je spojený s rôznymi zmenami a faktormi, ktoré môžu viesť k vzniku nenaplnených potrieb, pričom tieto potreby sú vysoko individuálne a líšia sa medzi staršími dospelými.

Ciele: Identifikovať nenaplnené potreby starších hospitalizovaných pacientov s maxilofaciálnymi ochoreniami.

Metodika: Údaje boli zbierané v období od apríla do októbra 2024 pomocou nástroja Camberwell Assessment of Need Short Appraisal Schedule – verzia pre pacientov (CANSAS-P). Výskumný súbor tvorilo 100 pacientov vo veku ≥ 60 rokov hospitalizovaných na vybranej klinike maxilofaciálnej chirurgie. Údaje boli analyzované pomocou deskriptívnej a inferenčnej štatistiky.

Výsledky: Priemerný počet nenaplnených potrieb bol 5,28 (SD = 4,75) z celkového počtu 22 domén. Štatisticky významné rozdiely v nenaplnených potrebách boli zistené v závislosti od veku, vnímaného zdravotného stavu, prítomnosti chronického

ochorenia, zavedenia nazogastrickej sondy alebo PEG a prítomnosti problémov so sluchom, mobilitou, prehĺtaním, dýchaním a verbálnou komunikáciou ($p \leq 0,05$).

Záver: Štúdia poukazuje na potrebu lepšej integrácie geriatrických princípov do maxilofaciálnej starostlivosti. Riešenie nenaplnených potrieb si vyžaduje nielen klinické intervencie, ale aj zlepšenú koordináciu medzi zdravotnou a sociálnou starostlivosťou. Budúce úsilie by sa malo zamerať na tvorbu cieľených modelov starostlivosti a politík, ktoré zabezpečia rovný prístup k podporným službám pre starších pacientov.

Kľúčové slová: Nemocničná starostlivosť. Ošetrovateľská starostlivosť. Starší pacient. Nenaplnené potreby.

INTRODUCTION

Population ageing is a key demographic trend of the 21st century with major implications for healthcare systems. The World Health Organization (2024) estimates that adults aged ≥ 60 years will account for 22 % of the global population by 2050. Increased longevity is associated with a higher prevalence of chronic diseases, multimorbidity, and functional decline, leading to more complex care needs. This is particularly relevant in maxillofacial diseases, where age-related changes and comorbidities complicate treatment and recovery. Maxillofacial diseases include conditions affecting the oral and facial regions, such as cancers, osteonecrosis, infections, and trauma. Older patients often present with more advanced disease and poorer outcomes due to delayed diagnosis and limited access to care. Age-related changes further complicate treatment, highlighting the need for comprehensive care (Abdi et al., 2019).

Unmet care needs, defined as the gap between required and received care, are common among older adults and span physical, psychological, social, and functional domains (Abdi et al., 2019; Kálánková et al., 2021). In patients with maxillofacial diseases, these may include inadequate pain

management, limited nutritional and rehabilitative support, and restricted access to psychological care (Jacob et al., 2024). Such unmet needs are linked to poorer health outcomes and reduced quality of life. Beyond clinical symptoms, these conditions significantly affect daily functioning and overall well-being. Difficulties with mastication, swallowing, and speech can lead to malnutrition and social isolation, while facial disfigurement and treatment effects contribute to psychological distress, including anxiety, depression, and reduced self-esteem. The complexity of these interrelated impacts highlights the need for comprehensive, patient-centered care (Molenaar et al., 2025). Person-centered care has become a key approach to addressing the complex needs of older patients, emphasizing individualized planning and shared decision-making (Santana et al., 2018). In maxillofacial care, this requires coordinated multidisciplinary collaboration, which improves outcomes and quality of life (Ringash et al., 2018). However, gaps persist due to fragmented systems, poor communication, limited geriatric expertise, and socioeconomic barriers (Feller et al., 2023).

Oral health and maxillofacial conditions are often overlooked in geriatric care, despite their impact on health and quality of life. Their limited integration into general healthcare contributes to unmet needs. While unmet needs are well studied in gerontology (Kalánková et al., 2021), research specifically on older patients with maxillofacial diseases is scarce, limiting the development of targeted care strategies.

AIM

The aim of this study was to explore the unmet care needs of older hospitalized patients with maxillofacial diseases.

SAMPLE

The study was conducted in a teaching hospital in Slovakia with Ethics Committee approval from [BLINDED] (ref. no. 06/2024). Following institutional consent, hospitalized patients were recruited from the Clinic of Maxillofacial Surgery using purposive sampling. Inclusion criteria comprised: (a) provision of informed consent; (b) age ≥ 60 years; and (c) absence of cognitive impairment, with the ability to actively participate in the research process. The absence of cognitive impairment was verified by the attending physician and nursing staff

based on routine clinical assessment, orientation to person, place, and time, and the patient's ability to understand the study information and provide informed consent. No standardized cognitive screening test was used. Exclusion criteria included: (a) impaired consciousness; (b) institutionalization in a healthcare or social care facility prior to the current hospitalization; and (c) duration of hospitalization of less than 72 hours at the time of data collection. The 72-hour threshold was used to ensure that participants had sufficient time to adapt to the hospital environment, experience the care processes on the ward, and provide a more reliable assessment of their perceived met and unmet care needs. This criterion is consistent with previous research on patient experience with nursing care, in which hospitalization for at least 72 hours was used as an inclusion criterion to ensure sufficient exposure to inpatient care (Nascimento et al., 2024). Patients hospitalized for a shorter period may not yet have had adequate exposure to multidisciplinary care, communication with healthcare professionals, nutritional support, discharge planning, or other aspects of care assessed by the CANSAS-P, which evaluates patient-perceived needs across multiple health and social domains (Slade et al., 2020). The sample consisted of 100 hospitalized patients aged ≥ 60 years (mean age 74.2 ± 9.8 ; range 60 – 98), with a slight predominance of women (53.0 %). Most participants had secondary education (49.0 %) and were old-age pensioners (57.0 %). Nearly one-third rated their health as unsatisfactory (32.0 %). Most patients were hospitalized with oncological diseases of the oral and maxillofacial region (87.0 %), while the most frequently reported specific diagnosis was tongue cancer (19.0 %). The majority of patients reported 1 – 2 chronic conditions along with the primary diagnosis (76.0 %). The most frequently reported conditions were arterial hypertension (16.0 %), diabetes mellitus (15.0 %), tongue cancer (8.0 %), osteonecrosis of the mandible (4.0 %) or maxilla (4.0 %), osteoporosis (4.0 %), and depression (4.0 %). Tongue cancer was the primary reason for hospitalization in 19.0 % of patients, whereas it was a coexisting condition distinct from the primary admission diagnosis in another 8.0 %. Other reported conditions included oral cavity tumours, breast cancer, benign prostatic hyperplasia, glaucoma, and cardiac arrhythmia. Functional impairments were common, particularly in hearing (70.0 %), breathing (70.0 %), swallowing (liquids

68.0 %, solids 63.0 %), mobility (59.0 %), and communication (61 %). A high proportion had a nasogastric tube or PEG (77.0 %). Hypertension (16.0 %) and diabetes (15.0 %) were the most frequently reported comorbidities.

METHODS

This cross-sectional study adhered to the STROBE checklist. Data were collected between April and October 2024 using the Camberwell Assessment of Need Short Appraisal Schedule – patient version (CANSAS-P).

The instrument is publicly available and can be accessed in the public domain without restrictions. It was translated into Slovak using the forward – backward translation method. CANSAS-P is a standardised self-report instrument designed to assess patients perceived needs across 22 domains, including accommodation, nutrition, self-care, physical health, psychological well-being, social relationships, safety, and access to services (Slade et al., 2020). Although originally developed for use in mental health services, CANSAS-P was selected because its broad domains are relevant to older hospitalised patients with complex maxillofacial conditions. In this study, it was not used as a psychiatric diagnostic instrument, but as a structured framework for assessing patient-perceived met and unmet care needs. Each domain is rated by the respondent as no need, met need, unmet need, or no response. The instrument was supplemented with additional items capturing demographic and clinical characteristics, including age, gender, education, and perceived health status. Furthermore, dichotomous (yes/no) variables were collected to assess the presence of chronic conditions, presence of a nasogastric tube or percutaneous endoscopic gastrostomy (PEG), pain experience, and functional impairments (vision, hearing, mobility, swallowing of liquids and solids, breathing, and verbal communication). Demographic, clinical and disease-related data were collected and processed anonymously in accordance with the General Data Protection Regulation (EU) 2016/679 and used exclusively for research purposes. All participants received verbal and written information about the study, including voluntary participation, confidentiality, and the right to withdraw without affecting their care. Written informed consent was obtained before data collection. For patients with hearing or communication difficulties,

information was provided in an adapted form and understanding was confirmed. Only patients able to understand the study information and clearly express consent were included.

Data were analyzed using IBM SPSS Statistics (version 25.0). Descriptive statistics were applied, including mean (M), standard deviation (SD), frequencies (%), and range (minimum and maximum values). The evaluation of the instrument followed the authors' recommendations. Associations between selected variables (demographic and clinical characteristics) and unmet needs were examined using Pearson's chi-square (χ^2) test. Unmet care needs were categorized as follows: 0 – 5, 6 – 10, and ≥ 11 unmet needs. The choice of statistical procedures was based on the nature and distribution of the data. Statistical significance was set at $p < 0.05$.

Internal consistency of the CANSAS-P was high (Cronbach's $\alpha = 0.892$), indicating good reliability for assessing unmet care needs in this population.

RESULTS

Distribution of unmet care needs across CANSAS-P domains in older patients with maxillofacial diseases

The mean number of unmet needs was 5.28 (SD = 4.75), ranging from 0 to 21 out of a possible 22 domains (Tab. 1). Analysis of individual CANSAS-P domains showed that unmet needs were most frequently reported in the areas of financial benefits (47.0 %), sexuality (39.0 %), transportation (37.0 %), physical health (36.0 %), and money management (36.0 %). High levels of unmet needs were also observed in intimate relationships (33.0 %) and self-care (31.0 %).

Association between sociodemographic and clinical factors and unmet care needs in older patients with maxillofacial diseases

Significant differences in the number of unmet care needs were observed across several variables. Age was significantly associated with unmet needs ($\chi^2 = 17.706$, $p = 0.007$), with the highest proportion of patients with ≥ 11 unmet needs found among those aged ≥ 91 years. Perceived health status was also significant ($\chi^2 = 17.349$, $p = 0.027$), with higher unmet needs more common among patients reporting unsatisfactory or poorer health.

Table 1 Assessment of needs based on the CANSAS-P instrument (N = 100)

Needs	No need	Met need	Unmet need	Non-response
Accommodation	66 (66.0 %)	26 (26.0 %)	8 (8.0 %)	0 (0.0 %)
Food	51 (51.0 %)	31 (31.0 %)	18 (18.0 %)	0 (0.0 %)
Household care	41 (41.0 %)	37 (37.0 %)	22 (22.0 %)	0 (0.0 %)
Self-care	34 (34.0 %)	35 (35.0 %)	31 (31.0 %)	0 (0.0 %)
Daily activities	35 (35.0 %)	36 (36.0 %)	28 (28.0 %)	1 (1.0 %)
Physical health	24 (24.0 %)	39 (39.0 %)	36 (36.0 %)	1 (1.0 %)
Psychotic symptoms	46 (46.0 %)	34 (34.0 %)	18 (18.0 %)	2 (2.0 %)
Information about health condition and treatment	45 (45.0 %)	30 (30.0 %)	23 (23.0 %)	2 (2.0 %)
Psychological distress	43 (43.0 %)	33 (33.0 %)	22 (22.0 %)	1 (1.0 %)
Safety to self	55 (55.0 %)	24 (24.0 %)	19 (19.0 %)	2 (2.0 %)
Safety to others	54 (54.0 %)	25 (25.0 %)	20 (20.0 %)	1 (1.0 %)
Alcohol	50 (50.0 %)	28 (28.0 %)	10 (10.0 %)	12 (12.0 %)
Drugs or medication	51 (51.0 %)	24 (24.0 %)	12 (12.0 %)	13 (13.0 %)
Friends	56 (56.0 %)	32 (32.0 %)	11 (11.0 %)	1 (1.0 %)
Intimate relationships	31 (31.0 %)	25 (25.0 %)	33 (33.0 %)	11 (11.0 %)
Sexuality	15 (15.0 %)	18 (18.0 %)	39 (39.0 %)	28 (28.0 %)
Childcare	38 (38.0 %)	33 (33.0 %)	25 (25.0 %)	4 (4.0 %)
Basic education	61 (61.0 %)	26 (26.0 %)	12 (12.0 %)	1 (1.0 %)
Telephone	44 (44.0 %)	34 (34.0 %)	21 (21.0 %)	1 (1.0 %)
Transport	28 (28.0 %)	33 (33.0 %)	37 (37.0 %)	2 (2.0 %)
Money	21 (21.0 %)	41 (41.0 %)	36 (36.0 %)	2 (2.0 %)
Financial benefits	24 (24.0 %)	27 (27.0 %)	47 (47.0 %)	2 (2.0 %)

Legend: % – percentage

Clinical factors showed multiple significant associations. The presence of chronic disease ($\chi^2 = 7.695$, $p = 0.021$), hearing problems ($\chi^2 = 7.605$, $p = 0.022$), mobility limitations ($\chi^2 = 3.253$, $p = 0.019$), swallowing difficulties (liquids: $\chi^2 = 9.926$, $p = 0.007$; solid food: $\chi^2 = 8.451$, $p = 0.005$), use of an enteral tube ($\chi^2 = 8.851$, $p = 0.012$), breathing problems ($\chi^2 = 12.727$, $p = 0.002$), and verbal communication difficulties ($\chi^2 = 11.283$, $p = 0.024$) were all significantly related to higher numbers of unmet needs. In contrast, no significant associations were found for gender ($p = 0.998$), education level ($p = 0.969$), vision problems ($p = 0.513$), or pain ($p = 0.350$).

DISCUSSION

Older adults are a heterogeneous population with complex health and social needs. Identifying unmet needs is essential, as they increase the burden on healthcare systems (Kalánková et al., 2021). In Slovakia, these needs remain insufficiently addressed despite their high prevalence (Kohanová et al., 2023). This study therefore examined unmet care needs among older hospitalized patients with maxillofacial diseases, a particularly vulnerable group

due to ageing, multimorbidity, and functional impairment. In this context, nurses have a central role in the early identification of unmet needs, continuous assessment during hospitalization, and coordination of supportive interventions tailored to the specific functional limitations of patients undergoing maxillofacial care (Kalánková et al., 2021).

The mean number of unmet needs was 5.28, indicating a substantial burden across multiple domains. The most frequent unmet needs related to financial support, sexuality, intimate relationships, transport, and physical health. These findings confirm that unmet needs extend beyond medical issues to include psychosocial and socioeconomic dimensions (Cheraghi et al., 2021; Kalánková et al., 2021). Therefore, routine assessment of unmet needs should be integrated into nursing admission and discharge planning, particularly for older patients with oncological maxillofacial conditions, enteral feeding, swallowing problems, impaired speech, or reduced mobility (Goyal et al., 2022).

Unmet needs related to sexuality and intimate relationships were highly prevalent, consistent with findings by Kalánková et al. (2021). Although intimacy is closely linked to emotional well-being and

quality of life, it remains underrecognized in healthcare settings (Hicham et al., 2023). As a result, patients often receive limited support. In individuals with maxillofacial diseases, these issues may be further intensified by changes in appearance, speech and swallowing difficulties, pain, and reduced self-esteem. These findings highlight the need to include sexuality and relationships in comprehensive patient care. Additionally, nursing practice should therefore create space for sensitive communication about body image, intimacy, self-esteem, and relationship concerns, with referral to psychological or counselling support when needed (Lane et al., 2022).

Financial support emerged as a significant unmet need. Older adults are particularly vulnerable to financial strain due to declining income and rising healthcare costs, especially in the presence of chronic illness (Kalánková et al., 2021; Eozenou et al., 2021). Such burdens may limit access to necessary care and remain highly relevant in Slovakia (Kohanová et al., 2023). In patients with maxillofacial diseases, costs related to transport, nutrition, rehabilitation, and long-term treatment may further increase this burden. These findings highlight the need to integrate financial counselling and improve access to social benefits within supportive care. In clinical practice, this requires cooperation between nurses, physicians, social workers, dietitians, speech and language therapists, physiotherapists, psychologists, and community care providers. Such multidisciplinary collaboration may help address not only acute surgical and medical needs, but also nutrition, communication, rehabilitation, psychosocial support, transport, and social assistance (Goyal et al., 2022; Kalánková et al., 2021; Lane et al., 2022).

Significant differences in unmet needs were observed across several variables. Age was strongly associated with unmet needs, with the oldest participants reporting the highest burden, likely due to increased frailty, multimorbidity, and functional decline (WHO, 2024). Perceived health status was also significant, as poorer self-rated health was linked to more unmet needs, reflecting not only physical condition but also functional and psychosocial factors (Freedman, 2022). These findings highlight the importance of considering both objective and subjective health indicators in care planning. Individualized nursing care plans should therefore combine clinical assessment with patients'

own perceptions of their health, functional capacity, and support needs.

The presence of chronic disease was also associated with unmet needs. Patients with chronic conditions reported a higher burden of unmet needs, which may reflect the cumulative impact of multimorbidity, functional limitations, treatment demands, and increased dependence on healthcare and social support. This finding is consistent with previous evidence showing that chronic illness in later life is associated with greater care complexity and a higher risk of unmet health and social needs (Freedman, 2022; Kalánková et al., 2021). In maxillofacial surgery settings, chronic conditions may further complicate recovery, nutrition, mobility, communication, and discharge planning, highlighting the need for individualized nursing assessment and coordinated multidisciplinary care (Goyal et al., 2022).

Functional impairments were key determinants of unmet needs. Hearing loss, mobility limitations, swallowing difficulties, breathing problems, and impaired verbal communication were all associated with higher unmet needs, reflecting reduced independence and increased vulnerability (Kalánková et al., 2021). Hearing impairment may hinder communication and increase social isolation (Wieczorowska-Tobis et al., 2016), while swallowing difficulties, particularly relevant in maxillofacial conditions, can negatively affect nutrition and well-being (Sánchez-Sánchez et al., 2021). Although enteral feeding may alleviate some issues, it also indicates greater care complexity (Ojo et al., 2022). Mobility limitations further reduce autonomy (Cheraghi et al., 2021). Communication and breathing difficulties were also significant, highlighting their impact on care quality and patient outcomes (Sharkiya, 2023; Kunczik et al., 2022). This supports the implementation of targeted nursing interventions such as adapted communication strategies for patients with hearing or speech difficulties, early nutritional screening, monitoring of swallowing safety, education regarding enteral feeding, respiratory support, fall prevention, and early mobilization (Jacob et al., 2024).

The results of this study also have implications beyond hospitalization. Discharge planning should begin early and include assessment of the patient's ability to manage nutrition, communication, medication, transport, follow-up appointments, and self-care at home. For patients with persistent functional

limitations, continuity of care should be ensured through referral to community nursing services, primary care, rehabilitation, speech and language therapy, nutritional counselling, social services, and family caregiver support. Strengthening the transition from hospital to community care may reduce unmet needs after discharge and support safer recovery among older patients with maxillofacial diseases (Jones et al., 2023).

This study has several limitations. It was conducted in a single teaching hospital using purposive sampling, which limits generalizability. The sample was clinically heterogeneous, although most patients had oncological diseases affecting the oral and maxillofacial region; therefore, the findings should be interpreted as reflecting unmet needs in this broader patient group rather than in patients with a specific diagnosis. In addition, CANSAS-P was originally developed for mental health services, and its use in maxillofacial surgery requires cautious interpretation. The cross-sectional design does not allow causal conclusions. In addition, needs were assessed by self-report, which reflects subjective perception at one point in time.

CONCLUSION

The results of this study highlight the need for a multidisciplinary and person-centred approach in the care of older patients with maxillofacial diseases. In addition to medical treatment, care should address communication, nutrition, mobility, social relationships, financial challenges, and psychological well-being. Early identification and systematic assessment of unmet needs may contribute to improved quality of life and support the development of more comprehensive and individualized care strategies for this vulnerable group.

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