

## Supportive Care Needs of Oral Cancer Survivors in Covid-19 Global Pandemic: Mini Review

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### Abstract

**Background:** It is well-known that oral cancer survivors have an array of unmet supportive care needs, but little is known on those needs that could get aggravated by COVID-19 lock down scenarios. A rapid mini-review was conducted to synthesize salient evidence on supportive care needs of oral cancer survivors amidst COVID-19.

**Methods:** Two rapid searches were conducted on PubMed and Google Scholar data bases available in English language using the key words "supportive care", "oral cancer", "COVID-19" for the first search and "supportive care" and "oral cancer" for the second search.

**Results:** The data bases yielded 24 and 134 publications in two searches respectively. However, there was only a single publication as to 21st December 2020 on supportive care for oral cancer survivors. Moreover, 18 publications on different aspects of supportive care needs of oral, oro-pharyngeal and head and neck cancer patients were accessed. There was an array of largely unmet supportive care needs of oral cancer survivors ranging from information needs to financial concerns. However, information on managing acute problems of recent surgeries and navigating the health system to access treatment services in difficult times were the pressing needs of oral cancer survivors in stringently imposed COVID-19 lock down.

**Conclusion:** There is dearth of research on supportive care needs among oral cancer survivors in COVID-19 induced health system disturbances. Hence, more research warranted in this regard aimed at intervening.

**Keywords:** COVID-19; Oral cancer survivors; Supportive care; Psycho-oncological services

### Introduction

Corona virus disease: COVID-19 caused by novel corona virus SARS-CoV-2 is impacting the countries across the globe as the worst public health crisis in recent history [1]. Availability of and accessibility to routine health care services become pivotal to cancer survivors in this difficult time [2]. Oral cancer denotes a multi-faceted public health challenge across the globe and especially in developing countries of the Asia-Pacific region which carry the highest burden of the disease [3]. Despite, occurring at a most accessible site of the body and often preceded by Oral Potentially Malignant Disorders, oral cancers are being diagnosed at late stages having less than 50% of 5-year-survival rate due to recurrences [4].

Furthermore, not only the disease but its main treatment modalities such as surgery, radiotherapy and chemotherapy may show devastating impact on oral cancer survivors [5,6] thus making them susceptible to face difficulties in performing their vital daily functions

of eating, speaking, swallowing and socially interacting demonstrating a profound negative impact at early stages of treatment as well across cancer trajectory [5-9]. This in turn combined with delays in surgical wound healing could give rise to restricted food intake and nutritional deficiencies [5]. Explorations into supportive care needs of oral cancer survivors therefore, revealed an array of unmet needs across wider domains while top most being emotional compounded by poorer physical and mental health influenced by selected demographic and clinical variables [6].

Furthermore, there is research evidence on increased susceptibility of cancer patients for COVID-19 infection and its severity especially pertaining to oral cancer patients [10,11]. It is well-known that head

and neck, oro-pharyngeal and oral cancer survivors have an array of supportive care needs pertaining to multiple domains across cancer survivorship trajectory [9,12-23] but little is known on those needs that could get exaggerated by COVID-19 lock down scenarios. Therefore, COVID-19 induced health service modifications that restricted availability of and accessibility to routine health care services for oral cancer survivors [24-28] has created an urgent need for supportive care targeted to them. Against this backdrop, a rapid mini-review was conducted to synthesis evidence on supportive care needs of oral cancer survivors amidst COVID-19 global pandemic.

### Methods

Two rapid searches were conducted on PubMed and Google scholar data bases on publications available in English language using the key words "supportive care", "oral cancer", "COVID-19" for the first review and "supportive care" and "oral cancer" for the second review. Moreover, supplementary search was conducted on impact of COVID-19 on oral

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**Received** March 5, 2021; **Accepted** March 19, 2021; **Published** March 26, 2021

**Citation:** Surendra G, Perera I, Ratnasekera N, Perera M, Herath C (2021) Supportive Care Needs of Oral Cancer Survivors in Covid-19 Global Pandemic: Mini Review. J Oncol Res Treat 6:161.

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Study and country of origin	Aim of the study	Main findings and conclusions	Translational value in COVID-19 pandemic context
Henry et al. 2020 Canada	To identify supportive care needs of patients with head and neck cancer immediately post-treatment, finding early predictors of unmet needs, and contrasting how immediate post-treatment needs differed from needs in longer-term survivorship.	Immediate post-treatment survivors had a wider variety of unmet needs compared with those in extended survivorship, with high prevalence of psychological unmet needs at both time points. Immediately post-treatment, patients needed significantly more support regarding pain and worries about treatment results, whereas patients in longer-term survivorship needed significantly more support regarding anxiety, changes in sexual relationships, and fear of death and dying.	Highlights the range of supportive care needs of head and neck cancer survivors along cancer survivorship trajectory immediate post treatment vs long-term survival.
Bossie et al. 2019 Italy	To highlight the importance of pain symptom assessment among head and neck cancer survivors as well the need for research.	Assessment, characterization and management of pain become vital in head and neck cancer survivorship. Further research warranted.	Pain management is an important dimension on supportive care need of oral cancer survivors along the cancer trajectory.
Manne et al. 2016 USA	To explore the post-treatment experiences and needs of oral/oropharyngeal cancer survivors.	Half of respondents had not received a written summary. One-third or more desired more information about long-term effects, recommended follow-up, and symptoms that should prompt contacting a doctor and information on recurrence and needed help for 'lack of energy'.	While fulfilling an array of information needs of oral cancer survivors, special information should be provided on navigating available health care services for better accessibility by oral/oropharyngeal cancer survivors. Access to routine treatment services becomes important in controlling recurrences.
Lee et al. 2015 USA	To determine the supportive care needs of persons with oral cancer who had completed active treatment at least three months previously.	There is a significant burden of multi-dimensional unmet supportive care need of oral cancer survivors with highest in emotional domain influenced by demographic and clinical attributes.	Highlights the need for support groups and attending to various informational needs.
Ghazali et al. 2015 UK	To organize the Head and Neck Cancer Patient's Concern Inventory (HNC-PCI) into domains.	Five domains were generated as a) Physical and functional b) Psychological/emotional/spiritual c) Social care and well-being d) Treatment-related e) other	Highlights the multi-dimensional nature of supportive care needs of oral cancer survivors. Therefore, supportive care services should address all dimensions.
Wells et al. 2015 UK	To identify the distress, unmet needs and concerns of head and neck cancer (HNC) survivors in the first 5- years after treatment,	There was a diversity of concerns and unmet needs identified among head and neck cancer survivors. Holistic needs assessment as part of follow-up care for HNC survivors with tailoring of support for particular concerns were needed. Specific information resources and self-management strategies are required to help HNC survivors with the practical and functional consequences of HNC treatment.	Highlights the need for holistic need assessment and providing specific information resources and self-management strategies tailored to the HNC survivors in COVID-19 lock down.

**Table 1:** Selected studies on supportive care needs of oro-pharyngeal, head and neck and oral cancer survivors with translational value in COVID-19 global pandemic.

cancer care. Two authors (GS and IP) conducted the search of literature independently based on the pre-determined search strategy. Eligible studies were selected in the first screening that was relevant to the scope of the present mini-review. All authors engaged in the subsequent stage of meticulous appraisal of the full texts of given publications and extracting data for the evidence synthesis within the scope of this rapid mini-review. The data were extracted from selected publications on supportive care needs of oral and pharyngeal cancers, head and neck cancers and oral cancer survivors and supportive care needs of oral cancer survivors in COVID-19 lock-down scenario. A narrative synthesis of the evidence is presented.

## Results

The results are presented in (Table 1) pertaining to salient evidence synthesis highlighting supportive care and supportive care needs of head and neck, oro-pharyngeal and oral cancer survivors whilst highlighting the translational value of main findings of selected studies into COVID-19 global pandemic context. As emerged from the findings, there is a high burden of multi-dimensional supportive care needs of those cancer survivors along cancer trajectory, from diagnosis to completion of treatment and long term survival. Furthermore, coping with short term, medium term and long term ramifications of the disease and its treatment becomes challenging influenced by socio-demographic and clinical attributes. Accordingly, management of pain, addressing difficulties in chewing, swallowing, information needs on disease and its treatment, nutritional advice, managing psychological

distress and financial support are among the well-known supportive care needs of head and neck, oro-pharyngeal and oral cancer survivors.

## Discussion

Knowledge and know-how transfer in the 'lessons learned' perspective has become fundamental to navigating and optimizing the health system response to cancer survivors and cancer care providers grappling with uncertainties of cancer trajectory and persisting COVID-19 pandemic. Therefore, evidence synthesis of published literature offers a promising approach in this regard. Nevertheless, the collective response to COVID-19 pandemic was challenged by an array of factors such as population and geographical heterogeneity of virulence and resilience to the disease [29], heterogeneous health care delivery models compounded by scientific uncertainties, scarcity of relevant research, proliferation of misinformation and fake news, poor access to actionable evidence, time constraints, and weak collaborations among relevant stakeholders [1].

As the COVID-19 global pandemic demonstrates waves of escalation, resurgence and higher virulence, countries are dragged on to lock down scenarios ranging from state-wise stringent imposition to localized flexible models with varying degrees of travel restrictions. Therefore, global dynamic intervention strategies for COVID-19 are in place demonstrating varying degrees of success [30]. In strictly imposed lock-down scenarios underpinned by social and physical distancing, availability of and accessibility to routine treatment care services and medication becomes a serious cause for concern

among cancer survivors [2]. Therefore, the impact of COVID-19 on oral cancer survivors deemed multifaceted. Accordingly, a recent rapid living systematic review of the impact of COVID-19 on cancer survivors, updated to 27<sup>th</sup> August, 2020, critically reviewed 19 selected publications [31]. Authors concluded that, currently available literature provided preliminary insights into a wide-range of supportive care needs of cancer survivors across the globe impacted by new norms of COVID-19 induced practice modifications of oncological services [31]. Social isolation, financial hardships and uncertainties ingrained into accessing on going cancer care had given rise to many issues in the physical, psychological, social and spiritual well-being of contemporary cancer survivors [31].

Oral cancer care is predominantly being provided by oral and maxillofacial practices. However, COVID-19 heavily impacted on oral and maxillofacial practices across the globe particularly during its first wave that resulted in postponement of elective surgeries and early discharge of cancer patients who underwent surgeries [32]. Therefore, as discussed in the clinical correspondence on supportive care for oral cancer survivors in stringently imposed COVID-19 lock down, many oral cancer patients who underwent recent surgeries were grappling with pain and difficulties in swallowing not knowing how to access to routine health care services [2]. Thus, the simple pilot intervention that was offered over-the-phone by a health professional demonstrated promising outcomes [2]. Facilitating patients and their care givers to navigate the health care system to ensure that they can continue in receiving timely treatment deemed the most crucial component of the pilot intervention [2]. The complimentary advice on practicing “mindfulness therapy” to maintain psychological well-being during difficult times added further value to the simple intervention [2]. This pilot intervention was an extension of a major research project to introduce a novel model of psycho-oncological supportive care for oral cancer survivors for the first time in Sri Lanka.

Many countries across the globe are strained in ensuring access to cancer care services in the era of COVID-19 induced uncertainties and challenges [33-37]. Furthermore, the relative prominence of supportive care needs varies across the cancer survivorship trajectory from immediate post-treatment to long term survival [12-23]. Information needs on the disease, treatment modalities, managing complications, oral care, nutritional advice, financial issues, addressing fears and concerns of recurrence, addressing psychological distress emerged as priority needs in an array of studies that explored unmet supportive care needs of head and neck, oro-pharyngeal and oral cancer survivors [12-23]. Surprisingly, there is a notable deficiency of research in this regard from developing countries in the Asia-Pacific region which carry the highest burden of oral cancer.

It is reasonable to argue that those largely unmet supportive care needs of oral cancer patients could get worsened in difficult times of COVID-19. Therefore, the clinical correspondence [2] makes a valuable contribution to development of an intervention to improve life situation of oral cancer survivors specifically applied to low-middle-income country context. Development of the intervention package by comprehensive triangulation method of an extensive critical literature search followed by gaining inputs from oral cancer survivors, caregivers and experts through a qualitative exploration has enhanced its validity and the translational value for similar settings [2]. Core components of the intervention package comprised of: Addressing information needs of the current condition, details about surgery and life after surgery including care and oral care and information on empowering the oral

cancer survivor to become an ambassador of goodwill/role model, practice of mindfulness therapy to ensure psychological well-being and navigating the existing administrative social support system of financial assistance. Therefore, the indicated intervention package seemed aimed at addressing the well-known burden of unmet multi-dimensional supportive care needs of oral cancer survivors [12-23] applied to the Sri Lankan context as oral cancer being the leading cancer category among males. Nevertheless, present promising findings needs validation by further findings on efficiency and effectiveness of the given intervention package. Furthermore, a recent commentary from the USA reported an intervention of remotely delivered mind-body services to cancer survivors aged  $\geq 18$ -years during COVID-19, that included mind-body group therapy sessions in fitness, meditation, yoga, dance, tai chi, and music delivered using Zoom video conferencing [38]. Session duration was 30 – 45 minutes and led by an integrative medicine clinician. Among 5498 unique visits, the majority (42.2%) attended fitness sessions with highest endorsement [38]. Authors recommended virtual mind-body services as a promising service mode of remote delivery thereby increasing the accessibility to such services by cancer survivors [38]. Further, research on therapists assisted internet delivered mindfulness-based cognitive therapy indicated success among cancer survivors suffering from anxiety [39]. However, lack of formal psycho-oncological supportive care services with access to on-line web-portals of supportive care for cancer survivors in many developing countries compared to developed countries necessitates use of appropriate technology in resource constrained settings.

The lessons learned on innovative models on providing supportive care for cancer survivors could be integrated into strengthening the role, structures and mandates of knowledge and know-how transfer platforms. COVID-19 global pandemic has overwhelmed the health systems of developed countries as well as developing countries by exhausting scarce health resources. Therefore, evidence on cost-effective delivery of supportive care for cancer survivors could inform policies and practices during public health crises such as COVID-19. In light of evidence of unique supportive care needs of oral cancer survivors dearth of research on offering supportive care targeted to them had created many information gaps. Therefore, further research warranted in this regard that provides platforms of knowledge and experience translation.

## Conclusion

There are notable lacunae in research exploring supportive care needs and innovative models offering supportive care for oral cancer survivors in difficult times of COVID-19. Nevertheless, several researchers had expressed their opinion on impact of COVID-19 global pandemic on oral cancer patients and oral oncological services. The burden of oral cancer is more on low socio-economic groups in developing countries that are grappling with the double burden of resource constraints and rising burden of COVID-19. Compared to their developed counterparts, developing countries are seriously constrained in accessing successful vaccines to combat the pandemic. Moreover, formal psycho-oncological care services are not available in many developing countries. Therefore, it is well argued that oral cancer survivors could be disproportionately affected by limitations in availability of and accessibility to routine health care services whilst, grappling with many unmet supportive care needs. In this context, further rigorous research is warranted on multi-dimensional impact of COVID-19 on unmet supportive care needs of oral cancer survivors especially in resource constrained setting.



### Authors contribution

GS and IP conceptualized the research and conducted the search of literature independently based on the pre-determined search strategy. All authors GS, IP, NR, MP and CH equally contributed in all other steps of the mini-review, writing the manuscript and making the final version.

### Acknowledgement

Authors wish to acknowledge oral cancer survivors and their care givers who participated in research included in this mini-review.

### Funding

No funding in this manuscript.

### Conflict of Interest

The authors have no conflicts of interest to declare.

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