

Institutionalization of an Efficient and Effective Oral and Maxillofacial Injury Surveillance System at a Tertiary Care Public Dental Hospital: An Interventional Study from Sri Lanka

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Abstract

Background: Oral and Maxillofacial (OMF) injuries constitute a multifaceted public health threat in Sri Lanka. Surveillance of OMF injuries has become crucial for planning and monitoring of preventive and control strategies. A pilot project was undertaken aiming at strengthening the OMF injury surveillance system at National Dental Hospital (Teaching) Sri Lanka (NDHTSL).

Methods: The current interventional study with pre- and post-evaluation was conducted from March 1, 2020 to May 31, 2020 at NDHTSL. Pre-intervention assessment was performed to identify the deficiencies in the injury surveillance system. Subsequently, a novel OMF injury surveillance system was introduced and implemented at NDHTSL. The interventions were conducted over a period of 3 months, following which a post-intervention assessment was performed to assess the success of the interventions.

Results: The previous injury surveillance system had many deficiencies, such as lack of comprehensiveness, not specific to dental trauma, lack of data flow and high respondent burden, etc. Interventions included development of a novel OMF injury surveillance form, circulating comprehensive guidelines on the new system and awareness program for relevant staff. Quality indicators of injury surveillance demonstrated improvements from pre-intervention stage to post-intervention stage, such as coverage from 2.7% to 72.2%, completeness from 95% to 100%, and accuracy from 66% to 100%. The perceptions and satisfaction of the dental surgeons on OMF injury surveillance system was significantly improved by the intervention ($P \leq 0.001$)

Conclusion: The strengthened OMF injury surveillance system was deemed efficient and effective. Further studies are warranted at different service levels prior to island wide expansion of the present system by incorporation and integration of it into the existing National Injury Surveillance System.

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Introduction

Oral and Maxillofacial (OMF) injuries constitute

a multifaceted public health threat in Sri Lanka. The victims of this tragedy are more often children, adolescents and young males who are in economically

productive age group.¹⁻³ Hence, OMF injuries impact the economic productivity of the country while increasing the public health expenditure. Furthermore, road traffic accidents are on the rise which result in an enormous burden of OMF injuries.³⁻⁶

“Oral and Maxillofacial injuries” is a composite term which includes injury to the oral and facial region, teeth and related structures;⁷ prevalence, causes and factors related to OMF injuries across the globe have been described by many published researches.⁸⁻¹¹

Surveillance is defined as ongoing systematic collection, analysis, interpretation and dissemination of health-related data for evidence-based decision making.¹²⁻¹⁴ Injuries are acute non-communicable diseases which should be prevented and controlled, based on the surveillance data.¹⁵ Therefore, developing the capacity of global injury systems has attracted attention as one of the most significant opportunities in global public health.¹⁶ Hence, a strengthened OMF injury surveillance system would be a prerequisite for the development of policies, strategies, guidelines as well as for expedition of the current OMF injury prevention activities.¹⁷

Injuries are the leading cause of hospitalization over the last two decades, accounting for about 1 million hospitalizations each year which underpins the importance of a complete, accurate and timely injury surveillance system.¹⁷ Furthermore, a study published in 2004 revealed that OMF trauma was the leading cause of dental inpatient service utilization.¹⁸

Dental trauma is the most common cause of dental emergencies.¹⁹ Moreover, dental trauma is recognized as a major dental public health problem across the globe which requires regular updates of knowledge in dental traumatology for preventive and control measures.²⁰ One of the important prerequisites for development and evaluation of such prevention strategies at local level would be the establishment of a specially designed injury surveillance system which provides accurate, complete, and timely data.²¹ However, lack of timely, complete and accurate data on OMF injury surveillance has become a global issue that hampers timely action and research.²² Surveillance systems for Oral and Maxillofacial Injuries have been designed by other countries with some strengths. A study conducted in Victoria, Australia, emphasized that oro-dental trauma data can be combined with injury surveillance data that are routinely collected to improve service planning and the design of oro-dental injury prevention interventions.²³ Even though epidemiological data are required for service planning related to dental and oral trauma, it is evident that epidemiological data are limited and have deficiencies in coverage, comprehensiveness, and timeliness in the field of oral and dental injuries.¹⁵

The present injury surveillance system at NDHTSL is not efficient and the collected data are

not being analyzed and utilized for decision making and planning at the central level. Therefore, health staff is demotivated and does not participate in the surveillance system.²⁴ Moreover, the current injury surveillance system is not comprehensive with regard to collection of data pertaining to OMF injuries which could be considered as a huge deficiency in this system. Against this backdrop, a strengthened OMF injury surveillance system consisting of complete, accurate, and timely collection, analysis, interpretation, dissemination, and utilization of data for decision making has become a timely need.

NDHTSL is the premier tertiary care public dental hospital in the country where patients with OMF injuries are admitted, referred, and managed, with the mission to be the center of excellence in patient centered care, education, research, and innovation. However, all such endeavors should be evidence-based for optimal outcomes. Therefore, this project aims to strengthen the OMF injury surveillance system at NDHTSL by addressing aforementioned weaknesses of injury surveillance systems.

Methods

Project design: An interventional project was conducted with pre- and post-evaluation.

Project setting: National Dental Hospital (Teaching), Sri Lanka (NDHTSL)

Phase 01: Pre intervention phase

In this phase, the present OMF injury surveillance system was assessed in order to identify the deficiencies in the current injury surveillance system with reference to OMF injuries.

Study Instruments

A self-administered questionnaire was developed to collect data from Dental Surgeons at NDHTSL to assess their perceptions/satisfaction on the current injury surveillance system. The first section of the questionnaire inquired socio-demographic data of participants, whereas the second part assessed perception and satisfaction by eight questions in a 5-point Likert scale ranging from strongly disagree to strongly agree. The questionnaire was validated by consensus from local experts and pre-tested at Institute of Oral Health, Maharagama for reliability.

A Focus Group Discussion (FGD) guide was developed to collect qualitative data from dental surgeons on the acceptability and gaps/deficiencies in the current injury surveillance system.

Key Informant Interview (KII) guide was developed to collect qualitative data from key stakeholders to identify the deficiencies and major improvement areas in the existing injury surveillance system.

Project population

Dental Surgeons employed at Outpatient Department(OPD)/Emergency Treatment Unit (ETU), OMF Surgery Units and Restorative Dentistry Units of NDHTSL.

Exclusion criteria – Those dental surgeons undergoing postgraduate training.

Sampling Technique

All Dental Surgeons working at the OPD/ETU, OMF Surgery Units and Restorative Dentistry Units of NDHTSL were included in the sample to distribute the self-administered questionnaire. Participants for FGD (8-12 participants) were selected based on voluntary participation from the same project population.

Data Collection

Questionnaires were distributed among dental surgeons at their working station in NDHTSL by trained personnel. FGD was conducted in a conducive environment in an iterative process until data saturation was achieved. KIIs were conducted with key stakeholders until data saturation point was achieved. KIIs included in-depth interviews with Deputy Director General (DDG) – Dental Services, Director – Non-communicable Diseases (NCD), Director – NDHTSL and ETU/OPD in charge dental surgeon

Data quality was assessed by means of coverage, completeness, accuracy, and timeliness of injury surveillance data. These indicators were developed in Phase 02 of the project described below. Coverage was assessed by the total number of forms filled divided by all patients registered with OMF injuries during a specified period (Equation 1), whereas completeness was assessed by completed entries within the form as a percentage of total entries (Equation 2). Accuracy was determined by comparing entries with actual information by cross-checking with patient records (Equation 3) and timeliness by comparing the date of filling the form with the date of presenting to the hospital (Equation 4).

Data Analysis

FGD and KII data were audio-recorded, transcribed, encoded, and analyzed by thematic analysis. Qualitative analysis was conducted manually. Quantitative data were coded, entered, and analyzed using SPSS software Version 25. Numerical data were analyzed by means of descriptive statistics. Categorical data were described in proportions and percentages. Wilcoxon Sign Rank test was applied to ascertain statistical significance of the hypotheses.

Phase 02: Development of interventions

A consultative meeting was conducted with a

Consultative Panel (Consultative Panel was composed of Consultant OMF Surgeons, Consultant Restorative Dentists, Consultant Orthodontist & Consultant Community Dentist) to discuss how to improve the existing injury surveillance system. The first consultative meeting was held on 19th February 2020 at the auditorium of NDHTSL. A predesigned draft of the OMF injury surveillance form which had been developed based on extensive literature search²⁵⁻²⁷ and international expert inputs (Personal Communication, Thams, 2020) was tabled for discussion at the meeting and further necessary improvements were discussed in detail. The second meeting was held on 26th of February 2020 to finalize the injury surveillance form. Accordingly, all issues were discussed in detail and finalized at the second meeting.

Based on pre-intervention assessment and recommendations of the consultative panel, consensus was reached for the following steps to rectify deficiencies identified in the existing injury surveillance system at NDHTSL.

I. Development of a data extraction form for OMF injury surveillance

II. Development of a guideline to provide explicit instructions and directions on comprehensive operation of new injury surveillance system

III. Arrangement of an awareness session for those who are dengage in injury surveillance process

IV. Establishment of an information flow for OMF injury surveillance system

V. Establishment of a method of data processing – data collection at the planning unit of the institution for data entry, analysis, and dissemination to be used by policymakers.

VI. Development of periodical reports on OMF injury surveillance data

VII. Development of quality indicators to assess coverage, completeness, accuracy, and timeliness for pre- and post-intervention comparisons of surveillance data as below:

$$\text{Coverage} = \frac{\text{Number of forms filled} \times 100}{\text{All patients presented with injuries within specific period}} \tag{Equation 1}$$

$$\text{Completeness} = \frac{\text{Number of complete entries} \times 100}{\text{Available entries}} \tag{Equation 2}$$

$$\text{Accuracy} = \frac{\text{Number of correct entries} \times 100}{\text{Available entries}} \tag{Equation 3}$$

$$\text{Timeliness} = \frac{\text{Number of forms attended within 24hr} \times 100}{\text{Total number of visits with OMF injuries within specific period}} \tag{Equation 4}$$

Phase 03: Implementation of Interventions

The OMF injury surveillance form reviewed by the consultative panel was finalized and made available for all relevant units for the commencement of recording OMF injuries presented to each unit. A guideline to provide explicit instructions and directions on comprehensive operation of the new OMF injury surveillance system was developed and circulated among relevant units of NDHTSL; furthermore, an awareness session was conducted.

All injury surveillance forms were collected at the planning unit of NDHTSL and coded and entered for analysis. Information flow was established as depicted in Figure 1:

The interventions were implemented at NDHTSL as a pilot project for a period of three months from the of 1st March 2020 to 31st of May 2020. After three months, the injury forms were collected, entered, and analyzed for preparation of periodical OMF injury surveillance report for the quarter of the 1st of March, 2020 to 31st of May, 2020. This quarterly Oral and Maxillofacial Injury Surveillance Report of NDHTSL was disseminated to the DDG – Dental Service unit and Director – NCD unit of the Ministry of Health for interpretation and evidence-based decision making.

Phase 04: Post-Intervention Assessment

Same methods explained in the pre-intervention phase were applied in this phase, except for a feedback discussion, held among Nursing Officers who were involved in OMF injury surveillance to explore the views pertaining to their contribution for the new surveillance system

Ethical Issues and Clearance

The purpose and procedure of the project was explained to the participants. Anonymity and confidentiality were ensured by excluding any information regarding personal identity. Informed written consent was obtained from the participants. No enforcement or intimidation were used on participants to take part in the study. Participants were informed that they would be allowed to terminate their participation

any time during the study without giving any reason. Those who did not participate were not penalized. Participants were able to ask any question from the principal investigator over the phone. The remarks or complaints, if any, were allowed to be brought to the knowledge of the Ethics Review Committee. The findings of the study will be published in local and international journals and presented in conference proceedings without breaching the confidentiality of the participants. Ethical clearance was obtained from the Ethics Review Committee of Faculty of Medicine, University of Colombo. Administrative clearance was obtained from the Director, NDHTSL.

Results

Socio-Demographic Profile of Respondents

Table 1 describes socio-demographic characteristics of the respondents of self-administered questionnaires. The majority of dental surgeons were aged 26-35 years (34.1 %) followed by 45-66 years (29.5%).

Table 1: Socio-demographic characteristics of respondents (N=44)

	Frequency	Percent
Age category		
26-35 years	15	34.1
36-45 years	11	25.0
46 -55 years	13	29.5
> 55 years	5	11.4
Marital Status		
Married	40	90.9
Never married	4	9.1
Gender		
Male	15	34.1
Female	29	65.9
Unit of attachment		
OPD/ETU	18	40.9
OMF surgery	20	45.5
Restorative	6	13.6
Working Experience		
<5 years	6	13.6
5-10 years	15	34.1
11-20 years	12	27.3
>20 years	11	25

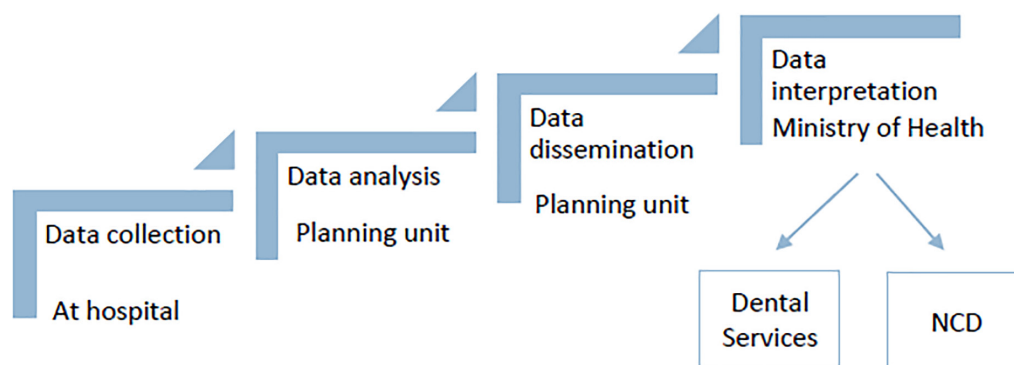


Figure 1: OMF Injury Surveillance Information Flow Plan

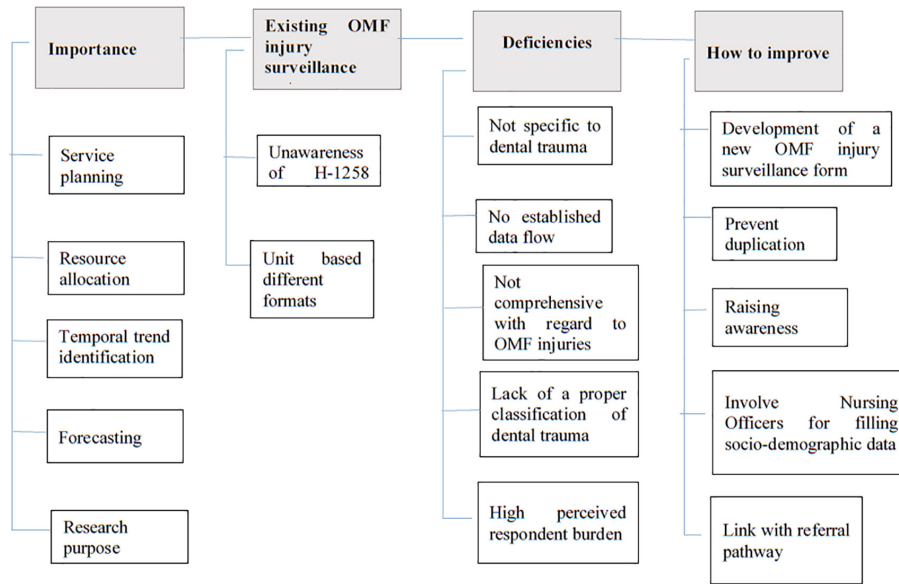


Figure 2: Thematic analysis of Focus Group Discussion (Pre-intervention)

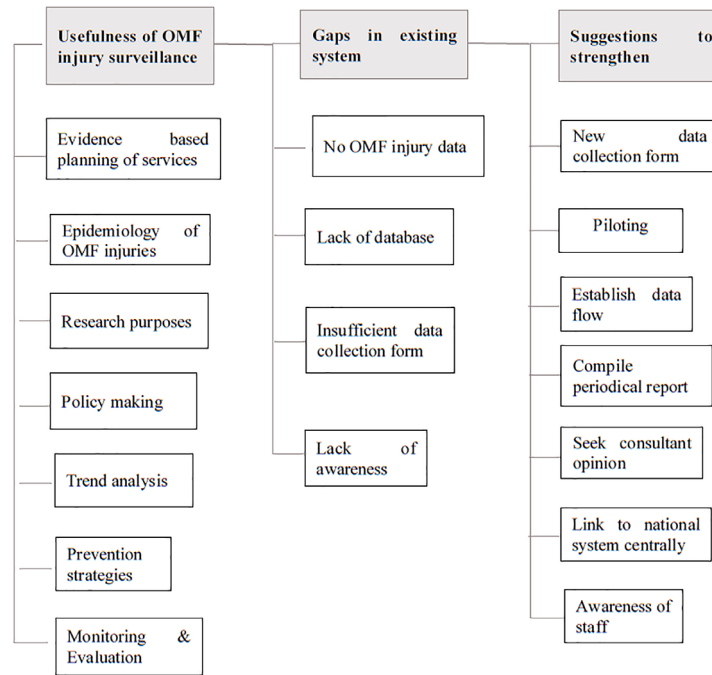


Figure 3: Thematic analysis of Key Informants' Interviews (Pre-intervention)

Almost 2/3 were females (65.9%) and about 1/3 of the respondents had 5-10 years of work experience followed by 11-20 years (27%).

Pre-Intervention Phase

Qualitative results are presented as thematic analysis illustrating the main themes and sub-themes which emerged from extensive review of transcribed manuscripts. Figure 2 illustrates thematic analysis of Focus Group Discussion and Figure 3 shows thematic analysis of Key Informants' Interviews. Results are consolidated and described together below for clarity and coherence.

One of the interesting sub-themes that emerged was lack of awareness on the existence of an injury surveillance form (H-1258) at NDHTSL. Moreover, it was revealed that despite having unit specific data collection forms pertaining to OMF injury, there is no centrally established information flow. Further, the lack of efficiency and effectiveness of the existing injury surveillance system and deficiencies in the existing form (H-1258) to capture OMF injuries were the other important sub-themes which emerged.

Suggestions to improve OMF injury surveillance included formulating a separate data extraction

form for OMF injury surveillance, conducting an awareness program for employees and establishing an information flow. Moreover, introducing a strategy

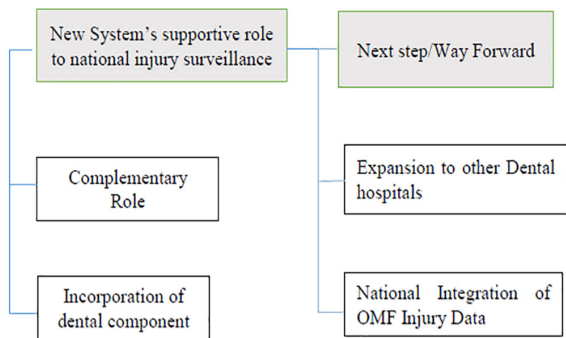


Figure 4: Thematic analysis of Key Informants' Interviews (Post-intervention)

of filling the form as a combined effort of Nursing Officers and Dental Surgeons in order to reduce the burden of workload which emerged as an important subtheme.

Post-Intervention Phase

Figures 4 and 5 illustrate the themes and subthemes which emerged from KIIs and FGD respectively. Accordingly, the new OMF injury surveillance form had been accepted as scientifically developed, user-friendly, comprehensive, and compliant. Moreover, the newly introduced OMF injury surveillance system was appraised as an efficient, effective complementary sub-component to be incorporated and integrated into the existing national injury surveillance system by stepwise expansion.

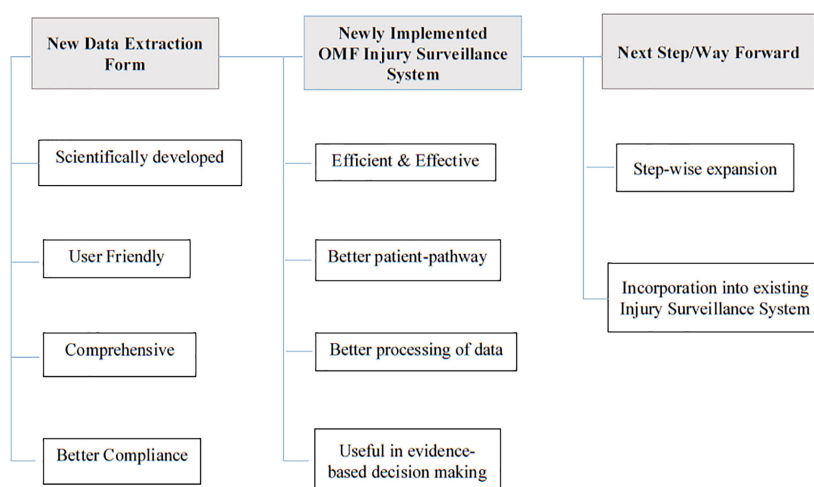


Figure 5: Thematic analysis of Focus Group Discussion (Post-intervention)

Table 2: Pre- and post-comparison of the respondents agreement for OMF injury surveillance systems

Statement	Mean Score		*P value
	Pre	Post	
There is an injury surveillance system currently in operation at National Dental Hospital.	3.16	4.20	≤0.001
There are provisions to mark oral & maxillofacial injuries adequately in the existing injury surveillance system.	2.84	4.25	≤0.001
It is possible to provide a comprehensive account on the type of oral & maxillofacial injuries in existing injury surveillance system	2.82	4.27	≤0.001
It is possible to provide a comprehensive account on severity of oral & maxillofacial injuries in existing injury surveillance system	2.64	4.25	≤0.001
Existing injury surveillance system helpful in clinical decision making	2.84	4.25	≤0.001
Existing injury surveillance system operating in this hospital could be filled conveniently	2.89	4.43	≤0.001
It is important to have comprehensive surveillance system on oral & maxillofacial injuries within the injury surveillance system	3.89	4.57	≤0.001
State your overall satisfaction with the existing oral and maxillofacial injury surveillance system	2.70	4.50	≤0.001

Scale - 1 to 5 where 1 =Strongly disagree / Strongly dissatisfied & 5 =Strongly agree / Strongly satisfied

*Wilcoxon Sign Rank Test

Table 3: Pre- and post-comparison of quality indicators of injury surveillance data*

Parameter	Pre-intervention	Post-intervention
Coverage (Equation 1)	2.7%	72.2%
Completeness (Equation 2)	95%	100%
Accuracy (Equation 3)	66%	100%
Timeliness (Equation 4)	100%	100%

*Statistical significance testing has not been performed as there were drastic improvements in post-intervention phase

Quantitative Data

As shown in Table 2, there were statistically significant ($P \leq 0.001$) improvements in the mean scores pertaining to each item of 8-questions scored on 5-point Likert-scale on perception/satisfaction of dental surgeons on OMF injury surveillance system, when pre- and post-intervention scores were compared.

As illustrated in Table 3, coverage was improved from 2.7% to 72.2%, while for completeness, the improvement was made from 95% to 100%. Accuracy was improved from 66% to 100%. Timeliness was 100% in both phases.

Discussion

The current research project was able to successfully establish a novel OMF injury surveillance system that is efficient and effective in terms of coverage, completeness, accuracy, and timeliness with a data flow by developing and implementing interventions to improve deficiencies in the present injury surveillance system.

Pre-intervention phase involved assessment of the existing injury surveillance system at NDHTSL. This involved identification of deficiencies and gaps by means of qualitative and quantitative perspectives and parameters. Accordingly, the existing injury surveillance system was far from satisfactory as there was no uniformity, continuity or comprehensiveness in collection of data pertaining to OMF injuries. Importantly, those data which were collected in an ad hoc manner were not collated for evidence-based decision making, neither at organizational nor at policy level. Qualitative perspectives were assessed by FGD and KIIs among relevant stakeholders exploring their views on core themes such as the importance of the injury surveillance system, views on the existing injury surveillance system, perceived deficiencies and methods for improvements. Exploring the views of stakeholders on the importance of OMF injury surveillance provided the rationale to gain insights into their views on the existing deficiencies and gaps while stimulating their thoughts for coming up with suggestions for improvements. A notable deficiency that emerged from the qualitative explorations was lack of a comprehensive OMF injury surveillance form that captured the full spectrum of common injuries to OMF soft and hard tissues. Therefore, the crucial importance of addressing the existing deficiencies by introducing a new improved OMF injury surveillance form was re-iterated by all stakeholders.

Development of a draft form for OMF injury surveillance was based on the existing H-1258 form, further strengthened by extensive literature search and inputs from local and international experts. Subsequently, this draft form was tabled for consensus and validation by a consultative panel for fine tuning

and finalizing.

Moreover, capturing the diversity and the full spectrum of OMF injuries consisting of conditions which could range from trivial enamel infraction to sinister facial fractures could be considered as a challenging task. Furthermore, OMF injury surveillance systems require essential concise data that minimize the respondent burden while providing necessary data for epidemiological and surveillance purposes.

In order to harness the maximum potential of any injury surveillance system, it should be accurate, complete and timely with an optimum coverage. As revealed by the findings, the coverage of the surveillance system was as low as 2.7% in the pre-intervention phase. These findings are supported by similar findings on deficiencies in coverage and completeness of retrievable patient data bases pertaining to specialized public dental clinics in Sri Lanka.²⁸ Despite the overarching importance of OMF injuries among dental emergency visits, establishment of an OMF injury surveillance system has not taken place. In this regard, negative attitudes of clinical staff towards injury surveillance have been identified as a main impediment for establishment of a sustainable OMF injury surveillance system in Sri Lanka.²⁹

Perceptions/satisfaction of dental surgeons on perspectives of the existing injury surveillance was assessed by a pre-tested, self-administered questionnaire which was subsequently compared with post-intervention assessment of improved OMF injury surveillance system (Table 2). However, the dental surgeons initially based their perceptions/satisfaction on unit-based injury data collection forms, but they were unaware of the existence of H-1258 form which was revealed at FGD. Not surprisingly, there were highly significant improvements in all aspects of perceptions/satisfaction of dental surgeons pertaining to the newly introduced OMF injury surveillance system underpinned by new OMF injury data extraction form. This was further iterated by the views expressed at FGD.

There is an array of core criteria that have been identified for evaluation of injury surveillance systems, such as data quality, operability, and practicality.³⁰ Accordingly, coverage, accuracy, completeness, and timeliness were considered as data quality indicators which were assessed and compared at pre- and post-interventional phases. Accordingly, there was a tremendous improvement in the post-intervention phase with regard to accuracy and coverage. Further, improvements in coverage could have been impacted by COVID-19 related practical issues which prevailed at NDHTSL. On the other hand, despite a 5% increment in completeness at the post-intervention phase, the actual magnitude

of improvement in it could have been higher as there was overall dramatic improvement in coverage. As for accuracy, the newly introduced OMF injury surveillance data extraction form was able to accomplish 100%. This could be plausibly attributable to the user-friendly data extraction form which involved contribution of nursing officers for completion of entries for the first part of the form that reduced the burden of workload for dental surgeons. The increased accountability of nursing officers for filling of data extraction forms was appraised by dental surgeons at post-intervention FGD. This was further supported by the views expressed by nursing officers at the feedback discussion stating that:

“There was no disturbance to our routine work when we were filling the first component of the injury data collection form. We have observed now the dental surgeons are more enthusiastic and relaxed on filling and signing the forms as we completed half of the task. It is good to see the quarterly report on OMF injury surveillance as we also contributed to getting this report prepared which indirectly reflects the work done in our units”.

The output of feed-back discussion held with nursing officers in the post-intervention phase also indicated their acceptance in the role and responsibility that made them satisfied. Moreover, the opinion expressed by dental surgeons and nursing officers who were involved in newly introduced OMF injury surveillance system painted the portrait of the picture of motivated staff with positive attitudes in contrast to commonly held negative attitudes of dental staff in the Sri Lankan context, as reported by Abeysekera, 2012.²⁹ Among quality indicators, timeliness was deemed satisfactory at pre-intervention phase, despite poor coverage and deficiencies in accuracy and completeness. However, with magnificently improved coverage as well as accuracy, 100% timeliness of OMF injury surveillance data in the post-intervention phase could be considered as a positive outcome.

As an inaugural OMF injury surveillance report revealed, injuries presented to NDHTSL from the 1st of March to the 31st of May 2020 were dominated by dental injuries with male dominance, especially affecting permanent and deciduous incisors of young adults and children most often caused by falls. These findings are corroborated by many other local and international literature.^{23, 31} Moreover, this quarterly report was commended by key informants as a unique and novel attempt that was accomplished for the first time in Sri Lanka.

Overall, the newly introduced OMF injury surveillance system was deemed to be efficient and effective for accurate, complete, and timely OMF injury data collection with high coverage, an established data flow and compilation and dissemination of a

quarterly report for evidence-based decision making. As the novel OMF injury surveillance system piloted at NDHTSL was deemed to be successful, it has to be integrated and incorporated into the existing national injury surveillance system as opined by key informants. Moreover, this notion is emphasized by Tham et al. (2009) with regard to integration of orodental injury surveillance into the existing injury surveillance in Victoria, Australia.²³

The duration of the current study overlapped the stringently imposed COVID-19 social lockdown period in Sri Lanka³² which affected the data collection procedure, implementation of the project, and incorporation of human resources to the mission. At the beginning of the study, it was challenging to reach consensus of the expert panel in finalizing the new surveillance form as their opinion varied in relative priority on variables of interest. Further, some participants of the FGD showed dominating behavior and their influence triggered the other participants to deviate from the topic of interest. This was a challenge to the researchers. Another limitation of the study was the self-administered questionnaire, as the responses could be influenced by peer pressure and social desirability response bias. At the time of implementation of the project, a considerable resistance from the staff was inevitable as the fate of any change in the world, as expressed by many researchers.^{33, 34} However, the researchers were able to identify local champions to facilitate implementation of the project as well as for the sustainability of the interventions. This was a strength in the project implementation phase which is corroborated by several other studies in the literature.^{35, 36} The success of the current study is a revelation for policymakers to expand OMF injury surveillance systems in other dental settings across the country as well as a stimulant to global academia. However, further research is warranted in this regard to assess acceptability and identify the bottlenecks for expansion of this novel OMF injury surveillance system.

Conclusion

Previous (existed) injury surveillance system which was in place at NDHTSL had many deficiencies such as lack of a comprehensive data extraction form pertaining to OMF injuries, lack of data flow, inefficiency, and ineffectiveness for evidence-based decision making.

The newly introduced OMF injury surveillance system was deemed efficient and effective demonstrating 100% completeness, 100% timeliness, and 100% accuracy with 72.2% coverage. The dental surgeons' perceptions and satisfaction on OMF injury surveillance have significantly improved ($P=0.000$). These findings were corroborated by qualitative explorations. Furthermore, nursing officers

demonstrated their willingness in their new role in this regard.

Novel OMF injury surveillance system should be expanded to other dental settings in a stepwise manner to capture the island-wide OMF injury data by incorporating and integrating it into the existing national injury surveillance system.

The potential of the novel OMF injury surveillance system should be harnessed for epidemiological and operational research purposes, as well as for evidence-based policymaking, planning, implementing and evaluating nOMF injury prevention and control strategies.

Conflict of Interest: None declared.

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