Does the utilization of dental communication software affect patient no- show rates?

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BACKGROUND

Missed dental appointments are a challenge in pediatric dental practices which leads to decreased clinic efficiency, financial loss and a disruption in the continuity of care. Various strategies have been implemented to reduce no-show rates with an increasing interest in digital communication software. Weave, a healthcare communication software offers automated appointment reminders via text with the aim of improving patient engagement and attendance.

This retrospective study sought to evaluate the impact of Weave on no-show rates by comparing trends from one year before and one year after its implementation in the outpatient clinic of the pediatric dental residency clinic in Hazel Park, Michigan.

The appointments evaluated were new patient examinations, periodic examinations, emergency appointments and sedation appointments.

PURPOSE

To determine whether the implementation of the Weave communication software is associated with a reduction in the number of missed appointments in a pediatric dental clinic.

METHODS

Data was collected from the database of Dentrix, the dental charting system currently in use in the clinic, one year prior to and one year following the implementation of the Weave communication software. No-show rates (missed appointments) were compared between the pre- and post-intervention periods. Statistical analysis was used to evaluate changes in no-show trends and determine the significance of any observed differences.

RESULTS

Between February 27, 2022 and February 27, 2023, a total number of 57,483 appointments were made and the total number of missed appointments was 1,903. Between February 28, 2023 and February 28, 2024, a total number of 51,271 appointments were made and the total number of missed appointments was 1,641. There was an overall decrease in the number of missed appointments across all appointment types after the implementation of the Weave dental communication software.

Appointment Category		02/27/2022-02/27/2023	02/28/2023-02/28/2024	p-value
New Patient Examination (%)				
	Missed Appointments**	229 (0.71)	115 (0.41)	1.33×10^{-8}
	Fulfilled Appointments	31954 (99.3)	2779 (99.6)	0.712
Emergency (%)				
	Missed Appointments**	250 (1.68)	150 (1.2)	2.7×10^{-4}
	Fulfilled Appointments	14648 (98.3)	12842 (98.8)	0.66
Periodic Examination (%)				
	Missed Appointments**	251 (7.1)	212 (5.2)	7.4×10^{-4}
	Fulfilled Appointments	3268 (92.9)	3855 (94.8)	0.39
Sedation (%)				
	Missed Appointments**	1173 (17)	1164 (21.6)	1.2×10^{-8}
	Fulfilled Appointments**	5710 (83)	4235 (78.4)	0.006

Table 1: Number of Appointments Missed vs. Fulfilled In both Pre- and Post-Intervention Appointment Categories
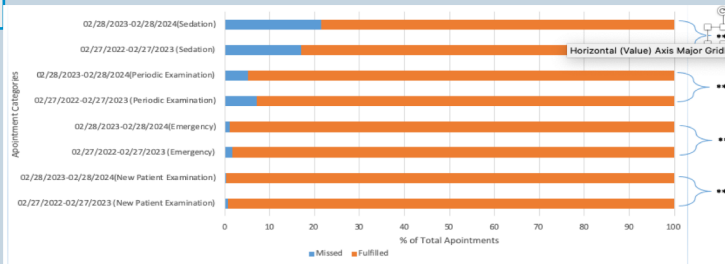** - p < 0.05 indicating a statistically significant difference

Figure 1: Percentage of Appointments Canceled vs. Not-Canceled In both Pre- and Post-Intervention Appointment Categories
** - p < 0.05 indicating a statistically significant difference

DISCUSSION

The research aimed to evaluate whether dental communication software reduced missed appointments. By comparing data from before and after its implementation, the study found a significant drop in cancellations—especially for new patient examinations, which fell from 229 to 115 (p < 0.0001). Other appointment types, like emergency and periodic examinations, also showed a decrease. The results suggest the software improved communication and reminders, leading to better attendance.

CONCLUSION

This study shows that dental communication software significantly reduces missed appointments, especially for new patient visits, where cancellations decreased by almost 50%. The results also suggest the software effectively improves patient engagement. Future research could assess the long-term impact, gather patient feedback, and expand analysis to other types of appointments for a broader understanding of its effectiveness.

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