Implementation of Integrated Electronic Dental Record: Staff Perspectives

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Introduction

Inter-departmental communication between Electronic Health Record (EHR) systems has historically been poor, particularly impacting hospital dentistry, where limited access to comprehensive medical histories can compromise patient care. The shift from dental-specific EHRs to integrated medical platforms like *Epic* aims to streamline workflows, enhance patient safety, and reduce redundant data entry. However, there is minimal research on integrating dentistry into hospital-wide EHR systems.

This study explores the transition from a conventional dental EHR (Axium) to Epic, evaluating its impact on patient care, workflows, and staff satisfaction while identifying areas for improvement in technology, training, and best practices.

Methods

This prospective, questionnaire-based study evaluates the transition from Axium to the Epic EHR system. Surveys were administered to staff, faculty, and residents at four intervals: 1 month pre-launch, and 1-, 3-, and 6months post-launch. Participants completed surveys either electronically via an emailed link or through paper copies, with a 2-week response window.

The questionnaire, developed and reviewed by the primary investigators, measured satisfaction and usability across several areas, including ease of accessing patient data, documentation, workflow efficiency, communication, patient engagement, and patient safety. Responses were recorded using a 5-point Likert scale (Strongly Agree to Strongly Disagree), with an option for N/A. Participants' roles (faculty, staff, or resident) were collected while maintaining anonymity.

This design allows for a comprehensive evaluation of perceptions over time, assessing the impact of the EHR transition on workflows, patient care, and overall satisfaction.



evaluated by dental team members. Participants were asked to rank each method, with a lower number indicating a more helpful training device. The results are summarized below:

Epic Training	Average
Support Staff in Clinic During Launch	2.39
Group Sessions in Computer Lab	2.93
Dress Rehersals	3.06
Modules	3.18
Epic playground at home, google searches etc.	3.31

Categories	Questions	1-Month Post (35 responses)	3-Month Post (25 responses)	6-Month Post (21 responses)
Reviewing Patient Data	Reviewing a patient's clinical information	1.34	1.08	1.19
	Reviewing any health changes since you last saw the patient	1.74	1.44	1.95
Documentation	Creating a visit note	1.17	1.08	1.52
	Documenting allergies	1.97	1.36	2.05
	Documenting vital signs	1.66	1.88	2.33
	Documenting immunizations	3.11	. 2.76	3.71
	Documenting family history	2.54	2.44	2.90
	Keeping problem lists updated	2.46	1.88	2.62
	Keeping medication lists updated	2.00	1.64	2.29
	Adding findings/planned procedures to tooth chart	1.29	0.92	1.38
	Creating a treatment plan	1.54	0.96	1.67
	Documenting a diagnosis code for billing purposes	2.14	. 2.00	2.33
	Documenting a procedure code (D-code) for billing purposes	1.91	. 1.76	2.10
	For attendings, signing a chart to close an encounter	3.69	4.08	4.00
Patient Engagement	Incorporating patient's requests for changes to their health record	2.51	. 2.24	2.76
	Communicating with the patient	1.77	1.64	1.86
Task and Workflow Management	Ordering laboratory tests	3.63	2.92	3.62
	Reviewing laboratory results	3.23	2.72	3.19
	Reviewing radiology results	2.14	1.88	2.14
	Identifying when a laboratory order from in-house has not been completed	3.80	3.28	3.71
	Identifying when a laboratory order from hospital (pregnancy test, blood work) has not been completed	3.57	, 3.20	3.62
	Writing prescriptions	3.29	2.52	3.33
	Renewing prescriptions	3.63	2.92	3.48
	Monitoring medication safety at the point of prescribing (e.g. drug- allergy, drug-drug interaction)	3.20	2 56	3 10
	Monitoring natient medication adherence	3.20	2.30	3.10
	Communicating referral information from specialists	3.00	2.00	2.40
	Reviewing referral information from specialists	3.04	2.00	2.00
	Identifying when a referral has not been completed	3.20	2.30	3.10
	Communicating with other clinicians and office staff	2.40	2.52	1.40
Preventitive Care and Panel Management	Identifying preventive care services (e.g., oral cancer screening, x-rays, dental cleaning) that are due for the patient	1.71	1.64	1.00
	Ordering appropriate preventive care services during the visit	1.04	1.90	1.96
EHR Satisfaction	Overall, how satisfied are you with EPIC?	1.34	0.92	0.90
		1.1/	0.52	0.30

Conclusion

Overall, responses indicated a general satisfaction with the *Epic* system across all evaluated areas. Although there were slight variations in the average scores for different questions, the overall means remained below 3. This corresponds to responses that were neutral or somewhat satisfied, suggesting that the dental team is generally comfortable with the system.

Some questions had average scores closer to 5, which are most likely influenced by the inclusion of "Not Applicable" responses. These responses may have skewed the data slightly, particularly for questions that were not relevant to all roles. As a result, these higher averages should not be interpreted as dissatisfaction but rather as a reflection of variability in system use across different team members.

Perceptions of the *Epic* integration were high, with *Epic*/IT support staff in clinic seen as the most successful tool to help integration

These findings support that the current use of Epic is well-received, with opportunities to improve clarity in survey design and continue refining support based on specific roles and workflows.



References

