

Enhancing clinical workflow efficiency through task automation

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Objective

"Too many calls come in when I'm at the desk," "I'm not sure if it's right to see patients this hectically," "My wrists hurt when I use the suction." As the severe hiring crisis continued to intensify without any sign of resolution, as a local clinic owner, all I hoped for was that my staff would stay. Witnessing the increase of kiosks and serving robots in restaurants, I realized that the challenges weren't unique to dentistry. This led to the natural acceptance of digitalization and automation. Since about four years ago, efforts have been made to change my dental clinic's system in a way that reduces simple tasks that employees say are difficult and increases efficiency.

Methods

Reducing repetitive tasks among staff:

a. At the desk, where repetitive tasks are most common:

- Registration and health questionnaire completion: Electronic chart tablets
- Handling calls and appointment scheduling: Naver Reservation, Naver ARS, TalkTalk chatbot
- Billing: Transitioned from the desk to treatment rooms via electronic charting
- Consultations: Handled in treatment rooms by available staff
- Oral hygiene product sales: Vending machines
- Payments: Kiosk

b. Creating a treatment room capable of single-person operation during emergencies:

- Suction: Auxiliary suction equipment, air mirrors
- Reducing manual labor: One-touch caps & dispensers, rotomixing
- Tool organization: Strategically placed carts
- Explanation of treatment precautions: Thoroughly documented instructions
- New staff training: Readily available manuals

c. Simplifying tasks in the sterilization room:

- Tool washing: Ultrasonic cleaners, medical thermal disinfectors

2. Addressing the problem of patient crowding at specific times:

- Personalization and optimization of appointment times

II. Enhancing Staff Efficiency

a. Remote communication:

- Staff to owner and vice versa: Call bells
- Staff to staff: Walkie-talkies
- Staff to waiting patients: Bluetooth microphones

b. All-rounder project:

- Creating an ecosystem where givers are recognized
- Enabling staff to chat through the electronic chart
- System resilient to sudden staff shortages

Results

By reducing repetitive tasks and enhancing operational efficiency, we managed to decrease the

necessary workforce, yielding multiple benefits:

- Benefits from the owner's perspective:
- Reduced stress from not being able to find staff.
- Reduced costs. It's not just about salaries. Basic employee benefits like health insurance, severance pay, parental leave, and maternity leave involve significant administrative costs, all of which have been reduced.
- Benefits from the staff's perspective:
- With fewer repetitive tasks, staff can devote more energy to clinical aspects of their work, enriching their learning opportunities.
- The system's ability to handle sudden absences without issues as all staff are trained to be all-rounders.
- Reduced conflicts stemming from hierarchical differences among staff.

Conclusion

Embracing automation to reduce mundane tasks has allowed individuals to focus more on creative and productive activities, a vital component for survival in modern society. As I navigate these changes at my workplace in response to the hiring crisis, I find myself more at ease and more focused on patient care than ever before.

Profile

- * Bachelor's Degree in Dentistry, College of Dentistry, Chonnam National University
- * Master of Dentistry, Graduated School of Dentistry, Yonsei University
- * Pediatric Dentistry Residency at Yonsei University Dental Hospital
- * Academic Executive Director of Korean Academy of Adhesive Dentistry (KAAD)
- * Fellow of the International association of Paediatric dentistry(IAPD)
- * Present) Private Pediatric dentist, Yonsei Smiling kids Dental clinic