


Dental informatics in clinical practice

Dental Informatics Online Community Webcast
Clinical computer use in general dentistry
 T. Schleyer, H. Spallek, T. Thyvalikakath, M. Torres-Urquidy,
 P. Hernandez, J. Yuhaniak

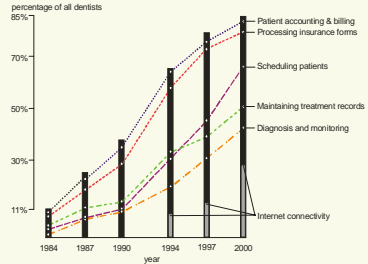


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Ligonier, Pennsylvania, 10/2004

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Background and motivation



Computer ownership, Internet connectivity and selected computer uses in dental practice (1984-2000)
 (Schleyer T.K, Spallek H, Bartling WC, Corby P. The technologically well-equipped dental office. Journal of the American Dental Association 2003; 134 (January); 30-41.)

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Study goal and methods

- **Goal**
 - determine how dentists use computers in clinical care (infrastructure, data entry/retrieval, barriers/enablers, etc.)
- 39-item telephone interview (exploratory study!)
- random US sample (from the ADA): 1,159 dentists

Schleyer TK, Thyvalikakath TP, Spallek H, Torres-Urquidy MH, Hernandez P, Yuhaniak J. Clinical computing in general dentistry. J Am Med Inform Assoc. 2006 May-Jun;13(3):344-52.
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Two-stage survey process

Screening

| | n | % | adj. % |
|----------------------------------|-------------|--------------|--------------|
| computer at chairside | 256 | 22.1 | 24.6 |
| computer not at chairside | 647 | 55.8 | 62.3 |
| no computer | 136 | 11.7 | 13.1 |
| refused to be screened | 120 | 10.4 | 100.0 |
| | 1159 | 100.0 | |

Interview

| | n | % |
|-----------------------|------------|------------|
| completed | 102 | 39.8 |
| non-respondent | 154 | 60.2 |
| | 256 | 100 |

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Results

Experience with computers

- 61% have taken a computer course
- computer experience was rated as:
 - 42% very comfortable
 - 47% comfortable
 - 11% not very comfortable

Practices, operatories and chairside computers

- Practice: solo: 45%; group: 55 %
- average number of operatories: 6
- 83% had computers in all operatories.

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Practice management systems (n=101*)

| Software application | Used by |
|----------------------|---------|
| Dentrix | 40% |
| Eaglesoft | 15% |
| Softdent | 15% |
| Practiceworks | 10% |
| Other | 21% |

*One dentist did not answer

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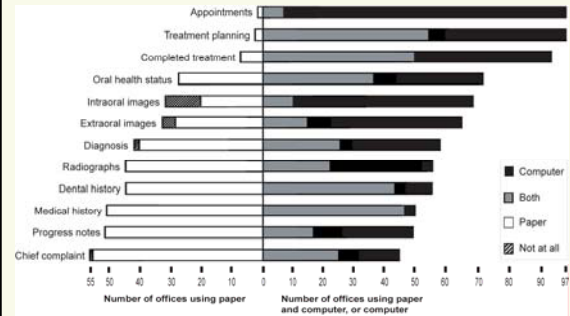
Reasons for using computers at chairside (n=173*)

| | | |
|--------------------------------|-----|-----|
| Data management | | 27% |
| Scheduling | 11% | |
| Retrieval | 6% | |
| Treatment planning | 5% | |
| Direct data entry | 5% | |
| Digital imaging | | 17% |
| Efficiency | | 12% |
| Current technology | | 9% |
| Minimize front desk congestion | | 6% |
| Intraoral charting | | 6% |
| Patient education | | 6% |
| Other | | 5% |
| Convenience | | 3% |
| Better communication | | 2% |
| Error reduction | | 1% |

*Multiple reasons cited

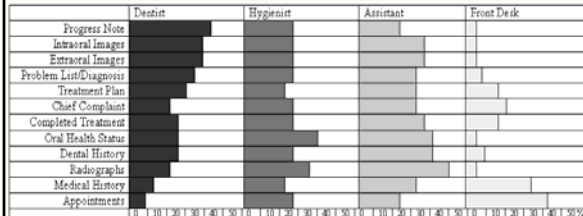
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Storage of patient information



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Chairside data entry



(100 offices; sorted by dentist's activity in descending order)

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How computers could be improved for chairside use

| Response | n | % |
|---|----|------|
| Improved input (e.g. voice, touch and keyboard) | 35 | 28.2 |
| Better usability and user interface design | 14 | 11.3 |
| Smaller computers, monitor | 14 | 11.3 |
| Better hardware and/or software integration | 13 | 10.5 |
| Improved digital radiology | 7 | 5.6 |
| Wireless connections | 7 | 5.6 |
| Faster computers | 7 | 5.6 |
| More stable system | 5 | 4.0 |
| Lower cost | 4 | 3.2 |
| Other | 12 | 9.7 |
| None | 6 | 4.8 |

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Thank you for your attention!



Natchez Trace, Mississippi, 11/2001

Please visit us on the Web:

Dental Informatics Online Community
<http://www.dentalinformatics.com>

Center for Dental Informatics
<http://di.dental.pitt.edu>

This study has been published as:

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