Medical Informatics of Europe 2011

Medical Providers’ Dental Information Needs: A Baseline Survey

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Agenda

- Introduction
- Methods
- Results
- Discussion and Conclusion
- Question and Answers
Introduction

● ‘Great Divide’ between dental and medical practice

● Dental Education at the Crossroads: Challenges and Change in January 1995 - "Dentistry will and should become more closely integrated with medicine and the health care system on all levels: research, education, and patient care”

● Not much is know about information sharing between physicians and dentists
• Non-Profit Organization
• 54 locations and 2 hospitals
• 3,741,308 patient encounters in 2010
• 376,708 unique patients in 2010
• 86 different medical specialties
• 772 physicians + 40 dentist
• 400+ research and educational projects
• 30,000 square miles of primary service area
Objective

To develop an initial understanding of the medical care providers’ core dental information needs and opinion of medical-dental integrated electronic health record (iEHR) environment in their workflow.
Methods: Survey Tool

- Developed a 13 question survey instrument

Medical Providers’ Opinion of Medical-Dental Integrated Electronic Health Record (iEHR) Environment

Q1. Please enter the survey number that was provided in the email: 
Q2. Please enter your specialty of medical practice: 
Q3. Please enter your role/title: 
Q4. Please enter the number of years of medical practice/experience: 
Q5. Do you ever require your patient's dental information to provide/coordinate effective medical care? Yes/No
Q6. Do you consider bi-directional flow of patient data between dental and medical care providers essential? Yes/No/Maybe
Q7. How frequently do you request for consult from a general dentist or dental specialist? Daily | Weekly | Monthly or less | Never | Other
Q8. How frequently do you refer a patient to a general dentist or dental specialist? Daily | Weekly | Monthly or less | Never | Other
Q9. Do you think an integrated electronic health record system (iEHR) where you could access your patient’s dental information would be useful to you, provided it's secure and confidential? Yes/No/Maybe
Q10. Below is a list of dental record information. What information would you like to access in the iEHR system, if any?
   - [ ] Oral health status
   - [ ] Dental appointment
   - [ ] Tooth chart
   - [ ] Treatment plan
   - [ ] Intra-oral images
   - [ ] Dental history
   - [ ] Dental problem list
   - [ ] Periodontal chart
   - [ ] Dental radiographs
   - [ ] Other
   - [ ] Dental alerts
   - [ ] Progress notes
   - [ ] Dental diagnosis
   - [ ] Extra-oral images
Q11. What do you think would be the advantages of an oral-systemic iEHR? 
Q12. What do you think would be the disadvantages of an oral-systemic iEHR? 
Q13. Please enter any general comments and/or questions regarding this survey or research. 

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Methods

• List of medical providers extracted from the Marshfield Clinic data warehouse → 1,197 medical providers system wide

• Physicians, Surgeons, Residents, Registered Nurses, Nurse Practitioners, Certified Nurses and Licensed Practical Nurses

• Online survey tool, Survey Monkey (Portland, OR)

• Between January 14th, 2010 and February 15th, 2010.

• Marshfield Clinic Institutional Review Board, classified the study as exempt under section 45 CFR 46.101(b)
Methods

- Questions Q5 to Q10 which were ‘structured’ in their format and were analyzed based on the ‘Role’ and ‘Specialty’.

- P values were derived by performing the Chi-square test.

- Questions Q11 to Q13 were open-ended and the collected data were analyzed and identified under appropriate major themes.
• The survey respondents were grouped based on the ‘Role’ and ‘Specialty’

• ‘Role’
  
  • **Group 1** - Physician, Surgeon, Anesthesiologist, Medical Director, Department Chair, Resident and Nurse Practitioner
  
  • **Group 2** - Certified Nurse, Nurse Midwives, Licensed Practical Nurses and Registered Nurse and
  
  • **Group 3** - Managers and Others.

• ‘Specialty’
  
• N=1192

• Response Rate: 421/1192 = 35.32%

• The provider’s response to Questions Q5, Q7 and Q8 were statistically significant when analyzed based on the ‘Role’ (P-value < 0.05)

• On the other hand, when analyzed based on ‘Specialty’, Questions Q5, Q7, Q8 and Q9 were statistically significant (P-value < 0.05)
Do you ever require your patient’s dental information to provide/coordinate effective medical care?

- Yes: 58.9% (247)
- No: 41.1% (172)
Do you ever require your patient's dental information to provide/coordinate effective medical care? Cardiology

- Yes: 6, 40%
- No: 9, 60%
Do you ever require your patient's dental information to provide/coordinate effective medical care? Emergency Medicine/Urgent Care

- Yes: 20 (61%)
- No: 13 (39%)
Do you ever require your patient's dental information to provide/coordinate effective medical care? Family Medicine

- Yes: 72, 75%
- No: 24, 25%
Do you ever require your patient's dental information to provide/coordinate effective medical care? Neurology

- No: 5, 45%
- Yes: 6, 55%
Do you ever require your patient's dental information to provide/coordinate effective medical care? Ob/Gyn

- 11, 44%
- 14, 56%
Do you ever require your patient's dental information to provide/coordinate effective medical care? Oncology

- Yes: 21, 64%
- No: 12, 36%

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Do you ever require your patient's dental information to provide/coordinate effective medical care? Pediatrics

- Yes: 12, 36%
- No: 21, 64%
How frequently do you request consult from a general dentist or dental specialist?

- 138 (55%) daily
- 54 (22%) weekly
- 22 (9%) monthly or less
- 36 (14%) never
- 1 (0%) other
How frequently do you refer a patient to a general dentist or dental specialist?

- Daily: 126, 51%
- Weekly: 38, 15%
- Monthly or less: 46, 18%
- Other: 30, 12%
- Never: 11, 4%
Do you think an integrated electronic health record system (iEHR) where you could access your patient's dental information would be useful to you, provided it's secure and confidential?

- Yes: 48.9% (206)
- No: 14.3% (60)
- Maybe: 36.8% (155)
Below is a list of dental record information. What information would you like to access in the integrated electronic health record system (iEHR) if any?

- Oral health status: 61.6% (226)
- Treatment plan: 58.0% (213)
- Dental problem list: 56.1% (206)
- Dental diagnosis: 53.7% (197)
- Dental history: 46.0% (169)
- Dental alerts: 45.2% (166)
- Dental appointment: 30.2% (111)
- Progress notes: 28.9% (106)
- Dental radiographs: 12.8% (47)
- Tooth chart: 8.7% (32)
What do you think would be the advantages of an oral-systemic iEHR?

- Access to more reliable dental information and history
- Better communication
- Better continuity of care
- Easy and faster access
- Reduce narcotics abuse
- Holistic care
- Better coordination of care
What do you think would be the disadvantages of an oral-systemic iEHR?

- Information overload
- Cost
- Privacy concerns
- Causes system slowness
- Dental Jargon
Discussion and Conclusion

● The survey results present a baseline measure by different medical specialties and major roles

● Limitation: results reflect medical providers’ opinion from one healthcare organization

● It would also be interesting to explore how a similar survey would perform on a state, national or an international level
Discussion and Conclusion

- Although dentists rarely document diagnostic codes, this calls for an urgent need for documenting diagnosis in their patient records and could be supported by standardized dental diagnostic codes.

- Based on the medical providers’ response, there seems to be a strong need for inter-communication between the physicians and dentists regarding their patients’ health information.
Thank you!

Discussion, Comments, Questions?

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