

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2. Follow this format for each person. DO NOT EXCEED FOUR PAGES.

NAME Schleyer, Titus KL	POSITION TITLE Associate Professor and Director, Center for Dental Informatics, University of Pittsburgh		
eRA COMMONS USER NAME titus1			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
School of Dentistry, University of Frankfurt am Main, Frankfurt/M, Germany	DMD	12/87	Dentistry
School of Dentistry and School of Medicine, University of Frankfurt am Main, Frankfurt/M, Germany	PhD	08/89	Molecular Biology
Temple University, School of Dentistry, Philadelphia, PA	DMD	05/91	Dentistry
The Fox School of Business, Temple University, Philadelphia, PA	MBA	01/95	Health Administration

A. Personal Statement

In this proposal, I am building on several research studies that are foundational to the proposed project. Our research center was the first one to conduct a comprehensive study of the content of paper- and computer-based dental record formats (1). This study has provided us with an excellent understanding of what information the various formats, including that used by Dentrix, are designed to accommodate. In important follow-up work, we are pursuing the development of richer, more comprehensive dental records through work on a standardized information model for general dentistry (2). We are currently in the process of subjecting a list of 1,100 data elements drawn from previous research and de-identified patient records from general practitioners to categorization and prioritization through a formal Delphi process. Subsequently, the collection of data elements will undergo formal structuring into an information model. This model will provide a comprehensive blueprint for data collection in general dentistry. Last, we have assessed adoption and utilization of, opinions about, and attitudes toward clinical computing in the United States (3). In this study, we performed a basic analysis of the electronic management of clinical information by general dentists. Information categories such as appointments, treatment plans and completed treatment with a strong connection to office operations and billing were stored on the computer in the overwhelming majority of practices. The oral health status, intra-/extra oral images, diagnoses, radiographs, and the dental history followed in terms of frequency of computer-based storage. Medical history and progress notes, and the chief complaint tended to be stored on the computer least often. These research studies, combined with the fact that I have become intimately familiar with the operations of the three NIDCR-funded PBRNs as a member of the PBRN Monitoring Committee since its inception, position this research project optimally for success.

B. Positions and Honors

Positions and Employment

8/1989 - 7/1995	Assistant Professor, Operative Dentistry, Temple University, Philadelphia, PA
8/1995 - 6/1996	Associate Professor, Operative Dentistry, Temple University, Philadelphia, PA

7/1996 - 12/2001	Associate Professor and Chairman, Department of Dental Informatics, Temple University, Philadelphia, PA
7/1996 - Present	Founding partner, S3 Web Technologies, LLC, Pittsburgh, PA
1/2002 - Present	Associate Professor and Director, Center for Dental Informatics, University of Pittsburgh, Pittsburgh, PA
5/2007 - Present	Associate Professor, Department of Biomedical Informatics, University of Pittsburgh, Pittsburgh, PA
10/2008 - Present	Associate Professor, Clinical and Translational Science Institute, University of Pittsburgh, Pittsburgh, PA

Other Experience and Professional Memberships

1989 - Present	Member, American Dental Education Association
1994 - Present	Member, American Medical Informatics Association
1995 - Present	Member, American Dental Association
2006 - Present	Standards Committee for Dental Informatics Working Group 11.7: General Dental EHR Information Model, Chair
2/2006 - Present	Reviewer, International Journal of Medical Informatics
2/2008 - Present	Member, Editorial Board, Journal of the American Dental Association
2008 - Present	Member, International & American Associations for Dental Research

Honors

5/1999	Dental Visionary 1999, American Student Dental Association
2005 - Present	Fellow, American College of Dentists
2009 - Present	Fellow, American College of Medical Informatics

C. Selected peer-reviewed publications

Most relevant to the current application

- Schleyer TK, Spallek H, Hernandez P. A qualitative investigation of the content of dental paper- and computer- based patient record (CPR) formats. Journal of the American Medical Informatics Association: JAMIA. 2007 Jul; 14 (4):515-26.PMCID: 2244908
- Acharya A, Schleyer TK. Electronic dental record information model. Int J Medical Engineering and Informatics. 2009; 1 (4):418-434.
- Schleyer TK, Thyvalikakath TP, Spallek H, Torres-Urquidy MH, Hernandez P, Yuhaniak J. Clinical computing in general dentistry. Journal of the American Medical Informatics Association: JAMIA. 2006; 13 (3):344-52.PMCID: PMC1513654
- Schleyer TK, Dasari VR. Computer-based oral health records on the World Wide Web. Quintessence international (Berlin, Germany: 1985). 1999 Jul; 30 (7):451-60.
- Schleyer TK, Spallek H, Bartling WC, Corby P. The technologically well-equipped dental office. Journal of the American Dental Association (1939). 2003 Jan; 134 (1):30-41.
- Schleyer TK. Why integration is key for dental office technology. Journal of the American Dental Association (1939). 2004 Oct; 135:4S-9S.
- Acharya A, Wali T, Thyvalikakath T, Schleyer TK. [abstract] In: J Dent Educ 72(2). 2008 ADEA Annual Session; 2008 Mar 29-Apr 2. Dallas, TX. 2008. p. 214.
- Thyvalikakath TP, Monaco V, Thambuganipalle HB, Schleyer T. A usability evaluation of four commercial dental computer-based patient record systems. Journal of the American Dental Association (1939). 2008 Dec; 139 (12):1632-42.PMCID: PMC2614265
- Torres-Urquidy MH, Acharya A, Hernandez-Cott P, Misner J, Schleyer T. Evaluating the effectiveness of modeling principles for data models. Studies in health technology and informatics. 2009; 143:525-33.PMCID: PMC2736630
- Thyvalikakath TP, Monaco V, Thambuganipalle H, Schleyer T. Comparative study of heuristic evaluation and usability testing methods. Studies in health technology and informatics. 2009; 143:322-7.PMCID: PMC2736678
- Irwin JY, Torres-Urquidy MH, Schleyer T, Monaco V. A preliminary model of work during initial examination and treatment planning appointments. British Dental Journal. 2009 Jan 10; 206 (1):E1; discussion 24-5.

D. Research Support

On-going Research Support

1UL1RR024153-01 Reis (PI) 10/01/06 - 06/30/11

NCRR

Clinical and Translational Institute, Online Research Community

The primary focus of the CTSI is to develop, nurture and support a cadre of highly trained clinical and translational research training. The CTSI will excel in the development of new biomedical knowledge and the translation of that knowledge from the basic and preclinical research settings to health practice.

Role: Co-Investigator

5 T15 LM007059-23 Crowley (PI) 07/01/07 – 06/30/12

NIDCR

Dental Informatics Training Grant

The major goal of this project is to conduct training in dental informatics.

Role: Co-Investigator

1R21DE018548-01 Schleyer (PI) 07/01/07 - 06/30/10

NIDCR

A Controlled Terminology for Diagnoses and Findings in General Dentistry

The major goal of this project is to develop a diagnostic reference terminology for general dentistry.

Role: PI (sole)

Completed Research Support

1U54DE014257-019002 Schleyer (PI) 08/01/01 - 07/31/07

NIDCR

NYU Oral Cancer RAAHP Center

This project has developed an electronic research collaboratory for health disparities in oral cancer.

Role: Co-Investigator

1R13DE014611-01 Schleyer (PI) 04/01/02 - 03/31/04

NIDCR/NLM

Conference: Dental Informatics and Dental Research

DESCRIPTION: Informatics is crucial for enabling advances in biomedical research, practice and education in the 21st century. As we transition to an information-based

Role: PI (sole)

1 G08 LM008667-01A1 Spallek (PI) 04/01/06 - 03/31/09

NLM

Dental Informatics Online Community

This project has developed an open, worldwide and virtual community for dental informatics (~1,000 members as of 1/2010).

Role: Co-Investigator

1R21DE018158-01 Chapman (PI) 07/01/07 - 06/01/09

NIDCR

Feasibility of a Natural Language Processing-based Dental Charting Application

This project has developed prototype that allows dentists to chart clinical finding using natural language.

Role: Co-Investigator