

SHANNON SOMMERS, MSHI, BTDH, RDH

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<https://dentaldatascienced.wixsite.com/mysite-1>

EDUCATIONAL BACKGROUND

2019	Master of Science in Health Informatics Summa Cum Laude	Medical University of South Carolina College of Health Professions, Charleston, SC
2013	Bachelor of Technology in Dental Hygiene Magna Cum Laude	State University of New York, Canton, NY
2006	Associate in Applied Science in Dental Hygiene Cum Laude	Trident Technical College, North Charleston, SC

OTHER EDUCATION

2020	SAS Programming 1: Essentials Badge	SAS Self-paced eLearning
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PROJECTS AND PRESENTATIONS

2021	Created <i>Dental Informatics: Health Information Exchange and Interoperability</i> PowerPoint presentation	Presented to dental students at The School of Dental Medicine at The University of Pennsylvania, March 2021
2020	Created and presented a two-hour continuing education course: <i>Artificial Intelligence (AI) in Dentistry</i> ; AGD PACE approved	Live Webinar hosted by Nine Lives CPR, December 10, 2020
2019	Capstone: Entity relationship diagram linking medical and dental research data. Mapped and linked patients within software systems by diabetes diagnosis and periodontal disease status	Medical University of South Carolina, Charleston, SC Mentor: Dr. Alexander Alekseyenko
2019	Created a dental mobile application consisting of two phases with firm completion dates. Incorporated a project charter, developed a requirements traceability matrix (RTM), work breakdown structure (WBS), created milestones, organized a request for proposal (RFP), demonstrated a workflow, developed wireframe mockups, data model, and ran use test cases	Medical University of South Carolina, Charleston, SC Mentor: Dr. Dan Furlong
2019	Formulated a storyboard that demonstrated the process of root cause analysis and process change to	Medical University of South Carolina, Charleston, SC

	improve quality control and measures related to infection control in the dental operator	Mentor: Dr. Jillian Harvey
2019	Built a 30-day, all-cause hospital readmission prediction model that exceeded predictive performance by performing and analyzing the results of several data models using R	Medical University of South Carolina, Charleston, SC Mentor: Dr. Andrew Johnson
2019	Accessed datasets on stroke and COPD patients via SAS using different methods of regression analysis and formulated results	Medical University of South Carolina, Charleston, SC Mentor: Dr. Kit Simpson
2019	Involved in a group case study focused on the acquisition of two hospitals and implementation of an employer-owned occupational health clinic	Medical University of South Carolina, Charleston, SC Mentor: Dr. Bob Warren
2019	Research project on the use of 3D printing in dentistry	Medical University of South Carolina, Charleston, SC Mentor: Dr. Mark Daniels
2018	Created a telehealth case study video that demonstrated a HIPAA breach	Medical University of South Carolina, Charleston, SC Mentor: Dr. Abby Kazley
2013	Developed and presented two continuing education courses related to dental hygiene and systemic disease: <i>Dental Management of the HIV Patient</i> and <i>Probiotics and Oral Health</i>	State University of New York, Canton, NY Mentor: Dr. Susan Willette
2012	Formulated research to examine the relationship between periodontal disease and Alzheimer's disease	State University of New York, Canton, NY Mentor: Dr. Susan Willette
2011	Developed a grant proposal to provide free oral cancer screenings to Charleston County's homeless population	State University of New York, Canton, NY Mentor: Dr. Susan Willette

AWARDS AND RECOGNITIONS

2019	Scholarship recipient	South Carolina Health Care Information and Management Systems Society
2019	MUSC College of Health Professions Dean Award	Medical University of South Carolina, Charleston, SC
2019	Alpha Eta Honors Society Inductee	Medical University of South Carolina, Charleston, SC
2012	Outstanding Component Member	South Carolina Dental Hygienists' Association

SKILLS

Proficient in Microsoft Word, PowerPoint, and Outlook Experience with Microsoft Excel and Access

Proficient with Patterson Eaglesoft software and Schick Digital Radiography
 Experience in collecting, processing, and managing healthcare data
 Experience with SQL, Python, SAS, and R
 Experience with Zoom, WebEx, Box, and Google hangouts
 Knowledge of healthcare and healthcare systems
 Excellent verbal and written communication
 Strong work ethic with demonstrated leadership and time management
 Highly organized
 Team player that can work collaboratively and independently

PROFESSIONAL EXPERIENCE

Research Administrator		
February 2021-present	Delta Dental of Michigan, Ohio, and Indiana	Okemos, MI
<p> Designs, develops, and deploys data-driven predictive models using a variety of analytical techniques and software tools and administers all aspects of Focused Review analytical research. Consults with internal and external clients on reporting, analytical, or research issues. Coordinates the InFocus team in the review and analysis of providers billing and treatment patterns. Develops action plans for monitoring provider treatment and billing behavior identified through InFocus, including the development and deployment of needs assessment and case studies. Maintains and develops departmental databases to store and organize data. Analyzes and troubleshoots system and database problems. Plans, coordinates, prepares, and performs provider desk audits, including analysis and research to resolve discrepancies. </p>		

Registered Dental Hygienist		
September 2006-February 2021	Low Country Family and Cosmetic Dentistry	Charleston, SC
June 2006-December 2006	Stone Family Dentistry	Charleston, SC
June 2006-September 2006	Dr. David Delli-Gatti	Charleston, SC
June 2006-September 2006	Dr. Mark LaRue	Charleston, SC
<p> Generated approximately \$290,000 per year delivering direct patient therapeutic services including oral prophylaxis, periodontal treatment, and exposure of digital radiographs. Provided patient education, nutritional counseling, and recommended oral hygiene products based on patient needs. Utilized dental software and provided insights in process development related to continuous quality improvement and workflows. Implemented infection control protocols and standards. Monitored billing practices and utilization of services, managed patient recalls, assisted office staff with insurance claims, and assisted dentist and/or other staff as needed </p>		
Registered Dental Assistant		
December 2003-February 2004	Our Lady of Mercy Wellness Outreach	Johns Island, SC
January 2002-December 2003	Dr. Dennis Gazes	Charleston, SC
September 1997-December 2001	Dr. Lynn Keener	Harrison, AR
August 1999-December 2001	Dr. Robert Doshier	Harrison, AR

Dental auxiliary that prepared patients for dental work, assisted dentist in four-handed dentistry techniques in general dentistry, endodontics, orthodontics, prosthodontics, pedodontics, and oral surgery. Exposed and developed radiographs, recorded patient medical and dental treatment and concerns in the dental record, provided oral hygiene instruction, fabricated temporary restorations and custom impressions from preliminary impressions, performed infection control and sterilization procedures, maintained dental equipment, and ordered and maintained dental supplies and inventory

HEALTH INFORMATICS EXPERIENCE

Data Mining and Analytics
 Applied Statistical and Research Methods
 Database Management
 Health Informatics Foundations and Management
 Applied Health Informatics
 Legal, Ethical, and Regulatory Issues in Health Informatics
 Quality Management of Healthcare Services
 Advanced Health Information Technology
 Health Information Systems
 Healthcare Data Content and Standards
 Systems Analysis and Design

OTHER EXPERIENCE

Research Methods in Health Services
 Grant Writing Strategies
 Pedagogy and Technical Online Learning
 Management Communications

LICENSES AND CERTIFICATIONS

2019	Lean/Six Sigma White Belt	Medical University of South Carolina, Charleston, SC
2019	Institute for Oral Health Care Improvement Certifications Leading Quality Improvement Introduction to the Triple Aim for Populations Introduction to Patient Safety Introduction to Patient-Centered Care Responding to Adverse Events From Error to Harm Teamwork and Communication in a Culture of Safety Testing and Measuring Changes with PDSA Cycles How to Improve with the Model for Improvement	Medical University of South Carolina, Charleston, SC

	Human Factors and Safety Interpreting Data: Run Charts, Control Charts, and Other Measurement Tools Introduction to Health Care Improvement Introduction to Health Care Leadership	
2006-present	SC license to practice dental hygiene #4186	LLR, South Carolina
2006-present	CPR (BLS)	American Heart Association
2006-present	SC license to administer infiltration anesthesia #IA3902	LLR, South Carolina
2006-present	Nitrous Oxide Monitoring	LLR, South Carolina

PROFESSIONAL ORGANIZATIONS

2021-present	Observer in Working Groups: 11.1 Standard Clinical Data Architecture, 11.7 Risk Assessment Software, 11.9 Core Reference Data, 13.3 Dental Provider's Guide to the Electronic Dental Record, 13.6 Utilization of EDR to Support Quality Improvement, 13.8 Augmented Intelligence	American Dental Association Standards Committee on Dental Informatics
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2020	Peer Reviewer: reviewed content based on a range of published and unpublished works including projects, research, papers, pilot programs, and/or quality improvement initiatives, and health IT related challenges within the healthcare field	American Medical Informatics Association 2021 Clinical Informatics Conference
2020-present	Advocacy Committee Member: participate in monthly advocacy meetings to influence state, territorial, provincial, and local health information and technology policies and advocate for improving health and healthcare in South Carolina	South Carolina Health Care Information and Management Systems Society
2019-present	Scholarship Committee Member: participate in monthly board meetings and review scholarship applications for selecting the 2020 scholarship winner	South Carolina Health Care Information and Management Systems Society
2005-2021	Member	American Dental Hygienists' Association

2012-2016	Member: held positions of secretary, vice-president, and president: attended regional and local board meetings, provided organization and direction for all officers, recorded meeting minutes, organized continuing education and community service events, developed and maintained social media websites, reached out to new members with relevant information, and participated in yearly visits to the local technical college to encourage professional membership	Charleston Dental Hygienists' Alliance
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PUBLICATIONS

2019	Sommers S, Obeid J, Craig J, Kirchoff K, Lenert L, Alekseyenko A.[Abstract]. Linking Dental and Medical Research Data via Federated HIE Master Patient Index	Scheduled for an oral presentation at the American Medical Informatics Association Clinical Informatics Conference, May 2020; cancelled due to COVID-19
2020	Sommers S, Webb A. The Power of AI Technology in Dentistry	<i>DDHK</i> Vol. 1, Issue 2, September 2020
2020	Sommers S, Webb A. Innovations in Dentistry: Navigational surgery, robotics, and nanotechnology	<i>Dentistry IQ</i> , September 24, 2020
2020	Sommers S, Webb A. Artificial Intelligence (AI) in Dentistry	<i>RDH</i> Vol. 40, Issue 10, pp. 10-11, October 2020
2020	Sommers S, Webb A. Data-Driven Dentistry: A New Perspective	<i>Dental Economics</i> , Vol. 110, Issue 10, pp. 17-18, October 2020
2020	Sommers S, Webb A. Dentistry, Data, and Population Health: Why Dental Hygienists Matter	<i>RDH</i> Vol. 40, Issue 11, pp. 16-18 November 2020
2020	Sommers S, Webb A. AI Technology and Teledentistry: Breaking Barriers to Dental Care	<i>Dentistry IQ</i> , November 30, 2020. Also featured in the Morning Brief newsletter
2021	Sommers S, Webb A. 3D Printing in Dentistry	<i>DDHK</i> Vol. 2, Issue 1 February 2021
2021	Sommers S, Webb A. Medical and Dental Data Integration: How Can This Become a Reality?	<i>Dental Economics</i> , Vol. 111, Issue 2, February 2021
2021	Sommers S, Webb A. Disruptive Innovations in Dentistry: How AI and Machine Learning are Enhancing Resin-Based Composites	<i>Dentistry IQ</i> , January 7, 2021
2021	Sommers S, Webb, A. Expanding the Dental Provider's Role in Chronic Disease Management and Care Coordination	Submitted for publication <i>RDH</i> magazine

