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September 18, 2018

James D. Fielder, Jr., Ph.D.
Secretary of Higher Education
Maryland Higher Education Commission
6 North Liberty Street
Baltimore, MD 21201

Dear Secretary Fielder:

The University of Maryland School of Dentistry is requesting authorization from the University System of Maryland to offer a new B.S./M.S. Clinical Dental Hygiene Leader (CDHL) Dual-Degree Program.

The School's previously approved M.S. in Dental Hygiene program has been dormant and last conferred degrees in 2013.

The proposed new program will educate future leaders in the profession by offering a Bachelor of Science degree in Dental Hygiene and an accelerated Master of Science in Dental Hygiene degree.

We appreciate your consideration. Please contact me should you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Bruce E. Jarrell".

Bruce E. Jarrell, MD, FACS
Executive Vice President and Provost



Cover Sheet for In-State Institutions New Program or Substantial Modification to Existing Program

Institution Submitting Proposal	University of Maryland, Baltimore
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Each action below requires a separate proposal and cover sheet.

- | | |
|---|---|
| <input checked="" type="radio"/> New Academic Program New | <input type="radio"/> Substantial Change to a Degree Program |
| <input type="radio"/> Area of Concentration New | <input type="radio"/> Substantial Change to an Area of Concentration |
| <input type="radio"/> Degree Level Approval New | <input type="radio"/> Substantial Change to a Certificate Program |
| <input type="radio"/> Stand-Alone Certificate | <input type="radio"/> Cooperative Degree Program |
| <input type="radio"/> Off Campus Program | <input type="radio"/> Offer Program at Regional Higher Education Center |

Department Proposing Program	University of Maryland School of Dentistry	
Degree Level and Degree Type	Bachelor of Science (B.S.) and Master of Science (M.S.)	
Title of Proposed Program	B.S./M.S. Clinical Dental Hygiene Leader (CDHL) Dual Degree Program	
Total Number of Credits	84	
Suggested Codes	HEGIS:	CIP: 51.0602
Program Modality	<input type="radio"/> On-campus <input type="radio"/> Distance Education (<i>fully online</i>) <input checked="" type="radio"/> Both	
Program Resources	<input type="radio"/> Using Existing Resources <input checked="" type="radio"/> Requiring New Resources	
Projected Implementation Date	<input checked="" type="radio"/> Fall <input type="radio"/> Spring <input type="radio"/> Summer Year: 2020	
Provide Link to Most Recent Academic Catalog	URL: http://dental-umaryland.smartcatalogiq.com/en/2018-2019/Catalog	
Preferred Contact for this Proposal	Name: Sheryl Syme, RDH, MS	
	Title: Director, Dental Hygiene Program	
	Phone: (410) 706-7224	
	Email: ssyme@umaryland.edu	
President/Chief Executive	Type Name: Bruce E. Jarrell, MD, FACS, Executive Vice President and Provost	
	Signature:	Date: 09/18/2019
Approval/Endorsement by Governing Board	Type Name:	
	Signature:	Date:

Revised 5/15/18

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**New Academic Program Proposal Prepared for the
Maryland Higher Education Commission:
BS/MS Clinical Dental Hygiene Leader (CDHL)
Dual-Degree Program
UNIVERSITY OF MARYLAND SCHOOL OF DENTISTRY**

**A. CENTRALITY TO INSTITUTIONAL MISSION STATEMENT AND PLANNING
PRIORITIES**

The University of Maryland School of Dentistry's (UMSOD) BS/MS Clinical Dental Hygiene Leader (CDHL) Dual-Degree Program will be a unique offering at the forefront of dental hygiene education, preparing exceptional students for a dynamic oral health landscape. The two-year dual-degree program, to be housed at the Universities at Shady Grove (USG), will enable students to obtain both a bachelor of science in dental hygiene and a master of science. Requiring an initial bachelor's degree for admission (in addition to prerequisites), the program is geared toward students with a science background who have decided to specialize in dental hygiene and/or those who want a primary role in facilitating and responding to change in the oral health field.

While the CDHL program will represent the UMSOD's first program at USG, it will join already-existing graduate programs offered by two sister schools of the University of Maryland, Baltimore (UMB): the University of Maryland School of Nursing (UMSON) and the University of Maryland School of Pharmacy (UMSOP). As a UMB school, the UMSOD — and by extension, the CDHL program — adheres strongly to, and emphasizes the value inherent in, the university's mission, which is:

To improve the human condition and serve the public good of Maryland and society at-large through education, research, clinical care, and service.

The CDHL program will further that mission, providing not only an innovative and first-of-its-kind dual-degree program that leads the way in oral health education, but a large clinical component serving not only the Shady Grove region, but the state and mid-Atlantic region as a whole. The UMSOD has an impressive history of service to Maryland communities, through such initiatives as Mission of Mercy and Sealant Saturdays, and the CDHL program will no doubt exhibit a similar commitment.

The desire to create the CDHL program at Shady Grove is a forward-thinking one, positioning both the UMSOD and USG on the cusp of a major transition in oral health delivery and medicine. Similar in focus to the Clinical Nurse Leader (CNL) program, offered at the UMSON and more than 100 other nursing schools throughout the country, the CDHL program will produce dental hygienists who can work interprofessionally as members of an interdisciplinary team, assuming key leadership roles in a wide variety of clinical, educational, public health, and healthcare settings.

In addition to offering the only master of science in dental hygiene in Maryland, the CDHL program will be the only one in the country combining the exceptional clinical and didactic dental hygiene baccalaureate education currently obtained at a dental school with dynamic graduate preparation in community and interdisciplinary oral health care as well as research methods and scholarly applications. Drawing upon the resources of the UMSOD, the first dental college in the world, CDHL students will work side-by-side with advanced education in general dentistry (AEGD) students and predoctoral dental students in a new Shady Grove clinical facility.

As befits an innovative dual-degree program, the didactic curriculum will also be cutting-edge, with a number of courses offered online exclusively to CDHL students, allowing them access to Baltimore-based UMSOD faculty members while benefiting from USG's interdisciplinary environment. Didactic courses will combine the outstanding baccalaureate education already provided at UMSOD, which has the only bachelor's program in dental hygiene in the state, with advanced graduate-level enhancements. The curriculum will place a strong emphasis on research and understanding the scientific literature, so that graduates are not just advanced clinicians, but experienced in, and wholly comfortable with, reviewing the latest findings in oral health and using evidence-based decision-making in patient care.

Notably, the dual-degree CDHL program addresses all six tenets of the UMB 2017-2021 Strategic Plan,¹ which are listed below:

Health, Justice, and Social Impact

Dental hygienists are preventive therapists who, with master's degrees, are better equipped to shape oral health policy and establish care programs in such entities as hospitals, federally qualified health care facilities, long-term geriatric care residences, and beyond. By doing so, and through patient care in clinics, the program will serve the community at large and provide care to those in need.

Research and Scholarship

Students in the CDHL program will engage in research both didactically and through course assignments and capstone projects. Many of their creative efforts will be publishable, adding to the broader scientific knowledge.

Student Success

Quite simply, this program aims to create leaders in health care. As demographics change and the research supporting the link between oral and systemic health grows, we need dental hygienists who will take the lead in addressing oral disease. Graduate-degreed dental hygiene clinic leaders will create those essential prevention programs and, in doing so, receive a similar

level of responsibility and accountability currently given to colleagues in pharmacy, nursing, physical therapy, and occupational therapy.

Inclusive Excellence

Students enrolled in this program, and all of the other professional programs housed at USG, will be instrumental to the broader interprofessional environment, pursuing excellence in all disciplines. Students will follow the Interprofessional Educational Collaborative guidelines, which focus on continuous development of interprofessional competencies by health professions students as part of the learning process.

These guidelines are related to four key domains:

1. Values/ethics;
2. Respect for roles and responsibilities;
3. Communication across professions; and
4. Teamwork for effective interprofessional practice.

Efficiency, Effectiveness, and Assessment

Creating a new dual-degree program at the USG campus utilizes the resources already present at UMSOD while providing cutting-edge education and clinical care to different localities of the state than those currently reached by Baltimore-based UMSOD.

Partnership and Collaboration

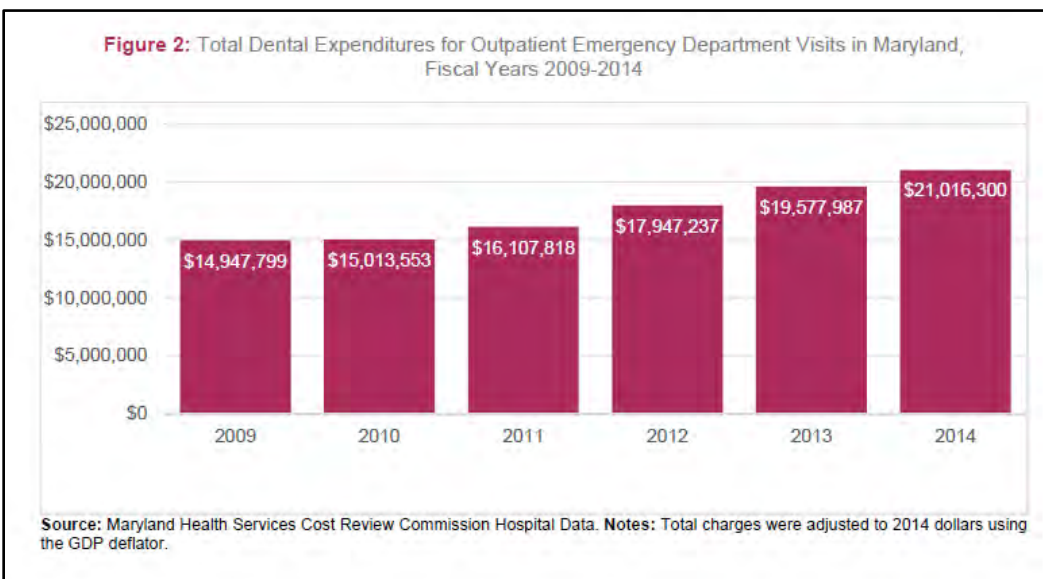
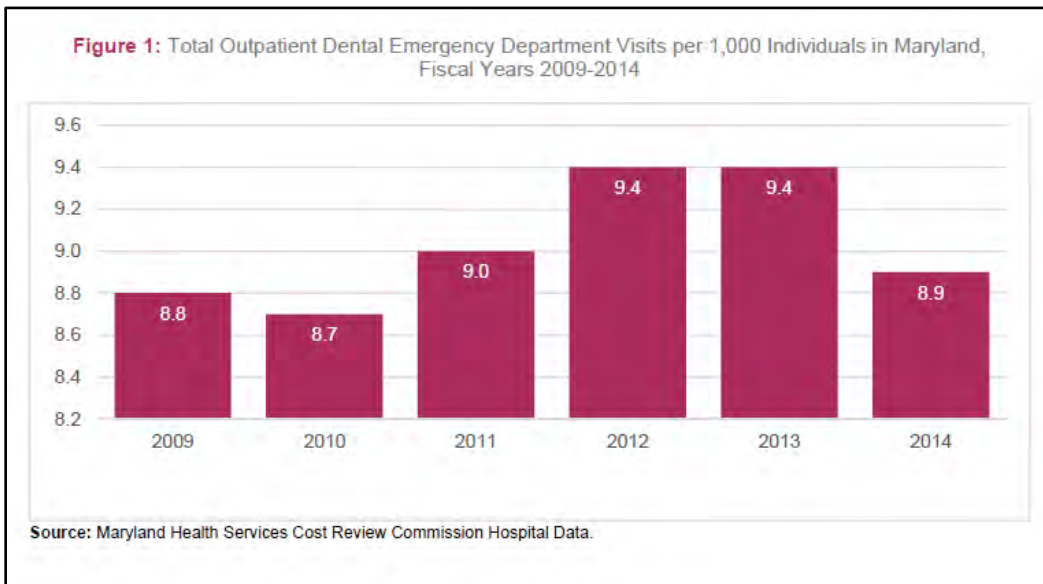
One fundamental aim of the USG campus is to foster interprofessional collaboration among students in health professions, which is a parallel emphasis of the CDHL program. Other partnerships in the community will enable the delivery of preventive oral health services to those in need.

B. CRITICAL AND COMPELLING REGIONAL OR STATEWIDE NEED AS IDENTIFIED IN THE STATE PLAN

Current research demonstrates the link between oral and systemic health, and as healthcare delivery becomes ever more integrated, the demand for multidimensional professionals will grow correspondingly. There is also a growing agreement among oral health advocates that new workforce models are necessary to improve access to oral health care for vulnerable and underserved populations. Graduates of the CDHL program will be qualified for those positions that go beyond the standard private dental practice and require an enhanced dental hygiene skillset that only master's-level instruction can provide.

For example, in 2015, over 40,000 emergency department (ED) visits for oral complaints were reported in Maryland.² Figures 1 and 2 provide further information on the prevalence of oral

health concerns in the state's EDs. Despite some statewide improvements, many Marylanders still lack access to oral health care and experience preventable oral disease. A CDHL graduate, as an advanced clinician with research experience, could assess the state of oral health promotion in a hospital setting, implement an oral health plan, evaluate the plan's effectiveness, and disseminate relevant information to colleagues in medicine, administration, and beyond. Given that the healthcare industry seeks to create a system that achieves effective oral health interventions at lower costs, a CDHL's ability to provide expertise in oral health in diverse settings, not just the traditional dental practice, becomes invaluable.



The nation's aging population will present new challenges in oral health, as well, requiring dental hygienists with the advanced skillsets a CDHL can provide. Senior citizens will comprise a fifth of the U.S. population by 2030; already, 1.3 million Americans reside in long-term care facilities for the elderly. As the Institute on Aging notes, “[c]hronic illness has replaced acute illness as the major health problem of older adults — and increasingly so as medicine evolves.”³ A grayer United States will need oral health professionals who can work in long-term care facilities — often, across many different branches — tackling the unique issues and conditions of those communities.

Much like working across the many branches of a company providing long-term care, dental hygienists with a CDHL degree will be especially suited for the burgeoning corporate dentistry sector. Their experience as part of a multidisciplinary team, attuned to the latest research and looking broadly at oral health from a public health perspective, will serve them well when managing an entity with many moving parts. As well, a CDHL degree, with its emphasis on the scientific literature, will also allow dental hygienists to remain in academia as faculty members, drawing upon their dual background — both clinical and research-based — to better educate forthcoming students in dental hygiene about the changing oral health landscape.

In summation, UMSOD has an opportunity to bridge the gap between regional and statewide present and future demand through the CDHL dual-degree program. UMSOD's established credibility in providing pre-eminent education, patient care, research, public service, and global engagement, as well as the aligned CDHL curriculum and student outcomes, will result in our graduates possessing the elevated knowledge, skills, and abilities to close regional and statewide gaps. Table 1 outlines specific examples of our regional and statewide needs and how CDHL graduates can provide solutions. It is important to note, however, that while CDHL graduates will have an enhanced dental hygiene skillset, that will not translate into an enhanced scope of practice.

In addition, the CDHL program speaks to many of the principles set forth in the Maryland State Plan for Postsecondary Education 2017-2021,⁴ notably “access,” “success,” and “innovation.” Graduates from the CDHL program will increase Maryland's percentage of professional and technical workers (27.2 percent), already the second-highest among all states. Our proposed program adheres to the principles of public higher education in Maryland, accepting credits from all of Maryland's accredited institutions and thus fostering and valuing diversity. The program's administrators will also reach out to other schools within the USM in order to prioritize diversity within the program.

**Table 1: Examples of CDHL Graduates
Bridging Regional and Statewide Oral Health Gaps**

Present and Future Regional and Statewide Need		Example CDHL Graduate Solutions
Advancement and evolution of knowledge in:	Oral health among residents in long term care facilities.	<ul style="list-style-type: none"> Design, develop, implement, and evaluate facility-wide, interprofessional education initiative on prevention of ventilator-induced pneumonia. Within the dental hygiene scope of practice, create facility-wide processes that incorporate risk assessments and identification of oral disease.
	The relationship between oral and systemic disease.	<ul style="list-style-type: none"> Through interprofessional collaborations, create and establish basic oral cavity screening process to enhance patient healthcare outcomes.
	Decreasing Maryland Medicaid system spending on patients seeking emergency oral care services.	<ul style="list-style-type: none"> Chair a community committee on oral health strategic planning and preventive care. Break the cycle of oral health emergency visits through oral health strategic planning and delivery, as well as interprofessional collaborations to design patient case management that leads to enhanced healthcare outcomes.
Expand educational opportunities and choices for minority and educationally disadvantaged students at institutions of higher education through:	Deployment into the workforce within a reasonable timeframe and expense.	<ul style="list-style-type: none"> Employed through the utilization of enhanced knowledge, skills, and abilities applicable to the workforce demand; possesses dual degrees, Master of Science and Bachelor of Science, and dental hygienist licensure, as well as saving monies on tuition and fees.
	Improvement of access and care opportunities for diverse communities.	<ul style="list-style-type: none"> Following in the innovative programmatic pathway, establish a pedodontics oral health education program within the Montgomery County school system, including but not limited to oral health care access and at-home oral health best practices.
Strengthen and expand the capacity of historically black institutions to provide high-quality and unique educational programs.		<ul style="list-style-type: none"> As a student at the Universities at Shady Grove (USG) campus for two full years, identify an opportunity to support a Maryland state HBI program at the USG campus.

C. QUANTIFIABLE AND RELIABLE EVIDENCE AND DOCUMENTATION OF MARKET SUPPLY AND DEMAND IN THE REGION AND STATE

We are committed to ensuring the development of our healthcare workforce, which will serve growing regional, national, and global needs. Graduate-degreed oral health leaders can provide high-level care and assume leadership roles that shape comprehensive health care delivery and policy. Moreover, professionally accountable graduate-degreed oral health leaders can educate other health professional leaders and collaborate with them to establish needed in-house programs. Maryland's economy will, of course, stand to benefit from the introduction of a highly trained oral healthcare workforce. As we mentioned earlier, CDHL graduates will qualify for those positions that go beyond private practice and require an enhanced dental hygiene skillset, for which master's-level instruction is necessary.

The program reached out to two distinct groups in order to demonstrate market demand and the UMSOD's unique suitability to answer it: Dental hygiene leaders in the community were engaged, while current baccalaureate students at UMSOD, UMSON, and the University of Maryland, College Park (UMCP) were surveyed. In addition, a review of available dental hygiene leadership positions was conducted using online job search websites. The quantifiable and reliable data sources confirm the need for a dental hygiene oral health leadership role, given community support, interest from regional student, and the number of current vacancies.

The Maryland Dental Hygienists' Association president noted that:

[T]here is a market and community value. In Maryland and across the country, access to care remains a problem. Many residents are finding it hard to find a provider that can treat them. Having a dental hygiene oral health leader adds a peg to the access to care wheelhouse to help residents achieve oral health. (Appendix C)

Of current UMSOD, UMSON, and UMCP students surveyed, 42 percent "somewhat agreed" or "totally agreed" that if a master of science in CDHL program were offered at Shady Grove, they would consider applying within the next three years. In regards to specific employment prospects, regional and national vacancy opportunities that preferred graduate-degreed dental hygiene candidates were identified. Moreover, regional vacancy opportunities include mid-level positions in the following areas: instruction and teaching, such as a dental hygiene clinical instructor at Howard Community College; and clinic management and coordination, such as a dental hygiene clinic coordinator at Education Affiliates. Looking nationally, a growing number of vacancies in community health and corporate dentistry leadership preferred graduate-degreed dental hygiene candidates, too, such as the lead public health dental hygienist at Staywell Health Care, health education coordinator at County of El Dorado (Calif.), and dental hygienist at Peak Dental Services. (For additional details on market research results, refer to Appendix C.)

D. REASONABLENESS OF PROGRAM DUPLICATION

UMSOD offers the only baccalaureate dental hygiene program in Maryland. The progressive curriculum provides a higher level of learning and a broad perspective that produces tomorrow's leaders, motivators, and educators in the field of dental hygiene. Our established and credible baccalaureate dental hygiene program provides the foundation to provide the only graduate dental hygiene program in the state.

E. RELEVANCE TO HIGH-DEMAND PROGRAMS AT HISTORICALLY BLACK INSTITUTIONS (HBIS)

There is no duplication of a similar program at any HBI.

F. RELEVANCE TO THE IDENTITY OF HISTORICALLY BLACK INSTITUTIONS (HBIS)

There is no duplication of a similar program at any HBI.

G. ADEQUACY OF CURRICULUM DESIGN, PROGRAM MODALITY, AND RELATED LEARNING OUTCOMES

1. Describe how the proposed program was established, and also describe the faculty who will oversee the program.

The CDHL program is a dual-degree program intended for students who have already earned a baccalaureate or higher degree from a regionally accredited college or university in a field other than dental hygiene and who also have completed the prerequisite coursework for the bachelor of science in dental hygiene program. An increasing number of leadership positions for dental hygienists has created a demand for graduate education in research, scholarly writing, scientific communication, management, traditional and online teaching, program management, and advanced community and interprofessional healthcare practice.

Partnering the existing bachelor of science degree in dental hygiene with the master of science degree prepares graduates to provide primary dental hygiene clinical care and advanced dental hygiene leadership skills alongside their educational, management, consultative, and research expertise in community, hospital, and interprofessional settings, as well as in private industry. Dual-degree students achieve clinical competency in the provision of dental hygiene services for all patient populations, including pediatric, adolescent, adult, geriatric, medically compromised, and individuals with special needs, as well as the spectrum of periodontally involved patients. Students also gain advanced skills in assessing, diagnosing, planning, implementing, evaluating, and disseminating information about oral health promotional programs in community-based health care settings.

While pursuing the existing bachelor's in dental hygiene, students will be dually enrolled in graduate courses in order to earn their master of science simultaneously. The courses taken for the CDHL master of science degree supplement the existing knowledge and skills gained in the bachelor's program with graduate curricula aimed at positioning students to achieve excellence in research, scholarly writing, scientific communication, interprofessional healthcare management and delivery, health promotion, and educational methodology. Division of Dental Hygiene faculty members in the UMSOD's Department of Advanced Oral Sciences and Therapeutics will oversee the program's curriculum and the clinic at the Shady Grove campus. Course masters will come from the UMSOD, the University of Maryland Graduate School, the University of Maryland School of Medicine (UMSOM), and UMB's Health Sciences and Human Services Library (HS/HSL). The program director from the Division of Dental Hygiene will report to both the director of the Division of Dental Hygiene and the chair of the Department of Advanced Oral Sciences and Therapeutics. This program will commence at Shady Grove in order to situate students in an interprofessional environment with other health and human services professions.

The CDHL program learning experiences will develop and strengthen the knowledge and skillsets of graduates, allowing them to pursue specialized career goals and assume leadership roles in a wide variety of clinical, educational, and public health care settings. Notably, CDHL students will obtain the clinical, educational, research, and managerial skills necessary to implement evidence-based practices in a rapidly changing health care delivery system. Self-evaluation and self-reflection will be encouraged throughout the program, and students will have

Table 2: Faculty Resources

Course Title	Course Master
New Clinical Dental Hygiene Leader Courses, UMSOD	
DHYG 611: Research and Technical Writing (4 credits)	Jacquelyn Fried, RDH, MS
DHYG 612: Communicative Oral Health Literacy and Advocacy (1 credit)	Lisa Bress, RDH, MS
DHYG 613: Scientific Method and Writing (1 credit)	Jacquelyn Fried, RDH, MS
DHYG 621: Research Seminar (3 credits)	Jacquelyn Fried, RDH, MS
DHYG 622: Practicum and Capstone I (5 credits)	Sheryl Syme, RDH, MS
DHYG 623: Practicum and Capstone II (5 credits)	Sheryl Syme, RDH, MS
DHYG 624: Foundations of Education (3 credits)	Sheryl Syme, RDH, MS
Health Science, UMB Graduate School	
MHS 600: Introduction to Library Resources and Scholarly Writing (1 credit)	Isabell May, PhD
MHS 602: Legal and Ethical Issues for Health, Human Services, and Clinical Professionals (2 credits)	Sarah Archibald, PhD, MS, MA, CCEP
MHS 615: Biostatistics for the Health Professional (3 credits)	Larry Magder, MPH, PhD
MHS 652: Communication and Leadership (3 credits)	Donny Ard, MHA, PA-C

opportunities to share and demonstrate their experiences, knowledge, and skills interprofessionally.

Courses will be taught and led by experienced graduate faculty members and academicians who have excelled at teaching in traditional and online formats. Table 2 provides the faculty course masters for the proposed program.

2. Describe educational objectives and learning outcomes appropriate to the rigor, breadth, and (modality) of the program.

The CDHL program is designed to guide students to the achievement of specific competencies in interprofessional health care delivery and education, leadership, and scholarship.

The CDHL program competencies identify and organize the knowledge, skills, and attitudes graduates must attain upon completion of the bachelor's and master's degrees. These competencies define the content of the curriculum, state what graduates must know and be able to do after completing the program, and establish a basis for the course content in the dual-degree program.

The educational objectives of the CDHL program are for students to:

- Demonstrate the skills required of a competent dental hygiene leader, including advancing the knowledge base of the profession, maintaining ethical practice standards, adhering to regulatory requirements, communicating effectively in oral and written formats, demonstrating cultural competence, and addressing the oral health care needs of diverse and complex populations groups.
- Develop a commitment to providing clinical dental hygiene care using contemporary professional knowledge, judgment, skills, and self-assessment processes to adapt practices as advances are made in evidence-based health care and interprofessional health care delivery systems.
- Apply the principles of ethical reasoning, ethical decision-making, and professional responsibility as they pertain to the academic environment, research, patient care, and interprofessional practice management.
- Develop strong scientific writing and research skills by learning about the research process, research design, and implementation, and sharing scholarly findings with other professionals through written publications and presentations at conferences and workshops under the guidance of mentors.
- Develop strong interprofessional relationships with faculty members, students, and mentors through the interprofessional clinical dental hygiene site and community practica, placing an emphasis on scholarship throughout the dual-degree program.
- Serve the community in a variety of private and public health settings and utilize information systems and technologies to improve patient health care outcomes.
- Engage in, conduct, disseminate, and demonstrate the scholarly application of knowledge and skills acquired in supervised community-based health interprofessional care settings.

- Lead in the promotion of health and prevention of disease by designing, providing, evaluating, and managing the care of a variety of patient populations with complex treatment and rehabilitative needs.
- Assume the responsibilities of a successful dental hygiene leader, including solving problems and making decisions in interprofessional settings; adapting to community health settings; communicating effectively; building relationships with patients, peers, faculty members, and mentors; and managing large and small projects involving interdisciplinary team members.
- Collaborate with other health care professionals to assess, provide a dental hygiene diagnosis, plan, implement, and evaluate patient health and social outcomes for diverse populations in a variety of health care settings.
- Engage in independent critical-thinking and interprofessional practice experiences that center on evidence-based decision-making.

The intended learning outcomes of the CDHL program are for students to be able to:

- Demonstrate ethical and professional conduct and adhere to regulatory principles in clinical dental hygiene, community health interprofessional practice, and research.
- Assess, plan, implement, and evaluate dental hygiene services for individuals and community groups as an integral member of the health team.
- Recognize the roles of members of the health-care team and that the dental hygiene leader functions as a member of the dental team and plays a significant role in the delivery of comprehensive patient health care.
- Describe the dental hygiene process of care as an integral component of total patient care and preventive strategies.
- Recognize the medical, dental, cultural, social, and behavioral influences impacting disease and health and the delivery of health services to individuals and communities.
- Demonstrate effective interpersonal written and oral communication skills during individual patient and community health interactions and with other members of the health care team.
- Initiate and assume responsibility for assessing the oral health needs of community-based programs, planning an oral health program to include health promotion and disease prevention activities, implementing the planned program, and evaluating the effectiveness of the implemented program in an interprofessional setting.
- Explain the laws which govern the practice of dental hygiene and how to access licensure requirements, rules, regulations, and state practice acts as a mechanism guiding professional judgement and practice.
- Demonstrate self-assessment skills and a commitment to lifelong learning and professional growth in the creation and presentation of a professional portfolio.
- Contribute to improving the knowledge, skills, and values of the dental hygiene profession by developing a capstone paper of publishable quality and sharing findings of the capstone culminating project.

3. Explain how the institution will:

a. Provide for assessment of student achievement of learning outcomes in the program

Learning outcomes are defined for each course and presented in detail in each course syllabi in the program. The course grading schema, educational presentation format, and description of grading criteria are clearly presented in each course syllabi. Course content, learning activities, and assessment mechanisms are in alignment with course outcomes and provide a pathway for achieving competence in all components of the graduate curriculum. Exams, assignments, quizzes, projects, papers, written and oral presentations, the capstone portfolio, and other assessments contain clearly defined evaluation criteria and procedures. Courses are periodically reviewed by the Dental Hygiene Curriculum Committee to assess for sufficient depth, scope, sequence of instruction, and quality to ensure achievement of the program's defined learning outcomes.

b. Document student achievement of learning outcomes in the program

UMB has optimal educational resources at the campus level as well as within the individual professional schools, which provide the best teaching and learning experiences possible and enable the achievement of excellence in all of its programs' courses. Courses are designed with learning outcomes that are appropriate to the rigor and depth of graduate coursework, and faculty members strive for consistency, coherence, equivalency, and academic excellence among the courses in the program offered in both traditional and online instructional formats. All courses assess student achievement of defined learning outcomes through regular and formal educational assessments. Student achievement of learning outcomes is documented in Blackboard, the course management system used at UMB. Students have access 24/7 to individual course assessment grades, grading rubrics, and course information.

Review of curriculum occurs on an ongoing basis at UMSOD by the Subcommittee for Course Reviews of the Dental Hygiene Curriculum Committee, which evaluates individual courses offered in the Division of Dental Hygiene. The Dental Hygiene Curriculum Committee is comprised of dental and dental hygiene faculty, student representatives, administrators at the school, the HS/HSL liaison, and alumni of the dental hygiene program. Additionally, confidential student feedback is obtained by UMSOD's Office of Evaluation near the end of each semester, which is submitted to the relevant faculty member, Division of Dental Hygiene director, Department of Advanced Oral Sciences and Therapeutics chair, and the senior associate dean for academic affairs.

4. Provide a list of courses with title, semester credit hours and course descriptions, along with a description of program requirements

The bachelor of science degree program in dental hygiene has been in existence since graduating its first class in 1972. The most recent accreditation reaffirmation for the UMSOD and the

bachelor of science dental hygiene program, conducted by the Committee on Dental Accreditation (CODA), occurred May 8-10, 2018.

While pursuing the existing bachelor's degree in dental hygiene, CDHL program students will be dually enrolled in graduate courses.

Course Descriptions and Credit Hours for Master of Science Degree (30 Total Credit Hours)

DHYG 611: Research and Technical Writing (3 credit hours) (new course)

Jacquelyn Fried, RDH, MS

This course is designed to 1) introduce students to the conduct of research, to heighten student awareness of the importance of research as the foundation and knowledge base for the profession of dental hygiene; 2) provide students with the skills necessary to critically evaluate the scientific literature; and 3) prepare students to communicate in writing to answer questions, explain ideas clearly, and demonstrate the conventions of organization and style appropriate in professional writing. Students learn how to provide peer critiques and self-evaluate, determining how and when to revise and edit their writing in order to produce professional written documents. Students will be asked to pose their own research questions and hypotheses, identify the elements of effective research, interpret research findings, and evaluate the quality of research publications.

MHS 600: Introduction to Library Resources and Scholarly Writing (1 credit hour) (existing course)

Isabell May, PhD

This course is designed to provide graduate learners the opportunity to develop skills in both accessing relevant online library resources and engaging in scholarly writing. The portion of the course focusing on library resources teaches and strengthens lifelong research and information competency skills by introducing students to the nature of research and the role of a library in the research process. Students learn the core concepts of information retrieval and essential techniques for finding, evaluating, analyzing, organizing, and presenting information.

The topics covered include: using online catalogs to locate books and other library resources; developing research strategies; exercising critical thinking to evaluate information; applying critical search techniques to electronic databases; understanding citation formats; and using the internet as a research tool. The scholarly writing of the course will place emphasis on organization, effective conveyance of thoughts through written words, and writing for multiple types of audiences. Students will have the opportunity to improve both their academic writing and their research skills as they write a literature review or a proposal. Emphasis is placed on conventions of scholarly writing and organizational strategies as well as grammar, editing, and usage.

DHYG 612: Communicative Health Literacy and Advocacy (1 credit hour) (new course)

Lisa Bress, RDH, MS

Research has shown that health literacy and health outcomes are directly linked. Additionally, individuals with low oral health literacy skills often have poor oral health knowledge, behaviors and health status, lower preventive service utilization, and increased oral health care costs. Students will learn to teach and create social and educational processes where patients and community groups obtain, process, and develop understanding of basic oral and craniofacial information and the services needed to make impactful oral health decisions.

DHYG 613: Scientific Method and Writing (1 credit hour) (new course)

Jacquelyn Fried, RDH, MS

This course is designed to develop students' scientific writing skills. Course focuses will be on learning and applying the principles of effective scientific writing and written research communication. Students will learn the steps of the research process, identify them in published works, and evaluate their quality. Throughout this course, adherence to ethical decision-making in research and adherence to scholarly writing style guides are emphasized.

DHYG 621: Research Seminar (3 credit hours) (new course)

Jacquelyn Fried, RDH, MS

This course provides the foundation for capstone project development. Students will receive in-depth information on proposal writing, the specific parts of the proposal, and what is included in each. Following established guidelines, students will assess the quality of selected proposals. They will refine their writing skills by drafting a mini-proposal on a topic of interest. In preparation for publication of their capstone projects, students will learn the rules of proper citation and authorship. Mechanisms for managing research, drafts, writing processes, logs, citation bibliography, manuscript writing, reference citation, and adherence to journal guideline will be discussed. Students will develop a capstone portfolio that includes their written works and relevant guidelines and protocols. Mentee/mentor relationships will be a focus with students devising a potential plan for selecting, and engaging with, a mentor.

DHYG 622: Practicum and Capstone I (4 credit hours) (new course)

Sheryl Syme, RDH, MS

Students will explore the diverse roles of dental hygienists in the health care system, seek the advanced knowledge and skills necessary to participate in these roles, and focus their interest in a chosen professional role through 1) community-based clinical service delivery; 2) interprofessional collaboration; 3) service learning; 4) hands-on experiences; and, most critically, 5) self-directed learning. Students will compose and revise a capstone paper under the guidance and approval of a dental hygiene faculty mentor. Students spend a minimum of 135 hours in hands-on activities at their practicum site and develop and submit target capstone deliverables (90 hours) in preparation for continuation to DHYG 623: Practicum and Capstone II.

MHS 615 (PH 621): Biostatistics for the Health Professional (3 credit hours) (existing course)
Larry Magder, MPH, PhD

We live in a time exploding with data — everything from individual wearable technology to community and national profiles, yet few students are prepared with the quantitative skills to analyze and evaluate that data and draw conclusions. This course will present basic statistical methods to a broad range of medical or public health problems. The course will emphasize the use of these methods and the interpretation of results using biomedical and health sciences applications, helping clinicians move beyond the data to decisions.

DHYG 623: Practicum and Capstone II (5 credit hours) (new course)
Sheryl Syme, RDH, MS

Students continue exploring diverse roles of dental hygienists in the health care system at their practicum sites with increasing self-directed learning. Through faculty feedback and rigorous self-assessment, students will rethink, edit, rewrite, and finalize their capstone papers. Students prepare for and deliver the final oral defense presentations and capstone portfolios at UMB before an invited audience of the relevant faculty capstone mentor and committee, CDHL and Dental Hygiene Program directors, and invited faculty members and graduate students. Since research typically is a collaborative process, this course will emphasize skills for providing and receiving constructive feedback. Students will be guided to publish their research utilizing more highly developed critical-thinking skills and greater self-directed learning. Each student spends a minimum of 135 hours in hands-on activities at the practicum site and 90 hours preparing for the finalization and presentation of the capstone paper.

DHYG 624: Foundations of Education (3 credit hours) (new course)
Sheryl Syme, RDH, MS

This course provides a foundation in the educational philosophies, learning theories, and teaching strategies requisite for the development, implementation, and assessment of curriculum applicable to health professional roles in commercial, private, public, and professional industries and organizations. Learners will understand educational concepts and principals of teaching; roles and responsibilities of faculty and instructional leaders; and state, professional, and national educational standards, and will match educational methods with desired learning outcomes. Participants will learn a variety of teaching techniques and share successful teaching delivery strategies.

MHS 602: Legal and Ethical Issues for Health, Human Services, and Clinical Professionals
(2 credit hours) (existing course)
Sarah Archibald, PhD, MS, MA, CCEP

This eight-week, 2-credit online course will explore ethical and legal issues that are timely and germane to health professionals. This course is based on the premise that to act in an ethical

manner means to engage in conduct according to accepted principles, and to improve moral confidence and moral action we must prepare the next generation of health professionals with the ethical resources, tools, and skills. A case-based learning design will be utilized to engage students in ethical discussion, exploration, and analysis with the goal of determining ethical and legal action that is sound and logical. This course will prepare students to make ethical health care decisions in the future.

MHS 652: Communication and Leadership (3 credit hours) (existing course)

Donny Ard, MHA, PA-C

Students learn effective management and communication skills through case study analysis, reading, class discussion, and role playing. The course covers topics such as effective listening, setting expectations, delegation, coaching, performance, evaluations, conflict management, negotiation with senior management, and managing with integrity.

Table 3: Dual-Degree Clinical Dental Hygiene Leader (CDHL) Program Course Sequence	
Semester and Course Number/Title	Credits
Summer I, Year I	
DHYG 611: Research and Technical Writing	3 Credits
MHS 600: Introduction to Library Resources and Scholarly Writing	1 Credit
MHS 602: Legal and Ethical Issues for Health, Human Services, and Clinical Professionals	2 Credits
Graduate Summer I Year I Credits	6 Credits
Summer, I Year I Total Credits	6 Credits
Fall I, Year I	
DHYG 612: Communicative Health Literacy and Advocacy	1 Credit
Graduate Fall I Year I Credits	1 Credit
DHYG 311: Prevention and Control of Oral Diseases I	6 Credits
DHYG 312A: Head and Neck Anatomy	3 Credits
DHYG 312H: Oral Histology and Embryology	1.5 Credits
DHYG 312M: Microbiology	1.5 Credits
DHYG 314: Periodontics for the Dental Hygienist I	3 Credits
DHYG 316: Oral Radiology I	2 Credits
B.S. Professional Fall I Year I Credits	17 Credits
Fall I, Year I Total Credits	18 Credits
Spring I, Year I	
DHYG 613: Scientific Method and Writing	1 Credit
Graduate Spring I, Year I Credits	1 Credit
DHYG 321: Prevention and Control of Oral Diseases II	5 Credits
DHYG 323: Patients with Special Needs	2 Credits
DHYG 324: Methods and Materials in Dentistry	2 Credits

DHYG 325: General Pharmacology and Therapeutics	3 Credits
DHYG 326: Oral Radiology II	2 Credits
DHYG 327: Periodontics for the Dental Hygienist II	2 Credits
DHYG 328A: General and Oral Pathology	3 Credits
B.S. Professional Spring I Year I Credits	19 Credits
Spring I, Year I Total Credits	20 Credits

Summer II, Year II	
DHYG 621: Research Seminar	4 Credits
MHS 652: Communication and Leadership	3 Credits
Graduate Summer II Year II Credits	7 Credits
Summer II, Year II Total Credits	7 Credits
Fall II, Year II	
DHYG 622: Practicum and Capstone I	4 Credits
MHS 615: Biostatistics for the Health Professional	3 Credits
Fall II Year II Graduate Credits	7 Credits
DHYG 411: Advanced Clinical Practice I	5 Credits
DHYG 412: Innovative Dental Hygiene Practice	2 Credits
DHYG 417: Community Oral Health	3 Credits
DHYG 419: Dental Anesthesia and Sedation	2 Credits
B.S. Professional Fall II Year II Credits	12 Credits
Fall II, Year II Total Credits	19 Credits
Spring II, Year II	
DHYG 623: Practicum and Capstone II	5 Credits
DHYG 624: Foundations of Education	3 Credits
Graduate Spring II Year II Credits	8 Credits
DHYG 421: Advanced Clinical Practice II	5 Credits
DHYG 424: Special Topics	1 Credit
B.S. Professional Spring II Year II Credits	6 Credits
Spring II, Year II Total Credits	14 Credits
<i>BS and MS awarded Spring II, Year II</i>	
SUMMARY	
UMB Professional BS Degree Credits Earned	54 Credits
UMB Graduate MS Degree Credits Earned	30 Credits
Total UMB Credits Earned for BS* and MS Degrees	84 Credits

5. Discuss how general education requirements will be met, if applicable.

Students complete general education requirements prior to entering this dual-degree program. Students are admitted having already completed a prior baccalaureate degree in another field, while also having completed general education and basic science requirements.

6. Identify any specialized accreditation or graduate certification requirements for this program and its students.

The American Dental Association's (ADA) Commission on Dental Accreditation (CODA) is the nationally recognized accrediting agency for dental and dental hygiene schools and programs. The authority to function as a nationally recognized accrediting agency is granted to CODA through its recognition by the U.S. Department of Education (DOE) as a specialty/programmatic accrediting body. The most recent CODA accreditation reaffirmation for UMSOD and the dental hygiene program occurred during the May 8-10, 2018 site visit.

The Division of Dental Hygiene is located in the UMSOD's Department of Advanced Oral Sciences and Therapeutics. The University of Maryland, Baltimore (UMB) which houses the University of Maryland School of Dentistry as well as other professional schools on the campus, is accredited by the Middle States Commission on Higher Education, the DOE-recognized regional accrediting body for colleges and schools. The most recent reaffirmation of Middle States accreditation occurred on June 23, 2016.

Table 4: BS Dental Hygiene Courses and MS Course Equivalency

Current BS Dental Hygiene Courses	Enhanced MS Courses Taken in Place of BS Course with Equivalent Content
DHYG 425: Dynamics of Health Care (2 credits)	MHS 602: Legal and Ethical Issues for Health, Human Services, and Clinical Professionals (2 credits)
DHYG 329: Oral Health Literacy (1 credit)	DHYG 612: Communicative Health Literacy and Advocacy (1 credit)
DHYG 427: Health Care Management (2 credits)	MHS 652: Communication and Leadership (3 credits)
DHYG 416: Principles of Scientific Evidence (2 credits)	MHS 615: Biostatistics for the Health Professional (3 credits)
HYG 413: Community Service-Learning I (2 credits)	DHYG 622: Practicum and Capstone I (4 credits)
DHYG 423: Community Service-Learning II (1 credit)	DHYG 623: Practicum and Capstone I (5 credits)
DHYG 414: Educational Program Development (2 credits)	DHYG 624: Foundations of Education (3 credits)

CODA's Standard 2-18 requires that dental hygiene programs teach and prepare students for all of the authorized clinical responsibilities required for initial dental hygiene licensure as defined

by the state's dental licensing board. The program is full-time and is comprised of dual bachelor's and master's degrees both awarded in Spring II, Year II. Students must fulfill all of the respective degree requirements to receive both degrees.

The master's capstone is designed as a supervised clinical dental hygiene leader experience that serves as both a scholarly demonstration of the knowledge and skills attained as a clinical dental hygiene leader as well as the community-based clinical and leadership practices acquired as part of the baccalaureate and graduate programs. The capstone functions as the culminating experience for the CDHL program and must be successfully defended with requisite presentation and completion of the capstone portfolio. The UMSOD will award both the bachelor's and the master's degrees upon the student's successful completion of respective program requirements. Requirements for both degrees must be successfully completed for dual receipt of both university degrees.

The curriculum of the dual-degree program enables students to sit for the National Board Dental Hygiene Exam (NBDHE) and the Commission on Dental Competency Assessment (CDCA) examinations to qualify for licensure as a registered dental hygienist (RDH). Students will take these exams in the final spring semester of the CDHL program. The NBDHE is conducted by the ADA's Joint Commission on National Dental Examinations. A minimum score of 75 percent is required to pass the NBDHE. A student in a dental hygiene program accredited by CODA is eligible for examination when the dental hygiene program director certifies the student is prepared in all NBDHE disciplines. This occurs in Spring 2, Year 1.

The CDCA Examination for dental hygienists consists of two exams taking place at two different times:

1. The Computer Simulated Clinical Examination (CSCE), a computer-based examination taken at a local Prometric Testing Center; and
2. The Patient Treatment Clinical Examination (PTCE), held at a clinical examination site such as UMSOD.

A score of 75 percent is required to pass each exam and both parts (clinical and computer-based) must be taken within 18 months. Students also complete the CDCA Local Anesthesia and Nitrous Oxide Examinations after completing DHYG 419: Dental Anesthesia and Sedation, a course taken during the summer of the first year. A score of 75 percent or better is required to pass each of these exams. These additional examinations are a part of the certification process — in addition to specific didactic and clinical training requirements determined by the Maryland State Board of Dental Examiners — for dental hygienists permitted to administer local anesthesia and nitrous oxide as pain control methods upon graduation.

Notably, UMSOD undergraduate dental hygiene students have had a long history of highly successful pass rates on all didactic and clinical board examinations, including the past five years.

7. If contracting with another institution or non-collegiate organization, provide a copy of the written contract.

Not applicable.

8. Provide assurance and any appropriate evidence that the proposed program will provide students with clear, complete, and timely information on the curriculum, course and degree requirements, nature of faculty/student interaction, assumptions about technology competence and skills, technical equipment requirements, learning management system, availability of academic support services and financial aid resources, and costs and payment policies.

The UMSOD Division of Dental Hygiene maintains active webpages informing students of admissions, program, and degree requirements; course and curriculum information; expectations and requirements regarding use of computers and educational technology applications to be used in the program; and updated policies that are linked to the Office of Academic Affairs, Office of Admissions, and the Department of Advanced Oral Sciences and Therapeutics. Division of Dental Hygiene faculty members work closely with the UMSOD's web moderator team and have a process in place for timely updates of web and orientation materials.

A new student orientation program conducted online using Blackboard, the UMSOD's course management system, and in-person delivery formats will convey timely information to incoming students before they begin the CDHL program. The orientation program conveys support services, educational technology, tuition and fees, student financial aid, UMSOD dress code and uniform, technical standards, and resources to students prior to the start of classes.

The orientation program is modeled after existing new-student programs for our undergraduate dental hygiene students, but includes CDHL-specific program orientation information on curriculum, faculty and student communication and interaction, trainings on educational technology use, as well as mandatory UMSOD- and UMB-specific trainings on clinical technology and campus technology practices.

The Division of Dental Hygiene program director also serves as the chair for the Dental Hygiene Student Progression Committee and conveys issues of progression directly to students and monitors student progress in all programs offered in the division. The program director is also a trained web moderator and serves as chair of the Dental Hygiene Curriculum Committee.

9. Provide assurance and any appropriate evidence that advertising, recruiting, and admissions materials will clearly and accurately represent the proposed program and the services available.

The UMB Cross-Functional Services Consortium, consisting of the UMB bursar, UMB registrar, the assistant vice president for university student financial assistance and enrollment services, and the assistant director of student enterprise applications, provides support and guidance for

submitting new program materials encompassing student support services, including federal and state financial aid.

Upon program approval, the director of dental hygiene recruitment and admissions will begin advertising the new CDHL program on the UMSOD website; in print recruitment materials distributed to feeder institutions and academic advisers in USM institutions; and will advise prospective students about the start date for the dual-degree CDHL program. The director will adhere to UMB-approved mechanisms for recruitment and advertising, and comply with federal guidelines for program establishment enabling the awarding of financial aid.

H. ADEQUACY OF ARTICULATION

All applicants must complete 57 credits of prerequisite, preprofessional basic science and general education coursework taken at regionally accredited colleges or universities prior to entering the dental hygiene program. (See Table 5 below.) Basic science courses must have been completed no more than five years prior to the application for admission.

Table 5: Basic Science and General Education Preprofessional Courses

Preprofessional Courses	Credit Hours
<i>Science Courses with Labs:</i>	
Anatomy and Physiology I and II	8 credits
General Biology	4 credits
Inorganic or General Chemistry	4 credits
Microbiology	4 credits
Organic Chemistry	4 credits
<i>Non-Science Courses:</i>	
Basic Statistics	3 credits
English Composition I and II	6 credits
English Technical Writing	3 credits
Humanity Elective	3 credits
Introduction to Psychology	3 credits
Introduction to Sociology	3 credits
Principles of Nutrition	3 credits
Public Speaking	3 credits
Human Growth and Development	3 credits
Social Science Elective	3 credits
57 credits (total)	

Appendix H lists these 57 credits of prerequisites as they appear on the UMSOD Division of Dental Hygiene webpage. The UMSOD maintains articulation with USM colleges and

universities in the “Recommended Transfer Programs” section on the website for [ARTSYS](#), the inter-institutional articulation system for USM universities and colleges.

Many students enter into the current dental hygiene baccalaureate program already holding a baccalaureate degree in another discipline. (See Table 6 below.) A master’s degree will give that baccalaureate the ability to become a dental hygienist at the graduate level. This graduate will fulfill the requirements to sit for the written and clinical boards and licensure. Importantly, it will also create a caregiver with advanced education beyond the clinical realm.

Table 6: Students with Prior Bachelor’s Degrees Entering Current UMSOD Dental Hygiene BS Program	
Year Entered Current Dental Hygiene Bachelor of Science Program	Percentage of Students with Baccalaureates Upon Entering
2014	9.5 percent or 2 out of 21 students
2015	14.3 percent or 3 out of 21 students
2016	12.5 percent or 2 out of 16 students
2017	25 percent or 4 out of 16 total students
2018	25 percent or 4 out of 16 total students

The UMSOD dental hygiene program has relationships with UMSON (located on the UMB campus) and UMCP, and recent polling of students at those entities who might be interested in graduate school have produced positive survey responses. (Refer to Appendix C).

More specifically, given that dental hygiene is rooted in public health, students with a bachelor of science in public health are excellent candidates for the CDHL program. Surveys targeting nursing students have also generated positive results. Combining a nursing education with a dental hygiene education and the skills of graduate level education creates a dual provider who can easily combine medicine and dentistry and serve as a catalyst in interprofessional collaboration.

The CDHL program’s location of Shady Grove provides vast opportunities for state university partnerships. In addition to the UMSON and UMSOP programs at USG, the campus houses over 80 undergraduate and graduate programs from the following state universities: Bowie State University; Salisbury University; Towson University; University of Baltimore; University of Maryland, Baltimore County; University of Maryland, College Park; University of Maryland Eastern Shore; and University of Maryland University College. The USG collaborative environment yields elevated options for students who have recently obtained a baccalaureate degree in another USG undergraduate program, such as biology, chemistry, or psychology (see Appendix H for specific prerequisite coursework), as well as providing a CDHL student pipeline.

I. ADEQUACY OF FACULTY RESOURCES

Our diverse faculty members focus on teaching, research, and service based on the philosophy, policies, strategic plan, and vision statement of UMSOD, UMB, and the USM. Faculty members who will be teaching in this program are listed in Table 7 below.

Table 7: Faculty Members Teaching in CDHL Program		
Faculty Members	Classes	Employment Status
<p><i>Sheryl Syme, RDH, MS</i> Program Director Associate Professor Director of Dental Hygiene Curriculum Management Program in the Department of Advanced Oral Sciences and Therapeutics, School of Dentistry Graduate Faculty Member</p>	<ul style="list-style-type: none"> ▪ Patients with Special Needs ▪ Foundations of Education ▪ Community Oral Health ▪ Special Topics ▪ Practicum and Capstone I and II 	Full-time
<p><i>Jacquelyn L. Fried, RDH, MS</i> Dean's Faculty, School of Dentistry Graduate Faculty Member</p>	<ul style="list-style-type: none"> ▪ Research and Technical Writing ▪ Scientific Method and Writing ▪ Research Seminar 	Part-time
<p><i>Deborah L. Cartee, RDH, MS</i> Clinical Associate Professor and Junior Clinical Coordinator in the Dental Hygiene Program in the Department of Advanced Oral Sciences and Therapeutics, School of Dentistry Graduate Faculty Member</p>	<ul style="list-style-type: none"> ▪ Prevention and Control of Oral Diseases I ▪ Head and Neck Anatomy ▪ Prevention and Control of Oral Diseases II ▪ Dental Anesthesia and Sedation 	Full-time
<p><i>Lisa Bress, RDH, MS</i> Clinical Assistant Professor in the Department of Advanced Oral Sciences and Therapeutics, School of Dentistry Graduate Faculty Member</p>	<ul style="list-style-type: none"> ▪ Oral Health Literacy and Communication ▪ Innovative Dental Hygiene Practice 	Full-time

<p><i>Sharon Varlotta, RDH, MS</i> Clinical Assistant Professor in the Department of Advanced Oral Sciences and Therapeutics and School of Dentistry Graduate Faculty Member</p>	<ul style="list-style-type: none"> ▪ Oral Histology and Embryology ▪ Methods and Materials in Dentistry ▪ Innovative Dental Hygiene Practice 	Full-time
<p><i>MaryAnn Schneiderman, RDH, MS</i> Clinical Assistant Professor and Senior Clinic Coordinator in the Department of Advanced Oral Sciences and Therapeutics, School of Dentistry Graduate Faculty Member</p>	<ul style="list-style-type: none"> ▪ Periodontics for the Dental Hygienist I ▪ Periodontics for the Dental Hygienist II ▪ Advanced Clinical Practice I ▪ Advanced Clinical Practice II 	Part-time
<p><i>Jacqueline Dailey, RDH, MS</i> Assistant Professor in the Department of Oncology and Diagnostic Sciences, School of Dentistry Graduate Faculty Member</p>	<ul style="list-style-type: none"> ▪ Oral Radiology I ▪ Oral Radiology II 	Full-time
<p><i>John Basile, DDS, DMSc</i> Professor in the Department of Oncology and Diagnostic Sciences, School of Dentistry Graduate Faculty Member</p>	<ul style="list-style-type: none"> ▪ General and Oral Pathology 	Full-time
<p><i>Glenn Minah, DDS, PhD</i> Professor in the Department of Microbial Pathogenesis, School of Dentistry Graduate Faculty Member</p>	<ul style="list-style-type: none"> ▪ Microbiology 	Part-time
<p><i>Richard L. Wynn, PhD</i> Professor in the Department of Neural and Pain Sciences, School of Dentistry Graduate Faculty Member</p>	<ul style="list-style-type: none"> ▪ General Pharmacology and Therapeutics 	Part-time
<p><i>Isabel May, PhD</i> Director, Writing Center Senior Lecturer UMB Graduate School's Science Communication Program Graduate Faculty Member</p>	<ul style="list-style-type: none"> ▪ Introduction to Library Resources and Scholarly Writing 	Full-time
<p><i>Laurence Magder, MPH, PhD</i> Assistant Professor in Epidemiology and Preventive Medicine, School of Medicine Senior Lecturer Graduate Faculty Member</p>	<ul style="list-style-type: none"> ▪ Biostatistics for the Health Professional 	Full-time

<p><i>Sarah Archibald, PhD, MS, MA, CCEP</i> Research Integrity Officer Graduate Studies Instruction and Academic Programs, Graduate School Graduate Faculty Member</p>	<ul style="list-style-type: none"> ▪ Legal and Ethical Issues for Health, Human Services, and Clinical Professionals 	<p>Full-time</p>
<p>Donny Ard, MHA, PA-C Senior Lecturer Graduate School Graduate Faculty Member</p>	<ul style="list-style-type: none"> ▪ Communication and Leadership 	<p>Full-time</p>

J. ADEQUACY OF LIBRARY RESOURCES

The HS/HSL is one of the largest health sciences libraries in the United States, with a track record of user-centered innovative services and programs. Fifty-seven employees, including 27 faculty librarians, staff the library, including a librarian liaison assigned to UMSOD. The attractive and vibrant facility, which opened in 1998, serves as a hub for collaboration and learning with resources, programs, and tools that promote discovery, creativity, and innovation. With wireless connectivity throughout the building, the HS/HSL has 45 group study rooms; three computer classrooms; an Innovation Space, which includes 3D printers; a presentation and practice studio; gallery; and multiple technology-enhanced meeting spaces. Through HS/HSL's website, the UMB community has access to a full range of resources and services.

The HS/HSL supports the university's students, faculty members, and staff members in the schools of Dentistry, Medicine, Nursing, Pharmacy, and Social work; the Graduate School; the University of Maryland Medical Center; and other affiliated institutions. Research Connection, the library's suite of research services, is available for all programs on campus, and includes individual research consultations, a systematic review service, research impact assessment, reference assistance, and more. Faculty librarians have many years of instructional experience in the classroom, community, and the online environment. For over 30 years, the HS/HSL has provided liaison services, in which faculty librarians are assigned to work with specific user communities, such as UMSOD. These dedicated faculty librarians provide the following services to students:

1. Individualized research assistance for papers and projects;
2. An overview of the library's resources; and
3. Small-group or individual workshops on tools, such as RefWorks or specific databases.

A [dedicated webpage](#) for dental resources and oral health librarian support is available. In fiscal 2017, faculty librarians reached over 3,500 faculty members, staff members, and students through online and in-person instructional sessions offered through the curriculum and in library-sponsored workshops.

In that same year, the HS/HSL licensed 112 databases, 4,252 journals, 359,911 books (print), and 17,381 e-books. One hundred percent of the current journal subscriptions literature is available electronically. Through its interlibrary loan and document delivery service, library staff can acquire articles and other resources not available through the library's collections. These are secured through local, regional, and national networks, including the University System of Maryland and Affiliated Institutions (USMAI) library consortium, the National Library of Medicine's DOCLINE service, and the Online Computer Library Committee (OCLC), among others.

Students in this program will also have the opportunity to utilize the Priddy Library on the USG campus. The dedicated health and life sciences librarian will be their primary library contact on that campus. The Priddy Library is jointly administered by USG and the UMCP libraries as an off-site branch library. Students and faculty of the nine university partners that teach at the USG campus receive research, instruction, and curriculum support and services. UMCP is a member library of the USMAI library consortium, and therefore Priddy Library participates in consortium-wide resource sharing.

K. ADEQUACY OF PHYSICAL FACILITIES, INFRASTRUCTURE, AND INSTRUCTIONAL EQUIPMENT

The physical facilities, infrastructure, and instructional equipment are adequate to support the program. The physical facilities, infrastructure, and instructional equipment that will support the program will be comprised of existing equipment already located at UMSOD's Baltimore location and brand-new equipment that is being purchased to outfit the facility on the Shady Grove campus. Furthermore, our facilities, infrastructure, and equipment will support the distance learning needs of the dual-degree program. All hands-on experiences will take place at the USG location in the new 15-unit simulation lab or the new 24-chair clinical space. A high-speed internet connection will be present between the two facilities to allow for access to all academic resources located at USMSOD's Baltimore location. There will be nine offices for faculty and a large telemedicine room for communication services between the two sites.

Students will use the same hardware and software systems that current UMSOD students use. Email will be through our Office 365 environment; library accounts and complete journal searching ability will be via PubMed. More specifically, our educational technology systems will be:

1. Blackboard, a learning management system;
2. QuestionMark, a secure assessment system, and
3. Mediasite, a didactic capture software.

Information technology staffing will be provided by the existing 22 staff members at UMSOD in Baltimore, new staff members located at the USG site, and existing USG staff.

L. ADEQUACY OF FINANCIAL RESOURCES WITH DOCUMENTATION

The CDHL program will be coordinated through UMSOD and administered through a combination of the University of Maryland Graduate School and UMSOD. The program director and faculty members for each content area have been identified. Tuition will be administered through UMSOD. Tuition and general funds from the USM will constitute the basis of cost to deliver the curriculum. UMSOD does not foresee funding changes and anticipates the ongoing intention of funding provided as described in the memorandum of understanding (MOU) between USM, USG, and UMB. Please note that all building, facilities and infrastructure costs will be provided by the USM to Shady Grove. Financial resource adequacy to deliver curriculum costs can be seen in Tables L1 and L2 and supporting notes in Appendix L, as well as the accompanying MOU between USM, USG, and UMB.

M. ADEQUACY OF PROVISIONS FOR EVALUATION OF PROGRAM

Every 10 years, UMB undergoes a reaffirmation of its accreditation with the Middle States Commission on Higher Education. The process is an opportunity to strengthen the university through an independent comprehensive evaluation. Under the established university holistic institutional assessment model, we will ensure that the CDHL program is:

1. Responsive and accountable to its stakeholders;
2. Advances the university's mission and vision; and
3. Utilizes the assessment data and information to evaluate the effectiveness of its programs, both at the macro and micro levels, and improves the effectiveness while meeting reporting obligations to stakeholders.

UMSOD has numerous checks and balances to ensure quality control and student outcome achievement. Procedures for evaluating courses, faculty, and student learning outcomes will follow well-developed procedures at UMSOD. At course completion, courses and individual faculty members will be evaluated by students using an anonymous web-based survey. Collected by the Dean's Office, such evaluations are reviewed immediately by the course director and program director, as well as annually by the department chair. Student grading is based on, and outlined within, each course syllabus. The Dental Hygiene Curriculum Committee conducts annual peer reviews of courses.

Furthermore, the established Dental Hygiene Community Liaison Committee will provide workforce development and economic growth insight. To measure the adequacy of preparation for employment, graduates and employers are queried annually. Other issues will be addressed by the program director, division chief, and department chair.

Every student is assigned a faculty advisor to facilitate student success. Program orientation will contain a series of web conferences that will include a description to available online library resources. Overall student progress will be monitored by the program director, who will work with the student and his or her assigned advisor for continuous progression oversight.

CODA, the specialty accrediting agency recognized by the U.S. Department of Education, works to maintain the highest professional and ethical standards in the nation's dental schools and programs. CODA employs a collaborative peer review accreditation process to evaluate the quality of over 1,450 dental and dental-related education programs nationwide, including dental, advanced general dentistry, advanced specialty, clinical fellowship, and allied dental programs.

Every seven years, the accreditation process begins when a sponsoring institution submits an application to CODA. The institution then completes a comprehensive self-analysis and self-study report detailing its resources, curriculum, policies, and operational standards. CODA then undertakes a site visit, with its team members selected for their expertise in the program area. CODA site visitors conduct interviews with administrators, faculty members, staff members, and students to verify information in the self-study and ensure that the program meets minimum accreditation standards. The site visitors then write a detailed site-visit report based on their findings and share it with both the sponsoring institution and CODA administrators in Chicago.

CODA must ensure that the clinical portion of the program is fully accredited. Clinically, the program will be considered the bachelor of science portion of the CDHL. UMSOD will inform CODA of a program change with the addition of the CDHL and its Shady Grove location. A letter will state the program addition of students, faculty members, and location. CODA will need to visit the site to approve the location/facility. Upon accreditation, it will be part of the UMSOD Dental Hygiene program and be inclusive in the seven-year reaccreditation process.

N. CONSISTENCY WITH THE STATE'S MINORITY STUDENT ACHIEVEMENT GOALS

A key feature of UMB's mission and strategic planning involves respecting, valuing, and achieving diversity. The Strategic Plan states:

Diversity represents a core value, defined as being "committed to a culture that is enriched by diversity, in the broadest sense, in its thoughts, actions, and leadership." UMB embraces and celebrates diversity, as well as cultural competence.

Reflecting this philosophy, the current dental hygiene program at UMSOD embraces student development of cultural competence. This same philosophy will provide the foundation for our proposed graduate program. CDHL students will provide clinical care to Marylanders of all backgrounds, resulting in a safety net for Montgomery County and neighboring communities. The patients seen will represent a rich fabric of diversity. Dental hygiene students learn about cultural diversity in both their clinical and didactic courses and, clearly, through patient care, yielding cultural competency. They also spend the preponderance of their required community service hours at sites where minorities and those with health inequities are treated. These vulnerable populations receive our same level of top quality, culturally competent care.

As outlined in the [Maryland State Plan for Postsecondary Education \(2017-2021\)](#),⁴ Maryland also has a goal of expanding educational opportunities for minority and educationally disadvantaged students. The proposed program aims to address both UMB's and the state's cultural diversity goals. Historically, the dental hygiene program has long worked toward achieving these goals, striving to enroll a diverse student body. The pipelines that have enabled us to reach out to these students will remain in place as we recruit for the CDHL program.

Over the past four academic years, our bachelor of science in dental hygiene program classes have been a diverse body. The entering class of 2017 was one-third non-Caucasian. Our baccalaureate program at UMB also offers a degree completion program that enables students who hold an associate degree in dental hygiene to obtain a bachelor's degree. The CDHL students will be enrolled in hybrid online sections of each bachelor's course, which will be run simultaneously with traditional sections held in Baltimore and overseen by the course director and/or section faculty leader.

The proposed program and its clinical facility are located in a culturally diverse metropolitan area of Montgomery County, providing easy access to enrollees of varying backgrounds. The College Park campus is relatively close geographically and will be a desirable pipeline for diverse students. The rest of Prince George's County (where UMCP is located) and metropolitan Washington, D.C. will also be pipelines to diversity.

Our program will have other attractions that make it amenable to an array of students from diverse communities. First, distance technology will be the platform for some course delivery. Distance learning provides educational opportunities for students who otherwise might not be able to participate in a traditional classroom environment. Internet-based degree programs embracing core values emphasizing social change and community engagement have been highly attractive to historically underrepresented groups.⁵ For rural and isolated communities, distance learning can be the vehicle that conquers geography and space between teachers and students. Distance learning not only achieves access, but can also help ensure success, as the technology of distance learning meets the needs of various learners, addresses different learning styles, and provides for various instructional approaches. Essentially, with the proper use of its varied technology, distance learning can address the needs of all populations. Emphasizing interactive learning, distance technology embraces a shift from passive to active learning and from competition to collaboration. Furthermore, effective collaborative learning values diversity.^{6, 7}

O. RELATIONSHIP TO LOW PRODUCTIVITY PROGRAMS IDENTIFIED BY THE COMMISSION

The proposed CDHL program is not directly related to an identified low-productivity program.

P. ADEQUACY OF DISTANCE EDUCATION PROGRAMS

UMSOD has designed the CDHL program utilizing a strategic hybrid approach of both face-to-face and online education, while advancing the design and development of student engaging courses. As a result, we look forward to continuing to:

1. Deliver improved student learning outcomes due (in part to) students earning their degrees faster, saving monies on tuition and fees, and obtaining opportunities to return or join the workforce sooner; and
2. Improve access and opportunities for a diverse student population by increasing the student enrollment of hygiene students and the output of hygienist leaders into our community workforce.⁸

The hybrid delivery model, incorporating both online and face-to-face learning, will strategically support the innovative CDHL program. In order to facilitate CDHL educational objectives and learning outcomes, UMSOD will deliver premier practices of distance education principles in compliance with the Council of Regional Accrediting Commissions (C-RAR).⁹

Mission and Purpose Alignment

As the state's public health, law, and human services university, the mission of UMB is to excel at professional and graduate education, research, patient care, and public service, and to educate leaders in health care delivery, biomedical science, global health, social work and the law. Also, UMB emphasizes interdisciplinary education in an atmosphere that explicitly values civility, diversity, collaboration, and accountability. In alignment and support of our parent school, UMB, the UMSOD strives toward preeminence through excellence and innovation with a targeted focus on education, among patient care, research, public service, and global engagement.

Online Education Curricula

In order to support the sequenced, rigorous CDHL curriculum, students will be exposed to synchronous, asynchronous, and face-to-face education modes. Through UMSOD's learning management system, Blackboard, course curricula for all modes of learning will be available. For example, after hands-on clinic sessions, students will have didactic material and homework assignments posted within Blackboard. Furthermore, a synchronous conferencing software, Blackboard Collaborate, will be used to engage learners in live activities such as presentations and live class sessions. Additionally, video cameras, webcams, and an interactive smart board are available (with support) to faculty members.

It is important to note that this is a unique, fast-paced program includes face-to-face clinic time at Shady Grove, hybrid courses, and online courses; as a result, the program will be clearly communicated as such to enable transparency and student clarity.

Academic Oversight and Evaluation of Online Learning

UMSOD will continue to ensure that the rigor and quality of instruction are at the same levels, and, in some cases enhanced, compared to face-to-face programs. Through the utilization of our current academic evaluation process, oversight by the program director, we will deploy best practices for distance education.

The historically successful dental hygiene baccalaureate curriculum review and evaluation process will continue to be employed, as well as additional distance education evaluation practices. To assure we are providing our students significant quality education, the following evaluation actions, as shown in Table 8, will be deployed for the proposed CDHL program.

Table 8: Evaluation Actions to Be Used in CDHL Program	
Oversight Resource	Evaluation Action and Support
Division of Dental Hygiene Director, course directors, faculty, students, faculty in the Office of Instructional Evaluation, and administrators	Ongoing and open collection of feedback
Committee on Dental Hygiene Curriculum Management	Meetings on discussion, actions, and proposals related to courses being taught, areas of concern, coordination of instruction, ongoing faculty calibration, planning for subsequent semesters, long-range planning of curriculum direction in relationship to the dental hygiene program, its missions and those of the school and campus
Dental Hygiene Curriculum Management Committee's Subcommittee for Course Reviews	Review individual courses scheduled for specific review
Division of Dental Hygiene	Meetings offer faculty development educational workshops and seminars for updating course methodology and updating course content to meet student needs; curriculum matters continually are raised and discussed
UMSOD Faculty Council	Meetings on oversight of all policies, procedures, curricular and clinical business connected to faculty responsibilities to UMSOD
Office of Educational Technology	Conducts yearly surveys with students to assess their utilization of and opinions on the quality and effectiveness utilized by dental hygiene course director; shares the survey analyses with the Dental Hygiene Curriculum Committee

Division of Dental Hygiene
Director

Administers surveys, analyzes data, and disseminates a variety of reports that address curricular issues; assists with long-range programmatic planning; and assesses alumni and employer opinions, patient satisfaction, student opinions, and student documentation. Receives and disseminates additional outcomes data such as student progression reports, program completion rates, National Board examination scores and Commission on Dental Competency Assessments success rates; outcomes measures are evaluated in relationship to the program's defined goals and competencies for new graduates

Furthermore, using the Specific Review Standards From the Quality Matters Higher Education Rubric, Sixth Edition,¹⁰ the course directors, program director, and instructional designer will assess the course overview and introduction, learning objectives (competencies), student assessment and measurement, instructional materials, learning activities and learner interaction, course technology, learner support, and accessibility and usability for each course.

Moreover, as part of the curriculum management plan, dental hygiene courses are evaluated relative to the defined goals and competencies of the program. Individual courses are assessed compared to the course-specific competencies for new graduates and program goals, competency assessment measures, assessment of whether competencies are met, and corrective actions taken to address unmet competencies. A defined mechanism for coordinating instruction among the dental hygiene course directors is present and involves a three-step process:

1. Periodic in-depth peer to peer course presentations;
2. Peer-to-peer course review of content, delivery, and outcomes; and
3. Course director self-review of content, course quality and outcomes.

As a result of this three-step process for dental hygiene course reviews, conversations between course directors and faculty are facilitated, and course strengths, course revisions, course redundancies, and course outcomes are identified and discussed in relationship to the overall dental hygiene curriculum. Additionally, the thoroughness of this three-step process helps determine if all topics necessary to support program competencies are present.

Qualified and Supported Faculty

Our collective and collaborative team of faculty and staff have experience in distance education that encompasses experienced distance education faculty, dedicated instructional technology, multimedia, and instructional design support and training, and a premier faculty development program that includes development in these areas.

Table 9: Distance Education Support	
UMSOD administrators, faculty members, and staff members will provide distance education student support by:	<ul style="list-style-type: none"> ▪ Communicating the nature of online learning, specifically the applicability to the CDHL program, prior and throughout the student lifecycle.
	<ul style="list-style-type: none"> ▪ Confirming enrolled students have reasonable and adequate access to the range of student services to support their learning.
	<ul style="list-style-type: none"> ▪ Confirming accepted students have the background, knowledge, and technical skills needed to undertake the program.
	<ul style="list-style-type: none"> ▪ Communicating the availability of the library's student services for access to research databases, online catalog of books and media, electronic interlibrary loan, librarians, and more.

Moreover, from 2007 to 2013, dental hygiene faculty members annually engaged six students at our satellite location in Perryville, Md., and six students at our satellite location on the Eastern Shore, through the digital learning environment. Academic evaluations provided evidence that these baccalaureate dental hygiene students were able to meet similar student outcomes compared to face-to-face students in Baltimore.

Since then, our faculty members have only enhanced their distance education competences and plan to provide a combination of synchronous and asynchronous education, including, but not limited to, a virtual collaboration platform and a cloud-based online examination platform to engage students. Moreover, our robust faculty development program is inclusive of distance learning pedagogy best practices, as well as new educational technology proficiency and applicability.

Development and Sustainment

The UMSOD administration, faculty members, and staff members are committed to developing and sustaining the hybrid CDHL program. In addition to explicitly stating distance education as a priority in our strategic plan, we have assigned programmatic ownership and expectations aligned to a budget plan and technology plan. Furthermore, in order to continue to enhance educational objectives and learning outcomes through online and face-to-face opportunities, we have decided to keep the student cohort size small (six students) and do not foresee significant enrollment growth. In the future, parts of the innovative and student-centric CDHL program design will be taken into consideration for integration within the current bachelor of science program at UMSOD's Baltimore campus.

Student Support in Online Learning

The CDHL program hybrid delivery model combines the use of online and in-person courses. While some courses are fully online, some courses are both online and face-to-face, and some fully face-to-face, serving patients. Full transparency with students regarding online, hybrid, and in-person course expectations, requirements, and responsibilities is essential to delivery this hybrid delivery model successfully. In addition, a certain level of student technology experience, knowledge, and skill will support student success in online and hybrid courses. Moreover, whether students are taking an online, hybrid, or face-to-face course, they need consistent access to academic and technical support services.

Online Education Integrity

As reinforced and strengthened in our core values of accountability, civility, collaboration, diversity, excellence, knowledge, and leadership, institution integrity is of the utmost importance. To assure distance education integrity specifically for the CDHL program, administrators, faculty members, and staff members at UMSOD will continue to convey established policies, procedures, and practices, including, but not limited to:

- The UMB Policy on Faculty, Student, and Institutional Rights and Responsibilities for Academic Integrity;
- Educational technology security safeguards and procedures;
- Online learning academic integrity discussions during student orientation and throughout semesters; and
- The online course student agreement to further establish expectations and responsibilities.

Furthermore, this culture of integrity will be emphasized in the CDHL distance education program through CDHL students' eligibility for the Philips Oral Healthcare Linda E. DeVore Professional Integrity Award. The award is presented to a graduating student who displays dignity, civility, honesty, integrity, intellectual curiosity, and responsibility.

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APPENDIX C

1. EMAIL SENT BY DIVISION DIRECTOR

Email sent by Marion Manski, RDH, MS, then-director of the UMSOD Division of Dental Hygiene:

On Tue, Mar 6, 2018 at 12:53 PM, Manski, Marion C <MManski@umaryland.edu> wrote:

The vision of the University of Maryland, School of Dentistry is *Good oral health is integral to general health and quality of life. We will achieve pre-eminence through excellence and innovation in education, patient care, research, public service, and global engagement.*

As a result, our purpose is *Advancing Oral Health. Improving Lives.*

In support of our vision and purpose, the Dental Hygiene program educates future leaders in the profession by currently offering undergraduate baccalaureate programs in dental hygiene and accelerated programs toward a Master of Science degree. The proposed Clinical Master of Science in Dental Hygiene: Clinical Dental Hygiene Leader (CDHL) program is further rooted in our vision and purpose. As such, the CDHL program's relevance and timeliness is fundamental to current research demonstrating the link between oral and systemic health. As this body of research continues to grow, the importance of good oral health will grow with it. With strong leadership in oral health, systemic quality of life has hopes for improvement and the place for oral health services in forward thinking health policy and comprehensive care will grow. Quality of life speaks to freedom from pain whether it be physiological, psychosocial or behavioral. These three parameters of pain are extant in oral disease while prevention can reverse or eliminate them. By definition, the dental hygienist is a preventive therapist, as a result health promotion and disease prevention are inherent in the proposed program. Insight into how to plan programs to prevent and eliminate disease is a mainstay of the CDHL program. Other societal ills, such as missed work productivity and school days, low self-esteem and destructive oral habits are by-products of oral pain and poor oral appearance. With the creation of the innovative CDHL program, addressing and preventing many of these societal ills is possible. Graduate degreed oral health leaders can provide high-level care and assume leadership roles that shape comprehensive health care delivery and policy.

The graduate CDHL program is designed for the student who has earned a baccalaureate degree in a field other than dental hygiene, including all pre-requisite coursework for the dental hygiene program. This option prepares graduates to provide patient care in addition to higher level preparedness to be future leaders and researchers in their profession. The Program also provides high quality oral health care services to residents of Maryland and the region, and provides consultative and other services to governmental and private agencies,

professional organizations and the community through the leadership and expertise of its faculty and contributions of its students.

Students will be eligible to sit for the National Board Dental Hygiene exam (NBDHE) and the Commission on Dental Competency Assessments (CDCA) clinical board to qualify for licensure as a Registered Dental Hygienist (RDH). Moreover, enabled with a clinical education and Master of Science degree, graduates will be able to integrate well into interprofessional collaboration and care in dentistry and medicine. They will also be prepared to be academicians, researchers and serve in public health initiatives.

Please assist us in providing student education and support in dental hygiene patient care, leadership, research, academia, public service, and community engagement by answering the three questions below.

1. Is there market and community value to professionally accountable graduate degreed dental hygiene oral health leaders? Please explain.
2. Do you foresee the dental hygiene oral health leadership role changing in the next 5 to 10 years? If so, how? What educational, collaboration, and training can University of Maryland, School of Dentistry provide to support the change?
3. Is there a need for oral health interprofessional healthcare education and training within healthcare industry and market? If so, would professionally accountable graduate degreed dental hygiene oral health leaders add value?

Thank you for your help!
Marion

2. RESPONSES TO EMAIL

A. Response from Jody Berinato, RDH, BS, Maryland Dental Hygienists' Association President:

1. Is there market and community value to professionally accountable graduate degreed dental hygiene oral health leaders? Please explain.

Yes, there is a market and community value. In Maryland and across the country, access to care remains a problem. Many residents are finding it hard to find a provider that can treat them. Having a dental hygiene oral health leader adds a peg to the access to care wheelhouse to help residents achieve oral health.

2. Do you foresee the dental hygiene oral health leadership role changing in the next 5 to 10 years? If so, how? What educational, collaboration, and training can University of Maryland, School of Dentistry provide to support the change?

The dental hygiene oral health leadership role can change into a leader who is able to go into non-traditional settings, like a nursing home, personal homes of those that aren't mobile, etc. to provide treatment without a dentist present. The University of Maryland, School of Dentistry can provide collaboration with the other professional schools in the University of Maryland system. Dental Hygiene oral health leaders will need to be able to work with nurses, doctors, social workers, and pharmacists in order to find those that need care. They will also need to work together to discuss appropriate treatment options that will best suit the needs of the individuals receiving care. Dental hygiene oral health leaders will also need to work with dentists in order to support the change in practice necessary to properly fit the needs of the underserved.

3. Is there a need for oral health interprofessional healthcare education and training within healthcare industry and market? If so, would professionally accountable graduate degreed dental hygiene oral health leaders add value?

There is a need for oral health interprofessional healthcare education. We spend so much time looking at the mouth and the medical community spends time at looking at all the other areas of the body. We need to work together to look at the whole picture to help our patients to achieve total body health. Having a provider like the dental hygiene oral health leaders could add a bridge the communication between medical and dental providers. It would help everyone better treat our patients.

B. Response from Vicki Pizanis, RDH, MS, EdD, Dental Hygiene Education and Practice Specialist, American Dental Hygienists' Association

4. Is there a market and community value to professionally accountable graduate degreed dental hygiene oral health leaders? Please explain

The community on the whole values well-trained individuals within their respective healthcare professions. Graduate programs in dental hygiene enable dental hygienists to pursue careers within education administration and research, as well as achieve personal growth and advancement within the clinical realm.

5. Do you foresee the dental hygiene oral health leadership role changing in the next 5 to 10 years? If so, how? What educational collaboration, and training can University of Maryland School of Dentistry provide to support change?

The healthcare system at present is evolving. Having graduates with additional skill sets beyond the basic principles of dental hygiene is crucial to advancing the profession for research, policy and leadership.

6. Is there a need for oral health interprofessional healthcare education and training within healthcare industry and market? If so, would professionally accountable graduate degreed dental hygiene oral health leaders add value?

The growing complexity of healthcare needs requires increasing reliance on a multidisciplinary team to address the needs of patients. Today there are currently 17 of master's level dental hygiene programs across the country.

3. SURVEY SENT TO BACCALAUREATE STUDENTS

Faculty from the University of Maryland, Baltimore, School of Dentistry are interested in exploring options to offer a Master of Science in Dental Hygiene: Clinical Dental Hygiene Leader (CDHL). The two year clinical graduate program is designed for a student who has already earned a baccalaureate degree in a field other than dental hygiene. The CDHL graduate program would offer hybrid (mix of face to face and online) courses and hands-on clinical practice at The Universities at Shady Grove campus with opportunities to expand to the Baltimore campus.

Building on foundational science knowledge, graduates will be prepared to provide patient care, as well as leadership and research skills in the dental hygiene profession. Moreover, through the leadership and expertise of School of Dentistry faculty and contributions of students, high quality oral health care services will be provided to the residents of Maryland and Montgomery [sic] County region, consultative and other services to governmental and private agencies, and professional organizations and community.

As a current baccalaureate degree student, we immensely value your input and opinion based on your current experiences, as well as future interests and goals.

I'd like to personally thank you in advance for taking a few minutes to complete the short survey available here: <https://www.surveymonkey.com/r/NNSNHL7>. Your responses will be impactful to our decision for future graduate programs.

Warm regards,
Marion C. Manski, RDH, MS
Director of Dental Hygiene

1. My age is:
 - a. 17-22
 - b. 23-28
 - c. 29-34
 - d. 35-40
 - e. 41-46
 - f. 47-52
 - g. 53+

2. Gender
 - a. Male
 - b. Female
 - c. Do not wish to answer

3. What baccalaureate degree program are you currently enrolled in?
4. A characteristic that I consider important in choosing a graduate program is affordability of the tuition.
 - a. Totally Disagree
 - b. Disagree Somewhat
 - c. Neither Agree or Disagree
 - d. Agree Somewhat
 - e. Totally Agree
5. A characteristic that I consider important in choosing a graduate program is the quality of the program and instruction.
 - f. Totally Disagree
 - g. Disagree Somewhat
 - h. Neither Agree or Disagree
 - i. Agree Somewhat
 - j. Totally Agree
6. A big motivator for enrolling in a Master of Science in Dental Hygiene: Clinical Dental Hygiene Leader (CDHL) program is to enhance the possibilities of employment advancement.
 - k. Totally Disagree
 - l. Disagree Somewhat
 - m. Neither Agree or Disagree
 - n. Agree Somewhat
 - o. Totally Agree
7. A big motivator for enrolling in a Master of Science in Dental Hygiene: Clinical Dental Hygiene Leader (CDHL) program is to complete a graduate degree.
 - p. Totally Disagree
 - q. Disagree Somewhat
 - r. Neither Agree or Disagree
 - s. Agree Somewhat
 - t. Totally Agree
8. A big motivator for enrolling in a Master of Science in Dental Hygiene: Clinical Dental Hygiene Leader (CDHL) program is to become an instructor at a university.
 - u. Totally Disagree
 - v. Disagree Somewhat
 - w. Neither Agree or Disagree
 - x. Agree Somewhat
 - y. Totally Agree

9. I would prefer a graduate program that offers hybrid (mix of face to face and online) courses and hands-on clinical practice.

- z. Totally Disagree
- aa. Disagree Somewhat
- bb. Neither Agree or Disagree
- cc. Agree Somewhat
- dd. Totally Agree

10. If a Master of Science in Dental Hygiene: Clinical Dental Hygiene Leader (CDHL) was offered at The Universities at Shady Grove campus through the University of Maryland, Baltimore, School of Dentistry, I would consider applying within the next three years.

- ee. Totally Disagree
- ff. Disagree Somewhat
- gg. Neither Agree or Disagree
- hh. Agree Somewhat
- ii. Totally Agree

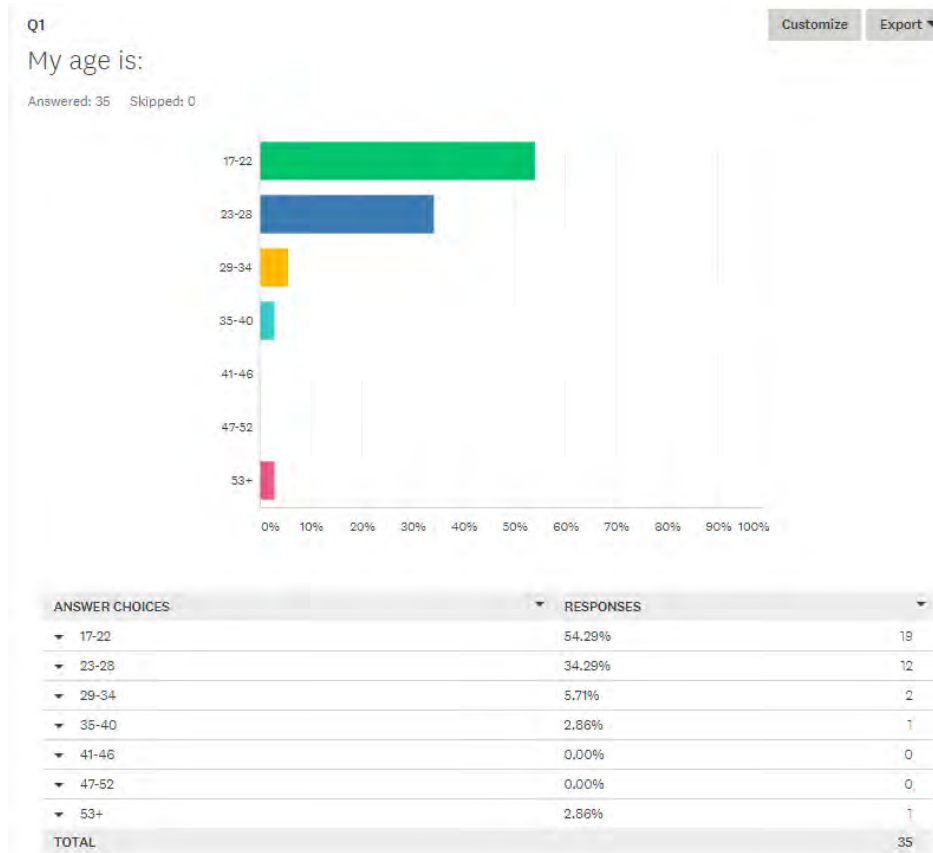
11. If a Master of Science in Dental Hygiene: Clinical Dental Hygiene Leader (CDHL) was offered at the Baltimore campus through the University of Maryland, Baltimore, School of Dentistry, I would consider applying within the next three years.

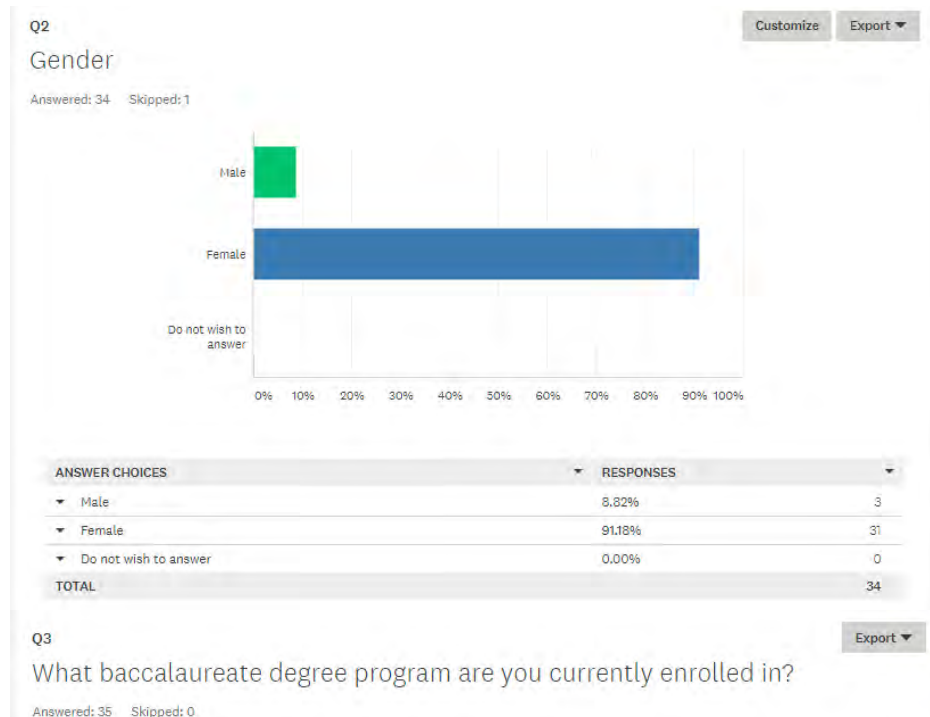
- jj. Totally Disagree
- kk. Disagree Somewhat
- ll. Neither Agree or Disagree
- mm. Agree Somewhat
- nn. Totally Agree

12. Do you have any other comments regarding the Master of Science in Dental Hygiene: Clinical Dental Hygiene Leader (CDHL) at the University of Maryland, Baltimore, School of Dentistry?

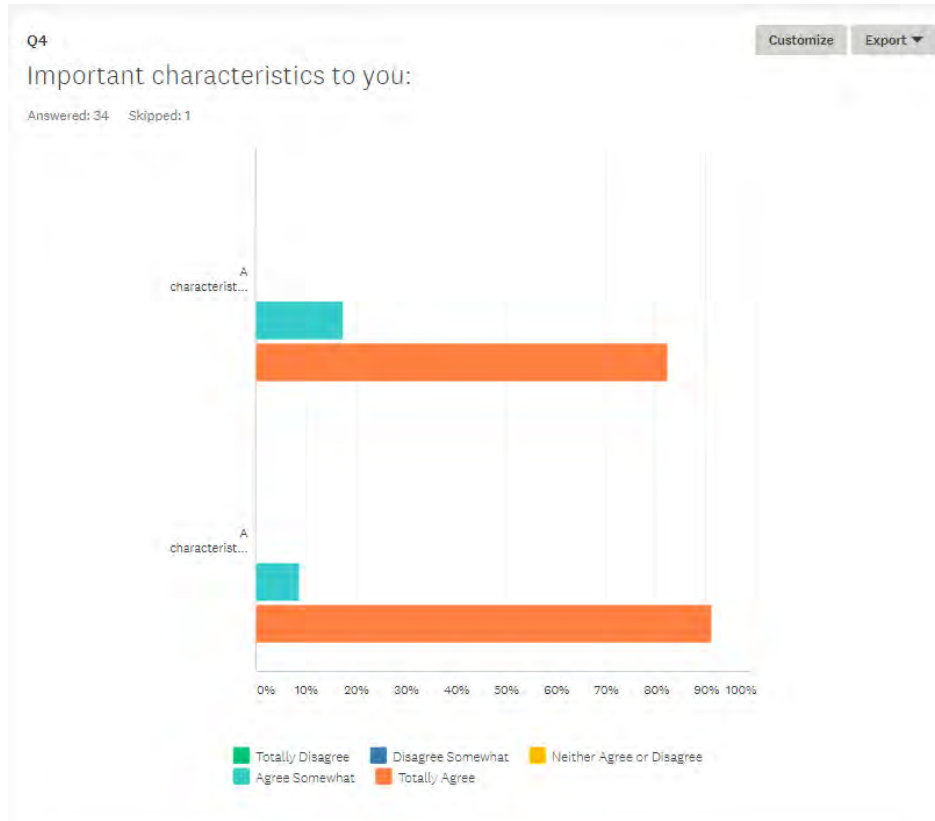
4. RESULTS OF SURVEY SENT TO BACCALAUREATE STUDENTS

Current baccalaureate students of UMSOD, UMSON, and UMCP were surveyed to gain feedback on their current experiences and future interests and goals to determine alignment with the proposed CDHL program.

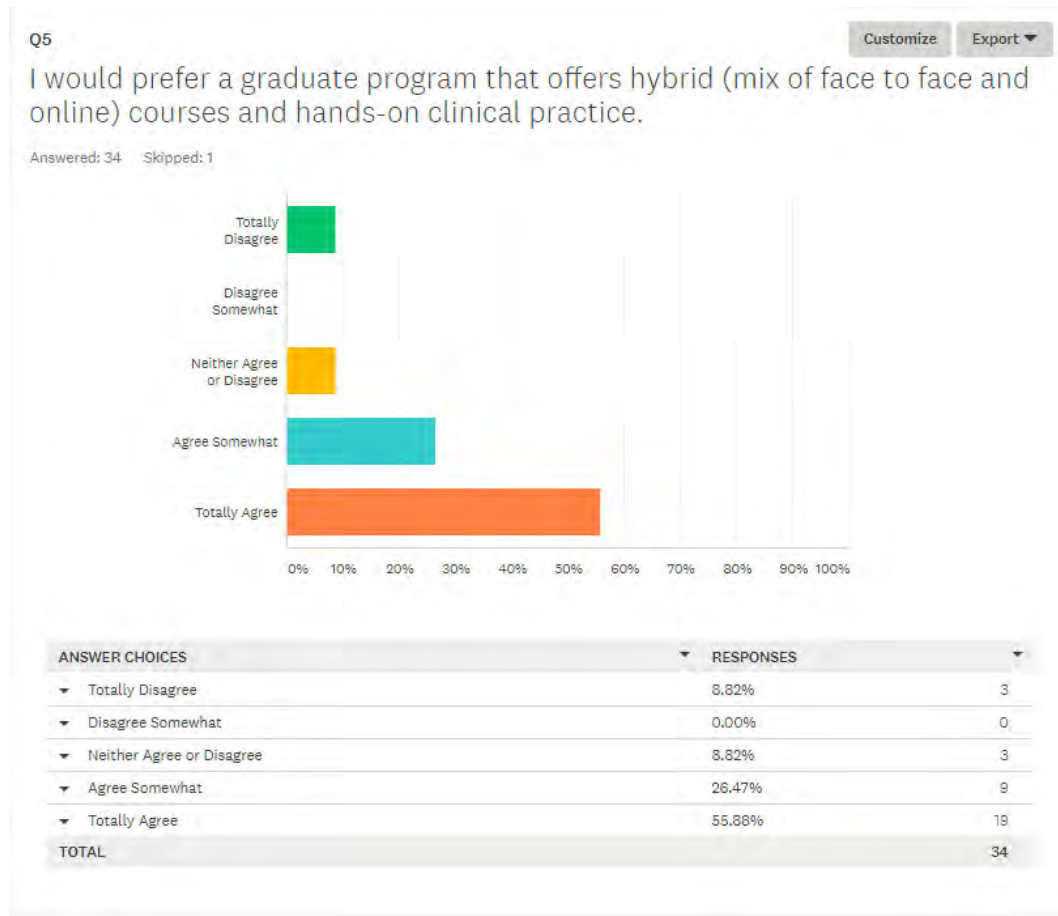




UMSON RN-BSN	25	~71 percent
UMSOD Dental Hygiene	1	~3 percent
UMCP Exercise Science	1	~3 percent
UMCP Public Health Science	8	~22 percent



	TOTALLY DISAGREE	DISAGREE SOMEWHAT	NEITHER AGREE OR DISAGREE	AGREE SOMEWHAT	TOTALLY AGREE	TOTAL
A characteristic that I consider important in choosing a graduate program is affordability of the tuition.	0.00% 0	0.00% 0	0.00% 0	17.65% 6	82.35% 28	34
A characteristic that I consider important in choosing a graduate program is the quality of the program and instruction.	0.00% 0	0.00% 0	0.00% 0	8.82% 3	91.18% 31	34

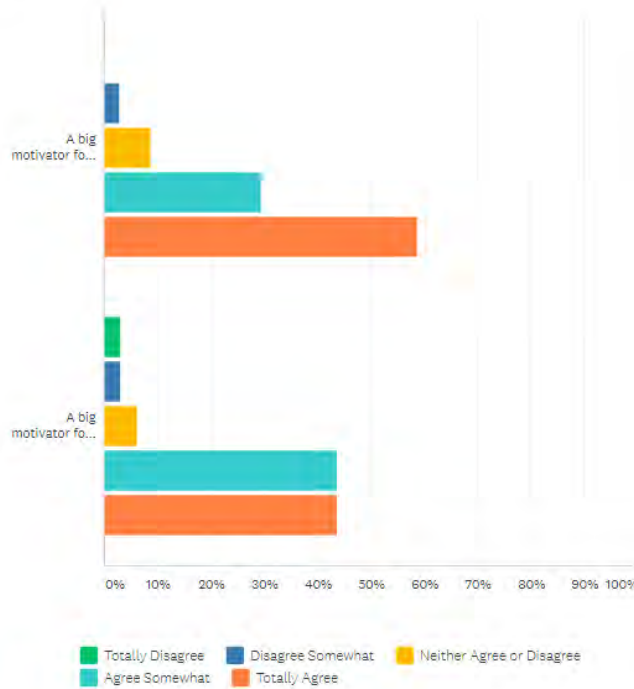


Q6

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Motivation:

Answered: 34 Skipped: 1



	TOTALLY DISAGREE	DISAGREE SOMEWHAT	NEITHER AGREE OR DISAGREE	AGREE SOMEWHAT	TOTALLY AGREE	TOTAL
A big motivator for enrolling in a Master of Science in Dental Hygiene: Clinical Dental Hygiene Leader (CDHL) program is to enhance the possibilities of employment advancement in clinic patient care, public health, academics, research, and/or administration.	0.00% 0	2.94% 1	8.82% 3	29.41% 10	58.82% 20	34
A big motivator for enrolling in a Master of Science in Dental Hygiene: Clinical Dental Hygiene Leader (CDHL) program is to complete a graduate degree.	3.13% 1	3.13% 1	6.25% 2	43.75% 14	43.75% 14	32



▼ If a Master of Science in Dental Hygiene: Clinical Dental Hygiene Leader (CDHL) was offered at the Baltimore campus through the University of Maryland, Baltimore, School of Dentistry, I would consider applying within the next three years.	24.24% 8	9.09% 3	33.33% 11	12.12% 4	21.21% 7	33
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Q8

Export ▼

Do you have any other comments regarding the Master of Science in Dental Hygiene: Clinical Dental Hygiene Leader (CDHL) at the University of Maryland, Baltimore, School of Dentistry?

Answered: 17 Skipped: 18

RESPONSES (17) TEXT ANALYSIS MY CATEGORIES (0)

1. None
2. Why do you need a master's degree to be a dental hygienist...?
3. No
4. Is there any way to apply this graduate degree with nursing?
5. I think having a new program here at USG is a great idea.
6. N/A
7. This is great idea and all effort to implement it should be pursue.
8. As a nursing student, I have no reason to switch gears and persue dentistry but that doesn't mean I don't think it could be a great opportunity for others
9. No
10. No
11. I think it's a good idea as long as the degree is recognized and there are clinical and job opportunities for the students graduating from that program. It would be a welcomed addition to the Shady Grove Campus; however, there's already a School of Dentistry on the Baltimore Campus, how would this program compete with the school in terms of tuition, affordability, recognition, job opportunities, clinical placements, need for another degree, etc. Just some food for thoughts. I'm a nursing student on the Shady Grove campus who is totally not interested in the field of dentistry, but I would be interested to see such program on my campus. My guess is that it would be similar to

- the CNL degree offered by the school of nursing on the bmore campus? I wish you good luck and much success with this endeavor!
12. I am not particularly interested in dental hygiene, however, I am in favor of bridge programs. That's why I chose to do the survey. :)
 13. Great idea
 14. No
 15. When will this program be implemented ?
 16. I really want to enroll!
 17. I was looking for a similar program to enter, it makes me happy to see one in Maryland. I look forward to applying. It's also great because I won't have to get another bachelor's degree to go into my interest of dental hygiene. I also hope this program is provided at USG.

5. RESULTS OF INDEED.COM SEARCH

- I. INDEED.COM job search for dental hygienist leadership roles that require or prefer a graduate degree.
- Based on search conducted on March 19, 2018 using “dental hygiene” (master) in the Maryland region. Two mid-level positions:
 - i. Instruction and teaching position
 1. Dental Hygiene Clinical Instructor at Howard Community College
 - a. <https://www.indeed.com/viewjob?jk=af2eb9b70e2ef75f&tk=1c8vjdp2favhsfaf&from=serp&vjs=3>
 2. Dental Hygiene Clinical Instructor at Howard Community College
 - a. <https://www.indeed.com/viewjob?jk=af2eb9b70e2ef75f&tk=1c8vjdp2favhsfaf&from=serp&vjs=3>
 - ii. Clinic management and coordination position
 1. Dental Hygiene Clinic Coordinator at Education Affiliates
 - a. <https://www.indeed.com/viewjob?jk=16599d09a15135bb&tk=1c8vjdp2favhsfaf&from=serp&vjs=3>
 - Based on search conducted on March 19, 2018 using “dental hygiene” (master) in the United States.
 - i. Community health positions
 1. Lead Public Health Dental Hygienist at Staywell Health Care
 - a. <https://www.indeed.com/cmp/STAYWELL-HEALTH-CARE/jobs/Lead-Public-Health-Dental-Hygienist-a9b23372f8ee85f2?sjdu=QwrRXKrQZ3CNX5W-O9jEvYDvBjsnww5x486LElz6UQoK-Xr0BXPQ-89u3D6a25nOswWwRoYRBtCv7YXxA5hi4bS56KpK08TcJMI-YZkKKAw&tk=1c8vj6326avhschl&vjs=3>
 2. Health Education Coordinator at County of El Dorado
 - a. <https://www.indeed.com/viewjob?jk=92c29bbc9bafc3da&tk=1c8va4csl51huc7n&from=serp&vjs=3>
 - ii. Corporate dentistry leadership positions
 1. Dental Hygienist at Peak Dental Services
 - a. <https://www.indeed.com/viewjob?jk=e58d29d7ec846b2d&q=masters+degree+%22dental+hygienist%22&tk=1c8va5vqo51hubdo&from=web&vjs=3>
 2. Hygienist at Western Dental and Orthodontics
 - a. <https://www.indeed.com/viewjob?jk=cf7b30c5205ad752&tk=1c8vkbbdo40tjfk0&from=serp&vjs=3>

iii. Instruction and teaching positions

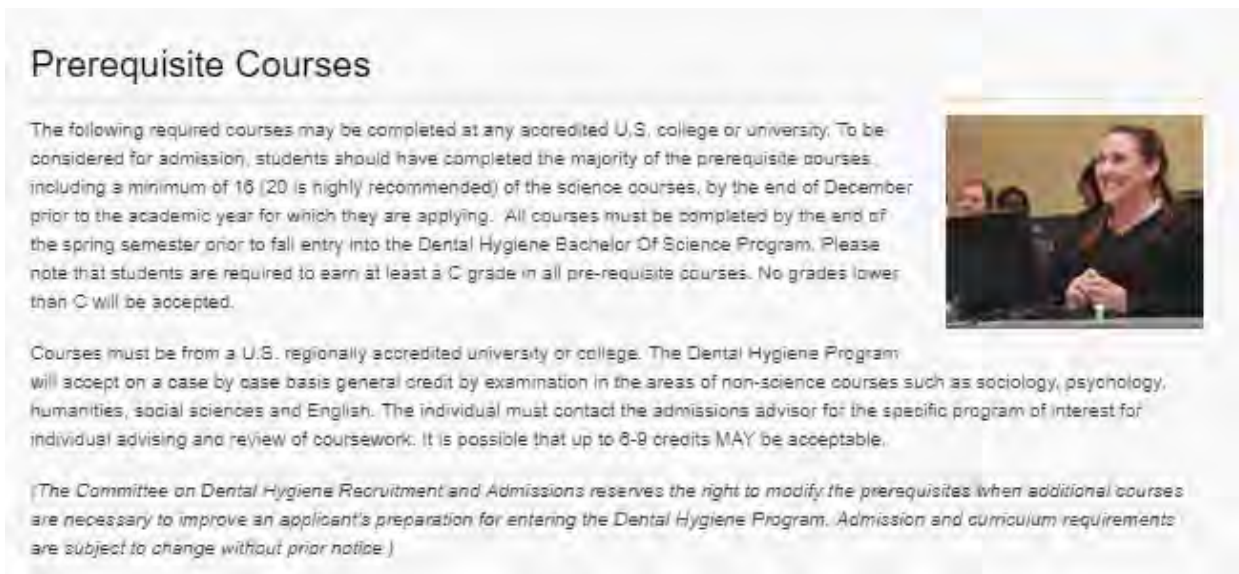
1. Program Director, Dental Hygiene at Laramie County Community College

- a. <https://www.indeed.com/viewjob?jk=837f5f97b34d7dba&tk=1c8v9umns18h51df&from=serp&alid=3&advn=4664336725265156>

APPENDIX H

Screenshot from UMSOD's dental hygiene admissions webpage

(<http://www.dental.umaryland.edu/admissions/programs/dental-hygiene/bachelor-of-science-baccalaureate-program/prerequisite-courses/>):




Prerequisite Courses

The following required courses may be completed at any accredited U.S. college or university. To be considered for admission, students should have completed the majority of the prerequisite courses, including a minimum of 16 (20 is highly recommended) of the science courses, by the end of December prior to the academic year for which they are applying. All courses must be completed by the end of the spring semester prior to fall entry into the Dental Hygiene Bachelor Of Science Program. Please note that students are required to earn at least a C grade in all pre-requisite courses. No grades lower than C will be accepted.

Courses must be from a U.S. regionally accredited university or college. The Dental Hygiene Program will accept on a case by case basis general credit by examination in the areas of non-science courses such as sociology, psychology, humanities, social sciences and English. The individual must contact the admissions advisor for the specific program of interest for individual advising and review of coursework. It is possible that up to 6-9 credits MAY be acceptable.

(The Committee on Dental Hygiene Recruitment and Admissions reserves the right to modify the prerequisites when additional courses are necessary to improve an applicant's preparation for entering the Dental Hygiene Program. Admission and curriculum requirements are subject to change without prior notice.)



(Specific courses shown on next page.)

Science Courses

(*All Science Courses must be taken within 5 years of the year you wish to enroll into the program.)

Anatomy / Physiology I & II*	8 credits
General Biology*	4 credits
Inorganic or General Chemistry*	4 credits
Microbiology*	4 credits
Organic Chemistry*	4 credits

Non-Science Courses

Basic Statistics	3 credits
Technical Writing	3 credits
English Composition	6 credits
Humanities <i>(This course can be taken in the categories of literature, philosophy, foreign languages, music and art appreciation, fine arts, math, particular education courses and history. Course must be academic, non-studio courses. Physical Education courses are not transferable.)</i>	3 credits
Introduction to Psychology	3 credits
Introduction to Sociology	3 credits
Principles of Nutrition*	3 credits
Public Speaking	3 credits
Human Growth & Development	3 credits
Social Sciences <i>(Social science electives can be taken in the categories of psychology and sociology (other than the required introductory course), anthropology, political science, economics, Cultural Studies, Woman's Studies, geography, business management, religion, information systems (not keyboarding courses) and education, Introduction to Computers (academic course) is often a General Education Requirement for college freshman and would be an acceptable 3 credit social science elective)</i>	3 credits

TOTAL OF 57 CREDITS OF REQUIRED COURSEWORK

APPENDIX L

TABLE L1: PROGRAM RESOURCES					
Resource Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Reallocated Funds*	\$0	\$0	\$0	\$0	\$0
2. Tuition and Fee Revenue (c + g below)	\$92,696	\$235,487	\$287,837	\$293,593	\$299,465
a. Number of F/T Students*	4	10	12	12	12
b. Annual Tuition/Fee Rate*	\$23,174	\$23,549	\$23,986	\$24,466	\$24,955
c. Total F/T Revenue (a x b)	\$92,696	\$235,487	\$287,837	\$293,593	\$299,465
d. Number of P/T Students*	0	0	0	0	0
e. Credit Hour Rate*	\$0	\$0	\$0	\$0	\$0
f. Annual Credit Hours*	0	0	0	0	0
g. Total P/T Revenue* (d x e x f)	\$0	\$0	\$0	\$0	\$0
3. Grants, Contracts, and Other External Sources	\$0	\$0	\$0	\$0	\$0
4. Other Sources*	\$709,788	\$748,158	\$739,468	\$733,789	\$727,279
5. TOTAL (Add 1-4)	\$802,484	\$983,645	\$1,027,305	\$1,027,382	\$1,026,744

*Please see notes on next page.

Notes to Table L1: Program Resources

1. UMSOD currently does not expect to reallocate existing funds due to anticipated funding from the pending MOU between USM, USG, and UMB (located in this appendix).

2a. Enrollment projections are primarily driven by the Commission on Dental Accreditation (CODA) [Standards for Dental Hygiene Education Programs](#), of which mandates one faculty for every five students (Standard 3-6).

2b. Annual tuition and fees rates are based on current and historical tuition and fees for existing programs at UMSOD and the University of Maryland Graduate School.

2d-2g. UMSOD currently assumes all enrollments will be on a full-time basis; therefore, no-part time enrollment or part-time credit rates have been reflected.

4. Funding data is based on the current Shady Grove MOU comprised of shared resources to support the BS/MS Clinical Dental Hygiene Leader Dual-Degree program and Graduate Certificate in Oral Health Sciences (12 credits) program. In addition, funding will support anticipated rotation of Advanced General Dentistry students. UMSOD anticipates submission for approval of the Graduate Certificate Program in Oral Health Sciences Program. UMSOD does not foresee funding changes and anticipates the ongoing intention of funding provided as described in the MOU between USM, USG, and UMB.

TABLE L2: PROGRAM EXPENDITURES

Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b+c below)	\$412,504	\$424,880	\$437,626	\$450,755	\$464,277
a. Number of FTE	4	4	4	4	4
b. Total Salary	\$330,004	\$339,904	\$350,101	\$360,604	\$371,422
c. Total Benefits	\$82,501	\$84,976	\$87,525	\$90,151	\$92,855
2. Admin Staff (b+c below)	\$169,868	\$174,964	\$180,213	\$138,807	\$142,971
a. Number of FTE	2	2	2	1.5	1.5
b. Total Salary	\$124,903	\$128,650	\$132,510	\$102,064	\$105,126
c. Total Benefits	\$44,965	\$46,314	\$47,703	\$36,743	\$37,845
3. Support Staff (b+c below)	\$76,535	\$78,831	\$81,196	\$83,631	\$86,140
a. Number of FTE	1	1	1	1	1
b. Total Salary	\$56,275	\$57,964	\$59,703	\$61,494	\$63,339
c. Total Benefits	\$20,259	\$20,867	\$21,493	\$22,138	\$22,802
4. Technical Support and Equipment*	\$ -	\$ -	\$ -	\$ -	\$ -
5. Library*	\$ -	\$ -	\$ -	\$ -	\$ -
6. New or Renovated Space*	\$ -	\$ -	\$ -	\$ -	\$ -
7. Other Expenses*	\$53,851	\$55,193	\$56,571	\$57,983	\$59,433
TOTAL (Add 1-7)	\$712,758	\$733,868	\$755,605	\$731,176	\$752,822

*Please see notes on next page.

Notes to Table L2: Program Expenditures

4. Technical support and equipment will be provided from the MOU between USM, USG, and UMB and is an integral component of the funding. Please refer to the MOU in this appendix.
5. Please refer to Section J of the proposal for further information.
6. USM is providing facilities at the Universities at Shady Grove Biomedical Sciences and Engineering Education (BSE) Facility and is on schedule to complete construction by May 2019. Please view [this link](#) containing specific information regarding the facility.
7. “Other Expenses” include non-labor expenses such as supplies, communication tools, faculty development, and travel.

**Memorandum of Understanding between
University System of Maryland (USM) and
University of Maryland, Baltimore (UMB) and
The Universities at Shady Grove (USG)
December 2018**

1. Purpose

This Memorandum of Understanding (“MOU”) constitutes an agreement between the University System of Maryland (“USM”), University of Maryland, Baltimore (“UMB”) and the Universities at Shady Grove (“USG”) to support offering a dual degree Bachelors of Science/Master of Science degree in Clinical Dental Hygiene, and an Advanced Education Program in General Dentistry (“AEGD”) at USG and a dental community clinic. This MOU was jointly developed and includes the duties and obligations of each party and relevant resource requirements to launch and operate these programs (“the Programs”) at USG.

2. Rationale for Proposed Programs

The University of Maryland School of Dentistry’s (UMSOD) Clinical Dental Hygiene Leader (CDHL) program will be a unique offering at the forefront of dental hygiene education, preparing exceptional students for a dynamic oral health landscape. The two-year dual-degree program, to be housed at the Universities at Shady Grove (USG), will enable students to obtain both a bachelor of science in dental hygiene and a master of science. Requiring an initial bachelor’s degree for admission (in addition to prerequisites), the program is geared toward students with a science background who have decided to specialize in dental hygiene and/or those who want a primary role in facilitating and responding to change in the oral health field. As a UMB school, the UMSOD and by extension, the CDHL program adheres strongly to, and emphasizes the value inherent in, UMB’s mission, which is: To improve the human condition and serve the public good of Maryland and society at-large through education, research, clinical care, and service. The CDHL program will further that mission, providing not only an innovative and first-of-its-kind dual-degree program that leads the way in oral health education, but a large clinical component serving not only the Shady Grove region, but the state and mid-Atlantic region as a whole. This workforce model is consistent with goals (“Aims for Improvement”) outlined in the 2001 report by the Institute of medicine to promote a more effective, efficient, equitable, and patient-centered health care system. Since prevention is a key component of the collaborative model, long-term costs for health care could decline if extensive curative measures could be curtailed. This dual-degree workforce can help resolve significant unmet oral health needs in citizens of Montgomery County and Maryland. It is expected that dual-degree professionals will meet with high employability in a variety of health care settings.

The AEGD Program, a one-year post-graduate dental education program, is accredited by the Commission on Dental accreditation (“CODA”) and awards a certificate upon completion. The program builds on the understanding that oral health is an integral and interactive part of overall health. It is designed to expand the scope and depth of dental knowledge and skills necessary to provide comprehensive oral health care to a wide range of population groups, as well as to function effectively and efficiently in multiple health care environments within interdisciplinary health care teams. This program will allow for a highly integrative model of interprofessional education, engaging students in dentistry, dental hygiene, nursing, and pharmacy. The program in general dentistry also

offers a unique opportunity for students to partner with surrounding hospitals in care delivery. Pilot programs in several states have demonstrated the effectiveness of this type of Emergency Department (ED) program, targeting patients who present to an ED with an oral health related complaint. Diverting patients from EDs also has the benefit of reducing costs to hospitals and taxpayers.

AEGD programs must provide clinical training to ensure upon completion of training, that residents are able to assess, diagnose and plan for the provision of multidisciplinary oral health care for a wide variety of patients, including patients with special needs. It is anticipated that the dental clinic at USG will need to be operational for 24-36 months to determine treatment needs of the community receiving care at USG. If the treatment needs do not support accreditation requirements for an AEGD program, then UMSOD residents in the AEGD program will be assigned primary rotations at USG. Regardless, AEGD residents will actively participate in inter-professional initiatives and experiential learning opportunities with other programs at USG.

In addition to the CDHL and AEGD programs, the dental students and dental hygiene students from the UMSOD will rotate to the clinical facility at USG. In an effort to enhance the dental and dental hygiene students' clinical experiences in a community-based setting, UMSOD will partner with the dental clinic to meet the ever increasing demands for access to dental care and to provide graduates with varied practice experiences including providing care in a community setting to un-insured and under-insured patients.

3. USM's General Funding Principles for Support of New or Expanded High-Cost Programs at USG

The USM, in concert with USG and its institutional partners, has developed a set of guiding principles to help establish a general framework by which new, high-cost programs, or expansion of current programs, being proposed for USG can be successfully mounted and sustained to the mutual benefit of the participating institutions and USG (and the citizens and businesses in Montgomery County served by them). This framework is used when the financial and operational model(s) by which USM institutions have traditionally developed and implemented programs at USG cannot adequately support the development or expansion of key programs, such as high-cost, resource-intensive programs in engineering, technology, and the life/health care sciences.

These principles include:

- The cost of establishing and operating programs will be shared between USG and the institutions.
- Costs will be apportioned according to the details of MOUs to be negotiated between USG and the individual institutions.
- Each MOU will include (or authorize the development of) appropriate performance metrics, negotiated and agreed upon by both the participating institutions and USG, which will be used to help assess the program's progress, effectiveness, and viability.
- To provide the financial and operational stability institutions need to plan and build successful programs—and to allow USG to maximize the resources available to it in support of its mission—the MOUs should specify a guaranteed period of funding for each program that will

continue on a rolling basis so long as each program meets the terms and conditions agreed upon by the institutions and USG. In the event that any program funded through the MOU process is required to cease operations at USG, both the institution and USG will work together to plan and implement an orderly and effective phase out of the program, including completion of all teach-out requirements and the transition of faculty as needed and appropriate per the requirements of state, Regent, and accreditor policies.

- Faculty staffing and workload decisions/requirements related to programs operating within the BSE will remain the sole responsibility of the home institution. Both the USG and the USM recognize that campuses require flexibility in how they holistically structure, administer and support their programs both on campus and at the regional centers if they are to be successful long term. However, an underlying principle of the MOUs is that funding supplied by USG or USM to the institutions to cover “gap costs” -- those ongoing structural deficits associated with operating high cost programs that cannot be recouped through the revenue models traditionally employed by campuses in support of their operations at USM’s regional centers -- should go primarily to build and support the educational quality of the programs and instruction being offered.
- Institutions and USG are expected to work together to identify and achieve efficiencies in academic programs and support services as appropriate and practice these general principles.

It is the determination of the USM and USG that based on the information provided, the Programs meet the definition of high-cost programs envisioned under this framework. Therefore the principles outlined above have been used to develop this MOU, which outlines the financial and operational expectations/requirements for the deployment and operation of the Programs at USG.

4. Financial and Operational Expectations/Requirements for the Programs at USG

4.1 Funding

Funding for the Programs under the five years of operation covered by this MOU will come from a variety of sources, including: tuition and fee revenue generated by students enrolled in the program at USG, dental clinic revenue, and FY 2019 enhancement funding provided by the USM and USG to UMSOD for the support of the Programs. A breakdown of the revenue and expenses (including those tied to instruction, support, supplies and equipment, marketing, and space) is provided in the attached schedule developed by UMSOD. The enrollment projections from which these revenue/expense estimates are derived are included as well.

The revenue/expense data provided by UMSOD for FY 19 (year one) through FY 23 (year five) can be broken down into three parts:

- Projected tuition and fee revenue that will be generated by enrollment within the Programs at USG;
- Projected dental clinic revenue;
- Program expenses that will be covered by using tuition and fee revenue and dental clinic revenue. These expenses are split between both instructional personnel costs (faculty, staff, residents) and operating expenses and will be covered by UMSOD using tuition and clinic revenues (this category includes the administrative indirect charge applied by UMB);

Importantly, it is the expectation of USM and USG—based on agreements made with the UMB leadership—that any tuition revenue generated from the Programs at USG that exceeds the expenses identified in section 2 of the schedule shall be used by UMSOD to reinvest in programming at USG either through new programs, enhanced capacity of existing programs, or other improvements.

For a breakdown by year of the amount of funding committed by USM/USG to the Programs, see the attached schedule.

- As supplement to all tuition and fee revenue generated by the expanded enrollment, the USM will provide additional funds to UMSOD to help cover the projected gap through the FY 23 period. After that point, progress under the program, including revenue and expenses, will be reviewed by all parties and a new and/or revised MOU negotiated as appropriate.
- USM will provide the amount shown in the attached schedule for five years, beginning in FY 19, to develop and deliver the UMSOD program at Shady Grove. Should the program be terminated prior to the end of the five-year period, payments will cease at the end of the fiscal year in which the program is discontinued. Should gap funding be terminated prior to the 5th fiscal year, the program will be discontinued.
- Should USG's state appropriation to support the delivery of the UMSOD program be reduced during this five-year period, hindering USM and USG's ability to transfer these funds, progress will be reviewed and the budget will be renegotiated.
- Should enrollments grow substantially beyond those projected, such that additional course sections must be offered to accommodate the program growth, the parties agree to review and renegotiate the amount of gap funding necessary to deliver the program.
- It is expected that gap funding will continue, with review on a rolling bases as outlined in section 4.3, as long as the program continues to operate successfully.
- Total programmatic costs were knowingly understated in the initial proposal since the true costs of space maintenance (e.g. classroom, offices, lab, and clinic charges) and equipment replacement could not be known at that time. UMSOD and USG will capture this information in the first 3 years of operation.
- A reconciliation of financial needs will be undertaken by all parties at end of year 3 to assure adequacy of funding to support the program through start-up period due to uncertainty of clinic revenues expected to be generated at USG as well as costs related to maintenance of facilities/equipment, facilities fees and equipment replacement cost. Review will include UMSOD, USG, and USM. Revision of programmatic funding will be necessary.

After the initial five years of operation (beginning with FY 24), the USM commits to ensuring sufficient funds are available to support the Programs, including the faculty expenses USM/USG have agreed to cover in the paragraph above, per the terms of the duties, obligations, and performance expectations set forth below.

4.2 Enrollment and Graduate Production

In return for the funding support outlined above, UMSOD is expected to:

- Successfully plan and implement the UMSOD programs in line with the proposal put forward to USM and USG (attached) and the terms and conditions of this MOU.

- Enroll at least 26 students in the UMSOD programs at USG by Fall 2020.
- By Fall 2023, aim to enroll and retain at least 45 students at USG annually, and produce at least 40 SOD graduates per year.

4.3. Funding Start Date, Transfer to USG, and Program Review and Evaluation Requirements

Initial transfer of funds from USM/USG to UMSOD, per the terms of this MOU and the schedule provided, is expected to occur in FY 19. This will allow UMSOD to begin needed hiring under the Programs prior to accepting enrollment.

This agreement becomes effective upon signature by authorized representatives of UMB, USG and USM. It remains in effect unless modified or terminated in writing by executives from all three parties. This MOU may be modified only by mutual written agreement of all parties, subject to final approval by the Chancellor.

5. Other Key Duties and Obligations Under the MOU

UMSOD will:

- Share data and information necessary to plan, develop, and operate the program and ensure its success. This includes data and information related to the SOD pathway (e.g., curriculum changes), including recruitment/acceptance of students (e.g., number of qualified applications, waitlist, acceptance rates), program enrollments and projections, retention and graduation rates, market demand and career pathways for graduates of the program, and other metrics as deemed appropriate by mutual consent. These metrics as well as a milestone schedule are articulated in a separate addendum.
- Share data and information required by USG to maintain campus-wide safety and security as well as the provision of student and academic services as identified in the current slate of student services provided by USG.
- Meet with USG annually to review and discuss progress under the program and any additional challenges/opportunities that the program has encountered. This will include reviewing progress toward enrollment projections, any challenges/opportunities that the program has encountered and other agreed upon metrics (e.g., demand for the program, degree outputs). This “informal” status review would be separate from the more comprehensive 5-year review articulated in section 4.3.
- Meet with USG and USM at the end of year 3 for financial review (as indicated in section 4.1).
- Partner with USG on mutually beneficial development efforts to support the program including grant and scholarship funding opportunities as they may arise to enhance and support the UMSOD programs and its students.
- Recruit, hire and manage faculty and staff for the program at USG. Staff hired to support the facilities and IT at USG the (e.g., lab technicians, managers, IT support) will work in partnership with USG to effectively manage and optimize the use of these resources.
- Honor all previously executed or subsequently executed agreements with USG including agreements on: counseling services, the delivery of student and academic services, support for students with disabilities, student information and data sharing.
- Partner with USG to identify and achieve efficiencies in academic programs and support services as appropriate and practice these general principles.
- Encourage the development of entrepreneurial and innovation co-curricular initiatives.

- Actively encourage faculty, students and staff to participate in inter-professional initiatives, course sharing, curriculum and experiential opportunities with other programs at USG.
- UMSOD recognizes that the specialized equipment under its control maybe part of these collaborative activities.
- Adhere to the current funding policy and fee schedule for all programs at USG including auxiliary student fees, technology fees and parking fees for students, faculty and staff.
- Will be responsible for supplying the disposables used in delivering the curriculum for these SOD programs as is current standard practice at USG.
- Will be responsible for maintaining the specialized and technical program equipment as outlined in the USG Operational addendum.
- Will be responsible for purchasing supplies and gases moving forward utilizing SOD expertise and knowledge.
- Will be responsible for notifying USG when purchasing, obtaining, or installing specialized and technical equipment to ensure compliance of federal, state and university regulations
- Will be responsible for notifying USG before constructing and moving specialized and technical equipment to ensure compliance of environmental, health and safety requirements.
- Will be responsible for providing personal protective equipment for clinic personnel within the clinical space under the control of UMSOD.
- Will maintain a complete inventory of all equipment and instruments for the clinical space under the control of UMSOD.
- Will be responsible for safety, training, certifications, environmental safety, regulatory licenses, annual reporting and medical emergencies within the clinical space under the control of UMSOD.
- Will be responsible for required periodic inspections and audits for space under the control of UMBSOD.
- Continue to follow existing policy and procedures for establishing a new academic program at USG including timely MHEC filings as well as the required submittals and approvals with regard to the academic program proposal at USG according to the current submission and approval procedures.

USG will:

- Provide funding to UMSOD to offset the projected gap costs associated with developing, implementing, and operating the UMSOD programs at USG for FY 19 through FY 23 per the requirements identified in Section 4.
- Meet with UMSOD annually to review and discuss progress under the program and any additional challenges/opportunities that the program has encountered. This will include reviewing progress toward enrollment projections and other agreed upon metrics (e.g., demand for the program, degree outputs). The annual review would be separate from the more comprehensive 5-year review articulated in section 4.3.
- Meet with UMSOD and USM at the end of year 3 for financial review (as indicated in section 4.1).

- Ensure that suitable office and classroom spaces are available to the program to support its effort, under the standard conditions of approved USG space policy
- As is current standard practice, USG will purchase and maintain the equipment used by the UMSOD programs in the USG labs and classrooms.
- USG recognizes that the simulation and clinical areas are under the control of UMSOD with understanding that all specialized technical program equipment obtained by USG is owned by USG.
- Partner with UMSOD on mutually beneficial development efforts to support the program including grant funding and scholarship opportunities as they may arise to enhance the program and its students.
- Honor all previously executed or subsequently executed agreements with UMSOD including agreements on: counseling services, the delivery of student and academic services, support for students with disabilities, student information and data sharing.
- Partner with UMSOD to identify and achieve efficiencies in academic programs and support services as appropriate and practice these general principles.
- Continue to provide current funding policy and fee schedules and invoices to UMSOD that include auxiliary student fees, technology fees, facility fees, room charges and parking fees for students, faculty and staff in accordance with standard existing procedures at USG for all USG partner institutions. If the funding policy and fee schedules change and are approved during this MOU term, the revised fee schedules will be used.
- Continue to follow existing policy and procedures for establishing a new academic program at USG including the required submittals and approvals with regard to the academic program proposals.
- Will be responsible for accepting the delivery of purchased supplies and gases.
- Will be responsible for housekeeping maintenance of and medical waste removal from the clinical spaces consistent with appropriate standards of a health care facility.
- Will be responsible for providing patient parking to ensure adequate parking is available for UMSOD clients.
- Will be responsible for providing and maintaining information technology services that support the specialized technology needs provided by UMSOD.

USM will:

- Provide the enhancement funds requested by USG for the Programs beginning in FY 19 and continuing through FY 23, as identified in Section 4 above.
- Work with USG to solve any funding needs that may require modification in the FY19-FY23 period.
- For the period that begins in FY 24, work with USG and UMB to ensure the continued adequacy of funds to cover the costs of the Programs as identified and agreed upon by the three parties.

6. Program Contacts

UMB and USG designate the following individuals as those with the responsibility of coordinating the MOU implementation in general terms:

- UMB: Br. Bruce Jarrell, Chief Academic & Research Officer, Dr. Mark Reynolds, Dean School of Dentistry, Dr. David George, Chief of Staff, School of Dentistry
- USG: Dr. Stewart Edelstein, USG Executive Director and Associate Vice Chancellor for Academic and Student Affairs, USM, Mary Lang, Chief Strategy Officer, Ms. Nico Washington, Chief Operating and Financial Officer
- USM: Ms. Ellen Herbst, Chief Operating Officer and Vice Chancellor for Administration and Finance, Dr. Joann Boughman, Senior Vice Chancellor for Academic and Student Affairs

7. Date and Signatures of MOU and Authority to Execute

This MOU shall be effective upon the date of the final signature by the authorized representatives of the parties. The undersigned individuals represent and warrant that they are expressly and duly authorized by their respective institutions to execute the MOU.

8. Required Signatures

The parties identified below agree to the provisions and terms of this MOU.**APPROVED:**

Dr. Bruce Jarrell, Ph.D Date
Chief Academic & Research Officer
University of Maryland, Baltimore

Stewart Edelstein, Ph.D Date
Executive Director
The Universities at Shady Grove
Associate Vice Chancellor for Academic Affairs
University System of Maryland

Dr. Mark Reynolds Date
Dean, School of Dentistry
University of Maryland, Baltimore

Ellen Herbst Date
Chief Operating Officer
Vice Chancellor for Administration & Finance
University System of Maryland

Dr. Joann Boughman Date
Senior Vice Chancellor for Academic & Student Affairs
University System of Maryland

Attachments:

Proposal and Excel Spreadsheet of UMSOD costs as submitted to USM (May 2018)Milestones Draft to Follow Metrics/Measures Draft to follow and USG Operational Addendum

PROGRAM FORECAST							
Masters in Dental Hygiene and Certificate Program in Oral Health Sciences							
Shady Grove Campus							
Academic Year (starting)							
	2019	2020	2021	2022	2023	2024	2025
Revenue							
Net Tuition Received by SOD	407,443	621,438	673,983	716,269	760,485	806,705	830,901
Clinic Revenue	750,840	773,365	796,566	820,463	845,077	870,429	896,542
Total Revenue	1,158,283	1,394,803	1,470,549	1,536,732	1,605,562	1,677,134	1,727,443
Expenses							
Faculty	448,050	546,364	650,173	669,678	689,768	710,461	731,775
Staff	520,860	639,027	658,198	677,944	698,282	719,231	740,808
Resident expenses	168,000	168,000	168,000	168,000	168,000	168,000	168,000
Operations	731,161	789,570	733,646	754,899	776,791	799,338	822,562
Total Expenses	1,868,071	2,142,961	2,210,017	2,270,521	2,332,841	2,397,030	2,463,145
AY Surplus / (Deficit)	(709,788)	(748,158)	(739,468)	(733,789)	(727,279)	(719,896)	(735,702)
USM Funding	709,788	748,158	739,468	733,789	727,279	719,896	735,702