



Dental Hygiene AAS Program
School of Science, Health and Criminal Justice
2015 Assessment Report



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Program Learning Outcomes

After completion of the program, students will be able to:

- 1) Provide the services outlined in the NYS Dental Hygiene Practice Act. *
- 2) Perform all phases of dental hygiene care, including assessment, planning implementation, and evaluation. *
- 3) Demonstrate problem solving strategies when managing patient care; and will make recommendations and referrals based on scientific theories and research. *
- 4) Demonstrate techniques utilized to prevent a medical emergency as well as steps taken to manage an emergency should one occur during a dental appointment. *
- 5) Assess, plan, implement and evaluate educational activities to promote good oral health and minimize disease in the community.



Program Learning Outcomes Continued

- 6) Become competent in the application of self assessment skills and demonstrate a commitment to life long learning as well as the advancement of dental hygiene as a profession. *
- 7) Conform to the ADHA's Professional Code of Ethics while attending all classes, labs/clinics and when completing off campus rotations in the community. *
- 8) Integrate legal and ethical concepts: maintaining patient confidentiality and autonomy while providing therapeutic interventions with cultural sensitivity and without discrimination. *
- 9) Create accurate and complete written documents and effectively communicate with peers, faculty, staff, other health care professionals, as well as patients. *
- 10) Provide a quality education that adequately prepares students to successfully pass the National Dental Hygiene Examination and both components of the CDCA Examination with 75% proficiency; and meet all requirements for NYS certification in local anesthesia and nitrous oxide analgesia.



Where Were Outcomes Assessed?

- *Outcome 1 - Perform Skills in the NYS Practice Act*

*Courses that provide the foundational information: DHYG 140/141, DHYG 142, DHYG 145, DHYG 155, DHYG 156, DHYG 215, DHYG 220, DHYG 221, 240/241
Competency assessed in DHYG 250/251 Clinic*

- *Outcome 2 - Perform All Phases of Dental Hygiene Care*

*Courses that provide the foundational information: DHYG 140/141, DHYG 142, DHYG 145, DHYG 155, DHYG 156, DHYG 215, DHYG 220, DHYG 221, 240/241
Competency assessed in DHYG 250/251 Clinic*

- *Outcome 3 - Utilize Problem-Solving Skills*

DHYG 140/141, DHYG 142, DHYG 145, DHYG 155, DHYG 156, DHYG 161, DHYG 215, DHYG 220, DHYG 221, DHYG 240/241, DHYG 250/251



Where Were Outcomes Assessed?

- *Outcome 4 – Prevent And/Or Manage Medical Emergencies*

Courses that provide foundational information: DHYG 141, DHYG 142, DHYG 215

Competency assessed in DHYG 256 in the spring

- *Outcome 5 - Plan and Implement Educational Activities to Promote Good Oral Health*

Competency assessed in DHYG 159 and 260 in the spring

- *Outcome 6 - Perform Self-Assessment*

DHYG 140/141, DHYG 142, DHYG 145, DHYG 241, DHYG 250/251



Where Were Outcomes Assessed

Outcome 7 - Conform to the ADHA's Professional Code of Ethics

Foundational information in DHYG 140/141, DHYG 142, DHYG 145, DHYG 241, DHYG 250/251. Competency assessed in spring during DHYG 270

Outcome 8 - Integrate Legal and Ethical Concepts

DHYG 140/141, DHYG 142, DHYG 145, DHYG 155, DHYG 241, 250/251

Outcome 9 - Written & Verbal Communication

DHYG 140/141, DHYG 142, DHYG 145, DHYG 155, DHYG 220, DHYG 221, DHYG 241, 250/251

Outcome 10 - Three Licensing Exams & NYS Certification in Local Anesthesia

DHYG 215, DHYG 251



Population Assessed

- A total of 42 matriculated students were assessed, this included: 20 freshmen and 22 senior students
- 17/19 (89.5%) 1st year students were retained
Failures: 2 students in DHYG 145/ 1 student DHYG 156
- The student who failed DHYG 145 will return in the fall to repeat the course and step back into the program. The second student who failed both DHYG 145 and 156 was dematriculated from the program and will be returning.



Population Assessed Continued

- Retention information for the 22 senior level students is not available because (8) students received an incomplete grade in DHYG 251: Clinic II
- Some patients cancelled their appointment or did not show for a scheduled appointment to complete care. Therefore clinic requirements were not met. It is anticipated that these 8 students will complete all requirements prior to the February deadline and 22/22 students will graduate in May.



Methods of Assessment

To address various learning styles, several methods were utilized to assess student work:

- Quizzes, Midterm and Final Exam Questions
- Instrumentation Skill Evaluations
- Process/End Product Forms
- Practicums
- Self Reflection Papers
- Case Studies
- Research Assignments
- Oral Presentations/Table Clinic Presentations



Measurement Strategies

- Direct observations in the clinical and lab setting. Faculty observe students as they complete processes and perform skills on peers and/or patients.
- Rubrics for oral presentations and research papers are distributed to students and utilized when grading.
- % of questions answered correctly on quizzes, exams, case studies as well as practicums where students move from station to station to answer questions.



Departmental Standards

- Our students must take three licensing examinations after completing the program and are required to achieve a 75 or higher to pass. As a result, the department adopted this benchmark for passing freshmen level assessments.
- CODA, our accrediting body, requires that we show progression in student learning and the ability to complete skills independently and safely in the workforce so students are required to complete clinic skills with 100% competency.
- Although our target is for students to complete clinic skills with 100% competency, this is an achievable goal since the students are given multiple attempts to complete each skill.



Course	Program Outcomes Assessed	Target <i>Note: we are a competency based program therefore students have multiple attempts to perform clinical/lab skills</i>	
DHYG 140	# 1, #2, #4	90% of students will complete written quizzes with a grade of 75 or >	
		90% of students will answer specified midterm exam questions with a grade of 75 or >	
		90% of students will answer specified final exam questions with a grade of 75 or >	
DHYG 141	#1, #2, #4, #6, #7, #8 and #9	90% will demonstrate basic skills with < 6 errors on the week 13 instrumentation evaluation	
		90% will receive a 75% or > on the five instrument evaluations	
		90% will receive a 75% or > when assessing a health history on a clinic patient	
		90% will receive 100% proficiency when placing barriers in prep for the patient appointment	
		90% will receive a 75% or higher on their professional conduct assessments	
DHYG 142	#1, #4, #7, #9	100% will perform a handwash & prepare the treatment room for patient care with 100% competency	
		100% perform all steps for administering supplemental oxygen with 100% competency	
		100% will perform all steps for measuring pulse, respiration and BP with 100% competency	Met

Course	Program Outcomes Assessed	Target <i>Note: we are a competency based program therefore students have multiple attempts to perform clinical/lab skills</i>	
DHYG 145	#1, #2		
		Class average will be a 75 or > on quiz 4 and final exam questions on radiation safety	Met
		Class average will be a 75 or > on midterm and final exam on questions testing x-ray components	Not met
		100% of students will perform all steps on process forms 8, 9, 11 with 100% accuracy	Met
		Class average will be a 75 or higher on midterm and final exam questions testing landmarks	Met
DHYG 155	#4, #7, #8	90% will answer questions on professional agencies on final exam with a grade 75 or >	Met
		90% will answer questions on chain of infection & prevention of cross contamination with a 75 or >	Met
		90% will answer questions on bloodborne pathogens/respiratory diseases with a grade of 75% or >	Met
		90% will answer questions on the components of an Infection Control Plan with a grade of 75% or >	Met
DHYG 156	#2, #3, #9	80% will answer 20 final exam questions comparing deciduous/permanent teeth with a 75% or >	Met
		80% will answer final exam questions and describe the gingiva with a grade of 75 or >	Not met
		80% will look at models during practicum #1 and state dentition and age with a grade of 75 or >	Met
		80% will look at models during practicum #2 and classify occlusion with a grade of 75 or >	Not met
		90% will complete a numbering system assignment with a grade of 75 or >	Met
		80% will critically analyze slides on practicum #2 and identify landmarks, palpations and deviation from normal with a grade of 75 or >	Met

Course	Program Outcomes Assessed	Target <i>Note: we are a competency based program therefore students have multiple attempts to perform clinical/lab skills</i>	
DHYG 161	#2, #3	80% will answer questions 1-15 on the final exam with a grade of 75 or >	Not met
		80% will answer questions 16-30 on the final exam with a grade of 75 or >	Not met
		80% will answer questions 31-45 on the final exam with a grade of 75 or >	Not met
		80% will complete workbook pages with a grade of 75 or >	Met
		80% will complete case studies on the final exam with a grade of 75 or >	Met
DHYG 215	#1, #2, #4, #8, #9	90% will complete the NYS Practice Act Assignment with a grade of 75 or >	Met
		90% will pass the final exam with a grade of 75 or >	Met
		100% will identify a patient, review medical history and administer local anesthesia with 100% accuracy	Met
		100% will accurately document the patient record with 100% accuracy	Met
		100% will demonstrate 100\$ accuracy in infection control techniques when administering anesthesia	Met
DHYG 220	#2, #3, #8, #9,	90% will record all components of a comprehensive perio exam, will analyze it and classify the patient’s periodontal status with a grade of 75 or >	Met
		90% will analyze case studies on the midterm exam and answer questions with a grade of 75 or >	Met
		90% will pass the final exam with a grade of 75% or >	Met
		90% will assess a periodontally involved patient, determine appropriate interventions and a recall and discuss in a written paper with a grade of 75 or >	Met
		90% will conduct research, develop a table clinic & provide an oral presentation with a grade of 75 or >	Met

Course	Program Outcomes Assessed	Target <i>Note: we are a competency based program therefore students have multiple attempts to perform clinical/lab skills</i>	
DHYG 221		90% will pass General Concepts Quiz with a 75 or >	Met
		90% will pass the Autonomic Nervous System Quiz with a 75 or >	Met
		90% will pass the drug Classification Quiz with a 75 or >	Met
DHYG 240	#1, #2, #3, #4, #8, #9	90% will pass questions on preventive materials utilized by a NYS RDH with a 75 or >	Not met
		90% will pass questions on materials utilized in general dentistry and specialty practices with a	Not met
		90% will complete research and submit a paper to demonstrate evidence based decision making skills with a 75 or >	Met
DHYG 241	#1, #2, #3, #4, #7, #8, #9	100% will demonstrate 100% accuracy mixing alginate & taking an impression and bite registration	Met
		95% will demonstrate 100% accuracy in infection control techniques when utilizing dental materials	Met
		100% will pour and construct a set of well trimmed study models with a grade of 75 or >	Met
		100% will fabricate a sports mouthguard and bleaching trays with a a grade of 75 or >	Met
		100% will complete the steps on the process form for placing sealants with 100% accuracy	Met
		100% will complete the steps on the process form for polishing an amalgam with 100% accuracy	Met
		100% will demonstrate technique for mixing dental cement/temporary restorations with 100% accuracy	Met
		100% will demonstrate technique when performing dental assisting skills with 100% accuracy	Met

Course	Program Outcomes Assessed	Target <i>Note: we are a competency based program therefore students have multiple attempts to perform clinical/lab skills</i>	
DHYG 250	#1, #2, #3, #7, #8, #9	90% will answer test questions on final exam pertaining to desensitizing agents with a grade of 75 or >, and 100% will practice the skill in lab on a peer with 100% accuracy.	Met
		90% will answer test questions on final exam pertaining to air polishing with a grade of 75 or >, and 100% will practice using the air polisher in lab on a peer with 100% accuracy.	Met
		100% of senior level students will practice all steps on the process form for completing a comp perio chart	Met
		90% will answer test questions on the final exam pertaining to the elder patient with a grade of 75 or >	Not met
		90% will answer test questions on the final exam pertaining to saliva testing and utilization of the DIAGNOdent laser unit with a grade of 75 or >	Met
		90% will answer test questions on the final exam pertaining to digital radiography with a grade of 75 or >	Met
DHYG 251	#1, #2, #3, #7, #8, #9	100% will demonstrate the steps in the process for opening and closing the panoramic digital unit with 100% accuracy and will expose a quality image	Met
		100% will demonstrate the steps for utilizing a Vizilite cancer screening kit on a clinic patient with 100% accuracy	Met
		100% will earn an overall grade of 80% in the Extra/Intraoral Examination Category in clinic	Met
		100% will earn an 80 or > on the child, teen, adult and geri patient competency exams	Met
		100% will assess the needs of a recall patient with a grade of 80 or >	Met
		100% will utilize good communication skills when explaining the summary of services form to a clinic patient and their supervising faculty member	Met
		100% will employ 100% accuracy when demonstrating technique when sterilizing contaminated instruments and completing the Quality Assurance Log	Met
		100% will demonstrate 80% proficiency when managing the care for a PII patient in the clinic.	Met
		100% will demonstrate 100% accuracy when applying a desensitizing agent on a clinic patient	Met
		100% will demonstrate 100% accuracy when utilizing the DIAGNOdent laser unit and performing saliva testing on a clinic patient	Met
		100% will demonstrate 80% accuracy when completing the steps for performing a comprehensive periodontal chart	Met

Summary of Areas of Weakness

- The dental hygiene students are overwhelmed with the amount of information that is covered in such a short amount of time. However, accreditation standards do not allow faculty to omit any of the content.
- Students prefer to take weekly quizzes that test less information instead of more comprehensive exams where they have to pull multiple concepts together. However, the National Exam is comprehensive so we prefer to develop this skill early.
- Research and writing skills are deficient for college level students
- Critical thinking skills are initially weak for freshmen level students because the information tested that first semester does not come together for them until they have had an opportunity to apply the information in the clinic when treating patients. By the 4th and final semester, the students do develop this ability and have repeatedly performed above the national average in this content area on the National Exam



Closing the Loop

- Discuss and analyze course learning outcomes at a department meeting since it was discovered that there were instances where a theory course had an outcome that needed to be evaluated in the clinical setting and it may be more appropriate to move that outcome to a lab/clinic course.
- Discuss expectations at a department meeting to determine if targets are realistic. (Example: 90% of the students will earning a grade of 75% or higher. Is 90% too high?)
- Require students to submit a first draft of papers so feedback can be provided prior to grading the final product and/or the student can be referred to the writing center when necessary



Closing the Loop

- Analyze exam and test questions where less than 75% of the students answered the question correctly to ensure validity. Consider rewording some the questions, spending more time in class on a deficient topic and/or developing worksheets and homework assignments so students can self assess their comprehension of the information prior to taking an exam. Then they can seek help from faculty or a peer if need be.
- Schedule a meeting the radiology lab instructors and lead instructor sometime in January while the information is still fresh in their minds. The time will be utilized to review missed test questions on the radiology final and ensure all faculty are reinforcing lecture concepts in the labs in the same manner. Schedule another meeting in mid-August, prior to the start of the fall semester, to review all process forms and calibrate faculty.
- Review and revise some of the DHYG 241 process/end product forms so the steps are clearer and easy for the students to understand.
- Purchase study models for 1st semester freshmen to practice classifying occlusion.



Resources Needed to Close the Loop

- Funding to compensate radiology faculty to attend 3 hours of calibration with the lead radiology instructor to review the final exam as well as all of the process forms distributed to the students during the fall. \$200.00
- Funding to purchase study models for students to practice classifying occlusion since many of our current models have chips and fractures. Requested funding: \$995.00
- Funding to create updated videos of faculty demonstrating the skills taught in pre-clinic so they can be uploaded in Blackboard for students to access and review at home when studying and prepping for skill evaluation. \$240.00

Total Budget: \$1,435.00

