

Dental Hygiene AAS Program
School of Science, Health and Criminal Justice
Fall 2016 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.

* indicates assessed this semester



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.

* indicates assessed this semester



Where Were Outcomes Assessed?

- *Outcome 1 – Provide 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
Not assessed until spring (in DHYG 151 and DHYG 256)
- *Outcome 5 - Plan and Implement Educational Activities to Promote Good Oral Health*
Not assessed until spring (in DHYG 159 and DHYG 260)
- *Outcome 6 - Perform Self-Assessment*
DHYG 140/141 Lab, DHYG 142 Lab, DHYG 145 Lab, DHYG 241 Lab,
DHYG 250Lab/251 Clinic



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. **AACU Oral Communication Assessed in DHYG 220 and was scheduled to be assessed in DHYG 250 but no data provided***

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



Population Assessed

- 40 students: 23 freshmen and 17 seniors
- 17/23 (73.9%) 1st year students were retained
 - 1 student failed DHYG 141 Pre-Clinic
 - 1 student failed DHYG 156 Oral Anatomy
 - 1 student failed DHYG 161 Histology
 - 5 students failed DHYG 145 Radiology
- (2) students changed majors, will attend classes on main campus in spring
- (3) students expressed a desire to return for fall 2017 semester to repeat failed course and graduate in 3 years
- (1) student failed 3 dental hygiene courses and will not be considered for readmission into the program



Population Assessed Continued

- Retention information for the 17 seniors is not available at this time because (6) students received an incomplete grade in DHYG 251: Clinic II
- Clinic requirements were not met because some patients cancelled their appointment or simply did not show for a scheduled appointment. It is hard to know ahead of time what the perio and calculus status of a patient is going to be.
- Lead instructor, Ms. Fremont reported that 4/6 should complete all requirements prior to the February deadline but two (2) may not graduate until December.



Methods of Assessment

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

- 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.
- AACU rubrics were utilized to evaluate oral and written communication skills and critical thinking.
- % of questions answered correctly on quizzes, exams, case studies as well as responses on practicums where students moved from station to station.



Departmental Standards

- Our students must take three licensing examinations after completion of 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 we show progression in student learning and the ability to complete clinical 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	
DHYG 140	# 1, #2, #4	90% of students will complete written quizzes with a grade of 75 or > (but 85% completed written quizzes with a grade of 75 or >)	Met
		90% of students will answer specified final exam questions with a grade of 75 or >	Met
DHYG 141	#1, #2, #4, #6, #7, #8 and #9	90% will demonstrate basic skills with < 6 errors on the week 13 instrumentation evaluation	Met
			Met
		90% will receive a 75% or > when assessing a health history on a clinic patient	Met
			Met
		90% will receive a 75% or higher on their professional conduct assessments	Met
		90% will receive a 75% or > on the self-reflection paper after first patient appointment	Met
DHYG 142	#1, #4, #7, #9	100% will perform proper handwashing & prepare the treatment room for patient care with 100% competency (95% on 1 st attempt and 5% on 2 nd attempt)	Met
		100% perform all steps for administering supplemental oxygen with 100% competency	Met
		100% will perform all steps for measuring pulse, respiration and BP with 100% competency (57% on 1 st attempt and 43% on 2 nd attempt)	Met
		100% will perform all steps in an extra/intraoral cancer screening 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	100% of freshmen students will process, label and mount films as outlined on process forms 8, 9, 11 with 100% accuracy	
		100% of freshmen students will utilize proper technique when exposing radiographs as outlined on process forms 1, 2,3,4,5,6,7,10 and 13	Met
		The data for test questions was not entered properly so results were skewed. Requires revision before data can be assessed.	
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 the components of an Infection Control Plan with a grade of 75% or >	Met
DHYG 156	#2, #3, #9	80% will answer questions 1-25 with a grade of 75 or > - met	
		75% will answer 6/8 questions correctly on the lab practicum – not met	
			Not met
		80% will look at models during practicum #1 and state dentition and age with a grade of 75 or >	Not met
		80% will look at models during practicum #2 and state occlusion with a grade of 75 or >	Met
	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 >	Met
		80% will answer questions 16-30 on the final exam with a grade of 75 or >	Met
		80% will answer questions 31-45 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
			Met
		100% will review a medical history & administer local anesthesia in lab with 100% accuracy	Met
		100% will document the patient record with 100% accuracy	Met
		100% will demonstrate 100% accuracy in infection control techniques when administering anesthesia, disposing of needles and anesthetic carpules and bagging syringes.	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 surgeries exam with a grade of 75% or >	Met
		90% will assess a periodontal involved patient, determine appropriate interventions and a recall interval and discuss in a written paper with a grade of 75 or >	Not 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
		90% will pass the dental treatment agents quiz with a 75 or >	Met
		90% will pass the PDR paper with a grade of 80% or >	Met
DHYG 240	#1, #2, #3, #4, #8, #9	Data for test scores was not entered accurately so results were skewed – no report at this time	
		85% 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; and 90% will pass the gypsum written quiz with a grade of 75 or >	Met
		95% will demonstrate 100% accuracy in infection control techniques when utilizing dental materials	Not 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 for placing sealants with 100% accuracy	Met
		100% will complete the steps on for polishing an amalgam with 100% accuracy	Met
		90% will earn a 75 or > on the study model, sealant & amalgam polishing written quizzes	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	Target	
	Outcomes	<i>Note: we are a competency based program therefore students have multiple attempts to perform clinical/lab skills</i>	
	Assessed		
DHYG 250	#1, #2, #3, #7, #8, #9	100% will practice placing a desensitizing agent on a peer in lab with 100% accuracy	Met
		100% will practice using the air polisher in lab on a peer with 100% accuracy - Met	Met
		100% of senior level students will practice all steps on the process form for completing a comp perio chart	Met
		Data for test results was not entered accurately so no reporting at this time.	
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 steps for utilizing a Vizilite cancer screening kit on a 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 sterilization techniques and documenting 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

- Retention in Radiology, which is a difficult course
- Utilizing APA formatting when submitting written papers and a reference page.
- Students prefer to take weekly quizzes that test less information instead of more comprehensive exams where they have to pull multiple concepts together.
- The ability to take information and critically apply it is initially a challenge for 1st semester freshmen students. They do not begin to really develop that skill until the 2nd semester when they start seeing patients in the clinical setting. Examples: ability to evaluate the gingiva, classify occlusion, etc. However, our students have repeatedly performed above the national average in this content area on the National Exam so they eventually develop this skill.
- The high number of incomplete grades given in senior clinic. The faculty need to brainstorm a means of screening and distributing patients in an equitable manner so everyone can completed requirements.



Summary of AACU Assessments

- Critical Thinking was assessed at both the freshmen and senior level.
- DHYG 142 (Quinn & Wood) 23/23 freshmen met the Institutional target since all scored above an 10. But the department's target was not met since only 65% of the class earned a 12 or higher.
- DHYG 221 (Penoyer) 17/17 seniors met both the Institutional and departmental targets since 16/17 students earned a 17/20 or >.



Summary of AACU Assessments

- Oral Communication was scheduled to be assessed in two senior level courses.
- DHYG 220 (Quinn): 17/17 students met both the Institutional and department targets. All 17 students scored 16/20 or higher
- DHYG 250 (Fremont): no data provided



Steps Taken Since Fall 2016 Assessment to Close the Loop

- New sets of study models were purchased so freshmen could practice classifying occlusion; and photos of models were uploaded to Bb so the students could study them at home or in the library.
- Lead radiology instructor spent time calibrating the 2 adjunct radiology instructors to ensure all 3 were emphasizing the same key concepts and utilizing the same terminology in lab to avoid confusion.
- Several faculty encouraged students to have a peer evaluate their written projects prior to submission and/or have given students the option of submitting a rough draft for feedback prior to final submission. So we saw stronger submissions in DHYG 220, 221 and 240 this fall.



Steps Taken Since Fall 2016 Assessment to Close the Loop

- Videos were made and posted so students had a visual of steps in the clinic process forms. This resulted in stronger performance of skill evaluations in 141 and 142.
 - a) Four videos on handwashing & proper placement and removal of PPE
 - b) Two videos of the steps for measuring pulse, respiration and BP
- Some of the dental materials processes were reviewed and wording was modified by 241 faculty to make the information clearer for the students.
- Freshmen purchased Iclickers in August. Penoyer and Quinn found they help to keep the students engaged during class and received positive feedback from students. Pre-clinic lead instructor also brought her Ipad to clinic & recorded students so they could analyze and self correct errors in instrumentation.



Closing the Loop Moving Forward

- 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 and encourage students to take advantage of faculty office hours.
- In fall 2015, 8/22 (36%) of students received an incomplete in DHYG 251 and in fall 2016, 6/17 (35%) received an incomplete grade. It is recommended that the faculty do an analysis to see what clinic requirements were not fulfilled to see if there is something that can be done to minimize his number. Some programs screen patients and assign to students so all students can fulfill the clinic requirements in a timely manner so this may be a direction the program needs to take.
- Make a video of the EO/IO cancer screening exams which is a long process and took most students 2-3 attempts to master.



Resources Needed to Close the Loop

- Funding for the videographer to travel from the main campus to Rome to help create some learning videos for the students.

