

Outcome Assessment Plan Aug. 2022 – Aug. 2023

Program Effectiveness Measures					
Outcome	Measurement Tool	Benchmark	TimeFrame/ Responsible Party	Results	Analysis/Action Plan
1) Students will be able to pass the national ARRT certification exam	ARRT documentation sheet	As a class, 75% average first-time pass rate over a 5 yr. period	Annually in March Director	<p>March of 2021 for class of 2020 n = 9, March 2020 for class of 2019 n=(6) - 100% March 2019 for class of 2018 n= (10) – 100% March 2018 for class of 2017 n= (10) - 100% March 2017 for class of 2016 (n8) - 100%</p> <p>Overall 5 yr avg. = 100%</p>	<p>Passage rates (100% for 20 straight years) & scaled scores on exam have remained well above national averages. The scaled scores remained in the same range as previous years. This indicates students who are well prepared. In addition, scores on Hesi Radiography exit exam remain very high and consistent across the last two year period. Continue to monitor.</p>

Outcome Assessment Plan Aug. 2022 – Aug. 2023

2) Employers will indicate satisfaction with students hired from the program	Post-Graduation Employer Survey,	Average score of 7 out of 10 over a 5 year period	Annually in March Director	<p>2016 - (n-7) - 8.6 2017 (n-10) - 8.9 2018 (n-9) – 9.27 2019 (n-5)- 9.23 (*one student not included – graduated in 2020 (n – 6) – 9.12</p> <p>Overall 5 yr. avg. – 8.94</p>	<p>Benchmark met. Continue to monitor. The results for 2020 were almost identical to the previous year. Both 2019 and 2020 showed improvement from previous years, although this may be due to inter-rater reliability error. The lowest areas were surgical rotations and venipuncture, which came in at nearly identical scores as in the past. This is still well above the benchmark and expected due to the fact students are just learning venipuncture skills and surgery can be challenging. One change made for the class of 2020 is that students are now required to start IV's at Mercy during the Spring rotation. It might be worth considering adding fluoroscopy to the post-graduate survey as this is another area that can prove challenging. Three employers failed to fill out the survey in 2020 and one student was still pursuing further education.</p>
3) Students will be able to find employment in the radiologic sciences field within 12 months of graduation	Phone or e-mail survey of former students	5 year average job placement rate of not less than 75% within 12 months after graduation	Annually in July Director	<p>2016 (n-8)100% 2017 (n-10) 100% 2018 (n-10) 100% 2019 (n-6) 100% 5 yr average of 100% 2020 (n-9) 100%</p>	<p>100% of the 2020 graduating class not currently pursuing additional education are employed. This reflects a strong job market. Continue to monitor.</p>

Outcome Assessment Plan Aug. 2022 – Aug. 2023

4) Graduates will indicate they were satisfied the program prepared them as entry-level practitioners	Student Post Graduate Survey	5 year average of 7 out of possible 10 (overall score)	Annually in May Director	2017 (n10)- 9.6 Overall 5 year avg. of 9.5 2018 - (n-9) 9.55 2019 (n-5) 9.4 2020 – (n 10) 8.6 2021 – (n-8) 9.14 Overall 5 yr. avg of 9.4	The overall 5 year average is well above the benchmark. The 2021 overall average was higher than in 2020 which was lower most likely to COVID-related events. Continue to monitor.
---	------------------------------	--	-----------------------------	--	--

Outcome	Measurement Tool	Benchmark	TimeFrame/ Responsible Party	Results	Analysis/Action Plan
5) Students will complete the program	Count of number of students starting program compared with number graduating	60% annual completion rate	Annually in May Director	2017 (n-10) - 10 of 11 graduated = 91% 2018 - (n 10) 10 of 10 - 100% 2019 – (9) 6 of 9 students graduated 66% 2020 – (10) 9 of 11 graduated for 82% 2021 – (10) 9 of 10 or 90% retention rate 5 year avg. of 85.8%	Graduation rate of 90% for the class of 2021. This is higher retention rate than the last several years and is reflective of a class of students who possessed better qualifications when entering the program and completing what they started. Continue to monitor.

Outcome Assessment Plan Aug. 2022 – Aug. 2023

Goal 1: Students will develop communication skills enabling them to communicate with patients and healthcare providers.					
Outcome	Measurement Tool	Benchmark	Time Frame/ Responsible Party	Results	Analysis/Action Plan
(1)Students will be able to effectively explain examination procedures to patients and/or family members. Goal 1 Outcome 1 Measure 1	“Criteria for Success” grading checklist, Questions 1-8	Annually as a class in Radiographic Positioning II, meet 70% of the “Criteria for Success” listed during a lab check-off exercise where students are given an exam and are required to obtain a history, explain the procedure and give any special instructions to the patient.	Annually in the Spring semester Instructor of Class	2019 – (n-11) 90% 2020 – (n=8) 96% 2021 – (n=9) 92%	Results were in line with past years. The most common errors were students not checking on prep for the exam and not reminding patients to drink plenty of fluid to flush out contrast following an IVU procedure.
Goal 1 Outcome 1 Measure 2	Clinical Patient Communication Rubric	80% of students will score 90% on the Rubric criteria in 20 randomly selected audits	Annually during spring semester, Clinical Instructor	May 2023 N=20 100% of the students were successful in meeting the benchmark for this category	May 2023, benchmark was again reached with an increased random sample size of 20. Continue to monitor. Action plan: re-emphasize to students the importance of clear communication during examinations.

Outcome Assessment Plan Aug. 2022 – Aug. 2023

Outcome	Measurement Tool	Benchmark	TimeFrame/ Responsible Party	Results	Analysis/Action Plan
<p>(2) Students will be able to verbalize problems and solutions to images obtained in the clinical setting. Goal 1 Outcome 2 Measure 1</p>	<p>Image critique grading rubric (questions 3-4)</p>	<p>As a class average, students will identify 85% of the problems and solutions to rejected images</p>	<p>Annually during summer semester "Image Critique" Instructor</p>	<p>2021 – N = 9, 94%</p>	<p>Analysis – This matched previous class metrics. All students except two were well versed in identifying all problems and solutions. The biggest issue was how this exercise was completed. Students were allowed to choose their own exams to cover and this created redundancy that did not allow evaluation of the full spectrum of exams covered to this point. Next year, the instructor will specify exams and students will draw for 5 exams that they then must find images to match that have problems.</p>

Outcome Assessment Plan Aug. 2022 – Aug. 2023

Goal 1 Outcome 2 Measure 2	Clinical Image Critique Form	Based on the criteria from the Clinical Image Critique Form, 80% of senior students can correctly verbalize 100% of problems/solutions on 20 random PCE image analyses	Annually during Spring semester, Clinical Coordinator	May 2023 N=25 100% of the senior students were able to correctly identify 100% of the problems/ solutions on randomly selected images.	This benchmark has been met. Clinical Image Critique has been recently required with program official in order to prove competency for each exam. This has also been emphasized as part of the curriculum in Image Critique, a summer course
Goal 2 Students will be able to think critically and solve problems in their daily work environment					
Outcome	Measurement Tool	Benchmark	Time Frame/Responsible Party	Results	Analysis/Action Plan
(1) The student will be	Critical thinking and	80% of graduating	Annually in May	This measure has	

Outcome Assessment Plan Aug. 2022 – Aug. 2023

able to successfully use critical thinking and problem-solving skills in the clinical environment upon graduation from the program. Goal 2 Outcome 1 Measure 1	problem-solving rubric	seniors receive an average score of at least 24 on the rubric indicating they are at a proficient level	Clinical Coordinator in conjunction with feedback from CI's	changed and will be evaluated for the first time in 2022	
Outcome	Measurement Tool	Benchmark	Time Frame/Responsible Party	Results	Analysis/Action Plan
Goal 2 Outcome 1 Measure 2	Student Clinical Evaluation Form (daily)	100% of senior students received a "satisfactory" score on critical thinking/problem solving on 60 randomly selected audits	Annually during the Fall, Clinical Coordinator	Fall 2022 For this Outcome, 60/60 or 100% of all senior student's audit received a score of "satisfactory" on their Daily Clinical Evaluation form.	The benchmark has been met. This Outcome is scored directly from the technologists at the clinical sites. Critical thinking is an integral part of the student's education when attaining images in a non-traditional situation and in judging image quality during image analysis Action Plan: Continue to monitor this Outcome with an increased sampling that increased from

Outcome Assessment Plan Aug. 2022 – Aug. 2023

					50 in 2019 to 60 in 2020.
(2) Students will be able to verbalize problems and solutions to images obtained in the clinical setting. Goal 2 Outcome 2 Measure 1	Image critique grading rubric (questions 3-4)	As a class average, students will identify 85% of the problems and solutions to rejected images	Annually during the summer semester Image Critique Class Instructor of class	2021, N = 9, 94%	Analysis – This matched previous class metrics. All students except two were well versed in identifying all problems and solutions. The biggest issue was how this exercise was completed. Students were allowed to choose their own exams to cover and this created redundancy that did not allow evaluation of the full spectrum of exams covered to this point. Next year, the instructor will specify exams and students will draw for 5 exams that they then must

Outcome Assessment Plan Aug. 2022 – Aug. 2023

					find images to match that have problems.
Outcome	Measurement Tool	Benchmark	Time Frame/Responsible Person	Results	Analysis/Action Plan
Goal 2 Outcome 2 Measure 2	Student Clinical Evaluation Form (daily)	90% of senior students will score satisfactory on the ability to "effectively to critique image" section on 75 random audits of the form	Annually during Fall Semester, Clinical Coordinator	Fall 2022n(=75) 75/75 satisfactory results in this sampling. (100%)	Analysis: This year's sample is an example of a continued effort by faculty and clinical supervisors to educate staff technologists, and students of the importance of the ability to effectively critique images at clinical sites. Technologists are required to verify the quality of the images a student takes prior to the dismissal of the patient. In addition, faculty verify the competencies with each student by requiring them to analyze and explain criteria necessary for acceptance of each image.

Outcome Assessment Plan Aug. 2022 – Aug. 2023

					Action Plan: Continue to monitor this new sampling size that increased from 50 samples in 2019 to 75 samples in 2020.
--	--	--	--	--	---

Goal 3 Students will demonstrate professionalism					
Outcome	Measurement Tool	Benchmark	Timeframe/ Responsible Party	Results	Analysis/Action Plan
(1) Students will demonstrate professionalism as demonstrated by their clinical attendance records Goal 3 Outcome1 Measure 1	Senior Student Clinical Attendance Record for Spring	As a class average, no more than an overall 3% absenteeism rate for the entire semester	Annually in May Clinical Coordinator	May2023 72 hours missed out of a possible 2408 hours. 2.99% absenteeism rate.	Benchmark maintained. The result of this year (2.99% 2023)

Outcome Assessment Plan Aug. 2022 – Aug. 2023

Outcome	Measurement Tool	Benchmark	Time Frame/ Responsible Party	Results	Analysis/Action Plan
Goal 3 Outcome 1 Measure 2	Class Attendance Roster (Principles of Rad. Exposure, Procedures II, Advanced Rad. and Special Topics)	80% of class days will have 100% attendance	Spring semester/Director	Spring 2021, 2 days had an absence out of 72 class days for both classes combined for 2020 (n= 19 students). This equates to 97% of class days with 100% attendance	Absences decreased in 2021 by 14% over last year. This is thought to have occurred due to tying absences to grades. We will continue to monitor to see if we get continued success in attendance.
Outcome	Measurement	Benchmark	Timeframe/Responsible Party		
2) Students will demonstrate core principles of professionalism as demonstrated by survey answers from physicians and staff technologists at the clinical sites. Goal 3 Outcome 2 Measure 1	Clinical Attendance Professionalism Survey	As a class, an average of 4.0 out of a possible 5.0 as measured on an annual survey distributed to the clinical sites	Annually in March/Clinical Coordinator	March,2023 N=19 Class avg. 4.5 out of 5 possible	Benchmark met. This years average was an decreased average of .2% This difference I feel is negligible. Continued monitoring will ensure the conduct of the students in the clinical setting.
Outcome	Measurement	Benchmark	Time Frame/ Responsible Party	Results	Analysis/Action Plan

Outcome Assessment Plan Aug. 2022 – Aug. 2023

Goal 3 Outcome 2 Measure 2	Final Performance Evaluation (Professionalism) Section)	90% of all students will receive a satisfactory (3 or above pts) on the professionalism section of the Final Performance Evaluation as indicated by Clinical Instructors	Annually in December /Director	Dec 2021, (n17) 100% of the students were rated as satisfactory	.This continues to trend with past years. Action plan is to continue to reinforce professionalism both in the classroom and clinical environments and in figuring letter grades for clinical classes. It is felt that tying this to part of the final grade in clinical courses will maintain a high average, since students failing to do so would score lower in clinical courses.
Goal 4 Students will demonstrate competence in their clinical practice					
1) Students will demonstrate clinical competence in their positioning skills.	Positioning I grading rubric	As a class average, students will achieve a minimum score of (90%) on the Final	Annually December, Instructor for Positioning 1	Dec 2020 (n-1) avg. 94.36%	The benchmark for this measure was increased from 80% to 90% in 2019.

Outcome Assessment Plan Aug. 2022 – Aug. 2023

<p>Goal 4 Outcome 1 Measure 1</p>		<p>Competency Lab Test</p>			<p>The result is nearly identical to last year's results. Our action plan is to continue to reinforce repetitions and practice during labs and to mandate a certain number of repeated competencies in clinical practice each semester to show continued competence.</p>

Outcome Assessment Plan Aug. 2022 – Aug. 2023

Outcome	Measurement	Benchmark	Time Frame/Responsible Party	Results	Analysis/Action Plan
Goal 4 Outcome 1 Measure 2	Exam Observation Form	90% of 30 randomly senior audits of the Exam Observation Forms indicate that students used the correct central ray and correct part positioning	Annually in Fall Semester, Coordinator	Fall 2021 (n=30) Of the 30 randomly chosen audits, 27 or 90% of the examinations observed had the correct central ray and correct part positioning.	Last year the Outcome had fallen below the benchmark of 100%. After analysis, program officials felt that the students consistently do use the correct CR angles and good positioning skills and concluded the benchmark was not realistic. Going forward the benchmark has been changed to 90% , which seems more realistic.
2) Graduates will be clinically able to perform as indicated by the clinical instructors.	Post-Graduation Clinical Instructor Survey	Average annual class rating of 7 out of 10 overall score for the survey	Annually in May, Director	May 2020 – (n=10), Avg. 8.8 May 2019 - avg.9.3 (n-5)	This was slightly below last years' mark and well above the 7 benchmark. The departure below last year's numbers is not

Outcome Assessment Plan Aug. 2022 – Aug. 2023

Goal 4 Outcome 2 Measure 1					seen as significantly different and may be influenced partially based on how much work the student does vs their ability to function in the field. The comments indicate good work ethics and communication skills as well as quality training at the clinical sites addressing the clinical competence of all students. Continue to monitor for changes.
Outcome	Measurement	Benchmark	Time Frame/Responsible Party	Results	Analysis/Action Plan
Goal 4 Outcome 2 Measure 2	Final Performance Evaluation Instrument	90% of all <u>senior</u> FPE evaluations are rated as satisfactory	Annually in Dec during the last Fall semester of the program –	Fall 2021 (n=9) In the didactic to clinical category, the	This measure has been changed from May to December since this is

Outcome Assessment Plan Aug. 2022 – Aug. 2023

		<p>by the CI's (2 or above) in both the didactic-clinical and equipment operation segments</p>	<p>Clinical Coordinator</p>	<p>students scored 100% satisfactory rating, also in the equipment operation category 10/10 (100%) students scored satisfactory on the FPE.</p>	<p>when FPE's are designated to be done each year. Continue to monitor. The results reflect the amount of clinical time spent in developing entry-level skills during the program. Repetition and experience provide the basis for solid technical skills. As an action plan, we will continue to reinforce these skills in simulated lab experiences and reinforce these principles with students in the clinical environment.</p>
--	--	--	-----------------------------	---	---