## Assessment Overview

**Discipline/Program Name:** Nursing  
**Assessment Year:** ’09 - ‘10

<table>
<thead>
<tr>
<th>Student Learning Outcome</th>
<th>Outcome Type</th>
<th>Methodology</th>
<th>n</th>
<th>History</th>
<th>Benchmark</th>
<th>Results</th>
<th>Strength of Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Use theory and clinical experiences to answer questions on a comprehensive standardized test.</td>
<td>Discipline</td>
<td>RN Exit Exam</td>
<td>47</td>
<td>5 years</td>
<td>85%</td>
<td>Both semesters met the benchmark</td>
<td>Strong</td>
</tr>
<tr>
<td>2. Integrate critical thinking skills and clinical reasoning in order to plan, deliver, prioritize, and evaluate safe holistic care of the individual; Achieve personal or collective goals using critical thinking, creative thinking or scientific reasoning.</td>
<td>SLO Discipline</td>
<td>Critical Thinking Pre-Test/Post-Test</td>
<td>47</td>
<td>4 years</td>
<td>85%</td>
<td>Both semesters met the first benchmark; but the second benchmark was not met</td>
<td>Neutral</td>
</tr>
<tr>
<td>3. Demonstrate caring (therapeutic) interventions by delivering compassionate and culturally sensitive care to clients across the life-span and the health-illness continuum; Recognize cultural traditions, understand historical perspectives and appreciate the diversity of human experience.</td>
<td>SLO Discipline</td>
<td>PN Exit Exam/RN Exit Exam</td>
<td>50 – Fall 2009; 53 Spring 2010</td>
<td>2 year</td>
<td>100%</td>
<td>Spring 2010 met the benchmark</td>
<td>Neutral</td>
</tr>
<tr>
<td>4. Utilize theory and clinical experience to successfully become a registered nurse.</td>
<td>Discipline</td>
<td>NCLEX Pass Rates</td>
<td>47</td>
<td>4 years</td>
<td>85%</td>
<td>All Methodologies used met the benchmark</td>
<td>Strong</td>
</tr>
</tbody>
</table>
Program / Discipline Assessment Report

Program/Discipline: Nursing
Responsibility: Jean Schroeder; Susan Scheuring; (Mary Steggall; Robin Fischer; Barb Stoner – Evaluation Committee)

Program/Discipline's Mission Statement:

Part 1: Registered nurses with an associate degree in nursing function as care providers by assessing, diagnosing, planning, implementing and evaluating the care given to clients. They function in seven major roles according to the expected outcomes of the National Organization of Associate Degree Nursing programs which are: Provider of Care, Member of the Profession, Manager of Care, Teacher, Advocate, Communicator and Critical Thinker. The graduate is accountable for the care given and responsible for functioning within the legal parameters of registered nursing practice. As a member of the discipline of nursing, the associate degree graduate is committed to continuous learning, ongoing professional development, maintaining competence and adherence to ethical standards of practice. Part 2: Registered nurses are expected to demonstrate behaviors such as: employability, and minimum competency regarding patient safety on the National Licensing Examination (NCLEX-RN). Our students are tested throughout the curriculum using standardized testing. This year HESI (Health Education Systems Incorporated) Critical Thinking Process in 1st semester was compared to Critical Thinking Process in 4th semester for Fall 2009 graduates and used the HESI Critical Thinking Test for both 1st and 4th semester with the Spring 2010 graduates to identify improvement. HESI PN Exit Exam and the RN Exit Exam are comprehensive tests given at the end of 1st semester and at the end of 4th semester to evaluate student learning and retention of material across the curriculum. The data from the NLNAC Category of Therapeutic Interventions for the PN Exit Exam was compared with the Therapeutic Interventions for the RN Exit Exam to measure improvement. The RN Exit Exam data was compared between Fall 2009 and Spring 2010.

Program/Discipline's Assessment History:

By using the assessment process as an evaluative technique, how has it previously affected your program's curricula and/or teaching strategies?

The nursing program has always utilized assessment testing to meet the requirements for the State Board of Nursing approval and to assist faculty in identifying areas of improvement needed in teaching the curriculum. Prior to implementation of the new curriculum in Spring 2006, the school utilized only the HESI RN Exit Exam. In Spring 2008, the program finished implementation of new curriculum that was mandated from the state. Along with the curriculum, the state mandated that all community college nursing programs provide assessment testing for all students in all semesters of the program. The schools were required to use ERI (Educational Resources Incorporated) and with grant money, the students would receive a discount in the fees for the testing. In Fall 2007, the program began using HESI (Health Education Services Incorporated), a company owned by Elsevier book company to provide a total testing package for the entire program, where students take HESI testing after each course, as well as a comprehensive test after their first year and at the end of their second year. HESI testing is used as an assessment of success on NCLEX-RN by scoring above the 850 benchmark on course assessment tests and exit exams.

In 2005, the CCCS (Colorado Community College System) created a uniform admission process and improved access to a nursing program for students with a GPA of 2.0 for 3 pre-requisites courses and then modified it with the implementation of the new curriculum to be a GPA of 2.5 and 5 pre-requisite courses. In addition to scores on the RN Exit Exam, evaluations of
student’s performance in the clinical setting by the preceptors had been part of the assessment process until Fall 2007-Spring 2008 assessment plan. This was removed beginning with the 08-09 Assessment Plan because it was identified that the data generated from the Clinical Evaluation Tool was not generating quality, objective data that met the outcomes for the program as generated for NLNAC accreditation. In Spring 2009, the clinical evaluation tool was leveled to match the student learning outcomes generated for NLNAC accreditation and implemented in Fall 2009. Faculty then revised the clinical evaluation tool to be course specific. It is undetermined when or if the tool will be used in future assessment plans.

In place of the clinical evaluation tool assessment data, critical thinking and the NCLEX pass rates are assessed. Critical thinking has been assessed with a separate standardized test since Fall 2006 with the implementation of ERI testing and a total testing package, but the decision to assess improvement from 1st to 4th semester was not made until Fall 2007 with the implementation of HESI testing. Critical thinking scores were evaluated from the ERI tests in terms of meeting the national average as was identified in the 07-08 Assessment Plan. In the 08-09 Assessment plan the critical thinking scores were only evaluated from the HESI tests, and could not be compared between 1st and 4th semester until Spring 2009. Beginning in Fall 2009, all Critical Thinking Process Test data is collected from HESI.

The NCLEX pass rates were chosen to be assessed beginning with the 08-09 Assessment Plan to also replace the data collected from the clinical evaluation tool. As part of the NLNAC accreditation process, one outcome for the program involves the students ability to provide caring or therapeutic interventions (Provider of Care). Spring 2009 was the first year that comparisons were made about improvement in scores on the NLNAC category of Therapeutic Interventions on the PN Exit Exam (1st year students) with the RN Exit Exam (2nd year students) or going from caring for simple to complex patients.

By using the assessment process as an evaluative technique, what changes to student learning have been noted?

With analysis of four semesters of data (Fall 2007, Spring 2008, Fall 2008, and Spring 2009) generated from the HESI RN Exit Exam, areas of improvement were found in Analysis within the Nursing Process; Critical Thinking; Health Promotion and Maintenance and Safety and Infection Control in the Client Needs categories; in the specialties categories overlaps were found in Community Health and Psych/Mental Health; Anxiety, Psychoses, Reproductive, Sensory, Math and Operative in the sub-specialties areas were seen in both academic years.

What unintended consequences, if any, have occurred because of the assessment process?

None of the deficits in the RN Exit Exam has impacted the NCLEX-RN pass rates for the college.

Because of the continued deficits in Math – the program has seen a continued struggle in the students in all semesters with math computations – which have lead to the implementation of a “Math Across the Curriculum” policy.

Who receives information about your department's assessment and why? (Please note if you plan on altering either of these items for the coming year.)

The faculty and Advisory Committee receive the information generated from the RN Exit Exam by the Assessment Coordinator and Instructional Research. The Assessment Coordinator utilizes the information to generate Areas of
Improvement worksheet for faculty to complete and then data is added to the Systematic Plan of Evaluation for NLNAC accreditation. The Advisory Committee is given the information to update them on the state of the program. No changes will be altered in data collection for this academic year.

### Part 1: Previous Academic Year Assessment Summary

<table>
<thead>
<tr>
<th>Outcome #: 1</th>
<th>Outcome Title: RN Exit Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome Type</strong> (choose by bolding): CTE/Nursing</td>
<td><strong>Outcome Description:</strong> Use theory and clinical experiences to answer questions on a comprehensive standardized test.</td>
</tr>
</tbody>
</table>

**Benchmark for success**
1) Please specify what percentage of the sample size is expected to meet or exceed your benchmark.
2) What is the rationale for choosing this measure?

1) 85% of graduating students will score above the benchmark for success (850) as a measured on a standardized exit exam of RNs.
2) Success on the RN Exit Exam is a predictor of success on the National Licensing Examination (NCLEX).

**Description of assessment process:**
1) What assessment methods were used to measure this outcome (i.e. pre/post test, portfolio review, etc.)?
2) How do these methods show students are learning?
3) What frequency is this outcome being measured (i.e.: each semester, yearly, every other year, etc.) and why?
4) How many students made up the sample size?

1) Students at the end of 4th semester were required to take a standardized 160 question exam created by HESI (Health Education Systems, Inc.).
2) This is a comprehensive test that includes questions from all 4 semesters: Fundamentals, Pharmacology, Pediatrics/Obstetrics, Medical Surgical, Psych/Mental Health and Leadership. Data can be compared with other tests taken that are course specific to identify improvement in specific courses.
3) Measured bi yearly, with fall graduates and spring graduates
4) Sample size: Fall 2008 – 25, Spring 2009 - 27

**Results**
What were the results of the assessment process? (List results for each method, if more than one were used.)

<table>
<thead>
<tr>
<th>RN EXIT EXAM ASSESSMENT REPORT</th>
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<tbody>
<tr>
<td>FALL 2008-SPRING 2009</td>
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**Introduction**

The following report summarizes the trends over the past two semesters for nursing student scores using HESI standards on the RN Exit Exam administered in the Nursing Program at Arapahoe Community College. For the Fall 2008 class, 11/25 scored 850 or above (44%); For Spring 2009, 13/27 scored 850 or above (48%).

The graphs will display the average student score for each topic on the exams for Fall 2008 and Spring 2009. The purpose of evaluating these averages is to predict performance on the upcoming NCLEX tests and to evaluate the need for curriculum changes within specific courses. The base/average score used...
for comparison is 850.

This report will look for topic areas within the five groups of Nursing Process, Client Needs, Specialties, Sub-Specialties, and the NLNAC topics that need improved performance in order for students to succeed on the NCLEX.

The Assessment Report

The RN Exit Exam saw mixed results. The Specialties section saw the most consistency, but the Sub-Specialties were the most mixed. This report will present the key topics in each of the five groups. The first topic is the Nursing Process. The following graph shows statistically significant improvement in three out of five topics (Analysis, Assessment, and Evaluation) between the Fall 2008 and Spring 2009. There was a decline in the area of Planning from Fall 2007 and Spring 2008. The main areas to be considered for reassessment in the next academic year is Implementation where in both the fall and spring semesters there were scores below the 850 benchmark.

The next graph shows trends in the Client Needs topics. It shows significant gains in four topics between Fall 2008 and Spring 2009 (Pharmacology, Physiological Adaptation, Physiological Integrity and Psychosocial Integrity). There were decreases in three topics (Basic Care and Comfort, Health Promotion and Management, and Safe Environment), and no change in Safety and Infection Control. Main areas to target for improvement are Health Promotion and Maintenance, Safety and Infection Control where both semesters were below the 850 benchmark.
In the Specialty Areas graph, there were significant increases for Spring 2009 in Community Health, Critical Care and Geriatrics. There were significant decreases from Fall 2008 to Spring 2009 in Maternity and Professional Issues, but not statistically significant. Non significant changes were seen in Pathophysiology, Medical Surgical, Maternity, and Fundamentals. Areas to consider for continued improvement are Geriatrics, and Maternity, since both remain significantly below the benchmark of 850.
The Sub-Specialties areas is shown on the graph below. There are significant increases (> 50 points) between Fall 2008 and Spring 2009 in Anxiety, Documentation, Endocrine, Growth & Development, Intrapartum, Oncology, Physical Assessment, Math and Reproductive. There was significant decreases between Fall 2008 and Spring 2009 in Abuse, Immune/Hematology, Integumentary, Newborn, Musculoskeletal, Legal/Ethical, Cultural and Professional Processes systems. There is no significant differences in Antepartum, Basic Skills, Cardiovascular, Depression, GI/Hepatic, Med Administration, Neurological, Postpartum, Psychoses, Renal, and Leadership between semesters. Areas for improvement are Antepartum, Documentation, Intrapartum, Math, Operative, Physical Assessment, Postpartum, and Professional Process.
**What did the department learn?**

1) How did group performance compare to the benchmark?
2) How does the data compare to the previous year, if applicable?
3) If multiple measures were used, how do they compare to each other?

1) In the overall score for the RN Exit Exam, Fall 2008 scored below the 850 benchmark (835), but the Spring 2009 scored above the 850 benchmark (862)
2) Of the four semesters who have taken the HESI RN Exit Exam, Spring 2009 was the first semester to score above the 850. Compared to the previous academic year (Fall 2007-Spring 2008), the category of weakness for the Nursing Process changed, so that will need to be monitored for another academic year for trends as each semester varies upon which area is a weakness. With Client Needs, there continues to be weaknesses in answering questions in the Health Promotion and Maintenance as well as Safety and Infection Control. In the Specialty areas there was no carry over to the next academic year for the same areas of concern, will continue to monitor in Fall 2009-Spring 2010. In the Sub-Specialty areas, the only area that was also identify in the previous year that continues into this year is the Clinical Concepts Sub Specialty of Operative and Math.

3) N/A

**Student performance summary**

1) Based on the findings, how does the department rate student performance in regards to this outcome (strong, weak, or neutral)?
2) How does this assessment affect plans for this coming year in terms of curricula, teaching strategies, and assessment methods?

1) Neutral, because we did see improvement in categories from the previous academic year.
2) Students are required to complete remediation after each course HESI testing to instill in them the seriousness of reaching the benchmark, as well as required to complete additional NCLEX type questions for each course starting in second semester. Students will continued to be counseled by the Retention Coordinator after taking the RN Exit Exam to review areas of improvement and for those students who score less than 850,and will be encouraged to take a review course to prepare for the NCLEX-RN; the faculty will use the summary reports for each course specific exam to improve curriculum; areas of improvement will be generated from the RN Exit Exam to identify gaps in the total curriculum and an action plan created to make changes in the curriculum which will be documented on the Systematic Evaluation Plan as well as the course evaluations created every semester.

**Outcome #: 2**

**Outcome Title:** Critical Thinking

**Outcome Type** (choose by bolding): CTE/Nursing

**Outcome Description:**
Demonstrate knowledge of the concepts of nursing that require critical thinking skills and apply them to situations given on a standardized critical thinking test.

**Benchmark for success**

1) Please specify what percentage of the sample size is expected to meet or exceed your benchmark.
2) What is the rationale for choosing this measure?

1) 85% of the graduating student’s critical thinking score will improve between 1st and 4th semester on a standardized critical thinking test, 85% of students will have a score above 850 on the NLNAC critical thinking category in both fall 2007 and spring 2008
2) Critical thinking is a skill that is a necessary tool for competency in the clinical setting.

**Description of assessment process:**

1) What assessment methods were used to measure this outcome (i.e. pre/post test, portfolio review, etc.)?
2) How do these methods show students are

1) Method #1: Comparing scores in a Pretest/Posttest format using a standardized Critical Thinking Test between 1st and 4th semester; Method #2: Comparing scores on the RN Exit Exam for Fall 2007 and Spring 2008 with the 850 benchmark in the NLNAC category of critical thinking.
2) By comparing the critical thinking scores between the 1st and 4th semester tests, scores should improve
3) What frequency is this outcome being measured (i.e.: each semester, yearly, every other year, etc.) and why?
4) How many students made up the sample size?

because of the exposure to the nursing curriculum; comparing scores on the RN Exit Exam to meeting the benchmark of 850 will show critical thinking skills compared to the criteria for success on the NCLEX-RN exam.

3) Method #1 is given at the end of 1st Semester and at the end of 4th semester; Method #2 is given at the end of 4th semester.
4) Fall 2008 – 25; Spring 2009 - 27

Results
What were the results of the assessment process? (List results for each method, if more than one were used.)

Method #1: Data analysis for Fall 2008 was unable to be completed because the students were given two different assessment tests - 1st semester students were given the ERI (Educational Resources Incorporated) and then in 4th semester they were given HESI. The categories were not congruent for comparison. The Spring 2009 cohort was the first group to take the HESI Critical Thinking Test in both 1st Semester and in 4th Semester, except for 4 students who were readmits and had taken the ERI Critical Thinking test. So only 23 were in the sample for data analysis. Nineteen students out of 23 had scores improve from 1st to 4th semester (83%) Method #2: Fall 2008 scored as a group 836 on the RN Exit Exam; Spring 2009 scored 863.

What did the department learn?
1) How did group performance compare to the benchmark?
2) How does the data compare to the previous year, if applicable?
3) If multiple measures were used, how do they compare to each other?

1) We did not meet the outcome of 85% improving in critical thinking scores between 1st and 4th semester for the Spring 2009 cohort by 2% points. Spring 2009 scored above the 850 benchmark, Fall 2008 did not.
2) Unable to compare data from last academic year because different assessment tests were used by a different assessment company for comparing 1st and 4th semester; for the overall score, in Fa07 and in Sp08, neither group scored above the 850 benchmark.
3) Student’s scores on the Critical Thinking Test is a more specific measurement of critical thinking skills, and overall scores for that test should be compared in addition to the Critical Thinking category on the RN Exit Exam to determine validity of results on the RN Exit Exam.
**Student performance summary**

1) Based on the findings, how does the department rate student performance in regards to this outcome (strong, weak, or neutral)?
2) How does this assessment affect plans for this coming year in terms of curricula, teaching strategies, and assessment methods?

| 1) Weak, because of the last four semesters |
| 2) Better data will be generated this coming academic year because both semesters will have the same assessment test being utilized; each course will continued to be evaluated in terms of critical thinking activities, and the activities will be leveled across the curriculum. Test questions written at higher levels of learning will continue to be reviewed for reliability and validity, and in Spring 2010, 1st semester students will be provided access to HESI practice tests to potentially improve the scores on the RN Exit Exam in the future, and will be introduced to case studies which can be assigned and leveled throughout the curriculum to apply critical thinking skills in a situation. Students who repeatedly score below the 850 benchmark on specialized HESI tests will be tracked concerning critical thinking scores and directed to material written to improve critical thinking in nursing. |

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<table>
<thead>
<tr>
<th>Outcome #: 3</th>
<th>Outcome Title: Therapeutic Interventions</th>
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</table>
| **Outcome Type** (choose by bolding): CTENursing/ General Education: Quantitative Reasoning | **Outcome Description:**
Demonstrate caring (therapeutic) interventions by delivering compassionate and culturally sensitive care to clients across the life-span and the health-illness continuum. The use of a standardized tool with questions written at higher level of learning impacts the use of quantitative reasoning. |

**Benchmark for success**

1) Please specify what percentage of the sample size is expected to meet or exceed your benchmark.
2) What is the rationale for choosing this measure?

| 1) There will see a 100% improvement in the category of Therapeutic Interventions between scores on the PN Exit Exam and the RN Exit Exam |
| 2) Seeing an improvement between 2nd semester students and 4th semester students validates the ability of the majority of students to improve in providing caring (therapeutic) interventions for simple to complex patients (i.e. 1st year to 2nd year). |

**Description of assessment process:**

1) What assessment methods were used to measure this outcome (i.e. pre/post test, portfolio review, etc.)?
2) How do these methods show students are learning?
3) What frequency is this outcome being measured (i.e.: each semester, yearly, every other year, etc.) and why?
4) How many students made up the sample size?

| Method #1: Students at the end of 2nd semester were required to take a standardized 110 question exam (PN Exit Exam) created by HESI (Health Education Systems, Inc.) and at the end of 4th semester, the same students take a standardized 160 question exam (RN Exit Exam)
2) Both the PN Exit Exam and the RN Exit Exams are comprehensive tests that include questions categorized based on the National League of Nursing categories of Critical Thinking, Therapeutic Communication and Therapeutic Interventions. By improving scores on the standardized testing, the students show that they are learning how to provide therapeutic interventions to their patients and have improved from the 1st year to the 2nd year of practice.
3) Measured bi yearly, with fall graduates and spring graduates
4) Sample size: Fall 2008 – 30 (PN Exit Exam), 25 (RN Exit Exam), Spring 2009 – 28 (PN Exit Exam), 27 (RN Exit Exam) |

**Results**

What were the results of the assessment process? (List results for each method, if more than one were used.)

| Method #1: For the Fall 2008 graduates, the overall score for Therapeutic Interventions on the HESI PN Exit Exam was 876 (students took the exam in Fall 2007) and the overall score for the Therapeutic Interventions on the RN Exit Exam was 833. For the Spring 2009 graduates, the overall score for therapeutic Interventions on the HESI PN Exit Exam was 851 (students took the exam in Spring 2008) and the overall score for the Therapeutic Interventions on the RN Exit Exam was 858. |
**What did the department learn?**

1) How did group performance compare to the benchmark?
2) How does the data compare to the previous year, if applicable?
3) If multiple measures were used, how do they compare to each other?

1) In the Fall 2008 group, the benchmark was not achieved; there was a decrease in score on between the PN Exit Exam and the RN Exit Exam. In the Spring 2009 group, the benchmark was achieved by 7 points. This would need to be assessed more specifically in the next academic year.
2) There can be no comparison from previous years for this outcome as this was the first year to assess it.

**Student performance summary**

1) Based on the findings, how does the department rate student performance in regards to this outcome (strong, weak, or neutral)?
2) How does this assessment affect plans for this coming year in terms of curricula, teaching strategies, and assessment methods?

1) Neutral, as one group did achieve the benchmark and the other group did not.
2) Next year, it would be necessary to be more specific in assessing improvement student – in addition to evaluating the group overall scores, improvement between the student’s scores who are graduating should be assessed. Evaluating group overall score provides a general impression of improvement as there is attrition between the time the students take the PN Exit Exam and the RN Exam, meaning a loss of possible weak test takers who can skew the overall score on the PN Exit Exam. Since this outcome requires assessment of using caring/therapeutic interventions it would be important to assess demonstration of this skill in the clinical area through the use of the improved clinical evaluation tool between scored of 1st year and 2nd year students. The use of this tool will help quantify the use of quantitative reasoning at the bedside.

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<thead>
<tr>
<th>Outcome #</th>
<th>3</th>
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<tbody>
<tr>
<td><strong>Outcome Type</strong> (choose by bolding): CTE/Nursing</td>
<td><strong>Outcome Title</strong>: NCLEX Pass Rates</td>
</tr>
<tr>
<td><strong>Outcome Description</strong>: Utilize theory and clinical experience to successfully become a registered nurse.</td>
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</tbody>
</table>
| **Benchmark for success** | 1) Graduates of the Arapahoe Community College Nursing Program will achieve an 85% pass rate on the National Licensing Examination (NCLEX-RN) for fall 2007 and spring 2008 on 1st attempt. 
2) Achievement of an 85% pass rate or above on the NCLEX-RN validates the teaching of the nursing curriculum. |
| **Description of assessment process** | Method #1: Individuals were tracked on the State Board of Nursing website and dates indicated as licensed nurses were recorded on a spreadsheet created by the Retention Coordinator to determine % of pass on 1st attempt the number of students recorded as passing divided by total number of students who took the examination. Method #2: NCLEX 6 month report (April and October). Method #3: Colorado State Board of Nursing pass rates (1st attempt) for all nursing schools identified on a quarterly basis. |
| 1) What assessment methods were used to measure this outcome (i.e. pre/post test, portfolio review, etc.)? |  |
### Results

What were the results of the assessment process? (List results for each method, if more than one were used.)

Method #1: In Fall 2008 24/25 students appear on the Colorado State Board of Nursing website as having passed the NCLEX-RN (96% pass rate) and Spring 2009 26/27 students appear on the Colorado State Board of Nursing website as having passed the NCLEX-RN (96%); Method #2: As of October 2008, the NCLEX 6 month report shows ACC as 94% for passing on 1st attempt for the Fall 2008 graduates; Method 3: As of October 2008, the Colorado State Board of Nursing School Report shows ACC at 95.2% pass rate for 2008 and a 100% pass rate for 2009.

### What did the department learn?

1) How did group performance compare to the benchmark?
2) How does the data compare to the previous year, if applicable?
3) If multiple measures were used, how do they compare to each other?

1) The students exceeding the benchmark set of 85% achieving success on the NCLEX-RN.
2) Compared to the previous year, pass rates have remained in the high 90’s or above (97% and 96%) for tracking students. The department will only be purchasing the NCLEX report annually beginning in 2010 as the data is too general other than the pass rates, which does not need to be monitored as closely and as a way of cutting costs to the department. The pass rates generated from the Colorado State Board of Nursing is influenced by students who have delayed taking the NCELX-RN or who did not pass on first attempt to reflect overall college pass rates, which is believed to be the discrepancy in the pass rate for the specific cohorts, but it does allow the college to compare pass rates with other colleges in the state.
3) All methods show the same results of > 85% results of passing the NCLEX-RN.

### Student performance summary

1) Based on the findings, how does the department rate student performance in regards to this outcome (strong, weak, or neutral)?
2) How does this assessment affect plans for this coming year in terms of curricula, teaching strategies, and assessment methods?

1) Strong
2) Keep the Retention Coordinator to work with “at risk” students; continue to work with faculty to develop high quality test questions for course exams; continue standardized tests for each course and comprehensive exams at the end of the first and second years; continue to review standardized test results to create areas of improvement for each course, continue to have students complete a large number of NCLEX type questions prior to graduation (at least 4000) to be best prepared for passing the NCLEX-RN.
## Part 2: Current Academic Year Assessment Plan

**Current Academic Year:** 2010-2011  
**Intended Learning Outcomes:** General Education Outcomes were changed to College Student Learning Outcomes; no new outcomes were added  
**Assessment Method(s):** No changes  
**Benchmarks:** No changes

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<tr>
<th>Outcome #:</th>
<th>1</th>
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<tbody>
<tr>
<td><strong>Outcome Title:</strong></td>
<td>RN Exit Exam</td>
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<tr>
<td><strong>Outcome Type (choose by bolding):</strong></td>
<td>CTE/Nursing</td>
</tr>
<tr>
<td><strong>Outcome Description:</strong></td>
<td>Use theory and clinical experiences to answer questions on a comprehensive standardized test.</td>
</tr>
</tbody>
</table>

### Benchmark for success
1) Please specify what percentage of the sample size is expected to meet or exceed your benchmark.  
2) What is the rationale for choosing this measure?

1) 85% of graduating students will score above the benchmark for success (850) as a measured on a standardized exit exam of RNs.  
2) Success on the RN Exit Exam is a predictor of success on the National Licensing Examination (NCLEX).

### Description of assessment process:
1) What assessment methods were used to measure this outcome (i.e. pre/post test, portfolio review, etc.)?  
2) How do these methods show students are learning?  
3) What frequency is this outcome being measured (i.e.: each semester, yearly, every other year, etc.) and why?  
4) How many students made up the sample size?

1) Students at the end of 4th semester were required to take a standardized 160 question exam created by HESI (Health Education Systems, Inc.).  
2) This is a comprehensive test that includes questions from all 4 semesters: Fundamentals, Pharmacology, Pediatrics/Obstetrics, Medical Surgical, Psych/Mental Health and Leadership. Data can be compared with other tests taken that are course specific to identify improvement in specific courses.  
3) Measured bi yearly, with fall graduates and spring graduates  
4) Sample size: Fall 2009 – 25 (7 readmits) , Spring 2010 – 22 (1 readmit and 2 PN-RN Students)

### Results
What were the results of the assessment process? (List results for each method, if more than one were used.)

The following report summarizes the trends over the past two semesters for nursing student scores using HESI standards on the RN Exit Exam administered in the Nursing Program at Arapahoe Community College. For the Fall 2009 class, scored 850 or above (%); For Spring 2010, scored 850 or above (%).  

The graphs will display the average student score for each topic on the exams for Fall 2009 and Spring 2010. The purpose of evaluating these averages is to predict performance on the upcoming NCLEX tests and to evaluate the need for curriculum changes within specific courses. The base/average score used for comparison is 850.  

This report will look for topic areas within the five groups of Nursing Process, Client Needs,
Specialties, Sub-Specialties, and the NLNAC topics that need improved performance in order for students to succeed on the NCLEX.

Nursing Process scores increased across the board from Fall 2009 to Spring 2010. The largest gain occurred in the area of Planning, which increased by 19.3%. All of the Nursing Process scores exceeded the HESI benchmark score of 850.
An increase in the average score was seen in all areas of Client Needs, with the exception of “Management of Care,” which decreased by 3.5%. Again, all categories exceeded the benchmarking score of 850. The largest percentage increase (20.4%) came from the “Health Promotion and Maintenance” area, which showed an average score of 956, up from 794 in Fall 2009.
Spring 2010 test scores for Medical Specialties showed an increase in average scores from Fall 2009 in most areas. The largest percentage gain was in the “Geriatrics” area, with a 29.9% increase. “Community Health” scores also increased from 725 in Fall to 933 in Spring, a gain of 28.7%. Scores within the “Critical Care” area and “Maternity” decreased slightly in Spring. This decrease dropped the average score for Maternity below the established benchmark.

The Medical Sub Specialties area is the largest area on the HESI testing, with 34 categories. The “Reproductive” sub-specialty was included in the Fall 2009 test, but not in the Spring 2010 test. Also, the areas of “Professional Processes” and “Professional Research/Theory” were included in the Spring 2010 test, but were not included in the Fall 2009 test. The largest percentage increase in average scores occurred in the “Teaching” area, with a 29.1% gain. This was closely followed by increases in the areas of “Postpartum” and “Integumentary”, with 22.3% and 20.2% gains respectively. The largest decrease in scores occurred in the “Documentation” area, which suffered a 71% decrease in average scores. In total there were eight categories which fell below the benchmark of 850: Antepartum, Depression/Grief, Documentation, Intrapartum, Newborn, Professional Processes, Psychoses, and Trauma.
| What did the department learn? | 1) In the overall score for the RN Exit Exam, both Fall 2009 (880) and the Spring 2010 scored above the 850 benchmark (946).  
2) The overall HESI RN Exit Exam scores have continued to improve over the last 4 semesters with this academic year being the first to show both semester scoring above the 850 benchmark. With Nursing Process, there were no categories that students scored below the 850 benchmark for both Fall 2009, and Spring 2010 which is a dramatic improvement from the last academic year. With Client Needs, Spring 2010 was the first semester that for Health Promotion and Maintenance as well as Safety and Infection Control, students scored greater than 850. In the Specialty areas in Fall 2009-Spring 2010 the areas that were above 850, but remain the lowest scoring are Maternity and Psych/Mental. In the Sub-Specialty areas, there are no areas that carry over of concern from last year, this year the largest concerns correlate with the Specialty areas such as Abuse, Antepartum, Intrapartum, but nothing statistically significant.  
3) N/A |
| --- | --- |
| Student performance summary | 1) Based on the findings, how does the department rate student performance in regards to this outcome (strong, weak, or neutral)?  
2) How does this assessment affect plans for this coming year in terms of curricula, teaching strategies, and assessment methods? | 1) Strong, because this was the first year that we saw both semesters score above the 850 benchmark and very few categories within the Exit Exam for both groups that had a less than 850 score.  
2) Students are required to complete remediation after each course HESI testing to instill in them the seriousness of reaching the benchmark, as well as required to complete additional NCLEX type questions for each course starting with second semester. Students were given access to HESI Practice tests with the Fall 2009 cohort, so will monitor impact of scores with future semesters. Students will encouraged to review their score report after taking the RN Exit Exam to identify areas of improvement and for those students who score less than 850, and will be encouraged to take a review course to prepare for the NCLEX-RN; the faculty will use the summary reports for each course specific exam to improve curriculum; areas of improvement will be generated from the RN Exit Exam to identify gaps in the total curriculum and an action plan created to make changes in the curriculum which will be documented on the Systematic Evaluation Plan as well as the course evaluations created every semester. |
| Outcome #: 2 | Outcome Title: Critical Thinking |
| **Outcome Type** (choose by bolding): CTE/Nursing/ General Ed: Critical Thinking/Problem Solving | **Outcome Description:** Incorporate critical thinking skills and clinical reasoning to plan, delivery, prioritize, and evaluate safe holistic care of the individual. |
| **Benchmark for success** | 1) 85% of the graduating student’s critical thinking scores will improve between 1st and 4th semester on a standardized critical thinking test; 85% of students will have a score above 850 on the NLNAC critical thinking category in both Fall 2009 and Spring 2010 on the RN Exit Exam  
2) Critical thinking is a skill that is a necessary tool for competency in the clinical setting. |
**Description of assessment process:**

1) What assessment methods were used to measure this outcome (i.e. pre/post test, portfolio review, etc.)?
2) How do these methods show students are learning?
3) What frequency is this outcome being measured (i.e.: each semester, yearly, every other year, etc.) and why?
4) How many students made up the sample size?

<table>
<thead>
<tr>
<th>1) Method #1: Comparing scores in a Pretest/Posttest format using a standardized Critical Thinking Test between 1&lt;sup&gt;st&lt;/sup&gt; and 4&lt;sup&gt;th&lt;/sup&gt; semester; Method #2: Comparing scores on the RN Exit Exam for Fall 2009 and Spring 2010 with the 850 benchmark in the NLNAC category of critical thinking and 85% scoring at or above the benchmark.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2) By comparing the critical thinking scores between the 1&lt;sup&gt;st&lt;/sup&gt; and 4&lt;sup&gt;th&lt;/sup&gt; semester tests, scores should improve because of the exposure to the nursing curriculum; comparing scores on the RN Exit Exam to meeting the benchmark of 850 will show critical thinking skills compared to the criteria for success on the NCLEX-RN exam.</td>
</tr>
<tr>
<td>3) Method #1 is given at the end of 1&lt;sup&gt;st&lt;/sup&gt; Semester and at the end of 4&lt;sup&gt;th&lt;/sup&gt; semester; Method #2 is given at the end of 4&lt;sup&gt;th&lt;/sup&gt; semester.</td>
</tr>
<tr>
<td>4) Fall 2009 – 25, with 6 students who were readmits; Spring 2010 – 22, with 1 readmit and 2 PN-RN students (only took the 4&lt;sup&gt;th&lt;/sup&gt; semester test).</td>
</tr>
</tbody>
</table>

**Results**

What were the results of the assessment process? (List results for each method, if more than one were used.)

| Method #1: Comparison of 1<sup>st</sup> Semester and 4<sup>th</sup> Semester overall scores on the Critical Thinking Test for Fall 2009 shows that all but one student improved their overall scores from 1<sup>st</sup> to 4<sup>th</sup> semester (96%) and in 4<sup>th</sup> semester, no student scored below the 850 benchmark (100%). The one student who did not improve was a readmit who had failed a previous semester. Comparison of 1<sup>st</sup> and 4<sup>th</sup> Semester overall scores for Spring 2010 shows 13/20 (65%) students’ scores improved (PN-RN students were not included in the sample), 4 students had the same score, and 3 students scored less than in 1<sup>st</sup> semester. |

![Critical Thinking Fall 2009](image)
Method #2: For Fall 2009, 15/25 (60%) scored greater than 850 on the NLNAC Critical Thinking categories; for Spring 2010, 17/22 (77%) scored greater than 850. Mean score for Fall 2009 was 876 and for Spring 2010 was 950.
**What did the department learn?**

1) How did group performance compare to the benchmark?

2) How does the data compare to the previous year, if applicable?

3) If multiple measures were used, how do they compare to each other?

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1) Method #1: We met the outcome of 85% improving in critical thinking scores between 1st and 4th semester for the Fall 2009 cohort, but did not for the Spring 2010 cohort. Fall 2009 1st semester mean HESI score was 880 compared to the Spring 2010 1st semester mean HESI score of 869. Both Fall 2009 and Spring 2010 4th semester mean HESI score was 920 which were above the 850 benchmark. Method #2: neither group had 85% of the students scoring above the 850 benchmark; the mean score for the Spring 2010 was significantly higher than the Fall 2009 group, both groups met the benchmark.

2) The only data available for comparison is Spring 2009, which had 83% of the students show improvement on the Critical Thinking Test from 1st to 4th semester, which correlates with the Fall 2009 cohort. With the Fall 2008 cohort, a different assessment test was used by a different assessment company for comparing 1st and 4th semester. With the RN Exit Exam data for the overall score on the critical thinking section, out of four semesters, Fa08 was the only group whose mean score was below the 850 benchmark.

3) Student’s scores on the Critical Thinking Test is a more specific measurement of critical thinking skills, and overall scores for that test should be compared in addition to the Critical Thinking category on the RN Exit Exam to determine validity of results on the RN Exit Exam.

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**Student performance summary**

1) Based on the findings, how does the department rate student performance in regards to this outcome (strong, weak, or neutral)?

2) How does this assessment affect plans for this coming year in terms of curricula, teaching strategies, and assessment methods?

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1) Neutral, because there was improvement for both groups on the Critical Thinking Test, but the Critical Thinking scores on the RN Exit Exam for students did not improve.

2) Continue to collect data generated from the Critical Thinking Test comparing 1st and 4th semester and continue to look for trends in maintaining a high level of students who have improved their scores between 1st and 4th semester. Each course will continued to be evaluated in terms of critical thinking activities, and the activities will be leveled across the curriculum. Test questions written at higher level of learning will continue to be reviewed for reliability and validity. Identify the impact of 1st semester students being provided access to HESI practice tests to potentially improve the scores on the RN Exit Exam in the future, and will be introduced to case studies which can be assigned and leveled throughout the curriculum to apply critical thinking skills in a situation. Students who repeatedly score below the 850 benchmark on specialized HESI tests will be tracked concerning critical thinking scores and directed to material written to improve critical thinking in nursing.

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**Outcome #: 3**

**Outcome Title:** Therapeutic Interventions

**Outcome Type** (choose by bolding):

CTE/Nursing/ General Education: Quantitative Reasoning

**Outcome Description:**

Demonstrate caring (therapeutic) interventions by delivering compassionate and culturally sensitive care to clients across the life-span and the health-illness continuum. The use of a standardized tool with questions written at higher level of learning impacts the use of quantitative reasoning.

**Benchmark for success**

1) Please specify what percentage of the sample size is expected to meet or exceed your benchmark.

2) What is the rationale for choosing this measure?

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1) There will see a 100% improvement for both semesters for the mean score in the category of Therapeutic Interventions between scores on the PN Exit Exam and the RN Exit Exam.

2) Seeing an improvement between 2nd semester students and 4th semester students validates the ability of the majority of students to improve in providing caring (therapeutic) interventions for simple to complex patients (i.e. 1st year to 2nd year).
**Description of assessment process:**
1) What assessment methods were used to measure this outcome (i.e. pre/post test, portfolio review, etc.)?
   - Students at the end of 2nd semester were required to take a standardized 110 question exam (PN Exit Exam) created by HESI (Health Education Systems, Inc.) and at the end of 4th semester, students take a standardized 160 question exam (RN Exit Exam).
2) How do these methods show students are learning?
   - Both the PN Exit Exam and the RN Exit Exams are comprehensive tests that include questions categorized based on the National League of Nursing Accrediting Commission (NLNAC) categories of Critical Thinking, Therapeutic Communication and Therapeutic Interventions. By improving scores on the standardized testing, the students show that they are learning how to provide therapeutic interventions to their patients and have improved from the 1st year to the 2nd year of practice.
3) What frequency is this outcome being measured (i.e.: each semester, yearly, every other year, etc.) and why?
   - Measured bi yearly, with fall graduates and spring graduates
4) How many students made up the sample size?
   - Fall 2009 – 25 (PN Exit Exam), 25 (RN Exit Exam), Spring 2010 – 31 (PN Exit Exam), 22 (RN Exit Exam)

**Results**
- For the Fall 2009 graduates, the overall mean score for Therapeutic Interventions on the HESI PN Exit Exam was 894 (students took the exam in Fall 2008) and the overall score for the Therapeutic Interventions on the RN Exit Exam was 884. For the Spring 2010 graduates, the overall mean score for Therapeutic Interventions on the HESI PN Exit Exam was 854 (students took the exam in Spring 2009) and the overall score for the Therapeutic Interventions on the RN Exit Exam was 956.

**What did the department learn?**
1) In the Fall 2009 group, the benchmark was not achieved; there was a decrease in score on between the PN Exit Exam and the RN Exit Exam. In the Spring 2010 group, the benchmark was achieved by 102 points. Trends will continue to be assessed in the next academic year.
2) Data from 2008-2009 indicate the same trends with Fall 2008 not achieving the benchmark and Spring semester achieving the benchmark. The Spring 2010 semester showed the greatest improvement at this point.

**Student performance summary**
1) Neutral, as one group did achieve the benchmark and the other group did not as in the previous year.
2) Evaluating group overall mean score provides a general impression of improvement as there is attrition between the time the students take the PN Exit Exam and the RN Exam, meaning a loss of possible weak test takers who can skew the overall mean score on the PN Exit Exam. Since this outcome requires assessment of using caring/therapeutic interventions it would be important to assess demonstration of this skill in the clinical area through the use of the improved clinical evaluation tool between scores of 1st year and 2nd year students. The use of this tool will help assess the use of quantitative reasoning at the bedside.

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**Outcome #: 4**

**Outcome Title:** NCLEX Pass Rates

**Outcome Type** (choose by bolding): CTE/Nursing

**Outcome Description:** Utilize theory and clinical experience to successfully become a registered nurse.

**Benchmark for success**
1) Please specify what percentage of the sample size is expected to meet or exceed your benchmark.
   - 1) Graduates of the Arapahoe Community College Nursing Program will achieve an 85% pass rate on the National Licensing Examination (NCLEX-RN) for Fall 2008 and Spring 2009 on 1st attempt.
   - 2) Achievement of an 85% pass rate or above on the NCLEX-RN validates the teaching of the nursing
2) What is the rationale for choosing this measure?

| Description of assessment process: | Method #1: Individuals were tracked on the State Board of Nursing website and dates indicated as licensed nurses were recorded on a spreadsheet created by the Assessment Coordinator to determine % of pass on 1st attempt the number of students recorded as passing divided by total number of students who took the examination. Method #2: NCLEX 6 month report (April and October). Method #3: Colorado State Board of Nursing pass rates (1st attempt) for all nursing schools identified on a quarterly basis. |

1) What assessment methods were used to measure this outcome (i.e. pre/post test, portfolio review, etc.)?
2) How do these methods show students are learning?
3) What frequency is this outcome being measured (i.e.: each semester, yearly, every other year, etc.) and why?
4) How many students made up the sample size?

| Results | Method #1: In Fall 2009 - 25 students (7 were readmitted back into the program) appear on the Colorado State Board of Nursing website as having passed the NCLEX-RN (100% pass rate) and Spring 2010 - 22 (1 readmit and 2 PN-RN students appear on the Colorado State Board of Nursing website as having passed the NCLEX-RN (96%); Method #2: As of April 2010, the NCLEX 6 month report shows ACC as 100% for passing on 1st attempt for the Fall 2009 graduates, and as of October 2010, the Spring 2010 graduates also show 100%. Method 3: As of Fall 2010, the Colorado State Board of Nursing School Report shows ACC at 100% pass rate for 2009 and a 100% pass rate for 2010. |

| What did the department learn? | 1) The students exceeding the benchmark set of 85% achieving success on the NCLEX-RN. 2) Compared to the previous year, pass rates have remained at 100% for tracking students. The program has begun purchasing the NCLEX report annually which started in 2010 as the data is too general other than the pass rates, which does not need to be monitored as closely and as a way of cutting costs to the department. The pass rates generated from the Colorado State Board of Nursing is influenced by students who have delayed taking the NCELX-RN or who did not pass on first attempt to reflect overall college pass rates, which is believed to be the discrepancy in the pass rate for the specific cohorts, but it does allow the college to compare pass rates with other colleges in the state. 3) All methods show the same results of 100% results of passing the NCLEX-RN. |

| Student performance summary | 1) Based on the findings, how does the department rate student performance in regards to this outcome (strong, weak, or neutral)? 2) How does this assessment affect plans for this coming year in terms of curricula, teaching strategies, and assessment methods? |

| 1) Strong 2) In Fall 2011, the program will admit it’s first class based on selective admission criteria which requires a higher GPA (3.0) than previously required (2.5), and achieving 70% or greater on the overall score for the Admissions Test. Faculty will work with “at risk” students and make recommendations for use of resources for student success; faculty to continue to develop high quality test questions for course exams; continue standardized tests for each course and comprehensive exams at the end of the first and second years; continue to review standardized test results to create areas of improvement for each course, continue to have students complete a large number of NCLEX type questions prior to graduation (at least 4000) to be best prepared for passing the NCLEX-RN. |