## Assessment Overview

**Discipline/Program Name:** Nursing  
**Assessment Year:** 2009-2010

<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>52</td>
<td>3 years</td>
<td>85%</td>
<td>Spring 2009 met the benchmark</td>
<td>Neutral</td>
</tr>
<tr>
<td>2. Incorporate critical thinking skills and clinical reasoning to plan, delivery, prioritize, and evaluate safe holistic care of the individual.</td>
<td>Discipline/GE</td>
<td>Critical Thinking Pre-/Post-Test</td>
<td>52</td>
<td>2 years</td>
<td>85%</td>
<td>Spring 2009 met the benchmark</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. The use of a standardized tool with questions written at higher level of learning impacts the use of quantitative reasoning.</td>
<td>Discipline/Quantitative Reasoning</td>
<td>PN Exit Exam/RN Exit Exam</td>
<td>55</td>
<td>New Outcome</td>
<td>100%</td>
<td>Spring 2009 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>52</td>
<td>2 years</td>
<td>85%</td>
<td>All Methodologies used met the benchmark</td>
<td>Strong</td>
</tr>
</tbody>
</table>
Program/Discipline: Nursing
Responsibility: Jean Schroeder; Susan Scheuring

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 ADN 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 finished using ERI (Educational Resource Incorporated) for Critical Thinking Process in 1st semester compared to HESI (Health Education Systems Incorporated) Critical Thinking Process in 4th semester for Fall 2008 graduates and used the HESI Critical Thinking Test for both 1st and 4th semester with the Spring 2009 graduates. 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.

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 state accreditation 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 HESI RN Exit Exam. In Spring 2008, the department 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 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 a 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 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 NLN.
accreditation. The plan is to update and level the clinical evaluation tool to match the student learning outcomes generated for NLN accreditation and then reintroduce the data collected 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 1\textsuperscript{st} to 4\textsuperscript{th} 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 1\textsuperscript{st} and 4\textsuperscript{th} semester until Spring 2009.

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 NLN accreditation process, one outcome for the program involves the students ability to provide caring or therapeutic interventions (Provider of Care). This year comparisons were made about improvement in scores on the NLN category of Therapeutic Interventions on the PN Exit Exam (1\textsuperscript{st} year students) with the RN Exit Exam (2\textsuperscript{nd} 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), areas of improvement were found in Analysis and Implementation within the Nursing Process; Critical Thinking; Health Promotion and Maintenance and Safety and Infection Control in the Client Needs categories; there were no overlap in categories for the specialties; 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?

Health Promotion and Maintenance, a sub category of Client Needs continues to be an area in need of improvement, as well as Safe and Effective Environment. A decline in Maternity scores in the Specialty area has been seen in the academic year of Fa08-Sp09 which is a new area of concern. Math, and Operative continues to be areas in need of improvement.

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 Retention Coordinator and Instructional Research. The Retention Coordinator utilizes the information to generate Areas of Improvement worksheet for faculty to complete and then data is added to the Systematic Evaluation Plan for NLN accreditation. The Advisory Committee is given the information to update them on the state of the program. The information is also given to the State Board of Nursing when the program is experiencing reaccreditation. The program will no longer tabulate data from Clinical Evaluation Tools for the assessment report, as that information has been found to be insignificant to identify trends.
Part 1: Previous Academic Year Assessment Summary

<table>
<thead>
<tr>
<th>Outcome #: 1</th>
<th>Outcome Title: RN Exit Exam</th>
</tr>
</thead>
</table>
| **Outcome Type** (choose by bolding): CTE/Nursing | **Outcome Description:**
| | Use theory and clinical experiences to answer questions on a comprehensive standardized 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 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 2007 – 31, Spring 2008 - 23

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

RN EXIT EXAM ASSESSMENT REPORT
FALL 2007-SPRING 2008

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 2007 class, 22/31 scored 850 or above (71%); For Spring 2008, 15/23 scored 85- or above (65%).

The graphs will display the average student score for each topic on the exams for Fall 2007 and Spring 2008. 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. The probabilities of performance on the upcoming NCLEX based on the HESI scores are as followed: <700 very poor performance; 700-749 serious preparation needed; 750-799 additional
preparation needed; 800-849 below average probability of passing; 850-899 average probability of passing; 900-949 excellent; >= 950 outstanding.

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 improvement in three out of five topics (Analysis, Planning, and Evaluation) between semesters. There was a notable decline in the area of Implementation, and a smaller decline in Assessment from Fall 2007 and Spring 2008. The main areas to be considered for reassessment in the next academic year are Analysis 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 gains in five topics between Fall 2007 and Spring 2008 (Health Promotion and Management, Management of Care, Pharmacology, Physiological Adaptation, and Safe and Effective Environment). There were decreases in three topics (Basic
Care and Comfort, Psychosocial Integrity, and Infection Control), and little change in two topics (Physiological Integrity and Reduce Risk Potential). Main areas to target for improvement are Health Promotion and Maintenance, Safe & Effective Environment, and Infection Control where both semesters were below the 850 benchmark.

In the Specialty Areas graph, there were increases for Spring 2008 in Community Health and Critical Care. There were significant decreases from Fall 2007 to Spring 2008 in Geriatrics and Pediatrics. Non significant changes were seen in Pathophysiology, Medical Surgical, Maternity, and Fundamentals. There was no change in Psych/Mental Health. Areas to consider for continued improvement are Community Health and Psych since both remain significantly below the benchmark of 850.
The Sub-Specialties were divided on this report into two graphs. In the first graph, there was significant decreases between Fall 2007 and Spring 2008 in abuse, cardiovascular, Growth & Development, Immune/Hematology, and Integumentary systems. There is no significant or no decreased in Anxiety and Antepartum between semesters. There were significant increases between Fall 2007 and Spring 2008 with Basic Skills, Depression, Documentation, Endocrine, GI/Hepatic, Intrapartum, and Leadership. In the Fall 2007 RN Exit Exam the group was tested over Legal/Ethical Issues and in Spring 2008, the group was tested over Cultural issues.

In the second graph, the following areas that decreased between Fall 2007 and Spring 2008 included Math, Med Administration, Neurological, Operative, Physical Assessment, Respiratory. There were significant decreases in Oncology, Postpartum, Professional Processes, Sensory, and Trauma questions being answered correctly. The areas where there were increases between Fall 2007 and Spring 2008 included Musculoskeletal, Newborn, Renal, Psychoses and Reproductive. In Fall 2007 and not in Spring 2008, questions were asked about Professional Research and Theory, and Professional Cultural. There was no change in teaching. Areas for improvement would be Anxiety, Math, Operative, Psychoses, Reproductive and Sensory because they remain below the 850 benchmark for both semester.
RN Exit Exam Results: Sub-Specialty #1

<table>
<thead>
<tr>
<th>Topic</th>
<th>Needed Score</th>
<th>FALL 2007</th>
<th>SPRING 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abuse</td>
<td>936</td>
<td>870</td>
<td>871</td>
</tr>
<tr>
<td>Antepartum</td>
<td>829</td>
<td>818</td>
<td>831</td>
</tr>
<tr>
<td>Anxiety</td>
<td>724</td>
<td>895</td>
<td>850</td>
</tr>
<tr>
<td>Basic Skills</td>
<td>921</td>
<td>921</td>
<td>961</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>883</td>
<td>883</td>
<td>906</td>
</tr>
<tr>
<td>Cultural</td>
<td>892</td>
<td>816</td>
<td>835</td>
</tr>
<tr>
<td>Depression</td>
<td>961</td>
<td>907</td>
<td>982</td>
</tr>
<tr>
<td>Documentation</td>
<td>1023</td>
<td>921</td>
<td>913</td>
</tr>
<tr>
<td>Endocrine</td>
<td>850</td>
<td>883</td>
<td>850</td>
</tr>
<tr>
<td>GI/Hepatic</td>
<td>825</td>
<td>850</td>
<td>831</td>
</tr>
<tr>
<td>Gwth_Devlp</td>
<td>735</td>
<td>735</td>
<td>735</td>
</tr>
<tr>
<td>Immune_Hematology</td>
<td>816</td>
<td>816</td>
<td>816</td>
</tr>
<tr>
<td>Integumentary</td>
<td>735</td>
<td>735</td>
<td>735</td>
</tr>
<tr>
<td>Intrapartum</td>
<td>735</td>
<td>735</td>
<td>735</td>
</tr>
<tr>
<td>Legal_Ethical</td>
<td>735</td>
<td>735</td>
<td>735</td>
</tr>
<tr>
<td>Leadership</td>
<td>735</td>
<td>735</td>
<td>735</td>
</tr>
</tbody>
</table>
The last component of the RN Exit Exam is the NLNAC (National League of Nursing Accreditation) topics. Therapeutic communication was the topic closest to 850 in the spring group, but it had seen a decline between Fall 2007 and Spring 2008. All three topics were close to 850 but lay just below in Spring 2008.
Conclusions

Areas in both semesters that remain in need of improvement (scores significantly below the benchmark of 850) include Analysis (Nursing Process), Safety & Infection Control (Client Needs), Community Health & Psych (Specialty Areas), Anxiety, Math, Operative, Psychoses, Reproductive, and Sensory (Sub-Speciality). Critical Thinking Skills remained below 850 for both semesters, but will be analyzed separately to identify improvement between 1st and 4th semester.

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) Both groups scored below the benchmark of 850, with the spring semester scoring lower than the fall semester. Results for each area of the RN Exit Report is described within the report.
2) Unable to compare with data from last academic year because a different assessment test was used.
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?

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?

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) 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 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 2007 – 31; Spring 2008 - 23

1) Weak
2) For the next academic year, the students will have been consistently exposed to the same assessment testing format from the same company (HESI); the assessment testing process will be more familiar to faculty and students and understood as a process to help with successfully passing the NCLEX-RN; students will be counseled by the Retention Coordinator after taking the RN Exit Exam to review areas of improvement; 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.
### 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 this academic year 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. Method 2: Fall 2007 scored as a group 827 on the RN Exit Exam; Spring 2008 scored 829.

### 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) Both groups scored below the 850 benchmark, with Spring 2008 scoring 2 points higher than Fall 2007.
2) Unable to compare data from last academic year because different assessment tests were used by a different assessment company.
3) Unable to compare.

### 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
2) Better data will be generated this coming academic year because the data will be congruent with the same assessment test being utilized; each course will continued to be evaluated in terms of critical thinking activities and test questions written at higher levels of learning.

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### Outcome #: 3
**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.
2) What is the rationale for choosing this measure?

1) Graduates of the Arapahoe Community College Nursing Program will achieve an 85% pass rate on the National Licensure 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:**
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: 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.
<table>
<thead>
<tr>
<th><strong>Results</strong></th>
<th>Method 1: Both Fall 2007 and Spring 2007 have a 100% pass rate, one student in Fall 2007 has not taken the NCLEX-RN; one student in Spring 2008 has not been identified on the Colorado State Board of Nursing website as having completed the NCLEX-RN; Method 2: As of June 2008, the NCLEX 6 month report shows ACC as 100% for passing on 1st attempt; Method 3: As of June 2008, the Colorado State Board of Nursing School Report shows ACC at 100% pass rate.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What did the department learn?</strong></td>
<td>1) The students exceeding the benchmark set of 85% achieving success on the NCLEX-RN. 2) Compared to the previous year, pass rates have fluctuated between 85% and 94%. 3) All methods show the same results of &gt; 85% results of passing the NCLEX-RN.</td>
</tr>
<tr>
<td>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?</td>
<td></td>
</tr>
<tr>
<td><strong>Student performance summary</strong></td>
<td>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.</td>
</tr>
<tr>
<td>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?</td>
<td></td>
</tr>
</tbody>
</table>
**Part 2: Current Academic Year Assessment Plan**

**Current Academic Year:** 2009-2010

**Intended Learning Outcomes:** A 4th Outcome was added pertaining to Therapeutic Interventions, which is a CTE/Nursing Outcome, but also a General Education Outcome of Quantitative Reasoning. The General Education Outcome was added the Outcome #3 pertaining to Critical as an outcome for the Nursing Program.

**Assessment Method(s):** For the 4th Outcome pertaining to Therapeutic Interventions, the PN Exit Exam has been added as an assessment tool.

**Benchmarks:** The benchmark remains the same for the 4th Outcome as 850 on the PN Exit Exam and RN Exit Exam.

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<table>
<thead>
<tr>
<th>Outcome #</th>
<th>Outcome Title</th>
<th>Outcome Type (choose by bolding)</th>
<th>Outcome Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RN Exit Exam</td>
<td>CTE/Nursing</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 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.)

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**RN EXIT EXAM ASSESSMENT REPORT**

**FALL 2008-SPRING 2009**

**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, Documentaion, 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, 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

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) 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 2008 and Spring 2009 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?

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 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
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?

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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**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?

   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
### 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.
2) What is the rationale for choosing this measure?

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 curriculum.

**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: 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.

**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

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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?

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.
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) 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 NCELEX-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. |
| 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) 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? |

| 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) 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. | 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. |