

# A Multidimensional Approach to Improving NCLEX-RN® Pass Rates Among ADN Students

Heather V. Westerfield DNP, RN, CNE, CMSRN  
Chesapeake College/ MGW School of Nursing

## ABSTRACT

To retain state board approval and national accreditation, nursing schools must achieve benchmark first-time pass rates on the National Council Licensure Examination for Registered Nurses (NCLEX-RN®). With healthcare being an every-changing field and continuous NCLEX-RN® updates, nurse educators are challenged to find a balance between student admission criteria and how to best prepare those students admitted to pass NCLEX-RN® on their first attempt.

Nursing faculty in a rural community college found that for two years in a row, their students were not able to reach the state benchmark for student success on the NCLEX-RN®. The faculty collected data and assessed their program to find ways to improve student licensure exam success rates.

Learn how one ADN program used an inclusive team approach and increased their NCLEX-RN® pass rates from 63% to 93% in two academic years.

## CONTACT

Heather V. Westerfield DNP, RN, CNE, CMSRN  
Chesapeake College  
Email: hwesterfield@chesapeake.edu  
Phone: 410-829-5400 ext. 2703  
Website: www.chesapeake.edu

## Significance/Relevance

Declining first time pass rates are a significant and relevant issue to all nursing programs. While the mitigating factors negatively impacting scores may vary amongst individual programs, the approach to correct the problem utilized at this program resulted in positive outcomes in a relatively short period of time. The approach included a thorough analysis of the admission criteria and practices, review/revisions of all unit and final exams, and development of a detailed, structured NCLEX-RN® review.

## Data Collection

- Nursing faculty collected data to predict the probability of completing the nursing program and success in passing the NCLEX-RN® on the first attempt.
- The analysis employed stepwise logistic regression with the independent variables of TEAS scores, Admission GPA, and Admission Points and the dependent variable of passing the NCLEX-RN® on the first attempt.
- All students with admissions criteria and students that either took the NCLEX-RN® or failed to finish the program were included in the analysis.
- Students who finished the program but did not take the NCLEX-RN® were excluded.
- Including all students who either took NCLEX-RN® or failed to finish the program gave the best means of predicting the outcome for students based on admission criteria.

## Description of Approach

### Analysis of Admission Criteria and Practices:

- The analysis employed stepwise logistic regression (n=162) with the independent variables of TEAS scores, Admission GPA and Admission points. The dependent variable was passing the NCLEX-RN® exam on the first attempt.
- Findings from the analysis have provided an evidenced-based foundation from which to revise and enhance admission practices in the program.

### Admission Criteria

Criteria	Points
* PSC 150	1
* ENG 101	1
* MAT elec (MAT 113,115,140)	A=3 B=2 C=1
* BIO 211	A = 3 B = 2 C = 1
BIO-212	1
BIO-202	1
** Pre-requisite GPA	3.75 – 4.0 = 5 3.5 – 3.74 = 4 3.25 – 3.49 = 3 3.0 – 3.24 = 2 2.5 – 2.99 = 1
TEAS	90.7% and Higher = 6 78.0% - 90.699% = 4 58.7% - 77.999% = 2 Less than 58.699% = 0
Baccalaureate or Higher Degree	2
Associate Degree	1
Certificate in area of Allied Health	.5
Academic plan created by the application deadline	1

\*Repeated to obtain passing grade, zero (0) points are earned for that course.

\*\* Pre-requisite GPA is calculated from grades earned in PSC 150, ENG 101, Math and Bio 211

### Enhancing Academic Rigor: Passing Standard

- The passing score for each course was increased by emphasizing exam performance.
- Students must achieve a 75% exam average prior to calculating any other points used towards their final grade.

### Examinations

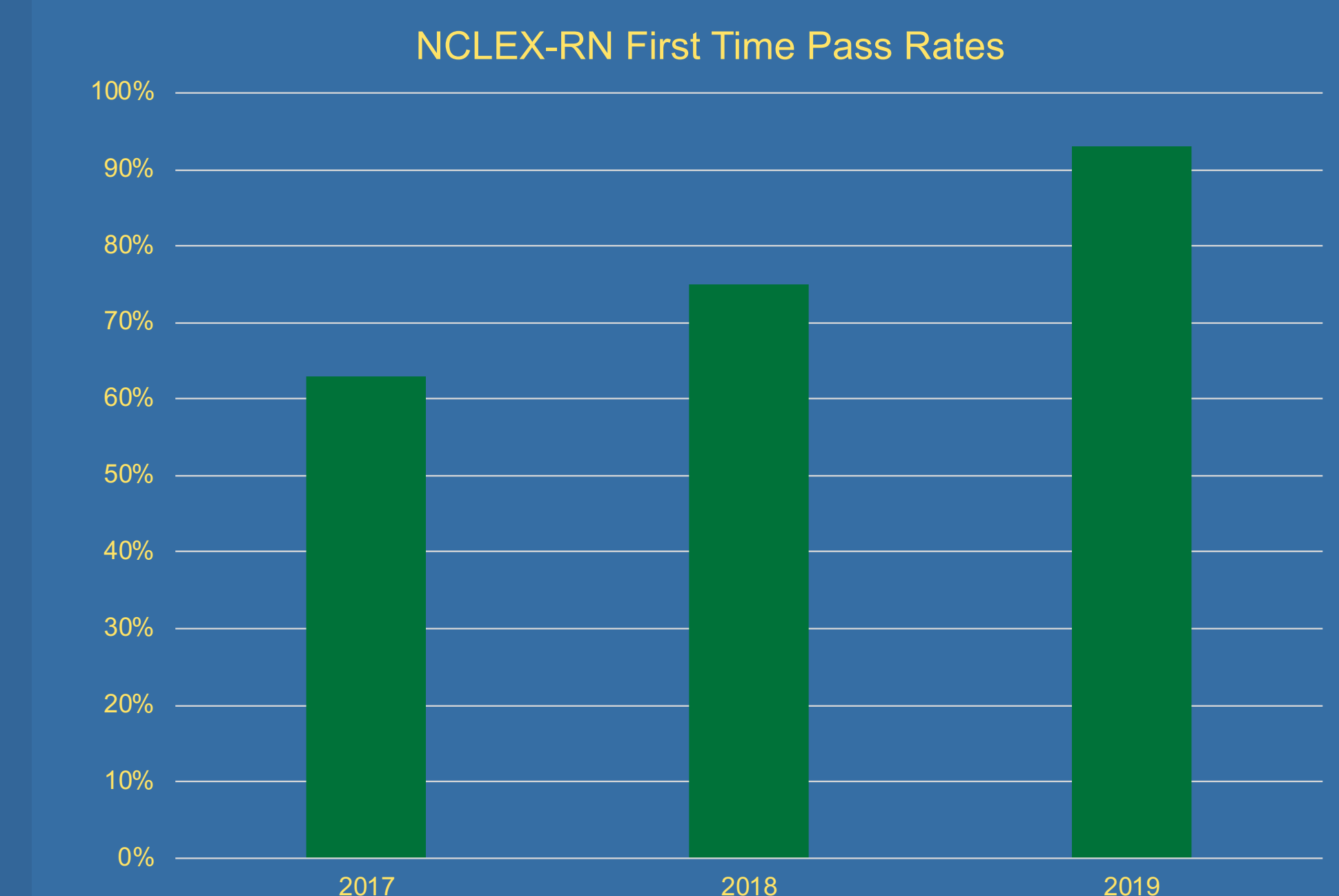
- Grant funding was utilized (Source: Nurse Support II program in the State of MD) for a consultant to critique unit and final exams. The consultant provided nursing faculty with several recommendations for exam improvement.
- All internal exams were subject to critical review before any exam item was vetted. Three full time faculty reviewed each exam item before administration to ensure appropriate level of difficulty, clarity and language/style to mirror NCLEX.
- All internal exams were subject to critical psychometric evaluation/review by faculty after students completed each exam. The software package used to administer exams provided statistical analysis of each exam/question. This data was used to recommend improvements for future exams.

### Preparation for NCLEX:

- All full-time faculty were assigned to advise and monitor a small number of students in the last semester of the program in terms of readiness for NCLEX.
- An individualized preparation plan continued through the entire last semester of the program and culminated with a mandatory review course before graduation.

## Findings

- Admission points were the best predictor of NCLEX-RN® first attempt pass rate; however, there was a correlation between TEAS scores, admission points or GPA, and passing NCLEX-RN®.
- Students who earned less than 12 admission points had 37% or less probability of passing the NCLEX on the first attempt.



## Conclusion

Nursing faculty and Senior leadership at the college worked together to change the admission criteria, enhance academic rigor and create a robust NCLEX-RN® prep program.

The implementation of the initiatives outlined here allowed the last graduating class to achieve well over the benchmark for success and may be of importance to any nursing program struggling to maintain the required state benchmarked first time pass rates.