NCLEX-RN 2016: Performance of Saskatchewan graduates

Saskatchewan Registered Nurses' Association

Contents

Introduction

Who is included in this report

This report provides statistics on the performance of graduates of Saskatchewan nursing education programs who wrote the NCLEX-RN in 2015 and 2016 as a part of their registration/licensure application process with a provincial or territorial Registered Nurse (RN) regulator in Canada. These writers are referred to as "Saskatchewan graduates" throughout the report.

This report does not include any Saskatchewan graduates who applied for licensure/registration outside of Canada.

Attempts

The report only includes graduates' attempts on the NCLEX-RN; any attempts at the previous nursing regulators' exam in years prior to 2015 are not included.

Cohorts

For the purposes of reporting, the Saskatchewan graduates were separated into two cohorts based on the year in which they wrote the NCLEX-RN for the first time:

1. **2015 cohort**: those who wrote the NCLEX-RN in 2015 for the first time
2. **2016 cohort**: those who wrote the NCLEX-RN in 2016 for the first time

By introducing the concept of cohorts, a group of writers can be followed every year in which they make new attempts. Table 1 shows how many Saskatchewan graduates in each cohort attempted the exam at least once in 2015 and 2016.

Table 1. 2015 and 2016 cohorts writing in 2015 and 2016

	2015 EXAM YEAR	2016 EXAM YEAR
2015 cohort	549	106
2016 cohort	-	546

In 2015, 549 Saskatchewan graduates wrote the NCLEX-RN for the first time and thus belong to the 2015 cohort. Of those who did not pass the exam in 2015, 106 wrote again in 2016.

In 2016, 546 graduates wrote the exam for the first time, and are considered part of the 2016 cohort.

NCLEX-RN pass rate by cohort

2016 cohort pass rate by the end of 2016

Of the 546 Saskatchewan graduates in the 2016 cohort (who wrote the NCLEX-RN for the first time in 2016), 84.4% had passed it by the end of 2016 after one or more attempts (see

Table 2). This is referred to as the 2016 **year-end NCLEX-RN pass rate** of the 2016 cohort.

Table 2. Year-end NCLEX-RN pass rate of the 2016 cohort

2016 cohort	PASSED	FAILED	TOTAL WRITERS	YEAR-END PASS RATE
By the end of 2016:	461	85	546	84.4%

2015 cohort pass rate by the end of 2016

Of the 549 Saskatchewan graduates in the 2015 cohort (who wrote NCLEX-RN for the first time in 2015), 79.4% passed by the end of 2015 after one or more attempts (see Table 3). Of the 113 graduates in the 2015 cohort who did not pass the exam in 2015, 106 attempted the exam again in 2016. Of this group, 73.6% passed by 2016's year-end. Ultimately, by the end of 2016, 93.6% of the 2015 cohort had passed the exam. The remainder who had not yet passed by the end of 2016, may still be able to attempt the exam in 2017 or subsequent years.

Table 3. Year-end NCLEX-RN pass rate of the 2015 cohort

2015 cohort writing in:	PASSED	FAILED	TOTAL WRITERS	YEAR-END PASS RATE
2015	436	113	549	79.4%
2016	78	28	106	73.6%
By the end of 2016:	514	35	549	93.6%

The percentage of the 2016 cohort who had passed by the end of 2016 (84.4%) was 5 percentage points higher than that of the 2015 cohort by the end of their first year of writing in

2015 (79.4%). Looking at the cumulative results of 2015 cohort after two years of writing, 93.6% have passed and only 6.4% have not yet passed.

2015 and 2016 cohorts' pass rates by attempt

The NCLEX-RN results can also be reviewed to see how successful each cohort was on each attempt (see Table 4). Of the 546 graduates in the 2016 cohort, 69.2% passed on their first attempt, which was an 8.7-percentage point higher pass rate when compared to the 2015 cohort's first-attempt pass rate of 60.5%.

Table 4. NCLEX-RN pass rates by attempt and by cohort (as of the end of 2016)

	2015 COHORT		2016 COHORT	
	TOTAL WRITERS	ATTEMPT PASS RATE	TOTAL WRITERS	ATTEMPT PASS RATE
Passed on first attempt	549	60.5%	546	69.2%
Passed on second attempt	215	56.3%	117	64.1%
Passed on third attempt	80	60.0%	11	72.7%
Passed after additional attempts	24	54.2%	0	-

NCLEX-RN duration statistics

Writers of the NCLEX-RN answer between 75 and 265 questions. For most writers, the computer program will stop asking questions once the program has calculated with 95% certainty that the writer is clearly above or below the passing standard.[1]

With computer-adaptive tests (CATs), the number of questions an exam writer answered and how long it took them to complete the exam show how quickly the writer demonstrated whether they met the required level of competence (the passing standard).

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Table 5. Exam duration statistics: first NCLEX-RN attempt by cohort

First attempt	COHORT	BY WRITERS WHO PASSED	BY WRITERS WHO FAILED	BY ALL WRITERS
Average number of questions answered	2016	107	165	124
	2015	128	159	140
% of writers answering minimum number of questions	2016	60.6%	20.2%	48.2%
	2015	40.4%	30.9%	36.6%
% of writers answering maximum number of questions	2016	9.0%	25.6%	14.1%
	2015	17.2%	28.6%	21.7%
Average exam duration	2016	1 hr 59 min	2 hrs 53 min	2 hrs 15 min
	2015	2 hrs 15 min	2 hrs 46 min	2 hrs 29 min
Number of graduates taking first attempt in (for reference)	2016	378	168	546
	2015	332	217	549
Number of questions: minimum of 75 and maximum of 265				
Maximum test time: 6 hours				

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[1] See "How a pass or fail is determined" section in the NCLEX-RN 2016: Canadian Results report for more information

Successful first-attempt writers in the 2016 cohort were able to demonstrate their competence with a fewer number of questions: an average of 107, which is closer to the minimum number of questions a writer could receive (75) than it is to the maximum number (265).

For the 2016 cohort, 60.6% of the 378 Saskatchewan graduates who were successful on their first attempt answered only 75 questions. This means they were able to demonstrate the required level of competence after answering the minimum number of questions. Of the 168 writers who were not successful on their first attempt, 20.2% needed only a minimum number of questions to demonstrate that they did not meet the required level of competence. This is an improvement compared to the 2015 cohort, when 30.9% answered the minimum number of questions.

The proportion answering the maximum number of questions reflects how many graduates were close to the passing standard at the end of their exam. Of the 378 Saskatchewan graduates in the 2016 cohort who passed on their first attempt, only 9% passed by a small margin, as they had to answer the maximum number of questions in order to demonstrate their competency.

Of the 168 Saskatchewan graduates in the 2016 cohort who were not successful on their first attempt, 25.6% answered the maximum number of questions (265). In other words, they were close to meeting the passing standard by the end of the test.

NCLEX-RN test plan performance

Each writer of the NCLEX-RN must answer questions across four major categories (with two of the categories having sub-categories for a total of eight topic areas) all of which are based on patient needs. The content for these question topics is referred to as the test plan.[2] To pass the NCLEX-RN, the exam writer must perform above the passing standard, which is set at 0.00 logits.[3]The longer bars indicate better performance.

The overall test plan performance of the first-attempt writers of the 2016 cohort was on average 0.31 logits above the passing standard. It was also 0.17 logits above the first-attempt 2015 cohort average and 0.11 logits below the first-attempt national average in 2016.

Compared to the national average and the passing standard, Saskatchewan graduates in the 2016 cohort performed best on the *Pharmacological and Parenteral Therapies* test plan category (0.42 logits above the passing standard).

> **Pharmacological and Parenteral Therapies** tests the competency of nursing care related to providing care related to the administration of medications and parenteral therapies.

The lowest average 2016 cohort logit was 0.25 on the *Basic Care and Comfort* and *Reduction of Risk Potential* test plan category.

> **Basic Care and Comfort** tests the competency of nursing care related to providing comfort and assistance in the performance of activities of daily living.

> **Reduction of Risk Potential** tests the competency of nursing care related to reducing the likelihood that clients will develop complications or health problems related to existing conditions, treatments or procedures.

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[2] For more information, see "Topics covered on the exam" section in the NCLEX-RN 2016: Canadian Results report
[3] For more information, see "How a pass or fail is determined" and "What is a logit?" in the NCLEX-RN 2016: Canadian Results report.

Figure 1 shows how well an average Saskatchewan graduate taking the NCLEX-RN examination for the first time in 2016 and 2015 performed overall and on each test plan category.

The average first-attempt performance of Saskatchewan graduates can be compared against the passing standard, each test plan category and cohort (based on the year of writers' first attempt). The longer bars indicate better performance.

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[4] For more information on each test plan category, see "Topics covered on the exam" in the report NCLEX-RN 2016: Canadian Results.

Figure 1. Average test plan category performance of Saskatchewan graduates on their first NCLEX-RN attempt in 2016 (compared to the average national performance and its provincial performance in 2015)

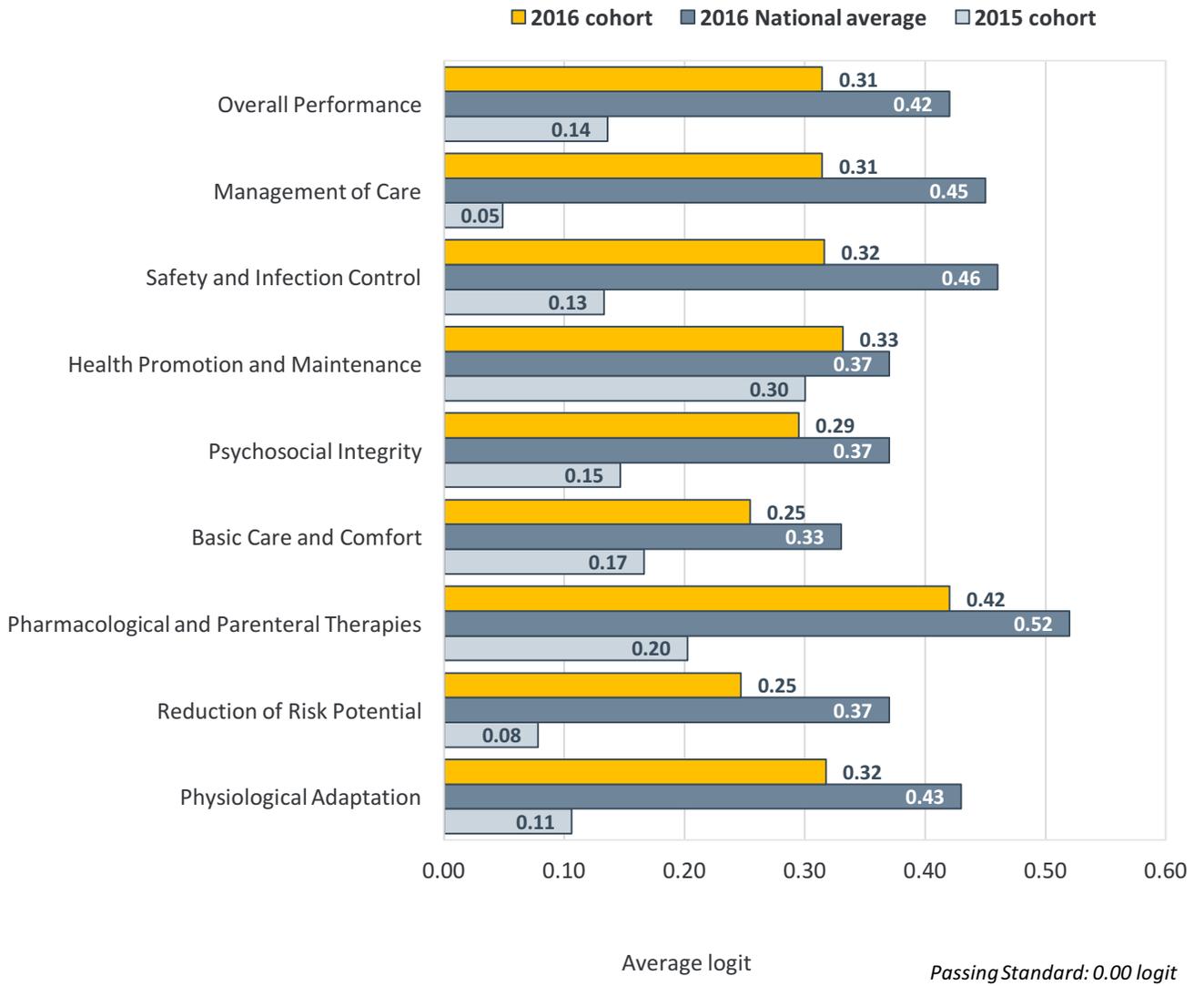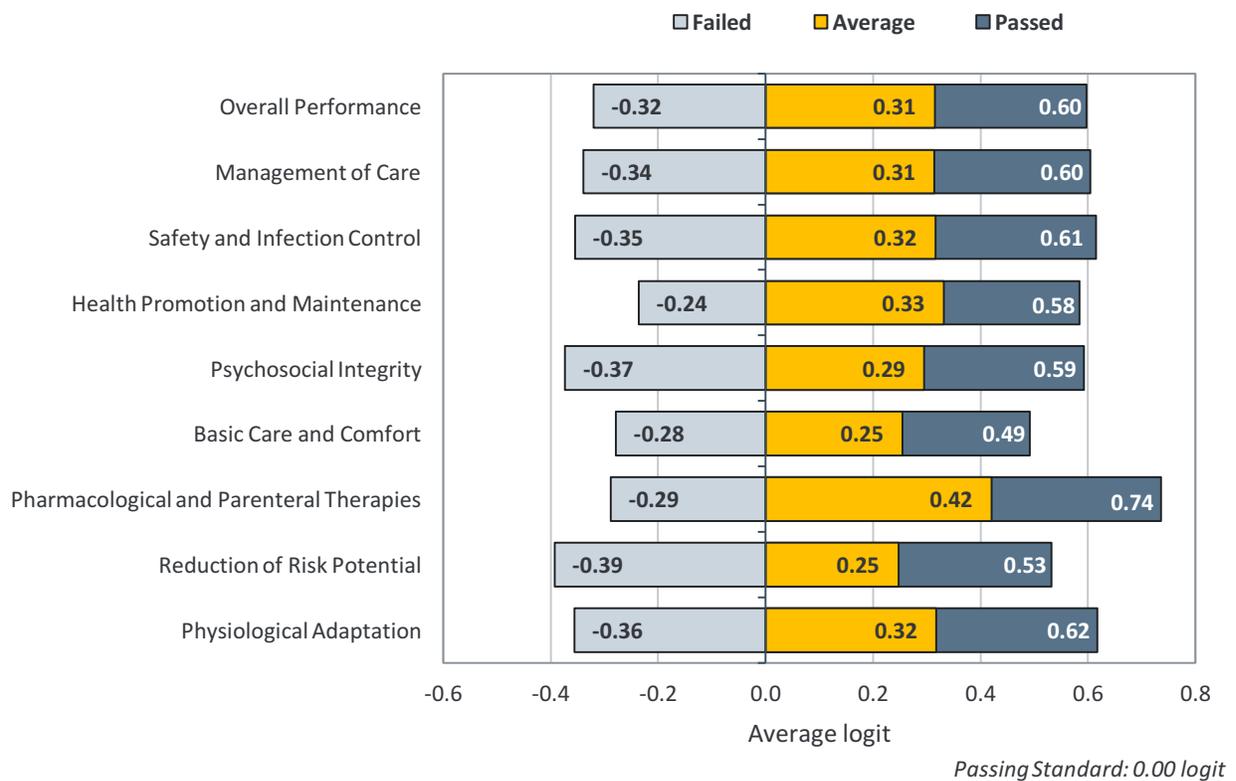|	2016 cohort	2016 National average	2015 cohort
Overall Performance	0.31	0.42	0.14
Management of Care	0.31	0.45	0.05
Safety and Infection Control	0.32	0.46	0.13
Health Promotion and Maintenance	0.33	0.37	0.30
Psychosocial Integrity	0.29	0.37	0.15
Basic Care and Comfort	0.25	0.33	0.17
Pharmacological and Parenteral Therapies	0.42	0.52	0.20
Reduction of Risk Potential	0.25	0.37	0.08
Physiological Adaptation	0.32	0.43	0.11

Average logit

Passing Standard: 0.00 logit

Figure 2 presents the same information as Figure 1, but with the average first-attempt performance of the 2016 cohort broken down by the exam result: graduates who passed the exam, who failed the exam and overall first-time writers in 2016 (for reference).

The further the bar is to the right of the passing standard (0.00 logits), the better the average performance was. For those writers who were not successful, the further the bar is from the left of the passing standard, the worse their average performance was.

Figure 2. Average test plan category performance of Saskatchewan graduates on their first NCLEX-RN attempt in 2016 (presented separately for those who passed and those who failed)

Passing Standard: 0.00 logit

A positive skew is noticeable in the *Pharmacological and Parenteral Therapies* test plan category. The positive skew (where data tends to cluster on the right side) represents a higher average passing performance and, in particular, higher performance for those who failed. Those who passed, performed best on this category (0.74 logits above the passing standard)

On average, those who were not successful on their first attempt had the lowest performance on *Reduction of Risk Potential* test category (-0.39 logits away from the passing standard).