



**Seneca**



**YORK**  
UNIVERSITÉ  
UNIVERSITY

# Mobility patterns of Seneca's business students at York University: Student profile and academic success

Ursula McCloy & Kate Williams

CENTER FOR RESEARCH IN STUDENT MOBILITY | SENECA COLLEGE

Stephen Childs & Richard Smith

OFFICE OF INSTITUTIONAL RESEARCH, PLANNING AND ANALYSIS | YORK UNIVERSITY

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## INTRODUCTION

- Building on the almost 40 year partnership between Seneca College and York University, this presentation reports on Seneca business students who moved between Seneca and York, in either direction.
- Previous research found that movement between the two institutions is significant: between 2000 and 2012, 9330 students moved from Seneca to York, and 5412 moving from York to Seneca.
- Ultimately, the findings can support the creation and enhancement of transfer agreements as well as supporting students making the transition.

**\*STUDY ALSO INCLUDES RYERSON STUDENTS, BUT THOSE ARE NOT INCLUDED IN THE CURRENT PRESENTATION.**



## WHY FOCUS ON BUSINESS PATHWAYS?

1. ONCAT's Business Transfer Committee, containing a range of college and university representatives from Ontario's business faculties, recently set a priority to "Gather data and create a report to share widely on the success of transfer students in Business."
2. At Seneca business pathways predominate:
  - KPI Graduate Outcomes survey indicates 82% of Seneca's business graduates continue to York or Ryerson
  - 42% of Ontario university students who come to Seneca enter a business program; York and Ryerson comprise 39% of all incoming business students from Ontario universities.
3. Focusing on a study area enables drilling into specific pathway agreements.

## RESEARCH QUESTIONS

The project goal is to follow students, using institutional administrative databases, who either start a program at York and move to a Seneca business program or start a Seneca business program and continue on to York.

### Research questions:

1. What share of Seneca's business students continues on to York or have previously attended York?
2. What is their sociodemographic and academic profile?
3. How well do students perform academically after transfer?

## PATHWAYS IN BUSINESS- UNIVERSITY TO SENECA

- Seneca offers graduate certificates (which require a degree or diploma) and accelerated, concurrent, or collaborative programs. Within Seneca's business programs:
  - Creative advertising is offered as a concurrent business program with York
  - 17 graduate certificate programs offered in business at Seneca
- Transfer of credits from universities is primarily on a course by course basis, with a minimum grade requirement.



## **PATHWAYS TO YORK BUSINESS**

### **General transfer policy**

- Seneca's business diplomas are considered "highly academic" and receive the maximum block credit amounts
  - Graduates of 3-yr Business Administration diplomas (GPA of 3.3/4 +math requirement) can enter a Commerce degree and obtain 42 credits (almost 1.5 yr of study)
  - Graduates of Seneca's two-year business programs are eligible for 30 credits (1 yr) towards a Commerce degree.

### **Accounting articulation agreements with Seneca (since 2015)**

- 3-yr Accounting and Finance diploma grads with 'C' or better in each course eligible for up to 57 credits towards the Bachelor of Commerce Honours degree (4 yr).
- 2-yr accounting diploma grads 45 credits (min. 'C' grades) towards the Bachelor of Commerce Honours degree.
- Both require a Seneca GPA of 3.0.



# Methodology



## SAMPLE FOR CURRENT STUDY

- The study population included all Seneca students enrolled in a business program from 2012-13 to 2016-17 (n=24,610); who were not enrolled at Seneca before 2007; and who had earned at least one course credit at Seneca.
- York sample included a subset of the above who had ever enrolled in a York degree (“term active”) at some point between 2007 and 2018, the program(s) enrolled in; credits attempted and earned per term; amount of transfer credit; first language; term and cumulative GPA; graduation status and program of graduation.
- Identifiers included:
  - Ontario Education Numbers, first, middle, last name, date of birth, first and last semester of enrollment at Seneca, six char. postal code.

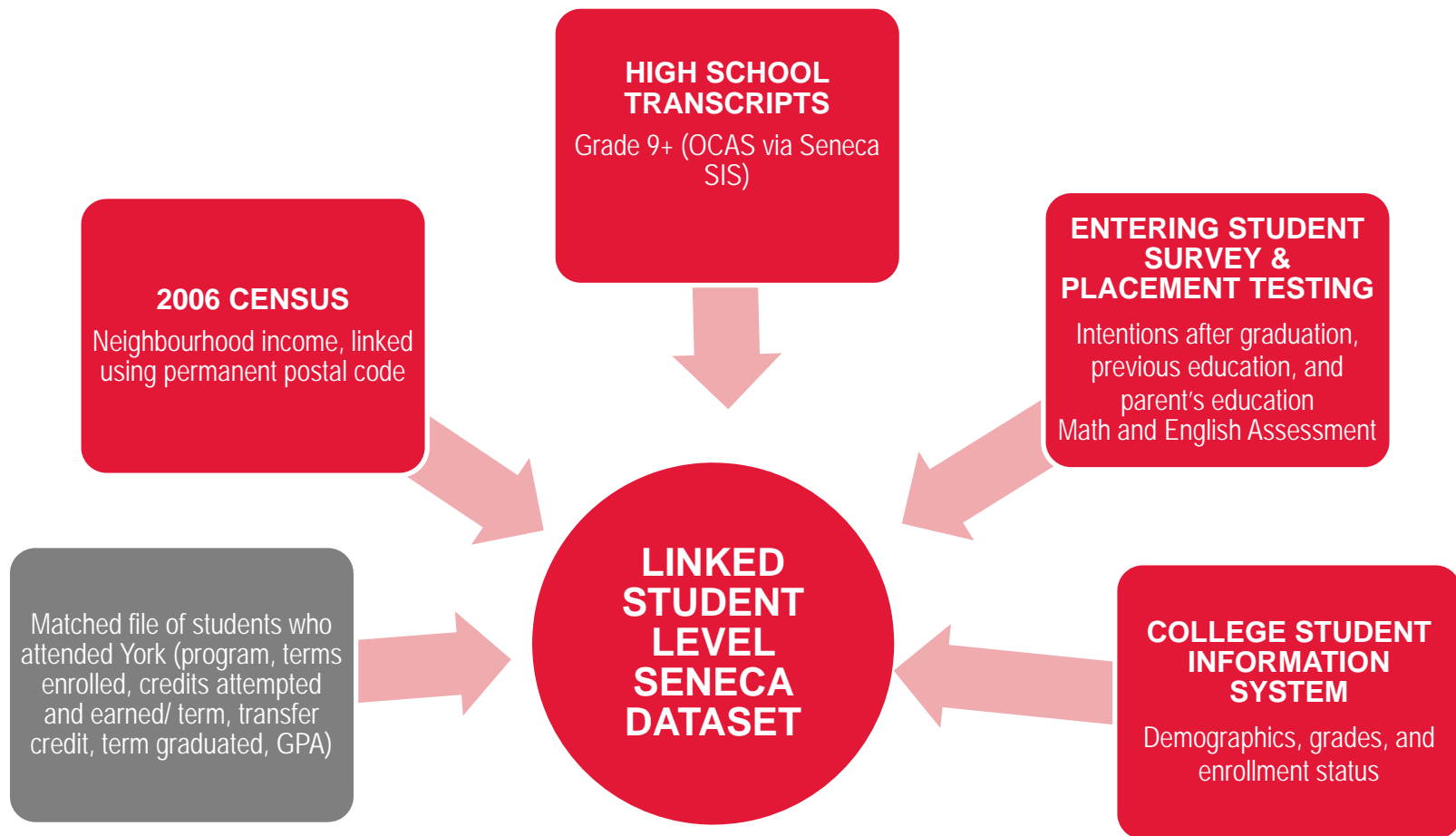




## PROCEDURE

- Project funded and contract signed with ONCAT Feb. 2018
- Data sharing agreements and confidentiality forms created and signed, and REB approval obtained (by July of 2018) (both institutions).
- Seneca securely transmitted personal identifiers to York who determined via a matching procedure which students had ever enrolled in a York degree (August, 2018)
- York extracted variables of interest for matched students and sent to Seneca.
- Seneca then merged this file with a previously created linked Seneca data file regarding students' sociodemographic profile.

# CREATION OF THE LINKED DATASET



## ANALYSIS

- **Both descriptive and regression techniques were used**
  - Descriptive results are presented for the key variables in the analysis
  - Linear regression was used for continuous outcomes: estimate the effect of a variety of characteristics on Seneca or York GPA.
  - Logistic regression was used for binary outcomes:
    - estimates on the odds of retention/graduating within the first year after transfer for Seneca to York pathway
    - estimates on the odds of retention/graduating within the standard program length after transfer for York to Seneca pathway

# Results

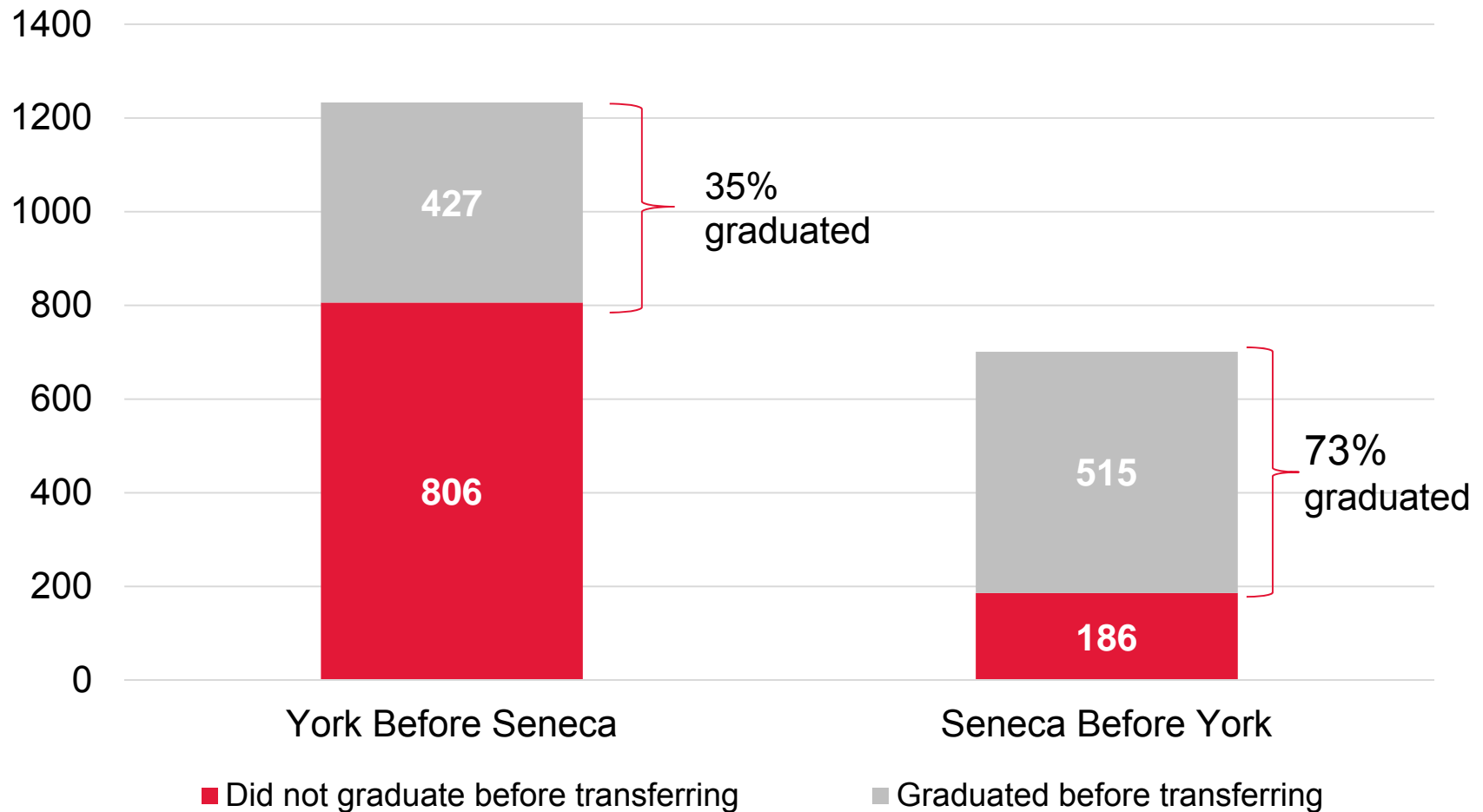


# Profile of York/Seneca transfer students

## Sociodemographic and academic backgrounds



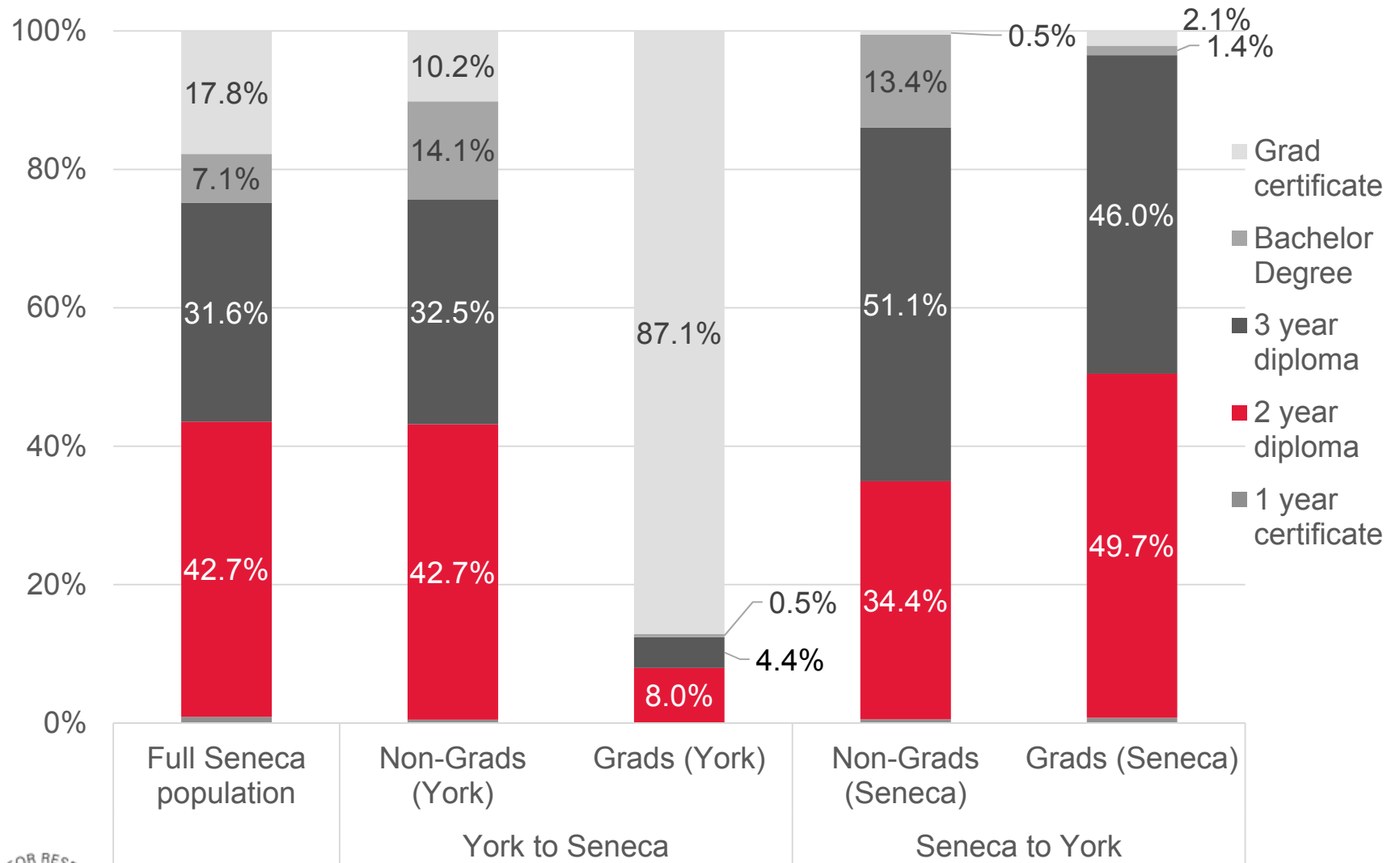
# NUMBER OF SENECA BUSINESS STUDENTS MOVING BETWEEN SENECA AND YORK



7.8% of all Seneca business students who enrolled in Seneca between 2012 and 2017 either originated from, or continued on to York. A further 7 students “overlapped” and are not included here.



# BUSINESS CREDENTIALS ENROLLED IN AT SENECA BY PATHWAY



# SOCIODEMOGRAPHIC CHARACTERISTICS BY TRANSFER PATHWAY

		York Before Seneca		Seneca Before York		Full Seneca business population
		Non-Grads (York)	Grads (York)	Non-Grads (Seneca)	Grads (Seneca)	
Gender	Female	53.0%	72.4%	42.5%	54.8%	52.0%
Status in Canada	International	16.3%	2.8%	32.8%	45.8%	35.6%
	Canadian Citizen	78.2%	93.9%	54.3%	36.5%	52.0%
	Domestic - Other	5.6%	3.3%	12.9%	17.7%	12.4%
First Language	English	45.2%	71.4%	30.1%	22.3%	42.9%
Income Group (non int'l)	Low Income	28.4%	22.4%	24.7%	28.5%	30.8%
	Mid Income	32.6%	29.1%	33.5%	39.0%	35.1%
	High Income	39.0%	48.6%	41.8%	32.5%	34.1%
Neither parent had a degree*		58.7%	57.9%	56.3%	64.3%	66.4%

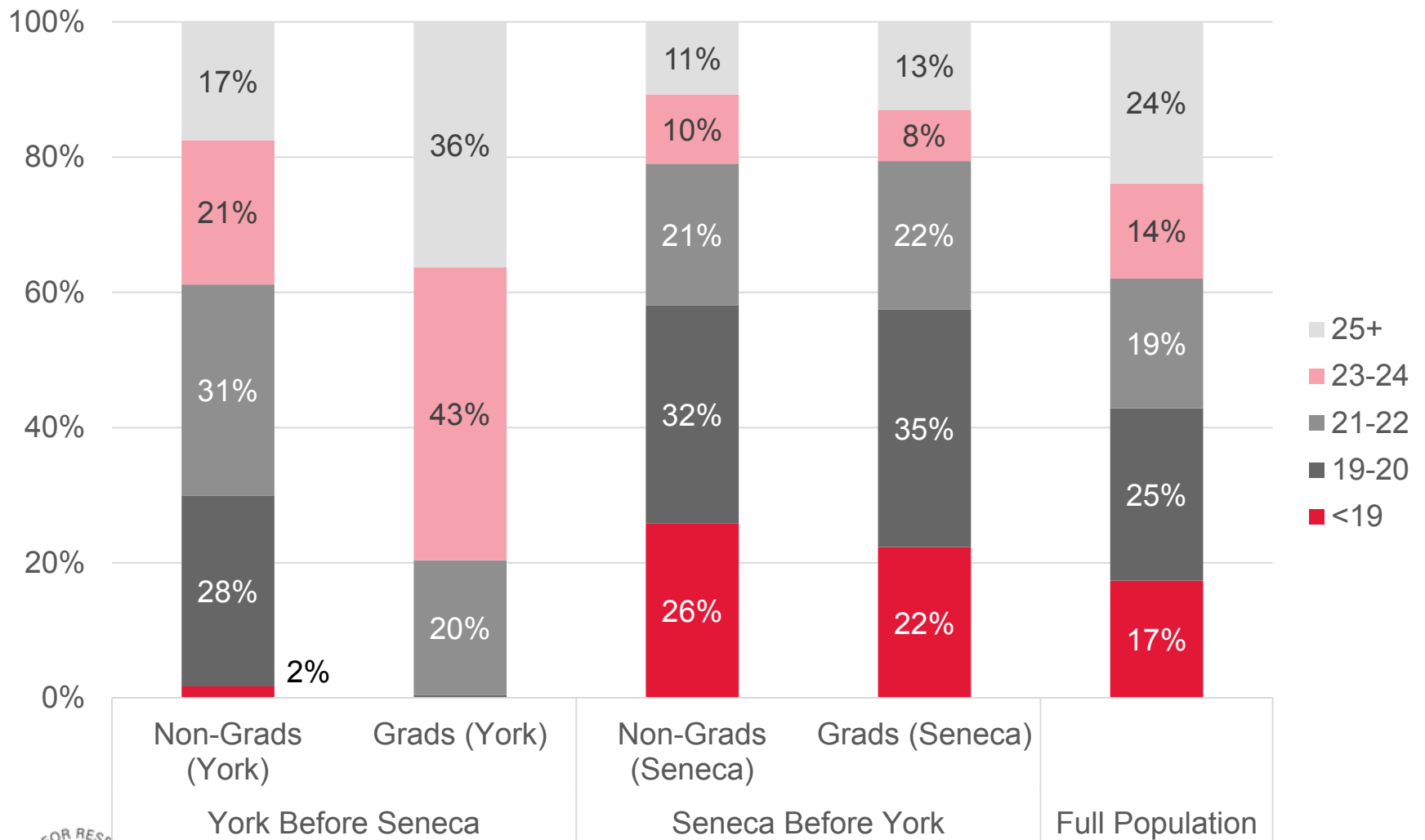


Parent's education variable only available for diploma students





## AGE STARTED AT SENECA BY TRANSFER PATHWAY



## HIGHEST CREDENTIAL ENROLLED IN AT YORK BY PATHWAY, PRE- OR POST-TRANSFER

	York to Seneca	Seneca to York
Bachelor Degree	1225	688
Masters Degree	7	12
PhD	1	1
<b>Total</b>	<b>1233</b>	<b>701</b>

## PROGRAMS OF ENTRY AT YORK FOR SENECA'S BUSINESS STUDENTS, SENECA TO YORK PATHWAY

Bachelor of Commerce	313	44.7%
Schulich Bachelor of Business Administration	1	0.1%
BUSO - Business and Society	85	12.1%
Bachelor of Arts	62	8.8%
ECON - Economics	62	8.8%
BUEC - Business Economics	46	6.6%
FBEC - Financial and Business Economics	37	5.3%
Bachelor of Human Resources Management	20	2.9%
Master of Accounting	1	0.1%
Master of Business Administration	2	0.3%
Master of Financial Accountability	3	0.4%
Master of Human Resources Management	1	0.1%
Other non-business related programs	130	18.5%
<b>Total</b>	<b>701</b>	<b>100.0%</b>



## LAST PROGRAM AREA AT YORK, YORK TO SENECA STUDENTS

Social Sciences and Related (excluding business)	487	39.5%
Commerce/Business/Administration	271	22.0%
Humanities and Related	213	17.3%
Mathematics and Physical Sciences	73	5.9%
Fine and Applied Arts	40	3.2%
Education, Physical Education, Recreation and Leisure	19	1.5%
Agriculture and Biological Sciences	18	1.5%
Health Professions and Occupations	15	1.2%
Interdisciplinary Studies	2	0.2%
Engineering and Applied Sciences	1	0.1%
Not Applicable/None	94	7.6%
<b>Total</b>	<b>1233</b>	<b>100.0%</b>

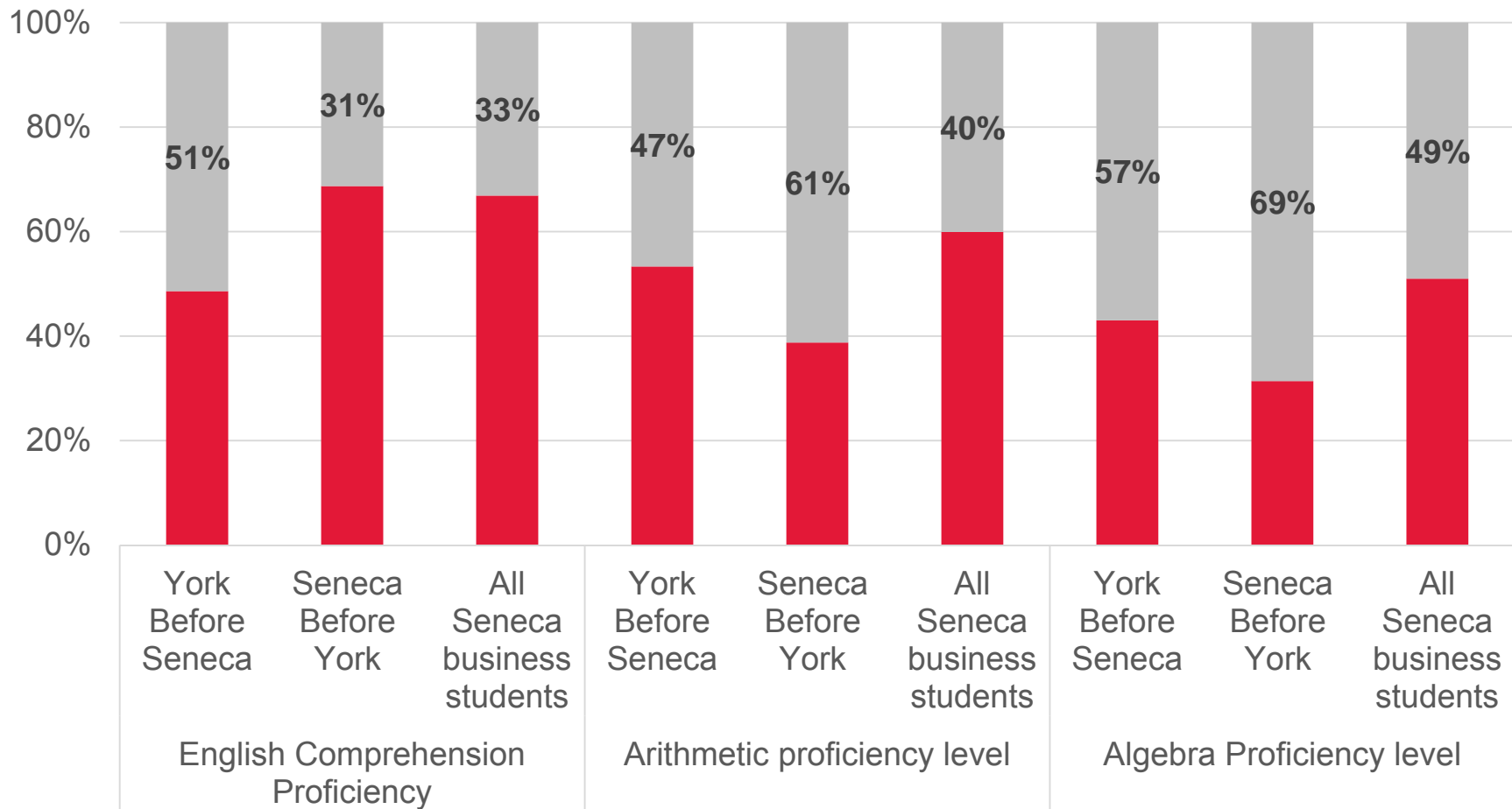
## HIGH SCHOOL GRADES BY PATHWAY

	York Before Seneca	Seneca Before York	Total Seneca Sample (Business)
% with >50% Senior HS courses U/M/OAC level	96.9%	27.7%	35.6%
	<60%	0.9%	5.4%
HS Average (all grade 11/12 courses)	60-69%	24.3%	42.6%
	70-79%	58.0%	40.8%
	>=80%	16.9%	11.2%
Number of failed 11/12 courses	0	61.6%	56.3%
	1-2	24.1%	24.0%
	>=3	14.3%	19.6%
% Eligible for university based on HS record	81.4%	28.1%	28.7%



ONTARIO HS STUDENTS ONLY (NO INT'L)

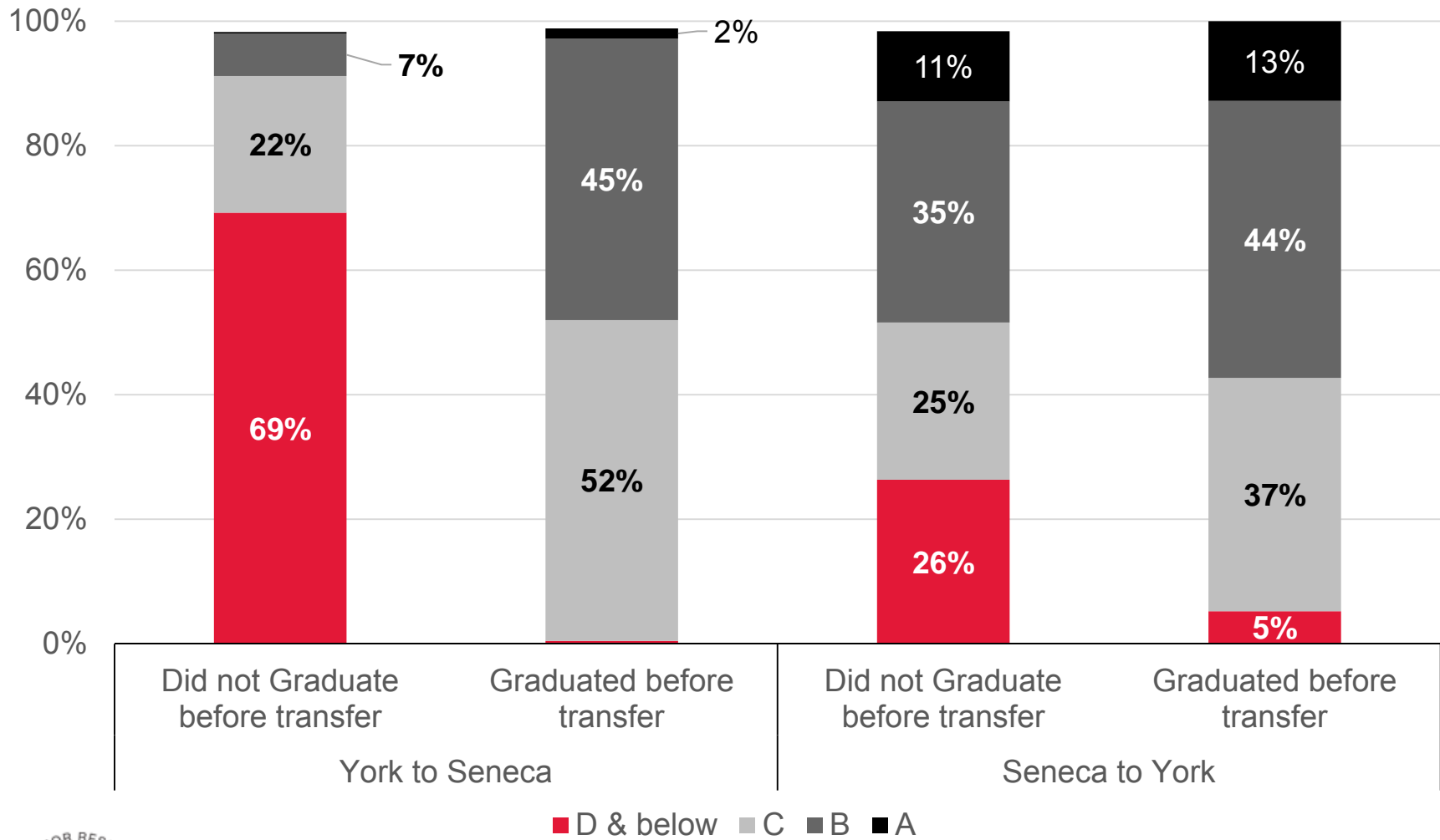
# ENGLISH AND MATH PROFICIENCY AT SENECA ENTRY, BY PATHWAY



■ Minimal/ basic & below    ■ Adequate and above



# GPA AT SENDING INSTITUTION BY PATHWAY AND GRADUATION STATUS



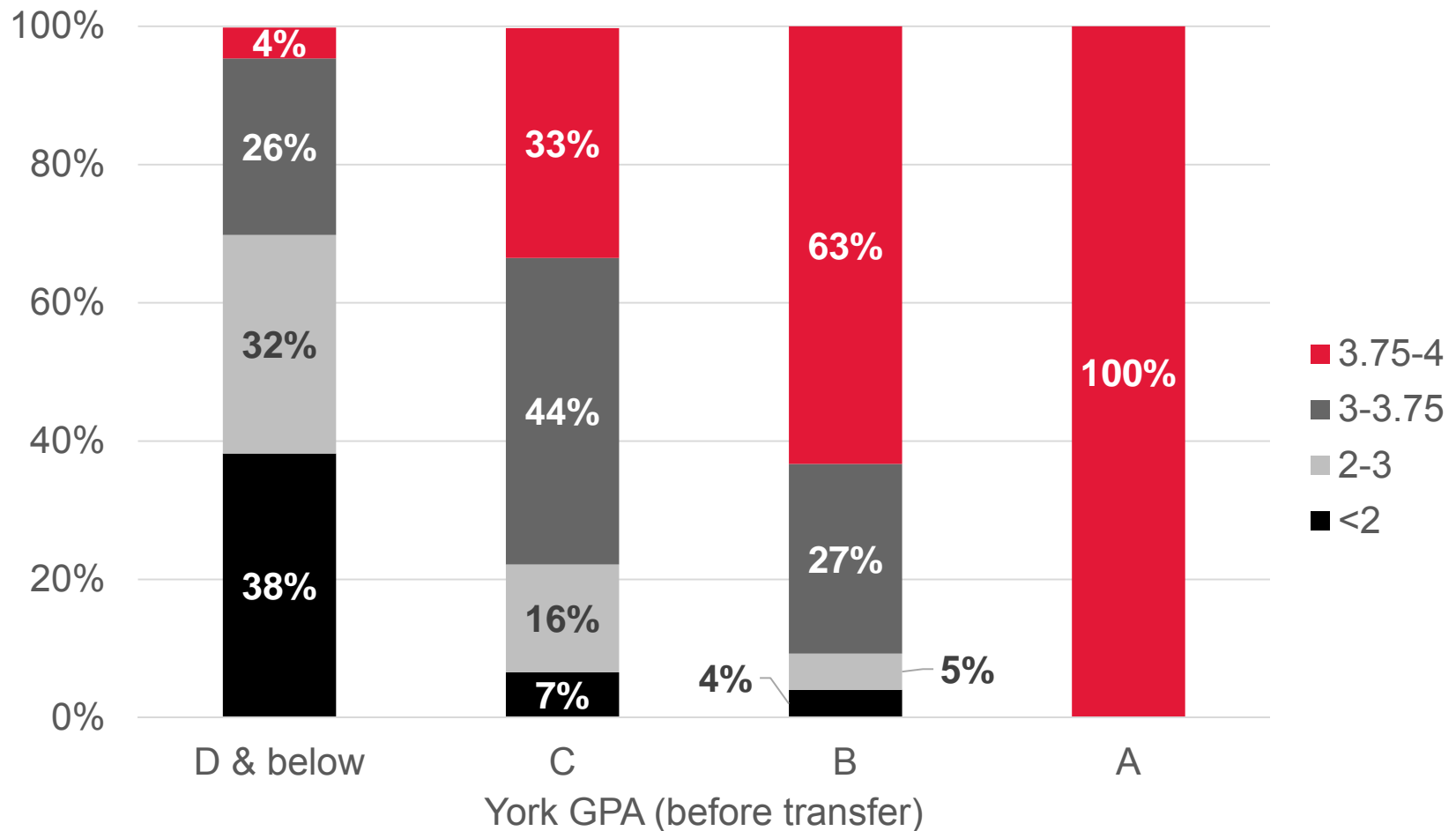
# Academic outcomes after transfer

## GPA and retention

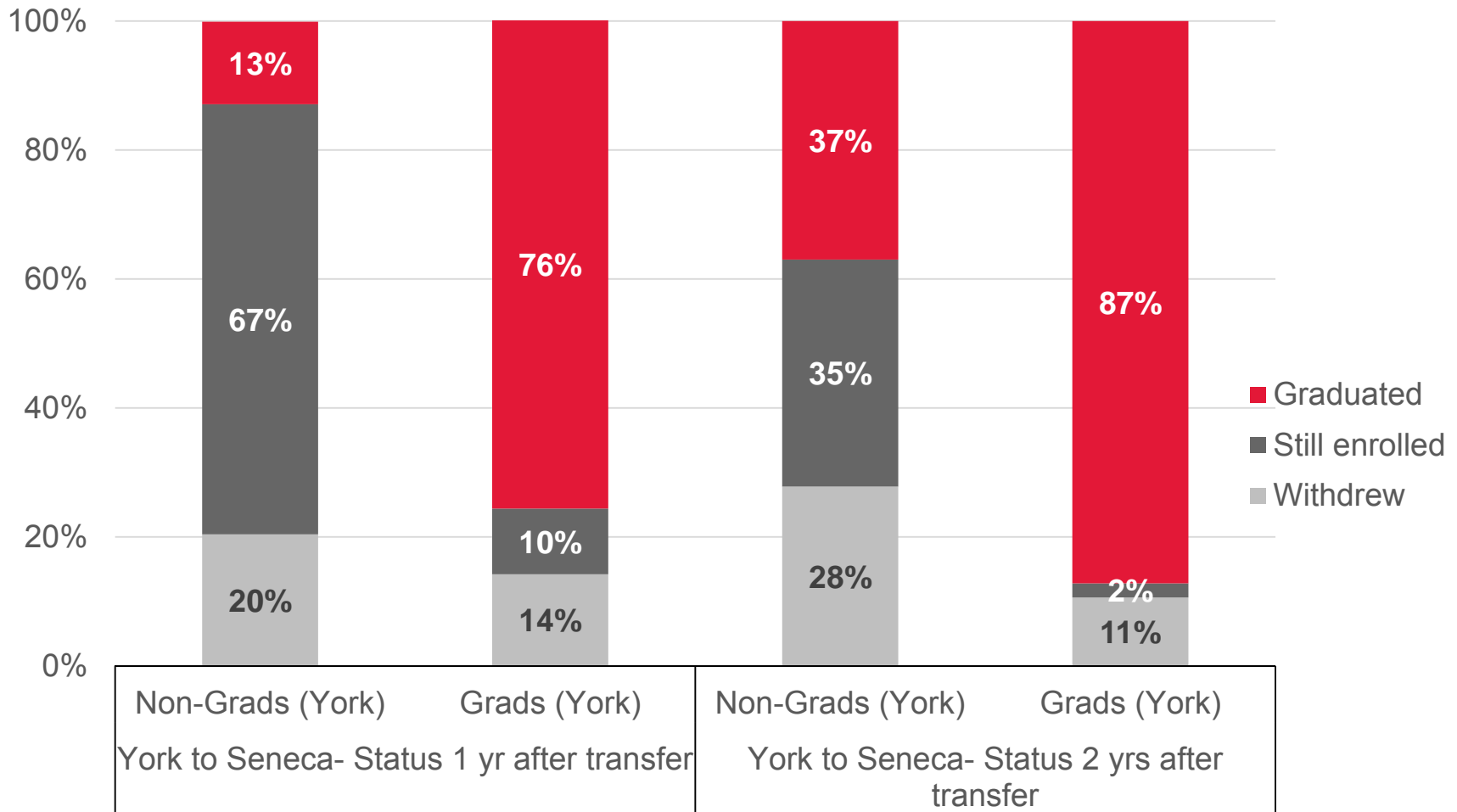




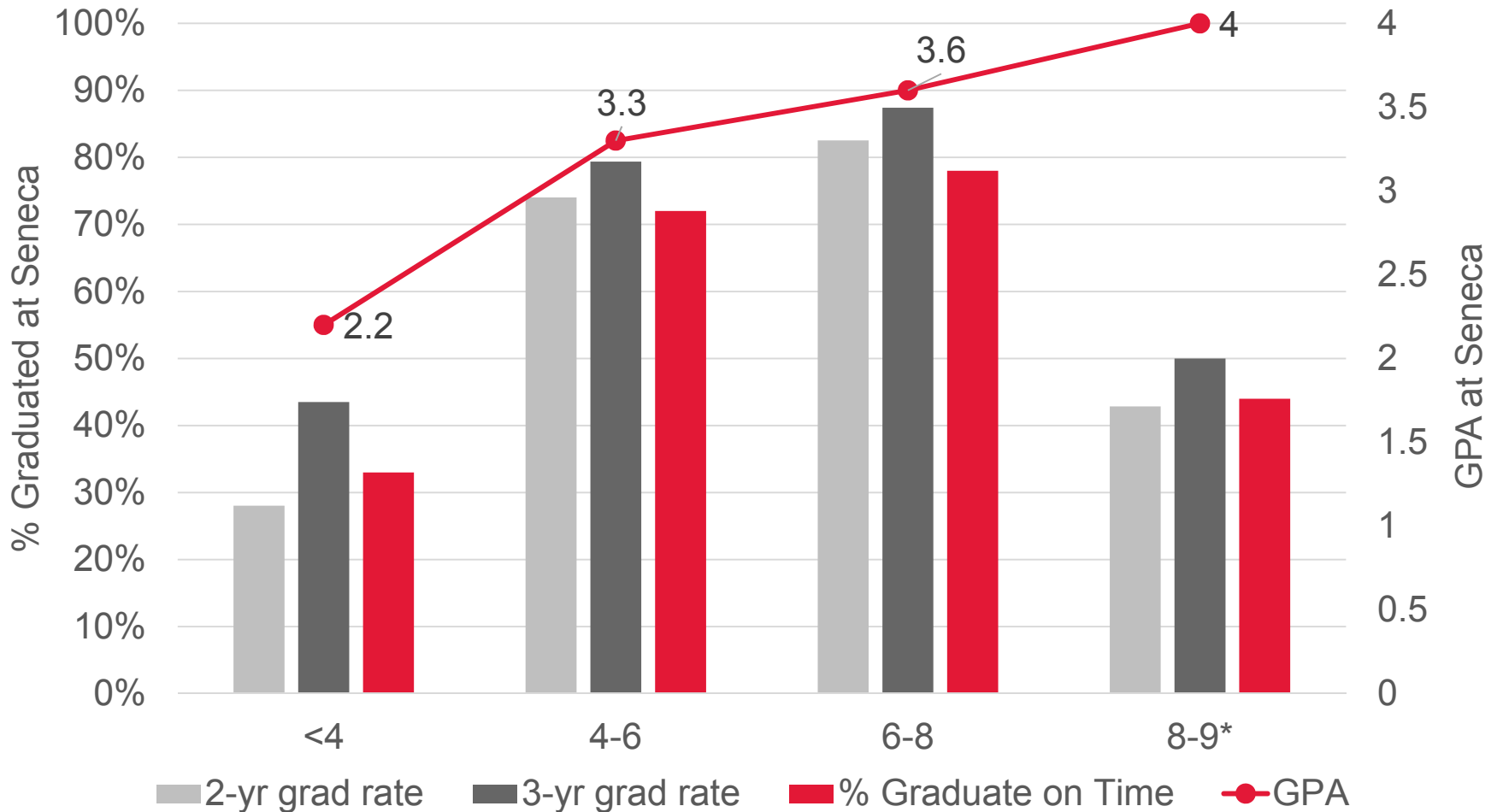
## SENECA GPA AFTER TRANSFER FROM YORK, BY YORK GPA



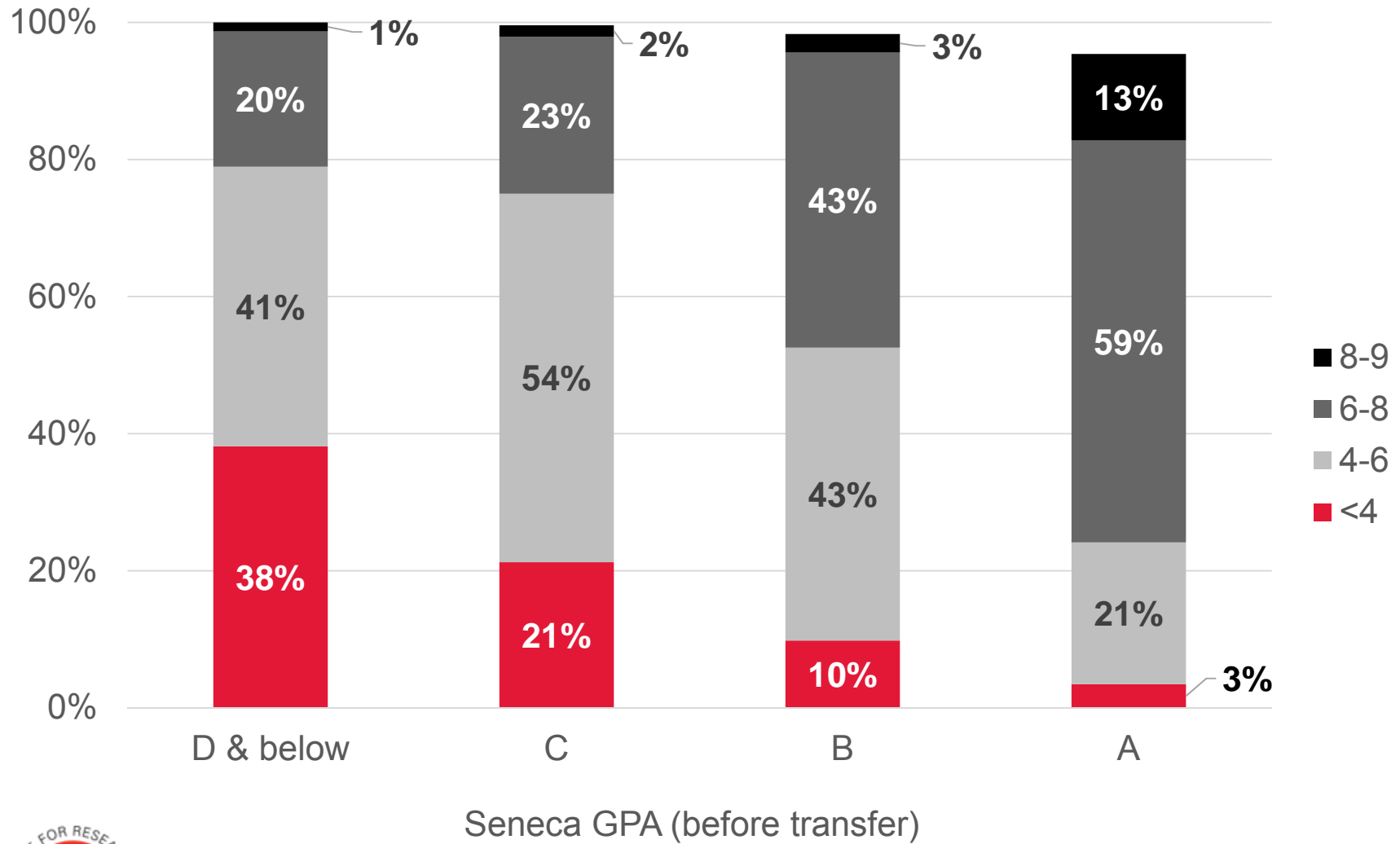
# ENROLMENT STATUS AFTER TRANSFER, YORK TO SENECA PATHWAY



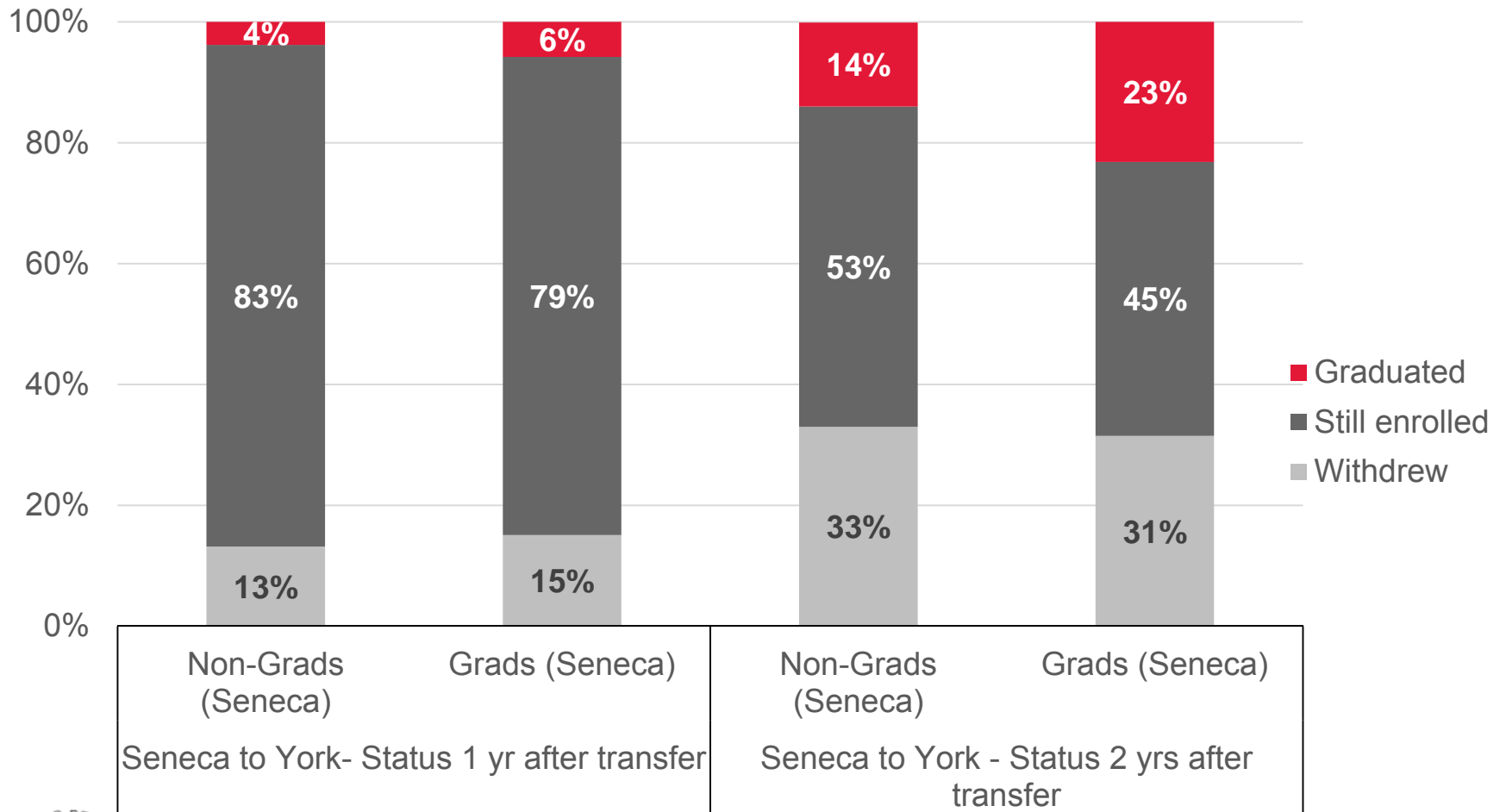
# ACADEMIC OUTCOMES AFTER TRANSFER FROM YORK, BY YORK GPA



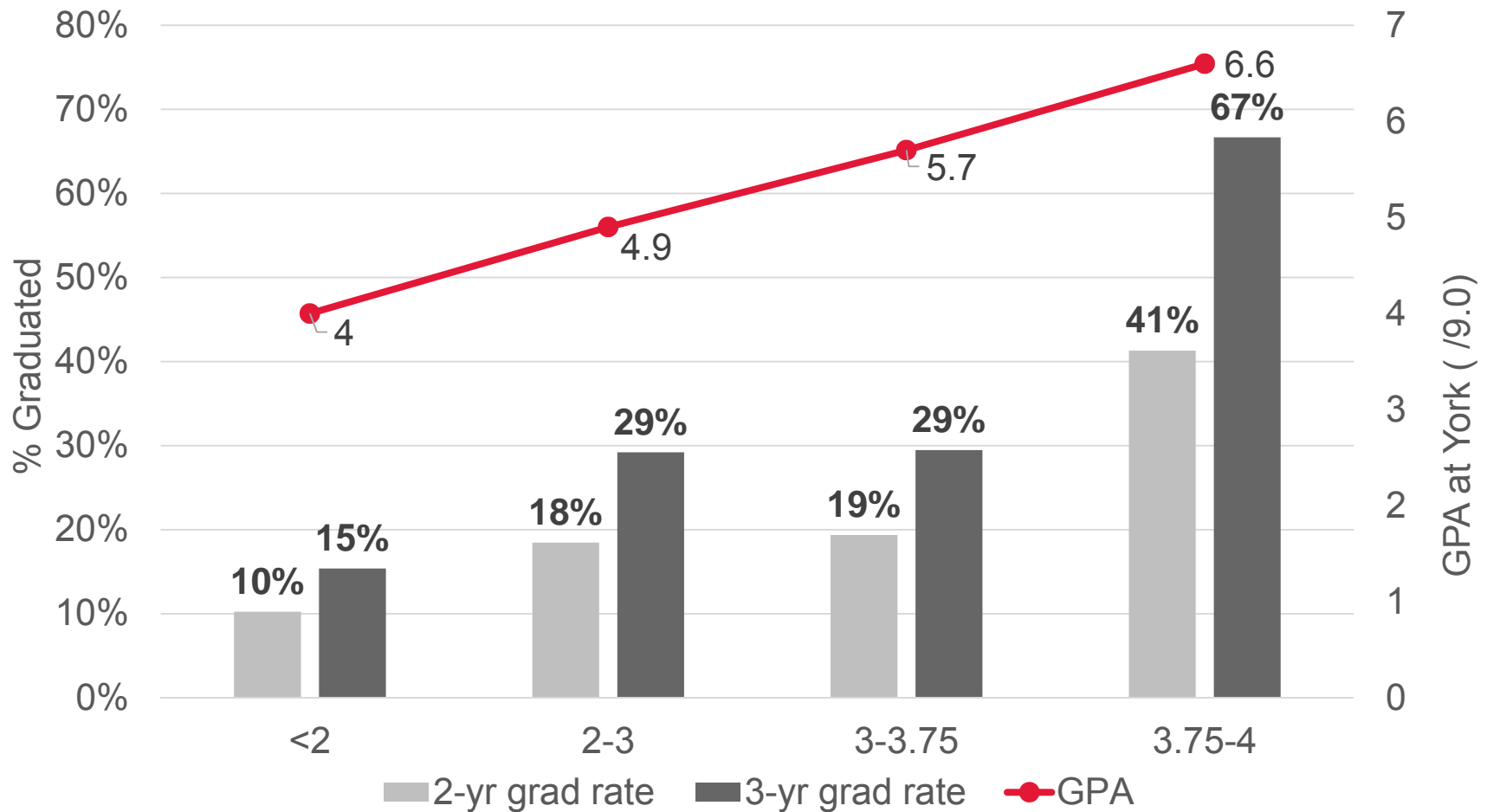
## YORK GPA AFTER TRANSFER FROM SENECA, BY SENECA GPA



# ENROLMENT STATUS AFTER TRANSFER, SENECA TO YORK PATHWAY



# ACADEMIC OUTCOMES AFTER TRANSFER FROM SENECA, BY SENECA GPA



## PATHWAY OUTCOMES FOR SENECA BUSINESS GRADUATES IN YORK'S BACHELOR OF COMMERCE

		n	GPA Seneca (/4.0)	GPA York (/9.0)	First year Retention	Average transfer credit
Block Transfer	2yr Business grads	66	3.4	5.6	86.8%	28.8
	3yr Business grads	44	3.4	5.1	81.3%	39.5
Articulated Pathways	2yr Accounting grads	81	3.2	6	90.0%	29.8
	3yr Accounting & finance grads	42	3.3	6.5	78.8%	44.3

# Results: Regression Analysis

## Influences on GPA and retention rates





## SUB-POPULATIONS FOR REGRESSION MODELS

Regression models contain 4 base populations

1. Variables available for all student/ credential types: gender, age, status in Canada, GPA, program, credential, DCTO use, graduation status, transfer credit (York)
2. High school: excludes international, and those who did not submit HS grades to Seneca; includes census neighbourhood income
3. Assessment scores: excludes graduate certificate and degree students (not assessed). Two models:
  - a) Those who did English assessment (almost all)
  - b) English and math assessment (required for many programs, not all)
    - includes international students and parents education variable (from a survey at assessment appointment)

## YORK TO SENECA: INFLUENCERS ON SENECA GPA

### Higher GPAs at Seneca were associated with:

- Being female
- Coming from a mid or high income neighbourhood
- Having HS grades/ courses that were “eligible” for university entry
- English and math assessment scores at Seneca entry
- Entering hospitality/ tourism relative to Accounting/ finance
- Entering grad certificates
- Higher York cumulative GPA



## YORK TO SENECA: INFLUENCERS ON GRADUATING WITHIN STANDARD PROGRAM LENGTH

**Higher graduation rates at Seneca were associated with:**

- Being female (only in HS model)
- Having HS grades/ courses that were “eligible” for univ entry
- Entering hospitality/ tourism relative to Accounting/ finance
- Entering grad certificates
- York cumulative GPA



## SENECA TO YORK: INFLUENCERS ON GPA

Higher GPAs at York after transfer were associated primarily with academic background:

- International students had higher GPAs relative to Canadian citizens. This effect disappeared when math assessment skills at Seneca entry were included.
  - math assessment skills had a positive impact on GPA at York
- taking >50% University prep courses in HS was associated with higher GPAs
- Seneca GPA was strongly associated with York GPA across all models

## SENECA TO YORK: INFLUENCERS ON FIRST YEAR RETENTION AT YORK

- International students were more likely to continue on to second year at York. This effect disappeared when math assessment skills at Seneca entry were included.
  - math assessment skills had a positive impact on retention at York
- Taking >50% Univ prep courses in HS was associated with higher retention
- Seneca GPA was only associated with York retention in the model without HS or assessment scores.

## CONCLUSIONS

- Students attending York primarily enter commerce or arts related degrees in business and economics; however students moving from York to Seneca enter a variety of programs
- Math assessment results at Seneca are consistently associated with GPA and retention, either pre- or post-transfer
  - Only exception is York to Seneca graduation rate
- GPA before transfer has strongest association with GPA and retention/graduation rate
- Most sociodemographic factors are not significant within the transfer populations; their effects may occur on the pre transfer GPA/ success, which then indirectly influences post-transfer success.

## NEXT STEPS/ CURRENT ACTIVITY

- Propensity to transfer models- which Seneca business students are most likely continue on to York or Ryerson?
- Comparison of success of transfer students versus non-transfer at Seneca
- Inclusion of Ryerson in regression models of academic performance after transfer
- Look more closely at how well students are doing in established pathways, and how they may be improved
- Determine whether there may be opportunities for pathway development based on the data.
- York/ Seneca Partnership currently conducting an ONCAT funded study of York/ Seneca students using combination of admin/ survey/ and focus group data.



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**Thank you!**

**Ursula McCloy** | [ursula.mccloy@senecacollege.ca](mailto:ursula.mccloy@senecacollege.ca)

**Kate Williams** | [kate.williams@senecacollege.ca](mailto:kate.williams@senecacollege.ca)

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