

# RETENTION OF IMMIGRANTS AND REFUGEES IN NB: A QUANTITATIVE ANALYSIS USING PROVINCIAL ADMINISTRATIVE DATA

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# CONTEXT

- New Brunswick's population is one of Canada's oldest. NB is small (750k), 48% rural, no CMA/CA is larger than 150,000 people, no city is larger than 75,000 people
- In 2016 only 5% of NB's population was foreign born. Only 8300 international immigrants in total migrated to any of the Atlantic Provinces in 2015 (8% of Cdn population, 3% of new immigrants)
- The Government of New Brunswick (GNB) sees immigrants as key to the broader strategy of increasing NB's working-age population
- GNB has invested significant resources and effort to attract and encourage retention of immigrants and refugees in NB. The Atlantic Immigration Pilot is aimed at supporting these efforts

## CHALLENGE – LACK OF DATA

- The Provincial government does not have direct access to personal information on who lands in NB and who stays in NB.
- IMDB: Landing records linked to tax files are used to determine retention but are not yet readily accessible and also come with a substantial time lag. Only intended destination is available for landing records; only tax filers captured
- Those linked files cannot currently be linked to other sources of provincial administrative data on health, social assistance or education

# ALTERNATIVE DATA SOURCES

- Surveys of immigrants (LSIC)
- Census files (1 and 5 year mobility for current residents)
- Other Statcan survey files
- Provincial administrative data

# PROVINCIAL DATA – MEDICARE REGISTRY

- Medicare is the universal health insurance plan offered by NB to its residents. It requires registration and periodic renewal.
  - Coverage includes almost all NB permanent residents and citizens, as well as international students as of 2017
  - Retrospective and longitudinal (registry information back to 1971)
  - Timely – Medicare registry data can be obtained with as little as a 6 month time lag
  - Contains age, sex, postal code of residence, household composition, citizenship status at time of enrollment, place of last residence before moving to NB
  - Linkable to other provincial administrative data

# PROVINCIAL DATA – MEDICARE REGISTRY

- Disadvantages
  - No direct identifier of immigrant status or visa category – must be imputed
  - Only the province or country of last residence is recorded
  - Residence in NB must be imputed based on active Medicare registration
    - Medicare cards renewed only every 3 years (5 from 2016)
    - Migration to another province is accurate but migration out of Canada is not immediately observed

# RESEARCH QUESTIONS

- Policy questions:
  - What are the retention rates for recent immigrants and refugees, compared with earlier immigrant arrivals and arrivals from other provinces?
  - How has retention varied by country of last residence?
  - How has retention varied over time, by age group, language preference and region of residence in NB?
- Methodological question:
  - Can Medicare registry data be used to answer these questions?

# SAMPLE

- All non-NB born NB residents with active Medicare registry at any point in time between 1971 and 2014, with a focus on post 2000 arrivals
- Entry to NB is observed based on the first date of registration in NB Medicare (>3 months). Exit from NB is observed based on date of termination in the NB registry. Multiple entry/exit can be linked by individual. Date of death in NB is observed
- Arriving immigrants are non-NB born, non-citizen, and arriving in NB from outside Canada.
- Interprovincial migrants to NB are non-NB born, citizen, arriving in NB from another province/territory



# METHODS

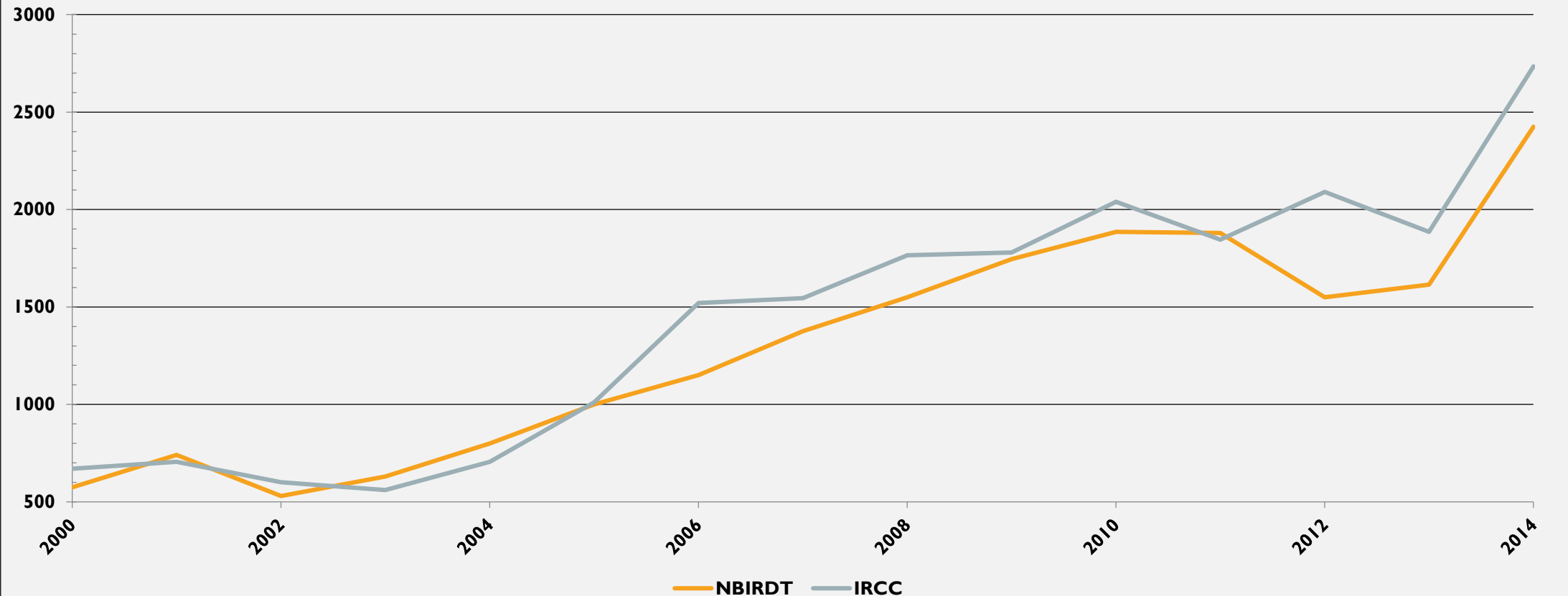
- Descriptive statistics
- Cox Proportional Hazard Model of duration of residence in NB
  - Measured from date of Medicare registry to date of Medicare registry termination
  - Censoring: death, end of sample period
- Data accessed through NB-IRDT, NB's Provincial Administrative Data Centre (UNB REB approved)

## SAMPLE CHARACTERISTICS – PROVINCIAL DATA

Place of last Residence	Gender	Average Age at arrival	Average Year of Arrival	Observations
USA	Men	40	1999	3590
	Women	39	1998	4045
EU/UK	Men	38	2002	2820
	Women	36	2000	3180
Mideast/Africa	Men	35	2003	1720
	Women	35	2003	1455
Asia	Men	36	2005	2980
	Women	35	2005	3195
UN	Men	36	1990	290
	Women	34	1989	335
Other	Men	37	2008	6710
	Women	36	2008	6445
Rest of Canada	Men	37	2000	111865
	Women	36	2000	116200

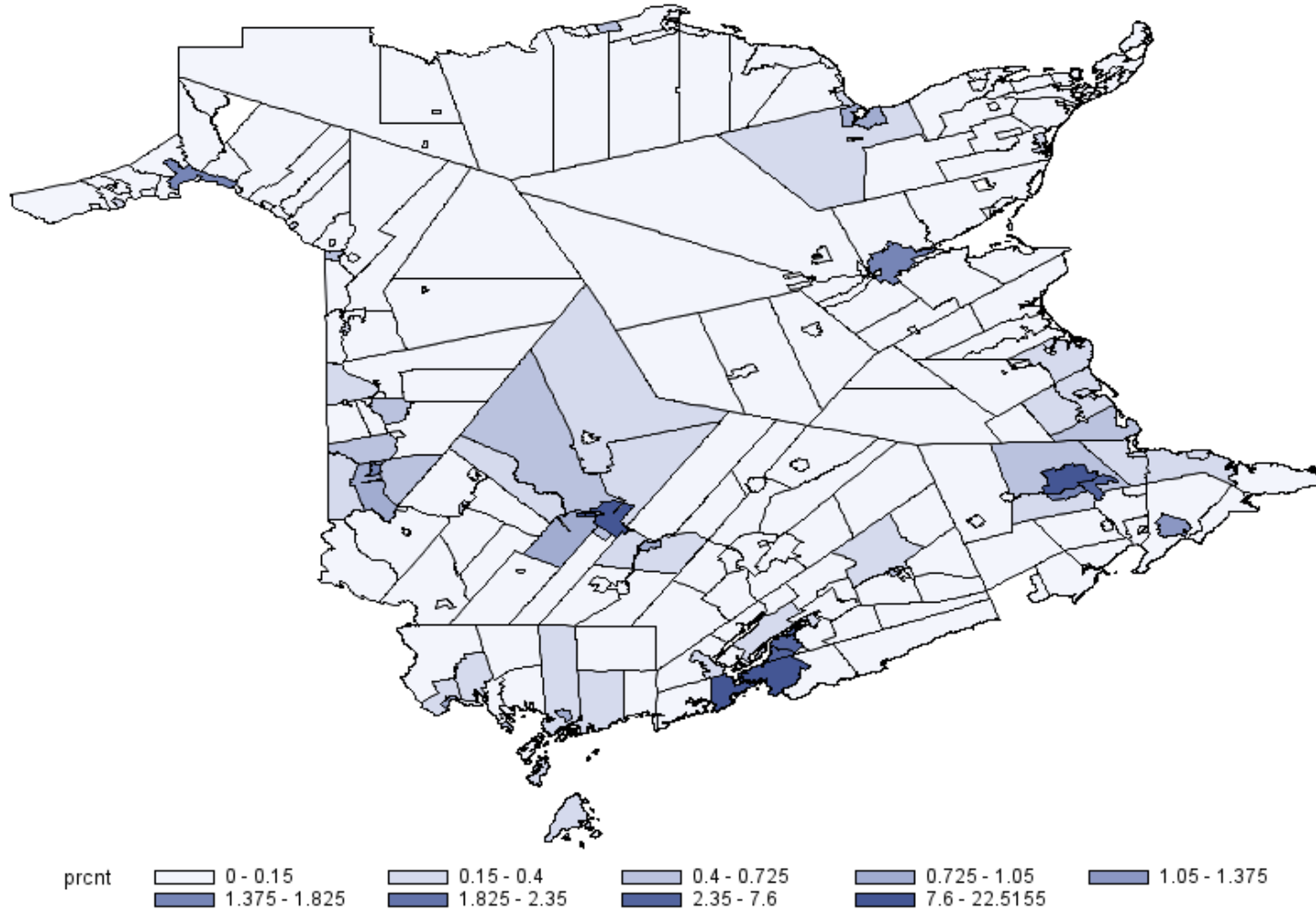
# NEW IMMIGRANTS TO NB BASED ON IRCC RECORDS ON INTENDED DESTINATION AND NEW MEDICARE REGISTRATIONS – 2000-2014

## 'Landed' and Medicare registered Immigrants to NB by Year of Arrival



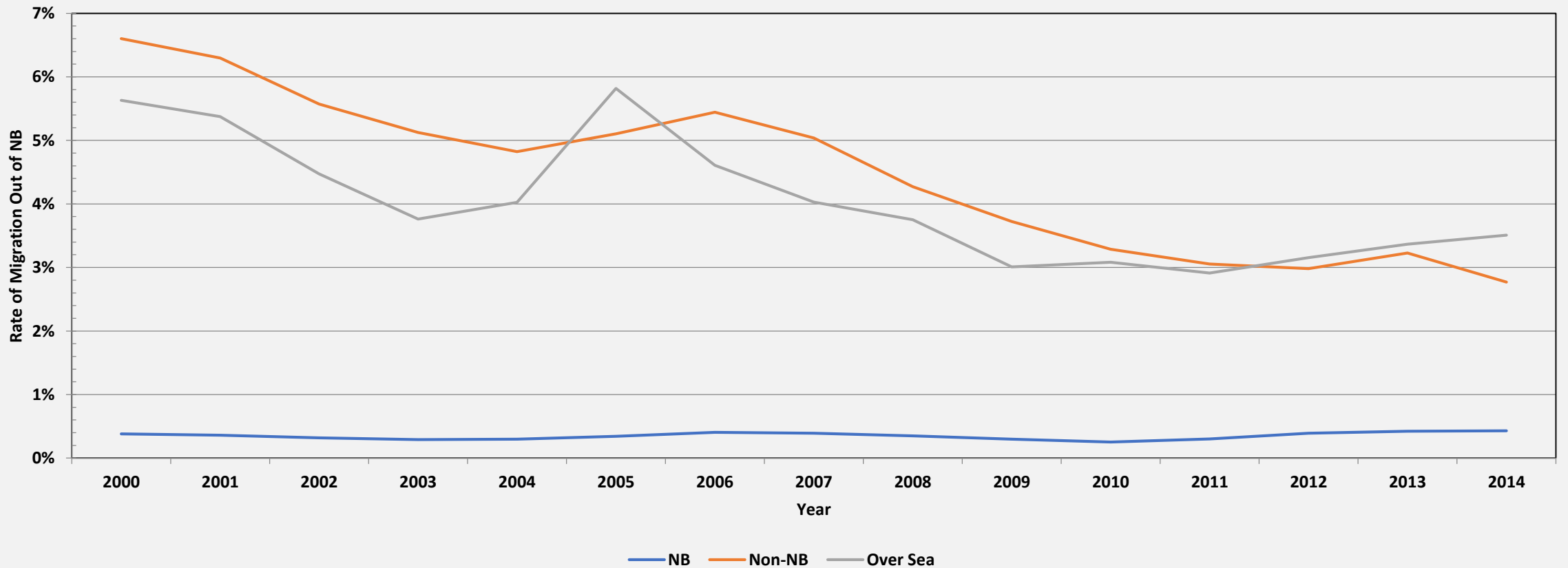
# PERCENT OF ALL ADULT IMMIGRANTS IN NB WHO ARE RESIDENT IN EACH CSD

Percent of Immigrants by CSD

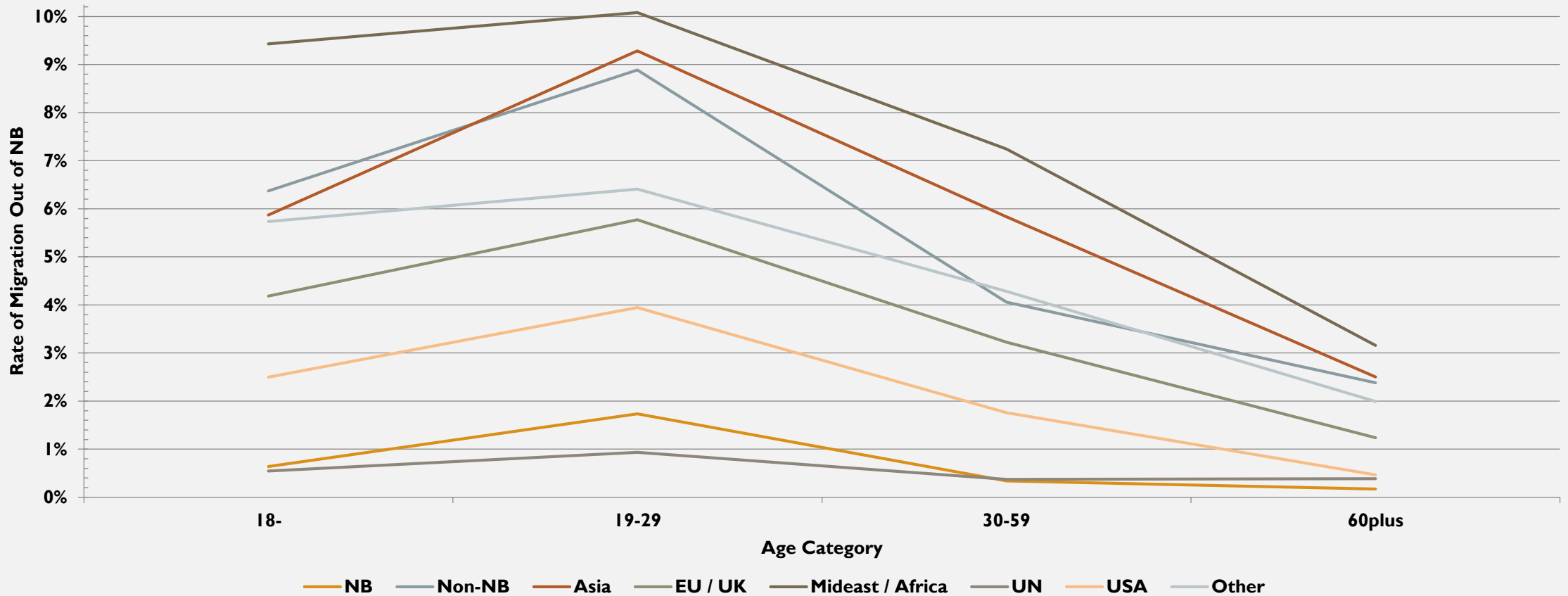


# ANNUAL OUT-MIGRATION RATE, BY YEAR

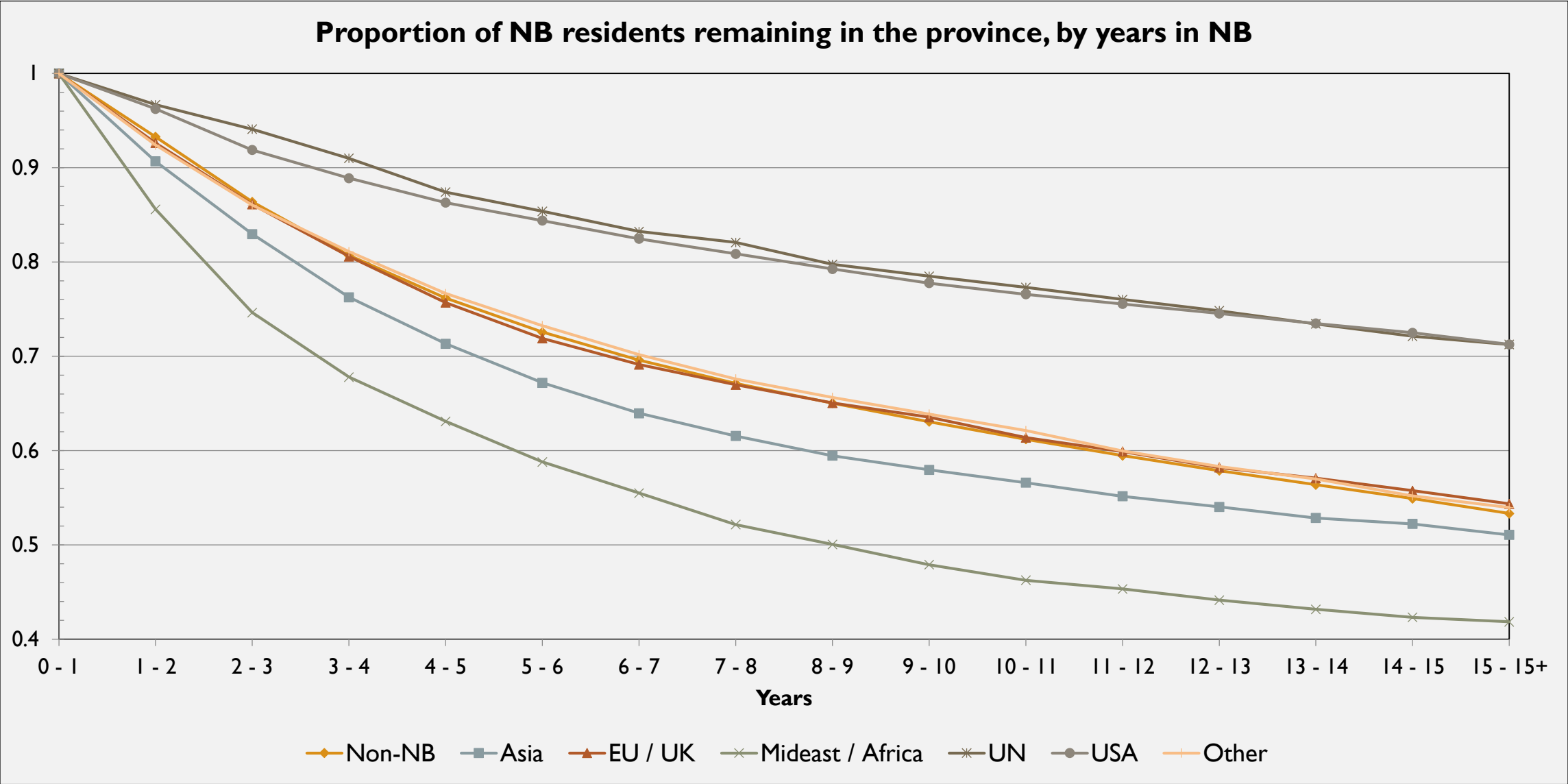
## Rate of Migration from NB (Age 30 - 59)



# ANNUAL OUT-MIGRATION RATES BY AGE AND SOURCE REGION



# ESTIMATED RETENTION RATES



## COX DURATION MODEL – SELECTED RESULTS

		Hazard Ratio	Pr > ChiSq
<b>Region</b>	Rest of Canada	1.000	--
	UN	0.336	<.0001
	Asia	1.229	<.0001
	EU/UK	0.914	<.0001
	Mideast/Africa	1.520	<.0001
	Other	0.976	0.202
	USA	0.483	<.0001



		Hazard Ratio	Pr > ChiSq
<b>Arrival Decade</b>	1970s	1.041	0.001
	1980s	1.596	<.0001
	2000s	0.811	<.0001
	2010+	0.559	<.0001
<b>Preferred Language</b>	French	0.924	<.0001
	Unspecified	2.370	<.0001

<b>Country of last residence</b>	<b>Hazard Ratio</b>	<b>Pr &gt; ChiSq</b>
<b>USA</b>	1	
<b>China</b>	3.311	<.0001
<b>Columbia</b>	3.024	<.0001
<b>France</b>	2.09	<.0001
<b>India</b>	2.605	<.0001
<b>Iran</b>	3.665	<.0001
<b>Korea</b>	2.523	<.0001
<b>Philippines</b>	1.069	0.5126
<b>UK</b>	1.238	0.0019
<b>Viet Nam</b>	3.176	<.0001
<b>Refugee*</b>	1.613	<.0001

## SUMMARY OF RESULTS

- Outmigration rates for immigrants to NB are broadly comparable to outmigration rates for non-NB Canadians, but with variation by age and region of last residence
- Highest outmigration rates are exhibited by individuals from the Middle East and Africa as well as Asia; lowest are for 'UN' individuals and Americans
- Outmigration rates are cyclical but have been trending down for immigrants and non-NB residents
- Statistical survival analysis confirms that recent arrivals are less likely to leave NB and that variation by country of residence remains. Those indicating no language preference are much more likely to leave
- Retention rates using provincial Medicare data are substantially higher than for comparable estimates using linked tax data, reflecting differences between intended and actual destination

## NEXT STEPS

- Data sharing agreement with Immigration, Refugee, and Citizenship Canada to obtain linkable provincial landing records that contain country of birth, visa category and other information
- Link IRCC immigrant data to Medicare registry to update retention study
- Focus specifically on Syrian refugees arriving 2015-16
- Link IRCC immigrant data to health service use, chronic conditions, social assistance receipt, education outcomes