



COMPLETENESS OF CASE ASCERTAINMENT AND SELECTION BIASES IN TWO SWEDISH STROKE REGISTERS

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INTRODUCTION

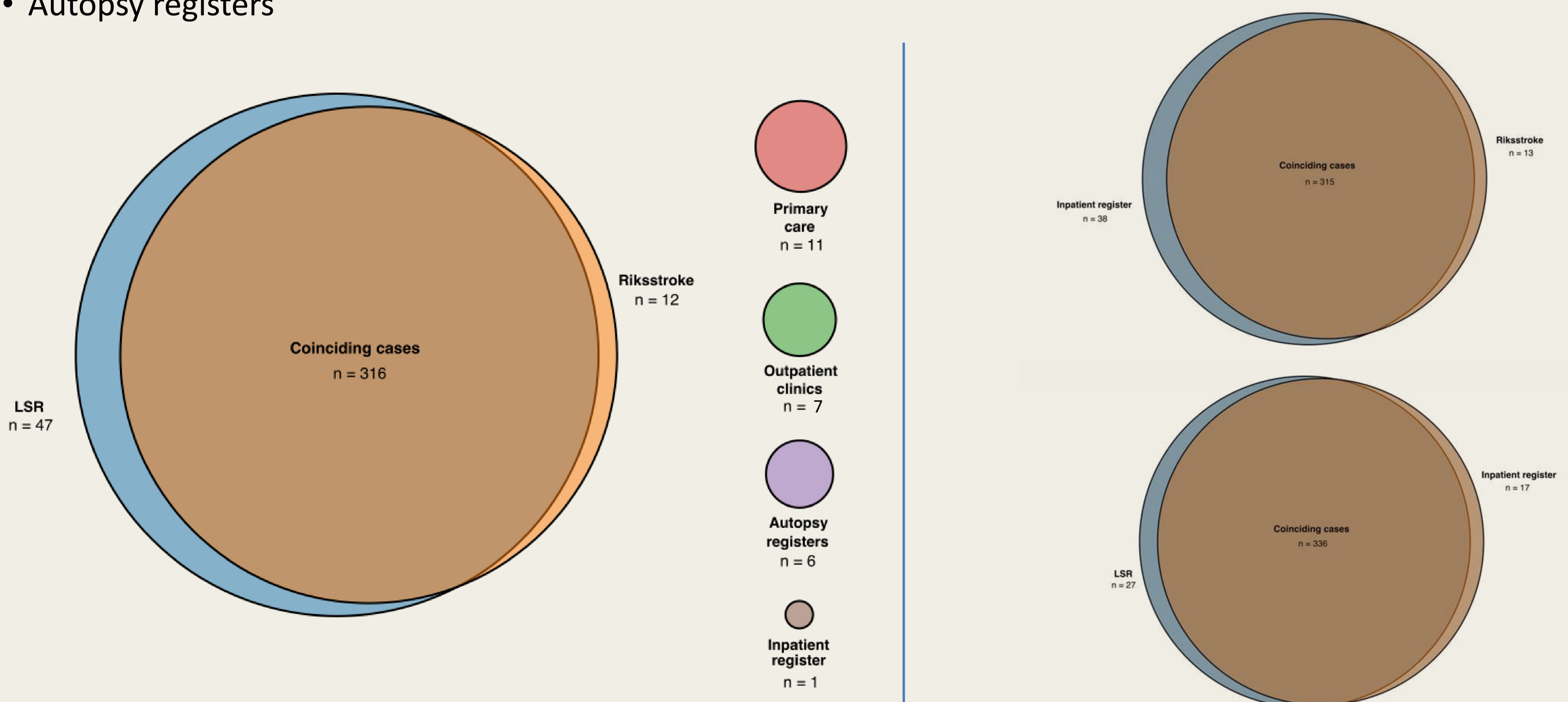
- Population-based stroke studies are gold standard for epidemiological research
- Hospital-based stroke registers are less resource-demanding
- Hospital-based stroke registers may have selection bias
- We compared case ascertainment and possible selection bias in two Swedish hospital-based stroke registers, and a recent population-based study

METHODS

- Study area
 - Catchment area of Skåne University Hospital Lund
 - Study population of 274,329 inhabitants (Dec 2015)
- Inclusion criteria
 - First-ever stroke (Feb 2015 - Mar 2016)
 - WHO definition of stroke
 - Ischemic stroke or ICH
 - Non-traumatic, non-iatrogenic
- Prospective methods
 - Lund Stroke Register (LSR) (hospital-based stroke register)
 - Riksstroke – Lund (RS) (hospital-based stroke register)
- Population-based study also included:
 - Retrospective methods
 - Primary care databases (ICD-10 based search)
 - Out- & inpatient clinic databases (ICD-10 based search)
 - Autopsy registers

RESULTS

- 400 first-ever stroke cases identified by our population-based study
- 363 cases (91%) detected by LSR
- 328 cases (82%) detected by RS
- Patients undetected by hospital-based registers had higher 28-day case fatality (44% (undetected) vs 9% (detected)) ($p=0.001$)
- Patients only detected in primary care more often lived in healthcare facilities (57% vs 7%) ($p=0.001$)
- Patients not detected by RS had less severe strokes at baseline (median NIHSS 3 vs 5) ($p=0.013$)



CONCLUSIONS

- 10-20% of stroke cases may be undetected with solely hospital-based methods
- This may entail selection bias: may exclude cases with high early case fatality and those living in healthcare facilities
- The scope and direction of selection bias may differ between hospital-based registers
- Regular audits for potential selection bias in hospital-based data are important