Office of the Seniors Advocate

From Residential Care to Hospital: Discussion

August 30, 2018

OFFICE OF THE
SENIORS ADVOCATE

Hospitalization of frail seniors

- Increased risk of:
  - Delirium
  - Pressure ulcers
  - Infection
  - Falls
  - Anxiety
  - Deconditioning
  - Death

Can J Aging. 2014 Mar;33(1):38-48. doi: 10.1017/S0714980813000615. Epub 2014 Jan 3.

Nursing home characteristics associated with resident transfers to emergency departments.

McGregor MJ[1], Abu-Laban RB[2], Ronald LA[1], McGrail KM[3], Andrusiek D[4], Baumbusch J[5], Cox MB[2], Salomons K[2], Schulzer M[6], Kuramoto L[2].

OFFICE OF THE
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BRITISH COLUMBIA

From Residential Care to Hospital:

An Emerging Pattern

Review

- Ministry of Health
  - Privacy Impact Assessment
    - Legislative authority to collect and use data
- University of British Columbia ethics review
  - Serves valid public interest
  - Minimal risk to people represented in the data sets

Data sources

- Quick Facts Directory (QFD)
  - Facility ownership
  - Funded care hours
- Continuing Care Reporting System (CCRS)
  - Resident characteristics (MDS 2.0)
  - Facility size
  - Urban/rural status
  - Facility admission and discharge dates
  - Reason for discharge
  - 55,130 episodes of care (24,000 deaths)
  - 358,470 MDS assessment records
  - All 293 facilities
  - April 1, 2012 to March 31, 2016

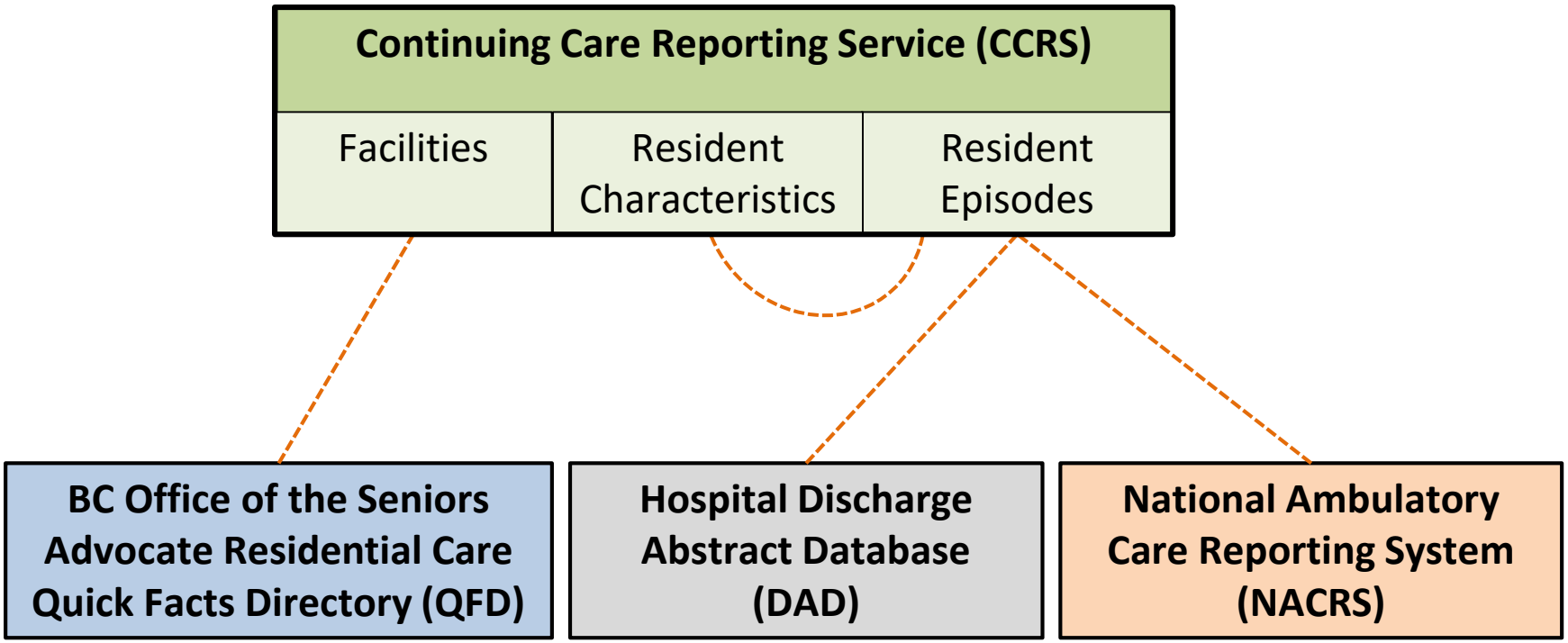
Data sources

- National Ambulatory Care Reporting System (NACRS)
  - Information for 212 facilities (82% of residents)
  - Triage and acuity scale
  - Dates of admission and discharge
  - Discharge disposition, presenting condition(s), standardized diagnostic codes
  - 22,062 records from April 1 2014 to March 31, 2016
- Discharge Abstract Database (DAD)
  - Information for all facilities
  - Diagnosis, admission and discharge dates, discharge disposition
  - ALC status
  - Length of stay

Three models

1) Emergency department transfer
   - NACRS, CCRS
   - 212 facilities
   - April 1, 2014 to March 31, 2016
2) Hospitalizations
   - DAD, CCRS
   - All facilities
   - April 1, 2012 to March 31, 2016
3) Death in hospital
   - DAD, CCRS
   - All facilities
   - April 1, 2012 to March 31, 2016

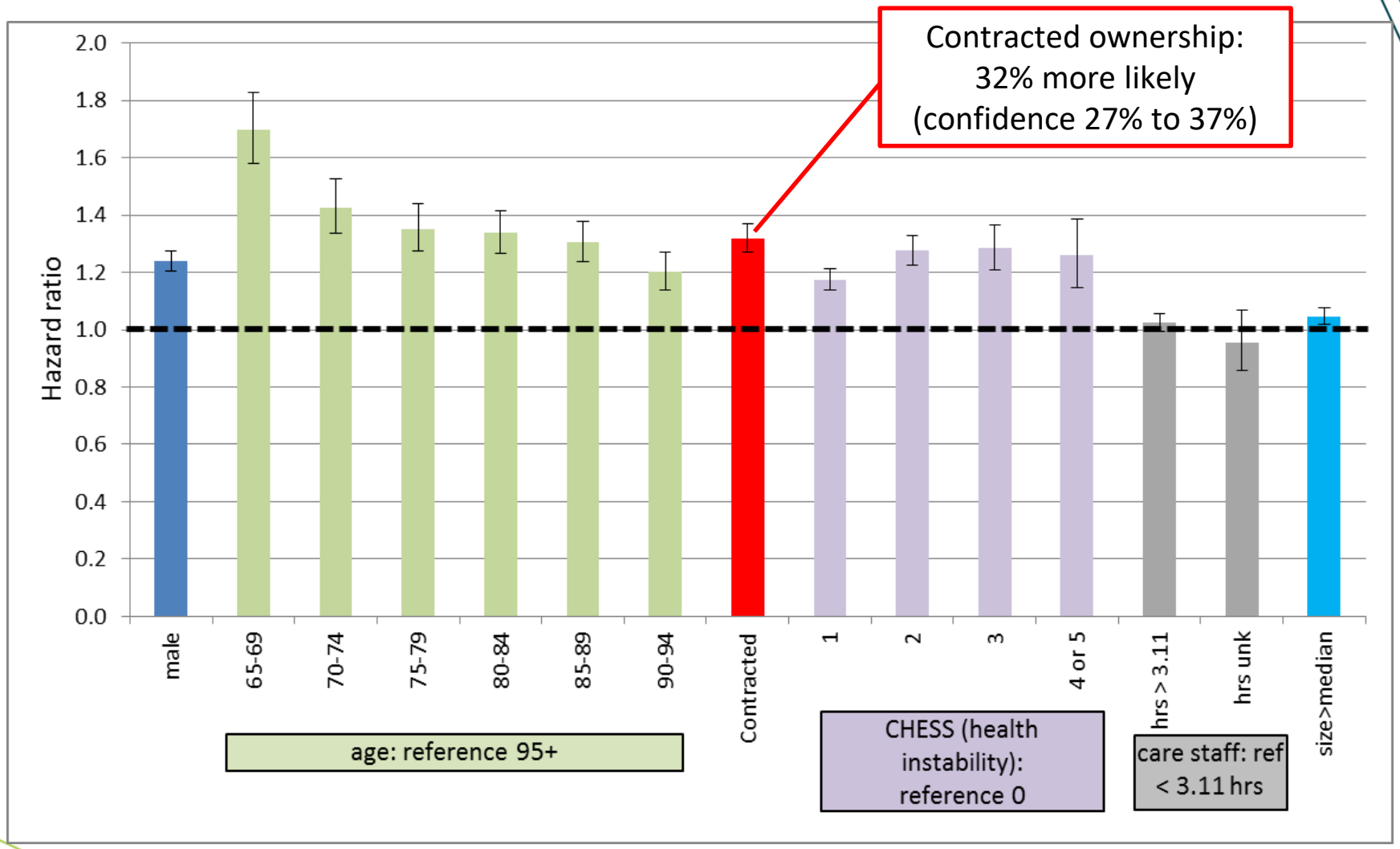
Sources of data used



NACRS data

	HA	All contracted	All
Number of NACRS ED visits	4,827	17,235	22,062
Number of RC facilities	52	160	212
Total RC beds	6,167	15,833	22,000
Reference: all RC facilities	*116*	*188*	*304*
Reference: all RC beds	*9,328*	*17,659*	*26,987*
% of beds represented by 212 facilities:	*66%*	*90%*	*82%*
NACRS ED visits per 100 thousand resident days	131.4	169.4	159.3
Death after arrival	0.6%	0.5%	0.5%
Admitted to the hospital of this ED	44.7%	46.1%	45.8%

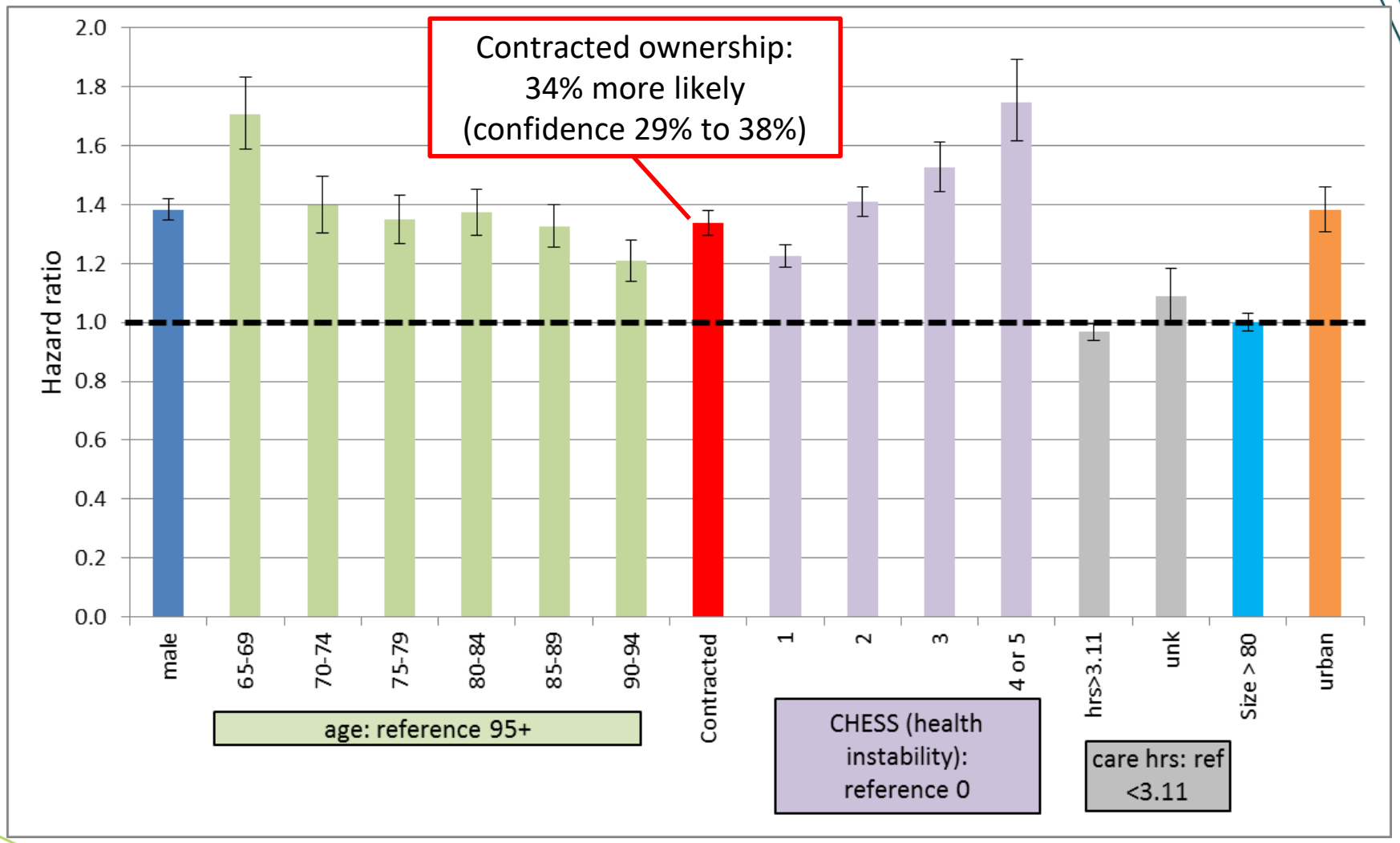
Model 1: ED visits



DAD data

	HA	All Contracted	All
Number of hospitalizations	*9,017*	*22,710*	*31,727*
Admitted from ED	65%	76%	73%
Direct admission	34%	24%	27%
proportion of direct admits are elective	84%	89%	88%
Urgent/emergent admission	71%	79%	76%
mean total LOS all admissions	5.7	7.6	7.0
mean acute LOS urgent/emergent only	6.7	8.3	7.9
Proportion with any ALC, urgent/emergent	2.1%	2.9%	2.7%
Total ALC days	2,709	*10,921*	*13,630*
ALC days per 100 thousand resident-days	25.0	48.7	41.0
Mean ALC LOS	17.9	19.5	19.2
Hosp'ns/100 thousand resident-days urgent/emergent only	59.0	79.6	72.9
Acute hosp days/100 thousand resident-days urgent/emergent only	395.5	663.0	575.8
Total hosp days/100 thousand resident-days urgent/emergent only	418.0	713.1	614.1
Deceased among urgent/emergent admissions	11.0%	13.2%	12.7%

Model 2: Hospital admission



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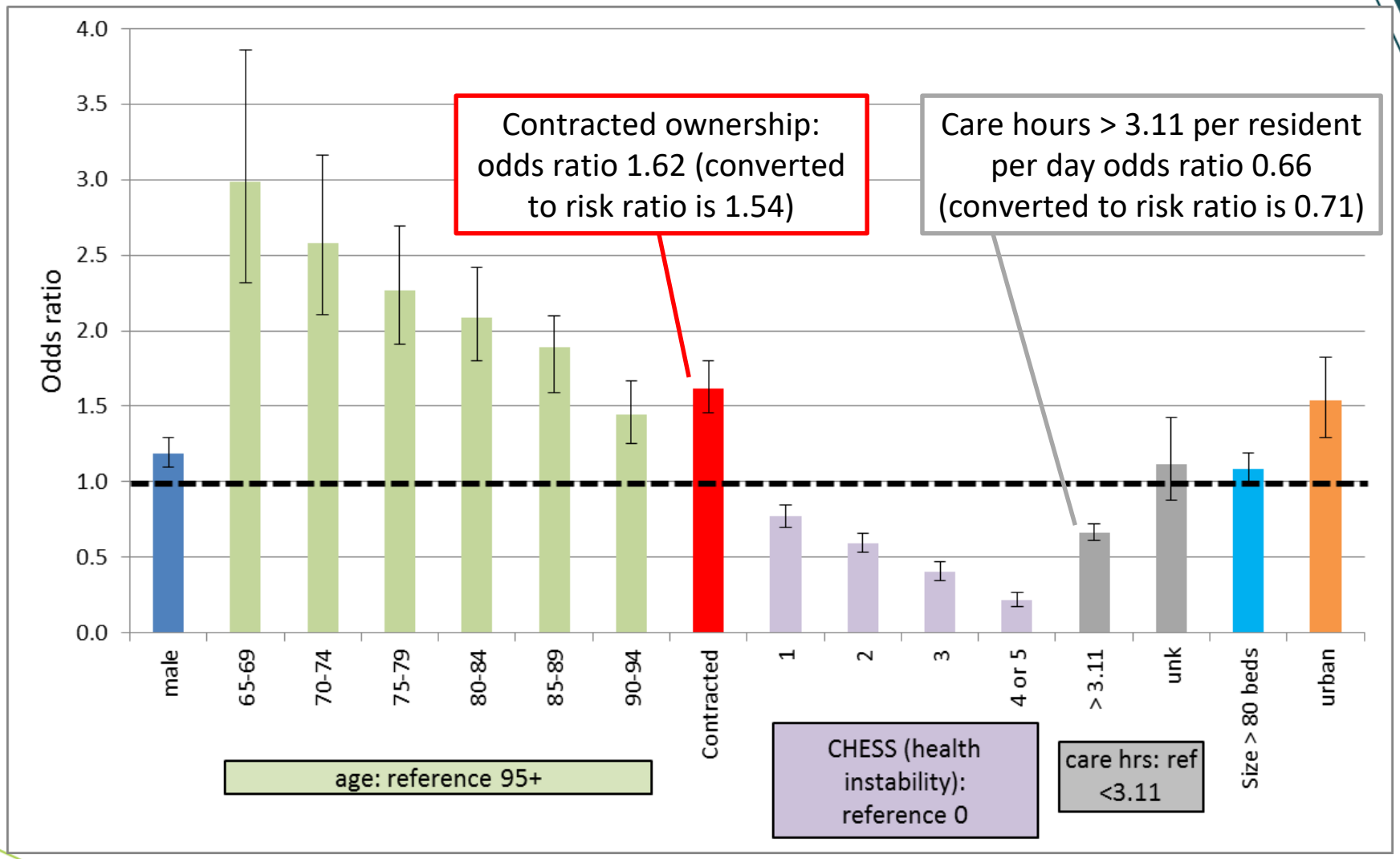
Model 3: Death in hospital



Unadjusted findings

	Residents of facilities in:		Contracted is x% higher
	HA facilities	Contracted facilities	
Model 1: ED visits per 100,000 resident days of stay	131.4	169.4	29% (adjusted is 32%)
Model 2: Hospital admissions per 100,000 resident days of stay	59.0	79.6	35% (adjusted is 34%)
Model 3: Proportion of deaths in hospital	8.2%	14.8%	80% (adjusted is 54%)
Average length of stay, all admissions	5.7 days	7.6 days	32%
Hospitalization resulting in Alternate Length of Stay (ALC)	2.1%	2.9%	36%
ALC days per 100,000 resident days of stay	25.0	48.7	95%
Total hospital days per 100,000 resident days of stay	418	713	71%

Compelling evidence

- Integrity of data
- Sound methodology
- Size of data set
- Consistent pattern
- Consistent with other studies

Why?

- Not the obvious
  - Staffing level
  - Acuity
- Other influences
  - Staffing complement/mix, experience and continuity
  - Additional training and/or access to CNS
  - Funding incentives
  - MOST (do not treat, do not hospitalize)

Next steps

- Gather more data
- Staffing mix from health authority and contracted facilities
- Do not hospitalize and do not treat orders
- Staff turnover from contracted
- Staff wages from contracted
- Examine incentive models in other jurisdictions
- Share data and findings with other jurisdictions; replicate in other jurisdictions

Goal

- Best of care possible for seniors living in long term care
  - Decrease unnecessary hospitalizations
  - Supporting seniors to remain in their homes

Q & A Session