Alberta Health Services

UNIVERSITY OF CALGARY

COVID 19 in the Older Adult

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Conflicts, Disclosures & Inclusion

- This presentation is copy-right compliant
- I have no relevant conflicts of interests or financial disclosures
- I aim to use person-first and inclusive language in this presentation. Please contact me if you notice anything that could be improved: jayna.holroyd-leduc@ahs.ca
- I acknowledge the traditional and present day territories of the Blackfoot and the Treaty 7 people including the Siksika, Piikuni, Kainai, Tsuut'ina and Stoney Nakoda First Nations. Calgary is also home to the Métis Nation of Alberta, Region III.

Learning Objectives

1. Identify the atypical presentations of COVID-19 infection in older adults

2. Describe the impact of COVID-19 on older adults

3. Recount the issues that contributed to outbreaks within continuing care

Symptoms of COVID 19 among Older Adults

Most commonly reported symptoms

- Fever (84%)
- Cough (63%)
- Dyspnea (26%)
- Fatigue (20%)
- Sputum production (18%)
- Chest tightness (15%)
- Diarrhea (13%)
- Anorexia (8%)
- Myalgia (5%)
- Nausea/vomiting (4%)

Less common symptoms (21%)

- Pharyngitis
- Rhinorrhea/ Nasal congestion
- Hemoptysis
- Chest pain
- Abdominal pain
- Dizziness/Syncope
- Headache
- Delirium
- Gait impairment

Other symptoms (reported in broader population)

- Conjunctivitis
- Anosmia

(Neumann-Podczaska *Aging and Disease* 2020; Sacco *Geriatr Psychol Neuropsychiatr Vieil* 2020)

Symptoms of COVID 19 among Older Adults

- Typical symptoms such as fever, cough, and dyspnea may be absent in the frail older adults despite respiratory disease
- Only 20-30% of frail older patients with infection present with fever
  - Threshold for diagnosing fever should be lower
    - 37.5°C or an increase of >1.5°C from usual temperature

(Jung *Ann of Geri Med and Res* 2017; Dadamo *J Am Geriatr Soc* 2020; Jarrett *Arch Intern Med* 1995; Malone *J of Geri Emerg Med* 2020)

Atypical COVID 19 presentations among Frail Older Adults

- Atypical COVID-19 presentations include
  - delirium
  - falls
  - functional decline
- Atypical presentation may be due to several factors including
  - physiologic changes with age
  - frailty
  - comorbidities and medications
  - inability to provide an accurate history
- Older adults may present with mild symptoms that are disproportionate to the severity of their illness

(Jung *Ann of Geri Med and Res* 2017; Dadamo *J Am Geriatr Soc* 2020; Jarrett *Arch Intern Med* 1995; Malone *J of Geri Emerg Med* 2020)

Frailty

- Definition: a state of increased vulnerability to adverse health outcomes
- Results from
  - reduced physiological reserve
  - loss of function across multiple systems
- Reduces the ability to cope with normal or minor health stressors
- Associated with increased risk of
  - physical, cognitive and functional decline
  - adverse health outcomes including mortality

(Xue *Clin Geriatr Med* 2012; Clegg *Clin Med* 2011; Walston *J Am Geriatr Soc* 2006)

Typical COVID-19 Lab and Radiologic findings in Older Adults

Typical Labs

- Lymphopenia (most commonly reported)
- Thrombocytopenia
- Elevated
  - CRP
  - ESR
  - LDH
  - D-dimers
- Slightly abnormal renal markers
- Normal cardiac and hepatic markers

Radiologic Findings

- Ground glass opacities (GGO) (29%)
- GGO + Consolidation (13%)
- Isolated consolidations (5%)
- Pleural effusion (4%)
- Normal (3%)
- Distribution of findings
  - Multiple lobes (62%)
  - Bilateral (58%)

(Neumann-Podczaska *Aging and Disease* 2020)

COVID-19 Adverse Outcomes increase with Age…

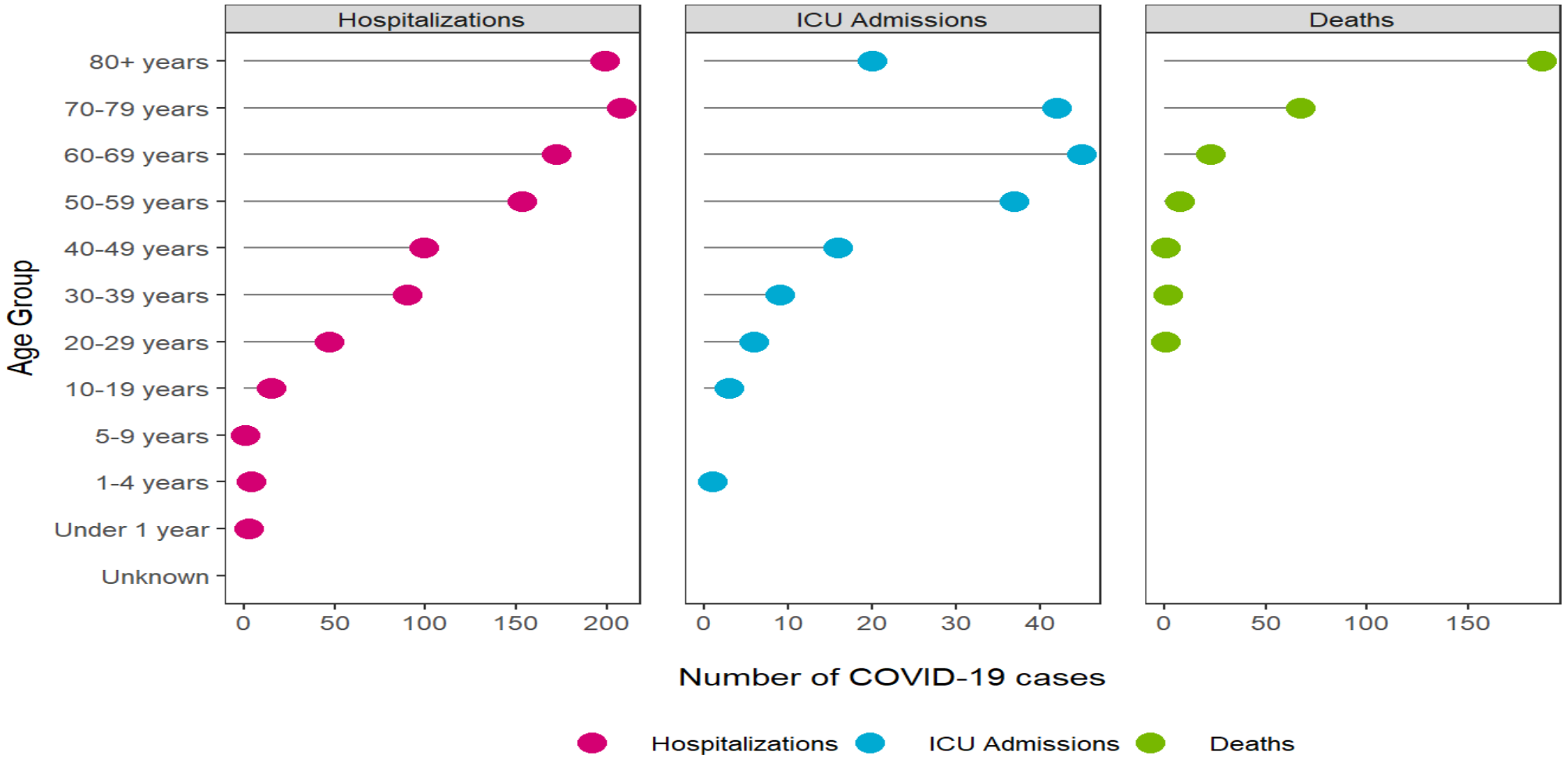

Figure: Total hospitalizations, ICU admissions and deaths (ever) among COVID-19 cases in Alberta by age group (Oct 16, 2020)

(https://www.alberta.ca/covid-19-alberta-data.aspx#toc-1)

…and with increasing Comorbidities

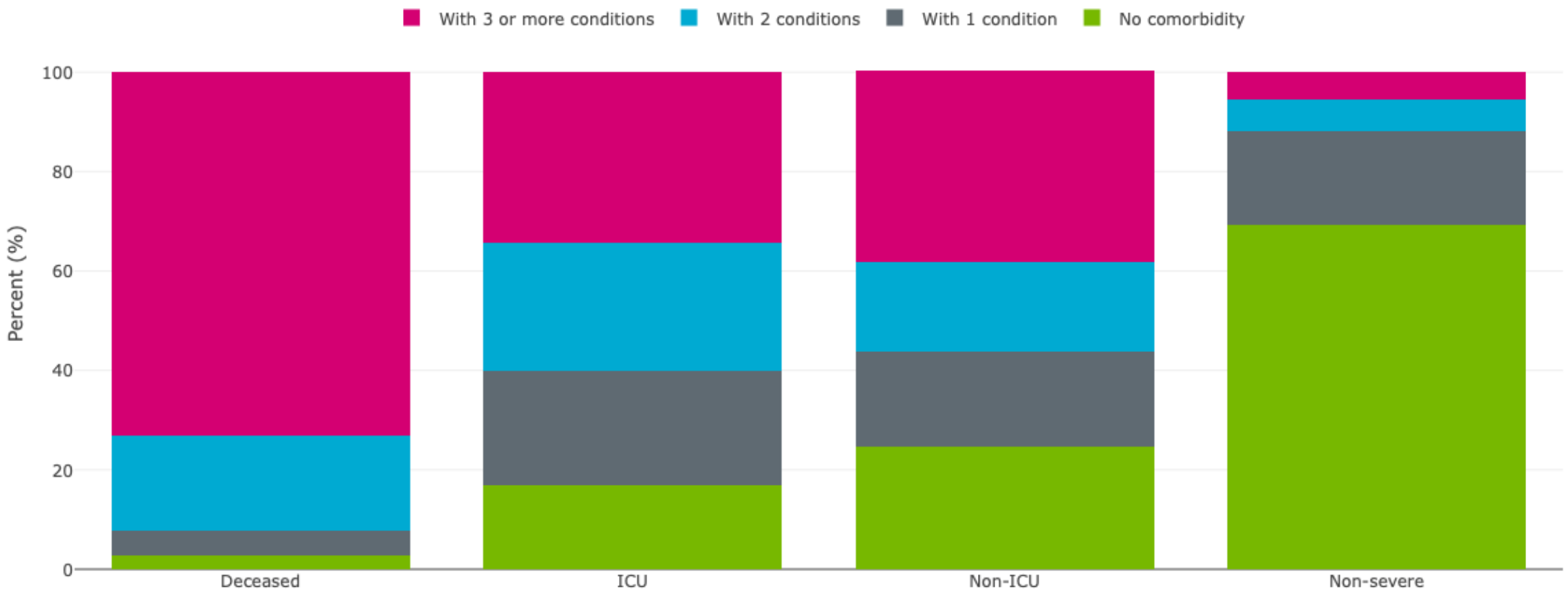

Figure: Percent of COVID-19 cases with no comorbidities, one comorbidity, two comorbidities, or three or more comorbidities by case severity (non-severe, hospitalized but non-ICU, ICU but not deceased, and deceased), all age groups and both sexes combined, all Alberta. Data updated (weekly) on 2020-10-12

(https://www.alberta.ca/covid-19-alberta-data.aspx#toc-1)

COVID 19 Complications in Older Adults

- Death
  - Mortality rises rapidly with age
  - Common causes of death:
    - pneumonia,
    - sepsis (viral or bacterial)
    - ARDs

(Neumann-Podczaska *Aging and Disease* 2020; Lithander *British Geriatric Soc* 2020)

Age distribution of COVID-19 cases deceased in Canada as of October 17, 2020, 7 pm EDT(n=9,649)

Age group (years)	Number of cases with case reports (proportion)
0-19	2 (0.0%)
20-29	9 (0.1%)
30-39	16 (0.2%)
40-49	54 (0.6%)
50-59	232 (2.4%)
60-69	702 (7.3%)
70-79	1,751 (18.1%)
80+	6,883 (71.3%)

https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html?stat=num&measure=deaths#a2

COVID 19 Complications in Older Adults

- Acute kidney injury (26%)
- Secondary infection (5%)
- Hepatic injury (5%)
- ARDS (5%)
- Cardiac
  - Acute heart injury (2%)
  - Cardiac insufficiency (2%)
  - Arrhythmia (1%)
- Delirium
- Functional Decline

(Neumann-Podczaska *Aging and Disease* 2020; Lithander *British Geriatric Soc* 2020)

Optimizing care for Older Adults during the pandemic

- Anticipate atypical presentations in patients over 75
- Educate older adults and their caregivers regarding mild symptoms that may represent disease
- As symptoms may be unreliable, consider early COVID-19 testing
- Consider co-infections (e.g. influenza)
  - Co-infection with influenza reported at 0.5% in Spring 2020

(Malone *J of Geri Emerg Med* 2020; Clerkin *Circulation* 2020)

Optimizing care for Older Adults during the pandemic

- Consider COVID-19 as the cause of delirium/fall/functional decline if any of the following are present:
  - Any suggestive symptoms (even if mild)
  - Low-grade temperature
  - History of COVID exposure or exposure to others with ILI symptoms
  - Hypoxia otherwise unexplained, even if mild (SaO2 <90%)
  - Rapid clinical deterioration
  - No other clear reason for delirium identified
    - be careful about dismissing the cause of delirium to UTI in LTC residents
  - CXR consistent with pneumonia

COVID 19 Outbreaks in Canadian Continuing Care

- Canadian LTC has the highest reported proportion of COVID-19 deaths internationally
  - 81% of total Canadian COVID deaths
  - Most other comparable countries have rates between 25-50%
- Undo suffering and poor quality of deaths
  - Reports of residents left alone without food, water or care
- Complicated further by high prevalence of cognitive impairment among LTC residents
  - 87% have cognitive impairment; 25% have advanced dementia
  - Changes to routine within LTC has had devastating consequences

(Estabrooks *Science Application Forum* 2020)

Chronic Issues that contributed to the COVID-19 Crisis within Canadian LTC facilities

1. Failure in confronting financing of LTC
2. Failure to optimize integration across community, continuing care and acute cate sectors
3. Lack of data needed for managing the LTC sector

(Estabrooks *Science Application Forum* 2020)

Chronic Issues that contributed to the COVID-19 Crisis within Canadian LTC facilities

4. Current data not being used to improve the sector
5. Although heavily regulated, there is no workforce standard or regulations related to quality of work conditions
   - impacts quality of care and quality of life of residents
6. Levels of regulated staff in LTC has been systematically reduced over time

(Estabrooks *Science Application Forum* 2020)

Chronic Issues that contributed to the COVID-19 Crisis within Canadian LTC facilities

7. Unregulated workforce provides upwards of 90% of direct resident care but has no voice
8. Failure to support LTC workforce that is more than 90% (racialized) women
9. Under developed or inadequately supported managers and leaders in the LTC sector
10. Inadequate levels of properly oriented dietary, laundry and housekeeping staff

(Estabrooks *Science Application Forum* 2020)

Chronic Issues that contributed to the COVID-19 Crisis within Canadian LTC facilities

11. Failure to acknowledge the profound inequities and inequalities
12. Older Canadians with dementia living in LTC have no voice
13. Systematic failure to deal with the consequences of population trends in
    - aging
    - dementia prevalence
    - Fewer family caregivers for older adults

(Estabrooks *Science Application Forum* 2020)

Contextual factors that Created the Crisis in LTC at the start of the Pandemic

1. Pandemic preparedness favoured acute care (hospital) settings
2. LTC residents have reduced immune system capacity as a result of aging
3. Novelty of the COVID-19 virus

(Estabrooks *Science Application Forum* 2020)

Contextual factors that Created the Crisis in LTC at the start of the Pandemic

4. Highly contagious virus with a long incubation period
5. Many Canadian LTC facilities are not physically designed for infection control practices
6. Staff did not know or misunderstood how to prevent and control the spread in the early days of the pandemic
7. Shortages of PPE, lack of support in teaching how to use PPE properly, and lack of understanding that PPE was essential

(Estabrooks *Science Application Forum* 2020)

Contextual factors that Created the Crisis in LTC at the start of the Pandemic

8. Some hospitals discharged patients who tested positive for COVID-19 to LTC facilities
9. Up to 30% of care aides and other staff worked at more than one LTC facility
10. Many LTC facilities lacked screening resources for symptoms, travel history, and contacts of both residents and staff
11. Staff were not able to work, for many reasons

(Estabrooks *Science Application Forum* 2020)

Recommendations to manage the pandemic in Continuing Care moving forward

1. All facilities need approved plans for responding to infectious outbreaks, including COVID-19
2. Regular in-person inspections of facilities by public health (and not by an accreditation body) to ensure
   - plans are being operationalized
   - residents and workers are safe
3. Provincial governments manage PPE procurement
   - ensuring LTC settings are equipped for infection control
4. Full time work for LTC workers with equitable pay and benefits
   - including mental health supports for PTSD due to the pandemic

(Estabrooks *Science Application Forum* 2020)

Recommendations to manage the pandemic in Continuing Care moving forward

5. Continue the “one site work policy” for the duration of the pandemic and beyond
6. Capability to properly isolate individuals with COVID-19 or cluster positive residents in one area within all LTC facilities
7. Technology and other means to connect residents with family/friends
8. At least one family member allowed to safely visit
   - with PPE and proper infection control practices and training

(Estabrooks *Science Application Forum* 2020)

Summary

- Providers need to consider atypical COVID-19 presentations in older adults
- The COVID-19 pandemic has had a disproportionate impact on older Canadians
  - tragically high death toll in LTC
- The COVID-19 pandemic has highlighted significant issues within the continuing care sector in Canada
- Changes need to be made within LTC now to prevent the pandemic from causing further devastation

Questions?
Comments?
Thoughts?