Admissions for Presumed Social Reasons: Epidemiology, Risk Factors, and Hospital Outcomes

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Submitted: 2 June 2023; Accepted: 25 September 2023; Published: 10 November 2023

DOI: https://doi.org/10.22374/cjgim.v18i4.706

Abstract

“Social admission” is a non-diagnostic label referring to an admission to a hospital for which no medical or health condition is deemed amenable to reversibility or rehabilitation; rather, the patient’s social circumstances are felt to be the sole cause of hospitalization. There is a growing realization that medical facilities are experiencing an increase in socially vulnerable patient presentations. Clinicians also face challenges in caring for this patient population, which may have atypical presentations in which medical and social complexity often align. To better understand individuals admitted for social reasons and to guide future care and research, we review (i) the epidemiology, (ii) risk factors, and (iii) health outcomes associated with being labeled as “social admission.” We draw attention to factors that may improve care for this patient population and offer potential solutions with clinical relevance. Clinicians should remain mindful that patients labelled as “social admissions” often have complex underlying medical problems, which may be acute, and are at high risk of poor outcomes.

Résumé

L’« admission sociale » est une étiquette non diagnostique qui fait référence à une admission à l’hôpital pour laquelle aucun trouble médical ou problème de santé n’est jugé réversible ou réadaptable; les circonstances sociales du patient semblent plutôt la seule et unique cause de l’hospitalisation. On se rend de plus en plus compte que les installations de soins de santé connaissent une augmentation du nombre de patients socialement vulnérables. Les cliniciens font également face à des défis dans la prise en charge de cette population de patients qui peuvent présenter des tableaux cliniques atypiques dans lesquels s’aligne souvent une complexité médicale et sociale. Pour mieux comprendre les personnes admises pour des motifs d’ordre social, et pour orienter les soins et les travaux de recherche à venir, nous examinons l’épidémiologie, les facteurs de risque et les résultats en matière de santé associés au port de l’étiquette « admission sociale ». Nous attirons l’attention sur des facteurs susceptibles d’améliorer les soins prodigués à cette population de patients, et proposons des
There are significant gaps in understanding the characteristics and needs of people admitted for social reasons. They often cannot advocate for themselves or are “silent by proxy” because those most commonly labeled as social admissions tend to be frail or cognitively impaired. They are underrepresented in research and policy because varying definitions and admission criteria make comparisons across regions and healthcare systems challenging, despite similar social presentations. Furthermore, “social admission” terminology is non-diagnostic, thereby negating the development of guidelines to standardize approaches to meet medical or social needs. Nonetheless, hospitals face growing numbers of this patient population. As a result, clinicians encounter challenges when it comes to delivering proper care for these patients, which often necessitate thorough evaluations, comprehensive assessments, and interdisciplinary care teams—resources that are not available in all settings. Here, we review (i) the epidemiology, (ii) risk factors, and (iii) health outcomes associated with patients who are labeled as “social admission” to guide future care and research. In our Discussion section, we also examine factors that should be considered when moving forward.

Methods

We conducted a focused literature review in the medical databases Medline and Embase on the topic of social admissions from inception to March 31, 2023. We searched for the following key words synonymous with social admission: social admit, social admission, acopia, dyscopia, home care impossible, and orphan patient. We had searched the references of relevant papers for further peer-reviewed publications and included papers describing patient populations labeled as: lack of community support, failure to cope, failure to thrive, and GP (general practitioner) problems, and medically inappropriate when used as synonymous to a “social admission” (all labels will be in single quotations through the rest of the paper). Papers focused on failure to thrive were
excluded from this review at the screening stage because it is recognized as a geriatric syndrome by the National Institutes of Aging and a Royal College competency for Internal Medicine (i.e., competency 1.4.13.6.1.5, frailty and failure to thrive). There is genuine concern that failure to thrive is used inappropriately to describe social admissions; however, unlike the other terms, failure to thrive has evaluation pathways and approaches to management. We included any peer-reviewed publication. We described the findings narratively. We used the umbrella label “social admission” in this paper but recognized that there are often biases and stigmas associated with all synonyms.

Results

The ten original research studies included in the review are summarized in Table 1.

Epidemiology

Prevalence

Few reports estimate the prevalence of “social admissions” in the general population. One study estimated “acopia” labels accounted for 0.10% of all emergency department (ED) admissions. Another estimated “acopia” labels it as accounting for 0.18% of all patients seen in one UK ED. The prevalence in adults >65 years is higher (Figure 1). Social presentations ranged from 0.57% to 9.3% among patients in the ED, and 0.44% to 4.0% among admissions to hospital. Another report on “social admissions” found prevalence increases with age, from 3.0% for those aged 65–69 and 12.0% for those 85 years and older. Using the Appropriateness Evaluation Protocol, 15.2% of admissions to a Swiss internal medicine department in an urban teaching hospital were deemed “medically inappropriate” and thereby social by default. In a survey of junior doctors and consultants in the United Kingdom, 51.8% reported encountering a patient admitted as “acopia” or “social admission” a few times per week and 23.4% reported it as a daily occurrence.

Characteristics

In each study, the average age (mean or median) was above 65 years (Table 1). Patients labeled as “social admissions” were predominantly women, and most of them lived in the community prior to admission. In the two studies where baseline dementia diagnosis was reported, dementia was present in 23.3% and 43.0% of social admissions. Functional dependence was present in over half of the population in four studies where this was reported.

Risk Factors

Few high-quality studies examine risk factors for being labeled as “social admission.” Living alone, falls, rehospitalization, and living in an independent dwelling were associated with increased odds of being admitted for “failure to cope” (FTC) among individuals >70 years in one Canadian hospital. In the Canadian case-control study, there was no association between a label of “failure to cope”; and medical diagnoses including falls, urinary incontinence, dementia, and conditions assessed through the Charlson Comorbidity Index (CCI). Age was not associated with “FTC” in that same study, but older age significantly increased the risk of being labeled “acopia” in another study. Another study of individuals admitted to hospitals under internal medicine services found worse physical functioning, a worse self-health rating, receiving informal care, hospitalization by a GP, and having a spouse with worse physical or mental health status increased the odds of “medically inappropriate” (i.e., social) admission.

Outcomes

Mortality

In-hospital mortality ranged from 3.0% to 34.9% (Figure 2). When compared to those admitted to an elderly acute care unit in the same time period, mortality was 8.9% for the elderly acute care unit compared to 34.9% for patients labeled as a “social admission.” One-to-three-month mortality post-hospitalization ranged from 12.9% to 26.0% and one-year mortality ranged from 34.0% to 43.0%. Of the 34.0% of patients who were diagnosed as “lack of community support” and went on to die, 38% died within one month of hospitalization.

Care in Hospital

In the ED, one study reported that vital sign assessments were delayed in 16 of 253 “home care impossible patients”: this is associated with under-triaging. One Australian study found 84% of “acopia” labels were admitted under a geriatrician. The average length of stay for “social admissions” ranged from 8 to 28.7 days. In comparison to two control groups (one control group matched for age, sex, and admission date, and the other control group consisting of all
Table 1. Definitions of social admission terminology and characteristics of people admitted as social admissions.

<table>
<thead>
<tr>
<th>Reference (First Author, Year) &amp; Study Location</th>
<th>Type of Study (n for social admission)</th>
<th>Social Admission Term &amp; Definition</th>
<th>Age (Years)</th>
<th>Sex or Gender</th>
<th>Living Situation</th>
<th>Function</th>
<th>Medical Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burrell 2021 London Health Science Centre, Canada</td>
<td>Case control (99)</td>
<td>Failure to cope = a condition not requiring acute medical attention, often considered a “social admission” do not provide a clinical diagnosis, and imply the patient is at fault for not managing a condition with which they should be able to cope.</td>
<td>Mean 84.1</td>
<td>57.8% female</td>
<td>73.5% independent dwelling</td>
<td>57.8% ADL assist</td>
<td>80% classified as frail with CFS</td>
</tr>
<tr>
<td>Elmstahl 1999 General hospital, Sweden</td>
<td>Chart review (380)</td>
<td>Lack of community support = patients without a specific diagnosis of symptoms, and in need of home help services for ADL activities as judged by a physician.</td>
<td>Mean 81</td>
<td>66.1% women</td>
<td>91.1% own home</td>
<td>55.8% unable to walk at admission 23.7% unable to eat independently</td>
<td>-</td>
</tr>
<tr>
<td>Gonski 1997 Sutherland Hospital, Australia</td>
<td>Case control (21)</td>
<td>Acopia = represents what is known as a social admission. Patients with acopia are presumably admitted without acute systemic disease, with accommodation problems, failure of self-care or falls without significant injury.</td>
<td>All &gt; 80 years</td>
<td>Most female</td>
<td>100% live alone or with family</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Kee 2008 General hospital, United Kingdom</td>
<td>Chart review (93)</td>
<td>Acopia = a pejorative term used in hospitals to describe patients who are unable to cope with activities of daily living. The term is mainly used to describe either patients with no acute medical problems or who are deemed inappropriate admissions.</td>
<td>Median 85 93.8% &gt; 65 years</td>
<td>69.1% female</td>
<td>-</td>
<td>-</td>
<td>81.5% had ≥ one comorbid condition 12.5% had ≥ 3 comorbid conditions</td>
</tr>
<tr>
<td>Obeid 2000 Sydney teaching hospitals, Australia</td>
<td>Chart review (109)</td>
<td>Acopia = the presentation of some older patients without reference to, or recognition of, the medical or functional reasons for the presentation or the underlying multifactorial pathology. It is often used to imply that the patient’s problems are only of a ‘social’ nature and that there is no active or ‘acute’ medical problem.</td>
<td>Mean 80 (SD 10.0) Range 28-92</td>
<td>64% female</td>
<td>96.3% own home</td>
<td>52% independent for ADLS 78% independent mobility with or without aid</td>
<td>8 diagnoses on average per person</td>
</tr>
</tbody>
</table>

(Continued)
| Study Location | Type of Study | Social Admission Term & Definition | Age (years) | Sex or Gender | Living Situation | Medical Conditions | ADL: activities of daily living; CCI: Charlson Comorbidity Index; CFS: Clinical frailty scale; IADL: instrumental activities of daily living; SD: standard deviation |
|----------------|---------------|------------------------------------|-------------|---------------|------------------|------------------|
| Perneger 1997 Urban teaching hospital, Switzerland | Cross sectional study (76) | Medically inappropriate = Defined by a tool called the Appropriateness Evaluation Protocol (AEP). The AEP uses 17 criteria (10 related to patient health status and 7 to the intensity of health service needs) to assess the appropriateness of each hospital admission and 27 other criteria to assess the appropriateness of each hospital day. Whenever an admission fulfilled at least 1 criterion, it was ruled appropriate. | 22.4% <50 years | 65.3% male | 50% live at home | 25% self rated fair to poor health | - |
| Rai 1986 Hospital, United Kingdom | Chart review (43) | Social adm = unplanned admission in which no medical or rehabilitation cause was found | Mean 85 (SD 5.0) | 1:1.7 ratio males to females | - | - |
| Richardson 1992 Hospital, Australia | Prospective descriptive study (10 social problem) | GP problem or social admit or social problem = conventionally regarded as inappropriate for an emergency department, including repeat prescriptions and route injections | Mean 83 (SD 4.8) | 59.5% women | - | - |
| Rutschmann 2005 University hospital, Switzerland | Exploratory observational study (253) | Home care impossible = describing the following situations: (1) when their primary care or referring physicians explicitly noted on their referral note that home care services and/or social and familial support were not able to support the patient at home anymore, or (2) when the triage nurse could not identify any specific social, familial and/or nursing support. | Mean 81 Range 65-97 | 60% female | 30% live alone | - |
| Victor 1986 General hospital, Wales | Survey/CASE control (101) | Social adm = code V600 to V655 | Mean 84 Range 65-97 | 59% male | 69% live with spouse | - |
admissions >65 years), the length of stay did not differ from an “acopia” or “social admit” reason for hospitalization.\textsuperscript{14,19}

**Discharge from Hospital**

In five studies examining the final discharge diagnoses, most people were not discharged with the same “social admission label.” One study found 51% of “home care impossible” labeled admissions had an acute medical issue, in whom 24% had a previously undetected infection.\textsuperscript{17} “Acopia” was not the final diagnosis in 88.0–95.2% of patients admitted under that label.\textsuperscript{14,15,18} Rather, falls and gait difficulties, delirium and dementia, and sepsis were all diagnosed prior to discharge. As shown in Table 2, a significant proportion of patients labeled as “social admissions” were unable to return home...
Table 2. Length of stay, discharge diagnoses and disposition of social admissions.

<table>
<thead>
<tr>
<th>Reference &amp; Social Admission Terminology</th>
<th>Length of Stay (Days)</th>
<th>Discharge Diagnoses</th>
<th>Discharge Disposition (versus pre-admission)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burrell 2021 Failure to cope NR NR NR</td>
<td>85% found to have a physical precipitant instead of lack of community support Cardiovascular event – 43.1% Infection – 29.5% Cerebrovascular event – 24.5% Trauma/falls – 24.0% Dementia – 19.1% Dehydration – 12.9% Hematological dx – 12.4% Endo/metabolic – 4.8%</td>
<td>37% went home (88.9% from home)</td>
<td></td>
</tr>
<tr>
<td>Elmstahl 1999 Lack of community support Median 14</td>
<td>95.2% did not have a final diagnosis of acopia Falls/Parkinson disease - 19.0% Delirium / Dementia – 19.0% Cerebrovascular disease – 14.3% Fracture – 14.3% GI problems – 14.3% UTI/Sepsis – 9.5%</td>
<td>42.9% went home (100% from home) 38.1% to LTCH (0% from LTCH)</td>
<td></td>
</tr>
<tr>
<td>Gonski 1997 Acopia Mean 17.3</td>
<td>92.5% did not have a final diagnosis of acopia Geriatric syndrome (e.g., fall, mobility issue or confusion) – 46.9% Sepsis – 29.6% Psychiatric diagnosis – 16.1% Cardiac – 7.4% Iatrogenic 6.2%</td>
<td>51.9% went home (96.3% from home) 14.8% to LTCH (1.2% from LTCH)</td>
<td></td>
</tr>
<tr>
<td>Kee 2008 Acopia Median 10 Range 1-139</td>
<td>88.0% did not have final diagnosis of acopia Gait problem or fall – 47% Confusion – 9% Cough or shortness of breath – 9% Psychiatric disorder – 9% Metabolic or endocrine disorder – 7% Incontinence – 5% New diagnosis of cancer – 5%</td>
<td>50% went home (90% from home) 25% to LTCH (1% from LTCH)</td>
<td></td>
</tr>
<tr>
<td>Obeid 2000 Acopia Mean 12.9 (SD11.7)</td>
<td>1-7 – 35.5% &gt;23 – 11.8%</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>Perneger 1997 Medically inappropriate</td>
<td>48.8% went home (100% from home)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rai 1986 Social admit NR NR</td>
<td>Dementia - 30%</td>
<td>40.0% went home (90.0% from community) 30.0% to LTCH (0% from LTCH, although 10% from shelter)</td>
<td></td>
</tr>
<tr>
<td>Richardson 1992 Social problem or some social component Mean 28.7 (SD 21.4)</td>
<td>51% had an acute issue Infection – 24% Cardiovascular disease – 14% Stroke – 9% Hernia or abdominal pain – 7% Pulmonary disease – 5% Others – 30% (included delirium, fracture, anemia, acute renal failure, cirrhosis, hypoglycemia, hyperglycemia, uncontrolled pain, etc.)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Rutschmann 2005 Home care impossible</td>
<td>NR</td>
<td>4.8% went home (88.9% from home)</td>
<td></td>
</tr>
<tr>
<td>Victor 1986 Social admit Mean 8</td>
<td>NR</td>
<td>NR</td>
<td></td>
</tr>
</tbody>
</table>

LTCH: long term care home; NR: not reported
Discussion

In our search to understand the epidemiology, risk factors, and health outcomes associated with a label of “social admission,” the number of original research papers rivaled the many commentaries, letters to the editor, or editorials on this topic. Chart reviews were the predominant study design. With the exception of one paper, the literature was not recent.

Despite prevalence estimates suggesting “social admissions” were a small proportion of all patients seen by the hospital system, once admitted, the rates of reported mortality were surprisingly high, and these patients were unlikely to return home after hospitalization. These findings support the notion that those admitted under the label of “social admission” may not be medically stable. However, bringing together the literature provided few insights into the experiences and care received by this population to explain the high mortality. Out of all studies analyzed, only one provided numerical data regarding possible under-triaging from reduced and timely vital sign monitoring. The study with the lowest mortality statistic admitted 84% of the acopia patients under geriatrics, which merits further consideration.

It would also be important to understand how many of these acute (and ultimately deadly) medical issues were present and brewing at the time of admission and were unrecognized due to premature diagnostic closure relating to the stigma of the “just a social admission” label, versus how many of these deaths were due to complications (e.g., falls, delirium, polypharmacy) that arose during the hospitalization.

Our findings also support previous literature suggesting “social admission” terminology is used predominantly in an older adult population. This population is predominantly female, functionally limited, and arrives from independent dwellings in the community (instead of being used to describe patients admitted from long-term care facilities). The Canadian case-control study, where no association was found between a label of failure to cope and medical condition was found, may reflect under-coding and an inability to comprehensively identify medical factors that are present and/or contribute to the acute presentation. Given that the majority of people admitted for social reasons were not discharged with the same diagnoses, we propose considering “social admissions” as a quality-of-care issue within the healthcare system.

The commentaries identified, combined with the included original research studies, provide valuable perspectives for understanding the phenomenon of “social admissions,” and we briefly summarize key insights below. Following each section, we provide a brief statement on possible ways to improve based on our observations.

Communication between clinicians

The phenomenon of social admissions occurs in part because healthcare professions like using the terminology. In one UK study, 43.5% of junior doctors and consultants felt “acopia” and “social admissions” were useful terms. In this same survey, 44.8% of physicians felt patients labeled with “acopia” were a burden on their time, and 62.7% believed “acopia” patients were a burden on National Health Service resources. This terminology was not unique to physicians. In two large teaching hospitals in Sydney, Australia, the terminology of “acopia” was used first by paramedics 10% of the time, triaging nurses 12% of the time, and emergency department physicians 21% of the time. Language confers meaning and “social admission” terminology may bias healthcare providers against looking for underlying medical, social or functional reasons for seeking help, with the implication that “failure to cope” is a failure on the patients or caregivers. Education and awareness of the stigma associated with “social admission” labels are potential actionable steps. There have also been calls to decrease the use of “acopia” and one organization has banned its use in their health authority altogether. Given the limitations and stigma of current labels, future research can explore the lived experiences of these patients and caregivers for better descriptors that are sensitive to their complex social situations.

A focus on efficiency

A 2015 ethnographic study investigated how intra-professional interactions affected medical education and discovered a hidden curriculum: there was too much importance placed on “getting the patient out” of the ED. Resource constraints were hidden within a discourse that shifted the problem of overcrowding in the ED onto the patients. The term “failure to cope” became activated when overworked physicians tried to avoid assuming care for high-needs patients, masking institutionally produced stress and altering the way “failure to cope patients” were being perceived. In the section on risk factors, recall that there was an increased likelihood of “failure to cope admissions” in
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association with multiple social risk factors but no correlation with medical conditions. This led the study to conclude that medical conditions, while very much present (average CCI was 6.03), did not play a role in the activation of a “failure to cope” label—rather, the label may have been used to place blame on the individuals and their caregivers, especially the repeat visitors to hospital. The clinical dilemma is summed up eloquently in one commentary: “In a system where resources are constrained, doing the right thing for someone whose needs fall outside the mandate of the provider means taking away resources from someone else.”

In addition to interdisciplinarity teams in the ED, one commentary provides an approach to the “social admission” patient assessment using a socio-ecological lens to facilitate the collection of information relevant to the medically or socially complex. Another potential approach is to use a clinical alternative to Appropriateness Evaluation Protocol prior to the determination of a “social admission” to ensure a thorough evaluation is completed for complex patients; the challenge would be feasibility.

More broadly, like any sobriquet, “social admission” serves as a reminder of our values and priorities: which patients do we accept as valuable and deserving of hospitalization? One strength of this review is its clinical perspective, which prioritizes the aspects of the literature on social admissions that have the most practical significance for clinicians. Additionally, to our knowledge, this is the first review bringing together original research on “social admission” labels, arguably one of the most vulnerable patient populations in the hospital. There are larger research fields that contribute to generating ideas for systemic changes benefiting this population, for example, the frailty literature. Like people admitted for social reasons, frail populations also encompass heterogeneous, complex and often poorly defined patient groups. Generating an evidence base linking “social admissions” to adverse health outcomes can learn from frailty scholarship, which has begun to move into clinical practice as screening tools and healthcare policymaking.

The biggest limitation of this review is its lack of systematic process. This means the review is largely unreplicable and does not provide a summary of the quality of the evidence. This limits the generalizability of our findings, especially looking at the dates of the original studies included. Nonetheless, there appears to be a consistent signal that “social admissions” labels involve more than just social factors. This review may also be a necessary step towards more rigorous research in this area. For example, we identified many more terms used to describe social admission than previously expected. It can be challenging to generalize from one “social admission” label to others (although UK and Australian studies appear to use “acopia” consistently), and this raises questions about the benefits of using a more medically precise term than “social admissions.” Second, terminology may vary in local healthcare settings. For example, the terminology “orphan patient,” used by our region to describe a social admission, is not present in the literature as it is used to describe patients without a general practitioner. More recently, we also became aware from clinical colleagues of the term “community emergencies,” which is also not described in the literature. As such, any literature search on the topic is only as good as the search terms that are used, which can be difficult because of this variation in local terminology. Future incorporation of literature on patients admitted as “failure to thrive” diagnoses is recommended as our findings parallel those found by other researchers. Even so, we hope that our effort to bring coherence to a topic that encompasses a highly heterogeneous population will advance care and research for the most socially vulnerable individuals within our healthcare systems. There is another limitation relevant to the discharge diagnosis section above; it is unclear if the diagnoses of falls, delirium, or mobility difficulties were present at admission or were iatrogenic. Furthermore, it is not clear whether these diagnoses were acute changes that precipitated the admission or non-acute chronic comorbidities that could be managed in the community—a major gap in our data that has implications for the true characterization and progression of these patients in the hospital.

Conclusion

Our review of the literature on social admissions provides insight into the epidemiology, risk factors, and health outcomes linked with different social admission terminologies, which are used inconsistently but refer to a similar group of individuals. Our findings suggest that people who are admitted as social admissions are predominantly older adults, female, require functional assistance, and live in the community prior to hospitalization. Our findings suggest social admissions are more than their social circumstances, and their care frequently involves complex medical issues. Failure to properly assess and appreciate the complexity of a social admission may be associated with premature death and increased long-term care placement, but more research in this area is needed. In conclusion, we provide practical recommendations for healthcare providers to improve the care
of social admissions, which can be implemented in current clinical practice.

Competing interests

JCM is an Internal Medicine resident with Nova Scotia Health and receives scholarships supporting her PhD research from the Department of Medicine at Dalhousie University, Dalhousie Medical Research Foundation, Dr. Patrick Madore Foundation, and the Pierre Elliott Trudeau Foundation. MKA reports grants from Sanofi, grants from GSK, grants from Pfizer, grants from the Canadian Frailty Network, personal fees from Sanofi, personal fees from Pfizer, personal fees from Seqirus, grants from Merck, grants from the Public Health Agency of Canada, grants from Canadian Institutes of Health Research, outside the submitted work. KR has asserted copyright to the Clinical Frailty Scale through Dalhousie University’s Industry, Liaison, and Innovation Office. Its use is free for education, research, and not-for-profit health care. Users agree not to change or commercialize the scale. In addition to academic and hospital appointments, KR is the co-founder of Ardea Outcomes, which (as DGI Clinical) in the last three years has contracts with pharma and device manufacturers (Danone, Hollister, INmune, Novartis, Takeda) on individualized outcome measurement. In 2020, he attended an advisory board meeting with Nutricia on dementia and chaired a Scientific Workshop & Technical Review Panel on frailty for the Singapore National Research Foundation. He is the Associate Director of the Canadian Consortium on Neurodegeneration in Aging, itself funded by the Canadian Institutes for Health Research, the Alzheimer Society of Canada, and several other charities. He holds the Kathryn Allen Weldon Chair in Alzheimer Research, funded by the Dalhousie Medical Research Foundation. SS, KK, GL, KN, SF, and MvM have no other conflicts of interest or additional sources of funding to declare.

Authors’ contributions

JCM contributed to the conceptualization and design, procurement of data, analysis of data, drafting of the original manuscript, and review of the original manuscript. SS, GL, and KN contributed to the conceptualization and design, analysis of data, and review of the original manuscript. KK, MvM, KR and MKA contributed to the conceptualization and design, procurement of data, analysis of data, and review of the original manuscript.

Acknowledgements

MKA and JCM are part of the Canadian Consortium on Neurodegeneration in Aging (CCNA) Team 14, which investigates how multi-morbidity, frailty and social context modify risk of dementia and patterns of disease expression. The CCNA receives funding from the Canadian Institutes of Health Research (CNA-137794) and partner organizations (www.ccna-ccnv.ca).

References

8. D’Entremont Y. Record number of ‘orphan patients’ being left at Halifax area emergency rooms, researcher says. Halifax Examiner [Internet]. 2022 Dec 20; Available from: https://www.halifaxexaminer.ca/health/record-number-of-orphan-patients-being-left-at-halifax-area-emergency-rooms-researcher-says/
9. Horizon Health Network. Pilot project of social workers in Emergency Departments benefiting patients, reducing social
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