The impact of the Covid-19 pandemic on nursing home staff mental health in Ireland

Presenter: Conan Brady

Co-investigators: Caomh Fenton, Orlaith Loughran, Blánaid Hayes, Martina Hennessy, Agnes Higgins, Iracema Leroi, Deirdre Shanagher, Declan M. McLoughlin
Background

- By mid-2020, the end of the first wave, nursing home residents accounted for:
  - 40% of Covid-19 deaths in the USA,
  - 56% in Ireland,
  - 47% in the UK and
  - 40% in Italy

Very little research on nursing home staff mental health:

- Only one quantitative study to date which estimated a prevalence of mod-severe PTSD symptoms in Italian care home workers to be 39% [Riello et al 2020]
Methods

• Online anonymous survey of staff mental health NHI-affiliated nursing homes (Nov-Jan 2020)
• Recruitment via NHI email list of persons-in-charge (PICs)
• Posters/email/telephone calls to every NHI nursing home
• Social media advertisement via Twitter and Facebook
Measures

- Basic demographic information was recorded along with profession, regional work location, years of experience, living arrangements, pre-existing medical and psychiatric conditions, extent of exposure to Covid-19, quarantine experience and history of contact with Covid-19-positive acquaintances.

- Free text box provided (analysed separately)

- Impact of Events Scale Revised (IES-R)
- WHO-5 Wellbeing Index
- Two Likert scale items on suicidal ideation and planning (From C-SSRS)
- Moral Injury Events Scale (MIES)
- Brief Coping Orientation to Problems Experienced (Brief-COPE)
- 15 items on perceptions of the Covid-19 outbreak adapted from SARS paper.
- 1 item on Altruism.
- Work ability scale (WAS)
Analysis

- Using a 95% confidence interval with a 5% margin of error, our minimum sample size was determined to be 360 based on previous literature demonstrating that 39% of nursing home staff scored $\geq 26$ on the IES-R during the Covid-19 pandemic.
- We examined demographic/Covid-19 exposure characteristics of the sample divided into three groups: nurses, healthcare assistants (HCA) and nonclinical staff.
- These groups were further categorised based on cut-off scores for the WHO-5, IES-R and WAS and the presence/absence of suicidal ideation or planning.
- Chi squares; ANOVAs as appropriate.
- Post-hoc analyses were performed for significant between-group differences. Significance level was set at 0.05.
- Regression analysis performed using a generalised linear model to adjust for significant differences in demographic features (i.e. age, years of experience, ethnicity), personal Covid-19 infection history and exposure to Covid-19-infected acquaintances.
- Simple sensitivity analysis performed for selection bias.
RESULTS
Response & Demographics

- 390 responses
  - 120 Nurses
  - 172 HCAs
  - 98 others, including catering, household, administrative staff and activity coordinators
- 86% Female; 13% Male; 1% Prefer not to say
- 83% White; 5% Asian; 4% SE Asian; 3% Black
Demographics

- There were significant differences between nurses, HCAs and nonclinical staff in age ($P<0.001$), ethnicity ($P<0.001$) and years' experience ($P<0.001$).

- With respect to age, HCAs were proportionally the youngest group.
  - There were significantly more HCAs aged $\leq 30$ ($z = 4.6$)
  - Significantly fewer HCAs aged $\geq 51$ ($z = -4.4$).

- Significantly fewer nurses were of white ethnicity ($z = -3.5$) and nonclinical staff were more likely to be of white ethnicity ($z = 4.5$).

- Nurses were the most experienced group:
  - less likely to report $<5$ years' experience ($z = -6.1$)
  - more likely to report $\geq 10$ years' experience ($z = 5.4$).
Exposure to Covid-19

- Almost one third of staff reported having quarantined (31.3%).
- A majority reported no history of Covid-19 infection (80.3%).
- Of those who had contracted Covid-19, only 4.8% reported having symptoms for ≥9 weeks but 33.8% reported not having fully recovered.
- Most nursing home staff reported no history of caring for residents with Covid-19 (63.9%), although 67% reported contact with Covid-19 infected acquaintances.
WHO-5 Wellbeing Index

WHO-5 score ≤32, indicating poor wellbeing, was 38.7% (95% CI 33.9-43.6%).

This figure lies at the higher end of the range for prevalence globally of depressive symptoms in the general population during the Covid-19 pandemic (14.6-48.3%).

Significant differences between groups were noted ($P=0.015$):
- more nurses reporting poor wellbeing ($z = 2.6$)
- more HCAs reporting normal wellbeing ($z = 3.1$).

Scores consistent with likely major depression (WHO-5 ≤20) were reported by 20% of all staff (95% CI 16-24%) with no differences between groups.
Suicidal Ideation & Planning

1 in 7 - thoughts of suicide

1 in 11 - suicide planning
Impact of Event Scale post-traumatic symptoms

- Mod-severe symptoms: 55% (n=214)
- No-mild symptoms: 45% (n=176)
Moral Injury Events Scale

- MIES scores: Total score; transgression by self, transgression by others, betrayal.
- The mean score for nursing home staff in Ireland (20.8, SD 9.1) was significantly higher than that of US hospital staff at the beginning of the pandemic (16.15, SD 7.8; \( P < 0.0001 \))
- There were significant differences between groups on the MIES total score (\( P = 0.027 \), adjusted \( P = 0.038 \)) and the MIES “Transgression by others” subscale (\( P = 0.030 \), adjusted \( P = 0.048 \)).
- HCAs reported a significantly higher degree of moral injury than nonclinical staff (mean difference (and a significantly higher “Transgression by others” score than nonclinical staff.
- A difference between groups was noted on the MIES betrayal subscale; however, this did not survive adjustment.
Brief-COPE

- Approach (adaptive); avoidant (maladaptive); Religion and Humour
- The groups differed in use of approach (adaptive) coping style ($P=0.001$, adjusted $P=0.045$), with nurses using an approach (adaptive) coping style more than nonclinical staff.
- There was a significant difference for use of religion as a coping mechanism but this did not survive adjustment ($P=0.049$, adjusted $P=0.116$).
- There were no differences noted for using avoidant (maladaptive) coping styles or humour.
Work Ability

- Work ability, as self-rated by the Work Ability Score, was deemed insufficient by 24.6% (95% CI 20.3-28.9%) of staff, with no differences between groups.

- No previous comparison data for nursing home staff but similar levels of insufficient work ability have been recorded in Irish doctors before the pandemic and was associated with burn-out in doctors.
Key points from quantitative analysis

- First systematically conducted study of Republic of Ireland nursing home staff experience during the Covid-19 pandemic.
- Only the second such report internationally.
- The prevalence of symptoms of PTSD and intensity of moral injury in Irish nursing home staff was significantly higher than that of hospital staff internationally during the Covid-19 pandemic.
- Concerning levels of suicidal ideation (13%) and planning (9%).
- Significantly more nurses reported poor wellbeing despite being more likely to utilise adaptive coping styles.
- HCAs reported a significantly higher degree of moral injury than nonclinical staff.
  - Youngest group but this remained significant even after controlling for age and years of experience.
    - Due to their close relationships with residents.
THANK YOU