Background Delirium is a complex condition, distressing for patients, family members and staff, and associated with poor outcomes. Despite high prevalence in the palliative care setting, it remains under-diagnosed. Delirium guideline-adherent care may both prevent and alleviate delirium. The best way to improve delirium-guideline adherence, and whether better adherence is reflected in reduced delirium, is not known. Prompt dissemination of feasibility findings is critical to avoid research waste.

Methods To inform a definitive large study, working closely with Patient Public Involvement members, we conducted a co-design and feasibility study (ISRCTN55416525) to assess the feasibility of collecting data (delirium diagnosis; guideline-adherence) from clinical records. Clinical record data (evidence of: delirium using a validated chart-based instrument; guideline-adherent delirium care) was collected from 50 consecutive in-patient admissions at three hospices pre- and post-implementation of a co-designed implementation strategy (data collection completed 3 December 2022). Analysis: Pre-post comparison of percentages for continuous data (delirium outcomes); nominal data (raw count of guideline-adherent metrics).

Results Target clinical record data collection (n=300) was achieved within timeframe, despite data collection during COVID-19. Delirium prevalence was comparable pre-and post-implementation with two-thirds of patients having a delirium episode during admission. There was a reduction in the proportion of delirium-days during admission 62% to 49%. We observed modest post-implementation improvements in most guideline-adherent metrics: delirium diagnosis as documented by the clinical team 15% to 26%; evidence of reversibility 33% to 36%; delirium risk assessment 0% to 12.5%; screening on admission 21% to 35%.

Conclusion Data collection about delirium outcomes and guideline-adherence from hospice clinical records is feasible. Our findings show the disparity between need (high delirium-incidence) and documented action (low guideline-adherence). However, there is a signal of patient benefit even with small documented improvements which needs to be formally evaluated in a multi-site study of effectiveness of an implementation strategy for improving delirium guideline-adherence.

HRV reduced SDNN & RMSSD very low: 21.3, 11.5ms spont; 27.2, 19.2ms paced, normal >50, >42 respectively
Strain significantly different (19.1, 24.3, p=0.02) in groups with/without fatigue,
BFI correlated with HRV, TUG with Strain (0.875, p=0.001), & HRV.

All found study acceptable No participant withdrew. One participant each:
• unable to complete STS
• felt echo interfered with privacy
• found paced breathing bothersome

Conclusions
1. Objective assessment of fatigue, cardiac muscle & ANS feasible, acceptable & warranted in palliative populations
2. Majority of participants fatigued subjectively & objectively
3. Significant diastolic dysfunction & loss of HRV present
4. Correlations between subjective & objective fatigue, myocardial strain & HRV
5. These bedside tests can be used in palliative populations to guide symptom management