

# Proactive IT-assisted CGA (i-CGA) in care homes: does it improve survival, hospitalisation, and achieving advance care planning preferences?

## An quasi-experimental longitudinal study where we share the learning

### The problem:

You have 250 patients spread across 13 care homes in your primary care network.

All need full CGAs with personalised care and support plans shared across the whole locality. Your team have never been trained in CGA.

That's about 1000 hours of work.



### The solution: i-CGA (link for demo [https://youtu.be/Pc8EAcjI\\_Bg](https://youtu.be/Pc8EAcjI_Bg))

- **IT-assisted deprescribing:** push a button and all high risk meds are identified for review
- **IT-assisted CGA checklist** to ensure nothing gets missed
- **IT-assisted advance care planning:** push a button and a personalised care and support plan and TEP is created and shared with the locality
- **Population based dashboard** for focussed reviews and evaluation

## Evaluation:

### Method:

Took place from 1<sup>st</sup> March 2019-30<sup>th</sup> April 2021. All residents in care homes registered to Pathfields Medical Group PCN were included.

Two groups created and followed up for a year:

- i-CGA group. Follow-up started when i-CGA completed (n=196)
- Control group. Follow-up started when coded by frailty status (n=100)

Outcomes of interest:

- Mortality
- Hospitalisation
- Achieving advance care planning preferences

### Result Headlines: despite having 296 patients the study is underpowered

**Unplanned admissions:** 1 i-CGA offered to 1 resident in a care home saves 0.97 hospital admissions per year – 84% certainty this did result did not arise by chance (p=0.16)

**Survival:** There may be improvement in survival but there is some confounding in the data:

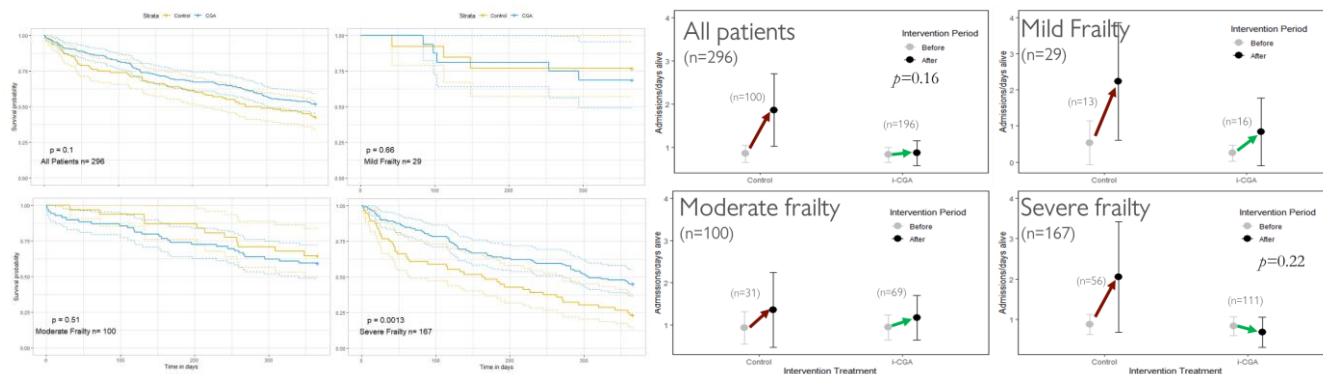
- The i-CGA software was so good at end of life care that it was used in acute “end-of-life” situations leading to paradoxical rise in mortality in first 30 days
- Data at risk of survival bias

**Quality of care:**

- i-CGA group: 100% had advance care plans. For patients expressing a preference NOT to be hospitalised if more unwell and died, 90% (65/72) achieved their end of life preferences of dying in their care home
- In control group 29% did not have advance care plans (32% of this cohort (8/25) died in hospital). For patients expressing a preference NOT to be hospitalised if more unwell and died, 88% (23/26) achieved their end of life preferences of dying in their care home

Demographics	Total (n=296)	Control (n=100)	i-CGA (n=196)
Male, n (%)*	83 (28)	42 (42)	41 (21)
Female, n (%)	213 (72)	58 (58)	155 (79)
Age, mean (SD)*	88.7 (6.97)	87.3 (6.9)	89.4 (6.9)
Dementia diagnosis, n (%)	170 (57)	53 (53)	117 (60)
Mild frailty, n (%)	29 (10)	13 (13)	16 (8)
Moderate frailty, n (%)	100 (34)	31 (31)	69 (35)
Severe frailty, n (%)	167 (56)	56 (56)	111 (57)
Follow-up started during pandemic (after 17/3/20)*	110 (37)	3 (3)	107 (55)

\* Statistically significant differences



### Learning points for a future expanded study (coming soon!)

- **Unplanned admissions:** the p-value is a statistical tool that purely assess whether a result arose by chance. Evidence from our hospital's BI team confirms a year-on-year in care home admission (now at 50%)
- **Survival:** We need to adjust for survival bias as a natural lag in CGA delivery and also confounding of “end-of-life CGA.” Time dependent Cox regression used on larger numbers will eliminate this
- **Quality of care:** A structured, checklist i-CGA offers superior quality of care with more patients being offered the opportunity for advance care planning conversations and achieving end of life preferences