

The 4 Drivers at the heart of successful Neighbourhoods



1. Activated Staff

Motivated teams that feel they have greater **autonomy, common purpose, confidence and skills.**

2. Integrated Care

Removing the barriers to getting things done. Making the working lives of our teams easier while **enhancing the quality of care and experience** for patients and service users.

4. Integrated Communities

Partners and **communities working together** to tackle the wider determinants and address inequalities.

3. Activated Citizens

Who have the **knowledge, skills, resources and confidence** to take more control of their own health and wellbeing.

National and international evidence is that **supporting teams to work together using a personalised approach** and removing the barriers that get in the way **can deliver significant outcome and system benefits.**

The challenge



The Syndrome: Frailty causes progressive loss of physiological reserve, risking crisis-driven health drops.

The Current Standard: Lack of integrated care defaults to emergency medical services and non-elective hospital admissions.

Patient Impact: Leads to invasive, prolonged, and highly clinical institutional stays misaligned with patient preferences.

Financial Burden: Individual emergency hospital end-of-life care averages **£18,020**, consuming up to **30% of acute hospital budgets**.

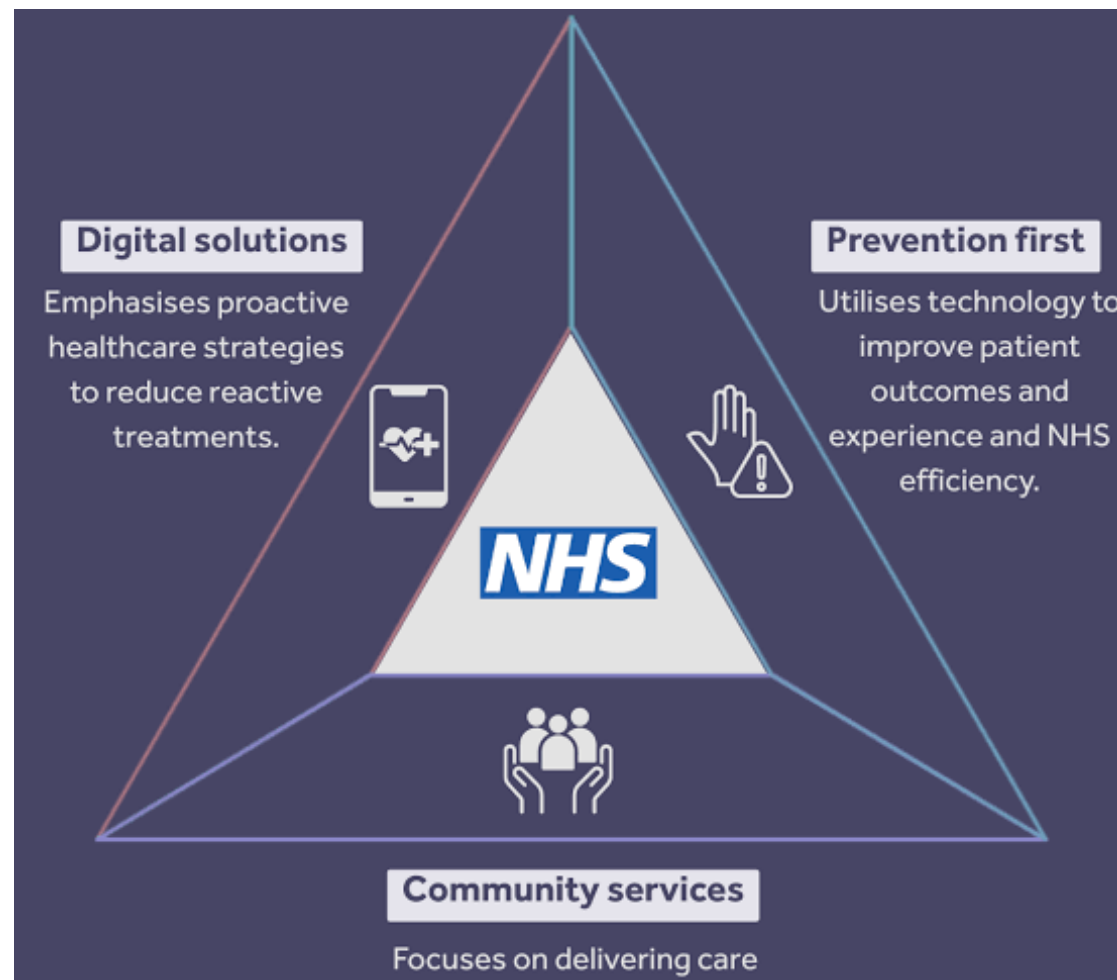


Strategic Aim & Core Hypotheses

Core Objective: Evaluate if a proactive, primary care-anchored INT model shifts care trajectories from hospitals to the home.

Key Intervention: Cross-boundary digital documentation of Preferred Place of Care (**PPC**) and Preferred Place of Death (**PPD**).

Strategic Alignment: Directly delivers on the NHS 10-Year Health Plan: *Hospital to Community, Analogue to Digital, Sickness to Prevention*.



Study Design & Setting

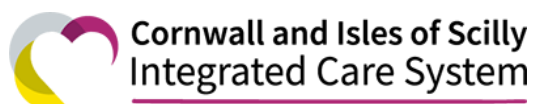
Design: Retrospective comparative cohort study evaluating clinical and health economic outcomes.

Setting: St Austell Healthcare Primary Care Network (PCN) & INT footprint in Cornwall, UK (Population: ~38,000).

Intervention Cohort: Frail patients managed via INT pathway who died between May 2025–May 2026 (n=41).

Historical Baseline: Standard care deaths coded as moderate/severe frailty between May 2020–May 2025 (n=1,066).

Inclusion Criteria: Age 65+ with baseline moderate/severe frailty via eFI or Comprehensive Geriatric Assessment (CGA).



	Cohort 1 (N = 1066)	Cohort 2 (N = 41)	Analysis / p-value *
Age (years)			
Mean ± SD	89.23 ± 8.27	81.98 ± 7.2	P < 0.001
Median [IQR]	90 [85-95]	84.5 [77–89]	
Sex, n (%)			
Female	655 (61.5%)	19 (46.3%)	P = 0.052
Male	411 (38.5%)	22 (53.7%)	
Female-to-Male Ratio	1.6 : 1	0.86 : 1	—
Residential Status, n (%)			
Independent Living / Community	780 (73.2%)	31 (75.6%)	P = 0.729
Nursing Home / Long-Term Care	286 (26.8%)	10 (24.4%)	
Frailty Severity, n (%)			
Moderately Frail (Rockwood = 6)	446 (41.8%)	19 (46.3%)	P = 0.566
Severely Frail (Rockwood ≥ 7)	620 (58.2%)	22 (53.7%)	

Methodological Limitations & Confounding



Cohort Imbalances & Pandemic Disruption:

Cohort 1 spans 5 years and is significantly larger than Cohort 2.

COVID-19 pandemic overlap (2020–2022) introduces potential out-of-hospital mortality and documentation anomalies, though sensitivity analyses show no statistical significance.

Selection & Demographic Bias:

Inherent selection bias in Cohort 2 due to prospective recruitment criteria.

Significant age variance as Cohort 2 was notably younger (*81.98 vs 88.23 years; $p < 0.001$*), reflecting AI-driven proactive screening for rapid frailty progression.

Unmeasured Extraneous Variables:

Informal caregiving capacity (a primary driver of a patient's ability to remain at home) was completely uncaptured.

Community nursing availability was untracked across both cohorts, which independently influences home death rates.

Data Consistency & Observer Bias:

Coding behaviour shifts may have occurred over the 5-year timeline.

Inherent observer bias exists due to the intense clinical focus on the active INT cohort.



Economic Framework & Cost-Savings Logic



Data Source: Built using a local cost-consequence model verified by NHS England reference data.

Acute Care Unit Cost: £562 per day (base non-elective inpatient bed cost).

Community Care Unit Cost: £145 per day (palliative care and supportive nursing package).

**Net Daily System Savings
Formula:**

**Acute cost (£562)-Community
Cost (£145)= £417 saved per
patient, per day**

Significant Shift in End-of-Life Care Setting



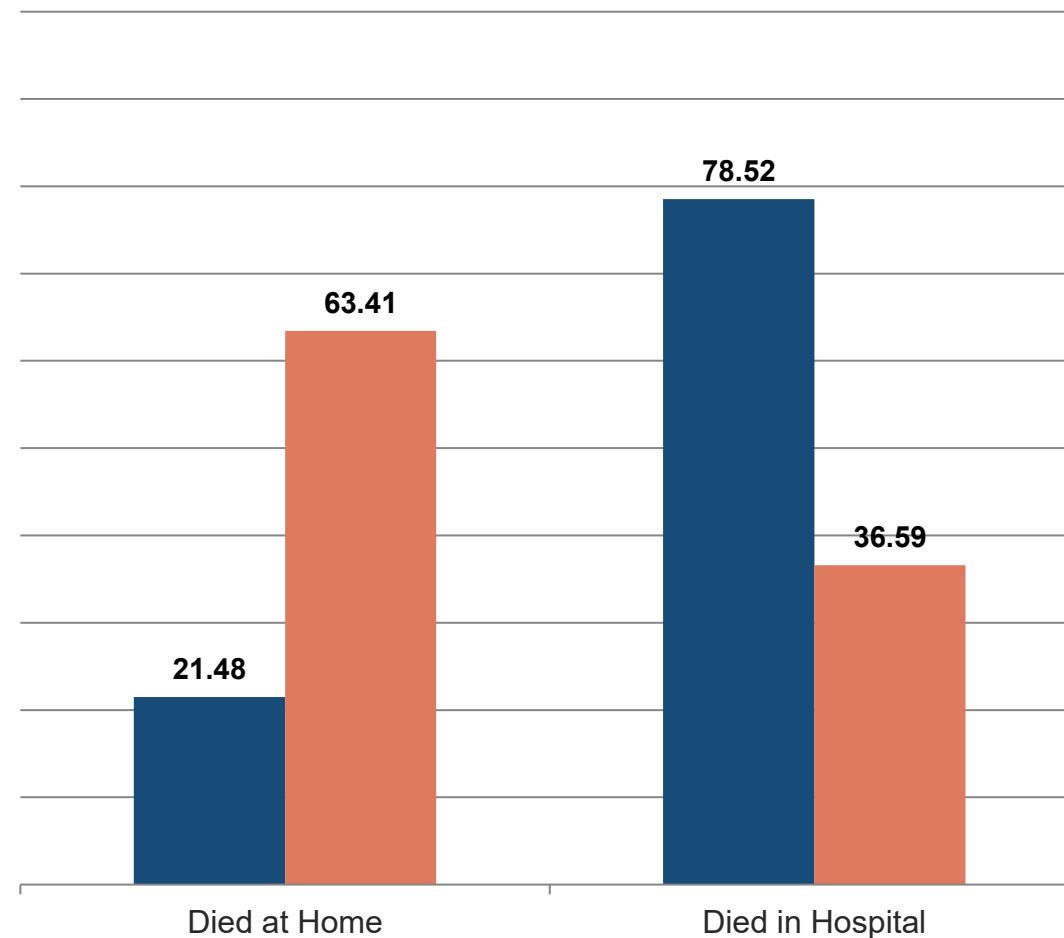
Historical Baseline (2020–2025; n=1,066):

21.48% died at home (229 patients); **78.52%** died in hospital (837 patients).

INT Intervention Cohort (2025–2026; n=41):

63.41% died at home (26 patients); **36.59%** died in hospital (15 patients).

Statistical Significance: Absolute increase in home deaths of **41.93%** ($Z = 6.26$, $P < 0.001$).



Capacity Relief & Net Financial Savings



Deflection Impact: The 41.93% trajectory shift corresponds to **17 fewer terminal hospital admissions** in the INT cohort.

System Evaluation: Savings modelled across three conservative Length of Stay (LOS) profiles.

Table Notes: Length of Stay (LOS) profiles are based on regional averages for late-stage frailty admissions. Savings calculated at a baseline non-elective inpatient bed cost of £562 per day. Net system savings reflect the gross inpatient bed cost minus community palliative and supportive care package overheads valued at £145 per day, giving a net tracking value of -£417 per patient, per day.

Terminal Admission Profile	Total Acute Bed Days Deflected	Gross Acute Hospital Cost Saved	Net System Financial Savings
7-Day LOS Scenario	119 Bed Days	£66,878	£49,623
10-Day LOS Scenario	170 Bed Days	£95,540	£70,890
14-Day LOS Scenario	238 Bed Days	£133,756	£99,246

Lesson 1: GP-Led INT Structure Removes Administrative Friction



The Fragmented Model (Avoid)

- Disparate IT systems stall necessary team communications.
- Conflicting clinical protocols introduce administrative friction.
- Varied clinical cultures hinder efficient cross-practice collaboration.

The Unified Model (St Austell Healthcare)

- Agile clinical environment via unified geographic configuration.
- Shared data access simplifies internal and external communication.
- Seamless out-of-hours coordination prevents emergency hospital transfers.



Lesson 2: Local Accountability Drives Proactive Frailty Management



Clinical Anchors Lead

- Core leadership team: Senior community and practice nurses (including matrons and specialist frailty nurse), GPs, eldercare psychiatrists, and senior community matrons.
- Multidisciplinary network coordinates community nurses, therapists, social, and voluntary care.

Proactive Care Delivery

- Longitudinal population knowledge identifies early markers of severe frailty.
- Crisis prevention steps in before emergency hospitalisation is required.
- Advanced care planning is built entirely on continuous, trusted clinical relationships.



Lesson 3: Rigorous Clinical Coding To Secure Service Funding



THE CODING CRISIS

Under-coded frailty data miscalculates the true denominator of at-risk individuals.

Under-funded community services directly result from incomplete data records.

Compromised service evaluation directly threatens future health economic validation.



THE REVENUE & GOVERNANCE FOUNDATION

Stable 5-year baseline established at St Austell Healthcare (n=1066) via consistent data tracking.

Automated risk-stratification tools refine and flag vulnerable patients for INT review.

Funding requirements- transforms clinical coding from admin burden into strategic governance.

Lesson 4: Operational Mission Creep Confounds Preventative Metrics



The Operational Conflict

Acute Hospital Pressures force community assets to pivot toward early discharges.

Diverting Limited Staff reduces the capacity for proactive home visits.

Diluted Preventative Capacity directly compromises long-term admission prevention goals.

Altered Selection Criteria introduces severe analytical bias into economic metrics.

Analytical Adjustments

Strict Inpatient Exclusions maintained to protect data integrity.

Statistical Baseline Controlled by removing patients identified while hospitalised.

Exclusion Criteria Applied to individuals who passed away before community intervention could begin ($n=4$).

Lesson 5: Scalability Limitations Beyond the Unified PCN Footprint



The Structural Baseline

St Austell Footprint: Operates under a highly unified, single-infrastructure Primary Care Network (PCN).

Minimal Friction: Eliminates the deep inter-organisational barriers that naturally plague multi-practice federations.

Generalised Mechanics: The basic clinical pathways can be replicated, but financial outcomes will vary.



Systemic Scaling Barriers

Social Care Disparities: Wide regional variations exist in available funding and social care provisions.

Demographic Volatility: Differing urban-to-rural population densities disrupt standard resource deployment.

Data Irregularities: Inconsistent baseline clinical coding behaviours distort regional performance tracking.

Workforce Constraints: Uneven distribution of community nursing staff—especially out-of-hours—dilutes preventative capacity.

Staffing Dependency: Recruitment, retention, and strategic deployment of trained community palliative staff remain a core point of failure.

Strategic Conclusions: Compassionate Care and Financial Sustainability



Core Clinical & Operational Delivery

Altered End-of-Life Trajectories: Significantly increases the proportion of frailty deaths occurring at home compared to historical standard care.

Unified Safety Net: Integrates community nursing, social care, and third-sector infrastructure with primary healthcare to prevent unwanted terminal admissions.

Patient-Centred Alignment: Connects multi-agency community care directly to pre-recorded care preferences (**PPC/PPD**) to preserve individual dignity.



System Value & Outcomes

Financial Sustainability: Proves that compassionate palliation and efficient resource management can be achieved simultaneously.

Quantifiable Net Savings: Delivers an estimated net system saving of **£417 per patient, per day**.

Capacity Relief: Directly frees up acute ward bed capacity by shifting care away from secondary hospital settings.

Declarations



Ethics and Governance

This work was undertaken as a retrospective service evaluation of a community frailty Integrated Neighbourhood Team (INT) model implemented within St Austell Healthcare. The evaluation used routinely collected clinical and operational data generated during standard care and service delivery. Data were analysed in anonymised and aggregated form, and no patient-identifiable information was accessed.

In accordance with UK Health Research Authority guidance, the project was classified as a service evaluation examining the outcomes of a service reorganisation and quality improvement intervention. Consequently, NHS Research Ethics Committee review and individual patient consent were not required. The evaluation was conducted in accordance with local information governance policies.



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Competing Interests Statement

The authors declare that they have no competing interests regarding the publication of this manuscript.

Dr. D. Murphy remains a GP Partner at St. Austell Healthcare.