Health 1000 Nursing Home Support

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Health 1000 Phase II

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- The nursing home crisis in outer north east London
- Poor primary care support
- High 999 calls and ED attendances
- High admission rates
- Poor end of life care and death in place of residence statistics

An opportunity

- 4 nursing homes lose their primary care support
- Health 1000 practice takes on this role
- Formal evaluation by the Nuffield Trust

Health 1000

- A new form of primary care practice
- Learning taken from Scandinavia, US and N Zealand
- Multi-disciplinary workforce Geriatrician/GPs/Nurses/Social Worker
  Generic Health Care Support Workers
- Originally formed to care for patients over 75 years with 5+ LTCs

The Problem & The Intervention

- Nursing Home staff feel unsupported by the healthcare system
- Poor training and isolation leading to poor confidence
- Risk averse behaviour defaults to 999 calls and hospital transfer
- Leading to high call out rates, admissions and deaths in hospital

- Health1000 team establishing trust
- Named staff for each home
- Staff training delivered by Health 1000
- Weekly ward rounds
- Prompt response to calls by phone or visit
- Treatment escalation plans for each resident
- Service covers 0800-2200 Mon-Fri and 0800-2000 Sat/Sun

Evaluation approach

- Mixed quantitative and qualitative analysis measuring:
- The impact of the new service on the use of hospital services
    - Outcomes measured for the four Health 1000 nursing homes before and after registration
    - Comparisons made to a group of similar homes in the local area*
- Experiences and views of staff delivering care at the nursing homes

*Comparator homes were nursing homes that were registered with the Care Quality Commissions (CQC) for similar services were selected as comparators. Our selected data covered 19 of these homes

Quantitative outcomes

- Use of secondary care services
  - Emergency and elective inpatient visits
  - Attendance at A&E
  - Outpatient appointments
- Costs of secondary care (tariff costs to commissioners)
- Separate analyses covered:
  - the whole period a person was resident in the nursing home during our defined pre or post-registration periods
  - the last three months of a person's life, if we knew they died
  - the period that excludes the last three months of life[1]

1. If a person was still alive at the end of follow-up, then their last three months of data were excluded from analysis of this period, as we would not know when they would have died

Quantitative results

1. Cohorts of residents

Post-registration periods of follow-up

Nursing home	Registration date	Date post-registration analysis starts[1]	Total days follow up post-registration[2]
Hillside	28 June 2016	27 September 2016	216
Hornchurch	4 May 2016	3 August 2016	271
Ladyville	20 June 2016	19 September 2016	224
Willows	4 April 2016	4 July 2016	301
Comparators	22 May 2016[3]	21 August 2016	253

1. We allowed a 3-month (91-day) transition period for the new service to take an effect
2. Follow-up ended on 30 April 2017
3. For the comparator homes, the corresponding period began on 22 May 2016 which is the average of the Health 1000 registration dates

Characteristics of residents on entry to Health 1000 nursing homes before and after registration with Health 1000

No evidence that the presence of Health 1000 has influenced the type of people coming to the homes

Characteristic	Before (n=154)	After (n=64)	P-value of difference
Mean age	83.1	83.8	0.5
Mean risk score	38.9	36.7	0.6
% female	58%	59%	1.0
% stroke	19%	17%	0.8
% CHD	18%	19%	0.8
% Heart failure	6%	9%	0.4
% Hypertension	58%	58%	1.0
% Dementia	31%	45%	0.06
% Depression	17%	8%	0.09
% Diabetes	19%	2%	0.6
% COPD	12%	20%	0.1

Characteristics of residents at each care home on entry

Residents at Hillside appear to have more needs, with a higher combined risk score and more comorbidities per resident. This is not related to there being more men at Hillside as the women at Hillside have similar average values for risk score and comorbidities.

Characteristic	Hillside (n=81)	Hornchurch (n=98)	Ladyville (n=32)	Willows (n=80)
Mean age (SE)	85.0 (0.7)	82.5 (0.8)	84.6 (1.3)	83.1 (1.0)
Mean risk score	41.2 (3.1)	35.6 (2.7)	34.9 (4.1)	34.7 (2.9)
% female	51%	65%	69%	63%
Mean numbers of comorbidities	2.07 (0.15)	1.73 (0.12)	1.50 (0.20)	1.79 (0.16)

Note: We only had these individual characteristics on entry for people who entered homes after 1st Oct 2013. That is why the cohort sizes in this table are lower than the total cohorts for the homes.

The impact on numbers of inpatient spells and associated costs

		Emergency inpatient spells		Elective inpatient spells	
		Health 1000	Comparators	Health 1000	Comparators
Number of visits	Before	213	942	24	109
	After	66	289	6	24
Visit rate per person per year	Before	0.83	1.04	0.10	0.12
	After	0.53	1.00	0.05	0.09
	% change*	-36%	-4%	-44%	-29%
	p-value for marginal change	0.03		0.68	
Cost per person year	Before	£2,925	£3,757	£82	£67
	After	£1,760	£3,347	£70	£177
	% change*	-40%	-11%	-14%	162%
	p-value for marginal change	0.046		0.58	

* Negative changes represent reductions

The impact on emergency inpatient spells before and during the last 3 months of life

		Before last 3 months of life		During last 3 months of life	
		Health 1000	Comparators	Health 1000	Comparators
Number of visits	Before	122	480	90	392
	After	30	112	26	134
Visit rate per person per 3 months	Before	0.13	0.16	0.85	0.77
	After	0.09	0.15	0.49	0.82
	% change*	-34%	-5%	-43%	6%
	p-value for marginal change	0.20		0.01	
Cost per person per 3 months	Before	£410	£561	£3,258	£2,795
	After	£289	£473	£1,653	£3,043
	% change*	-30%	-16%	-49%	9%
	p-value for marginal change	0.31		0.01	

* Negative changes represent reductions

The impact on numbers and costs of A&E visits and outpatient appointments (note shorter follow up period)

		A&E attendance		Outpatient appointments	
		Health 1000	Comparators	Health 1000	Comparators
Number of visits	Before	284	1,069	450	1850
	After	139	391	317	508
Visit rate per person per year	Before	1.11	1.19	1.76	2.05
	After	1.12	1.35	2.54	1.76
	% change*	0.4%	14%	45%	-14%
	p-value for marginal change	0.46		0.006	
Cost per person year	Before	£160	£176		
	After	£193	£237		
	% change*	21%	35%		
	p-value for marginal change	0.59			

* Negative changes represent reductions

The impact on use of hospital services: summary of results

- We have broadly similar cohorts of residents at the Health 1000 homes before and after registration and between the Health 1000 homes and the comparators
- Relative to the comparator homes, there is a significant reduction in emergency inpatient visits and associated cost
- There has been a significant increase in outpatient appointments
- The biggest reductions in emergency inpatient visits are during the last three months of a person's life

Qualitative results

Results from staff interviews

- We identified the following themes:
  - Previous experience of working in the sector (prior to Health 1000 introduction)
  - Staff views on purpose of Health 1000
  - Material changes staff have noticed now care is provided via Health 1000 (both positive and negative)
  - Specific improvements in care noticed by staff
  - Problems with Health 1000 (both resolved and yet-to-be resolved)
  - Changes in staff experience resulting from Health 1000

Main material changes in provision

- Having one GP as a single point of access in-hours
- Having access to the Health 1000 service during extended hours
- Having anticipatory medicine available
- A new End of Life Care approach including DNRs as appropriate, peace plans and availability of syringe drives on site
- Medicine reviews
- A change in protocol allowing care home staff to do diagnostic tests for UTIs

Improvements noticed by interviewees (1)

- The greatest number of improvements mentioned related to access:
- Easier access to GPs themselves
- A view that GPs spending more time in the homes face-to-face with patients had improved care quality:

  “just having that GP come in every week, you’d be surprised how much that stops it escalating at the weekends as well”

- Easier access for care home staff to clinical advice, both for triaging and also as a way of care home staff receiving formal and informal learning support

Improvements noticed by interviewees (2)

- Care home staff felt better able to manage risk themselves for the following reasons:
- More comfortable monitoring residents' conditions between GP visits as they were sure a GP would visit once a week
- Gaining a better understanding of what was acute and what could wait as a result of better support from GPs
- Improved self-confidence
- Creation of an atmosphere of mutual trust

Discussion of qualitative findings

- Most care home staff described poor experiences prior to Health 1000
- Support for Health 1000 as a way of addressing issues, but focus on reducing unnecessary hospital admissions less of a driver for care home staff than GPs
- Main improvements noticed related to access, relationships, medicines management and end of life
- Some staff noted their own approach to managing risk had changed
- Success of scheme seems to rest to a degree on whether there is a good cultural fit between the care home and the scheme – where staff can see the benefit and trust the GPs, they seem to have changed some practices in a way that could reduce the burden care homes place on local acute providers