South Tyneside NHS
NHS Foundation Trust

Interim Evaluation Report

Digital Care Home Tablet

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Purpose

The purpose of this report is to evaluate the Digital Care Home Tablet which has been implemented in Care Homes across Sunderland. The roll out commenced in March 2016 using a staggered approach and to date 41 out of the 46 Care Homes is live using this new technology.

The Digital Care Home tablet incorporates vital sign monitoring equipment that has blue tooth which means the observations recorded will be blue toothed directly to the tablet. There are some vital signs however that have to be inputted manually by the user directly onto the tablet. The information collected by the tablet will also be transmitted to a cloud based portal which can then be accessed by the care home and health care professionals involved in the residents care. There are three assessments available on the tablet, which are:

- NEWS
- MUST
- ABBEY pain score

The potential benefits identified were:

- Carers would feel more confident communicating; accurate factual information to the relevant health care professionals
- The technology would support the decision making process, speed up treatment and hopefully prevent further escalation
- Health professionals involved within the relevant services should find the information they receive from the residential homes, more reliable and in a standardised familiar format which will support the decision making process

Evaluation Process

Quantitative data process used

Detailed analysis was completed on a selection of residents' care records both prior to go live and following implementation. This method was adopted as it was difficult to access all the relevant clients' medical and nursing records from the different care suppliers. However, using this method to collect data meant there was no way of confirming its accuracy and completeness and the standard of record keeping varied greatly between the care homes.

The individual's NHS number and the care home were recorded so where possible the same residents could be revisited, so a direct comparison could be made. However, within this report to maintain confidentially for both the resident and the care home all the information has been made anonymous.

Using this method allowed the following information to be collected:

- Medical Diagnosis
- Emergency Health Care Plan in place
- DNACPR statements in place
- GP visits
- Recovery at home visits
- 111 contacts
- 999 call outs
- A&E attendance
- Emergency hospital admissions

Due to time constraints it was impossible to visit the entire Care Homes involved to gather information, therefore to attempt to give a balanced view four Care Homes were revisited following implementation.

Qualitative data process used

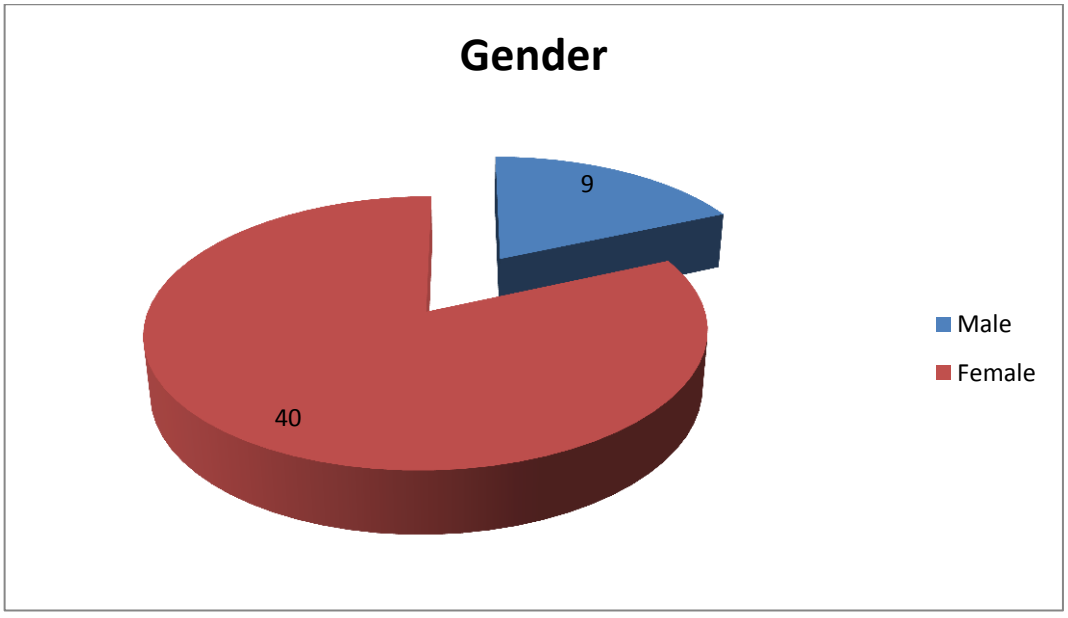
Interviews were conducted and information collected to support analysis of view/themes from the following stakeholders involved in the project:

- Care Home Staff
- Family of residents involved
- Recovery at Home service
- Frailty Team
- GP practice staff

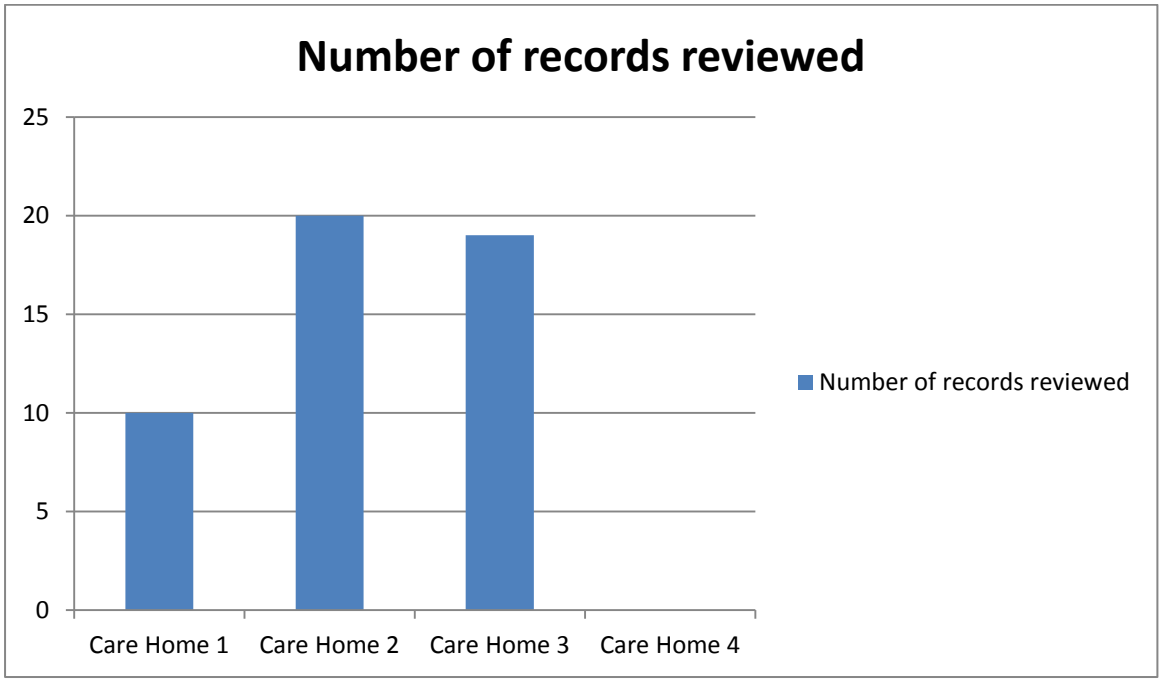
Results

Quantitative data

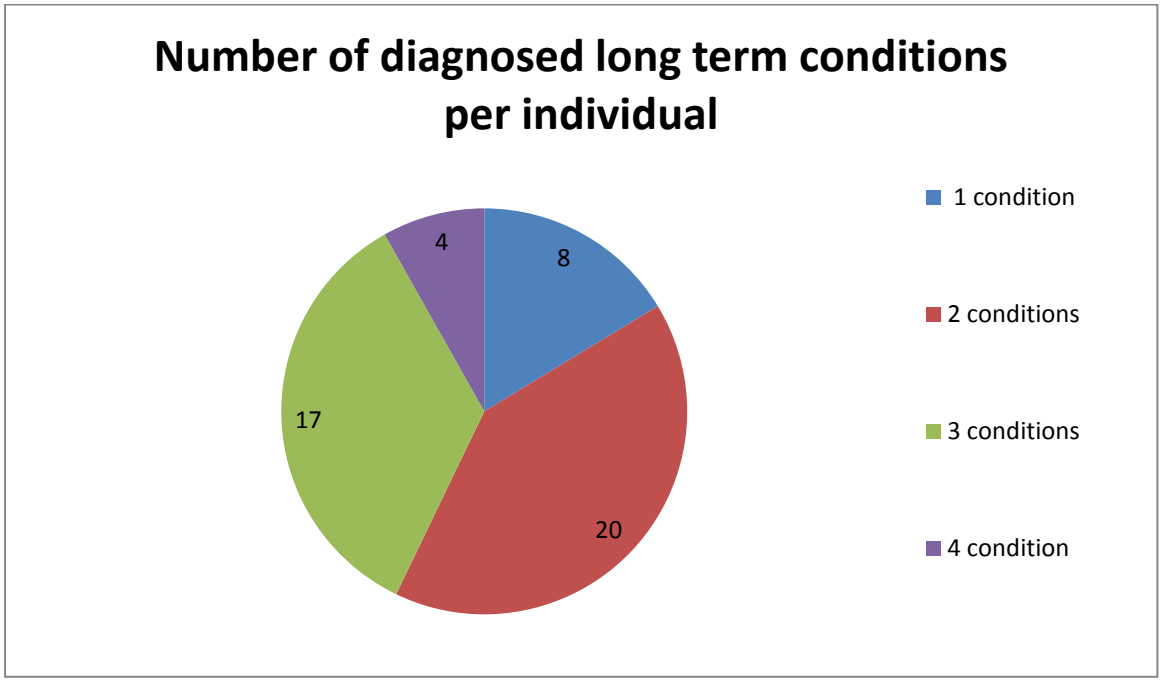
A total number of 49 individual residents' records were reviewed 81% of those residents were female and 18% male.



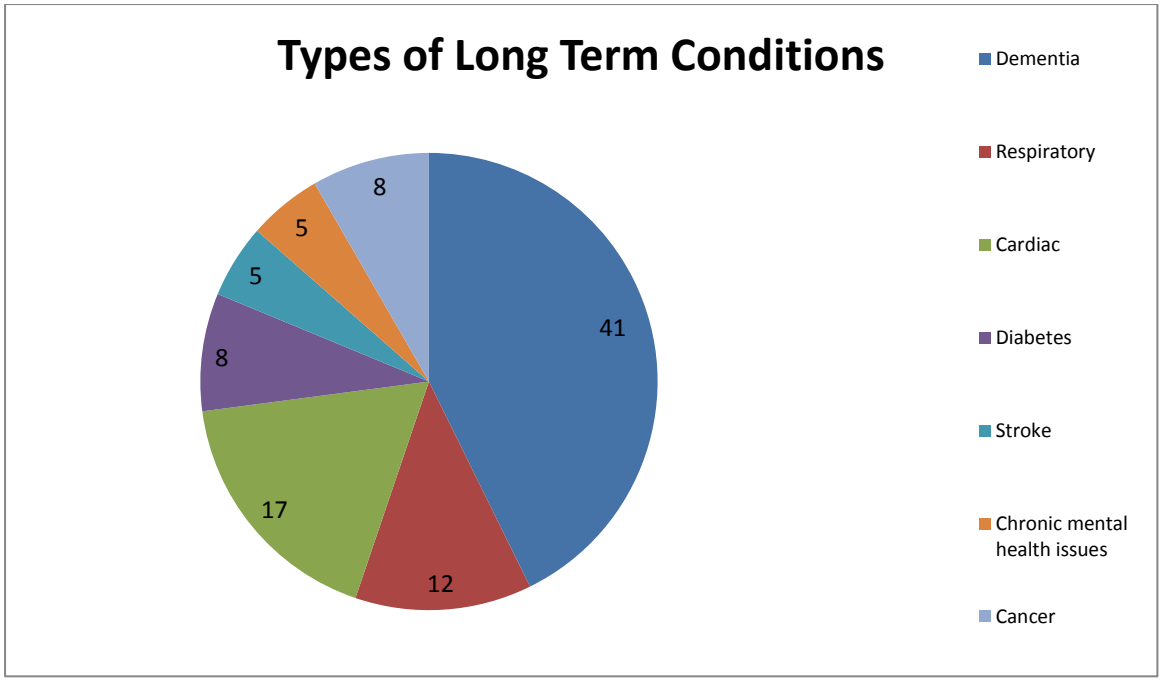
A total number of 4 care homes were visited to gather post implementation information, however one of the homes the records were too difficult to review but staff and family reviews have been included in this report.



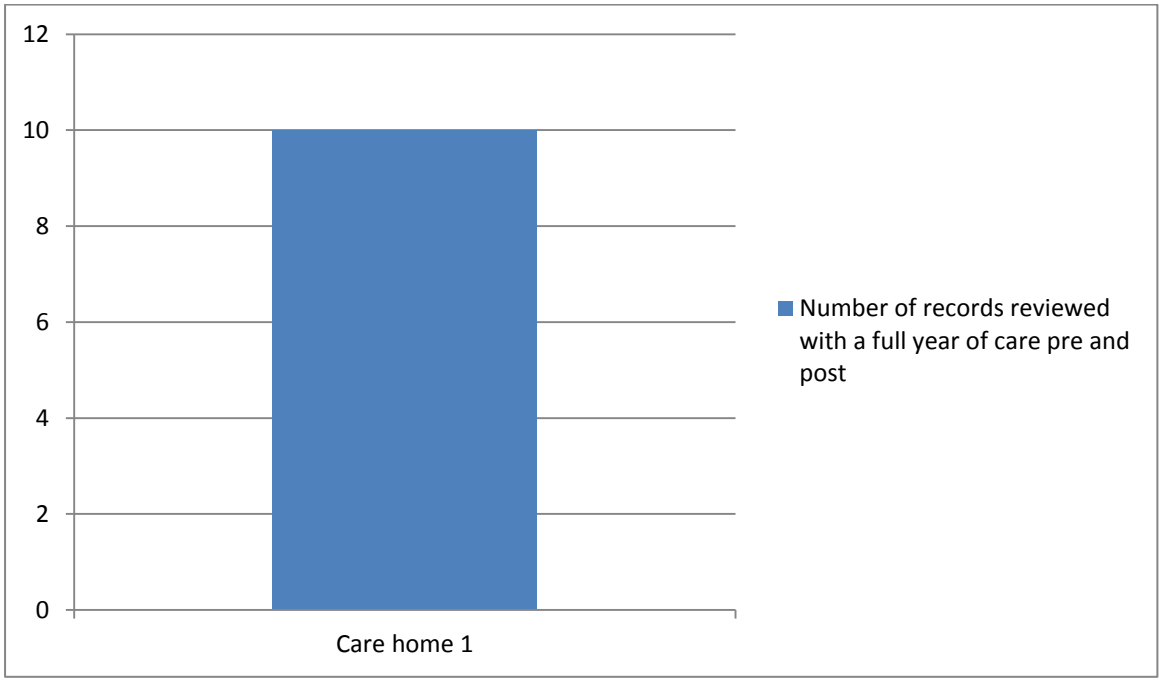
The data showed that the individuals in question had complex multi-faceted co-morbidities with a high percentage living with at least with 2 long term conditions.



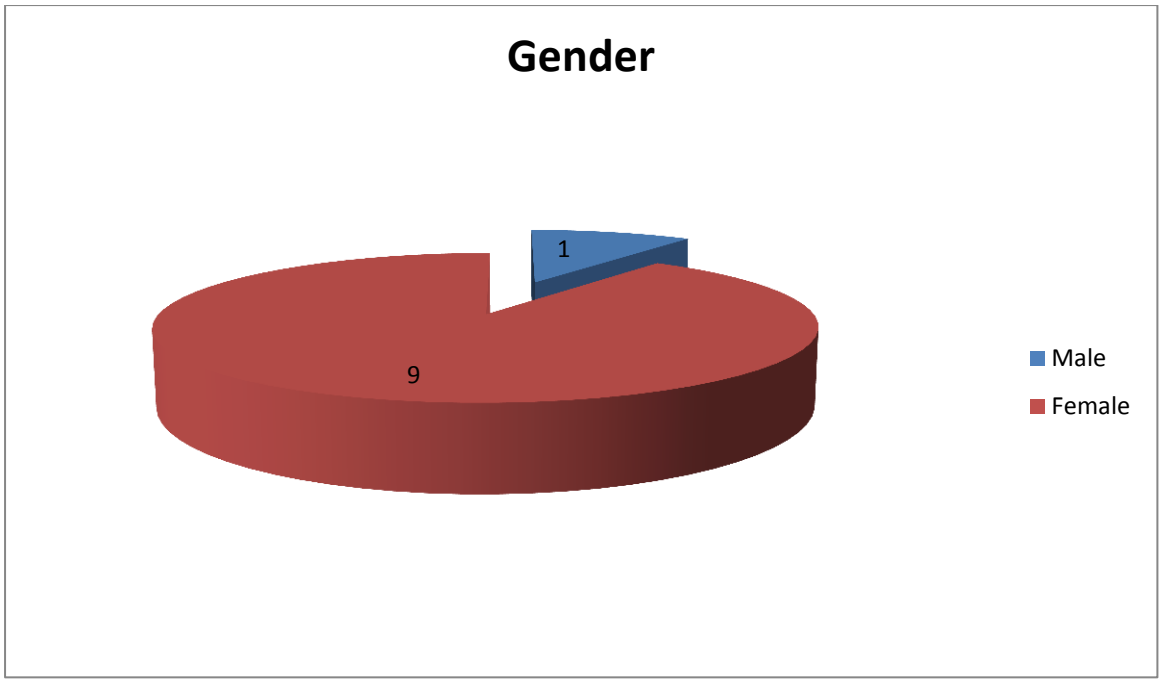
84% of the residents reviewed had a diagnosis of Dementia; therefore those individuals may find it difficult to express themselves during times of deteriorating health.

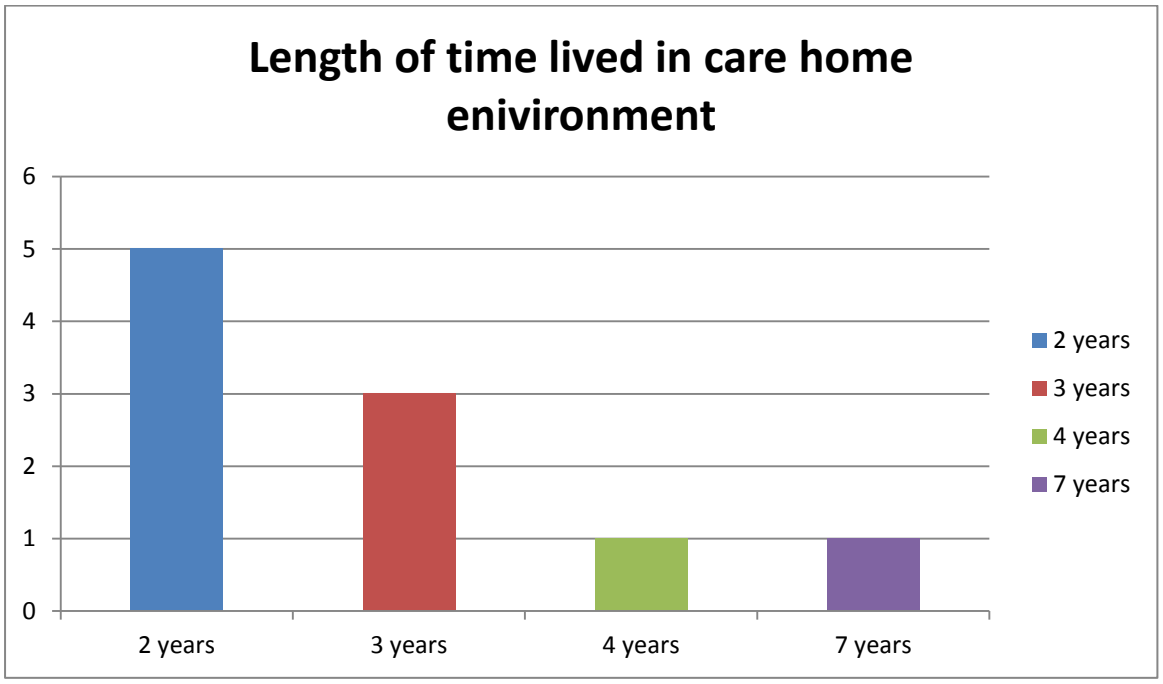


Out of the 49 sets of records reviewed only 10 residents had a complete year of care activity pre and post implementation. Those residents' records have been used to complete the detailed analysis of the type of activity for the year of care for 2015-2016 and 2016-2017

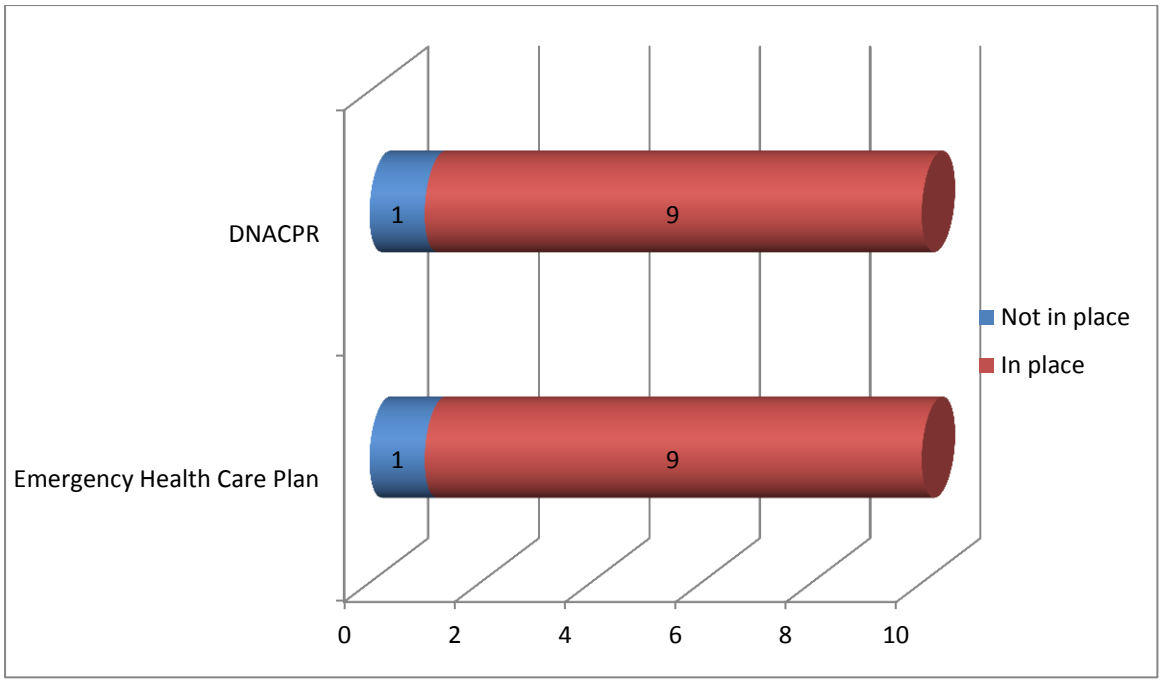


The results showed that 90% female to 10% male.



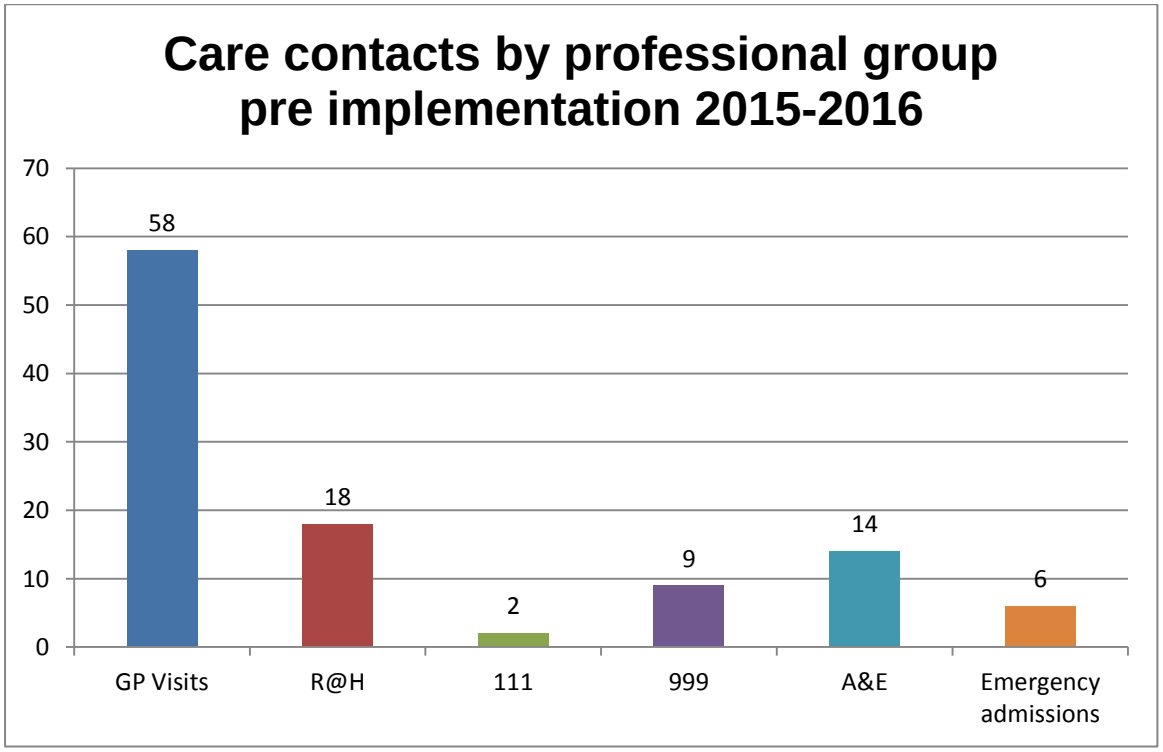


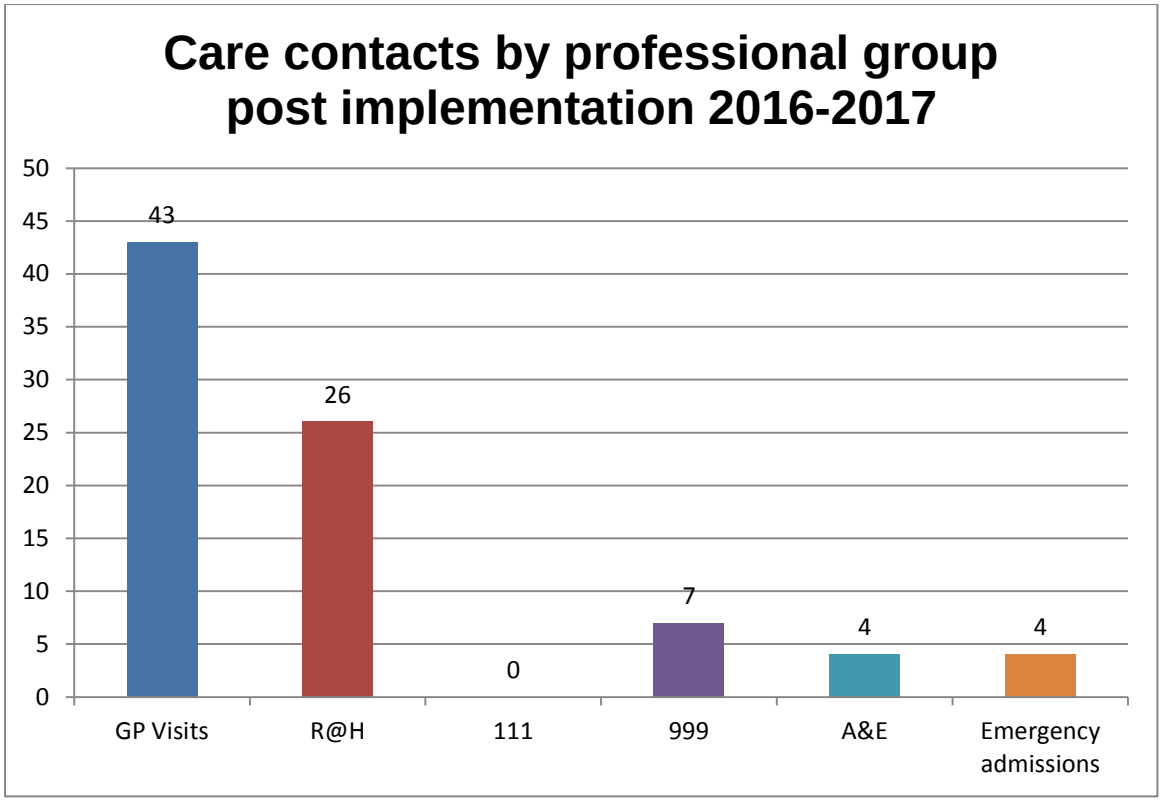
Assessment of number of Emergency Health Care Plans and DNACPR in place



Following the review it identified that 90% of those individuals had a detailed Emergency Health Care Plan and a DNACPR Statement.

All the residents' records were reviewed and the type of contact by the different professional group was recorded using the template Appendix One

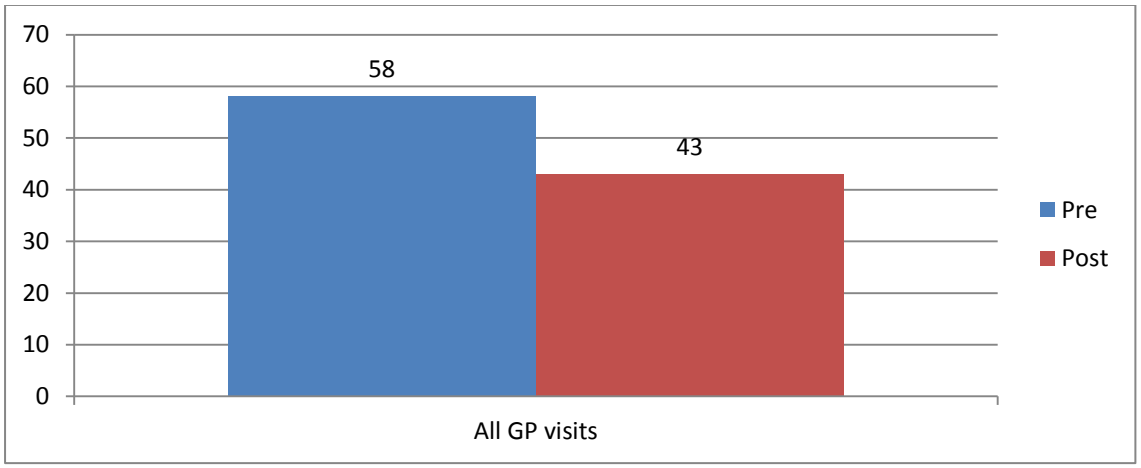




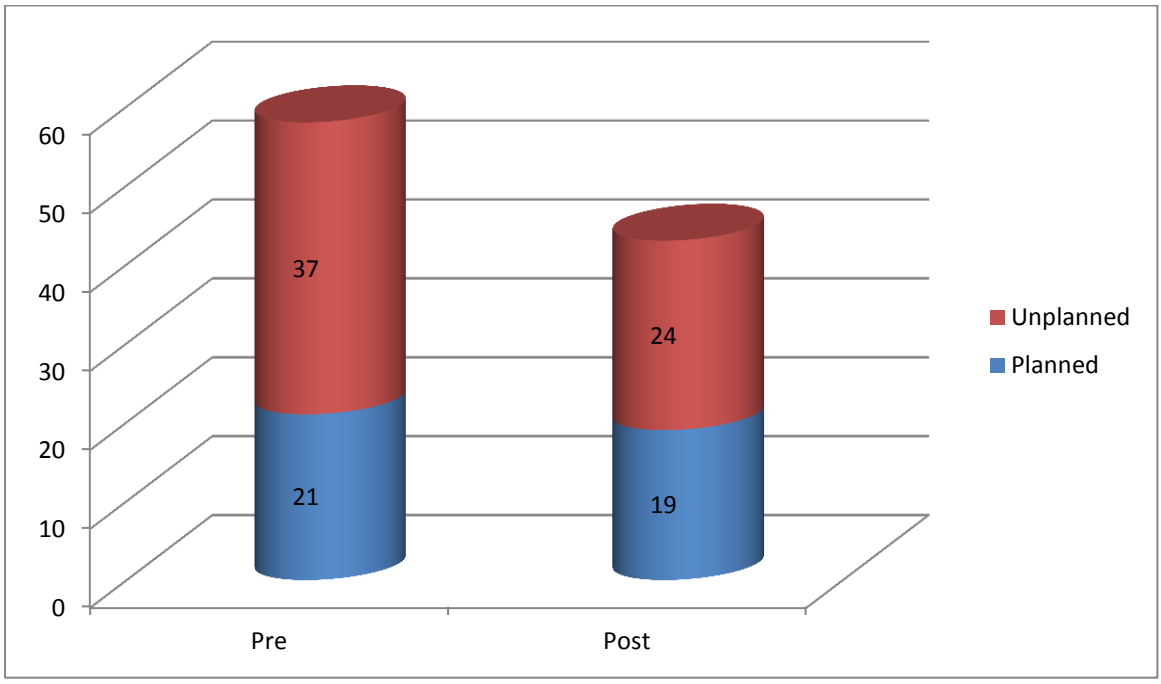
Community Setting

GP Contacts

For the 10 individual residents the year of care both pre and post implementation was analysed and the figures show post implementation a 25% reduction in GP visits



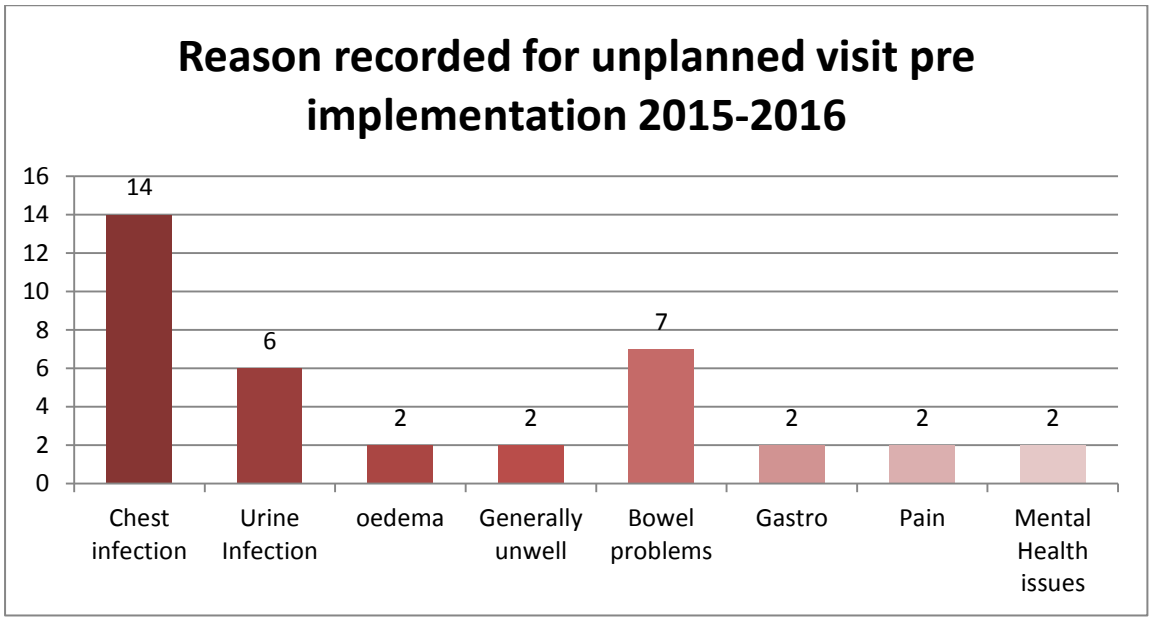
Those GP contacts were further analysed and broken down into planned and unplanned.



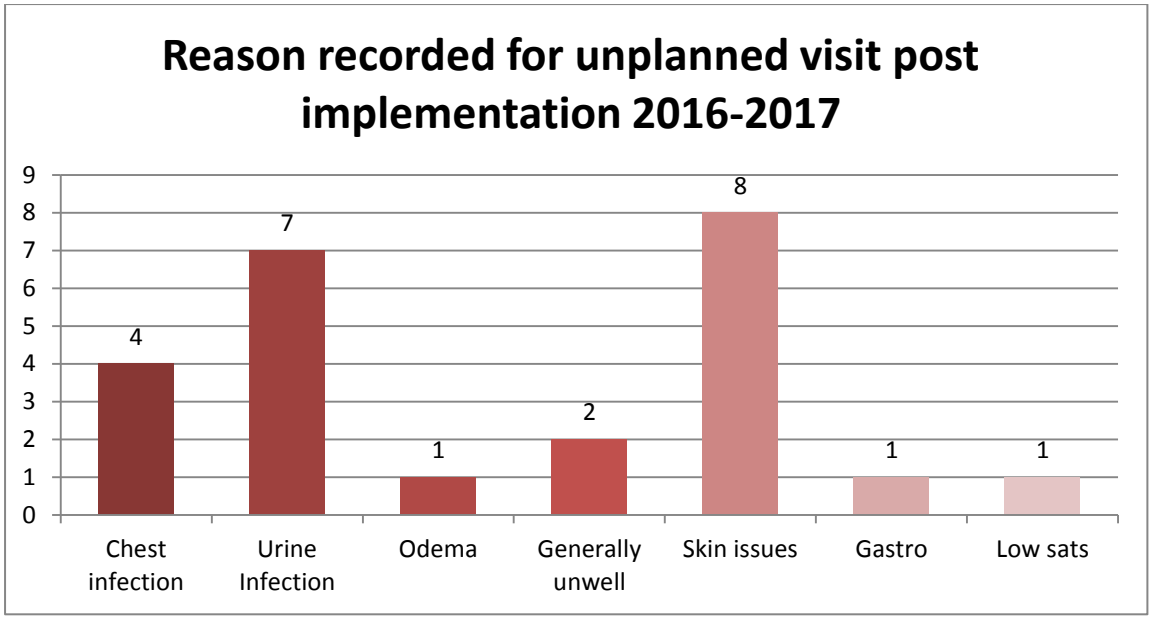
The information recorded showed that there was a:

- 35% reduction in unplanned GP visits
- 9% reduction in planned visits

The reasons for planned visits included medication reviews, completing DoL's, Emergency Health Care Plans and DNACPR statements. Unplanned visits are requests by the home when they have a health concern about the individual resident.



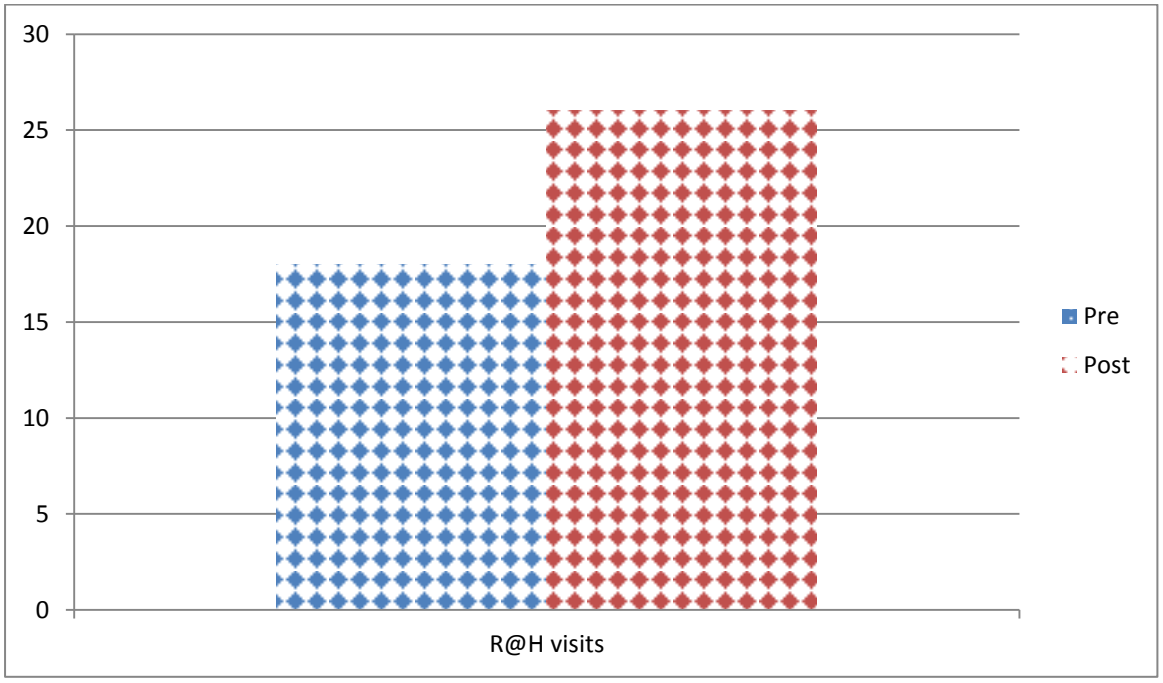
54% of all GP requests were relating to the resident having an infection



Post implementation showed a slight reduction in infection rates for those same individuals. There was some evidence that the language used during the documentation process had changed as one staff member had recorded reason for visit request as low oxygen saturation levels.

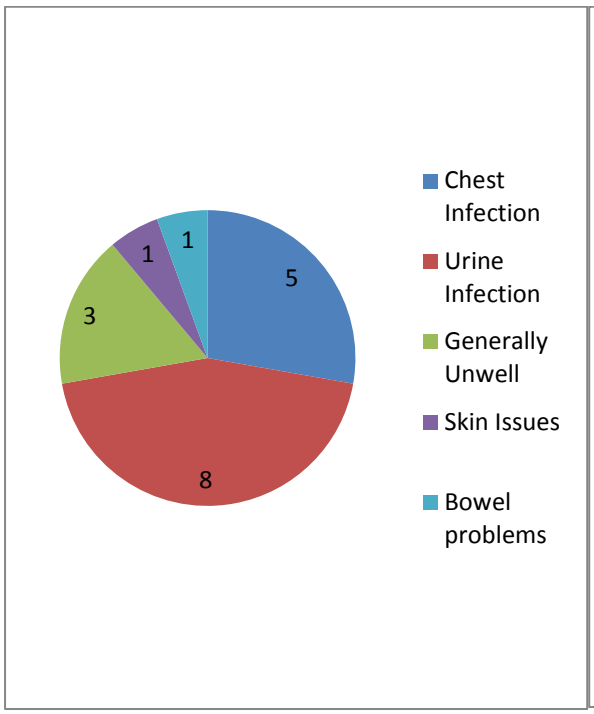
Recover at Home Contacts

The records identified that the number of visits had increased from the previous year

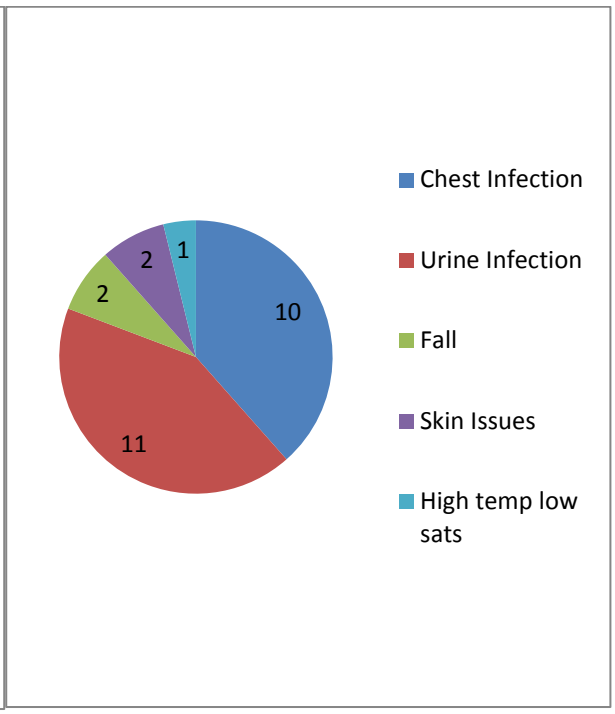


The total number of contacts by the service is outlined below, some individuals had more than one health problem. An analysis of the number and reason for the request for visits by the Recovery at Home service was undertaken.

2015-2016



2016-2017



Again this identified that 72% of contacts recorded for the individuals were associated with chest infection, urine infection and generally unwell pre implementation and 84% post implementation.

Again there was some evidence that the language used had changed in the records, as one carer had recorded the reason for visit as 'High Temperature and low oxygen saturation levels'.

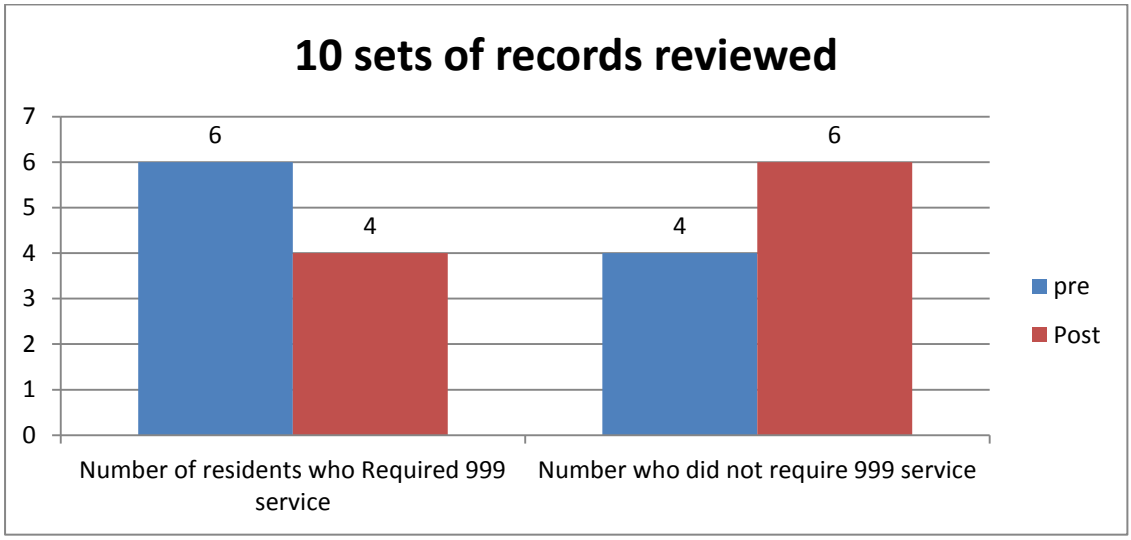
111 Contacts

The review identified the number for this type of contact is low only 2 in total pre and none post implementation.

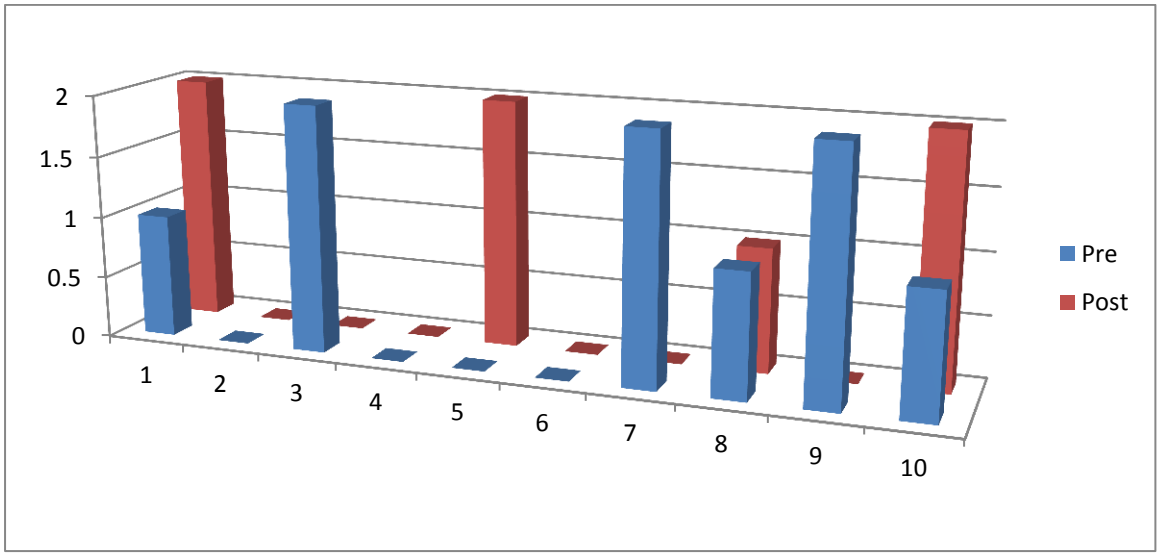
Emergency Secondary Care Review

Some residents used all the services during one episode of care, for example a common scenario which was recorded in the records, identified that a 999 ambulanced was called the individual assessed by the paramedics service who made the decision to take the individual to A&E for further treatment and then that resident is admitted to an emergency care ward.

Emergency Ambulance Call outs to the care home

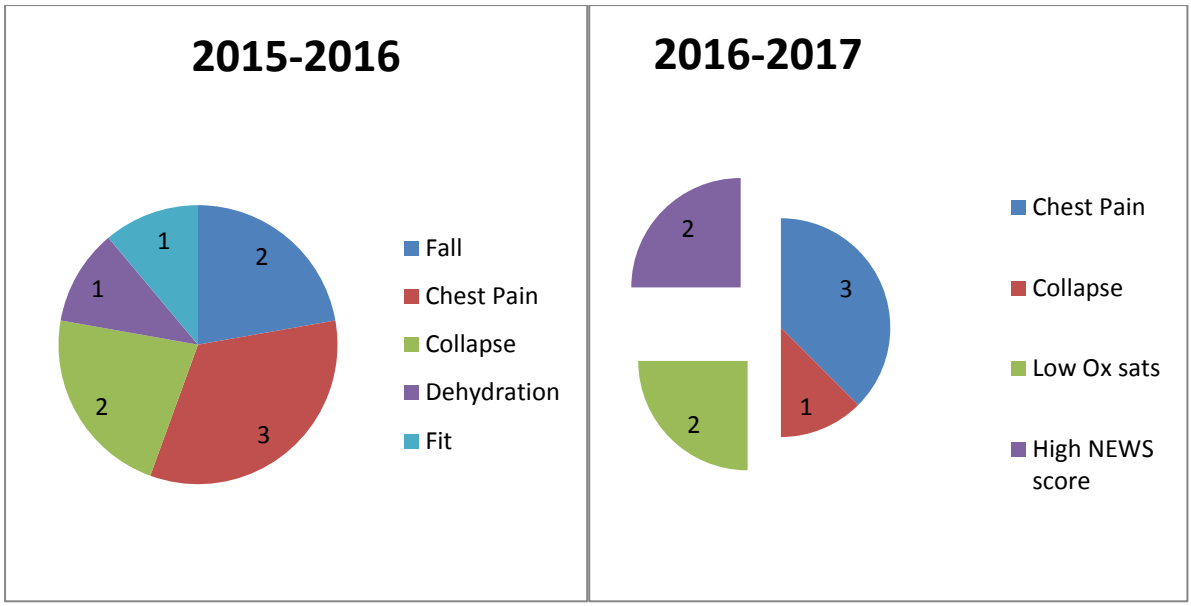


A breakdown of each individual resident usage



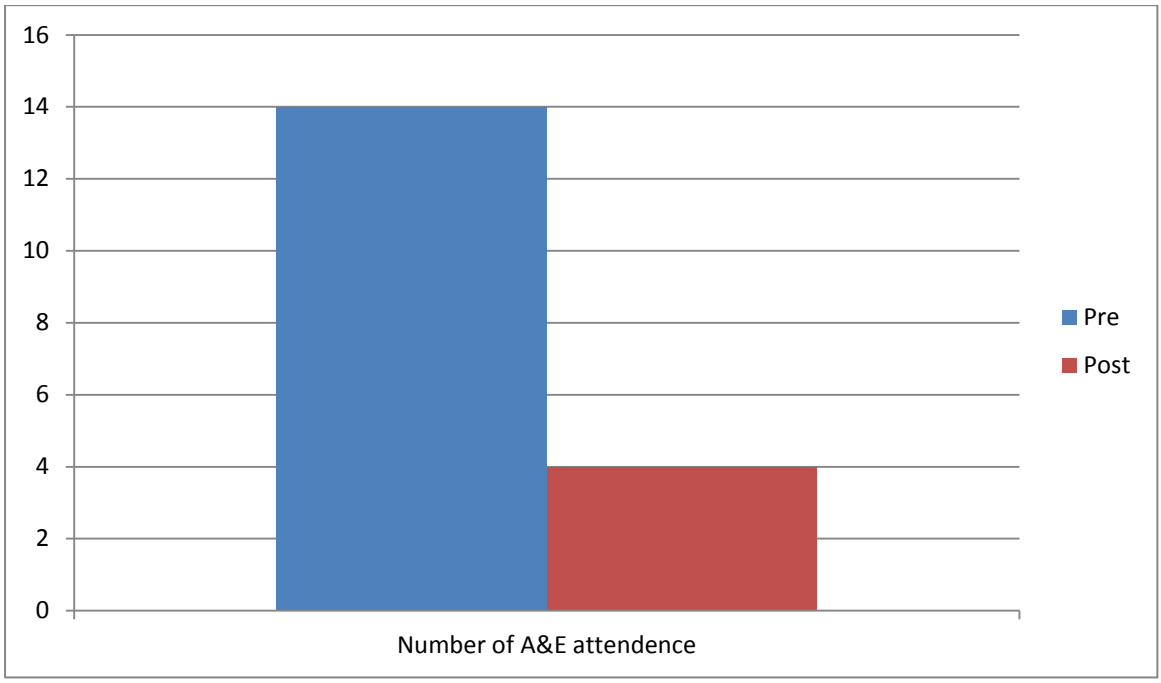
The review identified a 22% reduction in the use of the emergency ambulance service.

Reason for request recorded in the records



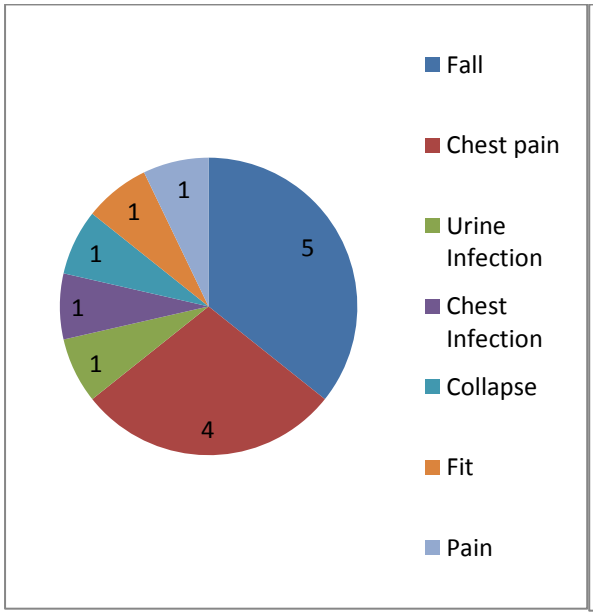
Again there was evidence that the language used in the care records following implementation had changed, on 4 occasions Low oxygen saturation levels and high NEW score was recorded in the reason for call out.

Accident and Emergency Attendances

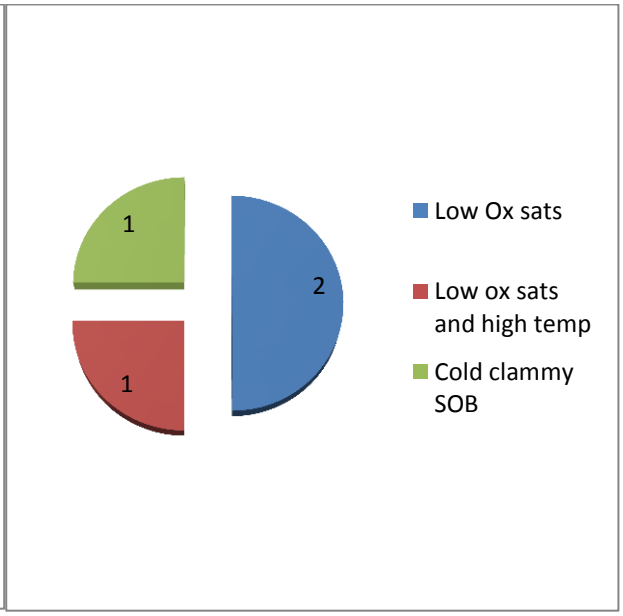


The chart shows a breakdown of the reasons why the particular resident attended the department

2015-2016

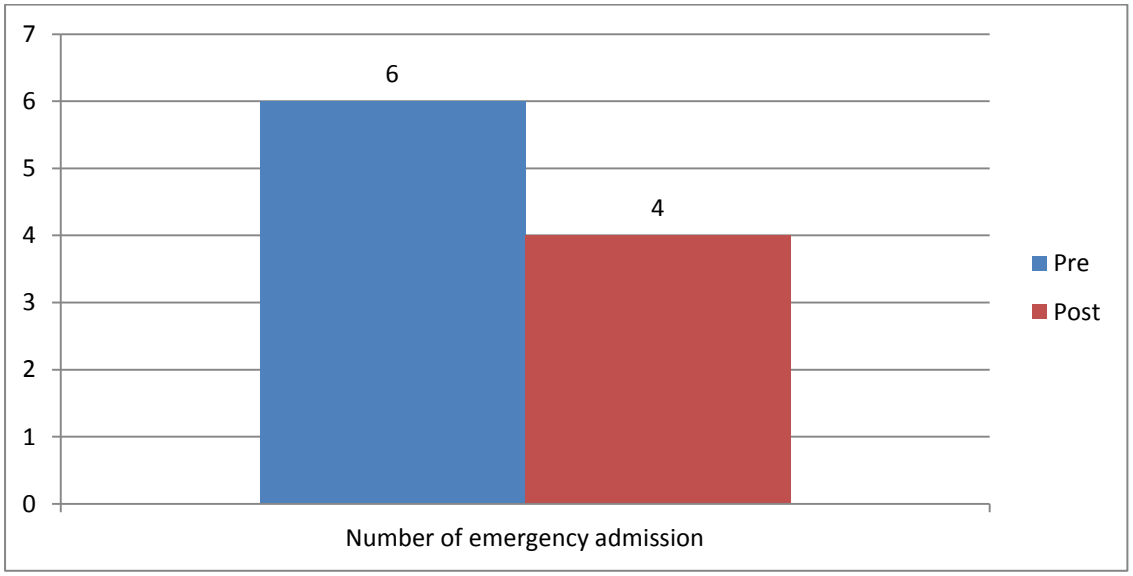


2016-2017



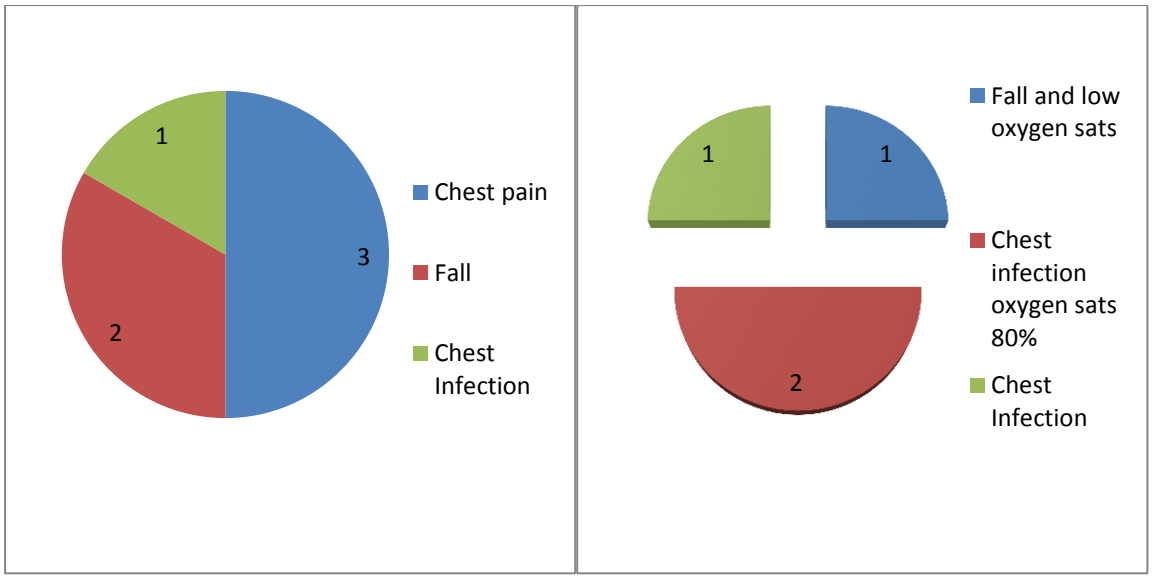
Post implementation there was a 71% reduction in attendance to A&E and again there was evidence that the language had changed during the documentation process in the care record.

Emergency admission



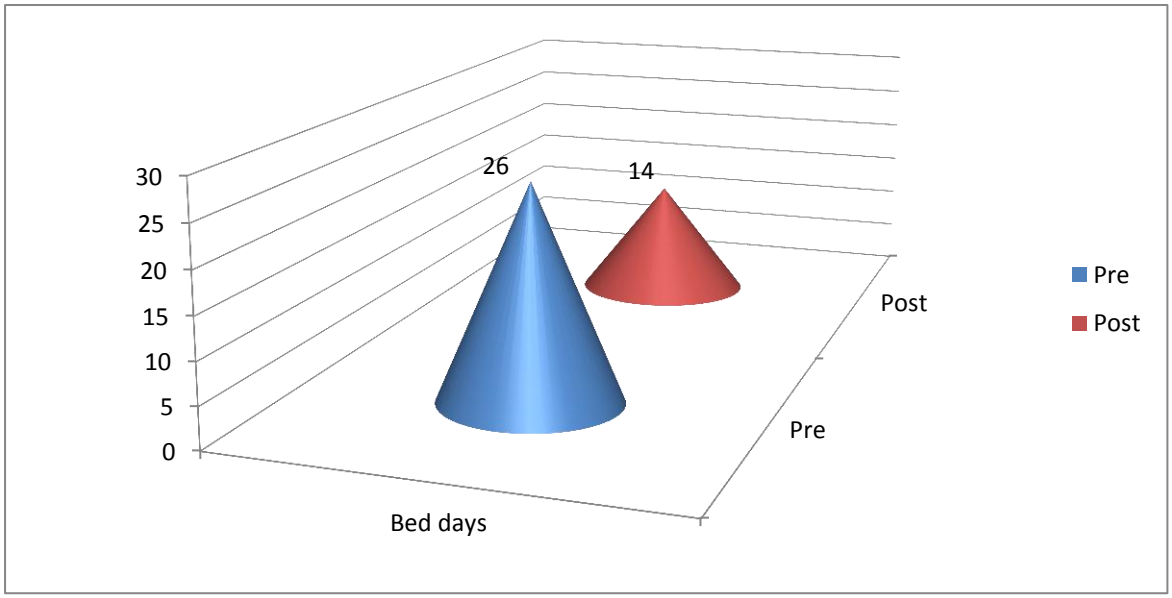
The reason recorded in the care record for emergency admission

2015-2016 2016-2017



The records identified that there was a 33% reduction in emergency admissions post implementation and again evidence that the language used in the care record had changed.

The number of days the residents spent in hospital during emergency admissions was calculated this information was obtained from discharge letters which were filed in the resident's records therefore an accurate account.



The records showed that there was a 46% reduction in the number of days spent in hospital following and emergency admission.

Summary of quantitative data analysis

Although the individuals are one year older and living with complex health needs, there has actually been an overall reduction of 24% post implementation of unplanned health contacts. However, using this method to collect data meant there was no way of confirming its accuracy and completeness.

After spending time reviewing the records there was evidence that those residents were having their vital signs monitored on a regular basis and having regular NEWS and MUST assessments completed. There was also evidence in the records that in times of concern those individuals are having their vital signs recorded again.

Qualitative Feedback

Care Home Staff (4 different Care homes interviewed x 10 staff members)

The feedback from care home staff that are using the new technology has been extremely positive and encouraging. Although initially at the start of the project some care home staff were sceptical about using the devices, as they did not believe it would make any difference to the care their residents received.

There were some initial concerns from care staff that they did not have the competence to use the equipment as it looked complicated. However, once they had received their training on how to use the new equipment correctly and used it in practice, one staff member stated, “I can’t believe how wrong I was about the tablet as it is so easy to use. I’ve totally changed my mind about it. It was really useful to monitor a lady who looked really unwell as we were able to see her observations and NEWS score improving.”

There was evidence of improved levels of satisfaction due to increased level of empowerment and ownership to support their decision making, during times of concern about resident’s wellbeing. Prior to the implementation of the Digital Care Home Tablet care staff stated they would often ring for a GP straight away or an emergency ambulance if they felt a resident looked unwell. However by using the tablet they stated it helped support their decision making process, aiding in when they needed to escalate a concern to the most appropriate service.

A member of staff shared an example of this when one of the residents looked breathless when she had been walked from her bedroom to the sitting room. “We had just walked a lady to the sitting room that has COPD. She was very out of breath and before the tablet I probably would have rang for an ambulance. But because I had the equipment to take her oxygen levels I was able to see after some rest her oxygen levels came back to her baseline.” This demonstrated that by taking monthly observations on the residents in their care, it was easier to identify what their usual measurements were, therefore giving reassurance to all involved.

This scenario demonstrated the benefits associated with the use of the tablet in this situation and reduced the need to ring for an emergency ambulance.

There was evidence of increased confidence when the care staff communicated with other professionals following implementation. One care home manager reported that, “It has given me much more confidence when requesting visits for my residents. Providing them with the resident’s observations and NEWS score has given me something concrete to tell them and I feel like we are now talking the same language.”

Learning new skills and expanding their knowledge has had a positive impacted reported one senior staff member. She reported that she was enjoying sharing these news skills and knowledge with more junior staff members.

The use of the Digital Care Home Tablet has encouraged staff members to ask questions as to why they were undertaking observations. Staff reported that they felt more valued as they were able to provide better care to their residents and having a baseline for all the residents made it easier to identify when they were deteriorating.

The care homes recognised that it was mainly the senior care workers who were using the equipment and acknowledged that going forward all levels of care staff need to be competent providing this aspect of care.

The care home staff did report that they felt at times that the clinicians did not have confidence in the vital sign measurements which they had recorded using the tablet and repeated the same measurements when assessing the patient.

Residents and their families

One of the key benefits identified has been a reduction in anxiety for both residents and their families. Residents have been impressed with the new equipment and reported a level of reassurance they didn’t previously have. One staff member reported that: “Sometimes family members identify that something isn’t quite right with their relative and have asked us to check their observations. We have one particular family that is very anxious about the health of their Mam and this has often caused us to ring 999. By using the tablet we are able to offer reassurance that their Mams observations were stable and she didn’t need an admission to hospital at this time.”

Wider Clinical Services

Recovery at Home (2 senior clinicians interviewed)

Although Recovery at Home has access to the system they have not been routinely accessing it when care homes have been ringing up requesting visits for their residents. However care home staff members have been able to inform them what

the resident's baseline observations and NEWS score was and what their current status is. This clinical information has been beneficial when Recovery at Home are triaging priority of patients, as they have been able to advise care home staff to repeat observations at specific times which has assisted in clinical decision making.

GP practice staff (4 different practices contacted for feedback)

Although the care staff reported positive views when dealing with practice staff, when four practices were contacted by telephone none of the people interviewed could comment stating they had no experience of dealing with care home staff ringing and providing vital signs for their patients when they requested home visits. This just highlighted the fact that more clinical engagement is needed with the practices as all Four Care Home had been using the table for more than 6 months. However, other practices waiting for care homes to go live can already anticipate the benefits associated with its implementation.

Frailty Team (3 different nurses form 3 teams interviewed)

All of the three nurses interviewed could see the benefits associated with the use of the Digital Tablet. One of the nurses reported that: "The GP's I work with are desperate for two of my homes to get their tablet as they think it' will really help them triage their patients who need home visits." Another nurse reported that the care home staff have a unique bond and relationship with their residents and with them now having the skills to take clinical readings, they can do it when the resident is most relaxed and at a time that suits them. Having these more reliable readings has resulted in the GP being able to modify one lady's current hypertension medication.

One nurse reported that the care staff need more support in becoming more competent recording the residents respiratory rate and following being interviewed said she will be encouraging and supporting care home staff using it going forward.

To Conclude

The information collected showed that a high percentage of residents are requiring health interventions, associated with symptoms of infection. The care homes which were used to evaluate the benefits did all demonstrate that they are completing regular assessments using the Digital Tablet. The staff did demonstrate that they had a good understanding of what the norm was for those individual residents and what course of action was required during times of concern regarding their residents' health.

The data collected did demonstrate that for those ten residents there was a marked difference to the care activity for the year of care pre and post implementation.

- 35% reduction in unplanned GP visits
- 22% reduction in 999 ambulance requests
- 71% reduction in A&E attendance

- 33% reduction in emergency admissions
- 46% reduction in bed days spent in hospital

However, the sample size was small and there may have been other influencing factors to take into account which may have impacted on these results. Also due to the constraints around access to medical and nursing records there was no opportunity to validate the data recorded in the residents care record.

There was evidence in the care record that the language used by the carers to describe the reason for the health contact had changed in some incidences. With information about vital signs being recorded which were outside the norm for those individuals which prompted them to ask for help from the different health services.

The benefits are being realised by the care staff using the Digital Care Home Tablet, they have reported that they have learnt new skills gained knowledge and now feel more confident in being able to care for their residents more efficiently.

Recommendations

To be able to maximise all the benefits of this new technology more clinical engagement is required from all the clinicians involved in providing services for this population group. All the relevant clinical teams have been offered training and have logins set up however, very few are accessing the system directly.

The care home staff reported that the visiting clinicians often repeated the same vital signs and this made them feel that they were dismissing their readings as inaccurate. The clinicians need to explain to the care home staff that these are repeated as part of their assessment and this will improve communication with the staff and where ever possible encourage and support the care home staff, using this new technology.

This piece of work could be repeated at a later date, when more Care Homes have been live using the Digital Table for a year. This would provide a much larger sample of residents records for analysis which may give more credibility.

Appendix One **Care Home Data Collection Tool**

Name of Care Home:---------- Date---------- Review Time Period----------

Clients Name---------- Client NHS Number----------

Please circle which applies Nursing or Residential Care Date admitted to Care facility:----------

Please circle Yes or No DNACPR in Place? YES NO Emergency Health Care Plan in Place? YES NO

Please list Type of Long Term Condition Client has:					
	Date & Reason	Date & Reason	Date & Reason	Date & Reason	Date & Reason
GP visits					
R@H visits					
111 visits					
Emergency Ambulance					
A&E attendance					
Emergency admission LOS					