Tunstall

White paper

The transformational potential of telecare

The latest independent research on the benefits of reactive and proactive telecare for policy makers and commissioners/payers

** Under Embargo **

Service users and their family

Social care

Healthcare

Allied public services

Executive Summary

There is increasing interest in the potential of reactive, proactive and personalised telecare to address the health and care demands of an ageing population. Multiple global exemplars of best practise can be found, but one of the constraints to date has been limited analysis of the operational and economic outcomes realisable by commissioners/payers. In response, Tunstall has funded a series of independent research studies evaluating these impacts.

The work spans reactive (emergency response), proactive and personalised (preventative) telecare in the UK and Spain. Collectively the findings provide compelling new insights. These demonstrate and quantify the ability of telecare to contribute to the 'quadruple aim'[1] of better health and care outcomes, improved cost efficiencies, user and carer experience, and improved staff experience. Specifically the findings show that;

- With reactive telecare in place, £4,500 per service user per annum was avoided in wider social care costs[2].

- Where this was extended to advanced proactive and personalised telecare, service users were able to live independently for longer, particularly those ultimately requiring residential care[3]. On the most prudent basis of assessment, the relative delay for people transferring to residential care compared with the overall was 8.6[4] months.

- Using an assumption of £84 per day for residential care, and with 27% of telecare users ultimately requiring residential care, this has the potential to avoid £5,900 per person[3].

- In addition, we believe this incremental capacity in residential care may contribute to alleviating some 'bed blocking' in hospitals.

- Proactive and personalised telecare also enabled wider operational efficiencies particularly in reducing emergencies: Emergency calls per person reduced by 54%[5] and ambulance mobilisations by 36%[6] over the study period[3].

- Proactive telecare service users reported a significant improvement in self-sufficiency and perception of safety, whilst improvement in the benefits for family (including informal carers) were reported by 98%[7] of respondents.

The research provides much needed quantification of the potential benefits per service user of reactive, proactive and personalised telecare across the quadruple aims model. We recommend that policy makers and commissioners apply this insight to derive indications of the further potential available via more advanced telecare services as well as identifying opportunities for enhancement in existing programmes.

Contents

1.0 Introduction and context

Globally, health and social care systems are facing a fundamental challenge catering for the implications of an ageing population and allied increase in chronic conditions. Current models of care for the elderly are increasingly challenged by the economic and capacity implications caused by the growth in demand. New models for health and social care which enable more effective means of addressing this challenge are therefore urgently required.

In some regions, telecare is already an established component of such approaches but this is far from universal and the maturity of deployments varies considerably. There is however increasing recognition that telecare may offer far greater potential through wider and more effective deployment, as well as through more advanced proactive approaches.
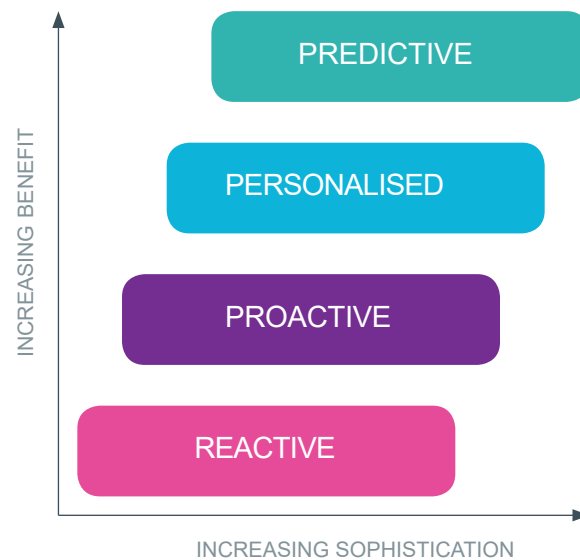
One of the challenges in evaluating this potential has been the lack of independent analysis of the benefits for social care and healthcare commissioners/payers and across the wider quadruple aims model. Recognising the need for clearer insight, Tunstall has commissioned a series of independent research studies to assess the outcomes of large scale telecare deployments. The studies spanning both reactive telecare in the UK and proactive/personalised telecare in Spain provide comprehensive insights and quantification of the realised benefits. These have been expressed on a per-person, per-annum (pp/pa) basis to help policy makers and commissioners/payers rapidly evaluate the potential scaled to their own systems and service user populations.

The insight is of relevance whether considering telecare as a new development, increasing the effectiveness of current telecare deployments, or extending these to higher level services. The work has also developed a new telecare outcomes framework[8] unified across the telecare tiers which helps provide much clearer understanding of where benefits may accrue, not just in social care but across the entire health and societal ecosystems.

1.1 Different levels of telecare

In order to help frame the different types of telecare services, we have developed a four tier model as summarised in Figure 1.

Figure 1: Telecare tiers

At the core of all telecare services is a **reactive** capability to an emergency situation. In the event of an issue being detected via installed sensors or via a worn pendant, contact can be directly established with the monitoring centre which can support or mobilise the most appropriate help. Sensors can be tailored to the user's specific situation to mitigate risks and combined with the reassurance of an effective response in the event of an issue, peace of mind can be provided for users and their friend/family carers.

Proactive telecare retains all of the aspects of reactive services but extends these in ways designed to avoid or reduce critical situations arising. Delivered as an integrated programme of outbound calls, follow ups, home care visits, along with advice and guidance, proactive telecare provides much broader and holistic support for service users, and their carers. The latter can be critically important with carers frequently being key to maintaining their loved one's independence. By providing support, guidance and tools to reduce carer overload, proactive telecare can reduce the risk of carers becoming dependent themselves, or developing conditions associated with burnout.

The full benefit of proactive support can be realised when the service is **personalised** to the specific needs of the service user through an ongoing needs stratification process. As well as better meeting the specific needs of the users/carers, the approach enables far greater support to be directed to those with the highest needs, risks and/or service usage. This cohort is also most likely to place higher demands on social care and healthcare systems and by improving the support, these impacts can be reduced.

The final tier in the hierarchy is advanced predictive telecare in which data-driven-insight and comprehensive health and care interventions complement the proactive personalised telecare. Predictive telecare approaches are relatively new, but Tunstall's pilot programmes[9] are already indicating high levels of predictive accuracy[10] using operational telecare data alone. By providing earlier indications of potential issues, interventions can be made earlier and more effectively to help avoid the adverse event.

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[9] In Spain, Tunstall Televida.
[10] Management analysis.

2.0 Research case studies

Recognising the need for robust analysis of the payer/commissioner and policy maker benefits of telecare at each of the tiers, the Tunstall funded independent research programme was developed to span the full reactive, proactive and personalised spectrum.

In the UK, the impacts on other social care services of reactive telecare for Lancashire County Council (LCC) has been analysed by the Yorkshire Health Economic Consortium (YHEC, part of the University of York). Since reactive telecare is a core platform for all telecare services, this insight is relevant not only in reactive telecare but also for all other telecare tiers.

In Spain, the benefit of proactive and personalised telecare has been analysed at operational and economic levels by independent research consultancy Ignetica Ltd. Based on all Tunstall Televida service users between 2011 and 2018, the findings provide a benchmark for others considering the incremental potential of higher level services as well as quantification for those already operating proactive services.

In terms of service user perceptions, this work is complemented by a third study undertaken by the Foundation for Health and Ageing at the Universitat Autònoma de Barcelona (FSiE-UAB). This illustrates not only the significant improvement in user reported perceptions of their safety and self-sufficiency, but also in terms of peace of mind for their families.
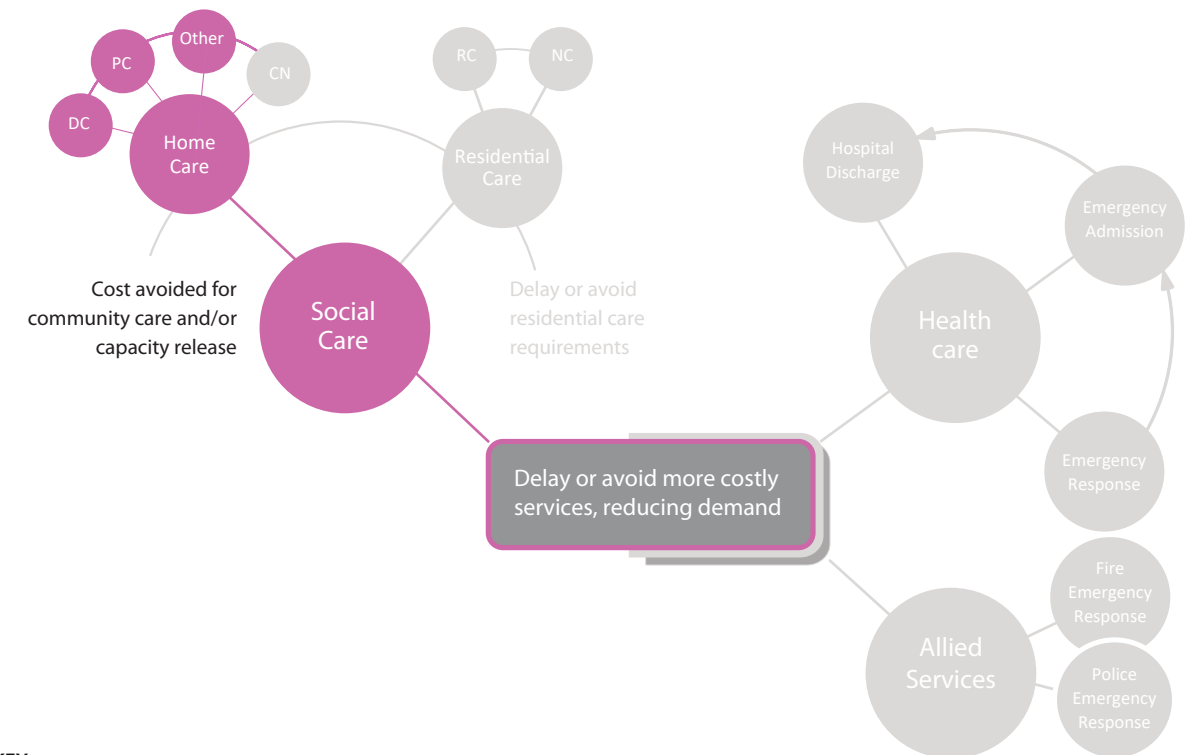
2.1 Care system benefits from reactive Telecare

The core elements of reactive telecare are common foundations for even the most advanced telecare solutions. Studying the impacts of reactive telecare can therefore provide key insight for such deployments, as well as providing a baseline for higher tier telecare services.

Reflecting this importance, Tunstall commissioned YHEC to undertake analysis of the impacts of telecare as deployed by Lancashire County Council (LCC) on overall social care package costs.

LCC is a long standing commissioner of telecare, but is particularly notable since recommissioning in 2015/16 led to a new approach which has achieved improved adoption and integration with consequent delivery benefits. Feedback indicates benefits being realised across each of the user/carer, social care and healthcare stakeholders. However, this research focussed specifically on the change from a commissioner perspective in overall home care service provision as reflected in figure 2.

Figure 2: The focus of the reactive telecare research in the context of the further potential benefit areas

KEY:

DC = Domiciliary Care, PC = Personal Care, CN = Community Nursing and related, RC = Residential Care, NC = Nursing Home Care, DToC = Delayed Transfer of Care

Using pseudonymised care data, the research enabled a robust statistical analysis of the home care package costs for matched cohorts of service users with, and without, telecare over time. Beneficial impacts in healthcare were also anticipated and will be assessed in a later phase of the study. As such, although the findings within social care alone are compelling they should also be considered as just one of the key components of the full benefits across the wider stakeholder domains as indicated in figure 2.

The study considered the social care data for LCC service users in the period 2016-17 using a control group without telecare and an intervention group using telecare. The two were matched as closely as possible based on their level of dependency, age and gender. At the time there were approximately 6,000 telecare service users (a number which has now grown based on the success of the programme to over 12,000). Since the objective was to assess the impact of telecare on other care services, those who were only in receipt of telecare with no other services were excluded (approximately 50%). Sampling was then taken from the remaining cohort, selecting matched subsets not impacted by other significant confounding factors.

A time series statistical analysis was undertaken and a model developed to reflect this using a series of co-variables including treatment (control or telecare), living alone, support from friends and family, entered a care home or died at any point, needs band and age band.

The weighted average cost of all of those who received telecare were prorated limited to the time periods observed to provide a prudent assessment perspective. The total difference between the two groups, less the cost of the telecare service equated to just over £4.5k per service user per annum. **Given the numbers of service users involved this can quickly scale into many millions of pounds.**

Since telecare was already in place, this reflects the value of the incremental capacity which would have been demanded if it was not in place, i.e. the additional costs avoided through use of telecare. However, with capacity being already constrained in most municipal settings and demand increasing as a result of ageing populations, measures which can reduce demand and offset the rate of increase otherwise required are of huge significance.
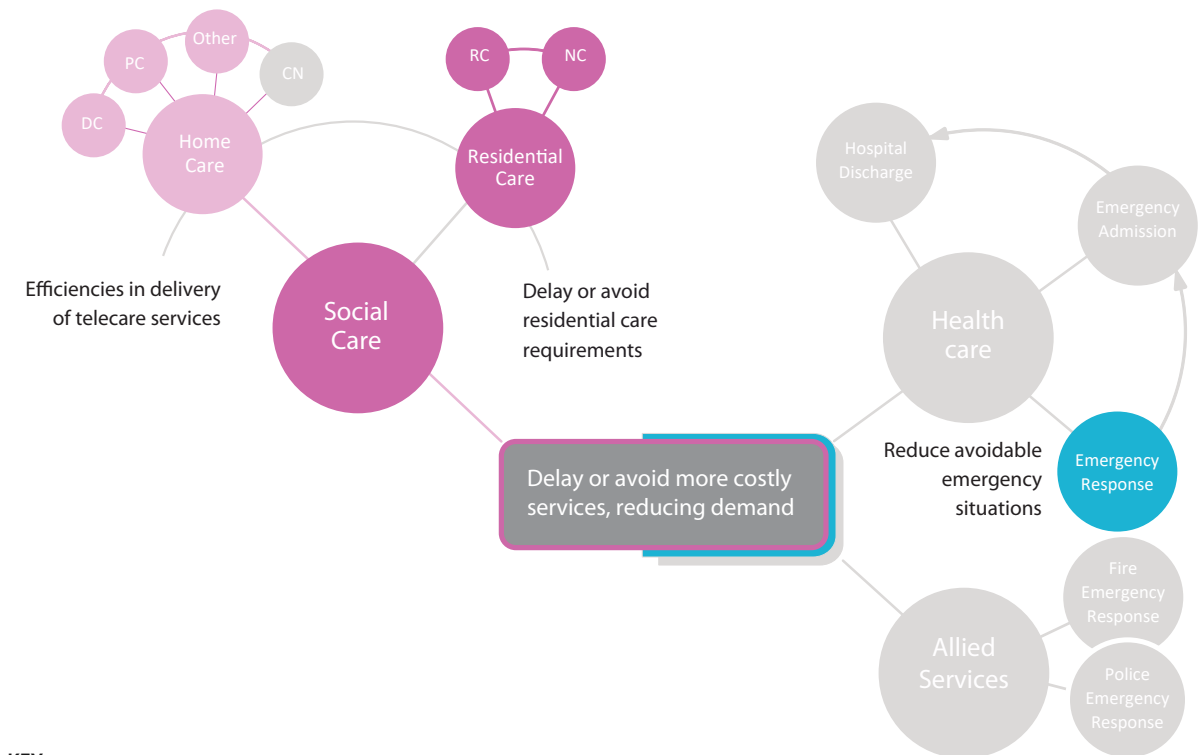
The research conclusively demonstrates how effectively managed and integrated telecare programmes can have a major impact in current operating terms, as well as strategically in tackling the demand implications imposed by ageing populations. Anecdotal feedback also points to potential benefits for healthcare and further research has been commissioned to consider these aspects definitively. However, even based on the capacity release in the social care system alone (i.e. additional costs avoided), the economics are compelling.

2.2 Proactive and Personalised Telecare in Spain

Proactive telecare builds on reactive telecare and extends the capability to provide enhanced support for service users and their family/friend carers. Personalised approaches take this further to ensure that the services are individually aligned to each service user/carer's unique needs via a needs analysis process. Collectively proactive and personalised telecare offers the potential to better support service users such that they can safely live independently for longer. Simultaneously, this can also create operational efficiencies and cost avoidance benefits for social care, healthcare and indeed the wider economy.

Given this potential there is increasing interest in the application of proactive telecare, particularly related to addressing the challenges associated with an ageing population. Whilst in general this is in a relatively early stage of adoption, in Spain the model has been embraced at scale since the late 1990's. As a result, Spain provides a mature and very large scale world leading exemplar of proactive and (since 2016) personalised telecare.

Figure 3: The focus of the proactive and personalised telecare research in the context of the further potential benefit areas

KEY:

DC = Domiciliary Care, PC = Personal Care, CN = Community Nursing and related, RC = Residential Care, NC = Nursing Home Care, DToC = Delayed Transfer of Care

Tunstall's Spanish division (Tunstall Televida) has been at the forefront of this innovation process and as one of the largest providers of these services in Spain, this also provides a large scale service user population to study. To independently assess the benefit of progressively more advanced proactive/personalised services delivered by Tunstall Televida, a longitudinal study spanning the years 2011-2018 was commissioned with Ignetica Ltd.

The study overcame some of the traditional challenges of mapping discrete health, social care and population datasets and instead utilised Tunstall Televida pseudonymised operating data. Due to the nature of the proactive/personalised telecare service this data is comprehensive spanning the full telecare experience of service users over this time. This provided rich data on the service user demographics (population, age, gender and dependency), the service metrics (registrations, cessations and causations) and operating metrics (for telecare and for allied emergency services) over time. With approximately 248k service users by the end of the study period it also provided a significant study population.

2.2.1 Service user population baseline

The study sought to assess qualified change over time as the proactive and personalised telecare service became progressively more advanced. To ensure that changes were the result of the new approaches rather than other demographic factors, a key initial focus was investigating the comparability of the service user population at registration for the service. This confirmed that whilst the service user population changed and grew over time[11], the average age at registration remained very stable.

In 2011 the mean age at registration was 79.15 years which grew marginally to 79.75 years by 2014 and to 79.89 years in 2018. The gender mix remained stable throughout, as did the dependency (i.e. stratification of need) across the duration that this data was available[12]. As such it does not appear that there was any significant variation in the mean profile of service users at registration and this therefore provides a stable population to assess the wider changes.

2.2.2 Increased time living independently

Having commenced telecare, this is normally ended only when the service user either dies or their needs change to the extent that they can no longer live independently. With the age and profile of service users being broadly consistent at registration, assessing the time before leaving the service therefore provides a key indication of changes in the time living independently. For ease of reference we have referred to this duration as length of stay in telecare (LOS-TC).
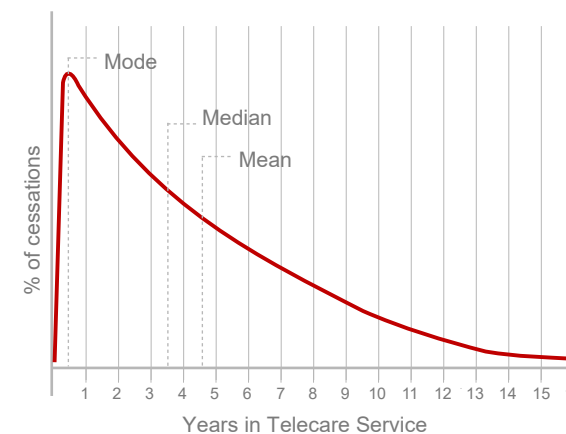
Overall, the mean LOS-TC increased steadily over the study period as proactive services were enhanced and latterly personalised. In 2011 mean LOS-TC was 3.25 years, by 2014 this was 4.16 and 4.75 years by 2018. Correspondingly the mean age at cessation increased from 82.96 years in 2011, to 83.88 in 2014 and 85.17 in 2018. Mean LOS-TC was thus increased 2011-2018 by 1.5 years and 0.59 years 2014-2018.

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[11] Service user population at the end of year was 165k in 2011, 202k in 2014 and 248k in 2018.

[12] Dependency was assessed and recorded from 2016 onward.

Whilst the mean changes are very significant, they of course provide a single point summary of a much more nuanced distribution of LOS-TC durations. This has been investigated as part of the study revealing a long tail distribution (figure 4) with a peak in the early months of service, and others then extending in some cases to 15 years or more. Given this profile, due consideration was also given to the statistical implications of the cumulative effect of the distribution curve. Use of median rather than mean measures can be useful in reflecting the profile and this data was available from 2014 onwards and is therefore also used where possible. On this basis, over the shorter 2014-2018 period median LOS-TC increased by 0.17 years from 3.71 to 3.88 years.
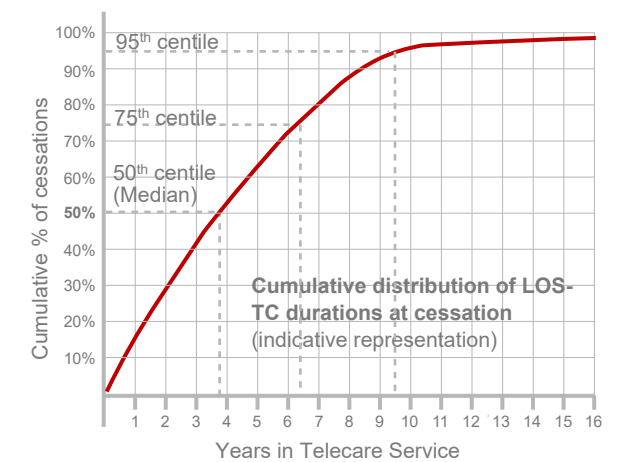
Figure 4: Indicative distribution of LOS-TC durations by % of cessations[13]

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[13] Simplified representation based on the Ignetica study of proactive and personalised telecare in Spain.

The same data can be seen in terms of its cumulative profile (i.e. the cumulative percentage of cessations by the particular LOS-TC) in figure 5. This shows that close to 100% will have left the service after 15 years, and highlights the opportunity to consider the changing position at different centiles over time.

Figure 5: Indicative cumulative distribution of LOS-TC durations by % of cessations

Using the same format as figure 5, figure 6 presents the specific profiles found for 2014-2018 and highlighting the change not only in summary measures, but more particularly the change beyond the 50th centile as the durations progressively increased.

Figure 6: LOS-TC cumulative distribution at cessation per year 2014-2018 (all cessations)

A seen in figure 6, collectively the findings show that it has been possible to enable service users to extend the time that they can live independently as the services have become progressively more advanced.
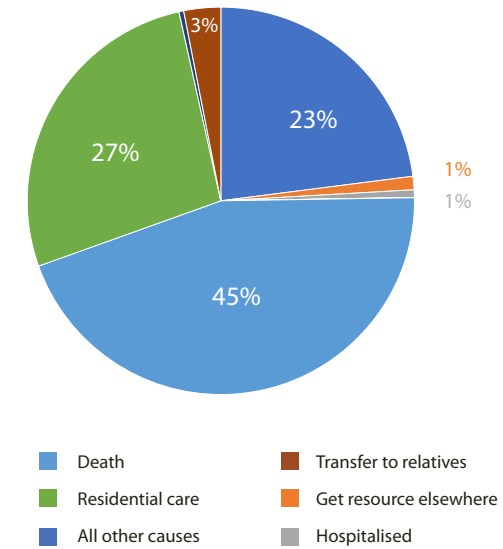
2.2.3 Delaying the time before residential care is required

Death of service users is sadly the largest single cause of cessations in each year studied and specifically for 2018 this accounted for 45% of all cessations (figure 7). In these cases the service user has been able to maintain their independence to the end of their life.

Figure 7: Telecare cessations in 2018 by causation

- Death
- Residential care
- All other causes
- Transfer to relatives
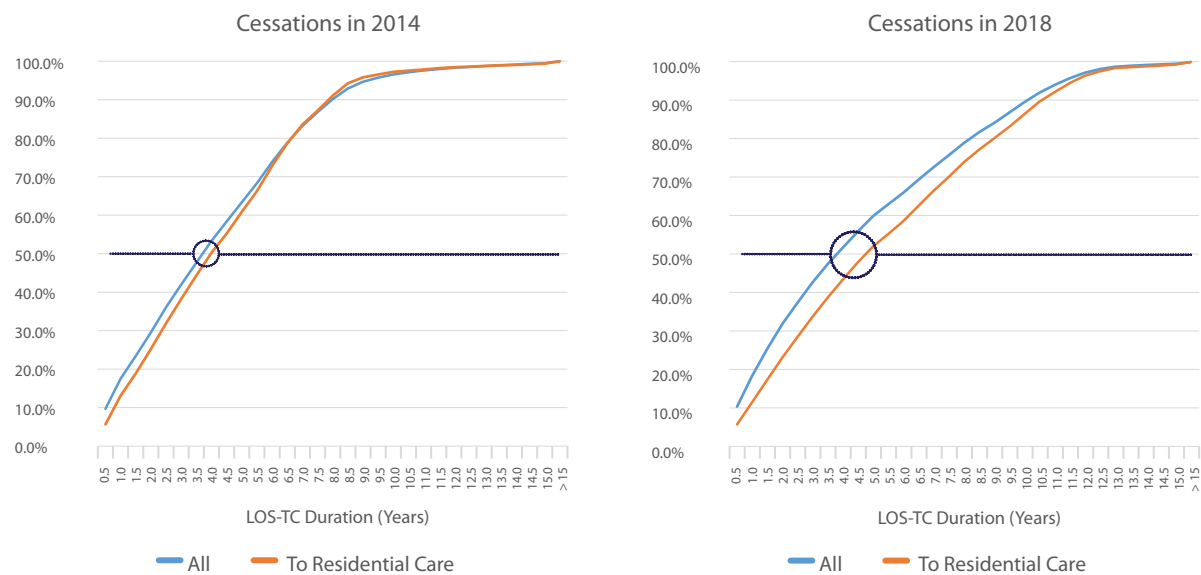- Get resource elsewhere
- Hospitalised

The second most common reason for leaving telecare is service users requiring residential care, with this accounting for 27% of all cessations in 2018. Other causes related to requiring additional support are relatively modest, for example 3% moving to live with relatives, 1% to hospitals and 1% to other services. Given the high proportion of service users involved, changes in the point at which residential care is required can therefore be very significant in terms of demand for residential care capacity.

Analysis of LOS-TC for service users ultimately going into residential care was therefore a key focus of the study: Mean LOS-TC was 3.3 years in 2011, increasing to 4.34 in 2014 and 5.48 in 2018, thus increasing by 2.18 years over the 2011-18 study period. Median LOS-TC was 3.98 years in 2014 and 4.83 in 2018 thus increasing by 0.85 years for the shorter period. Correspondingly, the mean age of service users transitioning to residential care increased from 84.70 years in 2011 to 85.10 in 2014 and 86.19 by 2018.

These increases have been realised over time and are extremely significant in absolute terms, but also in terms of the potential economic and capacity implications for residential care. The increased LOS-TC are also notably higher than those for the overall service user population reflecting the more significant change for those progressing to residential care.

In order to provide the most prudent assessment[14] of the impact of this change, the analysis focussed on the differential between overall LOS-TC and that for those moving to residential care. From a position where in 2011 these were almost identical (0.05 years)[15], by 2018 this had grown to 0.95 years (median) or 0.72 years (mean). This change is highlighted in Figure 8.

Figure 8: Comparison of cumulative distribution of LOS-TC at cessation overall (blue) and to residential care (amber) highlighting the increasing differential from 2014 to 2018.

Cessations in 2014

LOS-TC Duration (Years)

— All   — To Residential Care

Cessations in 2018

LOS-TC Duration (Years)

— All   — To Residential Care

2.2.4 Economic implications of delayed residential care requirements

Using the median and mean measures in bed day terms, this would equate to releasing between 262 and 346 days for each service user moving to residential care. The economic value of this would of course be a function of the applicable cost of residential care bed night to commissioners/Payers. If we assume a typical cost of £84[16] then this would release capacity with a value of £22-29k per person going into residential care, or with 27% of service users following this route, overall this would equate to £5.9-7.8k for each and every service user.

Whilst the economic value of the capacity released is compelling, there is also significant strategic value in using this approach to help contribute to offsetting the increase in demand associated with rapidly ageing populations.

It is important to recognise that the delay has been realised not by seeking to delay transfer but by providing proactive support and assessing when, based on each individuals circumstances, residential care may be required. As such in some cases residential care needs will have been identified earlier, but overall the net effect has increased the service durations as described. Whilst the delay in time before residential care was required is very clear, there was no evidence to suggest that the ultimate share of admissions to residential care was reduced. Indeed the share of cessations to residential care increased by 3.9% points over the period as might be expected with the average age of service users at cessation increasing.

2.2.5 Personalisation enabling enhanced services and operational efficiencies

The study analysed each of the key operating metrics involved in the telecare services over the study period. This identified that as the service became progressively more advanced, the numbers of proactive calls per service user naturally increased. In 2011 there were 15.53 calls per person per annum (pp/pa) which increased to 23.87 by 2014 and 26.84 by 2016.

The introduction in 2016 of the personalised telecare service and the needs stratification methodology enabled the most appropriate level of support to be provided per service user. As a result far greater support could be provided to those with the highest needs, whilst achieving overall efficiencies to ensure the service remains economically sustainable. By 2018, the overall number of outbound calls fell to 23.04 pp/pa overall, but within this mean level, for the highest risk group this was 67.42 and for the lowest it was 19.18.

Providing the most complete support for those with the highest needs has clear benefits for the user and carers. It is also this high risk group that can generate the greatest demand for wider social-care and healthcare service and which, through more effective management, offers the potential to reduce demand accordingly.

This can be seen directly through the reduction of inbound (emergency) call volumes in to the telecare service. Across all service users, an average of 16.51 inbound calls were received pp/pa in 2011. As the service became more proactive this fell to 9.76 in 2014 and 8.72 by 2016. The

introduction of personalisation in 2016 resulted in this reducing yet further to 7.57 by 2018, a fall of 54% over the 2011-18 period. Within this average level there was significant variation according to the dependency level with 6.87 for the lowest needs group and 16.65 for the highest risk service users.

2.2.6 Reduced demand for emergency ambulance responses

As part of the handling of emergency inbound calls a series of potential physical service mobilisations could be made, ambulance response being the most common. As the service became more proactive/personalised the number of calls pp/pa reduced marginally from 0.48 in 2011 to 0.46 in 2014. As this extended further and personalisation was introduced in 2016, the frequency fell to 0.31 pp/pa by 2018, a 36% reduction from 2011.

The study therefore indicates not only the impact of increased levels of proactivity and personalisation on the time living independently, but also the reduced demand for allied services as a result of the approach.

[16] Value used at an indicative level only since this value will vary in different regions and systems. The value is based on earlier UK based analysis from the Tunstall "Demand Management from Care Homes" white paper (March 2018).

2.3 Service user perceptions of safety and self-sufficiency

At the core of proactive and personalised telecare is effective support to help service users and their families safely manage their situations. To assess how proactive telecare influenced the perceptions of safety, self-sufficiency and loneliness, a further study was commissioned by Tunstall Televida.

The patient reported outcome measures (PROMS) study on the impact of Telecare services on Elderly People and their family was undertaken by the Foundation for Health and Ageing (FSiE) at the Universitat Autònoma de Barcelona (FSiE-UAB).

Completed in 2016 and involving 1200 service user respondents, the study compared active users of proactive telecare compared with a control group which qualified for telecare but had not yet commenced the service. As summarised in the table below, ratings for key variables were assessed firstly in terms of the share of respondents indicating an improvement, and secondly in terms of the rating on a 0-10 scale (proportion in the case of loneliness) before and after telecare (TC).
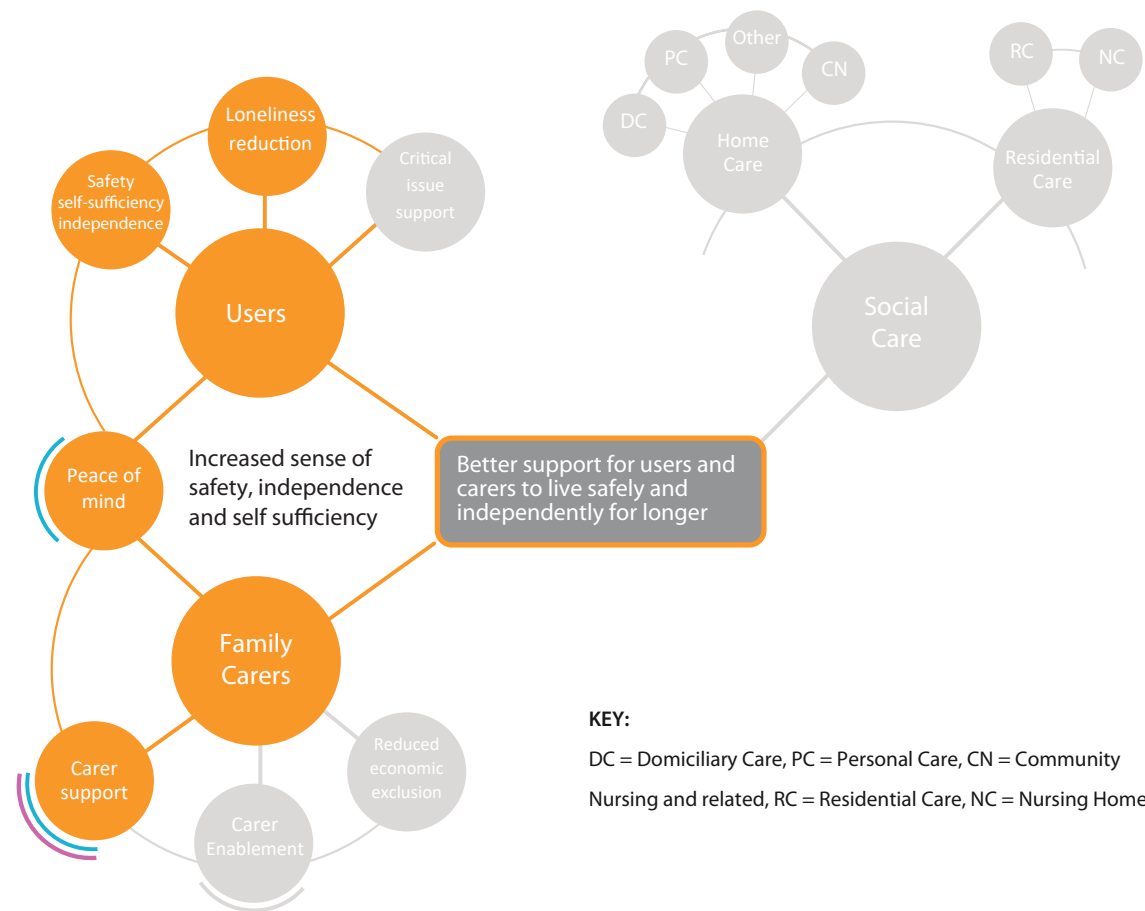
Table 1: Summary effects for the intervention group. patient reported measures from the FSiE-UAB Study, 2016

2016 Research Proactive Telecare	% of service users indicating improvement with TC	Mean score (0-10) or proportion	
		Before TC	After TC
Perception of safety	96.1%	5.9	7.9
Perception of self sufficiency	78%	5.3	6.3
Perception of families' peace of mind	98%	5.7	7.8
Perception of not being alone	92.3%	52.8%	55.8%

Figure 9: The focus of the FSiE-UAB Research in the context of the wider areas of potential benefit

KEY:

DC = Domiciliary Care, PC = Personal Care, CN = Community Nursing and related, RC = Residential Care, NC = Nursing Home

As seen in Table 1, 96.1% indicated an improvement in their perception of safety, with a mean score of 5.9 increased to 7.9 once telecare was in place. In the case of self-sufficiency 78% indicated an improvement and the mean ratings went from 5.3 to 6.3, again showing significant beneficial impact for service users.

It is striking however that the highest reported increase was in terms of peace of mind for families whether they live together or not, and whether they are also their social caregiver or not), with 98% of service users indicated an improvement. From an initial rating of 5.7 this witnessed the largest rating improvement to 7.8 once proactive telecare was in place.

The study also found 92.3% manifesting a perception of decreased loneliness since the use of telecare. However this did not lead to a significant increase in the proportional number of service users without signs of loneliness, which moved from 52.8% to 55.8%.

At the time of the 2016 study the service users were in receipt of proactive telecare but before the introduction of personalisation. To assess how this has changed since personalisation the FSiE-UAB research has been recommissioned with results anticipated later in 2020.

3.0 Research conclusions and recommendations

The independent research commissioned by Tunstall provides new evidence of the beneficial impacts of telecare at reactive (personal emergency response) and proactive/ personalised (preventative) levels. Collectively the research identifies the very significant benefit for service users/carers, and for the social care and healthcare systems which support them. These align with the 'quadruple aims model'[17] of improved cost efficiencies, quality of health and care, carer experience and end user experience.

Specifically the key conclusions include;

- Social care cost were reduced (costs avoided) by £4.5k per service user per annum, with reactive telecare in place.

- Where this was extended to proactive and personalised telecare, the research demonstrates that service users were able to live independently for longer, and even more so for those ultimately requiring residential care.

- On the most prudent basis of assessment, the relative increase for those ultimately requiring residential care compared with the overall increase was 8.6[18] months.

- Using an assumption of £84 per day for residential care, and with 27% of telecare services users progressing to residential care, we believe this has the potential to avoid £5.9k per telecare service user for the residential care commissioner/payer[19]. With a lack of residential care capacity frequently leading to 'bed blocking' in hospitals we believe the approach has potential to help reduce these pressures.

- The findings also show that mature proactive and personalised telecare can enable wider operational efficiencies particularly in reducing emergencies. Despite increasing numbers of older service users, the number of ambulance mobilisations per service user fell by 36% over the study period[20] and the number of inbound (emergency) calls by 54%.

- Proactive telecare service users reported significant improvement in self-sufficiency and perception of safety, with the greatest change being in their families' peace of mind[21] with 98% indicating an improvement.

[17] Institute for Healthcare Improvement, http://www.ihi.org/

[18] The differential length of stay in telecare (LOS-TC) between overall cessations and those moving to residential care increased from 0.04 years (mean) in 2011 to 0.72 years (mean) or 0.95 years (median) by 2018. The absolute increase in LOS-TC for those going to residential care was 2.18 years compared with 1.5 years overall from 2011-2018. Using the differential between this and the overall increase in LO-TC provides the most prudent basis of assessment. The lowest of the measures 0.72 years equates to 8.6 months.

[19] 262 days at £84 equates to £22k per person moving to residential care, since 27% of telecare service users transition to residential care, £5.9k provides an easily scalable measure per telecare service user.

[20] Ambulance mobilisations per person were in 2011 0.482, and 0.307 in 2018.

[21] FSiE-UAB Patient Reported Outcome Measures study for Tunstall, 2016, comparing proactive telecare users against a control group whose needs qualified for telecare but where this had not yet been deployed, as described on page 16. In this study, where the term "carers" is used, these include relatives of the service users, whether they live together or not and whether they are also their social caregiver or not.

3.1 Recommendations

The research findings demonstrate the beneficial impact of telecare at each of the levels from reactive, through proactive to personalised levels. The findings are therefore relevant to commissioners/payers and policy makers evaluating the potential either for development of existing programmes or progressing to more advanced levels of telecare.

We would recommend evaluating current telecare services against the findings for the equivalent level of telecare in order to identify opportunities for enhancement of current programmes as well as quantification of the incremental potential via higher tier services.

As demonstrated by the findings, Telecare offers clear benefits to service users/carers and very significant capacity release/cost avoidance in social care as well as healthcare. The ability to help address key cross dependencies between health and social care systems mean it can contribute significantly to integrated health and care programmes. We would recommend consideration of this potential based on the research findings for integrated health/care planning, particularly in helping to address the challenging implications of ageing populations.

Further information

Tunstall is committed to an ongoing research programme to help inform and support the most effective application of telecare in addressing the challenges arising from ageing populations. Informed by this research and over 60 years of telecare innovation, Tunstall has the expertise and capability to help policy makers, commissioners/ payers and practitioners maximise the potential.

Acknowledgements

We are grateful for the support of each of the independent research organisations undertaking the studies described in this report. We further appreciate the support of Ignetica Ltd in contributing to the production of this document.