

## Hello My Name is RITA

### Introducing Reminiscence Interactive Therapy Activities.

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*'Memory is the diary we all carry about with us.'*

Oscar Wilde, *The Importance of Being Earnest.*

#### **ABSTRACT**

The older population worldwide is increasing. Amongst these, people with dementia and cognitive impairment represent a growing segment. It is an urgent priority to maximise the potential of this group and to ensure that they are supported to experience the best quality of life possible. Reminiscence therapy as a form of intervention for people with dementia and cognitive impairment has been used for over 50 years. Recent developments in the use of information technology to facilitate reminiscence therapy represent the interface of technology with proven methods of therapeutic intervention. This paper explores the implementation of one such intervention in one Local Authority and one CCG in the United Kingdom and summarises key findings from the areas who implemented the technology and makes recommendations for future work in the area of reminiscence therapy using digital media systems.

The paper concludes that RITA in Dudley Metropolitan Borough Council and North Tyneside CCG showed both qualitative and quantitative improvements. Consistent evidence is presented across key sites that demonstrate improvements in engagement, mood, communication, confidence, empowerment and integration on the part of residents and staff, and reduced wandering, anxiety and agitation, which are consistent with the key research in this area. Falls reductions of between 38% and 45% are presented in areas in Dudley, which show the potential in the next 5 years to reduce admissions by 281, bed days by 2306 at a cost avoidance of £691k. Similarly, falls reduction in North Tyneside are shown as between 23% and 53% which is potentially a reduction of 233 admissions or 1912 bed days, and a cost avoidance of £573k over 5 years. Further evidence drawn from the case studies shows multiple sites also reporting other savings associated with reduced care costs and 1 to 1 supportive observations, improvement in nutrition and hydration, reduced use of medication and improvement in staff morale, although further work is required in the future to quantify these improvements more accurately.

#### **DEMENTIA**

Dementia is a syndrome which causes cognitive deterioration. There are various forms of dementia, amongst which Alzheimer's disease, Vascular Dementia, and Lewy Body dementia are more well-known forms of dementia. Whilst the overall progress of cognitive decline varies between the various types of dementia mainly due to the way in which the brain damage is caused, they all have a fairly similar impact. The ability to undertake daily tasks, take on new memories, remain oriented to the world around them, and communicate what they mean and how they feel are common manifestations of dementia in all its forms.

The World Health Organisation estimate that nearly 10 million new cases of dementia will be diagnosed every year worldwide, that's one case every 3 seconds. The most recent survey in 2015 estimated that there were 50 million cases at that time and predicted that these would triple to 152 million by 2050. The estimated number of patients with dementia over the age of 65 according to NHS Digital statistics (reference) was 67.4 per 100,000 or over 674,000 people over the age of 65 with dementia. Prince et al (2014) estimated the cost of dementia care in the UK to be over £26 billion, social care costs being estimated as over £10 billion and hospital care costs over £4 billion. Whilst there is no cure for dementia currently, there are a number of pharmaceutical treatments which seek to preserve as much functioning for as long as possible, such as donepezil, galantamine, rivastigmine and memantine. Alongside it is common for antipsychotics and other medication such as antidepressants to be prescribed to manage as much as possible the psychological effects of dementia such as low mood and agitation. However, these do not represent a long-term solution as someone's disease progress it is common for most medication to lose its efficacy. Of as much importance as the medical treatments are the non-pharmacological approaches for people with dementia and cognitive impairment, the most prominent and well-established of these being reminiscence therapy.

Source: Prince, M et al (2014) Dementia UK: Update Second Edition report produced by King's College London and the London School of Economics for the Alzheimer's Society

### **REMINISCENCE THERAPY.**

Reminiscence is defined by the American Psychological Association (APA) as "the use of life histories-written, oral, or both-to improve psychological well-being. The therapy is often used with older people." It originates in the work of Butler (1963) and his work on life reviews, helping people to recall past events and make sense of their lives and derive meaning from them. Park et al (2019), in their meta-analysis of reminiscence therapy, found positive evidence for reductions in depression, and behavioural and psychological symptoms of dementia, and improvements in quality of life. The Cochrane review (Woods et al, 2018) concluded that reminiscence therapy had multiple benefits. The review found variations between the effects of reminiscence therapy in people's homes as opposed to care homes, with care homes showing greater improvements. The reviewed evidence suggested reminiscence therapy can improve quality of life, cognition, communication and mood, although the evidence reported on did not show a dramatic improvement.

The use of the therapy is typically used with patients with memory problems and dementia but is also perfectly applicable to other conditions in which cognitive impairment is a factor such as learning disabilities, neurological disorders and acquired brain injuries. Patients with memory problems from dementia or other brain disorders often have attendant behavioural issues such as anxiety, disorientation, and aggression. The ability to engage positively with these client groups that have significant communication difficulties is hugely powerful, something that has been substantiated with reminiscence therapy. It is also an urgent issue that needs to be addressed at public health level as the growth in prevalence of cognitive impairment and dementia has an increasing impact on the health and social care sector. Interventions that can be demonstrated across health and social care that have both a positive personal impact, but also strategic impact are essential and should be implemented in all areas where these issues are confronted.

Up until the advent of reminiscence therapy as a non-pharmacological intervention, care settings managed these issues in many cases through the use of restraint and medication. None of these are ideal but unfortunately sometimes necessary to manage the safety of individuals in their best interests.

The NICE guidance for the care of patients with delirium (CG103, NICE, 2019), recommend the use of reorienting activities such as:

“talking to the person to reorientate them by explaining where they are, who they are, and what your role is (and) introducing cognitively stimulating activities (for example, reminiscence) (subparagraph 1.3.3.1)’

Reminiscence therapy using RITA accomplishes both of these goals by having calibrated media available to support reminding people where they are, who they are and supporting communication with those around them, and reminiscence activities available on the system.

A series of teams in other countries have devised technological solutions which have approached the subject of providing reminiscence therapy through information technology. Some work in other countries has already been published on the use of digital reminiscence therapy solutions.

O’Rourke (2016) in her Master’s thesis on the use of digital reminiscence therapy in Ireland found the following:

- There exists jeopardy in the application of reminiscence activities and technology-assisted reminiscence in care home.
- Activity coordinator definitions and understandings of reminiscence therapy and its objectives are varied.
- The value placed on reminiscence and its benefits is varied.
- Perceived benefits of the application of technology-based reminiscence for facilitators include;
  - increasing access to the activity of reminiscence,
  - reducing session preparation time,
  - increasing availability of reminiscence materials,
  - increased enjoyment in viewing reminiscence materials,
  - increased opportunities for social interactions with persons with dementia.
- Challenges include:
  - the technical specification required for setup,
  - user skill required for operation,
  - dependency on variables to engage in reminiscence care home organisational readiness for the integration of technology into care home therapies.
- In some cases, technology was observed to place a dependency on having access to the resource in order to be able to engage in the process of reminiscence.

Welsh et al (2018) in their Canadian study looked at the role of digital reminiscence therapy in bringing together generations younger and older. Their findings included improved agency and confidence in people with dementia and also younger people talking to them. Welsh et al’s work is important but purely qualitative work that does not coordinate the qualitative findings of users with other measures of improvement.

Hashim et al (2013) recognised the value of integrating reminiscence therapy with computer technology for therapy sessions and used a memory book with personalised digital content. In this touching case study, a practicing Muslim who was losing their memory was given the opportunity to use the computer technology to assist in recovering some of her identity particularly her religious and cultural heritage.

## ***History of RITA.***

The genesis of RITA which stands for “reminiscence interactive therapy activities” was the experience of one of the founders of the company, seeing what a relative of theirs experienced in caring for a member of their family who had dementia.

This powerful experience was enough to set them on a trajectory to change the status quo. Seeing how this relative had experienced their previous life and how they had previously been able to spend their life, their career, their successes and their overall resourcefulness immediately impacted him. RITA was born from the belief that there must be something positive that could be done to enrich a person with dementia’s life and allow their time to pass in a much more qualitative way, became the challenge. Sometimes we cannot change the outcome, but we can change the experience of the outcome.

For 15 years RITA has been deployed across the full spectrum of Health & Social Care including Acute, Mental Health, Community, Care Homes, CCG’s, Councils, Hospices, Charities and individuals. At the heart of the work is not just the technology itself but also the extensive network of care professionals and clinicians who have contributed to the ongoing development and improvement of the RITA technology. The company has maintained a dialogue with clinicians, responding to their suggestions with updates to the system and what it offers patients, clinicians and relatives.

RITA is a stand-alone hardware and software package which comes in two formats – a large 24” touch screen device for group therapy and a smaller 10” touch screen tablet for one to one use. RITA is a physical device preloaded with content which is accessed via a secure and easy to use software user interface which means that internet or cloud access is not required. This places it in a different category to other solutions to the integration of information technology and reminiscence therapy.

Dudley MBC and North Tyneside CCG have deployed both forms of the device to several settings in primary care.

The pilot in Dudley involved purchasing 13 full packages (24” & 10”) and 3 additional 10” tablets at a cost of £74,680. The units were bought through the Better Care Fund and made available across 11 residential and nursing home sites, at the Unicorn Centre and within the Carers Hub at the Queens Cross Network. Both Dementia Gateways already had Rita, however, this provided the opportunity to upgrade both units. The use of RITA was introduced at the same time as the development of the Dementia Digital Pathway in concert with Dudley Telecare services

The team from My Improvement Network provided extensive training to raise awareness of RITA, the pilot and potential improved outcomes for individuals, their carers and to also make best use of resources.

New Bradley Hall	– residential care home
Woodview house	– specialist nursing home
Richmond court	– residential care home
Wordsley hall	– residential care home
Jubilee court	– Acquired Brain Injury residential care home
Bushey fields hospital	– intermediate step down beds
Tiled house	– re-enablement care home
Hollybush house	– rehab & respite care plus continuous care residents
Unicorn centre	– specialist service for adults with profound multiple learning disabilities
Queens cross Network	– support centre for adults with physical and/or sensory disabilities
Brett young centre	– day service
Crystal gateway	– dementia gateway day service

North Tyneside CCG implemented RITA in 30 homes in their area, covering 1447 beds, with 31 units. 16 of the homes were residential and 14 of the homes were nursing home care. The homes were grouped into four localities listed below.

<b>N West Locality</b>	Ashfield Court
	Heatherfield
	West Farm Residential Care
	The Evergreens
	Park View Care Home

<b>N Shields</b>	Appleby Nursing Home
	Collingwood Court
	Holmlea Residential Care Home
	Prince's Court
	Coble House
	Willow Court Care Home
	Willow Lodge
	Old Vicarage

<b>Wallsend</b>	Charlton Court
	Croft Dene
	Hadrian House
	Eothen Wallsend
	Windsor Court
	Howdon Care Centre
	St. Peter's Court Care Home

<b>Whitley Bay</b>	Earsdon Grange
	Eastbourne House
	Eothen Whitley Bay
	Kendal House
	Redesdale Court
	Risedale Residential Home
	Rosemount Care Home
	Seaview
	St Annes Residential Care Home
	The Lawns Residential Care Home

### ***INTEGRATING REMINISCENCE THERAPY INTO DIGITAL TECHNOLOGY***

This report is intended to summarise the experiences of the users (both patients/residents and staff) in the use of RITA in the early adopter care settings in Dudley MBC and North Tyneside CCG. This work synthesises the observed outcomes of the use of RITA in a variety of settings with different client groups, which were summarised in a series of case studies written by the care teams themselves, which make them all the more powerful and immediate. During the development of this paper, further information and clarification was sought from care settings who were early adopters to provide a more rounded exploration of their experiences.

The report is intended to show what has been consistently observed and therefore can be confidently asserted as the likely outcome of the implementation of RITA in health and social care settings who plan to adopt RITA. The report intends to align the findings of those structured feedback exercises to the three arms of clinical governance as envisioned by Darzi:

- Clinical effectiveness
- Patient safety
- Patient experience.

Additionally, what can be confidently asserted about the cost effectiveness of RITA from the currently available evidence will be reviewed and discussed. Finally, the report intends to conclude with recommendations for further work around the implementation of RITA and researching its benefits and limitations.

Both the clinical effectiveness and patient safety elements will review the current evidence with NICE guidance around falls, delirium and dementia in mind. The patient experience element seeks to collate those areas that have been consistently reported and thematically analysed, and where appropriate, illustrative examples of vignettes will augment these summaries.

Sometimes we can't change the destination, but the journey can be meaningful and as comfortable as possible.

**THE VALUE OF REMINISCENCE THERAPY AND THE IMPACT ON EMERGENCY ADMISSIONS.**

**Admitted patient care data from Hospital Episode Statistics 2019-2020 (Source: NHS Digital).**

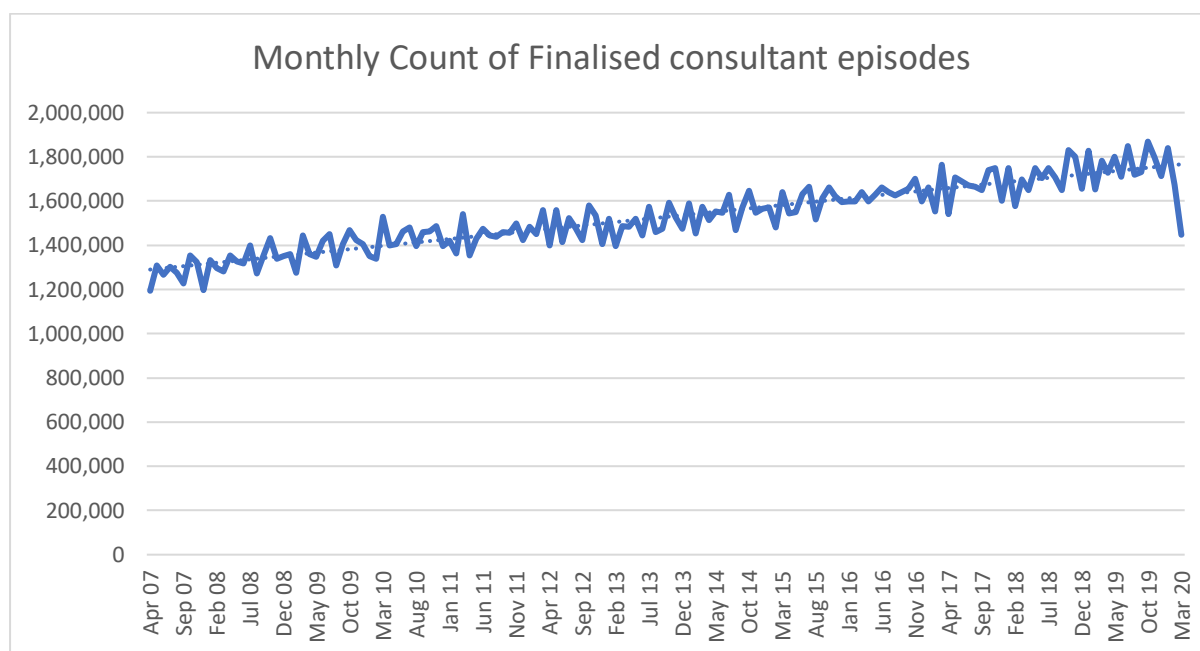
*\*For the purposes of this paper we have used data for NHS Dudley CCG in respect of Dudley MBC*

Secondary care settings, such as hospitals, measure their activity in terms of finalized consultant episodes – episodes of care in which a patient is admitted to hospital under the care of a consultant. In the table below, the national figures for finalized consultant episodes for are shown. It concludes that in 2019-2020 the number of emergency admissions were numbered at over 6.5 million episodes in the UK.

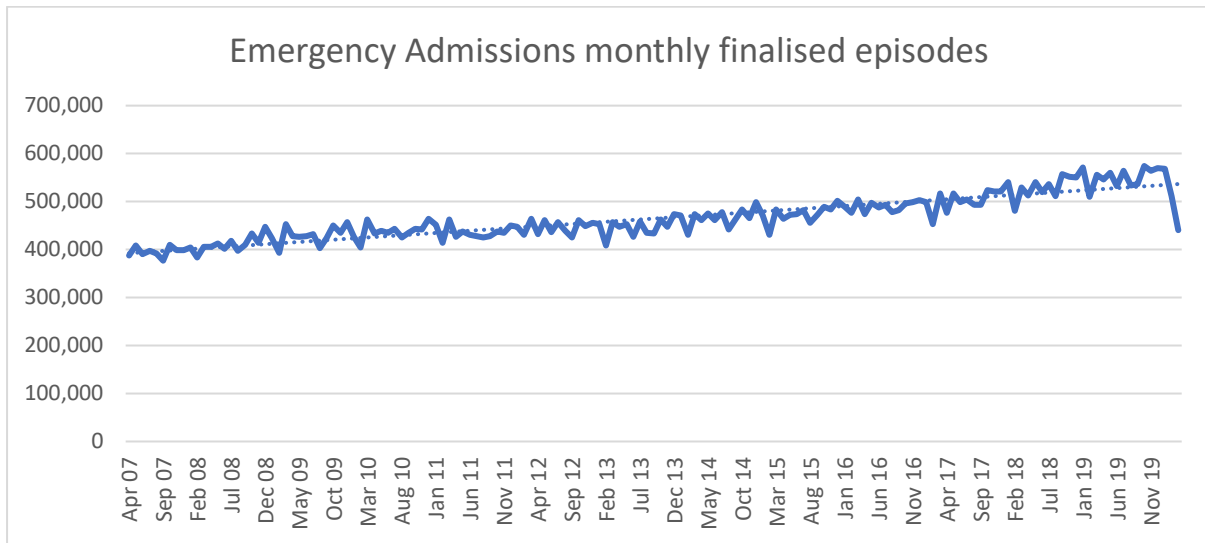
Year to date comparison	April 2018 to March 2019	April 2019 to March 2020	% change
<b>FCEs<sup>2</sup></b>	<b>20,760,699</b>	20,879,213	<b>0.6%</b>
% FCEs with a procedure <sup>7</sup>	58.6%	58.7%	-
Ordinary Admission Episodes <sup>4</sup>	13,374,474	13,456,103	0.6%
Day Case Episodes <sup>5</sup>	7,386,225	7,423,110	0.5%
<b>Finished Admission Episodes<sup>3</sup></b>	<b>17,127,498</b>	17,176,622	<b>0.3%</b>
Emergency Admissions <sup>6</sup>	6,437,959	6,501,167	1.0%

In the financial year April 2019-March 2020, there were 20,879,213 FCEs across the NHS, an increase of 0.6 % on the previous year. 58.7% had a procedure of some sort in a theatre, day surgery unit or endoscopy suite.

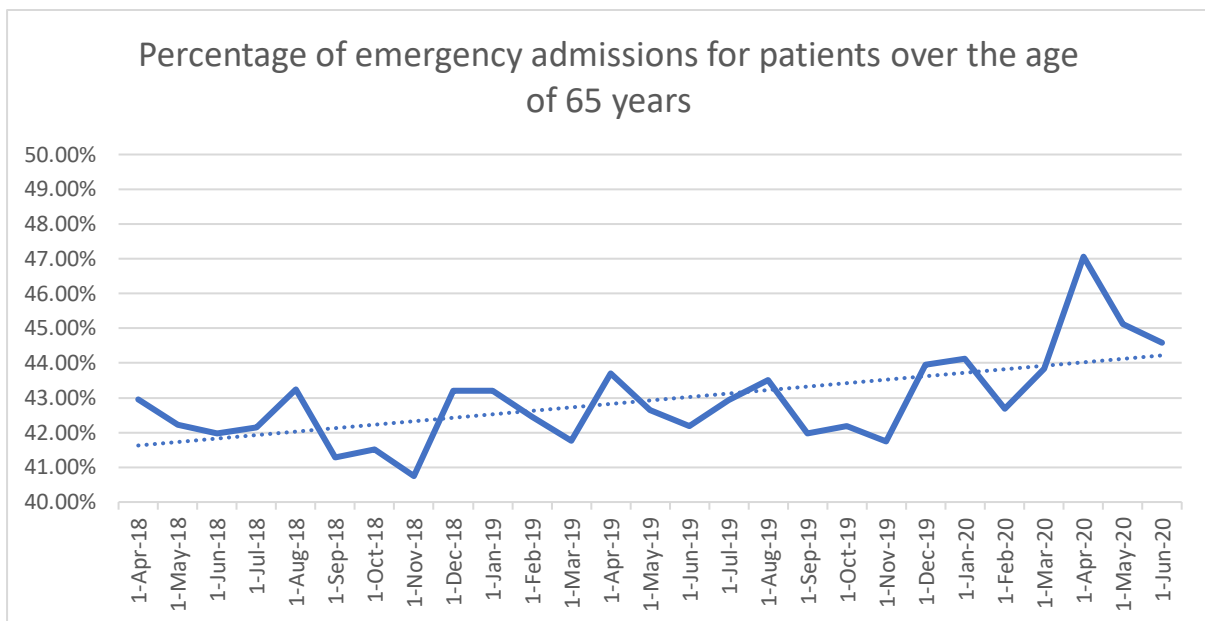
Interestingly the proportion of admissions which were unplanned, e.g. emergency admissions, increased by greater than the overall rate of FCEs with a 1% rise to 6,501,167. The growth in monthly count of FCEs is shown below.



When depicted as a graph of monthly count of FCEs the increase in FCEs month on month can be clearly seen.



When emergency admissions are taken by themselves, they also show a similar increase. For example, the emergency admissions at the start of this graph, in April 2007, totalled 387,887 admissions for that month across the NHS, against 511,503 admissions in March 2020 an increase of 31.9% in emergency admissions over 13 years.



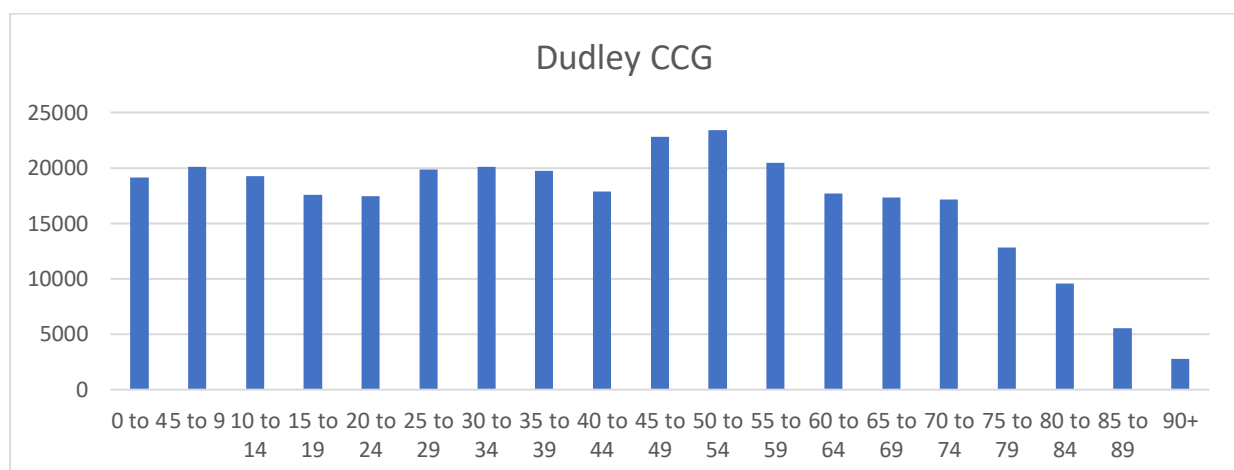
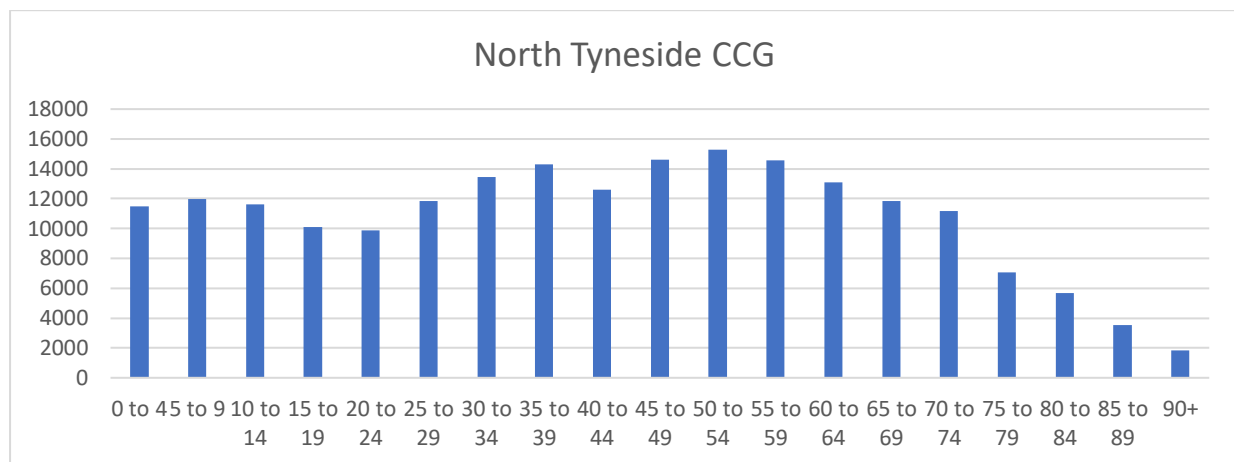
If the percentage of patients over the age of 65 admitted as an emergency is depicted, it becomes clear that month on month the data suggests that the problem is worsening in the National Health Service. At one point, in April 2020, the percentage of emergency admissions for over 65s was nearly half (47.06%) of all admissions in that month.



## DUDLEY AND NORTH TYNESIDE

Age	Resident care home population, 2001	Proportion of usual resident population, 2001 (%)	Resident care home population, 2011	Proportion of usual resident population, 2011 (%)	Change in resident care home population between 2001 and 2011 (%)	Change in usual resident population between 2001 and 2011 (%)
65 and over	290,000	3.5	291,000	3.2	0.3	11.0
65-74	29,000	0.7	31,000	0.6	5.1	11.1
75-84	97,000	3.3	88,000	2.8	-9.2	6.2
85 and over	164,000	16.2	172,000	13.7	5.1	23.9

Based on mid 2018 population census estimates, 205,985 people were living in North Tyneside CCG and 320,626 people were living in Dudley CCG at the time of the implementation of RITA. The bar graphs below summarise the age distribution in these CCGs.



19.98% of people were aged over 65 in these population estimates in Dudley CCG, and 20.33% were aged over 65 in population estimates for North Tyneside CCG.

Based on the data for the 2001 and 2011 Census from the Office for National Statistics, number of patients over 65 in a care home or nursing numbered 291,000 in 2011, 3.2% of the population of those over the age of 65. The calculations relevant to each CCG are cited below including total population and breakdown into age group.

	Population based on mid 2018 estimates for each age group		Population in care homes based on 2011 census estimate in each age group.	
	NHS Dudley CCG	NHS North Tyneside CCG	NHS Dudley CCG	NHS North Tyneside CCG
Total CCG population				
65 and over	65175	41165	2053	1297
65-74	34487	23035	218	145
75-84	22416	12755	633	360
85 and over	8272	5375	1133	737

Wolters et al (2019) reviewed the demand that patients over the age of 65 placed on secondary care settings both in terms of ED attendances and number of admissions. Based on nationally available data sets at that time, Wolters et al calculated the demand that resulted from patients needing to attend or needing to be admitted to hospital. Based on Wolters et al (2019) the following ratios were used to calculate likely admission and attendance rates.

<b>Over 65s in care homes</b>	
ED attendances per patient per year	0.98
Emergency admissions per patient per year	0.7
For 65s and over, %age of emergency admissions total that are from care homes	7.90%
For 65s and over, %age of ED attendances that are from care homes	6.50%
Percentage of above admissions that are estimated could be avoided	41%
RH admissions per resident per year	0.77
NH admissions per patient per year	0.63
Percentage of emergency admissions that were potentially avoidable (%)	41%
Average number of emergency admissions per person per year that were potentially avoidable	0.29

On this basis the number of projected ED attendances can be calculated for Dudley CCG and North Tyneside CCG respectively.

	Dudley CCG projected ED attendances per year	North Tyneside CCG projected ED attendances per year
65 and over	2012	1271
65–74	213	142
75–84	620	353
85 and over	1111	722

Similarly, the number of projected emergency admissions can also be calculated.

	Dudley CCG projected Emergency admissions per year	North Tyneside CCG Emergency admissions per year
65 and over	1437	908
65–74	152	102
75–84	443	252
85 and over	793	516

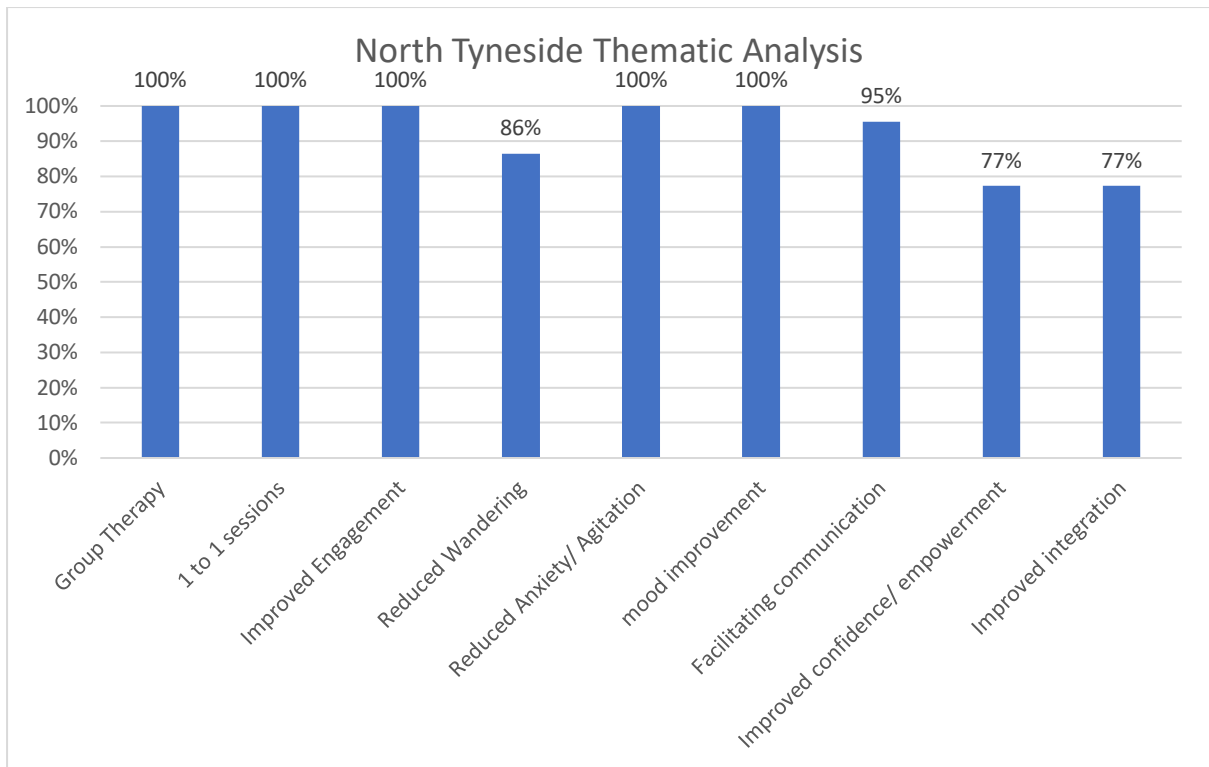
Each admission is on average 8.2 days according to Wolters et al (2019), equating to 11784.8 bed days and 10633.3 bed days for Dudley CCG and North Tyneside CCG respectively.

### **Qualitative measures**

Care and nursing homes in both Dudley MBC and North Tyneside CCGs were asked to provide structured feedback about their use of RITA. This included their perceived improvements in care and reduction in unwanted events. The following elements of the analysis were undertaken through a thematic analysis of the feedback provided from each care setting. These pieces of feedback were verbatim from the care teams themselves with no guidance from the commercial partner which makes them authentic and vital reflections of the experience of each team in the use of RITA and its impact on users, carers, and the wider healthcare economy.

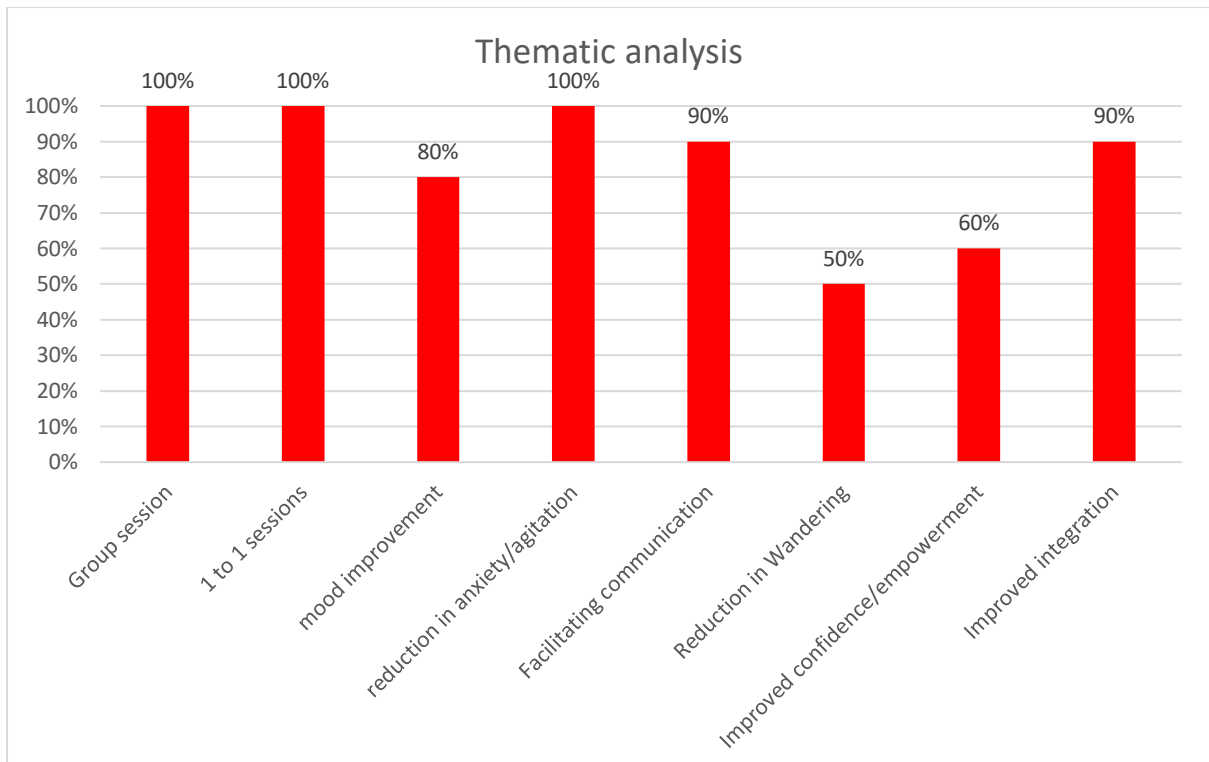
22 homes provided feedback in the North Tyneside area. 100% of them used RITA for both group therapy and 1 to 1 sessions. This part of the report is taken from the qualitative narrative made in the feedback statements from the care homes themselves. Statements were recorded as substantiated if the statement could be positively identified from the narratives supplied as part of the structured feedback. The limitations of the current retrospective review is that data was not originally collected for this purpose and certain caveats must be applied to any conclusions drawn from the evidence surveyed.

100% of the homes reported improvements in engagement of clients, and improvement of mood. 100% reported reductions in anxiety and agitation, and 86% reported reductions in wandering. 95% of care facilities reported improved communications between carers, relatives and clients. 77% reported improved integration of clients into groups and improved confidence and empowerment of clients. This is particularly significant for people arriving in care facilities and often gives them a focal point for discussion when perhaps they don't really have much in common with their new peer group.



Dudley **MBC** had 10 facilities using RITA which provided feedback. In the same way as North Tyneside CCG 100% reported use for both groups and individual 1 to 1 sessions.

100% of facilities reported a reduction in anxiety and agitation, 90% of facilities reported an improvement in communication between carers and clients, and improvement of integration of clients. 80% reported improvements in mood, 60% reported improvements in confidence and empowerment, and 50% reported a reduction in wandering.



The categories and findings are illustrative but not exhaustive. There was no attempt on the part of the independent reporter in these cases to attempt to draw inferences from the feedback provided other than those that could be confidently asserted from clear statements made by the facilities themselves. The enthusiasm with which the facilities adopted RITA and then implemented them in a variety of ways to capitalise on its versatility and efficacy is illustrated not only by the quantitative data that has been reported, but also on the qualitative themes that can be clearly drawn from the feedback data. The variance in results can be reasonably attributed to the novelty of the technology and the ongoing process of developing different ways of using the technology to benefit both clients, carers and relatives.

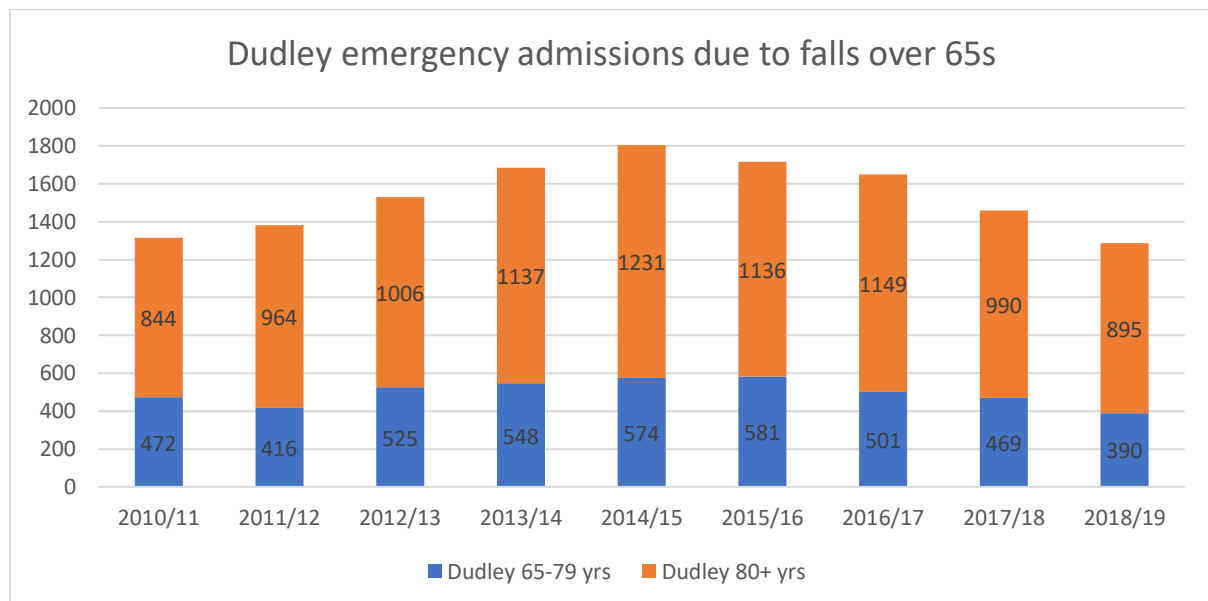
The significance of these findings is that they found, independent of the research literature, comparative findings of the use of reminiscence therapy for people with dementia using digital technology. They agree with Parks et al (2019) in that mood was improved and anxiety and agitation were decreased, and similarly reflect the findings of the Cochrane review (Woods et al, 2018) and improved communication and mood. The improvements in integration, confidence and interpersonal communication were consonant with findings of Welsh et al (2018) in their Canadian study. In this respect, they independently verify in a real world setting the findings of previous research in this area.

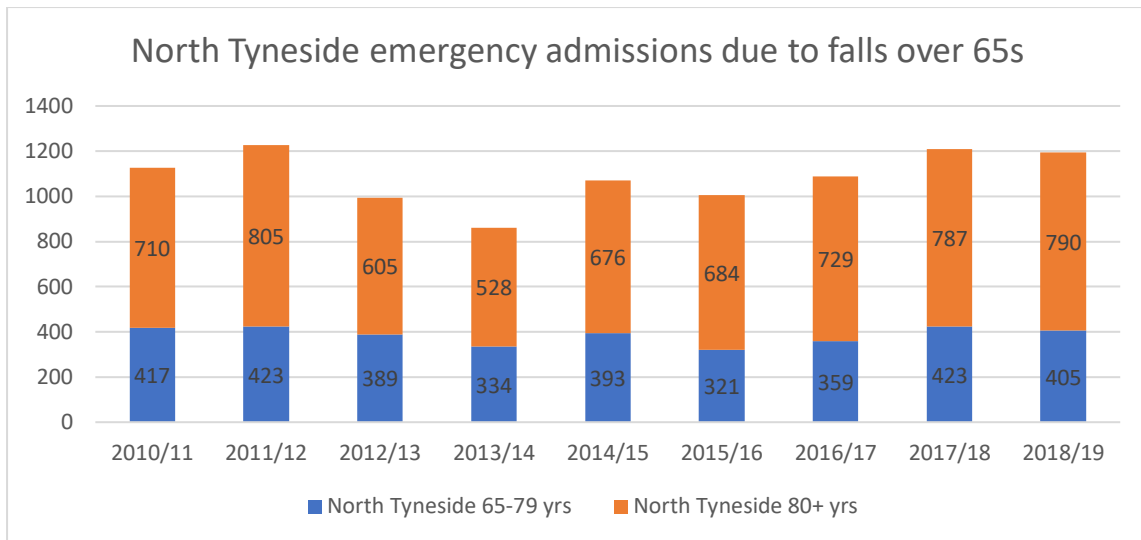
### **THE IMPACT OF RITA ON FALLS**

Falls are particularly prevalent in the over 65s age group and pose greater risk of mortality and morbidity in comparison with other age groups. In groups with delirium and/or dementia the risks are greater. Falls are one of the significant findings of Wolters et al's (2019) as a comorbidity in the care and nursing home population, and one of the more significant causes of attendances and admissions to hospitals for patients over 65 in care and nursing home settings.

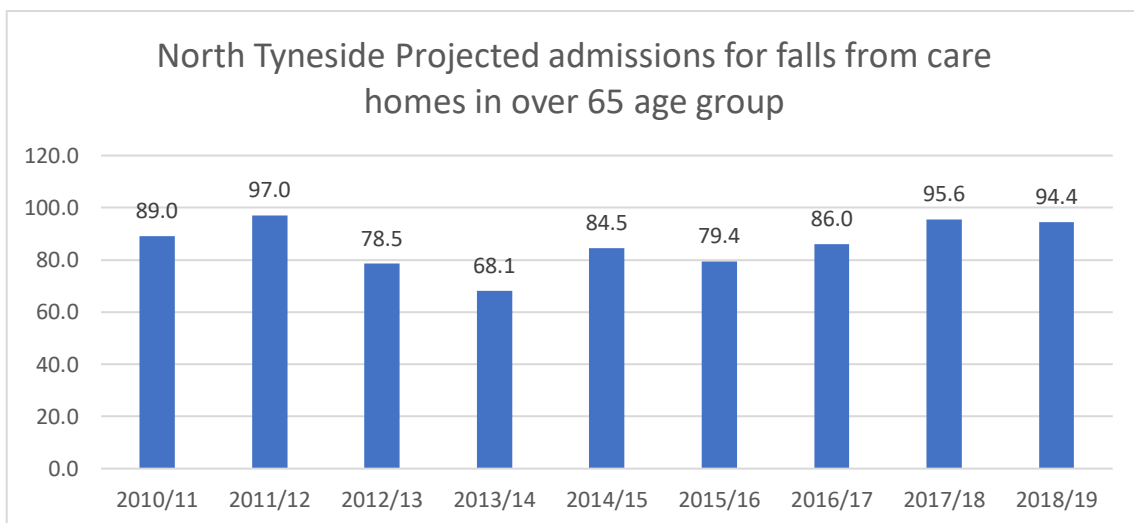
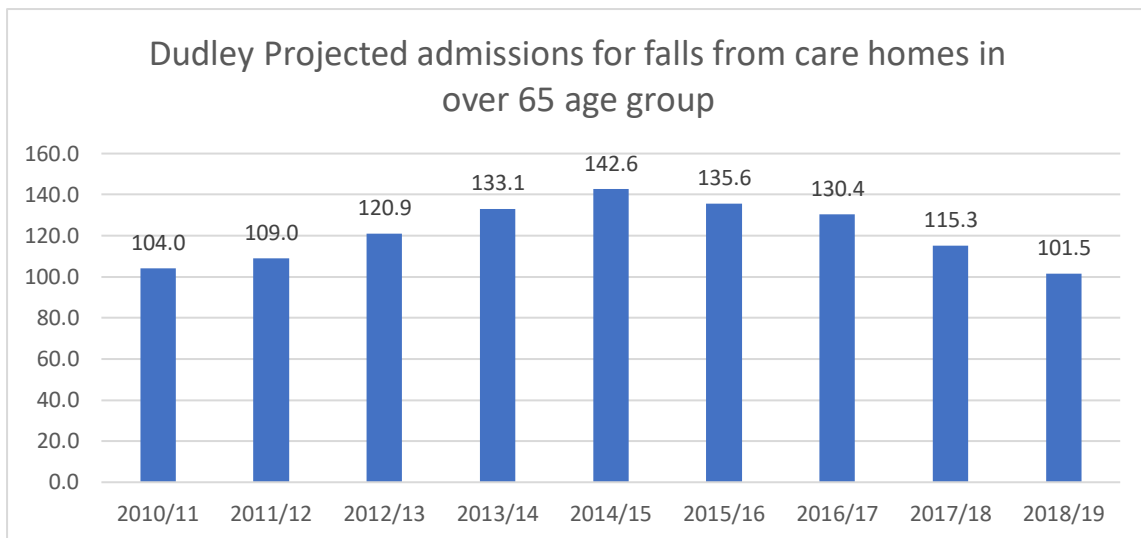
One of the most well substantiated claims from the teams that implemented RITA was that there was a reduction in the number of falls post introduction of RITA. 19 of the 30 homes in the North Tyneside area commented that falls appeared to have reduced (63%).

Nationally, the Public Health Outcomes Framework reports the number of falls nationally regionally and locally in the over 65 age group that results in emergency admission to hospital. This independent reviewer extracted data for both Dudley CCG and North Tyneside CCG for annual numbers of emergency admissions due to falls in the over 65s age groups (see graphs below).





Based on Wolters et al (2019), the following projected number of emergency admissions for falls in the over 65 age group is based on the 7.9% cited in the paper which are specifically from care and nursing homes.



## Dudley MBC

Two homes in the Dudley MBC, Woodview House, and Wordsley Hall, provided comparative data both for the three months before and three months after the implementation of RITA

Woodview House, with 24 residents, reported 33 falls in the 3 months before the implementation of RITA, and 18 falls in the 3 months after the implementation of RITA, a reduction of 45%.

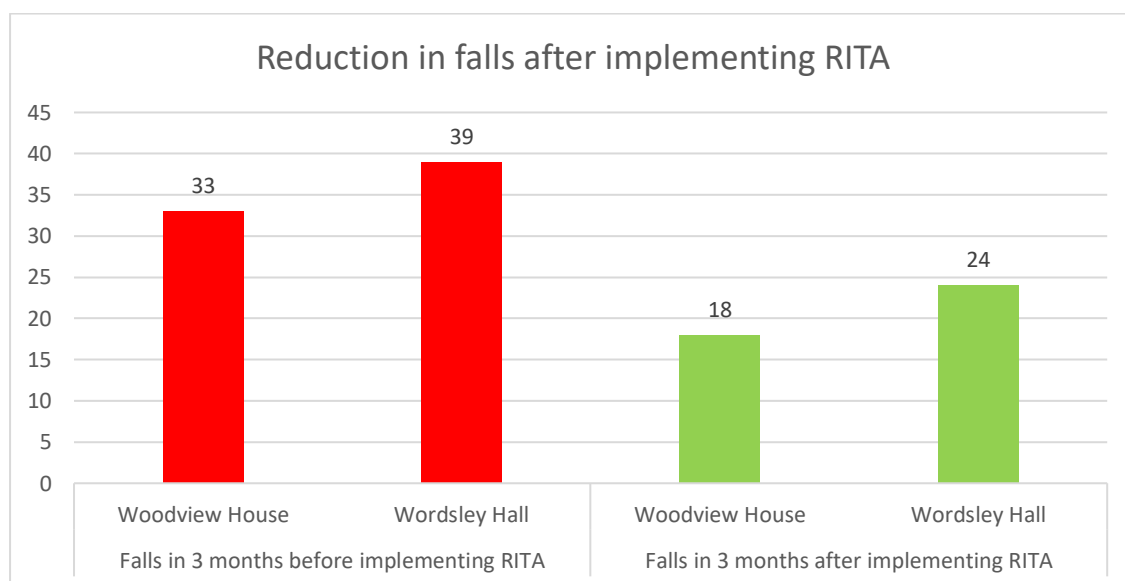
### Woodview House

No of patients	24			
		Falls per month		Falls per patient per month
Falls in 3 months before implementing RITA	33	11	Reduction 45%	0.333333
Falls in 3 months after implementing RITA	18	6		0.181818

Wordsley Hall also provided data for both the 3 months before the implementation of RITA and the 3 months after RITA was implemented. 39 were reported in the 3 months prior to the implementation of RITA and 24 in the 3 months after the implementation of RITA a reduction of 38%.

### Wordsley Hall

No of patients	41			
		Falls per month		Falls per patient per month
Falls in 3 months before implementing RITA	39	13	Reduction 38%	0.317073
Falls in 3 months after implementing RITA	24	8		0.195122



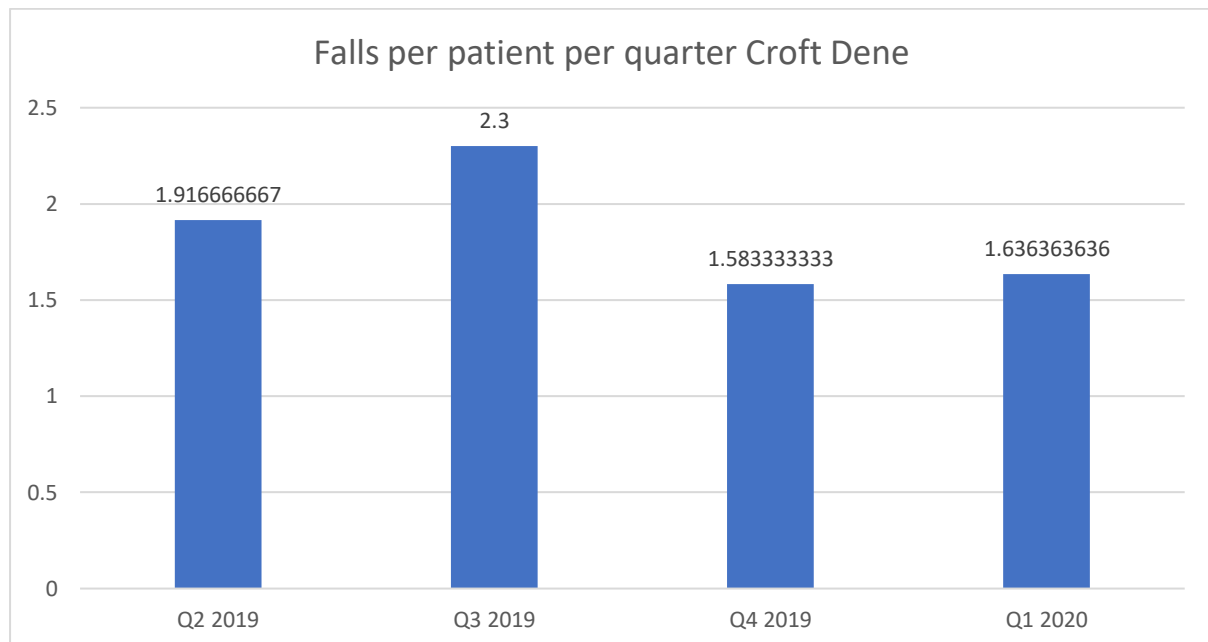
The data provided in the two homes from Dudley MBC suggests that the implementation of RITA afforded a reduction in falls of between 38% and 45%. Based on the previously cited data for emergency admissions for falls in the over 65s age group in care home, it is estimated that 625 admissions were for falls in the Dudley MBC area over the last 5 years. The data provided in this analysis for the two homes mentioned suggests that a potential reduction of between 237 and 281 admissions are possible over 5 years. Based on Wolters et al's (2019) suggestion that each admission is approximately 8.2 bed days this suggests a reduction in bed days of 1947 and 2306 bed days. Based on a conservative estimate of bed day cost of £300, this is a saving of between £584,250 and £691,875 over 5 years from reduced admissions due to falls.

**North Tyneside CCG**

Three homes provided data for falls pre and post the implementation of RITA - Croft Dene, Howden and Appleby.

**Croft Dene Analysis**

Croft Dene implemented RITA in September 2019. Croft Dene kept data for the monthly rate of falls between 2018 and 2020. Quarterly comparisons year on year for both pre and post implementation of RITA were provided. The two quarters pre implementation of RITA were compared with the two quarters post RITA implementation were provided. Based on the number of patients and number of falls reported a ratio of falls per patient was worked out by the independent reviewer. The data suggests that for the two quarters prior to the implementation of RITA the number of falls a patient was likely to experience if they were at risk of falls was between 1.91 and 2.3 falls per patient per quarter. Post the implementation of RITA the reduction was to between 1.58 and 1.63 falls per patient per quarter. This represented an improvement of 23%, meaning that patients at risk of falls were 23% safer post implementing RITA.





### Howdon Care Home.

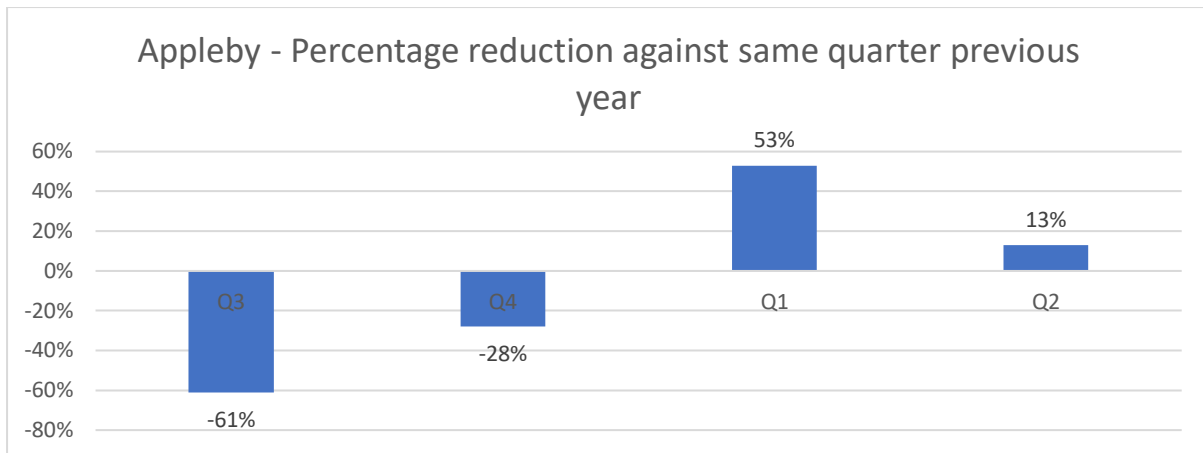
Howdon Care home has 90 beds. It implemented RITA in September 2019. The home provided monthly data for the year prior to the implementation and the year post implementation. Completed quarters of data were compared pre and post RITA implementation. Interestingly the improvement was not immediately evident in this case study but became clear over time as evidenced below, the final improvement compared to the previous year being 32% reduction in reported falls based on comparison with the previous year.

		2018-2019		2019-2020	Percentage reduction on previous year
<b>Howdon</b> 90 beds	Oct to Dec	56	Oct to Dec	56	0%
	Jan to Mar	72	Jan to Mar	51	7%
	Apr to Jun	72	Apr to Jun	49	32%

### Appleby

Appleby Care home has 55 beds. Appleby provided data for 2018 to 2020 to the independent reviewer. Again, the comparison was made between completed months for the months provided. No improvement was apparent for the first two quarters however the second two quarters provided evidence of improvement of between 13% and 53%.

		2018-2019		2019-2020	Percentage reduction on previous year
<b>Appleby</b> 55 beds	Oct to Dec	18	Oct to Dec	29	-61%
	Jan to Mar	18	Jan to Mar	23	-28%
	Apr to Jun	36	Apr to Jun	17	53%
	Jul to Sep	23	Jul to Sep	20	13%



The findings in these homes in North Tyneside suggests a reduction of between 23% and 53% in falls is possible. In the same way as with Dudley, if these reductions are applied to the number of admissions for falls in the over 65s in the last 5 years in North Tyneside, it suggests that a reduction of between 101 and 233 admissions over 5 years was possible. This would constitute a reduction of between 829 and 1912 bed days over 5 years, a reduction in cost of between £248,952 and £573,672 over the 5 years in question.

Other homes who attempted to quantify the reduction in falls included Ashfield Court Care Home in North Tyneside:

*“As a result, we have reduced our falls from 25-30 per month to 6 – 7 representing approx. 76% reduction.” (Case Study)*

### Other Findings

It should be mentioned by this independent reviewer that during the process of engaging with the care home providers that were users of RITA and through analysing the feedback from the care homes nominated during this review process, that other outcomes were also cited as being improved by the care homes concerned, but for which there was limited or no other corroborating evidence supplied by the homes themselves other than the aforementioned case studies.

### Cost Savings Through Reduced Care Costs

Two homes mentioned in their case studies that the use of RITA reduced care costs through reducing the negative behavioural consequences of their dementia. Jubilee Court mentioned 2 very challenging residents who in the past who have been given notice to move on.

*“With the support of the RITA system, they have been able to stay and be supported and integrated into Jubilee Court Cost Savings Moving from Residential Care to Nursing Home Care additional cost £158.16 per week, plus £36 Mental Health Premium*

*Total Savings 2 Residents £20,192 per annum.”*

### **Dudley MBC Jubilee Court Case Study**

Similarly, New Bradley Hall Residential Home had a situation with an elderly female patient whose behavioural needs necessitated placement in a specialist residential care facility. With the cooperation of the family, they arranged to bring the patient back to her previous home.

*“The costs of the specialist residential care facility were considerable and were not regarded as a suitable solution by either the individual herself and the family. The elderly female’s daughter pioneered with her Local Authority to find an alternative placement with supported care in the form of RITA a therapeutic digital reminiscence unit at New Bradley Hall in Kingswinford. New Bradley Hall is a brand new 66 bed residential care facility located in Kingswinford. The staff at the facility offer 24-hour high quality residential care and specialist dementia care.*

*Costs associated with out of Borough Specialists remote Care Facility Annual Costs £74,100  
Costs associated with move back to Borough with robust supported plan Annual Cost Savings £33,540”*

### **Dudley MBC New Bradley Hall Case Study**

In North Tyneside, 25 out of 30 homes (83%) reported a perceived reduction in the number of 1 to 1s required.

On a slightly different tack, Croft Dene found savings through being able to rely on RITA rather than booking external entertainers:

*“We have also been able to reduce our ‘Entertainment Bookings’ as RITA has proved invaluable in the plethora of entertainment contained within the system. So, we have been able to demonstrate financial savings here too! (Case Study)*

Risedale Residential Home, West Farm Care Home and Willow Court Care Home in North Tyneside all reported improvements in the number of supportive observations and improvement in the quality of the interactions when they were required:

*“We have been able to reduce our 3-1, 2-1 and 1-1 Care as residents are more stimulated and interested in what RITA can offer. It is used daily, our residents get to choose what they want to do, which increases their self esteem and morale. It calms their mood and changes focus. Where there is 1-1 care, their activities are much more meaningful. (Risedale Residential Home Case study)*

*“We have been able to reduce to the number of 3-1 and 2-1 care needed at West Farm. By bringing back old memories, using mood music to relax residents who become agitated. The old movie clips help strike up conversations between the residents, this frees up time for staff to carry out other tasks without the worry or concern of the residents arguing. It is a much calmer environment since the arrival of RITA! (West Farm Care Home Case study)*

*“We have found that 1-1 support has become more meaningful since introducing RITA and noticed improved mood and interaction. A group session where we played Christmas music was instrumental in bringing back memories and staff are able to carry out other duties knowing that the residents are happy and engaged. (Willow Court Care Home Case study)*

## **Nutrition and Hydration**

Several homes reported improvement in nutrition and hydration. In Bushey Fields Hospital, Dudley MBC, they found that patients were often not eating or drinking they then:

*".....introduced RITA, particularly around music. The presence of music at mealtimes has created a better environment and patients are happier and more inclined to eat and drink. One lady was singing along to the hymns." (Case study)*

Rosewood Care Home, in Dudley MBC, found a similar effect:

*"They use music at mealtimes as this is a good distraction and keeps people calmer for longer" (Case Study)*

In North Tyneside, 57% (17 out of 30 homes) reported that there were perceived improvements in nutrition and hydration.

Coble House Care Home in North Tyneside seemed to be able to relate the emotional contentment of their residents with improvements in their nutrition and hydration:

*"We have found that the overall emotional wellbeing of our residents has improved and therefore, as a consequence, oral intake has improved. (Case study)*

Eastbourne House Care Home in North Tyneside clearly felt that the environmental impact of relaxing music from RITA fed into improved interest in meals:

*"Relaxation music is always used at mealtimes. It creates a calming environment and stimulates more interest around mealtimes which aids nutrition and hydration. (Case study)*

Princes Court Care Home noticed positive changes as RITA improved the social element of mealtimes:

*"Residents don't stare at each other across the room. They are much more inclined to drink more fluids and eat during a social gathering. It is extremely beneficial. (Case Study)*

Similar social effects were observed at Willow Court Care Home

*"RITA has provided so much social inclusion, reducing social isolation, as our residents come together for music, sports, games and films. They have also showed more interest around mealtimes and definitely drink more fluids when in these social gatherings. (Case study)*

One striking vignette is provided by the Evergreens Care Centre:

*"(One) resident was very agitated and would not eat or drink. We introduced RITA and went through the different programmes. We watched a movie We were able to discover her favourite colour and that she likes to dance. She became calm and eased her agitation. She began to interact and started to eat and drink. This was a good result and her diet has improved overall. (Case study)*

## **Reduced Medication**

Woodview House, part of Dudley MBC, claimed as part of their case study that RITA had a positive impact on the need for medication:

*“We have been able to reduce medication (sleeping pills) as we have been able to use RITA as a tool to calm, reduce agitation which helps aid restful sleep. We have also been able to reduce hospital admissions. Between December and January, we had 4 hospital admissions (one was a repeat).” (Case Study)*

The reduction of anxiety and agitation identified elsewhere in the qualitative section were part of the impact of RITA at Willow Lodge Care Home where one agitated resident was requiring medication:

*“(Carers) played the images of the kittens, fish tank, relaxation music. (The) residents were mesmerised. We were able to reduce the medication for this resident. Great outcome. (Case study)*

## **Staff Morale**

A number of homes specifically commented on the impact of the systems introduction on staff morale:

*“We feel that RITA has allowed us to achieve so much more and has been perfect for staff morale and job satisfaction.”*

### **Howdon Care Home North Tyneside Case Study**

Charlton Court Care Home, as well as reporting that RITA had helped reduced falls, found that RITA had encouraged the regular staff to get involved in the activities sessions rather than just the activities coordinators:

*“We use RITA in both group and individual sessions every day. We find that carers use RITA as much as the actual activities staff and they love it. The residents’ and their families’ mood and wellbeing have greatly improved, with old movies, songs and arts & crafts proving extremely popular.” (Case study)*

Collingwood Court Care Home had particularly positive comments from the CQC Inspection (published in February 2020) which specifically identified the positive impact that RITA had had on residents and went on to say:

*“We are obviously delighted with these reported comments, but we know ourselves the massive impact that this has had for our residents and also our staff.” Maggie Harrison – Manager (Case Study)*

RITA also appears to have made the time spent with residents more rewarding at Princes Court Care Home:

*“General Staff are spending better time with the residents and enjoying it. It is supporting the care we deliver here at the home. (Case study)*

And also at **Risedale Residential Home:**

*“RITA has also had a positive impact on staff morale feeling satisfied that they have met the resident’s needs. (Case study)*

## **ALIGNMENT TO CARE QUALITY COMMISSION FUNDAMENTAL STANDARDS AND REGULATIONS.**

It was drawn to the attention of this reviewer by statements from two users of RITA that the Care Quality Commission had inspected the teams during the time that RITA was implemented and specifically mentioned the use of RITA as being of significant importance in supporting the clinical areas concerned in meeting their CQC requirements for both the regulations and the fundamental standards.

The two homes concerned were Charlton Court and Collingwood Court respectively and the relevant elements of their reports are cited below verbatim:

### CQC Feedback Third Party Statements.

"The home was also involved with a Reminiscence interactive Therapy/activities [RITA] project with the clinical commissioning group where technology and reality orientation was used to stimulate people. A benefit was also as people were occupied there was evidence of a reduction in the number of falls." CQC: Charlton Court Inspection report. 12 February 2020, Pg 14. Accessed on: <https://www.cqc.org.uk/location/1-327518817>

"A professional commented, "The home's use of the RITA system has added to the reminiscence therapy the activities co-ordinators were already carrying out, which has proven a huge success in improving people's well-being." CQC: Charlton Court Inspection report. 12 February 2020, Pg 15. Accessed on: <https://www.cqc.org.uk/location/1-327518817>

"A reminiscence interactive therapy activity (RITA) scheme had been introduced. Staff used RITA software on an iPad or computer to interact with people. It worked very well with people with dementia related conditions. For example, by reducing agitation and improving communication. Staff helped people to use the system and access a variety of activities to achieve positive outcomes. An external professional said, "(Registered manager) and her team have embraced the technology to help support and engage residents, relatives and staff with meaningful activities. The outcomes for residents have been amazing and the home's hard work was recognised with a recent award."

CQC: Collingwood Court Inspection report. Pg 12. 17 February 2020. Accessed on: <https://www.cqc.org.uk/location/1-319253325>

### **How RITA meets CQC fundamental standards**

The CQC inspect on both the fundamental standards and CQC regulations themselves. The tables below summarise the most relevant fundamental standards and CQC regulations and how RITA supports sites who have implemented RITA with meeting these regulations and standards.

<i>Person centred care</i>	RITA carries an individualised profile of patient's biographical touchpoints summarised in a single body of media.
<i>Dignity and Respect</i>	Enhances 'Dignity and Respect' through enhancing the importance of the patient's biographical story.
<i>Enhances 'Safety'</i>	Evidence presented in this report provided in main body on reduction in falls.
<i>Safeguarding from Abuse.</i>	Enhances 'Safeguarding from abuse' by reducing need for restraint or inappropriate limits or freedom through positive engagement.
<i>Nutrition and Hydration</i>	Some evidence that RITA enhances uptake of Food and Drink.
<i>Consent</i>	Reduces patient anxiety and agitation and improves carer communication with patient.

How RITA helps providers meet CQC regulations.

Reg 9 Person centred care must reflect their preferences.	
(3) Without limiting paragraph (1), the things which a registered person must do to comply with that paragraph include—	
(a) carrying out, collaboratively with the relevant person, an assessment of the needs and preferences for care and treatment of the service user;	RITA carries a significant amount of biographical detail which assists with these processes.
(b) designing care or treatment with a view to achieving service users' preferences and ensuring their needs are met;	As seen in the main article, RITA assists with the process of communication and individualisation of care. RITA increases participation and integration and reduces barriers to communication and supporting people with dementia and other mental health issues.
(d) enabling and supporting relevant persons to make, or participate in making, decisions relating to the service user's care or treatment to the maximum extent possible;	
(e) providing opportunities for relevant persons to manage the service user's care or treatment;	It has been noted that RITA supports new staff to integrate into the team and provides a steppingstone to get to know new clients and residents.
(f) involving relevant persons in decisions relating to the way in which the regulated activity is carried on in so far as it relates to the service user's care or treatment;	RITA has demonstrated improved involvement by providing a collection of biographical touchpoints which assist with the process of communication and understanding the residents' experience of life.
(h) making reasonable adjustments to enable the service user to receive their care or treatment;	RITA supports the process of ensuring that the care is adjusted and calibrated for residents' specific needs.
(i) where meeting a service user's nutritional and hydration needs, having regard to the service user's well-being.	As noted under Other Reported outcomes, RITA has shown promise in supporting calmer more productive and healthier mealtimes for residents.

Reg 10 – Dignity and respect 10.— (1) Service users must be treated with dignity and respect. (2) Without limiting paragraph (1), the things which a registered person is required to do to comply with paragraph (1) include in particular—	
(a) ensuring the privacy of the service user;	RITA is specifically designed to be a hardware only solution where required so all of the data relating to an individual is on a single device without external cloud storage so cannot by definition be hacked by outside sources.
(b) supporting the autonomy, independence and involvement in the community of the service user;	RITA improves the way people make choices about their lives and has shown how it can support people to be more independent and confident.
(c) having due regard to any relevant protected characteristics (as defined in section 149(7) of the Equality Act 2010) of the service user.	Multiple case studies attest to the manner in which RITA can be employed to support cross cultural communication and can be employed without any possibility of discrimination to service users of any background.

12.— (1) Care and treatment must be provided in a safe way for service users.

(a) assessing the risks to the health and safety of service users of receiving the care or treatment;	The use of RITA to summarise the biographical elements of an individuals life allow for greater understanding of an individuals' needs and therefore allow for better care planning and support, and improved safety outcomes.
(b) doing all that is reasonably practicable to mitigate any such risks;	

## DISCUSSION and FINAL SUMMARY

RITA rewards careful and persistent use by building up over time a 'map' of the life experiences of the individual users. Not only are the media 'calibrated' to the individual users' tastes, RITA takes it to the next level by enabling individuals, family members and their carers to tag each item with unique biographical information about people, events, and places and their particular significance to that individual. This development in the relationship between the user, the care team and RITA is reflected in some of the results of the falls reductions.

To someone who has never met a RITA user, RITA provides a ready introduction to their life up until that point. The applications for RITA are really only limited by the imagination of the users.

The reports of users in both Dudley and North Tyneside strongly support that over time, introducing RITA reduces risk of falls, improves quality of life and reduces the negative consequences of the deterioration of someone's cognition due to dementia. This has been externally verified on at least two occasions that this reviewer is aware of by the inspection of the Care Quality Commission.

As well as the benefits experienced by individuals using RITA, RITA provides additional advantages when used in group sessions. The experience of users in groups is that it reduces isolation and empowers individuals and gives them more confidence around others. Individuals who before were not comfortable in group situations find them easier as RITA provides a talking point which facilitates making friends. This is obviously of particular benefit in ward and care environments where the membership of the clientele often changes. Enabling the integration of new individuals to social groups, particularly if they have lost their confidence with a degree of cognitive impairment as is often the case, is of huge value and reduces the concomitant anxiety, agitation, and loneliness if not handled well.

Distinction must be made between the use of RITA for multimedia and what is typically termed 'music therapy' in many settings. More often than not sadly music therapy is interpreted as using a genre of music or the album of a particular artist, or the soundtrack of an opera, musical or film to calm patients who are listening to it, almost as background music. Whilst pragmatically this sometimes works – and who wouldn't persist a behaviour that has some positive payoff? – true therapeutic intervention using music is of a different quality, and RITA is particularly well placed to facilitate this.

The fact is that it is usually individual songs or media items that are evocative to individuals and these, rather than the generic album or type of music, holds the most significance to individuals. Being able to provoke a biographical touchpoint using musical media at the touch of a button immediately builds rapport and resonance between carers, family and individual users.

Using RITA in group therapy as a focal point for discussion and engagement improves the interactions between users, carers and family. Individual components of the software are available elsewhere it is true, but they are not available in a single setting like RITA. Also, as a standalone platform RITA does not require a server connection so implementing their use is not reliant on the quality of wireless internet connections or negotiating the security protocols of local care or ward settings.



There is also a natural scepticism in the older generation of technology and the increasing dangers of cybersecurity risks mean that the ability to control biographical data in a discrete physical format which is quickly and intuitively implemented in clinical and social settings puts RITA in a different position to other products that are superficially similar but fundamentally different in meeting the needs for reminiscence therapy in a digital format.

It is true that on the one hand facilities could and have operated with the benefit of an integrated technological solution such as RITA to augment the care environment. However, based on the evidence presented in this paper, it is also demonstrably true that the evidence presented suggests that environments that do not employ RITA are qualitatively and arguably quantitatively poorer for its absence.

Future integration of RITA should focus on the use of RITA as a support for Primary Care Networks in Enhancing support to care homes as part of their Telemedicine and Telecare services. As a recognised source of support for carers and relatives, in this reviewer's opinion RITA should form part of the suite of electronic solutions that are rolled out to emphasise the positive influence primary care services can have on keeping residents in their own home environments and supported to have fulfilling and engaging lives whatever physical or mental impairments they are experiencing.

### **Recommendations.**

This report outlines the structured feedback from care settings who adopted RITA. It is limited by the fact that the information available to the reviewer was the case studies provided by the organisations concerned, backed up by asking for retrospective data which was not originally collected for the purpose of definitively confirming the efficacy of RITA as a technology which improved clinical outcomes. This report recommends that future implementations of RITA should take into account ensuring that any implementation should involve proactive data collection pre and post implementation that confirms that outcomes are being achieved which are suggested by this review.

It is also worthy of note that the report does not cover what would be called balance outcomes, such as increased sedentary lifestyles or other risks that RITA may involve. None were shown in the case studies examined, which were overwhelmingly positive in their appraisal of the technology, but future work should be mindful to examine and balance the outcomes examined in an objective manner.

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## Appendix One

### Dementia Indicators on Quality Outcome Frameworks

In 2019-2020, out of 60,407,685 patients registered with GP practices, 474,547 were listed as on the dementia register, a total of 0.79% overall.

However, there was local variation in dementia with 0.51% in the London area, going up to 0.91% of list size in the South West. Dudley CCG was near the top of this range in 2019-20 with 0.86% of list size listed on the dementia register, or 2826 patients out of a total list of 327,796 patients across 44 practices.

North Tyneside CCG actually sits above the national average at 0.92%, or 2035 patients out of a total list of 222,116 patients across 26 practices.

July 2020 Number of patients with dementia prescribed antipsychotics in England – 9.74%

July 2020 Number of patients in local STP (Black Country and Birmingham) – 12.6%

July 2020 Number of patients in Dudley CCG – 12.4%

Patients with a diagnosis of dementia – 2637

Patients with a diagnosis of dementia prescribed antipsychotics – 326

July 2020 Cumbria and North East STP - 8.5%

July 2020 North Tyneside CCG – 6.4%

Patients with a diagnosis of dementia – 1924

Patients with a diagnosis of dementia prescribed antipsychotics – 124