Innovating for Improvement

Helping older people live well: the story of a self-management support intervention delivered in primary care

Saltaire Medical Practice *in partnership with*

Age UK, Bradford & District *and*

Yorkshire & Humber AHSN Improvement Academy *and*

Connected Health Cities

The
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Foundation

Contents

About the project

Project title:

A self-management support intervention for older people living with frailty: a primary care feasibility project

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- Age UK, Bradford and District
- Academic Unit of Elderly Care and Rehabilitation
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Part 1: Abstract

Self-management support (SMS) interventions aim to increase people's knowledge about their condition, improve ability to self-care and enhance ability to utilise health services appropriately[1]. They have been shown to be effective for people living with other long-term conditions but not specifically frailty. We implemented an SMS intervention to 106 older adults in primary care. This involved a guided conversation delivered by a trained Age UK coordinator and centring around the resource 'A practical guide to healthy ageing'[2]. Our innovative intervention tested collaborative working between the voluntary care sector and primary care and used the electronic Frailty Index as a case-finding tool. Service users' perceptions of their self-management ability did not improve at 3 or 6 months. As this was a feasibility study, no formal sample size calculation was undertaken. All 10 members of key delivery staff found their experience of joint working between primary care and voluntary care sector to be positive. There was positive feedback from service users regarding the proactive nature of the service although some felt that the service was not suitable for them as they already had satisfactory self-care abilities. Our intervention could be implemented in other primary care settings but the impact of administrative burden needs to be planned for. The relationship between this intervention and impact on longer-term outcomes including healthcare utilisation requires further exploration with a larger study and longer follow-up.

Part 2: Progress and outcomes

Context

Self-management support (SMS) interventions aim to increase people's knowledge about their condition, improve their ability to self-care and enhance their ability to utilise health services appropriately[3] . There is evidence for the effectiveness of SMS interventions for people living with other long-term conditions but not specifically frailty. Frailty is conceptualised as a condition that affects older people in which biological reserves are lost, resulting in increased vulnerability to decompensation and adverse outcomes after a stressor event[4]. Older people living with frailty often present in an unscheduled manner in an acute crisis and may not previously have been well known to primary care services. Frailty is however a transitional process with three recognised phases: 'mild' frailty, 'moderate' frailty and 'severe frailty'. It is anticipated that interventions offered earlier in the frailty trajectory could allow a more holistic and proactive approach to care to be taken in this patient group.

Our intervention

Our intervention was innovative in two key ways. Firstly, it used the electronic Frailty Index (eFI) as a case-finding tool to identify older people at risk of mild frailty and target a SMS intervention at this group[5] . Secondly, it tested the feasibility of joint working between primary care and the voluntary sector to deliver a SMS intervention in this group of people.

We chose to target our intervention at the population at risk of mild frailty as we felt that self-management support interventions are likely to have the most to offer to this group. Older people living with mild frailty can be characterised as those who are 'slowing down' and may be starting to need help with activities such as finances, shopping and transportation. Those at the more severe end of the frailty spectrum may instead require personalised care planning and more complex interventions such as comprehensive geriatric assessment or advance care planning. The eFI identifies people 'at risk' of frailty but does not diagnose frailty *per se*. We did not clinically validate the frailty status of this 'at risk' group as this would have significantly increased practice workload and was not felt to be feasible.

Design of the intervention

We aimed to recruit 100 people and to deliver SMS interventions from April 2017 to October 2017.

Eligible people were:
- registered at Saltaire Medical Practice
- over 65 years
- at risk of mild frailty using the eFI (eFI score between 0.12 and 0.24)
- high users of primary care

Those with the highest number of primary care consultations over the preceding period

September 2016 to February 2017 were offered the SMS intervention. People were excluded if they were in receipt of palliative or end of life care, if they were a resident in a nursing or residential home or if they were unable to provide consent. Out of an eligible pool of 277 people meeting these criteria, 168 invites were sent out by post. Permission was sought from consenting patients to share their demographic details with Age UK Bradford and District. Those accepting the invitation received a consultation with a trained Age UK Bradford and District Supporting Self Care Coordinator in person at the practice or via telephone if preferred. People were sent 'A Practical Guide to Healthy Ageing' in advance of the consultation and a guided motivational interviewing style conversation took place. This A4 booklet had previously been co-created by NHS England and Age UK and covers topics such as:

- Looking after your feet
- Looking after your eyes
- Making your home safe
- Keeping active
- Medicines review
- Hearing tests

- Preventing falls
- Vaccinations
- Keeping warm
- Getting ready for winter
- Bladder problems
- Mental wellbeing

These topics provided prompts for the consultation which typically lasted 30 to 60 minutes in duration. As a result of this consultation, sign posting to other services and information provision took place, with some people going on to have a further follow-up telephone consultation or second visit. People receiving the intervention were flagged on the primary care electronic health record system and followed up with questionnaires at 3 and 6 months.

Project impact and outcomes

1. Uptake rates and demographics

168 people were offered the intervention and 106 accepted, representing a 63% uptake rate. Fifty-five service users were female and 51 were male. Figure 1 demonstrates the age distribution of service users. Figure 2 shows the numbers having face-to-face and telephone consultations. The majority of people (n=68) had a one-off face-to-face consultation.

2. Feedback from service users

Our implementation manager undertook five semi-structured telephone interviews with consenting service users. Views of the service were mixed. Some interviewees felt that the service offered benefits and opened up new possibilities. Other interviewees found the intervention empowering. Some could see the potential benefits of the service to others but did not feel that they required input at this point in time. A range of quotes from service users are displayed on page 8.
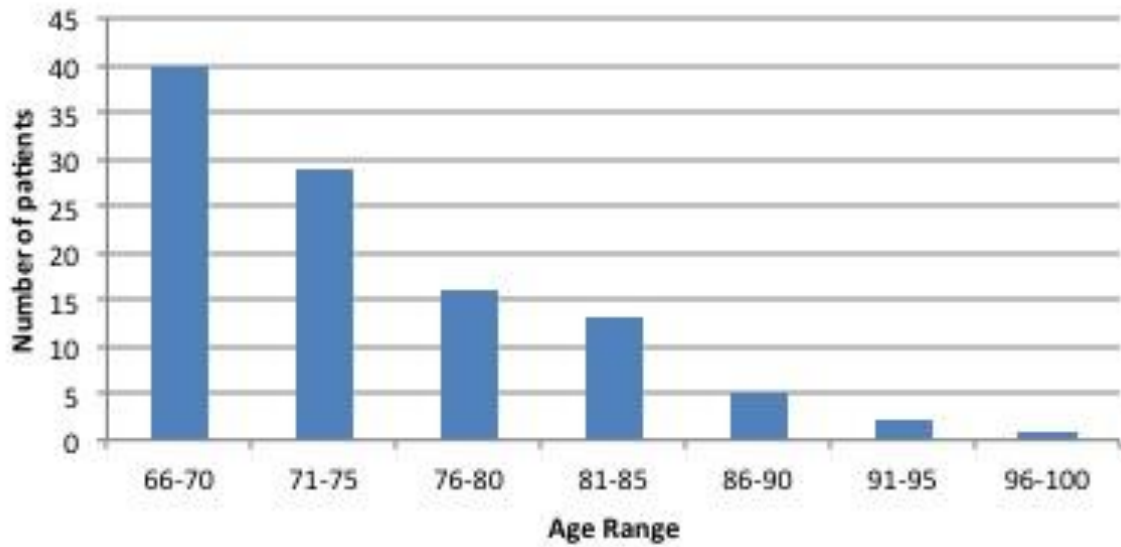
Figure 1: Age distribution of service users
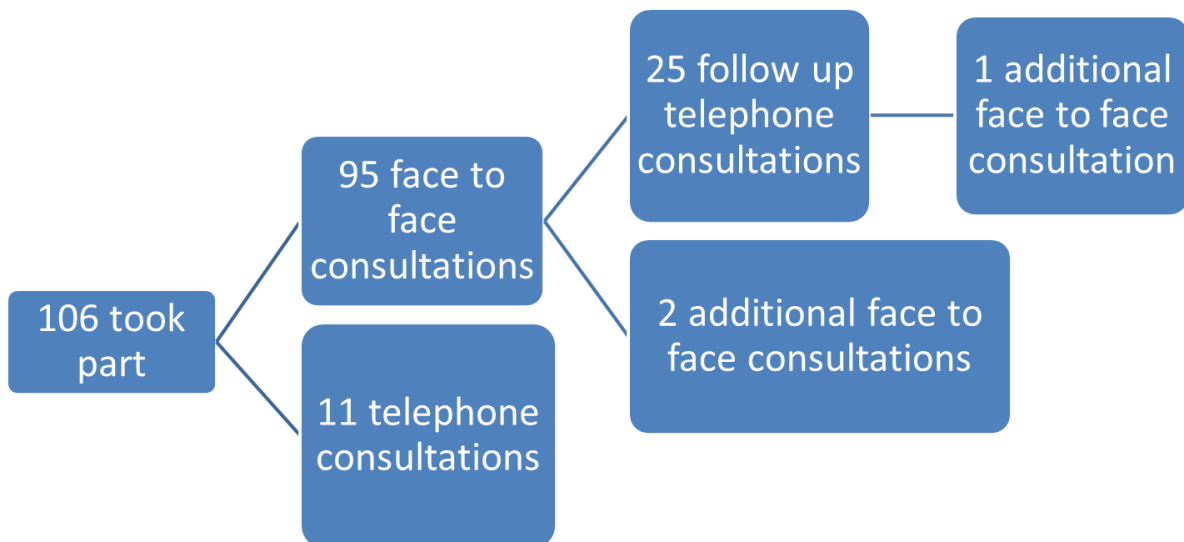
Figure 2: Numbers and types of consultations undertaken within SSC intervention

"I don't know that I need anything in particular at the moment." *Service user B*

"I've addressed a lot of this stuff already." *Service user A*

"I can see that for older and lonely people it's a very good thing to be doing." *Service user E*

"I was pleased to be chosen, glad to be asked." *Service user E*

"Was surprised that with all the cost cutting, the practice is able to offer this service" *Service user E*

"I came away feeling confident, very confident." *Service user C*

"Just knowing that there is someone there and how to get in touch with them is a great help" *Service user F*

"All a bit vague isn't it … is this about me personally or as an age group?." *Service user B*

"I sort of look after myself at the moment … but my memory isn't what it used to be."

Service user D

3. Service users' perceptions of their self-management ability

All service users were asked to complete the short 18-item version of the Self-Management Ability Scale (SMAS-S) at three time points:

- Pre-intervention at baseline
- 3 months post-intervention
- 6 months post-intervention.

The SMAS-S is designed to measure self-management abilities and has been validated for use in older people. It measures six core abilities (initiative, investment behaviour, variety, multi-functionality, self-efficacy and positive frame of mind). The total score provides an estimate of a person's overall ability to self-manage.

Paper copies of these questionnaires were distributed by post to service users. A stamped addressed envelope to the practice was included for return. Eighty-seven of 106 (82%) service users returned questionnaires at baseline. Follow-up questionnaires were sent to these 87 service users, with 70 returning three-month questionnaires and 76 returning six-month questionnaires. Sixty-seven service users returned questionnaires at all three time points, reflecting a 63% response rate.

We used the Wilcoxon Rank Sum Test to compare the mean SMAS-S scores (in pairs) at baseline, three and six months after the intervention to assess change in self-management ability. There were no significant differences over time either within the individual categories or in the total scores.

Time	Total scores	P-values
Baseline (BL)	78.07 (11.73)	BL vs 3 months: 0.62
3 months	78.60 (12.32)	BL vs 6 months: 0.39
6 months	79.61 (11.98)	3 vs 6 months: 0.77

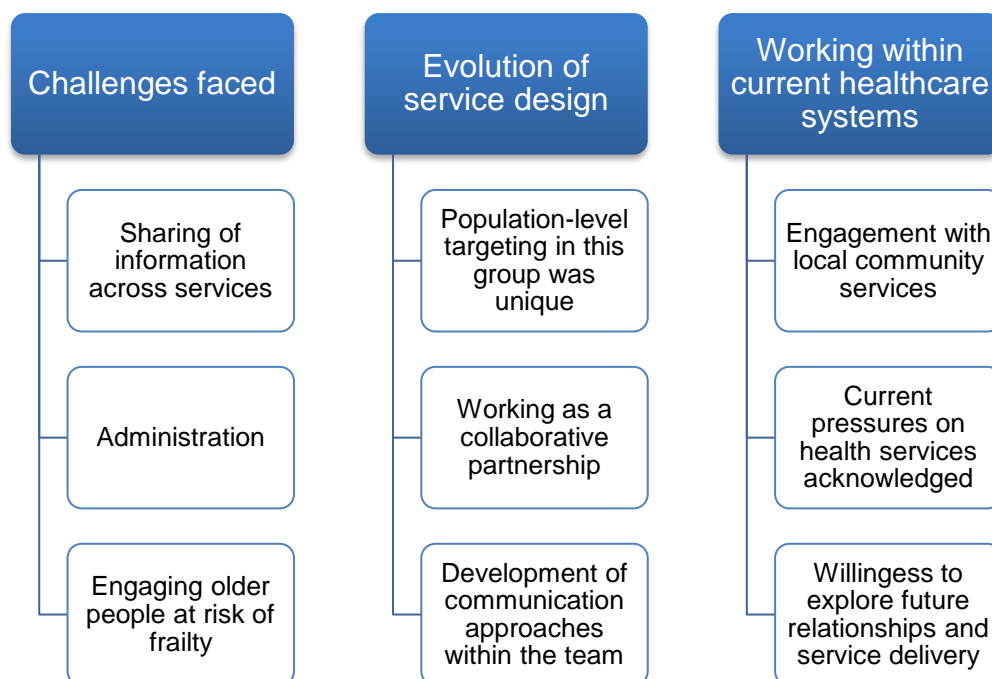**Table 1:** Comparison of SMAS-S scores by sub-groups (higher values indicate greater self management)

4. Staff feedback on the service

Our implementation manager distributed questionnaires to the following 10 members of our team, representing key delivery staff from all partnership organisations.

- Age UK supporting self-care coordinator
- Age UK director of services
- Age UK administrator
- Programme manager, Improvement Academy
- GP, Saltaire Medical Practice
- Advanced nurse practitioner, Saltaire Medical Practice
- Practice manager, Saltaire Medical Practice
- Practice administrator, Saltaire Medical Practice
- Practice operations manager, Saltaire Medical Practice
- Patient participation group (PPG) lead, Saltaire Medical Practice

All 10 questionnaires were returned in either paper or electronic format depending on personal preferences and were thematically analysed by the implementation manager. It had been agreed at a team meeting that the questionnaires would not be anonymous. Key results from the staff feedback questionnaires are below and some of the themes emerging from the free-text responses are shown in figure 3.

- 100% (*n*=10) of staff felt that this project helped support older people at risk of mild frailty to better self-manage.
- 100% (*n*=10) found their experience of joint working between primary care and the voluntary sector to be 'positive' or 'very positive'.
- Staff opinions were mixed regarding the acceptability of this intervention to the target group. 50% of staff (*n*=5) felt it was 'acceptable' or 'very acceptable' but 50% of staff felt neutral about this.
- Staff opinions were again mixed about the suitability of this intervention for the target group of patients. 70% (*n*=7) felt that that the intervention was 'appropriate' for the target group with one person feeling the intervention was 'very appropriate'. However 1 person felt neutrally about this and one person felt the intervention was 'inappropriate' for the group of patients.

Challenges faced	Evolution of service design	Working within current healthcare systems
Sharing of information across services	Population-level targeting in this group was unique	Engagement with local community services
Administration	Working as a collaborative partnership	Current pressures on health services acknowledged
Engaging older people at risk of frailty	Development of communication approaches within the team	Willingess to explore future relationships and service delivery

Figure 3: Key themes emerging from staff feedback questionnaires

5. Healthcare utilisation

We wanted to understand whether the SMS intervention had any impact on wider service and system-level outcomes such as health and social care resource utilisation. Pseudonymised linked data available from a database held by the Connected Health Cities (CHC) Connected Yorkshire programme enabled us to compare the healthcare utilisation of the population at Saltaire Medical Practice who had been offered the intervention with a matched control group at Bingley Medical Practice, another practice within the same CCG, who had not been offered the intervention. Connected Health Cities is a Northern Health Science Alliance led programme funded by the Department of Health

and delivered by a consortium of academic and NHS organisations across the North of England. The work uses data provided by patients and collected by the NHS as part of their care and support. Data sharing agreements were in place between Connected Yorkshire and both Saltaire Medical Practice and Bingley Medical Practice as well as Bradford Teaching Hospitals NHS Foundation Trust.

Usual care in both practices did not include any self-management support interventions for older people at risk of mild frailty and the two practice populations were comparable in terms of socio-economic deprivation and ethnicity. For each service user taking part in the intervention at Saltaire Medical Practice, a gender and age-matched control was selected at Bingley Medical Practice who also had an eFI score of between 0.12 and 0.24 (i.e. at risk of 'mild' frailty). Each control was allocated a 'baseline' date identical to their corresponding case and their utilisation of health services was measured at the same time periods to reduce the impact of seasonality. The four time periods were:
- six to three months before baseline
- three months before and up to baseline
- baseline and through to three months later
- three to six months after baseline.

In both cases and matched controls, we measured GP consultations (including visits at the practice, home visits and telephone consultations), referrals from general practice and secondary care activity including visits to the emergency department, inpatient admissions and outpatient clinic activity at Bradford Teaching Hospitals NHS Foundation Trust. A form of linear regression, Difference in Differences Estimation using individual level data, was used to analyse healthcare utilisation. For all outcomes, we used two-sided p-values with a significance level of 0.05. STATA 14 was used for all analyses.

We performed exploratory analyses of healthcare utilisation data as this was a feasibility study and no formal sample size calculation had been undertaken prior to this study. The numbers of healthcare visits in the four time periods are shown in Table 2 but the data were too sparse for the A and E attendances, inpatient admissions and outpatient attendances for further statistical analyses to be meaningful.

Figure 4 shows overall numbers of GP consultations before and after the intervention in the cases and controls.

Table 3 summarises the difference–in-difference analyses for GP visits and GP referrals. In the pre-intervention period the mean number of GP visits per case was 3.9 (SE 3.0) and control 4.4 (SE 4.1). In the post-intervention period the mean number of GP visits in the cases rose to 4.6 (SE 3.3) and the controls dropped to 4.0 (SE 3.8). The difference in difference between the groups of an increase in GP visits of 1.2 (SE 0.7) was not significant (p=0.09).

The number of GP referrals rose slightly in both the cases and control group in the post intervention period but the difference in difference was not significant (Table 2).

Learning points from these analyses:
1. Although the controls were identified from a similar group of mildly frail patients (defined per eFI score) and matched on age and sex, there was a difference in GP

utilization between the cases and controls in the pre-intervention period. This may reflect the heterogeneity of heathcare use within this population.

2. Secondary care outcomes may not be appropriate measures for future work in this area, unless a longer follow-up time is planned, as inpatient admissions, emergency department visits and outpatient visits are rare events in this population of older adults at risk of mild frailty.

Healthcare service	TIME IN RELATION TO BASELINE							
	3-6 months before		0-3 months before		0-3 months after		3-6 months after	
	Control	Case	Control	Case	Control	Case	Control	Case
GP visits	258	178	179	126	213	234	211	256
GP referrals	22	9	16	11	28	24	17	12
In-patient admissions	3	6	3	2	5	7	4	6
Out-patient visits	5	18	7	18	5	13	6	21
Accident and emergency visits	1	2	0	2	3	2	0	2

Table 2: Numbers of Healthcare utilisations by service users (case) and control groups

Health care outcome	Mean	Standard error	P-value
GP visits			
Before			
Controls	4.44	4.13	
Cases	3.89	2.96	
Difference (C-C)	-0.56	0.49	0.26
After			
Controls	4.00	3.76	
Cases	4.62	3.34	
Difference (C-C)	0.62	0.49	0.21
Difference-in-difference	1.18	0.70	0.09
GP referrals			
Before			
Controls	0.36	0.78	
Cases	0.19	0.54	
Difference (C-C)	-0.17	0.11	0.13
After			
Controls	0.43	0.86	
Cases	0.34	1.02	
Difference (C-C)	-0.09	0.11	0.45
Difference-in-difference	0.09	0.16	0.59

Table 3: Comparison of healthcare utilisation between service users (cases) and their controls using difference in difference
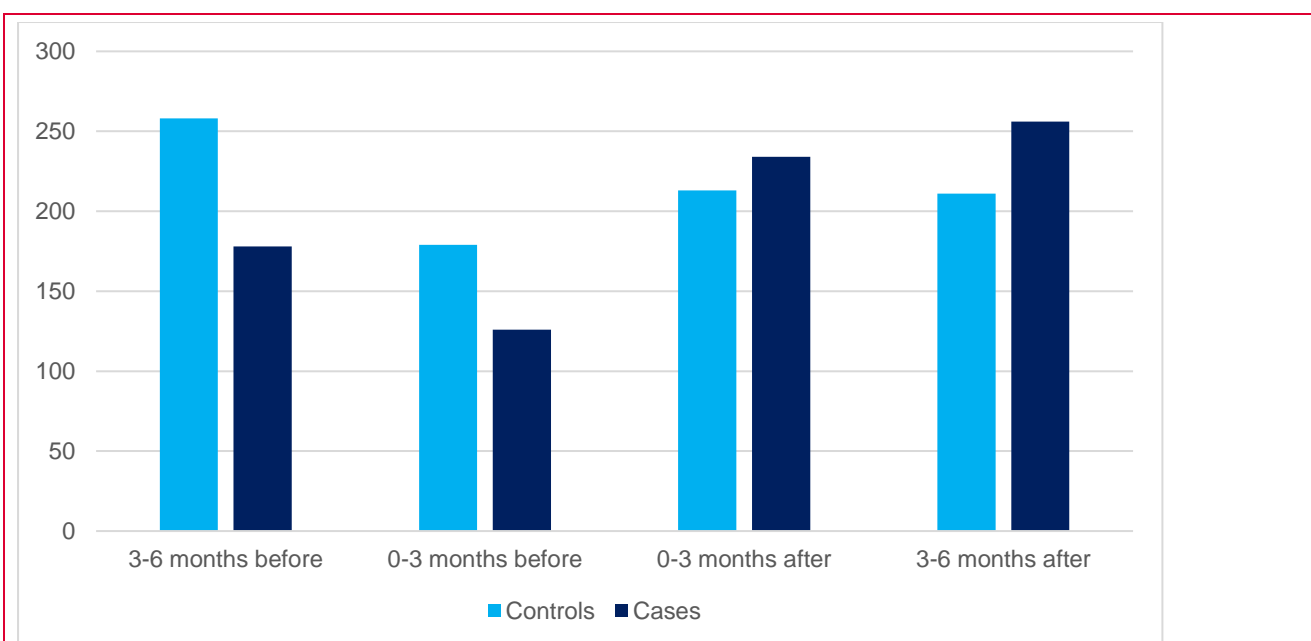
Figure 4: GP visits in all service users (cases) and their controls in relation to the time of the intervention

Part 3: Cost impact

We did not undertake a formal economic evaluation of this project.

In addition to the Health Foundation funding which was used to support the implementation of this project within the practice, Age UK costs and Improvement Academy support, there was additional funding from Connected Health Cities to support analysis of data regarding healthcare utilisation. This analysis did demonstrate the feasibility of working with linked data sets to support evaluation of a primary care intervention however due to limitations of underpowered matching and cohort sizes it would be unsuitable to use this data for future economic evaluation.

Part 4: Learning from your project

Our achievements

This was a feasibility project aiming to test a SMS intervention in 100 older people at risk of mild frailty. We exceeded our recruitment expectations and recruited 106 people to this intervention, confirming feasibility of recruitment. We found that collaborative working between primary care and the voluntary sector was feasible and rewarding. A good relationship between the practice and Age UK was established and sustained over the course of the project. There is interest from both groups in continuing to work together.

Enablers to our success

1. Patient input

This project was co-designed with patients. Prior to the set-up of the project, focus groups had been undertaken with older people at risk of mild frailty to greater understand their health needs. These interviews informed the design of the intervention and there was ongoing input from the practice's Patient Participation Group (PPG). PPG input was invaluable, assisting us with naming the project, designing the logo and providing input into the wording of the invitation letters which were sent out to the target population. The PPG contributed to revisions in our language in the publicity, for example moving to the phrase 'supporting self-care' rather than a 'self-management support intervention'.

2. Staff background and expertise

The buy-in and expertise of the advanced nurse practitioner was crucial to the project's success as this ensured effective screening of those patients initially thought to be suitable, to exclude unsuitable patients such as those resident in care homes or with diagnoses of dementia or with palliative care needs. The Supporting Self Care coordinator had a previous background in healthcare, having already worked in an established Age UK Bradford and District post with experience of the organisation. She undertook an accredited health coaching training course which strengthened her knowledge, skills, strategies and confidence. Having one coordinator in the role rather than a shared role meant that recognition and relationships with the practice staff grew with time.

3. National policy

Frailty has gained increasing recognition in recent years as an important long term condition. This was recognised by policy makers in 2017 when frailty was added to the national General Medical Services (GMS) GP contract. The eFI has been implemented into primary care electronic health record systems and this enabled us to case-find people at risk of mild frailty using routine healthcare data. The suitability and availability of the 'Practical Guide to Healthy Ageing' booklet meant that we did

not need to create a new resource.

Challenges and barriers to success

1. Staffing

At various points in the project, we had staffing gaps which resulted in a lack of project continuity and other members of staff undertaking extra workload. Our implementation manager post was not filled until June 2017 which meant the programme manager and SSC coordinator took on additional workload preceding this. The programme manager and SSC coordinator had periods of maternity leave from December 2017 which resulted in the implementation manager and a clinical leadership fellow leading the evaluation and a break in project continuity. A member of staff within Connected Health Cities moved to another role in October 2017 and was not replaced until January 2018.

2. Administration burden

The administrative workload in inviting patients and handling other associated paperwork (such as SMAS-S returns) proved time consuming for administration staff and conflicted with other tasks, such as sending out reminders for influenza vaccinations and clinical reviews. Obtaining the return of the SMAS-S questionnaires was time-consuming and difficult, especially the follow-up questionnaires at 3 and 6 months. Reminders to complete the questionnaire were made by telephone. We were unable to send these questionnaires via email from the practice which some people indicated would have been a preferred mode of communication. We tried to overcome some of these challenges by the provision of administrative support by the Improvement Academy's implementation manager.

3. Language of frailty and self-perceptions of the target group

Obtaining buy-in from our target population was a challenge. We found that people were not expecting to receive the offer of a new service and were sometimes confused about why they had been selected. Telephone conversations were required to describe the intervention in greater depth and allay fears. Initial low uptake meant that a higher volume of invites needed to be dispatched within a relatively short time frame and additional administrative support was required to speak to patients and answer queries.

The provision of the 'Practical guide to healthy ageing' was both a barrier and an enabler. Whilst it provided a themed framework for the conversation, it mentioned people over the age of 70 and some of the imagery depicted people with older appearances than our population. Whilst the booklet did not specifically discuss frailty, we found that service users were not keen on the initial section on walking tests and therefore we did not use these as part of the discussion. Indeed 'frailty' as a term did not feature in the invite or during the consultation. The eFI is designed

only as a tool to identify people 'at risk' of frailty and not to diagnose frailty *per se,* which should be undertaken clinically. As we did not undertake clinical validation of participants' frailty status during this intervention, it would have been inappropriate to 'diagnose' frailty. As we had not made any diagnoses of frailty during the course of this project and did not openly discuss this, this may have contributed to confusion amongst older people regarding why they had been offered the intervention.

Initially it was anticipated that the intervention would comprise a blend of more intensive techniques such as motivational interviewing techniques and health coaching but the cohort selected did not identify with the concept of goal setting and making changes, instead preferring to focus on maintaining their health. This led to a lighter touch approach using signposting methods and linkage to internal Age UK Bradford and District services.

4. Competing priorities and clinical workload

Input from clinical staff was sometimes restricted due to their responsibilities but were able to join meetings for a shorter period. We tried to overcome this by holding meetings at lunchtime at the most likely convenient time for clinical staff, with non-clinical staff being more flexible.

5. Information governance and space at the practice

Information governance meant that administrative work relating to the project could not be done remotely across a secure system. This led to significant time being spent physically at the practice by both the supporting self-care coordinator and Improvement Academy staff. Rooms at the practice were at times scarce.

6. Data

Social care data was limited and therefore deemed unsuitable for further analysis. Patient reported outcome measurement including Quality of Life (QOL) is not routinely collected in primary care except for 10 random GP satisfaction questionnaires each quarter and to change this would require both resource, infrastructure and likely behaviour change among clinicians to incorporate PROMs as usual care. The 12 month project implementation and evaluation period posed a timing challenge around the 6-month post-intervention data collection and this resulted in additional pressure on the team.

Key points: our learning and what we wish we'd known

- Voluntary care sector workers can become an integral part of a primary care team. Appointments in primary care usually last 10 minutes but these appointments lasted 30-60 minutes and took a holistic approach. People were willing to talk about sensitive subjects such as mental health and continence.
- People reported feeling pleased that older people were being offered a preventative service and given time to 'tell their story' without being rushed. Even those declining the service were pleased that such a service was being offered to 'more needy' people.
- Clinical validation of frailty status would have enabled us to more openly discuss the concept of frailty. However this would have required considerable additional resource and clinicians' time and is unlikely to be sustainable.
- A method for flagging up suitable people presenting to practitioners could have encouraged healthcare professionals to encourage uptake of this service whilst people were consulting them for other issues.
- Targeting the right individuals relative to their level of self-management was indicated through our qualitative work as something that could be further refined.
- The relationship between health care utilisation for people identified as at risk of frailty is likely to be complex and requires further work with a larger study and a longer follow-up period.
- Many of this target group used smart phones and computers. We could have employed better use of technology for communication and publicity. We set up a twitter hashtag #selfcaresaltaire but, on reflection, underutilised this.

Part 5: Sustainability and spread

We intend to share our learning and the results of this work with our key stakeholders. We are due to present this work to Saltaire Medical Practice's PPG at the start of July 2018 and are also intending to share this work at a practice meeting. We have written and submitted an article for the Summer 2018 'Self Care and Prevention' newsletter produced by the three local CCGs. It is our intention to also write an article for next edition of the local Age UK Bradford and District magazine.

At present, we do not plan to sustain the intervention beyond the funding period but both Age UK and Saltaire Medical Practice are interested in further exploration of ways of collaborative working. Further funding would however be required to undertake this work as it requires the employment of a Supporting Self Care coordinator, administrative support and coordination, none of which can be easily incorporated into 'usual business'.

We presented early results of this work to more than 100 delegates at the 'Improving the quality of life for older people' event in Leeds in April 2018. We intend to disseminate the full results of this work through further presentations and academic papers.

With appropriate funding, clinical engagement and resource, most aspects of this work could be implemented in another general practice setting in the UK, depending on future evaluation work demonstrating positive impact at an individual level and in terms of health and care resource use supporting cost-effectiveness.

Appendix 1: References and resources

References:

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Additional Resources:

Further information on the work of the Healthy Ageing Collaborative can be found on partner websites:

Improvement Academy

Connected Health Cities

Academic Unit for Elderly Care & Rehabilitation

Yorkshire & Humber AHSN