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Acceptability and use of a patient-held communication tool for people living with dementia: a longitudinal qualitative study

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Acceptability and use of a patient-held communication tool for people living with dementia: a longitudinal qualitative study

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All of the authors declare that they have no conflict of interest

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Abstract:

Objectives: To assess the acceptability and use of a low-cost patient-held communication tool.

Design: Longitudinal Qualitative interviews at three time points over 18 months

Setting: Primary and community services

Participants: Twenty-eight dyads - People living with dementia in Northern Ireland and their informal carers, supplemented by focus groups, and content analysis.

Interventions: a patient-held healthcare "passport" for people living with dementia.

Primary and secondary outcomes: acceptability and use of the passport – barriers and facilitators to successful engagement.

Results: There was a qualified appreciation of the healthcare passport and a much more nuanced, individualistic or personalised approach to its desirability and use. How people perceive it and what they actually do with it, are strongly determined by individual contexts, dementia stage and other health problems, social and family needs and capacities. We noted concerns about privacy and ambivalence about engaging with health professionals.

Conclusion: Such tools may be of use but there is a need for demanding, thoughtful, and nuanced programme delivery for future implementation in dementia care. The incentivisation and commitment of General Practitioners is crucial. Altering the asymmetrical relationship between professionals and patients requires more extensive attention.

Article Summary

Strengths and limitations of this study

- Our LQR design allowed a consideration and assessment of contextual factors and mechanisms [21] related to use of a patient-held medical communication tool in 'real-world' environments.
- The LQR design was key to building rapport and trust with participants and uncovered various assumptions about caregiving, and aspects of individual and systemic behaviours that determine passport usage.
- While we delivered educational seminars on the use of the passport to targeted key staff
 within the dementia services and sent information and passports to participants' GPs, we
 were unable to reach out to all those involved in the care and treatment of individuals.
- While the existence of the passport evaluation had been disseminated to GPs across
 Northern Ireland, many GPs either failed to engage with its use or considered it another burden.

Introduction:

Dementia is increasingly prevalent in Western societies, producing considerable challenges to families, health services and economies [1, 2]. However, as dementia progresses, the appearance of other health problems and disabilities are commonplace, leaving specialist-based healthcare systems to manage the various health and social care problems in a fragmented and inefficient manner. People living with dementia ('PLWD') and family caregivers commonly report dissatisfaction on issues such as multiple and unnecessary appointments and distress at repeating history and current situation (needs and resources), symptoms, treatment and care package [3-5]. Communication with health care professionals in dementia services is often problematic for both the patient and their family members [6], related to various aspects of organizing care and areas of decision-making for

relatives with dementia [7, 8] [9] [10, 11]. Various obstacles deny widespread acceptance and use of internet-based support [12, 13].

Attempts to address service barriers are generally confined to hospital and hospice settings [14] and/or overly focused on clinical decisions and pathways, to the neglect of personcentred approaches[15, 16]. To address these problems, a consortium of health professionals and people with long-term and life-limiting conditions co-produced a "healthcare passport", an expandable information booklet divided into sections covering key aspects of the person's life, support, and care. For example, some of the sections covered information on health problems, another contained details of medication, while other sections disclosed salient aspects of the individual's life – religious or spiritual beliefs and interests. Importantly, the 'passport' was to be held by the person with dementia (or their proxy) who completed the personal and social sections, while medical treatment and care were completed by the various and relevant health professionals, and entries could be made by the latter during visits. In brief, the passport was designed as a portable patientheld record of care that could facilitate the cross-transfer of information between patients and a variety of medical and social care professionals. In collaboration with health and social care agencies, statutory and voluntary, we sought to examine how this low-cost communication tool might be acceptable and useful to people living with dementia and their families.

Aims: to examine the efficacy of a healthcare passport for people with dementia and their family carers, intended to facilitate communication and decision-making for service users and family caregivers. Additionally, we wanted to explore: (a) how this tool is used over

time; (b) the engagement of relevant service providers; (c) the barriers to information and communication between and among family carers and health and social care professionals ('HSCPs') and how these can be remedied; and (d) how to refine and/or deliver the passport and similar interventions.

Ethical Approval: The study was given favourable ethical opinion by the Office for Research Ethics Committees Northern Ireland (ORECNI) on 21 July, 2015. (REC reference 15/NI/0129)

Method: adopting a realist evaluation approach to complex interventions, we used Longitudinal Qualitative Research (LQR), focus groups and document content analysis.

Recruitment

We aimed to recruit 20-25 people with mild-to-moderate dementia, and their families, sufficient to obtain a range of individual situations and experiences. This was done through the Memory Clinic of the Western Health & Social Care NHS Trust.

Capacity: If the lead clinician or centre manager believed absence of capacity, the lead clinician or centre manager helped identify their next of kin, family caregiver or someone close to the person (who does not receive remuneration for this role) who will act as a "personal consultee". Although the capacity of the person with dementia may diminish over the evaluation period, we intended that they are fully involved in using the passport, and any associated decision- making. We held no prior assumptions about participants' current use of health and social care services. The potential participants were approached by clinicians who provided information about the study. Interested service users and their families then contacted the study team for further information and provided written

informed consent. Family GPs were contacted and given information tools about the passport. Additionally, we ran information sessions for local health professionals within the local dementia services.

Interview methodology

Primarily we used Longitudinal Qualitative Research (LQR) methods [17, 18]. Briefly, this consisted of three in-depth interviews: (1st) shortly after referral; (2nd) at six months; and (3rd) at twelve months. The interviews, lasting between 60 and 90 minutes, were undertaken in the participants' homes by BWB and EC, females with PhDs with substantial training and experience in qualitative research with vulnerable populations; sociologist and psychologist, respectively. The researchers met with all participants prior to the study, via the memory clinics, and provided a clear overview of the study aims. Neither researcher had prior personal experience of dementia or its associated caregiving. We used topic guides to help us record and explore change over time, and the processes associated with such changes. Thus, the initial interview gathered 'baseline' information about the onset and diagnosis, health and social care needs, the context of care and the availability of support. We also examined service users' and caregivers' perceptions and expectations of the passport. Field-notes were not taken during interviews but the team met regularly to discuss issues arising from the interviews. The topic guide and analysis were based on the literature and experts by experience within the Alzheimer's Society. The topic guide was refined after the initial interviews.

In subsequent meetings, we explored any change to these areas and issues and the passport usage. Additionally, we did a content analysis of service user and caregiver entries in the

passport and examined General Practitioner's assessment of passport usage. All participants provided recommendations for future use of the passport.

Analysis: The interviews were audiotaped, transcribed and then entered into a qualitative software programme (N-Vivo version 11) for data coding and management. We used *Trajectory analysis* which examines changes over time for participants[19]. We coded and indexed the data, using a spreadsheet in order to generate a matrix into which the data was 'charted'. This summarized the data by category from each transcript, building themes with the support of memos and data display. Transcripts were analysed and coded independently by the researcher, 1-2 members of the caregiver participant group, and members of the research team.

Some specific areas covered: (a) a retrospective examination of the experience of people with dementia, family carers, help-seeking and communication needs – prior to using the passport; (b) practical use of the passport, differentiated by different care characteristics and contexts (e.g. dementia stage, social class and social support networks, gender and care-relationship); (c) change in use of the passport over time in response to need; (d) care planning and advance directives for end of life care; (e) joint decision making (family and patient); (f) comprehension and ease of use by stakeholders (professionals and family); and (g) reasons for discontinuation. Additionally, we examined contextual factors of people in the use and maintenance of this type of intervention and how it can be more effective.

Understanding the acceptance and use of the passport over time with a range of people was the main goal and thus, theoretical data saturation was not particularly relevant. While it was not possible to undertake participant checking per se, participants were provided with a synopsis of their previous responses and asked about change.

Passport Content analysis: The passports' contents were examined to see how they were used and by whom, in addition to family carers, and the level and quality of the information provided.

Findings

Participant recruitment and attrition

Following initial recruitment of 28 patient-carer dyads for the first wave of interviews, two declined; we therefore interviewed 26 PLWDs and carers in wave 1. Participant (patient and carer) characteristics in addition to recruitment and attrition flow are provided in Table 1 and Figure 1 below. Advised by the Memory Clinic to expect a high attrition rate in this particular population, we had 16 participating families at wave 3 (48% of total contacted).

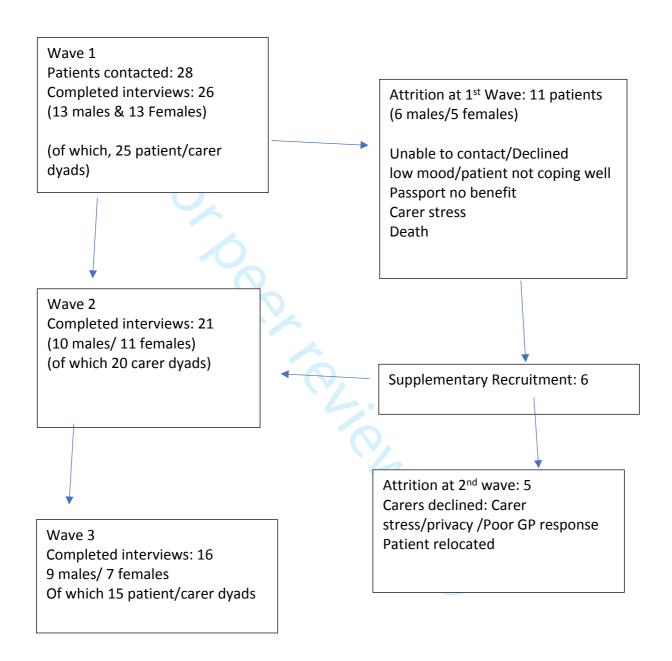
We obtained a socially heterogeneous sample from range of occupational backgrounds. However, all 28 patient participants were retired, or not working. Only five patients lived alone in their own home, one lived in residential care (by choice), and 20 lived with either their spouses, or a daughter or son.

We noted various comorbidities (including depression, diabetes, arthritis, COPD, heart problems, hypertension, breast and prostate cancer, hearing, and vision impairments). Depression (37%), arthritis (30%), diabetes (27%), and cardiac conditions (27%) were the most frequently occurring comorbidities in our final sample. Eighteen participants (60%) had multiple comorbidities, with between two and eight separate conditions in addition to their dementia. The comorbidities reported by the participants may not entirely correspond to their medical records. Some participants may have forgotten to mention particular conditions, or have chosen not to disclose them.

TABLE 1: RECRUITMENT AND ATTRITION

	Wave 1	Wave 2	Wave 3
Number	26	21	16
Gender	13 females 13 males	11 females 10 males	7 females 9 males
Carer gender	18 female 8 males	17 females 4 males	12 females 4 males
Age	57-89	57-87	58-88
Stage	Mild-moderate	Mild-moderate	Marked deterioration: 3 males
Living	With carer: 17	With carer: 14	With carer: 11
arrangements	Living alone: 9	Living alone: 5	Living alone: 4
	Other: 2	Other: 2	Other: 1
Attrition	5 females 6 males	4 females 1 males	N/A

Figure 1: flow chart of Participant Recruitment and Attrition waves 1-3



Carers

Eighteen of the family caregivers were retired from work and six were still working. Most carers were female, (daughters (N=13), and wives (N=11)). Husbands were the next biggest

group (N=5); others were sons (N=3), brothers (N=1), and sisters (N=1). In some cases (N=5), caring was shared between two or more family members. Eight carers (daughters and sons) also had their own families to care for; one carer (wife) also cared for a mother with Alzheimer's disease and an elderly relative. Thirteen carers had serious health problems including diabetes, high blood pressure, arthritis, depression, and epilepsy.

Contextual Experience of Health and Social Care

Participants reported limited communication and coordination between departments, and individual professionals; miscommunication between health and social care professionals (HSCP), considerable variation in information and service provision, and problems when formal carers changed. Some families felt intimidated by unfamiliar doctors, while others became particularly assertive when they felt the patient was being disadvantaged. Those who had worked in healthcare or had family in the healthcare system were more confident, and found it easier to get the service they needed. The main health and social care issues reported were the difficulty in seeing the same GP every time "You never see the same doctor twice. They are always booked up, and others don't know your case." (C16), the short consultation time, the importance of the GP taking time to listen, being comfortable with the GP, and the attitude of the GP (emphatic and warm versus condescending and dismissive). Some avoided seeing their GP because they feared another diagnosis, or because they felt they should not "bother" the GP.

Attitudes to, and expectations of, Passport use

In the following section, we detail the perceptions and use of the passport over the evaluation period. The key factors in this were: (a) correct completion; (b) timing; (c) privacy; (d) additional burden; and (e) response from Healthcare Professionals.

Correct completion

Most participants were unsure about the potential usefulness of the passport though we noted some scepticism on its usefulness and/or capacity to use it. Some were anxious about writing anything at all in the passport.

"It's not so much reservations but will it actually really make any difference to (participant) or myself, really? Will it actually make any difference? [] Well, I've only glanced at it but really I don't know." (C17)

Importantly, participants worried that there was a 'right' way to use the passport, and most wanted guidance on this. Overall, the most common response was 'we will give it a go' – a tacit agreement to try it out. In any case, over the study period many people stated simply that they forgot to use the passport which was often put away "for safekeeping". Again, some of this may be due to the uncertainty about using the contents.

Timing

Many participants considered the passport to be unnecessary at this stage of their healthcare, mostly because they had few appointments currently. This was particularly true of care dyads with a diagnosis less than six months prior to interview, and for those with few/no co-morbidities. However, others acknowledged potential usefulness as the illness

progressed, and of particular use if something were to happen to the carer. Few participants maintained that they could keep track of this information themselves, or believed the healthcare professionals would already be sharing/recording the information without prompting. In each of these cases, the opinion of those individuals did not change with further explanation of the passport, and so it is unlikely that the response was due to poor understanding of the purpose of the passport.

"No, I just filled in the basic information and that's it. That was all, really. I haven't really used it, because I didn't feel...because she hasn't been to any appointments so at this stage...I would say maybe in the future it will be more relevant but, at the minute, no." (C1)

Privacy and relationships

Carers' attitudes to information-sharing with healthcare professionals is complex and the concept of promoting 'personhood' in healthcare had limited currency among carers. Thus, several families were unwilling to share personal details with the doctor beyond medical history, and did not acknowledge the significance or relevance of that part of the passport.

"No, no, and you know, we don't like to have a document like this lying about the house so that other people, for whom it is not their business, may come across it and see what's going on or what [P24]'s drug regime is." (C24)

Such families preferred compartmentalised approaches to care or were suspicious of sharing personal information with paid carers in particular. These views seldom changed over the study period. Participants were also apprehensive about who should have access to, and make entries in, the passport. Even though it was explained that control over the use of the passport lay with the family, people remained unsure as to how this could be decided. We noted warmth between dyads in most of the interviews and this bond appears

to assist in using the passport. However, we also noted that some couples fearing the loss of their 'old' relationship strove to maintain a 'normality' which, in some instances meant minimising external intrusion. With implications for the healthcare passport and for care generally perhaps, several couples suggested that they try and manage things themselves (e.g., C2, C28/P28, P30). "We handle things ourselves. As far as we can, we'll do it. Wherever she goes, I go now." (C2)

Additional burden

Participants' enthusiasm for the passport centred on its organisational and memory purposes. However, while carers focussed on keeping track of varied professional appointments, patients focussed on medication management. Additionally, while carer participants who formed part of family network anticipated its value in cross-communication to relatives, unless prompted none indicated its utility in information-sharing with health and social care professionals. Again, this suggests that the concerns about threats to the personhood of the family member posed by health professionals' responses and attitudes does not register significantly with caregivers or was overshadowed by healthcare needs. "It's a new thing, it's very hard to handle, and the last thing on your mind is this book." (C3). Others, particularly non-spouse males, were apprehensive that the passport may become too onerous.

"This is what happened to us. Whenever (Participant) was diagnosed we got bombarded with everything, which 90% of it was great but there was a couple that we couldn't just cope with, and that was one of them, you know, it was too much at the time. Probably in time to come it might..." (C11)

Ownership of Passport

Most carers indicated that the PLWD would not be able to use the passport, or somehow dissuaded the PLWD from using it. In one case, this was because the PLWD did not want to use the passport, and in a few cases, this was due to problems with writing as a symptom of the condition.

"As regards M., my husband, he won't be able to fill that in because he can't write now because he has problems with using his fingers and hands [....]. Therefore, he wouldn't personally be doing this, it would be me." (C17)

There was quite a range, however, in the carer's perception of the PLWD's ability to use the passport amongst people with the same/similar memory scores. Carers expressed a number of reasons why the PLWD would not use the passport, including an inability to write, forgetting to use it, not understanding how to use it, or not wanting to use it because it is a reminder of their condition.

Anticipated response from Healthcare Professionals

Some participants, particularly carers, 'self-censored' any exchange with health professionals believing that doctors were unlikely to use the passport, or even to read it. This was particularly true when people spoke of GPs or Consultants (with the exception of the Memory Clinic staff). People who mentioned this were also more likely to discuss doctors being disinterested or pressed for time when discussing their relationships to healthcare professionals.

"You'd be taking your life in your hands when you hand them the book and say 'can you fill that in?' They would just tell you that they don't have time and that would be the way like, and I wouldn't go back and ask a second time." (C18)

They were also more likely to relay negative stories about experiences with HSCPs.

However, in contrast, family caregivers who had direct experience working in the healthcare sector, tended to suggest that healthcare staff would find the passport very useful.

Participants sceptical of professional engagement with the passport nevertheless maintained the value in the passport for their own care dyad. Updating the passport and/or introducing it into healthcare consultations was problematic. "We weren't good at doing the homework, I have to say. Some of it's done and some of it hasn't been updated."

(C32). Thus, some people forgot to bring the passport when attending hospital and general practice appointments —while others were greeted with bemusement by clinicians who appeared to be unaware of its existence. Additionally, other participants consciously neglected it, anticipating that the passport may be perceived by clinicians as a burden and did "not want to bother" them.

"We've tried to use it." (C20) "When we saw the reaction to it, we don't take it anymore." (C20a) "They just look at you as if-" (C20)

Healthcare Passport content analysis

During the 3rd wave of interviews we made copies of the passport entries with the permission of the participants. With one exception (P8), carers had filled in the passport, rather than the PLWD. Most participants opted to keep their HP after the evaluation, except one (P14).

Family caregivers, soon after diagnosis, began incrementally to assume control of various responsibilities in the PLWD's life. Sometimes family intervention is a response to cognitive changes and the diminishing capacity of the person, for others it appears to be a preemptive and prematurely unnecessary intervention, prompted by anxiety about risks. In return, the family member with dementia assumed a new identity role which undermined their sense of agency and initiated an erosion of abilities and skills. "Do you want me to write all this down?" (P7) "No, I'll get [wife] to do it for us, Dad." (C7)

Additionally, some of the PLWD had various co-morbid conditions and/or learning difficulties, which made writing problematic. Each of the passports was completed in a distinctly idiosyncratic style. While this demonstrates the different individuals' personhood, it may also present challenges for HSCPs. In other words, our evidence suggests that the passports may not conform to a standard information collection. For example, in terms of medication and side effects, as well as comorbidities and their impact, and self-care, the level of detail varies considerably between PLWDs, and some do not mention these at all, even when these are a significant aspect of their needs and difficulties. So, HSCPs may be concerned that vital information is not recorded and may consider that, in its current form, the passport is unreliable.

Personal narratives, hobbies, and activities also varied considerably and information was also recorded unsystematically. Thus, carers included details about dementia progression and PLWD deterioration, along with details on religion, likes, and dislikes, and activities. Of the 12 completed passports, four contained only undated entries, two contained partially dated entries only, all but two (P8 self-completed; P21: social worker completed) were

completed by the carer. Those who were overwhelmed (e.g., C13), or coping very well (e.g., C13) did not complete the HP.

GPs feedback

The general consensus among the GPs was that "... the fundamental idea is very good." (CB) Some GPs were familiar with maternity notes, about which they noted "... work well if the patients bring them" (CB) but said that often they did not. In the current study, few patients took the passport to their GP, and those who did, reported that the GP appeared to be unfamiliar with it or unenthusiastic about its use, which deterred them from taking it again. Commonly, GPs felt that the passport created another pressure on GP's time and also were concerned about its legal status in the event of medical complications or patient complaints. Mostly, however, most expressed doubt about the additional bureaucracy.

"Another form! Will it improve the lives of patients and carers? The others rarely do!" (Dr Mc)

The practicality of and reasoning behind offering the passport in paper format was questioned in the context of ubiquitous digital technology within the healthcare system.

Discussion

To our knowledge, this is the first study to evaluate a communication tool in dementia healthcare [20]. The complexity of dementia, often accompanied by co-morbid disability and illness, create challenges for interventions designed to support relationships in care 4]. Thus, over time, health and social needs can accelerate and informal care networks may be

unpredictable. Additionally, while these factors underpin the rationale for communication tools they also increase evaluation uncertainties about their acceptance and use.

Despite the challenges to its widespread use, the health care passport for people living with dementia was still considered favourably by many participants but requiring a more nuanced approach. As a communication tool it may be determined by the extent of the person with dementia's care needs and the caregiver's role and ability in meeting these. While the healthcare passport was co-designed and strongly supported by people with dementia, family caregivers and healthcare professionals, its feasibility rested on various assumptions about stakeholder beliefs, values, behaviours within a range of contexts and specific needs. Our evaluation underlined the salience of factors that are seldom acknowledged in the implementation of complex interventions and particularly within the world of dementia care. Prima facie, we found a ready acceptance of the passport by service users and carers who were willing to 'give it a go' and could envisage its benefits. However, a more tacit understanding of cultural attitudes towards health professionals emerged. In many cases, participation was gained simply because families felt an underlying obligation to the dementia services (Memory Clinics). Again, deference to professionals was manifested in the reluctance of service users and carers to 'bother' their GP revealing the asymmetry of this relationship and patient-family insecurities about 'annoying' clinical staff. GPs, mostly, did not engage with the passport, partly because they considered it old technology and inefficient. However, this perspective fails to recognise that many older people are not familiar with digital technology.

The timing for introducing the passport may influence its uptake and usage. This may prove difficult to gauge. At the very early stages post-diagnosis, patients may have good physical

and mental health and may reject the passport as unnecessary while, nevertheless regarding it as potentially helpful as the condition progresses. Others, who appeared to be still in shock or depressed for some time after the diagnosis, found the passport as a painful reminder and didn't want to use it. It was regarded as a "dementia passport" and associated with lack of capacity and decline. For those at a more advanced stage, and/or with considerable co-morbidity and thus, service use, often felt overwhelmed by the information flow that they thought necessary to be inserted.

As noted in other healthcare areas [22, 23], the 'ownership' of communication tools presents interesting and challenging dilemmas. Developed as a patient-held communication tool but not specifically designed for dementia, cognitive deterioration may alter the passport's management, often assumed by the family carers. In some cases, family members appear to undertake, and therefore sometimes undermine, the normal activities of daily living of the person with dementia. The extent to which the passport is held and 'owned' by the family caregiver requires further examination.

For people who wished to maintain a sense of 'normality' the passport may have been perceived as a threat or an intrusion, in which case people consider what is most at stake for them and will try to find ways of protecting this.

Revealing participants' tastes and dispositions within the passport was intended to create a sense of personhood and while some people understood and appreciated the concept, other participants were anxious about the sharing of personal information, feeling that some formal carers or clinicians did not need to know the personal details or specific

aspects of a person's life. For others, achieving basic medical and social care services appears to be prioritised over non-essential knowledge – suggesting that the two information types are balanced in a zero-sum game.

Content analysis revealed that each passport was entirely different from others. While this is to be expected when it comes to personal narrative, it is not helpful in terms of medical information, symptoms, progression, comorbidities, side effects of medication, etc. The current non-standardised format of the sections relating to information relating to the patient's health may undermine the passport's viability and efficiency. Essential information may be missing or not have been updated, or indeed not dated. Many entries were not, or only partially dated. As such, the information contained in the passport may not be regarded as reliable by some professionals.

This evaluation has provided rich, in-depth information about the uptake and use of a healthcare passport for people living with dementia. For example, recruitment to studies such as this may be relatively easy but meaningful participation is more difficult to achieve. Thus, a future trial will need to set much stricter parameters for participation including much more robust assessment of informed consent rather than a willingness to please clinicians, complexity of care, disease progression and passport 'ownership'.

Recommendations

HSCPs need to have an awareness of the dynamics in a patient-carer dyad, and the particular circumstances of the carer, and devise a care plan fully cognisant of the medical and socio-psychological condition of both. Some families require much more in-depth

consultation on the use of the passport and over a longer period of time than the resources permitted in the current evaluation. It must be made clear that it is a "health passport" rather than a "dementia passport". People living with dementia need to know that it is widely used by all patients, so that they do not feel stigmatised by its use.

The degree and exact nature of GP resistance may require further understanding about how, if at all, it may be overcome. Alternatively, future design and implementation may have to consider which service should take responsibility for the dissemination and oversight of the passport.

Patient and Public Involvement

This study was developed with the support of the Alzheimer's Society Northern Ireland.

People living with dementia were involved in various stages of the project except writing for publication.

Author contributions:

GL, AA, MW, ST, SMcI, BeMcC, BrMcC and VC co-designed the study, EC, BWB and DC collected and analysed the data. All authors contributed to the writing of the manuscript. GL was the PI on the study.

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TABLE 1: RECRUITMENT AND ATTRITION

	Wave 1	Wave 2	Wave 3
Number	26	21	16
Gender	13 females 13 males	11 females 10 males	7 females 9 males
		(new: 3 female 1 male)	
Carer gender	18 female 8 males	17 females 4 males	12 females 4 males
Age	57-89	57-87	58-88
Stage	Mild-moderate	Mild-moderate	Marked deterioration: 3 males
Living	With carer: 17	With carer: 14	With carer: 11
arrangements	Living alone: 9	Living alone: 5	Living alone: 4
	Other: 2	Other: 2	Other: 1
Attrition	5 females 6 males	4 females 1 males	N/A

Figure 1: flow chart of Participant Recruitment and Attrition waves 1-3

Figure 1 Recruitment and attrition Attrition at 1st wave: 11 Wave 1 6 males | 5 females Patients contacted: 28 Declined when contacted about first interview | Low mood | Calls not Completed interviews: 26 returned | Patient not coping well | Carer has health problems | HP is extra (13 males | 13 females) chore and of no benefit | High carer distress & patient went into home | (of which 25 patient/carer dyads) several bereavements and serious illness | Patient's husband died Wave 2 Recruited additional patients to compensate for attrition: 4 Completed interviews: 21 1 male | 3 females (10 males | 11 females) (6 contacted: 2 unresponsive) (of which 20 patient/carer dyads) Attrition at 2nd wave: 5 1 male | 4 females Carer sees no benefit in HP and worries about a breach of data protection | Patient Wave 3 moved to England | Unresponsive | HP causes arguments and adds stress | High Completed interviews: 16 carer stress & house move | GP knows nothing about HP (9 males | 7 females) (of which 15 patient/carer dyads)

EQUIP Research Checklist

Consolidated Criteria for reporting qualitative studies (COREQ)

1	Interviewers	Identity provided
2	Credentials	Described
3	Occupation	Described
4	Gender	Described
5	Experience and training	Described
6	Relationship established	Yes
7	Participant knowledge of the	Described
	interviewer	
8	Methodological	Described
9	Orientation and theory	Thematic
10	Sampling	Described
11	Method of approach	Described
12	Sample size	Described
13	Non-participation	Attrition described
14	Setting of data collection	Described
15	Presence of non-participants	Described
16	Description of sample	Described
17	Interview guide	Described
18	Repeat interviews	Described
19	Audio visual recording	Described
20	Field notes	Described
21	Duration	Described
22	Data saturation	Discussed
23	Transcripts returned	Discussed
24	Number of coders	Described
25	Description of the coding tree	Coding discussed/described
26	Derivation of themes	Described
27	Software	Described
28	Participant checking	Discussed
29	Quotations presented	Present
30	Data and findings consistently presented	Yes
31	Clarity of major themes	Described
32	Clarity of minor themes	Described

Person

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Acceptability and use of a patient-held communication tool for people living with dementia: a longitudinal qualitative study

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Conflict of Interest statement:

All of the authors declare that they have no conflict of interest

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Dementia, caregivers, patient-held records, communication, information

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Abstract:

Objectives: To assess the acceptability and use of a low-cost patient-held communication tool.

Design: Longitudinal Qualitative interviews at three time points over 18 months

Setting: Primary and community services

Participants: Twenty-eight dyads - People living with dementia in Northern Ireland and their informal carers, supplemented by focus groups, and content analysis.

Interventions: a patient-held healthcare "passport" for people living with dementia.

Primary and secondary outcomes: acceptability and use of the passport – barriers and facilitators to successful engagement.

Results: There was a qualified appreciation of the healthcare passport and a much more nuanced, individualistic or personalised approach to its desirability and use. How people perceive it and what they actually do with it, are strongly determined by individual contexts, dementia stage and other health problems, social and family needs and capacities. We noted concerns about privacy and ambivalence about engaging with health professionals.

Conclusion: Such tools may be of use but there is a need for demanding, thoughtful, and nuanced programme delivery for future implementation in dementia care. The incentivisation and commitment of General Practitioners is crucial. Altering the asymmetrical relationship between professionals and patients requires more extensive attention.

Article Summary

Strengths and limitations of this study

- Our LQR design allowed a consideration and assessment of contextual factors and mechanisms related to use of a patient-held medical communication tool in 'real-world' environments.
- The LQR design was key to building rapport and trust with participants and uncovered various assumptions about caregiving, and aspects of individual and systemic behaviours that determine passport usage.
- While we delivered educational seminars on the use of the passport to targeted key staff
 within the dementia services and sent information and passports to participants' GPs, we
 were unable to reach out to all those involved in the care and treatment of individuals.
- While the existence of the passport evaluation had been disseminated to GPs across
 Northern Ireland, many GPs either failed to engage with its use or considered it another burden.

Introduction:

Dementia is increasingly prevalent across the globe, producing considerable challenges to families, health services and economies [1-3] provoking government and philanthropic policy and research initiatives in healthcare and social inclusion[4]. However, as dementia progresses, the appearance of other health problems and disabilities are commonplace, leaving specialist-based healthcare systems to manage the various health and social care problems in a fragmented and inefficient manner. People living with dementia ('PLWD') and family caregivers commonly report dissatisfaction on issues such as multiple and unnecessary appointments and distress at repeating history and current situation (needs and resources), symptoms, treatment and care package [5-7]. Communication with health care professionals in dementia services is often problematic for both the patient and their family members [8], related to various aspects of organizing care and areas of decision-

making for relatives with dementia [9, 10] [11] [12, 13]. Various obstacles deny widespread acceptance and use of internet-based support [14, 15].

Attempts to address service barriers are generally confined to hospital and hospice settings [16] with a bias towards clinical decisions and pathways, but neglecting person-centred approaches[17, 18]. A consortium of health professionals, voluntary sector organisations, carer groups and people with long-term and life-limiting conditions met over a two-year period to co-produce a "healthcare passport". This was an expandable information booklet divided into distinct sections which covered important aspects of the individual's life, support, and care [19]. For example, one section was allocated to information on any health conditions the person had; another allowed for details of any medication they had been prescribed and could be expanded to record changes to medications; Coverage on a person's social networks and supports was also provided for – allowing the health and social care professionals the opportunity to assess supportive contexts. Other sections disclosed salient aspects of the individual's life – religious or spiritual beliefs and interests. Importantly, the 'passport' was to be held by the person with dementia (or their proxy) who completed the personal and social sections, while medical treatment and care were completed by the various and relevant health professionals, and entries could be made by the latter during visits. In brief, the passport was designed as a portable patient-held record of care that could facilitate the cross-transfer of information between patients and a variety of medical and social care professionals. In collaboration with health and social care agencies, statutory and voluntary, we sought to examine how this low-cost communication tool might be acceptable and useful to people living with dementia and their families.

Aims: to examine the acceptability and use of a healthcare passport for people with dementia and their family carers, intended to facilitate communication and decision-making for service users and family caregivers. Additionally, we wanted to explore: (a) how this tool is used over time; (b) the engagement of relevant service providers; (c) the barriers to information and communication between and among family carers and health and social care professionals ('HSCPs') and how these can be remedied; and (d) how to refine and/or deliver the passport and similar interventions.

Ethical Approval: The study was given favourable ethical opinion by the Office for Research Ethics Committees Northern Ireland (ORECNI) on 21 July, 2015. (REC reference 15/NI/0129)

Method: adopting a realist evaluation approach to complex interventions, we used Longitudinal Qualitative Research (LQR) and document content analysis.

Recruitment

We aimed to recruit 20-25 people with mild-to-moderate dementia living in the community, and their families, sufficient to obtain a range of individual situations and experiences. This was done through the Memory Clinic of the Western Health & Social Care NHS Trust.

If the lead clinician or centre manager believed absence of capacity, the lead clinician or centre manager helped identify their next of kin, family caregiver or someone close to the person (who does not receive remuneration for this role) who will act as a "personal consultee". Although the capacity of the person with dementia may diminish over the evaluation period, we intended that they are fully involved in using the passport, and any associated decision- making. We held no prior assumptions about participants' current use

of health and social care services. The potential participants were approached by clinicians who provided information about the study.

Passport Implementation

Interested service users and their families then contacted the study team for further information and provided written informed consent. Initially, they were contacted by a staff member of the Alzheimer's Society who guided the dyads through the passport contents, explaining each section and addressing any queries or concerns. Family GPs were contacted and given information tools about the passport. (CD Rom format and links to the passport website). Additionally, we ran information sessions for local health professionals within the local dementia services.

Interview methodology

Primarily we used Longitudinal Qualitative Research (LQR) methods [20, 21]. Briefly, this consisted of three in-depth interviews: (1st) shortly after referral; (2nd) at six months; and (3rd) at twelve months. The interviews, conducted with the PLWD and carer together, lasted between 60 and 90 minutes, and were undertaken in the participants' homes by BWB and DC, females with PhDs with substantial training and experience in qualitative research with vulnerable populations; sociologist and psychologist, respectively. The researchers met with all participants prior to the study, via the memory clinics, and provided a clear overview of the study aims. Neither researcher had prior personal experience of dementia or its associated caregiving. We used topic guides to help us record and explore change over time, and the processes associated with such changes. Thus, the initial interview gathered 'baseline' information about the onset and diagnosis, health and social care needs, the

context of care and the availability of support. We also examined service users' and caregivers' perceptions and expectations of the passport. Field-notes were not taken during interviews but the team met regularly to discuss issues arising from the interviews. The topic guide and analysis were based on the literature and experts by experience within the Alzheimer's Society. The topic guide was refined after the initial interviews. GPs providing care for the people with dementia were interviewed by telephone towards the end of the 18-month data collection and addressed issues on acceptability, ease of passport use, response to patient participants and recommendations for continued use and adaptation.

In subsequent meetings, we explored any change to these areas and issues and the passport usage. Additionally, we did a content analysis of service user and caregiver entries in the passport and examined General Practitioner's assessment of passport usage. All participants provided recommendations for future use of the passport.

Analysis: The interviews were audiotaped, transcribed and then entered into a qualitative software programme (N-Vivo version 11) for data coding and management. We used *Trajectory analysis* which examines changes over time for participants[22]. We coded and indexed the data, using a spreadsheet in order to generate a matrix into which the data was 'charted'. This summarized the data by category from each transcript, building themes with the support of memos and data display. Transcripts were analysed and coded independently by the researcher, 1-2 members of the caregiver participant group, and members of the research team. Some specific areas covered: (a) a retrospective examination of the experience of people with dementia, family carers, help-seeking and communication needs — prior to using the passport; (b) practical use of the passport, differentiated by different care characteristics and contexts (e.g. dementia stage, social class and social support

networks, gender and care-relationship); (c) change in use of the passport over time in response to need; (d) care planning and advance directives for end of life care; (e) joint decision making (family and patient); (f) comprehension and ease of use by stakeholders (professionals and family); and (g) reasons for discontinuation. Additionally, we examined contextual factors of people in the use and maintenance of this type of intervention and how it can be more effective. Understanding the acceptance and use of the passport over time with a range of people was the main goal and thus, theoretical data saturation was not particularly relevant. While it was not possible to undertake participant checking per se, participants were provided with a synopsis of their previous responses and asked about change.

Passport Content analysis: The passports' contents were examined by DC to see how they were used and by whom, in addition to family carers, and the level and quality of the information provided. This was a simple thematic analysis, noting categories of entry and overall usage.

Code: P (person living with dementia); C (Caregiver)

Findings

Participant recruitment and attrition

Following initial recruitment of 28 patient-carer dyads for the first wave of interviews, two declined; we therefore interviewed 26 PLWDs and carers in wave 1. Participant (patient and carer) characteristics in addition to recruitment and attrition flow are provided in Table 1 and Figure 1 below. Advised by the Memory Clinic to expect a high attrition rate in this particular population, we had 16 participating families at wave 3 (48% of total contacted).

We obtained a socially heterogeneous sample from range of occupational backgrounds. However, all 28 patient participants were retired, or not working. Only five patients lived alone in their own home, one lived in residential care (by choice), and 20 lived with either their spouses, or a daughter or son. We noted various comorbidities (including depression, diabetes, arthritis, COPD, heart problems, hypertension, breast and prostate cancer, hearing, and vision impairments). Depression (37%), arthritis (30%), diabetes (27%), and cardiac conditions (27%) were the most frequently occurring comorbidities in our final sample. Eighteen participants (60%) had multiple comorbidities, with between two and eight separate conditions in addition to their dementia. The comorbidities reported by the participants may not entirely correspond to their medical records. Some participants may have forgotten to mention particular conditions, or have chosen not to disclose them.

TABLE 1: RECRUITMENT AND ATTRITION

	Wave 1	Wave 2	Wave 3
Number	26	21	16
Gender	13 females 13 males	11 females 10 males	7 females 9 males
Carer gender	18 female 8 males	17 females 4 males	12 females 4 males
Age	57-89	57-87	58-88
Stage	Mild-moderate	Mild-moderate	Marked deterioration: 3 males
Living	With carer: 17	With carer: 14	With carer: 11
arrangements	Living alone: 9	Living alone: 5	Living alone: 4
	Other: 2	Other: 2	Other: 1
Attrition	5 females 6 males	4 females 1 males	N/A

Figure 1 (here)

Eighteen of the family caregivers were retired from work and six were still working. Most carers were female, (daughters (N=13), and wives (N=11)). Husbands were the next biggest group (N=5); others were sons (N=3), brothers (N=1), and sisters (N=1). In some cases (N=5), caring was shared between two or more family members. Eight carers (daughters and sons) also had their own families to care for; one carer (wife) also cared for a mother with Alzheimer's disease and an elderly relative. Thirteen carers had serious health problems including diabetes, high blood pressure, arthritis, depression, and epilepsy.

Contextual Experience of Health and Social Care

Participants reported limited communication and coordination between departments, and individual professionals; miscommunication between health and social care professionals (HSCP), considerable variation in information and service provision, and problems when formal carers changed.

"... but it is frustrating that you're having to go to different professionals that you've to keep regurgitating everything again. Some of them do use the computer systems that have all the information on but, again, I know that they don't have time to read it." (P27)

"Remembering appointments, we always stick the letters up on the fridge so that keeps reminding us about the appointments. We would have to do that or we'd forget. (P14) "There's that many appointments that times you do get mixed up in the dates." (C14) "You have a lot with diabetics, eye clinic, and different clinics with diabetes." (P14)

"It's the same with the carers coming in, and I can't tell them not to because I am looking for (help), but because they are swapping and changing faces, he's finding that...." (C8) "When I saw you this morning, I didn't know ... I said 'Where did she come out of'?" (P8)

Some families felt intimidated by unfamiliar doctors, while others became particularly assertive when they felt the patient was being disadvantaged. Those who had worked in healthcare or had family in the healthcare system were more confident, and found it easier to get the service they needed. The main health and social care issues reported were the difficulty in seeing the same GP every time "You never see the same doctor twice. They are always booked up, and others don't know your case." (C16), the short consultation time, the importance of the GP taking time to listen, being comfortable with the GP, and the attitude of the GP (emphatic and warm versus condescending and dismissive). Some avoided seeing their GP because they feared another diagnosis, or because they felt they should not "bother" the GP.

Attitudes to, and expectations of, Passport use

In the following section, we detail the perceptions and use of the passport over the evaluation period. The key factors in this were: (a) correct completion; (b) timing; (c) privacy; (d) additional burden; and (e) response from Healthcare Professionals.

Correct completion

Most participants were unsure about the potential usefulness of the passport though we noted some scepticism on its usefulness and/or capacity to use it. Some were anxious about writing anything at all in the passport.

"It's not so much reservations but will it actually really make any difference to (participant) or myself, really? Will it actually make any difference? [] Well, I've only glanced at it but really I don't know." (C17)

Importantly, participants worried that there was a 'right' way to use the passport, and most wanted guidance on this. Overall, the most common response was 'we will give it a go' – a tacit agreement to try it out. In any case, over the study period many people stated simply that they forgot to use the passport which was often put away "for safekeeping". Again, some of this may be due to the uncertainty about using the contents. In the following quote for example, one person queried whether 'objective facts' or more subjective issues were required.

"I wonder about this, the sense of it. There are lots of things. For example, what I would have filled in, or what has been filled in, "All about me"...that's the 7th May, oh whether it is relevant. For instance, "All about me", I'm such and such a height, my weight is such and such...?" (P8)

Timing

Many participants considered the passport to be unnecessary at this stage of their healthcare, mostly because they had few appointments currently. This was particularly true of care dyads with a diagnosis less than six months prior to interview, and for those with few/no co-morbidities. However, others acknowledged potential usefulness as the illness progressed, and of particular use if something were to happen to the carer. Few participants maintained that they could keep track of this information themselves, or believed the healthcare professionals would already be sharing/recording the information without prompting. In each of these cases, the opinion of those individuals did not change

with further explanation of the passport, and so it is unlikely that the response was due to poor understanding of the purpose of the passport.

"It'll be some time before I'm going back to see my GP, and I'll have to wait until F. comes back, so there's really nothing I'll be doing immediately, and it'll be some time before I would get to use it." (P30)

"No, I just filled in the basic information and that's it. That was all, really. I haven't really used it, because I didn't feel...because she hasn't been to any appointments so at this stage...I would say maybe in the future it will be more relevant but, at the minute, no." (C1)

Privacy and relationships

Carers' attitudes to information-sharing with healthcare professionals are complex and the concept of promoting 'personhood' in healthcare had limited currency among carers. Thus, several families were unwilling to share personal details with the doctor beyond medical history, and did not acknowledge the significance or relevance of that part of the passport.

"No, no, and you know, we don't like to have a document like this lying about the house so that other people, for whom it is not their business, may come across it and see what's going on or what [P24]'s drug regime is." (C24)

Such families preferred compartmentalised approaches to care or were suspicious of sharing personal information with paid carers in particular. These views seldom changed over the study period. Participants were also apprehensive about who should have access to, and make entries in, the passport. Even though it was explained that control over the use of the passport lay with the family, people remained unsure as to how this could be decided. We noted warmth between dyads in most of the interviews and this bond appears

to assist in using the passport. However, we also noted that some couples fearing the loss of their 'old' relationship strove to maintain a 'normality' which, in some instances meant minimising external intrusion. With implications for the healthcare passport and for care generally perhaps, several couples suggested that they try and manage things themselves (e.g., C2, C28/P28, P30). "We handle things ourselves. As far as we can, we'll do it. Wherever she goes, I go now." (C2)

Additional burden

Participants' enthusiasm for the passport centred on its organisational and memory purposes. However, while carers focussed on keeping track of varied professional appointments, patients focussed on medication management. Additionally, while carer participants who formed part of family network anticipated its value in cross-communication to relatives, unless prompted none indicated its utility in information-sharing with health and social care professionals. Again, this suggests that the concerns about threats to the personhood of the family member posed by health professionals' responses and attitudes does not register significantly with caregivers or was overshadowed by healthcare needs. "It's a new thing, it's very hard to handle, and the last thing on your mind is this book." (C3). Others, particularly non-spouse males, were apprehensive that the passport may become too onerous.

"This is what happened to us. Whenever (Participant) was diagnosed we got bombarded with everything, which 90% of it was great but there was a couple that we couldn't just cope with, and that was one of them, you know, it was too much at the time. Probably in time to come it might..." (C11)

Ownership of Passport

Commonly, the family caregivers took responsibility for holding and maintain the passports, commonly indicating that the PLWD would not be able to use the passport and in some instances, they dissuaded the PLWD from using it. For many, caregivers' assumed responsibility for the passport because they provided most of the organisation and management of care. However, in one case, this was because the PLWD did not want to use the passport, and in a few cases, this was due to problems with writing as a symptom of the condition.

"As regards M., my husband, he won't be able to fill that in because he can't write now because he has problems with using his fingers and hands [....]. Therefore, he wouldn't personally be doing this, it would be me." (C17)

Interestingly, there was quite a range in the carer's perception of the PLWD's ability to use the passport amongst people with the same/similar memory scores. Carers expressed a number of reasons why the PLWD would not use the passport, including an inability to write, forgetting to use it, not understanding how to use it, or not wanting to use it because it is a reminder of their condition.

Anticipated response from Healthcare Professionals

Some participants, particularly carers, 'self-censored' any exchange with health professionals believing that doctors were unlikely to use the passport, or even to read it.

This was particularly true when people spoke of GPs or Consultants (with the exception of the Memory Clinic staff). People who mentioned this were also more likely to discuss

doctors being disinterested or pressed for time when discussing their relationships to healthcare professionals. Concerns about 'bothering' the health professionals were raised from the outset.

"The doctor wouldn't have any objections whenever I come with that and ask him to fill it in?" (P7)

"You'd be taking your life in your hands when you hand them the book and say 'can you fill that in?' They would just tell you that they don't have time and that would be the way like, and I wouldn't go back and ask a second time." (C18)

They were also more likely to relay negative stories about experiences with HSCPs.

However, in contrast, family caregivers who had direct experience working in the healthcare sector, tended to suggest that healthcare staff would find the passport very useful.

Participants sceptical of professional engagement with the passport nevertheless maintained the value in the passport for their own care dyad. Updating the passport and/or introducing it into healthcare consultations was problematic. "We weren't good at doing the homework, I have to say. Some of it's done and some of it hasn't been updated."

(C32). Thus, some people forgot to bring the passport when attending hospital and general practice appointments —while others were greeted with bemusement by clinicians who appeared to be unaware of its existence. Additionally, other participants consciously neglected it, anticipating that the passport may be perceived by clinicians as a burden and did "not want to bother" them.

"We've tried to use it." (C20) "When we saw the reaction to it, we don't take it anymore." (C20a) "They just look at you as if-" (C20)

Healthcare Passport content analysis

During the 3rd wave of interviews we made copies of the passport entries with the permission of the participants. With one exception (P8), carers had filled in the passport, rather than the PLWD. Most participants opted to keep their HP after the evaluation, except one (P14).

Family caregivers, soon after diagnosis, began incrementally to assume control of various responsibilities in the PLWD's life. Sometimes family intervention is a response to cognitive changes and the diminishing capacity of the person, for others it appears to be a preemptive and prematurely unnecessary intervention, prompted by anxiety about risks. In return, the family member with dementia assumed a new identity role which undermined their sense of agency and initiated an erosion of abilities and skills. "Do you want me to write all this down?" (P7) "No, I'll get [wife] to do it for us, Dad." (C7)

Additionally, some of the PLWD had various co-morbid conditions and/or learning difficulties, which made writing problematic. Each of the passports was completed in a distinctly idiosyncratic style. While this demonstrates the different individuals' personhood, it may also present challenges for HSCPs. In other words, our evidence suggests that the passports may not conform to a standard information collection. For example, in terms of medication and side effects, as well as comorbidities and their impact, and self-care, the level of detail varies considerably between PLWDs, and some do not mention these at all, even when these are a significant aspect of their needs and difficulties. So, HSCPs may be concerned that vital information is not recorded and may consider that, in its current form, the passport is unreliable.

Personal narratives, hobbies, and activities also varied considerably and information was also recorded unsystematically. Thus, carers included details about dementia progression and PLWD deterioration, along with details on religion, likes, and dislikes, and activities. Of the 12 completed passports, four contained only undated entries, two contained partially dated entries only, all but two (P8 self-completed; P21: social worker completed) were completed by the carer. Those who were overwhelmed (e.g., C13), or coping very well (e.g., C13) did not complete the HP.

GPs feedback

The general consensus among the GPs was that "... the fundamental idea is very good." (CB) Some GPs were familiar with maternity notes, about which they noted "... work well if the patients bring them" (CB) but said that often they did not. In the current study, few patients took the passport to their GP, and those who did, reported that the GP appeared to be unfamiliar with it or unenthusiastic about its use, which deterred them from taking it again. Commonly, GPs felt that the passport created another pressure on GP's time and also were concerned about its legal status in the event of medical complications or patient complaints. Mostly, however, most expressed doubt about the additional bureaucracy.

"Another form! Will it improve the lives of patients and carers? The others rarely do!" (Dr Mc)

The practicality of and reasoning behind offering the passport in paper format was questioned in the context of ubiquitous digital technology within the healthcare system.

Discussion

There have been welcome developments in internet-based decision-making tools in dementia care [23] much more work is needed in this field, particularly among older people who are less digitally literate or confident in its value. To our knowledge, this is the first study to evaluate a patient-held communication tool in dementia healthcare [24]. The complexity of dementia, often accompanied by co-morbid disability and illness, create challenges for interventions designed to support relationships in care [6]. Thus, over time, health and social needs can accelerate and informal care networks may be unpredictable. Additionally, while these factors underpin the rationale for communication tools they also increase evaluation uncertainties about their acceptance and use.

Despite the challenges to its widespread use, the health care passport for people living with dementia was still considered favourably by many participants but requiring a more nuanced approach. As a communication tool it may be determined by the extent of the person with dementia's care needs and the caregiver's role and ability in meeting these. While the healthcare passport was co-designed and strongly supported by people with dementia, family caregivers and healthcare professionals, its feasibility rested on various assumptions about stakeholder beliefs, values, behaviours within a range of contexts and specific needs. Our evaluation underlined the salience of factors that are seldom acknowledged in the implementation of complex interventions and particularly within the world of dementia care. Prima facie, we found a ready acceptance of the passport by service users and carers who were willing to 'give it a go' and could envisage its benefits. However, a more tacit understanding of cultural attitudes towards health professionals emerged. In

to the dementia services (Memory Clinics). Again, deference to professionals was manifested in the reluctance of service users and carers to 'bother' their GP revealing the asymmetry of this relationship and patient-family insecurities about 'annoying' clinical staff. GPs, mostly, did not engage with the passport, partly because they considered it old technology and inefficient. However, this perspective fails to recognise that many older people are not familiar with digital technology.

The timing for introducing the passport may influence its uptake and usage. This may prove difficult to gauge. At the very early stages post-diagnosis, patients may have good physical and mental health and may reject the passport as unnecessary while, nevertheless regarding it as potentially helpful as the condition progresses. Others, who appeared to be still in shock or depressed for some time after the diagnosis, found the passport as a painful reminder and didn't want to use it. It was regarded as a "dementia passport" and associated with lack of capacity and decline. For those at a more advanced stage, and/or with considerable co-morbidity and thus, service use, often felt overwhelmed by the information flow that they thought necessary to be inserted.

As noted in other healthcare areas [25, 26], the 'ownership' of communication tools presents interesting and challenging dilemmas. Developed as a patient-held communication tool but not specifically designed for dementia, cognitive deterioration may alter the passport's management, often assumed by the family carers. In some cases, family members appear to undertake, and therefore sometimes undermine, the normal activities of daily living of the person with dementia. The extent to which the passport is held and 'owned' by the family caregiver requires further examination.

For people who wished to maintain a sense of 'normality' the passport may have been perceived as a threat or an intrusion, in which case people consider what is most at stake for them and will try to find ways of protecting this. While not a form of denial, this represents a determination to resist labelling as a dementia patient and the sequalae of medical and social responses that this may entail.

Revealing participants' tastes and dispositions within the passport was intended to create a sense of personhood and while some people understood and appreciated the concept, other participants were anxious about the sharing of personal information, feeling that some formal carers or clinicians did not need to know the personal details or specific aspects of a person's life. For others, achieving basic medical and social care services appears to be prioritised over non-essential knowledge – suggesting that the two information types are balanced in a zero-sum game.

Content analysis revealed that each passport was entirely different from others. While this is to be expected when it comes to personal narrative, it is not helpful in terms of medical information, symptoms, progression, comorbidities, side effects of medication, etc. The current non-standardised format of the sections relating to information relating to the patient's health may undermine the passport's viability and efficiency. Essential information may be missing or not have been updated, or indeed not dated. Many entries were not, or only partially dated. As such, the information contained in the passport may not be regarded as reliable by some professionals.

This evaluation has provided rich, in-depth information about the uptake and use of a healthcare passport for people living with dementia. For example, recruitment to studies such as this may be relatively easy but meaningful participation is more difficult to achieve. Thus, a future trial will need to set much stricter parameters for participation including much more robust assessment of informed consent rather than a willingness to please clinicians, complexity of care, disease progression and passport 'ownership'.

Recommendations

HSCPs need to have an awareness of the dynamics in a patient-carer dyad, and the particular circumstances of the carer, and devise a care plan fully cognisant of the medical and socio-psychological condition of both. Some families require much more in-depth consultation on the use of the passport and over a longer period of time than the resources permitted in the current evaluation. It must be made clear that it is a "health passport" rather than a "dementia passport". People living with dementia need to know that it is widely used by all patients, so that they do not feel stigmatised by its use.

The degree and exact nature of GP resistance may require further understanding about how, if at all, it may be overcome. Alternatively, future design and implementation may have to consider which service should take responsibility for the dissemination and oversight of the passport. Digital technology and flexible internet-based platforms which allow for greater flow of exchange between patients, health and social care providers, and caregivers offer much promise for communication and decision-making but again, such platforms need to be shaped and managed according to person-centred needs.

Patient and Public Involvement

This study was developed with the support of the Alzheimer's Society Northern Ireland.

People living with dementia were involved in various stages of the project except writing for

publication.

Author contributions:

GL, AA, MW, ST, SMcI, BeMcC, BrMcC and VC co-designed the study, EC, BWB and DC collected and analysed the data. All authors contributed to the writing of the manuscript. GL was the PI on the study.

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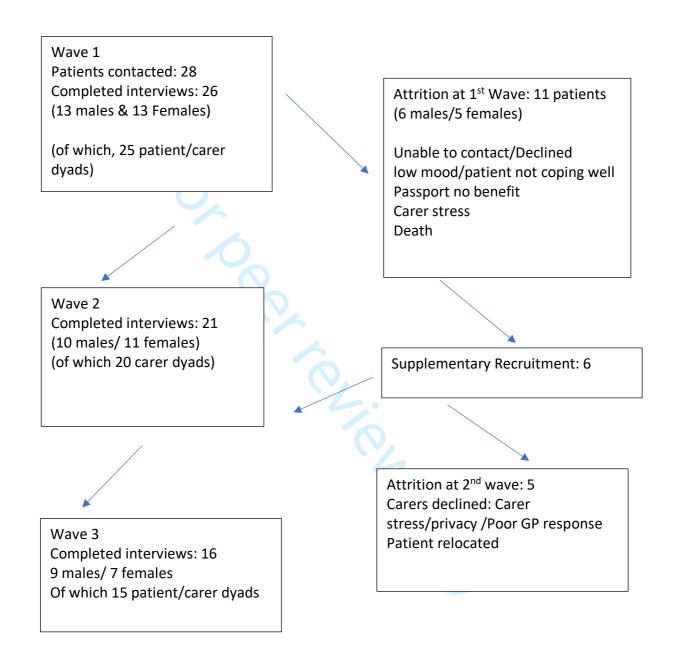
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Figure 1: flow chart of Participant Recruitment and Attrition waves 1-3



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Acceptability and use of a patient-held communication tool for people living with dementia: a longitudinal qualitative study

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Abstract:

Objectives: To assess the acceptability and use of a low-cost patient-held communication tool.

Design: Longitudinal Qualitative interviews at three time points over 18 months and document content analysis

Setting: Primary and community services

Participants: Twenty-eight dyads - People living with dementia in Northern Ireland and their informal carers.

Interventions: a patient-held healthcare "passport" for people living with dementia.

Primary and secondary outcomes: acceptability and use of the passport – barriers and facilitators to successful engagement.

Results: There was a qualified appreciation of the healthcare passport and a much more nuanced, individualistic or personalised approach to its desirability and use. How people perceive it and what they actually do with it, are strongly determined by individual contexts, dementia stage and other health problems, social and family needs and capacities. We noted concerns about privacy and ambivalence about engaging with health professionals.

Conclusion: Such tools may be of use but there is a need for demanding, thoughtful, and nuanced programme delivery for future implementation in dementia care. The incentivisation and commitment of General Practitioners is crucial. Altering the asymmetrical relationship between professionals and patients requires more extensive attention.

Article Summary

Strengths and limitations of this study

- Our LQR design allowed a consideration and assessment of contextual factors and mechanisms related to use of a patient-held medical communication tool in 'real-world' environments.
- The LQR design was key to building rapport and trust with participants and uncovered various assumptions about caregiving, and aspects of individual and systemic behaviours that determine passport usage.
- While we delivered educational seminars on the use of the passport to targeted key staff
 within the dementia services and sent information and passports to participants' GPs, we
 were unable to reach out to all those involved in the care and treatment of individuals.
- While the existence of the passport evaluation had been disseminated to GPs across
 Northern Ireland, many GPs either failed to engage with its use or considered it another burden.

Introduction:

Dementia is increasingly prevalent across the globe, producing considerable challenges to families, health services and economies [1-3] provoking government and philanthropic policy and research initiatives in healthcare and social inclusion[4]. However, as dementia progresses, the appearance of other health problems and disabilities are commonplace, leaving specialist-based healthcare systems to manage the various health and social care problems in a fragmented and inefficient manner. People living with dementia ('PLWD') and family caregivers commonly report dissatisfaction on issues such as multiple and unnecessary appointments and distress at repeating history and current situation (needs and resources), symptoms, treatment and care package [5-7]. Communication with health care professionals in dementia services is often problematic for both the patient and their family members [8], related to various aspects of organizing care and areas of decision-

making for relatives with dementia [9, 10] [11 [12, 13]. Various obstacles deny widespread acceptance and use of internet-based supportive tools [14, 15].

Attempts to address service barriers are generally confined to hospital and hospice settings [16] with a bias towards clinical decisions and pathways, but neglecting person-centred approaches[17, 18]. A consortium of health professionals, voluntary sector organisations, carer groups and people with long-term and life-limiting conditions met over a two-year period to co-produce a "healthcare passport". This was an expandable information booklet divided into distinct sections which covered important aspects of the individual's life, support, and care [19]. For example, one section was allocated to information on any health conditions the person had; another allowed for details of any medication they had been prescribed and could be expanded to record changes to medications; Coverage of a person's social networks and assistance was also provided for – allowing the health and social care professionals the opportunity to assess supportive contexts. Other sections disclosed salient aspects of the individual's life – religious or spiritual beliefs and interests. Importantly, the 'passport' was to be held by the person with dementia (or their proxy) who completed the personal and social sections, while medical treatment and care were completed by the various and relevant health professionals, and entries could be made by the latter during visits. In brief, the passport was designed as a portable patient-held record of care that could facilitate the cross-transfer of information between patients and a variety of medical and social care professionals. In collaboration with health and social care agencies, statutory and voluntary, we sought to examine how this low-cost communication tool might be acceptable and useful to people living with dementia and their families.

Aims: to examine the acceptability and use of a healthcare passport for people with dementia and their family carers, intended to facilitate communication and decision-making for service users and family caregivers. Additionally, we wanted to explore: (a) how this tool is used over time; (b) the engagement of relevant service providers; (c) the barriers to information and communication between and among family carers and health and social care professionals ('HSCPs') and how these can be remedied; and (d) how to refine and/or deliver the passport and similar interventions.

Ethical Approval: The study was given favourable ethical opinion by the Office for Research Ethics Committees Northern Ireland (ORECNI) on 21 July, 2015. (REC reference 15/NI/0129)

Method: adopting a realist evaluation approach to complex interventions, we used Longitudinal Qualitative Research (LQR) and document content analysis.

Recruitment

We aimed to recruit 20-25 people with mild-to-moderate dementia living in the community, and their families, sufficient to obtain a range of individual situations and experiences. This was done through the Memory Clinic of the Western Health & Social Care NHS Trust.

If the lead clinician or centre manager believed absence of capacity, the lead clinician or centre manager helped identify their next of kin, family caregiver or someone close to the person (who does not receive remuneration for this role) who will act as a "personal consultee". Although the capacity of the person with dementia may diminish over the evaluation period, we intended that they are fully involved in using the passport, and any associated decision- making. We held no prior assumptions about participants' current use

of health and social care services. The potential participants were approached by clinicians who provided information about the study.

Passport Implementation

Interested service users and their families then contacted the study team for further information and provided written informed consent. Initially, they were contacted by a staff member of the Alzheimer's Society who guided the dyads through the passport contents, explaining each section and addressing any queries or concerns. Family GPs were contacted and given information tools about the passport. (CD Rom format and links to the passport website). Additionally, we ran information sessions for local health professionals within the local dementia services.

Interview methodology

Primarily we used Longitudinal Qualitative Research (LQR) methods [20, 21]. Briefly, this consisted of three in-depth interviews: (1st) shortly after referral; (2nd) at six months; and (3rd) at twelve months. The interviews, conducted with the PLWD and carer together, lasted between 60 and 90 minutes, and were undertaken in the participants' homes by BWB and DC, females with PhDs with substantial training and experience in qualitative research with vulnerable populations; sociologist and psychologist, respectively. The researchers met with all participants prior to the study, via the memory clinics, and provided a clear overview of the study aims. Neither researcher had prior personal experience of dementia or its associated caregiving. We used topic guides to help us record and explore change over time, and the processes associated with such changes. Thus, the initial interview gathered 'baseline' information about the onset and diagnosis, health and social care needs, the

context of care and the availability of support. We also examined service users' and caregivers' perceptions and expectations of the passport. Field-notes were not taken during interviews but the team met regularly to discuss issues arising from the interviews. The topic guide and analysis were based on the literature and experts by experience within the Alzheimer's Society. The topic guide was refined after the initial interviews. GPs providing care for the people with dementia were interviewed by telephone towards the end of the 18-month data collection and addressed issues on acceptability, ease of passport use, response to patient participants and recommendations for continued use and adaptation.

In subsequent meetings, we explored any change to these areas and issues and the passport usage. Additionally, we did a content analysis of service user and caregiver entries in the passport and examined General Practitioner's assessment of passport usage. All participants provided recommendations for future use of the passport.

Analysis: The interviews were audiotaped, transcribed and then entered into a qualitative software programme (N-Vivo version 11) for data coding and management. We used *Trajectory analysis* which examines changes over time for participants[22]. We coded and indexed the data, using a spreadsheet in order to generate a matrix into which the data was 'charted'. This summarized the data by category from each transcript, building themes with the help of memos and data display. Transcripts were analysed and coded independently by the researcher, 1-2 members of the caregiver participant group, and members of the research team. Some specific areas covered: (a) a retrospective examination of the experience of people with dementia, family carers, help-seeking and communication needs – prior to using the passport; (b) practical use of the passport, differentiated by different care characteristics and contexts (e.g. dementia stage, social class and social support

networks, gender and care-relationship); (c) change in use of the passport over time in response to need; (d) care planning and advance directives for end of life care; (e) joint decision making (family and patient); (f) comprehension and ease of use by stakeholders (professionals and family); and (g) reasons for discontinuation. Additionally, we examined contextual factors of people in the use and maintenance of this type of intervention and how it can be more effective. Understanding the acceptance and use of the passport over time with a range of people was the main goal and thus, theoretical data saturation was not particularly relevant. While it was not possible to undertake participant checking per se, participants were provided with a synopsis of their previous responses and asked about change.

Passport Content analysis: The passports' contents were examined by DC to see how they were used and by whom, in addition to family carers, and the level and quality of the information provided. This was a simple thematic analysis, noting categories of entry and overall usage.

Code: P (person living with dementia); C (Caregiver)

Findings

Participant recruitment and attrition

Following initial recruitment of 28 patient-carer dyads for the first wave of interviews, two declined; we therefore interviewed 26 PLWDs and carers in wave 1. Participant (patient and carer) characteristics in addition to recruitment and attrition flow are provided in Table 1 and Figure 1 below. Advised by the Memory Clinic to expect a high attrition rate in this particular population, we had 16 participating families at wave 3 (48% of total contacted).

We obtained a socially heterogeneous sample from range of occupational backgrounds. However, all 28 patient participants were retired, or not working. Only five patients lived alone in their own home, one lived in residential care (by choice), and 20 lived with either their spouses, or a daughter or son. We noted various comorbidities (including depression, diabetes, arthritis, COPD, heart problems, hypertension, breast and prostate cancer, hearing, and vision impairments). Depression (37%), arthritis (30%), diabetes (27%), and cardiac conditions (27%) were the most frequently occurring comorbidities in our final sample. Eighteen participants (60%) had multiple comorbidities, with between two and eight separate conditions in addition to their dementia. The comorbidities reported by the participants may not entirely correspond to their medical records. Some participants may have forgotten to mention particular conditions, or have chosen not to disclose them.

TABLE 1: RECRUITMENT AND ATTRITION

	Wave 1	Wave 2	Wave 3
Number	26	21	16
Gender	13 females 13 males	11 females 10 males	7 females 9 males
Carer gender	18 female 8 males	17 females 4 males	12 females 4 males
Age	57-89	57-87	58-88
Stage	Mild-moderate	Mild-moderate	Marked deterioration: 3 males
Living	With carer: 17	With carer: 14	With carer: 11
arrangements	Living alone: 9	Living alone: 5	Living alone: 4
	Other: 2	Other: 2	Other: 1
Attrition	5 females 6 males	4 females 1 males	N/A

Figure 1: (Here)

Carers

Eighteen of the family caregivers were retired from work and six were still working. Most carers were female, (daughters (N=13), and wives (N=11)). Husbands were the next biggest group (N=5); others were sons (N=3), brothers (N=1), and sisters (N=1). In some cases (N=5), caring was shared between two or more family members. Eight carers (daughters and sons) also had their own families to care for; one carer (wife) also cared for a mother with Alzheimer's disease and an elderly relative. Thirteen carers had serious health problems including diabetes, high blood pressure, arthritis, depression, and epilepsy.

Contextual Experience of Health and Social Care

Participants reported limited communication and coordination between departments, and individual professionals; miscommunication between health and social care professionals (HSCP), considerable variation in information and service provision, and problems when formal carers changed.

"... but it is frustrating that you're having to go to different professionals that you've to keep regurgitating everything again. Some of them do use the computer systems that have all the information on but, again, I know that they don't have time to read it." (P27)

"Remembering appointments, we always stick the letters up on the fridge so that keeps reminding us about the appointments. We would have to do that or we'd forget. (P14) "There's that many appointments that times you do get mixed up in the

dates." (C14) "You have a lot with diabetics, eye clinic, and different clinics with diabetes." (P14)

"It's the same with the carers coming in, and I can't tell them not to because I am looking for (help), but because they are swapping and changing faces, he's finding that...." (C8) "When I saw you this morning, I didn't know ... I said 'Where did she come out of'?" (P8)

Some families felt intimidated by unfamiliar doctors, while others became particularly assertive when they felt the patient was being disadvantaged. Those who had worked in healthcare or had family in the healthcare system were more confident, and found it easier to get the service they needed. The main health and social care issues reported were the difficulty in seeing the same GP every time "You never see the same doctor twice. They are always booked up, and others don't know your case." (C16), the short consultation time, the importance of the GP taking time to listen, being comfortable with the GP, and the attitude of the GP (emphatic and warm versus condescending and dismissive). Some avoided seeing their GP because they feared another diagnosis, or because they felt they should not "bother" the GP.

Attitudes to, and expectations of, Passport use

In the following section, we detail the perceptions and use of the passport over the evaluation period. The key factors in this were: (a) correct completion; (b) timing; (c) privacy and relationships; (d) additional burden; (e) ownership of passport; and (f) anticipated response from Healthcare Professionals.

Correct completion

Most participants were unsure about the potential usefulness of the passport though we noted some scepticism on its usefulness and/or capacity to use it. Some were anxious about writing anything at all in the passport.

"It's not so much reservations but will it actually really make any difference to (participant) or myself, really? Will it actually make any difference? [] Well, I've only glanced at it but really I don't know." (C17)

Importantly, participants worried that there was a 'right' way to use the passport, and most wanted guidance on this. Overall, the most common response was 'we will give it a go' – a tacit agreement to try it out. In any case, over the study period many people stated simply that they forgot to use the passport which was often put away "for safekeeping". Again, some of this may be due to the uncertainty about using the contents. In the following quote for example, one person queried whether 'objective facts' or more subjective issues were required.

"I wonder about this, the sense of it. There are lots of things. For example, what I would have filled in, or what has been filled in, "All about me"...that's the 7th May, oh whether it is relevant. For instance, "All about me", I'm such and such a height, my weight is such and such...?" (P8)

Timing

Many participants considered the passport to be unnecessary at this stage of their healthcare, mostly because they had few appointments currently. This was particularly true of care dyads with a diagnosis less than six months prior to interview, and for those with few/no co-morbidities. However, others acknowledged potential usefulness as the illness progressed, and of particular use if something were to happen to the carer. Few

participants maintained that they could keep track of this information themselves, or believed the healthcare professionals would already be sharing/recording the information without prompting. In each of these cases, the opinion of those individuals did not change with further explanation of the passport, and so it is unlikely that the response was due to poor understanding of the purpose of the passport.

"It'll be some time before I'm going back to see my GP, and I'll have to wait until F. comes back, so there's really nothing I'll be doing immediately, and it'll be some time before I would get to use it." (P30)

"No, I just filled in the basic information and that's it. That was all, really. I haven't really used it, because I didn't feel...because she hasn't been to any appointments so at this stage...I would say maybe in the future it will be more relevant but, at the minute, no." (C1)

Privacy and relationships

Carers' attitudes to information-sharing with healthcare professionals are complex and the concept of promoting 'personhood' in healthcare had limited currency among carers. Thus, several families were unwilling to share personal details with the doctor beyond medical history, and did not acknowledge the significance or relevance of that part of the passport.

"No, no, and you know, we don't like to have a document like this lying about the house so that other people, for whom it is not their business, may come across it and see what's going on or what [P24]'s drug regime is." (C24)

Such families preferred compartmentalised approaches to care or were suspicious of sharing personal information with paid carers in particular. These views seldom changed over the study period. Participants were also apprehensive about who should have access

to, and make entries in, the passport. Even though it was explained that control over the use of the passport lay with the family, people remained unsure as to how this could be decided. We noted warmth between dyads in most of the interviews and this bond appears to assist in using the passport. However, we also noted that some couples fearing the loss of their 'old' relationship strove to maintain a 'normality' which, in some instances meant minimising external intrusion. With implications for the healthcare passport and for care generally perhaps, several couples suggested that they try and manage things themselves (e.g., C2, C28/P28, P30). "We handle things ourselves. As far as we can, we'll do it. Wherever she goes, I go now." (C2)

Additional burden

Participants' enthusiasm for the passport centred on its organisational and memory purposes. However, while carers focussed on keeping track of varied professional appointments, patients focussed on medication management. Additionally, while carer participants who formed part of family network anticipated its value in cross-communication to relatives, unless prompted none indicated its utility in information-sharing with health and social care professionals. Again, this suggests that the concerns about threats to the personhood of the family member posed by health professionals' responses and attitudes does not register significantly with caregivers or was overshadowed by healthcare needs. "It's a new thing, it's very hard to handle, and the last thing on your mind is this book." (C3). Others, particularly non-spouse males, were apprehensive that the passport may become too onerous.

"This is what happened to us. Whenever (Participant) was diagnosed we got bombarded with everything, which 90% of it was great but there was a couple that we couldn't just cope

with, and that was one of them, you know, it was too much at the time. Probably in time to come it might..." (C11)

Ownership of Passport

Commonly, the family caregivers took responsibility for holding and maintain the passports, commonly indicating that the PLWD would not be able to use the passport and in some instances, they dissuaded the PLWD from using it. For many, caregivers' assumed responsibility for the passport because they provided most of the organisation and management of care. However, in one case, this was because the PLWD did not want to use the passport, and in a few cases, this was due to problems with writing as a symptom of the condition.

"As regards M., my husband, he won't be able to fill that in because he can't write now because he has problems with using his fingers and hands [....]. Therefore, he wouldn't personally be doing this, it would be me." (C17)

Interestingly, there was quite a range in the carer's perception of the PLWD's ability to use the passport amongst people with the same/similar memory scores. Carers expressed a number of reasons why the PLWD would not use the passport, including an inability to write, forgetting to use it, not understanding how to use it, or not wanting to use it because it is a reminder of their condition.

Anticipated response from Healthcare Professionals

Some participants, particularly carers, 'self-censored' any exchange with health professionals believing that doctors were unlikely to use the passport, or even to read it. This was particularly true when people spoke of GPs or Consultants (with the exception of the Memory Clinic staff). People who mentioned this were also more likely to discuss doctors being disinterested or pressed for time when discussing their relationships to healthcare professionals. Concerns about 'bothering' the health professionals were raised from the outset.

"The doctor wouldn't have any objections whenever I come with that and ask him to fill it in?" (P7)

"You'd be taking your life in your hands when you hand them the book and say 'can you fill that in?' They would just tell you that they don't have time and that would be the way like, and I wouldn't go back and ask a second time." (C18)

They were also more likely to relay negative stories about experiences with HSCPs.

However, in contrast, family caregivers who had direct experience working in the healthcare sector, tended to suggest that healthcare staff would find the passport very useful.

Participants sceptical of professional engagement with the passport nevertheless maintained the value in the passport for their own care dyad. Updating the passport and/or introducing it into healthcare consultations was problematic. "We weren't good at doing the homework, I have to say. Some of it's done and some of it hasn't been updated."

(C32). Thus, some people forgot to bring the passport when attending hospital and general practice appointments —while others were greeted with bemusement by clinicians who appeared to be unaware of its existence. Additionally, other participants consciously

neglected it, anticipating that the passport may be perceived by clinicians as a burden and did "not want to bother" them.

"We've tried to use it." (C20) "When we saw the reaction to it, we don't take it anymore." (C20a) "They just look at you as if-" (C20)

Healthcare Passport content analysis

During the 3rd wave of interviews we made copies of the passport entries with the permission of the participants. With one exception (P8), carers had filled in the passport, rather than the PLWD. Most participants opted to keep their HP after the evaluation, except one (P14).

Family caregivers, soon after diagnosis, began incrementally to assume control of various responsibilities in the PLWD's life. Sometimes family intervention is a response to cognitive changes and the diminishing capacity of the person, for others it appears to be a preemptive and prematurely unnecessary intervention, prompted by anxiety about risks. In return, the family member with dementia assumed a new identity role which undermined their sense of agency and initiated an erosion of abilities and skills. "Do you want me to write all this down?" (P7) "No, I'll get [wife] to do it for us, Dad." (C7)

Additionally, some of the PLWD had various co-morbid conditions and/or learning difficulties, which made writing problematic. Each of the passports was completed in a distinctly idiosyncratic style. While this demonstrates the different individuals' personhood, it may also present challenges for HSCPs. In other words, our evidence suggests that the passports may not conform to a standard information collection. For example, in terms of

medication and side effects, as well as comorbidities and their impact, and self-care, the level of detail varies considerably between PLWDs, and some do not mention these at all, even when these are a significant aspect of their needs and difficulties. So, HSCPs may be concerned that vital information is not recorded and may consider that, in its current form, the passport is unreliable.

Personal narratives, hobbies, and activities also varied considerably and information was also recorded unsystematically. Thus, carers included details about dementia progression and PLWD deterioration, along with details on religion, likes, and dislikes, and activities. Of the 12 completed passports, four contained only undated entries, two contained partially dated entries only, all but two (P8 self-completed; P21: social worker completed) were completed by the carer. Those who were overwhelmed (e.g., C13), or coping very well (e.g., C13) did not complete the HP.

GPs feedback

The general consensus among the GPs was that "... the fundamental idea is very good." (CB) Some GPs were familiar with maternity notes, about which they noted "... work well if the patients bring them" (CB) but said that often they did not. In the current study, few patients took the passport to their GP, and those who did, reported that the GP appeared to be unfamiliar with it or unenthusiastic about its use, which deterred them from taking it again. Commonly, GPs felt that the passport created another pressure on GP's time and also were concerned about its legal status in the event of medical complications or patient complaints. Mostly, however, most expressed doubt about the additional bureaucracy.

"Another form! Will it improve the lives of patients and carers? The others rarely do!" (Dr Mc)

The practicality of and reasoning behind offering the passport in paper format was questioned in the context of ubiquitous digital technology within the healthcare system.

Discussion

There have been welcome developments in internet-based decision-making tools in dementia care [23] much more work is needed in this field, particularly among older people who are less digitally literate or confident in its value [24]. The complexity of dementia, often accompanied by co-morbid disability and illness, create challenges for interventions designed to support relationships in care[6]. Thus, over time, health and social needs can accelerate and informal care networks may be unpredictable. Additionally, while these factors underpin the rationale for communication tools they also increase evaluation uncertainties about their acceptance and use.

Despite the challenges to its widespread use, the health care passport for people living with dementia was still considered favourably by many participants but requiring a more nuanced approach. As a communication tool it may be determined by the extent of the person with dementia's care needs and the caregiver's role and ability in meeting these. While the healthcare passport was co-designed and strongly supported by people with dementia, family caregivers and healthcare professionals, its feasibility rested on various assumptions about stakeholder beliefs, values, behaviours within a range of contexts and specific needs. Our evaluation underlined the salience of factors that are seldom acknowledged in the implementation of complex interventions and particularly within the

world of dementia care. Prima facie, we found a ready acceptance of the passport by service users and carers who were willing to 'give it a go' and could envisage its benefits. However, a more tacit understanding of cultural attitudes towards health professionals emerged. In many cases, participation was gained simply because families felt an underlying obligation to the dementia services (Memory Clinics). Again, deference to professionals was manifested in the reluctance of service users and carers to 'bother' their GP revealing the asymmetry of this relationship and patient-family insecurities about 'annoying' clinical staff. GPs, mostly, did not engage with the passport, partly because they considered it old technology and inefficient. However, this perspective fails to recognise that many older people are not familiar with digital technology.

The timing for introducing the passport may influence its uptake and usage. This may prove difficult to gauge. At the very early stages post-diagnosis, patients may have good physical and mental health and may reject the passport as unnecessary while, nevertheless regarding it as potentially helpful as the condition progresses. Others, who appeared to be still in shock or depressed for some time after the diagnosis, found the passport as a painful reminder and didn't want to use it. It was regarded as a "dementia passport" and associated with lack of capacity and decline. For those at a more advanced stage, and/or with considerable co-morbidity and thus, service use, often felt overwhelmed by the information flow that they thought necessary to be inserted.

As noted in other healthcare areas [25, 26], the 'ownership' of communication tools presents interesting and challenging dilemmas. Developed as a patient-held communication tool but not specifically designed for dementia, cognitive deterioration may alter the

passport's management, often assumed by the family carers. In some cases, family members appear to undertake, and therefore sometimes undermine, the normal activities of daily living of the person with dementia. The extent to which the passport is held and 'owned' by the family caregiver requires further examination.

For people who wished to maintain a sense of 'normality' the passport may have been perceived as a threat or an intrusion, in which case people consider what is most at stake for them and will try to find ways of protecting this. While not a form of denial, this represents a determination to resist labelling as a dementia patient and the sequalae of medical and social responses that this may entail.

Revealing participants' tastes and dispositions within the passport was intended to create a sense of personhood and while some people understood and appreciated the concept, other participants were anxious about the sharing of personal information, feeling that some formal carers or clinicians did not need to know the personal details or specific aspects of a person's life. For others, achieving basic medical and social care services appears to be prioritised over non-essential knowledge – suggesting that the two information types are balanced in a zero-sum game.

Content analysis revealed that each passport was entirely different from others. While this is to be expected when it comes to personal narrative, it is not helpful in terms of medical information, symptoms, progression, comorbidities, side effects of medication, etc. The current non-standardised format of the sections relating to information relating to the patient's health may undermine the passport's viability and efficiency. Essential information

may be missing or not have been updated, or indeed not dated. Many entries were not, or only partially dated. As such, the information contained in the passport may not be regarded as reliable by some professionals.

This evaluation has provided rich, in-depth information about the uptake and use of a healthcare passport for people living with dementia. For example, recruitment to studies such as this may be relatively easy but meaningful participation is more difficult to achieve. Thus, a future trial will need to set much stricter parameters for participation including much more robust assessment of informed consent rather than a willingness to please clinicians, complexity of care, disease progression and passport 'ownership'.

Recommendations

HSCPs need to have an awareness of the dynamics in a patient-carer dyad, and the particular circumstances of the carer, and devise a care plan fully cognisant of the medical and socio-psychological condition of both. Some families require much more in-depth consultation on the use of the passport and over a longer period of time than the resources permitted in the current evaluation. It must be made clear that it is a "health passport" rather than a "dementia passport". People living with dementia need to know that it is widely used by all patients, so that they do not feel stigmatised by its use.

The degree and exact nature of GP resistance may require further understanding about how, if at all, it may be overcome. Alternatively, future design and implementation may have to consider which service should take responsibility for the dissemination and oversight of the passport. Digital technology and flexible internet-based platforms which

allow for greater flow of exchange between patients, health and social care providers, and caregivers offer much promise for communication and decision-making but again, such platforms need to be shaped and managed according to person-centred needs.

Patient and Public Involvement

This study was developed with the support of the Alzheimer's Society Northern Ireland.

People living with dementia were involved in various stages of the project except writing for publication.

Author contributions:

GL, AA, MW, ST, SMcI, BeMcC, BrMcC and VC co-designed the study, EC, BWB and DC collected and analysed the data. All authors contributed to the writing of the manuscript. GL was the PI on the study.

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Figure 1: flow chart of Participant Recruitment and Attrition waves 1-3

