

Addressing the social care crisis in the United Kingdom: the 'magic bullet' of telecare policy

Andrew Eccles

School of Social Work & Social Policy, University of Strathclyde, United Kingdom

**13th International Symposium & 2017 Annual Conference on Social Policy,
August 18-21, 2017, Nanchang, China**

The most recent comprehensive report about social care for older people in the United Kingdom acknowledges that it is in a 'precarious state' in terms of the quality of care provided, the crisis in funding, and significant evidence of a lack of dignity afforded the recipients of care services (Care Quality Commission, 2017). The report argues that:

'It appears to be increasingly difficult for some providers to deliver the safe, high quality and compassionate care people deserve and have every right to expect. With demand for social care expected to rise over the next two decades, this is more worrying than ever [and offers a] stark warning that adult social care is approaching a tipping point [...] driven by more people with increasingly complex conditions needing care but in a challenging economic climate, facing greater difficulties in accessing the care they need' (Care Quality Commission, 2017: 1)

Of 4,000 nursing homes inspected in England, which care for the most vulnerable people at the end of their lives, 32% were rated inadequate or requiring improvement and 37% were advised they had to improve safety (ibid.)

This assessment of a crisis in social care for older people in the United Kingdom is neither new, nor confined to residential care; in 2011 evidence from the enquiry into home care provision in the United Kingdom by the Equality and Human Rights Commission painted a bleak picture of often impersonal, very time-limited and inconsistent care delivery in which the potential for relationships to develop between carers and older people appeared to be

increasingly remote (EHCR, 2011). Since 2010, in the era of 'austerity' that has prevailed in public finances of the United Kingdom, the changing demographic of a greater number of older people, in particular the increase in the numbers over the age of 85, has introduced more complex needs in the provision of adult social care. At the same time, there has been a decline in funding:

'In real terms, the National Audit Office estimates there has been a 7 per cent reduction in spending on adult social care by local authorities between 2010 and 2015 and the House of Commons Library has calculated that real terms funding fell by 8.4% between 2010–11 and 2016–17' (HoC, 2017: 47:6)

This combination of circumstances has led to the recent observation by the chair of the National Care Association that 'There is not a crisis in adult social care [...] we are now beyond the crisis point. We really are at the edge of the cliff [...] (Collinson, 2016). This crisis has long been anticipated and yet successive United Kingdom governments have declined to address fundamental financial, cultural or structural change to deal with it, preferring instead regular organizational restructuring (Hudson & Henwood, 2002). However the prospect held out by remote care technologies, such as telecare - particularly for the care and well-being of older people - emerged in the early part of this century in government thinking. Since 2006, there has been a Telecare Development Programme in the United Kingdom, with a similar programme of Telemedicine technologies being implemented in the delivery of health care in the community. Telecare policy now sits at the strategic heart of the delivery of care services.

Care policy in the United Kingdom is a complex admixture of family input, use of the private sector, voluntary organisations and the State (see Phillips, 2007 for an overview). Of these, the State has long played the dominant role in health care provision and – albeit in more complex ways in terms of funding and delivery – a major role in social care. This role played by the state in the United Kingdom should also be seen in the context of comparatively (certainly in European terms) low levels of obligation placed on family members to take responsibility – either in a legal or cultural sense - for their ageing parents (Rowntree, 1995; Saraceno and Keck, 2008). Thus Governments, saddled with rising demand but also seeing opportunities for innovative forms of care for older people have pushed ahead with the

remote care technology agenda. Albeit there are different political jurisdictions across the United Kingdom, care technologies such as telecare are, in policy terms, universally seen as not only a possibility but a necessity, and policy discourses have proceeded on that basis. The Telecare development program of the Scottish Government (2008:6), for example, proposed that by the year 2015 'remote long term condition monitoring undertaken from home will be the norm'. The United Kingdom has not been alone in exploring this agenda of 'care at a distance' (Pols, 2012), but it has been pre-eminent in global terms in the scale of the endeavour, the assumptions made of its potential, and is perceived as a world leader in both the use and manufacture of these technologies (Department of Health, 2012a).

These remote care technologies are geared towards the perceived health and care needs of different client groups - such as older people, disabled people and people with long term conditions - and are widely assumed by technologists and change managers in health and social care to have the capacity to impact beneficially on clients' lives. Of these clients, older people are by far the most likely recipients - given their care needs, but also because demographic change and attendant costs are rarely far from discussion about these technologies. The technologies have developed rapidly in the past decade from a 'first generation' of basic alarms, detectors and passive sensors in houses, to current manifestations such as the tracking of people's movements in their homes and real-time monitoring of long term health conditions. In its more recent guise, using GPS based technologies, telecare technologies can track the movements, and health status, of people outside their home environments, thus allowing people's lifestyles to continue despite, for example, the onset of memory loss, other cognitive impairment, or chronic conditions of ill-health. These technologies now cover social care, health care and rehabilitation, spawning the use of the (often imprecise and overlapping) categories telecare, telehealth and tele-rehabilitation. There is some merit to these demarcations but, following an approach more likely to found in European research (see for example Pols and Willems, 2012), this paper uses *telecare* as an umbrella term for these different aspects of remote care technologies in their application to people's - often overlapping - health, social care and rehabilitation needs.

There is clear evidence of benefits to be derived from the use of telecare technologies. For service users these benefits include greater continued independence, autonomy and enhanced connectivity with others (Fisk, 2003; Mols & Poser, 2005; McCreadie & Tinker, 2005; Loader, Hardey & Keeble, 2009; Moser, 2012; Pols, 2012). There is also evidence of advantages for carers, particularly in relation to reducing pressure on caring roles and aiding connectivity (Yeandle and Fry, 2010). Apart from benefits to individuals and carers, financial savings generated through the use of telecare technologies have the potential to release funds for other applications, thus offering opportunities for better targeting of resources. As the Audit Commission – guardian of public finance expenditure in the UK – noted at the outset of telecare development, the use of these technologies represents the unusual possibility of providing cost savings at the same time as better service provision (Audit Commission, 2004). Subsequent to the Audit Commission report both governments and technology companies in the United Kingdom have explicitly promoted the move to telecare technologies based on two factors; increased cost savings, and enhanced quality of life (see Eccles et al (2013) for a more detailed discussion).

Subsequent to the Audit Commission offering its assessment of the potential to be afforded by these technologies, a substantial critical literature has emerged. This literature has broadly focused on two issues: the lack of discussion around the wider social impact of telecare and reservations about the decision making processes involved in the scale of telecare programmes - what Mort, Roberts and Milligan (2009: 85) argue is an 'ethical and democratic deficit in this field which has arisen due to a proliferation in research and development of advanced care technologies that has not been accompanied by sufficient consideration of their social context'. Their comment is made also in the context of the United Kingdom's particularly ambitious and government driven policy agenda, an approach noted by Pols and Willems (2012:6), who argue that, in coming to terms with these technologies,

'The dubious status of promises and the unpredictable processes of domestication that are so hard to trap with standard research methods, make implementing telecare technologies on a large scale and on a top-down basis, as is done in the UK, a hazardous investment'.

The overriding hazard to which these authors allude is that the interaction between telecare technologies and their end users is complex and requires implementation based on appropriateness of purpose, nuance in understanding and fine adjustment to end-user needs. This assessment by Pols and Willems is based on their extensive research with users of telecare technologies in the Netherlands. Their findings are echoed in research from Finland (Soderlund, 2003), Norway (Moser, 2012), Spain (Mort, Roberts and Callen, 2013) from further research on the situation in the Benelux countries (Oudshoorn, 2011; Pols 2012; Kamphof, 2013a). A third, related, area of critical comment has centred on the actual lived experiences of the recipients of telecare technologies – for example from the research in the United Kingdom by Greenhalgh et al (2013), a richly detailed phenomenological enquiry into service users' experience of telecare technologies. These studies note the potential benefits but at the same time uncover significant unanticipated complexities in their implementation, which require attention to small scale specifics of how individual users perceive of, and function with, these new technologies. This complexity in practice requires space for debate and reflection, neither of which has been readily available in the ambitious scale of government sponsored telecare policy in the United Kingdom. The 'hazard', then, is in understanding and responding to the quality of the care experience for users of telecare services. In a policy world of fiscal scarcity and reduced social care budgets (see Mort, Roberts and Blanca (2013) on telecare use in an era of austerity), it has been assumed there may be distinct gains from the use of telecare technologies for governments and policy officials charged with reducing costs, one of the reasons why policy implementation has moved so rapidly. This has encountered a further potential hazard, in that this push for such high levels of telecare engagement, representing, as it does, often profound shifts in types of care and care relationships, comes against a backdrop of very low recognition by the public about these technologies; a 2012 survey of adults in the United Kingdom indicated that 91% had not heard of either telecare or telehealth. Of those surveyed who were aged 55 or over - the most likely recipients of these technologies – 93% had heard of neither. The evidence from other European countries is that telecare technologies work in some contexts, with some people at some stages in their lives, a sentiment which has also emerged from researchers looking at the situation in the United Kingdom (Eccles, 2010; Mort and Roberts, 2011; Newman, 2011). The contrast between this uncertainty in the research about the outcomes of using telecare technologies with the

policy position of the United Kingdom governments is clear, whether with the ambitions of the 3millionlives programme in England or the commitment from the Scottish Government that 'telehealth will be widely recognised by service users and their carers as the route to greater independence and quality of life' (Scottish Government, 2006: 6).

Despite a substantial critical literature around telecare policy and its implementation, there has been very limited theorizing about telecare in relation to policy analysis. Fujimoto (2000) explores the issue in a case study of Japan, where the objective conditions – an ageing population and strain on financial and labour resources – make for an obvious case for the use of these technologies. But betwixt policy objectives and implementation Fujimoto's study makes clear there are numerous complexities at play, which means implementation has fallen short of policy intentions. This has resonance with the position in the United Kingdom too; very significant claims that have not been realised in practice. Barlow (2012) has explored the organizational complexities of policy delivery in some detail via a case study approach. This paper will explore this disjuncture in terms of policy analysis. It draws on a wide range of policy commentary and empirical data around implementation to help locate telecare in a more theoretical, policy analysis, light.

A lack of theoretical sophistication on the part of policy makers themselves has become a common theme across public policy, via an under appreciation of complexity, and an over reliance on assumptions of linearity. As Exworthy notes of the 'official' position about policy making:

'Politicians identify a priority and the broad outlines of a solution ...; Policy-makers ... design a policy to put this into effect, assembling the right collection of tools: legislation, funding, incentives, new institutions, directives; The job of implementation is then handed over to a different group of staff, an agency or local government; ...the goal is (hopefully) achieved' (UK Cabinet Office 2001, p.5, cited in Exworthy 2008: 319).

It will be argued here that due complexity was not adequately considered, nor factored into, policy framing and implementation of telecare policy. This is reflected in the actual experience of telecare policy itself and has become one of the key reasons for its failure to be realised in practice in the terms policy makers set for it. Of more concern (since policies

often fail at the implementation stage) is the way in which telecare was *assumed* to be a key solution to the impending crisis in social care; its failure to materialise as anticipated has likely now exacerbated the scale of this crisis.

Policy theorizing

A multitude of models can be drawn upon to help theorize about policy making (see Cairney (2013) for a detailed overview). Across these different models there is some overlap but also considerable debate. Indeed, the desirability of ‘models’ of policy theorizing has been challenged (John, 2012) as almost inherently contrary to the actual messiness of policy and implementation. Nonetheless, this paper does employ a theoretical model, albeit a broad framework in the form of Multiple Streams Approach (MSA) (Kingdon, 1995). A Multiple Streams Approach to understanding policy formation and implementation has been used in related fields (see Exworthy et al (2010) for example); its strength lies in the conceptual space it affords for thinking through how well particular policy has progressed according to its initial objectives. Although originally conceived as a model to illuminate an understanding of policy formation, it has more recently been employed to explore, in addition, policy implementation (which can, in any case, rarely be separated out from policy itself); see Boswell & Rodrigues (2016) and Ackrill et al (2013) for its application in this sphere.

Kingdon introduces the MSA by stating ‘The phrase ‘an idea whose time has come’ captures a fundamental reality about an irresistible movement that sweeps over our politics’ (Kingdon, 2014: 1). As Cairney notes, he goes on to argue that this underestimates the complexities of actual policy change and the limited ‘window of opportunity’ wherein this policy change might have a significant impact. The key to Kingdon’s argument – although Kingdon himself emphasises that this is often an imprecise schemata – is the simultaneous congruence of three separate streams which combine to make this ‘window of opportunity’: the *problem stream*, the *policy stream* and the *political stream*. The problem stream is where – amidst a myriad of potential policy claims – a very few particular policies develop momentum, sometimes in response to an impending crisis, and aided by the ability of policy advocates to demonstrate that a well thought-out solution is available at hand. The policy

stream is where this perceived solution takes hold among policy makers and, as Greenhalgh et al (2012) note, may emerge as a dominant discourse in the policy field. In the politics stream, policy makers have the motive and opportunity to pursue the ideas toward actual policy on the ground. As this paper will argue, the politics stream may involve the use of policy instruments to try to ensure compliance at the implementation stage, given that the gap between policy and implementation (Pressman & Wildavsky, 1973) is a well-recognised phenomenon. Crucially, Kingdon argues, these three streams of problem, policy and politics have to operate simultaneously in a 'policy window' and as Exworthy (2008: 322) notes, 'The ability of policy-makers to 'fix the window open [...] will largely determine the long-term viability of the policy'. So the variables here will be the co-incidence of the three different streams with a given window of opportunity. It is the absence of congruence across these variables which presents a challenge to policy success.

One of the critical reflections on MSA (Cairney, 2013; Rawat & Morris, 2016) is that its broadness may not highlight some of the specifics and complexities of a given policy between policy and implementation; in other words it has a wide scope, which is useful in allowing policy to be theorized, but limited in utility around the depth of this capacity to theorize. But the obverse of that is that its very scope will allow capture of enough overall understanding to make initial theorizing possible and accessible.

This paper, then, applies MSA to telecare policy, as a way of unpacking what, in terms of the policy claims made for it, has been an area of very varied policy success. It does so by looking at the policy proposal evidence and empirical outcomes of the policy as it has been implemented. The paper will then note some wider social outcomes of what has happened with telecare implementation, in that the unwarranted assumptions around its efficacy and levels of use have allowed policy makers to bypass fuller consideration of perhaps the most pressing contemporary issue in social care; how the care needs of a rapidly changing demography are to be met with the dignity that older people ought to be afforded (and which is enshrined in legislation). In short, the policy rubric around telecare assumed seamless solutions to care demands verging on a 'magic bullet' solution, too readily willing to buy-in to the Audit Commission's putative narrative about the possibility of telecare leading to both cost savings and enhanced quality of life. The evidence here is perforated with ambiguity, and a decade of this assumption around efficacy has allowed the provision

of social care in the United Kingdom to assume critical levels of inadequacy. It has also allowed – based on ‘magic bullet’ thinking - for complexities around choice, ethical decision making and the unintended consequences of the policy - such as social isolation - to be largely side-lined, as research on the issue has predominantly been pursued within a narrow, and methodologically restricted, remit. The discussion starts with an outline of the formation of telecare policy.

The policy problem

As Cairney and Zahariadis (2016) note, MSA considers how policy solutions are received within government or wider policy networks. One of the problems here is the notion that there are ideas ‘whose time has come’ for policy makers, implying that not only the policy itself but its implementation will display an irresistible logic which brooks little reflection about its suitability or the complexities of its implementation. In MSA thinking this represents the *problem stream* stage, where the policy problem – in this case care needs in a rapidly changing demographic – met what was perceived to be a policy solution already available and waiting to be taken up. This is an important aspect of the policy development; the gap between the urgency of a policy idea and the protracted process of finding solutions (which may require a long gestation) is most effectively bypassed by the adoption of an existing presumed solution. In the case of telecare the evidence base for presuming the efficacy of the solution was thin when the idea ‘whose time has come’ was promoted by the Audit Commission in 2004, which held up the prospect of telecare as simultaneously a solution to care demands but also cost savings. But thereafter a policy was rapidly developed by government which made serious assumptions based on not only on an idea ‘whose time had come’ but on a linearity of implementation. On both counts the actual experience was much less clear cut; other countries – notably, for example, Germany - faced with similar demographic change did not embrace telecare as policy solution with the same air of policy necessity and instead explored alternative themes such as inter-generational contracts of support for older people (Eccles, 2015).

The key actors in the policy stream stage all had sound reasons to coalesce around the telecare solution. Albeit central government had devolved responsibility of social care to

local government over the previous decade, long term social care policy, both in the community and in residential settings remained identified with the government at the centre in terms of public perception over responsibility for taking the policy lead in this area (Means et al, 2008). This was also the case because local government in the United Kingdom (the component parts of the United Kingdom have different arrangements but the issue remains universal) is, comparatively in European terms, unusually reliant on central government, rather than local taxpayers, for its funding. Local government itself – which would become the lead agency in implementing telecare policy – was enthusiastic about promoting telecare, as it had struggled with perennial problems around the under-resourcing of adult care. But a third – and major – policy actor was the commercial sector, in the shape of manufacturers of telecare equipment. In this regard the United Kingdom was a world leader, and so the nexus between central and local governments and manufacturers began to develop a mutually reinforcing discourse around how telecare was essential as a policy solution and was able to address both cost, and quality of life, criteria in such a crucial policy area.

Thus the spaces for discussion around a multiplicity of issues – for example the ethics of using surveillance technologies, and the efficacy of telecare use in terms of operability and presumed cost savings - became limited by the dominance of ‘expert’ knowledge in policy decision making (Callen et al, 2009). This is noteworthy in the United Kingdom context, where, for example the Scottish Government rapidly developed a formal ‘partnership’ with the leading United Kingdom telecare technologies company Tunstall, such that this company’s logo appeared on official Scottish Government publications. Tunstall’s literature (2009, p3) notes that the United Kingdom faces a ‘demographic timebomb’ where the social and healthcare needs of increasing numbers of older people would outstrip the resources required. Similarly, local authority commissioners of technology were apt to talk of the unsustainability of current patterns of care delivery; taken together, a discourse based on the *necessity* of technological solutions for future service delivery quickly emerged. Indeed the Scottish Government explicitly argued that ‘Telecare services [should] grow as quickly as possible’ (Scottish Government, 2008 p6) despite the lack of any significant research evidence about telecare use at that point. As noted below – in the wake of a great deal more research evidence which suggests ambivalence around the results of telecare in

practice – the Scottish Government position on its projections to 2020 remains largely the same (Scottish Government, 2015). Here then we have a relatively closed circle of expert opinion: government, partner technologists and local care commissioners reinforcing each other's largely uncontested discourse. But the discourse around the implications of demographic change, for example, *is* contested in academic circles (Walker, 1993; Tinker, 1999) and challenges precisely some of these assumptions about the necessity of technology-based care.

This relatively closed discourse extends to evaluations of telecare. Policy evaluations are usually retrospective of actual implementation and thus limited in scope given the outcomes of implementation required by the policy makers. In one major evaluation for the Scottish Government, Beale (2012) notes that, of three possible methods that could have been used to evaluate the cost effectiveness of the policy, the least robust was used, given the complexities and uncertain variables inherent in the data under evaluation. In *Investing to Save: Assessing the Cost Effectiveness of Telecare* (Clifford et al, 2012: 10) the authors conclude that 'Councils should actively promote the provision of telecare as a 'mainstream' activity' in local authority care services' and that 'Councils should include standard methods of assessment and training in the applicability of telecare within their re-ablement and personalisation processes'. These conclusions are based on research in which 'Tunstall assessors suggested appropriate telecare solutions' (p5) and 'costs of Telecare were calculated for each client using economic calculations provided by Tunstall'. (p6).

In both these studies the limitations of data mining and use of methods suggested by, or in conjunction with, technology companies are made explicit and open in the findings. The point is that they contribute to a discourse set within the context of expert opinion within the policy stream. As Callen et al (2009) note, public space for debate about the desirability of these technologies, their implications for care relationships, and aspects of privacy largely sit outside the realm of parameters set by 'experts'. Thus in the policy stream phase policy advisers and technologists tended to inhabit a world in which these complexities –such as alternative ethical approaches, open democratic spaces for debate and alternative paradigms about how we address future care needs (based, for example, on the relationship between work and care) - were rarely addressed. In this sense the policy stream element of

the Multiple Stream Approach coalesced smoothly, and alternative discourses around telecare were effectively marginalised (Greenhalgh et al, 2012).

The third strand of the MSA is represented by the *politics* stream where policy makers have to balance a variety of implementation factors such as interest group representation, feedback from research trials and the competing political demands of other policy areas. It is here, at the political level, that the policy moving into implementation aspect becomes more complex. Various political problems emerged in the telecare implementation process, but the logic of the policy stream coalition, discussed above, tended to side line, diminish, or indeed distort these political problems, for example in the use of raw data to skew the results of the WSD research (Greenhalgh, 2012a). The first of these political problems to be discussed here is the emerging research evidence.

The scale of ambition for the use of Telecare technologies in the United Kingdom was illustrated by the *Whole System Demonstrator* (WSD) project, the largest telecare research programme undertaken anywhere in the world to date, at a cost – funded by the UK government - of £31m (\$61 at 2009 exchange). This project variously involved a randomised control trial (RCT) of telehealth and telecare users across three sites in England, with data collection over twelve months and analysis over a further twelve. The results of this research came *after* the announcement of the ambitious telecare policy proposals outlined above. It is not in the remit of this paper to explore the WSD results in detail; suffice it to say the first three tranches of WSD reporting between 2012 and 2013 offered results on cost savings and quality of life enhancement which are ambivalent, were sometimes at odds with the current policy, and open to debate (Innes et al, 2012). A less ambivalent assessment of the research emerged from the Parliamentary Office of Science and Technology, which reported, that ‘The results [...] showed no statistically significant reduction in health or social care use between the telecare and non-telecare groups’ and further recorded: ‘The results of the telehealth economic evaluation [...] showed that telehealth was not cost-effective at the scale implemented in the trial’ (2013 n.p.). In addition to the results, the WSD trial itself, by dint of its research design, managed to avoid political input at the political stream stage; in other words by basing the research only on *clinical* factors, and not also around social and ethical considerations, the political stream element was effectively closed to political

argument in favour of a technical evaluation which considered only operating efficacy and not social impact.

Despite this, the United Kingdom telecare policy programme moved on: the telecare programme in Scotland, projecting forward to 2020, noted the need to: 'Maximise and increase the use of telehealth and telecare to improve access for citizens to planned and unplanned care' (Scottish Government, 2012: 26), whilst the United Kingdom Prime Minister at the time, speaking in December 2011, announced of the telecare programme: 'We've trialed it, it's been a huge success and now we're on a drive to roll this out nationwide' (Gov.UK, 2011 n.p.). This rather sweeping announcement was made on the basis of claims by the United Kingdom Government's Department of Health involving, as Greenhalgh (2012: 344) notes, the 'cherry-picking of unanalysed data to put on its website before the trial had finished recruiting [which] was scientifically inappropriate but politically expedient'. The political expediency reflects the decision to undertake an ambitious telecare program without a sufficient evidence base, but perhaps also reflects the powerful nexus between the UK governments and technology companies at the policy stream level. Nevertheless even this nexus of policy stream interests— what Greenhalgh (2012: 344) has termed 'an increasingly powerful industrial-political complex' - has proved to be problematic. There are a number of reasons for this, succinctly discussed by Barlow (2012): thus, albeit the United Kingdom has been a world leader in both the adoption and manufacture of telecare equipment, the industry remains fragmented and without a single market leading product. Part of the problem that arises from this is the lack of inter-operability of equipment, a weakness repeatedly found by Greenhalgh et al (2013) in their qualitative research around the experiences of telecare end users. There has also been scepticism on the part of the purchasers of these products; despite the 'cherry picking' of data from the WSD trials the health care professionals, especially in the more professionally powerful areas such as clinical medicine, are well acquainted with the full results of the trials (for example in the reporting of GP magazine, aimed at general practitioners) and so have not been convinced that the evidence base is robust enough.

Organizational problems also exist at the political stream level. Despite decades of attempts at organizational change, relationships between health care and social care across the United Kingdom, but particularly England, remain stressed. There are many factors involved

here (see Eccles, 2013 for an overview) but key to the problem with telecare implementation has been the lack of financial congruence across health and social care budgets. Thus telecare, as the WSD research demonstrated, albeit it is not cost-effective at scale, can bring about a reduction in emergency hospital admissions. The cost savings here accrue to health services. But the costs of the provision of telecare equipment are most often borne by social care budgets which reside in local authorities and not health organizations. There would need to be either a transfer of funds across the two budgets (that is, health paying for telecare in its social care capacity) or a pooling of health and social care funds. The latter has been implemented in Scotland (although is in its nascent stage and is not short of complexities – see Black, 2015) but not in England. A further organizational complication has been the major reforms to health care arrangements in England which, in an attempt to foster greater access for private companies to engage with health delivery, have resulted in significantly more fragmentation of delivery. So the organizational needs of the telecare industry – for predictable and sustained take up of products - have not been served by parallel policy developments elsewhere. As Barlow et al (2012: 14) note from their research:

‘The cost of remote care services was frequently raised not only as a barrier to adoption but also in relation to the evolution of a remote care industry and market. Competition amongst technology suppliers has emphasised technology development but also the cost of solutions to service providers. The challenge for suppliers is how to balance a ‘one size fits all’ approach – with sufficient adaptability to respond to future patient needs and expectations – and a mass-customised model designed around the specific needs of end-users but using standardised components.’

Nonetheless, at the policy stream level policy officials at the Department of Health (DH) continued to plan for the provision of telecare based on financial calculations that were simply not borne out by the evidence of the WSD trials. The DH assumptions were based on a projected two million regular users of telecare with financial savings coming from fewer hospital admissions (GP 11 June 2012 <http://www.gponline.com/telecares-12bn-savings-remain-doubt/article/1135469>). But the unknown costs here were the additional financial pressure of keeping erstwhile patients in the community: these community care costs were not factored into the assumptions around savings. The ‘magic bullet’ thinking behind this

approach was revealed, more startlingly, in the request of the journal of General Practitioners, GP, for a breakdown of cost assumptions behind the telecare programme. The journal reported that:

‘The DH [Department of Health] originally blocked GP's request for the evidence behind its savings claim, but published a summary of its calculations after an appeal. It said disclosing the full evidence would 'be a prejudice to the effective conduct of public affairs, given that the information sought is in statistical format'.’ (GP, 2012 n.p.)

The policy stream response to this political stream weakness of implementational uncertainty in the telecare industry was the announcement, in 2012, of the 3 million lives project (DH, 2012). This was a Government announced, but largely industry-led, policy concordat which aimed to have three million users of telecare devices in England by the year 2017. In part it can be seen as an attempt by policy makers to engage with the telecare industry in a way that might address the industry's concerns about the uncertainties of future markets (and thus their reluctance to invest in product development). But it also represented a reboot of the telecare policy programme. The 3 million lives programme rationale was clear:

‘The Department of Health (DH) believes that at least three million people with long term conditions and/or social care needs could benefit from the use of telehealth and telecare services. Implemented effectively as part of a whole system redesign of care, telehealth and telecare can alleviate pressure on long term NHS costs and improve people's quality of life through better self-care in the home setting’

A more detailed reading of aims reveals the underlying *industry* concerns, however:

- For DH and industry to work together over the next 5 years to develop the market and remove barriers to delivery.
- For DH to create the right environment to support the uptake of telehealth and telecare including rewarding organisations for adopting and integrating these technologies in services by developing a tariff.

- For industry to work with the NHS, social care and other stakeholders to simplify procurement and commissioning processes for telehealth and telecare services at scale.
- To put the NHS and UK industry at the forefront of telehealth and telecare globally, developing significant opportunities for UK plc.

Three aspects of this are worth commenting on, in terms of the lack of congruence between policy and political streams. First, the weaknesses of implementing telecare cost effectively, as illustrated by the WSD trials, are simply not addressed. This is, again, 'magic bullet' thinking; in the event of countervailing evidence, policy makers simply doubled down. As Hendy et al (2012: 1) note:

'The implementation of a complex innovation such as remote care requires it to organically evolve, be responsive and adaptable to the local health and social care system, driven by support from front-line staff and management. This need for evolution was not always aligned with the imperative to gather robust benefits evidence. This tension needs to be resolved if government ambitions for the evidence-based scaling-up of remote care are to be realised'.

Second, given the evidence already discussed about organizational complexities, the programme offered no organizational *solutions* beyond a series of aspirations, similar to the programme in Scotland which announced of future policy that telecare *will* be the preferred option.

Third, the projections were indefensibly optimistic. As Hunn (2012) has noted, the projected *global* figure for telecare use for 2017, based on comparable definitions of the technologies, was only 1.8 million. Hunn argues: 'Trying to target numbers is not helpful. We could deploy 3 million devices quite easily, but most would sit gathering dust or be hidden in the back of drawers [...] the aim should be about achieving a better quality of life for patients. That's not about procurement managers writing contracts for devices, it's about changing the way we incorporate data into our ways of working' (ibid: 5).

In order to galvanise the political steam into meeting policy aspirations, policy makers introduced a number of policy instruments (see Bouscombes & Le Gales, 2008; Bemelmans-Videc et al, 2003 on the policy instrument literature) around telecare policy. These instruments – *carrots, sticks and sermons* – to use the title of the Bemelmans-Videc text – were designed by a variety of measures to encourage adoption of policy in the political stream. Key to this in the instance of telecare was the use of performance indicators. The problems with using a performance indicator culture have been widely noted. Smith (1995), in his seminal work, indicated the unintended consequences of performance indicators, ranging from the need to accommodate centrally driven targets that do not necessarily meet the needs of particular localities, to the propensity to operate gaming strategies to meet current and future requirements of indicators. A more recent literature (Quereshi, 2001; Miller, 2011) has expressed misgivings about outcomes measurement that are driven from the centre by policy makers, but which are not adequately connected to actual outcomes which reflect the needs of service users themselves. Of course this latter approach to outcome measurement would necessarily be contextual and often localised. A striking example of this tension in the United Kingdom context came from the Scottish experience, where local Telecare Partnerships were able to engage with the performance indicator data requirements only with considerable difficulty (Beale, 2011; Eccles, 2011). In one particular partnership, where the Telecare programme predated the central push from Scottish Government after 2006, local outcome measures and ethical frameworks had already been established. This partnership took the decision that the data required (for example, hospital bed days saved through the use of telecare technologies) from Government at the centre – at the heart of the policy stream - required such a simplification of the actual decision making process around implementation that the figures would simply lack validity. Other Telecare project managers offered similar misgivings (Eccles, 2013). Thus whilst this particular Telecare partnership was lauded within Scottish Government telecare literature as an exemplar of good practice, it ranked simultaneously as ‘in need of improvement’ in the Scottish Government performance indicator rankings because it had failed to return outcome figures, demonstrating an incongruence between the policy instruments employed by the policy stream and politics stream.

A further series of complexities at the implementation stage reflect the linear assumptions made by policy makers about policy delivery, although in this case these complexities were exacerbated by the way in which government funded research evidence was, as noted above, 'cherry picked' to reinforce the dominant policy discourse behind the efficacy of telecare solutions to care needs. What became apparent, as the roll out of telecare proceeded, was that the social and ethical questions of its use were side lined. As Hendy et al (2012: 1) note about the WSD trials, these issues were not considered due to the methodological limitations of the study, viz. 'While remote care was successfully rolled-out, wider implementation lessons and levels of organisational learning across the sites were hindered by the requirements of the RCT'.

These telecare technologies, based as they increasingly are on surveillance (for example through monitoring of conditions or GPS tracking of movements) - and in the new care relations they presage - prompt ethical issues hitherto unexplored: the ethical and democratic deficit previously noted by Mort, Roberts and Milligan (2009: 85).

Social research, drawing more heavily on qualitative methods has identified a multitude of complexities in the use of telecare in its social context. The phenomenological enquiry with end users by Greenhalgh et al (2013) reveals particular deficiencies with the interoperability of different pieces of equipment but also the complexities of telecare efficacy where recipients have multiple morbidities. Mort Callen and Roberts (2013) note the pressure on end users to use the equipment 'appropriately' or potentially have it withdrawn from them; the use most likely to be deemed 'inappropriate' by resource managers was service users using the equipment's alert function for social interaction - essentially having someone to talk to in the remote response centre.

These complexities and tensions between telecare policy and practice go beyond the experiences of just service users. A distinctly under-researched area has been the experience of carers and care workers, who are increasingly expected to engage with these new technologies. Eccles' (2013) research reveals significantly different attitudes to care technologies, and their utility in replacing human care, across a range of professions who are engaged in the assessment of service users for potential telecare installation. There is unpredictability here across various fronts. There may be differences in attitude across age

groups which are more or less familiar with new technologies, but also across different caring professions – for example health and social care – which are now expected to assess older people for the potential of using technology based care, and between family members and technology recipients over the suitability of these technologies. Thus, while monitoring equipment may offer extended families and carers peace of mind, it may simultaneously represent an intrusion into the privacy of recipients. What we have here is a need for more qualitative research on the actual experience of care professionals, carers and clients in understanding how, when and why these technologies are used and how the various parties to their use experience them. There exist limited, and essentially surface, accounts of client satisfaction (see, for example, Scottish Government, 2009) but a paucity of research based on more depth of enquiry. Where these deeper case studies do exist – particularly from the Netherlands, but also Moser's (2012) work in Norway - they point to the complexity of operationalizing telecare technologies and the intricate, often unpredictable consequences of the interface between technologies, their users and care practitioners. Oodshoun (2011), and Kamphof (2013), offer findings from research with carers and practitioners, which adds further layers of complexity. This is particularly the case with the second and third generation telecare technologies (which provide copious data from the monitoring of service users in their own homes or via GPS), where sifting the data and responding to its implications may be approached quite differently by different carers and care professionals, giving rise to new concerns about the responsibilities of care professionals who have access to data but may be overloaded by its sheer volume. Kamphof also notes the tensions that arise between practitioners and their managers, where practitioners feel confident to sift (and thus order) data in the face of more managerialist concerns (see Meagher and Parton, 2004, for a discussion of this tension), that *all* data ought to be recorded and interpreted. Moser's work with carers points to a similar set of issues; whilst it is often carers and family members who feel a particular benefit from technologies that are keeping their relatives' movements and health condition monitored, this carries unforeseen additional pressures: checking equipment, interpreting movements and having additional care responsibilities (Moser, 2012).

At the policy stream level, quality of life (QoL) is explicitly included, by both industry representatives and policy makers, as an intended policy outcome of the deployment of

telecare technologies (TSA, 2010; Scottish Government, 2011). But these claims around QoL need to be tempered by a clearer understanding of the complex factors which contribute to QoL measurement (see Eccles et al, 2013). Among these, QoL among older people is influenced by social networks and friendship. Yet telecare technologies – with their potential to replace human care with monitoring and surveillance equipment – have the potential to lead to social isolation, potentially a key factor in the *reduction* of QoL for older people (ibid). Albeit social isolation does not necessarily, in itself, equate to loneliness, loneliness will usually be predicated on social isolation. The associations between loneliness and an increase in a serious decline in indicators of good health have been well documented (see Eccles, 2015 for a summary). Thus addressing one public policy problem - the cost of social care and the desire to have older people in community settings - may have unintended disadvantages for recipients' health.

Quality of life was also the subject of enquiry by the WSD project (see above). Its authors noted:

[I]f telehealth leads to improved self care behaviour and efficacy, we might expect increases in health related QoL and reductions in negative affect. It remains unclear whether improvements in these patient reported outcomes are driven primarily by objective improvements in physical health, or by subjective improvements in perceptions of agency or control. Telehealth could reduce health related QoL and psychological wellbeing owing to the increased burden of self- monitoring, concerns about intrusive surveillance, a perceived lack of user friendliness, or the undermining of the traditional (face-to-face) therapeutic relationship [...] our findings strongly suggest no net benefit from telehealth; therefore, it should not be used as a tool to improve health related QoL or psychological outcomes' (Cartwright et al, 2013).

Thus we can observe a multitude of complexities among user experiences; both service users and practitioners. These indicate a clear disjuncture between the *policy stream* assumptions of efficacy and the political stream experience of a wider user group, summarised in a detailed discourse analysis around telecare between technologists and users (Greenhalgh et al, 2012). These authors also stress the need for greater participation over the design and functionality of telecare technologies at the policy stream stage in order

that there might be greater congruence with political stream factors. Indeed, as Barlow *et al* (2006:403) note, drawing on the organizational complexities in the development of telecare policy on the ground,

‘Stakeholder involvement is particularly important in innovative care delivery projects because of the degree of autonomy in decision making held by care professionals and the amount of coordination which is required between different care professionals and services. Health and social care services involve diverse staff from differing organisations, possessing differing cultures and values. These need to be closely involved if pilot projects are to be integrated into mainstream service delivery’.

Conclusion

Reviewing the research of a number of qualitative and organizational accounts indicates that assessment for, planning, delivery, and operation of telecare with end users at the politics stream level is significantly more complex than is held to the case at the policy stream level where policy and industry discourses prevail. In terms of Multiple Streams Approach, there is a clear lack of congruence across these two streams, which is problematic given the need for this congruence to hold within the ‘window of opportunity’ that is afforded policy change. The problem here lies with the determination of the policy stream elements, in particular policy makers and manufacturers, to press ahead with implementation before thorough trials were conducted and moreover, to redouble the effort in the face of evidence that was, at best, ambiguous. The reliance on a narrow methodological focus side lined crucial areas of concern around telecare use; the ethics, the user experience and the wider cost impact on community based care. The selective use of data to bolster the policy stream discourse has been egregious, but what is possibly of greatest concern is the lost opportunity to address the pressing issue of a crisis in the provision of social care for older people in the United Kingdom; ‘magic bullet’ thinking around telecare over the past decade has meant that fundamental structural problems of the financing and organization of such care have simply been postponed rather than tackled. The application of a Multiple Streams Approach has afforded the opportunity to

begin to theorize on why this has been the case; in essence the issue in the ‘problem stream’ remains, but the circular and reinforcing arguments and research enquiry of actors in the policy stream have singularly failed to engage with the inconvenient complexities of the political.

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