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A qualitative synthesis of pharmacist, other health professional and lay perspectives on the role of Community Pharmacy in facilitating care for people with long-term conditions.

#### ABSTRACT

Background: There is increasing interest in an enhanced role for community pharmacy (CP) in facilitating care for people with long-term conditions (LTCs). It is important to understand the perspectives of stakeholders in order to identify key issues that may impact on future development of the role and related services.

Objectives: Explore pharmacist, other health professional and lay perspectives on the role of CP in facilitating care for people with LTCs.

Methods: Synthesis of qualitative research from UK based studies published between 2007 and January 2017 using a meta-ethnographic interpretative approach.

Results: Variation in the conceptualisation of the role of CP in facilitating the care of people with LTCs was apparent across and within lay and health professional accounts. Despite evidence of positive attitudes and a culture amenable to change, there remains a lack of clarity about the existing and potential role of the pharmacist in this area. A theoretical framework is proposed that highlights the dynamic nature of the process involved in the development of lay and health professionals' understanding of the role and engagement with services. Influences on this process include experience and perceived need, service operationalisation, and ongoing developments within wider healthcare policy and commercial environments. Perceived integration with existing professional and peer support structures, views about traditional medical hierarchies and concerns about potential duplication are important influences on the value attributed to the role of CP and the services provided.

Conclusions: There is acknowledged potential for an extended role in CP to support the care of people with LTCs. To ensure the likelihood of successful engagement with patients and positive health outcomes, developments should acknowledge influences within and beyond the CP setting. Potential overlap with other healthcare services should be explicitly addressed, ensuring this is framed and delivered as valued reinforcement with clearly defined boundaries of responsibility.

A qualitative synthesis of pharmacist, other health professional and lay perspectives on the role of Community Pharmacy in facilitating care for people with long-term conditions.

#### INTRODUCTION

The increasing burden associated with long-term conditions (LTCs) is one of the biggest challenges facing healthcare systems worldwide. In the United Kingdom (UK), LTCs account for 70% of health and social care spending and 50% of all General Practitioner (GP) appointments, and the number of people living with complex multi-morbidities is rising rapidly.<sup>12</sup> Due to a growing and aging population and increasing financial pressure on the UK's National Health Service (NHS), there is an urgent need to understand how best to help support the growing number of people with LTCs to self-manage their conditions, <sup>13</sup> whilst delivering high quality and affordable care as envisaged in the NHS Five Year Forward View. <sup>24</sup>

Community pharmacy (CP) already plays a significant role in the ongoing monitoring, support and treatment of people living with LTCs.<sup>5</sup> CP-led interventions have been shown to have a positive effect on the identification of undiagnosed LTCs, their management and clinical outcomes.<sup>6-9</sup> CP's convenience and easy access, particularly in areas of higher deprivation, means that it is ideally placed to provide services that can help support those most in need. <sup>10</sup> Furthermore, an extended role for CP in the prevention and management of LTCs has been identified by policy makers internationally alongside calls for the provision of more "cognitive" and "clinical" services to support both medicines use and public health.<sup>11 12</sup> Pharmacy contractual arrangements vary between different countries within the UK. In England, the Community Pharmacy Contractual Framework, first introduced in 2005, allows pharmacies to be reimbursed for providing a range of NHS services. Currently, the main contracted services to support people with LTCs are medicines use reviews (MURs) and the New Medicine Service (NMS), targeted at chronic respiratory and cardiovascular diseases. CP also has a defined public health role that includes a responsibility for supporting patients with LTCs with lifestyle advice. <sup>13-15</sup> In Scotland, LTC support is provided by the Chronic Medication Service (CMS). Although services such as MURs, NMS, and CMS are operationalised differently across the UK, they all allow for the provision of support for LTCs beyond the traditional dispensing role of pharmacists.

It is argued, however, that the full potential of CP to contribute to increasing demand on stretched NHS resources has yet to be realized; that progress in extending the role of community pharmacists (CPs) has been "patchy and lacking in scale;" and that there is still untapped potential for their role in the wider

contribution to the "prevention, early detection, supported self-care and ongoing management of LTCs". <sup>12 16-18</sup>

CP professional organisations and bodies in the UK have recently published a shared vision document that proposes the facilitation of personalized care for people with LTCs as one of the key areas in which CP has the potential to make a significant contribution to addressing the needs of an already overburdened health and care system. <sup>18 19</sup> A number of challenges have been identified to the successful implementation of this vision, including funding and regulation requirements; systematic and wider integration of CP within new models of care currently being developed within the NHS more widely; greater "digital maturity and interconnectivity" with improved access to healthcare records; consideration of NHS and CP organisational cultures; and increased public awareness. <sup>12416</sup>

Exploration of the perceptions of patients, community pharmacists and other relevant stakeholders is important to help understand and assess how to ensure that any service developments and innovations in this area will meet the needs of, and be acceptable to, people with LTCs and their carers, community pharmacists and the health professionals with whom they work. Although evidence suggests that patients with LTCs value aspects of extended CP services <sup>20</sup> and that their experiences of service provision can improve attitudes towards pharmacists and subsequent interactions, findings are conflicting and patient satisfaction is closely linked to expectations and beliefs in relation to the legitimacy of an extended CP role. <sup>21</sup> Findings from qualitative research are helpful in providing a more in-depth understanding of these issues; however, these studies tend to focus on specific CP services, LTCs or stakeholder groups. The value of synthesizing the results of quantitative research in building a cumulative knowledge base is well established; however, the accepted methods used for this are not applicable to qualitative research.<sup>22</sup> This study aimed to use an interpretative meta-ethnographic approach <sup>22-24</sup> to synthesise and interpret findings from existing qualitative studies in order to develop additional insight into how the role of CP in facilitating care for people with LTCs is perceived.

#### METHODS

Qualitative research findings from UK-based studies published between 2007 and January 2017 were synthesized using an inductive and interpretative approach in line with Noblit and Hare's method of meta-ethnography.<sup>22-24</sup> This approach involves translation and synthesis of key "interpretative metaphors" (themes, perspectives or concepts) across empirical research studies using a continuous comparative analysis of texts while preserving original meanings and exploring the contexts in which

these are understood. Meta-ethnography differs from other more descriptive methods of qualitative synthesis in that it aims to build on the second order interpretations and explanations from original research, which are treated as data, to develop new interpretations and a more comprehensive understanding of a particular phenomenon.<sup>25</sup> Specifically, in this case, this method is used to understand beliefs about the potential of the role of CP in facilitating the care of people with LTCs. Although initially developed for the synthesis of ethnographies, this method is now used more widely in health-related research, incorporating qualitative studies from a range of research traditions that focus on in-depth accounts of people's experiences, perceptions, social interactions and behaviours.

#### Literature search

A systematic literature search was conducted in February 2017 to identify peer reviewed qualitative research papers published from 2007 to 2017. PubMed (including Medline), EMBASE and CINAHL databases were searched using key terms across five areas, including derivatives and thesaurus terms adapted for the requirements of each database. These included the following: Community pharmacy or pharmacist, qualitative methods, lay and health professional perspectives, roles or services, chronic disease or long-term conditions. Hand searching of reference lists of all relevant papers identified was also completed. Inclusion and exclusion criteria can be found in table 1.

#### (insert Table 1)

The search was restricted to primary research papers published in peer reviewed journals. Only studies from the UK were included to ensure comparability in terms of the associated healthcare and socio-political systems within which the study findings were situated, thereby facilitating a more in-depth exploration of the specific cultural context in which CP operates. The search included terms associated with services commissioned across the UK, such as MURs, NMS and CMS. Evidence relating to these services are likely to be transferable and of relevance to people living with LTCs and those who help to support their care.

A restriction to the last 10 years was implemented to help ensure that findings would be as relevant as possible to the current economic and healthcare context within the UK, while acknowledging potential for change over time.

It is common within meta-ethnographies to purposively sample relevant papers based on maximal variation sampling,<sup>23</sup> or iteratively until theoretical saturation is achieved. <sup>26</sup> Due to the limited number of papers identified, all were included in the analysis further to a quality appraisal using the Critical Appraisal Skills Programme (CASP) checklist. <sup>27</sup> All included papers were deemed to have used appropriate methods to address the stated aims of their research, to have appropriate recruitment and data collection strategies and have taken ethical issues into consideration. Papers varied in the depth of their analysis and conceptual richness of their findings, but all were considered to be sufficiently rigorous and relevant for inclusion. The ENTREQ checklist (enhancing the transparency in reporting the synthesis of qualitative research) was used to ensure systematic reporting. <sup>26</sup>

#### Analysis

An inductive and iterative approach to analysis was employed. Papers were read to identify overarching commonalities, differences and shared concepts using constant comparison methods.<sup>23</sup> Particular attention was paid to the concepts and themes that may be generic across clinical conditions in comparison to those that may be condition-specific and to the contexts in which the original data sets were collected and interpreted. First and second order constructs from the results, discussion and conclusion sections of the papers were included within the analysis. Findings from different perspectives (patients, public, CP, general practice and other stakeholders) were initially coded separately and then compared.

An initial coding frame was developed and applied to all the selected papers with the help of NVivo software so that instances of each newly developed concept were grouped together to aid translation and synthesis. NH (social sciences researcher) coded all the papers and GD (academic community pharmacist) dual coded a selection of papers. Researcher coding and translation across studies was compared and adjustments were made to the coding framework and interpretation where appropriate. The final interpretation and synthesis of the findings were reviewed by both NH and GD.

#### FINDINGS

A total of 17 papers were identified that met the inclusion and exclusion criteria of the literature search (see Figure 1).

(Insert Figure 1)

Included papers represented appropriate variation in terms of the range of methods, perspectives, services and medical conditions. Twelve papers included the views of pharmacists, two of GPs, three of other health professionals and eight of patients or carers. Eight were related to specific services (four to the NMS, four to MURs), seven were condition specific (three coronary or heart conditions, two dementia, one juvenile arthritis, and one diabetes) and two were based on LTCs more generally. Most papers provided mainly descriptive accounts based on thematic analyses. A few, however, based their analyses on existing theoretical frameworks, including Normalisation Process Theory <sup>28</sup>, Damschroders' consolidated framework for implementation research <sup>29</sup>, Donabedian's structure-process-outcome approach <sup>30</sup> and Foucault's concept of pastoral power. <sup>31</sup> Summaries of the papers and their methodologies are included in tables 2 and 3.

#### (Insert Tables 2 and 3)

Four key overlapping constructs were identified by translating and combining primary data and secondary concepts from individual studies i.e. reciprocal translation<sup>24</sup>. These are described in detail below. Table 4 provides an example of the analytical process and Figure 2 outlines a proposed theoretical framework to illustrate the overlap between the constructs, the reciprocal relationship between them and the dynamic nature of the process. Identifiers are provided after data extracts to demonstrate whether they relate to lay (Lay), GP (GP), Community Pharmacist (CP) or other health professional (HP) accounts, whether the study from which it was extracted was focused on a specific service (MUR, NMS or CMS), a combination of LTCs (LTC), or a specific LTC (LTC name) and whether the extract originates from a primary data source (primary) or secondary concept (secondary).

(Insert Table 4)

(Insert Figure 2)

#### Construct 1 - Conceptualisation, disruption and adaptation

Ongoing national policy developments in the UK and increasingly competitive retail environments have resulted in a dynamic shift or disruption to what has been described as the "traditional" or "old school" CP dispensing role. <sup>32</sup> Wide variation in the understanding and conceptualisation of the role of CP in facilitating the care of people living with LTCs was apparent within and across the lay and health professional accounts included within our synthesis. A range of influences on the understanding, acceptance and awareness of changing roles and ways of working within CP in relation to supporting

patients with LTCs were described. These operated at various levels and although some were shared between patients and health professionals, others were specific to each group (See Table 5).

#### (Insert Table 5)

#### Pharmacist and other health professional perspectives

The accounts of CPs across all studies confirmed the perceived value and opportunity within the existing or potential role of CP in supporting people with LTCs. Perceived benefits included reducing pressure on GP <sup>33</sup>; improving the profile and professional status of CP<sup>31-35</sup>; patient monitoring and education <sup>29 35</sup>; improved clinical outcomes <sup>33 35</sup> and perceived patient reassurance and satisfaction. <sup>34 35</sup>

There was also evidence of a culture amenable and accepting of change,<sup>34 35</sup> whereby extension to the traditional dispensing role is valued and desired, perceived to meet patient need, contributes to job satisfaction <sup>28 29 35</sup> and helps to demonstrate the worth and skills of the CP profession.<sup>31 32 35</sup>

"I felt like I was in a production factory just checking scripts. I wanted to be challenged more. This [NMS] is doing exactly that and I love my job now, I love doing all these services and I love the patient interaction" (CP, NMS, Primary; Wells et al., 2014)

At the same time, contradictions and uncertainties were also apparent. Ambiguity of the CP role and professional identity, a lack of clarity over responsibilities and a reluctance to engage with additional extended roles were also described. Specific issues centred on: the lack of perceived value or effectiveness of NMS in addressing non-adherence over and above routine advice already provided <sup>29</sup>; concerns about possible overlap with other healthcare providers<sup>33-35</sup>; selective patient eligibility for the NMS<sup>35</sup>; services being completed in some instances without a definitive patient need and beliefs that public awareness and understanding of the services and skills available was low <sup>13</sup>; variable willingness to relinquish traditional dispensing roles in order to meet imposed MUR targets and extend existing CP roles <sup>32</sup>; and cautious optimism about the ability of CP to transition from dispensing to a patient-centred approach. <sup>33</sup>

"the key challenge for community pharmacists lies in how to combine new roles and make the transition from their traditional dispensing roles and responsibilities to a patient-centred selfcare support role" (CP, LTC, secondary; Ogunabayo et al., 2015)

There was little evidence on the perceptions of GPs and other healthcare providers on the role of CP in supporting the care of people with LTCs. This was despite reports that poor relationships with GPs,

discussed in more detail in the following section, was seen to be a key barrier to the integration of the role of the CP within the wider healthcare context and the successful implementation of services. There was evidence of recognition by GPs that the skills of the pharmacist are under-utilised, <sup>36</sup> however awareness and understanding of the purpose of services such as NMS and MURs were reported to be low and had little influence on their practice.<sup>29 32</sup> GPs reported concerns about possible duplication of work and changes to traditional healthcare boundary divisions.<sup>29 32</sup>

#### Lay perspectives

Patients were reported to hold primarily traditional views regarding the division of labour in healthcare <sup>37-39</sup> and the dominant perception of CP was seen to be responsibility for medicines supply and over the counter advice for self-limiting conditions.<sup>36 38-40</sup> There was evidence of a lack of clarity about the role of the pharmacist or purpose of CP services, <sup>40</sup> particularly when these contradicted expected and traditional perceptions of the pharmacist encounter.<sup>31 38</sup>

"I wouldn't necessarily go to my pharmacist and ask about my health around my diabetes, I would go and ask, I have got a raging cold, can I take this? And that's where I find the pharmacists really helpful" (Lay, Diabetes, primary; Twigg et al., 2013)

The role of the pharmacist was usually conceptualized, not in isolation, but in relation to beliefs about other roles and responsibilities within the wider healthcare system, primarily those of the GP. There were, nevertheless, positive examples indicating that some patients welcomed LTC support from CPs. Patients were reported to perceive CPs as appropriately skilled professionals, <sup>37-39</sup> able to provide medicines related information, reassurance and an interest in their care <sup>28 30 37-39</sup> and fulfil a perceived gap in their care needs.<sup>28</sup>

"I think probably also the psychological effect here that you can talk to somebody you know and even if you just get a confirmation of what the doctor has prescribed for you, it's a big help" (Lay, Heart Failure, primary; Lowrie et al., 2014)

Patients who had not already experienced extended services within CP found it more difficult to identify the value of CP for supporting them with their LTCs beyond practical medicines support such as home delivery, pill boxes and medication supply.<sup>40</sup> Extended self-care was not commonly reported to be an area seen to be under the responsibility of the pharmacist. <sup>36 40</sup>

"I know that they do offer a lot, but for me, my first port of call would be my doctor" (Lay, LTC primary; Ogunabayo et al., 2017)

Concerns about conflict of interest due to the commercial setting and perceptions of pharmacists as "shop keepers" could influence the level of trust patients have in the advice they are provided by CPs and their perceptions of their role.<sup>37</sup>

"I'm just not sure I'm happy about it at all. ... It's just at the back of your mind, ..., you wonder about the drugs companies and all that, and all those promotions in the shop ... is it the kind of place they should be doing this kind of thing?" (Lay, CVD, secondary; Bissell et al., 2008)

#### Construct 2 – Relationships, collaborations and integration

#### Pharmacist and other health professional perspectives

Inter-professional relationships and collaboration can both influence, and be influenced by, perceptions of the role of CP, its value in supporting the care of people with LTCs and the implementation of new services. Across studies, there were commonly reported beliefs that the role of CP in supporting patients with LTCs was restricted by the lack of integration with wider healthcare teams <sup>33 41</sup> and limited access to medical records.<sup>36</sup> Traditional views of medical hierarchies which see the CP role as subordinate to that of the GP could impede inter-professional collaboration and communication,<sup>28 41</sup> result in concerns about perceived duplication of resources and boundary encroachment<sup>28 29 42</sup> and in, some cases, a sense of anxiety about engaging with GPs.

"It depends on the relationship you've got with the doctors and if you're quite happy to speak to the doctors yourself.. but if you feel a bit you know how will the doctor take this, they might shout at me down the phone or tell me to mind my own business" (CP, Heart Failure, primary; Lowrie et al., 2014)

CPs reported variation in how services, such as NMS, influenced the levels of engagement and collaborative working with GPs and nurses in primary care. There was a perception amongst CPs that there is a lack of GP awareness and interest in the NMS<sup>35</sup> and MURs<sup>42</sup> and that they place little value on MUR reports. <sup>32</sup> A lack of integration between CP services and existing primary care services was seen to limit the support and treatment provided,<sup>36</sup> impede implementation and result in confusion for the

patient.<sup>29</sup> For some CPs, however, a degree of duplication was accepted and conceptualized as evidence of valuable reinforcement and integrated care.<sup>28</sup> These beliefs may have been specific to the service provided within the context of this particular study, which included integrated referral pathways for heart failure.

*"it takes a good few times whether it's their GP or nurse or pharmacist.. it takes .. everybody all reinforcing the same thing if they are going to be able to manage their own medicines (CP, heart failure, primary; Lowrie et al., 2014)* 

GPs were reported to be generally supportive of NMS in principle, but were unclear about its implications on boundaries and relationships with CPs and perceived that NMS has little effect on GP/CP collaborations.<sup>29</sup> Positive examples of collaborative working were however reported in cases where there were existing good relationships.<sup>34</sup> Beliefs that the delivery of CP services could damage existing positive relationships were also apparent, particularly in cases where there was a perceived lack of agreement about their purpose, value and nature.<sup>42</sup>

"relationships are excellent [with GPs], no problems at all which is another reason for not getting too involved in MURS. The people that seem to have done them have rather upset their GPs" (CP, MUR, primary; Bradley et al., 2008)

There was little evidence in relation to communication and collaboration with specialist nurses and secondary care teams, although similar concerns relating to boundary encroachment seem to exist<sup>29</sup>. Developing these collaborations may be challenging, but was perceived to offer advantages when supporting people with LTCs. <sup>43</sup>

#### Lay perspectives

Traditional medical hierarchies and views in relation to the authority of the GP over CPs were reported to influence lay perceptions on the potential benefits of CP services<sup>37</sup> and subsequent engagement. <sup>39</sup>

"I would go and see the doctor, I wouldn't ask these [CP]... only because in ranking that's what he's [dr] there for" (Lay, NMS, primary; Latif et al., 2013)

Patients with good relationships with their GPs did not want these to be put at risk by allowing changes to their treatment that the GP had not endorsed  $^{38\,39}$  and patient trust in CP services was greater if there had been referral or validation by a GP  $^{38}$  or other usual healthcare provider.  $^{28}$ 

*"If the pharmacist just took it on himself I wouldn't be happy, but I would think if the doctor said go and see the pharmacist to discuss it, that would be good" (Lay, diabetes, primary; Twigg et al., 2013)* 

However, the role of CPs in endorsing GP help-seeking was also valued <sup>28</sup> and CP services were more highly regarded when relationships with GPs were poor, access to other services difficult and satisfaction with other healthcare services was low. <sup>40</sup>

CP was seen to occupy an isolated and subordinate position rather than one that is fully integrated with the rest of the primary care team.<sup>39</sup> This conflicted with patients' wish for care that is "joined up" i.e. not isolated or duplicated and based on knowledge about their medical history and condition. <sup>38</sup> Some patients struggled to identify the value and purpose of CP services in supporting their conditions in addition to their existing healthcare and wider support networks. <sup>30 38 40</sup>

"Community pharmacists are perceived as relatively marginal to the set of practices, repertoires or networks which patients draw on when managing treatments for chronic disease" (Lay, CVD, secondary; Bissell et al., 2008)

Engagement and satisfaction with CP services were also shaped by lay beliefs about the pharmacist encounter, <sup>28</sup> traditionally based on patients approaching the pharmacist for advice rather than the pharmacist proactively engaging patients in services.<sup>32</sup> Deviations from the established interaction paradigm were not expected, nor always welcomed.<sup>38 39</sup> Lack of clarity and expectations over the purpose of services could result in disengagement <sup>31 32 30</sup> and motivation to engage with MURs were described by some patients as being for the benefit of pharmacists rather than themselves.<sup>38 39</sup>

"Although I'm up to speed and informed with what's happening with myself, I felt that I was happy to do the interview for the benefit of the pharmacist" (Lay, NMS, primary; Latif et al., 2013)

Familiarity with individual CPs and repeated contact was important for patients with LTCs in building trust and establishing relationships required for supporting their needs <sup>28 38</sup> and for engaging with MURs.<sup>30 38 39</sup>

"The relationship part of it is very important, it's the trust got to build, you can't just have the locum pharmacist coming in and you know he knows nothing about you, you build that relationship before you put trust in them" (Lay, Diabetes, primary; Twigg et al., 2013)

Interactions with CPs were defined by patients in relation to the ways in which they differed from those with other HPs, in particular the GP. These differences could offer a range of benefits, including: patients reporting they could discuss issues they had not been able to with their GP<sup>30 37 38</sup>; that the time available to discuss their treatment and concerns was valued <sup>28 30 34 37 39</sup>; that CPs were more approachable, "friendly", accessible and more helpful <sup>28 30 33 37 38</sup>; and that repeated consultations with CPs can help to empower patients to discuss their conditions and symptoms with their doctors. <sup>28</sup>

"I think it [repeated consultations associated with heart failure service] brings you a lot closer you know well I mean the doctors they're fine, but somehow or another you can't talk to them the same as you can to the pharmacist" (Lay, Heart failure, Primary; Lowrie et al., 2014)

These descriptions are difficult to reconcile with conflicting findings that although many pharmacists endorsed a patient-centred approach <sup>13</sup> based on mutual decision making, <sup>30</sup> actual interactions tended to be pharmacist-led, didactic, paternalistic and framed as a monitoring exercise. <sup>31 33 39</sup> This type of approach results in patients with extensive disease experience having little scope to challenge the pharmacist <sup>31 32</sup> or for their potential expertise to be recognised. The way in which services such as the NMS were framed were reported to encourage pharmacist-led interactions characterized by expectations of admissions of non-adherence <sup>31 38</sup> and based on assumptions and stereotypes of patients that need "educating" about their medicines.

"...the pharmacist was explicitly 'monitoring' patient behaviours in terms of their understanding and use of medicines. Integral to this was an expectation that the patient should admit to 'nonadherence'..., this was often framed with some sense of morality, where being adherent is 'good' and being non-adherent 'bad'. (Lay and HP, NMS, Secondary, Waring et al., 2016)

Variations in interactions and relationships may occur as a result of differences in pharmacist experience, communication and interpersonal skills, understanding of the purpose of services <sup>29 31</sup> and stereotypes about patient need. <sup>13 38</sup>

#### Construct 3 – Socio-cultural, political and commercial drivers and restraints

In the UK, changes to the role of CP specifically in relation to LTC support have been mainly policy and service driven, with the option provided to participate in nationally commissioned services such as NMS, CMS, and MURs provided certain requirements are met. <sup>13 29 31</sup> Service delivery has required adaptation to new and extended roles and responsibilities, resulting in changes to both lay and professional

perceptions of the CP role and its profile.<sup>29 31 34</sup> It has been proposed that these changes are resulting in an extension of the "pharmacy gaze" by allowing pharmacists increasing focus on the health and lifestyle issues and the wider "life-world" of patients and that this has been instrumental in shaping perceptions of where the boundaries of roles and responsibilities of CP towards patients should lie.<sup>31</sup>

Changes in pharmacists' identities and roles in supporting people with LTCs are reported to be driven by corporate and policy visions and priorities for the modernisation of primary care.<sup>31</sup>

"...NMS as a politically-driven strategy for managing demand for GP services and in concert an opportunity for professional and business development for pharmacists, eg where the NMS is seen to attract additional funding. This rationality addresses wider socio-economic priorities and sees a convergence of policymakers' and the corporate interests creating a coercive influence not only on patients' but also on pharmacists' practices" (Lay and HP, NMS, secondary; Waring et al., 2016)

Increasingly competitive retail pharmacy environments have meant that organisational pressures to engage with MURs differ in nature according to the pharmacy type and organisation size. <sup>13 32 42</sup> Some accounts suggested that engagement with MURs in particular were often driven by "top down" pressure and financial incentives based on a quantity rather than quality-led approach.<sup>32 42</sup> This can challenge professional autonomy and adaptation <sup>32</sup> and may be incongruent with perceptions of and identification with a professional patient-centred driven role.

"The way I feel about being forced into doing MURs, you're just running through the motions, they [patients] don't have any real issues... and that undermines the service, as far as I'm concerned (CP, MUR, Primary: McDonald et al., 2010)

Extending support for the care of patients with LTCs outwith currently funded services was reported to be unlikely to occur without a change in the way pharmacy is incentivized to provide these services. <sup>13 41</sup> Changing the way UK pharmacists are remunerated was suggested as a potential way to increase the provision of lifestyle advice,<sup>13</sup> enable role extension in LTC management and integration with the wider care team<sup>32 33 38</sup> and change the priorities placed on dispensing.<sup>33</sup> Current commissioning arrangements were reported to be resulting in regional variation in the availability of services to support people with LTCs. <sup>36</sup>

"we do not have a commissioned service where we can do medicines use reviews at the patient's home. However, my colleagues in the neighbouring [area] do have it.. and it's shown to be a valuable service (HP, dementia, primary; Maidment et al., 2017)

Other socio-cultural influences included beliefs and expectations in relation to the busy commercial setting of the pharmacy, particularly if patients were uncertain about the terms under which they could approach pharmacists for advice. This may influence, for example, restricting the time and opportunity pharmacists have for interacting with patients, <sup>33</sup> the visibility of pharmacists, <sup>38 40</sup> patient expectations and perceptions about pharmacy "services", how long patients are prepared to wait, <sup>13</sup> their likelihood of approaching the pharmacist for advice, and whether they perceived that the environment was conducive to talking about private medical matters. <sup>30 38</sup> In the UK, there are nationally specified standards on patient consultation areas that pharmacies are required to fulfil in order to provide MUR services. Findings from one study highlighted that the availability of private consultation rooms within the pharmacy space is not necessarily equated with perceptions of, and interactions associated with, a traditional "clinical" environment. <sup>38</sup>

#### Construct 4 – Operationalisation of services and LTC support

Finally, lay and health professionals' understanding of and engagement with new CP services for people with LTCs can also be influenced by the way in which services are operationalised. The need to incorporate extended roles and services within busy workloads and the variation in knowledge, communication and interpersonal skills of CPs can result in threats to the fidelity to service specifications,<sup>36</sup> the fulfilment of policy aims<sup>39</sup> and confidence in delivery. <sup>28</sup> Some of the main perceived barriers to the implementation of existing and potential services to support people with LTCs were restricted capacity to integrate services into daily routines due primarily to pressures on staffing and time<sup>13 39 41 42</sup> and the commercial need to prioritise services and activities that generate revenue, such as dispensing, over activities such as self-care support, and collaborative care planning. <sup>32 33 38</sup> The organisational, administrative and remuneration processes of new services were perceived to cause additional burdens when capacity is restricted. <sup>34 39</sup>

*"It's difficult to be able to get the time to play more of a role in terms of long-term conditions"* (CP, LTC, primary; Ogunbayo et al., 2015)

There were differences in the reported motivation and ability to manage these barriers across different types of pharmacy organisations<sup>32 42</sup> and to integrate services into daily routines,<sup>29</sup> although this was

easier when there was more than one pharmacist or a larger support team in place. <sup>29 33</sup> The status of the employer is reported to influence the emphasis placed on relationships with patients <sup>13</sup> and relations with GPs were felt to be more likely for pharmacies co-located with GP surgeries.<sup>35</sup>

"the main difference [between the Independent workplaces and other pharmacies] is having a little talk with them about their medication . .offer extra advice to them so they feel like somebody actually cares ." (CP, CVD, primary: Morton et al., 2015)

The implementation of CP services was reported to be associated with complex logistical, co-ordination and communication issues across organisations.

"It's difficult when there's so many people involved in the care of one patient. There are us and the heart failure nurses, GPs and the primary care pharmacists. To coordinate all that and to get everybody saying the same thing, that's definitely.. not easy" (CP, Heart failure, primary; Lowrie et al., 2014)

Standardized formats of service specifications were seen to help support pharmacists in the provision of lifestyle advice and behaviour change techniques and increase confidence in delivery. <sup>28 33</sup> The delivery of NMS was described as at times being more pharmacist-dominated than intended, <sup>29</sup> although "routinisation" did not necessarily result in formulaic interactions <sup>32</sup> and modifications to NMS questions were reported to allow a more flexible and patient-friendly approach. <sup>31</sup>

The use of technology, such as telehealth, internet and mobile application technology, to facilitate selfcare was supported in principle, but not currently widely utilised and the availability of technology and technological expertise varied. <sup>29 32 33</sup> CPs perceived that this may be particularly valuable when working with younger age groups <sup>43</sup> and in supporting medication adherence for people with LTCs more widely. <sup>33</sup>

Wider public awareness campaigns and publicity are commonly suggested requirements to increase understanding and uptake of CP services and patient engagement with CP. National services such as MUR and NMS in particular were perceived to require a range of proactive engagement approaches to encourage patients to take part, due to a lack of public awareness and understanding of the services being offered. <sup>29 32 34</sup>

"I think the main thing is advertising the service, we have leaflets and things like that but somehow the service still doesn't appeal.. there will be a percentage of people who will see pharmacists as just dispensers" (CP, NMS, primary; Latif et al., 2016)

CPs were reported to be more confident in their traditional dispensing and medicines "expert" and "educator" roles and less so in relation to wider self-care support and collaborative care planning. It has been suggested that there is therefore a need for further training, particularly to improve understanding of the nature of treatment for specific conditions (such as dementia or coronary vascular disease), specific patient groups (such as young people), <sup>13 36 43</sup> and for addressing concerns in relation to complex needs, co-morbidities and skills in behaviour change. <sup>28</sup>

#### DISCUSSION

Analysis of qualitative findings from the papers included within this study suggests that the role of CP in facilitating the care of people with LTCs is complex, at times ambiguous and continually evolving in response to drivers from within and external to the profession. Variation in understandings and beliefs about the CP role and services exists both within and across stakeholder groups. Four key overarching constructs were identified: conceptualisation, disruption and adaptation; relationships, collaboration and integration; socio-cultural, political and commercial drivers and restraints; and operationalisation of services and LTC support. A theoretical framework is proposed which illustrates the overlap and relationships between these constructs and the influence of individual level factors within each of the stakeholder groups. This framework highlights how attitudes towards the role of the community pharmacist can both influence and be influenced by behaviour (i.e. service development, implementation, delivery and utilisation) and the socio-cultural environment in a dynamic way that is reflective of Bandura's behavioural theory of reciprocal determinism.<sup>44</sup> It is therefore important to acknowledge influences within and beyond the CP setting and the varying perspectives between stakeholder groups when developing and evaluating future services and the role of CP in supporting LTCs more widely. Failure to do so may result in a lack of patient or health professional engagement, sub-optimal improvement of health outcomes and/or CP not fulfilling its potential contribution to the demands on the wider health care system. The proposed framework can provide a structure to help facilitate the consideration of key perspectives, issues and drivers to role and service development and implementation. It can also aid our understanding of the contexts and mechanisms to be assessed when evaluating new initiatives, highlight knowledge gaps and shape future research priorities and approaches.

Findings suggest that over the last decade, the conceptualisation of the role of CP has been characterised by disruption to the "traditional dispensing role" and adaptation to change. Despite reports of positive attitudes, a culture amenable to change and a general willingness of CPs to support patients with LTCs, there remains an underlying ambiguity about the existing and potential value of the role of CP in this area, particularly from the perspective of patients. As the proposed framework illustrates, role development and conceptualisation is driven by conflicting and evolving demands from the wider socio-political, economic and cultural environment; interaction with patients and the wider health care system; and within CP itself. Variation in perceptions, beliefs, expectations and behaviour (such as public engagement with extended CP services or pharmacist willingness to deliver them) can result from an interaction between this dynamic overarching process and a range of factors that exist at the individual level. For example, pharmacy contracts and payment structures can have an important influence on perceptions of the CP role directly via the initiation and implementation of new services, but also indirectly via experience of service delivery. Other research studies using survey methods have also found that experience of extended CP services influences subsequent interactions with the pharmacist and plays a significant role in developing and changing lay perceptions of the value of CP in supporting patients with their LTCs.<sup>2021</sup> Attitudes towards CP do not necessarily relate to behaviour, <sup>21</sup> however, and service utilisation will depend not only on availability, awareness and satisfaction with CP services, but also on a range of other individual influences. These could include patients' illness beliefs and experience, existing self-management and coping skills, individual illness trajectories, treatment response and the availability and use of other support networks and services.<sup>45</sup>

From a pharmacist perspective, and as highlighted by research on the NMS in England,<sup>31</sup> the delivery of commissioned extended services allows an increasing focus on the wider "life-world" of patients which can in turn influence pharmacists' perceptions of their role. Although the value of adapting to a more patient-centered approach in supporting LTCs was often recognised, evidence suggests this is not always reflected in practice. The emphasis on the bi-directional relationships between the constructs within the proposed framework can help account for the seemingly conflicting finding that conceptualisation of the role can also be instrumental to the way in which services are operationalized; albeit shaped by other individual level and wider restraints and drivers. A previous study on the professional identity of pharmacists identified a range of elements associated with the role.<sup>46</sup> Although the "scientist" element was found to be the strongest, close association with a range of other elements was seen to reflect

flexibility and amenability to change.<sup>46</sup> Findings from the papers included in this synthesis suggest that, although perceptions of the role are continually evolving, the role of "educator/informer", specifically in relation to medicines, remains a commonly dominant representation. This tends to be associated with a more didactic and paternalistic approach to the delivery of services supporting adherence and self-care and, in many contexts, can be misaligned with the principles of more patient-centered models of care for LTCs and theoretical approaches to behaviour change. <sup>47 48</sup> A recent systematic review suggests that this issue is not only restricted to pharmacists but has also been identified within other healthcare professions.<sup>49</sup> Findings from a study evaluating a new pharmacy personalized care plan service for patients with LTCs, which was published after the literature review for this synthesis was completed, demonstrate that consultation skills training can help support pharmacists adopt a more patientcentered approach. <sup>50</sup> Uncertainty remained, however, over whether this approach was consistent with the CP professional role and pharmacists reported a lack of confidence in their ability to support the wide range of different health goals identified by patients. In line with findings from the papers included within this synthesis, adequate resources, capacity and the need for integration with the healthcare system were highlighted as key elements for successful service provision, despite positive attitudes towards the service.<sup>50</sup>

The need for quality integrated care is recognized more widely for supporting people with LTCs and new integrated models of care are currently being promoted and evaluated within the UK.<sup>12451</sup> The role of the pharmacist was found to be conceptualized by patients and carers in relation to those of other healthcare providers supporting their LTCs, in particular the GP. Integration with existing support structures provided by health professionals and lay or peer networks and concerns about potential duplication, traditional medical hierarchies and the commercial and healthcare policy environment in which CP is situated are therefore essential considerations. Successful inter-professional collaboration, however, depends on CP having a clearly delineated, recognized and valued contribution and place within the self-care support system in order to effectively engage with the wider multidisciplinary teams<sup>33</sup> and patients. There is longstanding literature on the influences on and impact of relationships between GPs and community pharmacists, <sup>52-55</sup> professional boundaries in relation to prescribing and clinical autonomy, <sup>52,56</sup> responsibilities, <sup>16</sup> power relationships and medical hierarchies. <sup>31</sup> Overcoming inter-professional barriers to collaboration and communication is important to ensure services provided within CP meet patient need and that new service configurations are successfully and cost-effectively disseminated, implemented and utilized.<sup>56</sup> A key challenge is ensuring confidence and trust in the CP

services by GPs and other healthcare providers as well as members of the public. <sup>57</sup> The need for GPs to understand and be more aware of CP expertise for successful collaborations to take place has been highlighted by others, <sup>58</sup> however, this study also highlights the importance of specifically distinguishing between GP beliefs about the value of specific contracted services being offered within CP (such as NMS, CMS, and MURs), GPs concerns about potential duplication, and their awareness and recognition of the expertise of the CP profession, the latter of which seems to be consistently viewed more positively. Potential overlap between services should therefore be explicitly addressed, ensuring that the contribution of CP is perceived and delivered as valued reinforcement with clear agreed boundaries of responsibility rather than duplication.

#### Strengths and weaknesses

The main strength of this meta-ethnography is that analysis was based on studies that focused on a range of LTCs, services and participants, all covering a wide geographical area within the UK. By their nature, published qualitative research findings include a representation of the authors' conceptualisations of their data based on themes or concepts perceived to be of most importance to them. Study findings are context specific and their value lies in the rich in-depth understandings and interpretations specific to each. Methodological arguments have been presented against the synthesis of qualitative research <sup>25</sup>, however, Britten, et al. <sup>22</sup> suggest that "interpretative methods such as meta-ethnography can provide a means to generalise findings that "do not supplant the detailed findings of individual studies, but add to them" and that "transferability of shared meanings and generative mechanisms is possible and indeed useful". This meta-ethnography cannot, however, account for data that was not included within the published version of the findings.

A range of different qualitative methods were used within and across studies, including, focus groups, face to face interviews, telephone interviews and ethnographic observation. This can help to strengthen confidence in the findings by providing an opportunity for method triangulation. The potential for bias and the impact of "stigma" and social desirability on individual accounts should be acknowledged, as all the findings relate to perceptions and "public" accounts of beliefs and self-care behaviours. Although a range of sampling methods were employed across studies, it is also likely that there may have been some biases in sampling, with recruitment to both the services being evaluated, and the studies evaluating them, biased to those who may have more positive views towards the services, CP or different support needs. Reliability and transferability of our findings depend in part on the reliability

and quality of the research synthesised and is limited by the data that was available for inclusion. Further research would be needed to ascertain the extent to which the findings and conceptual framework presented are transferable to other settings and healthcare systems.

Current healthcare practice, policy and the political landscape is changing rapidly. Although studies included were published within the last 10 years to reflect more recent developments, the data on which these papers were based were collected between 2002 and 2014. It was not possible to analyse findings based on more recent changes in attitudes and perceptions or on recent service developments within community pharmaceutical practice.

Only one paper included the perceptions of carers and specialist nurses and two the perspectives of GPs, despite the key role they play in supporting patients with a range of LTCs and the importance of the relationship between the CP and the GP featuring strongly in many of the accounts. Research on methods or interventions to help improve collaboration and interdisciplinary working between CP and GPs has been suggested<sup>41</sup> and this would also apply to other healthcare providers. Further research is also needed to ascertain the experiences, opinions and beliefs of a wider range of patients living with LTCs, in particular those who are non-service (NMS, MUR or CMS) users <sup>30</sup> or from pharmacies who do not wish to offer such services. <sup>29</sup>

Further evidence on the potential value of integration with LTC support networks and the use of technologies in self-care support for people with LTCs within CP could also be valuable for developing improved patient-centred services. <sup>33</sup> Research on the implementation, diffusion or translation of innovations into healthcare settings within the CP setting is reported to be largely under-explored. <sup>29</sup> Existing theoretical work and conceptual models on the diffusion, dissemination and implementation of innovation in health service delivery <sup>59, 60</sup> may be valuable in this regard, particularly in light of a policy focus on new integrated models of care to support personalized care.<sup>1250</sup>

#### CONCLUSIONS

The role of CP in the UK is varied, complex, at times ambiguous and continually evolving in response to drivers from both within and external to the profession. Despite a certain level of optimism for an extended professional role in CP to help to facilitate the care of people with LTCs, there is variation

within and across CP, lay and other health professional perspectives on how this might meet the needs of patients and contribute to reducing demand on the healthcare system.

The proposed conceptual framework presented in this paper helps to explain the dynamic processes and socio-cultural influences involved in how the role of CP is perceived. It outlines the range of influences within and beyond the CP setting that may benefit from consideration when extending the role of CP and implementing new models of care for people with LTCs.

Effective service implementation and delivery, successful engagement with patients and positive health outcomes are more likely if the LTC support provided is patient-centred, compatible with the perceived and actual capacity and skills available within CP and fully integrated within existing healthcare and lay support networks. One challenge in particular is the delineation of the role of the community pharmacist within the wider NHS healthcare system. This is complicated by unclear professional boundaries, traditional perceptions of medical hierarchies and the perceived potential for conflict from commercial and other external pressures. Integration and potential overlap with other services should therefore be explicitly addressed, ensuring that the latter is perceived and delivered as valuable reinforcement rather than duplication.

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Inclusion Criteria	Exclusion Criteria
<b>Population:</b> Community pharmacists; patients and carers either diagnosed with, or caring for, a person with a long-term condition; health professionals	
<b>Study aims include the identification of</b> : health professional and lay perspectives of the existing or potential role of community pharmacists or community pharmacy services in facilitating care for people with long-term conditions, including lifestyle and self-management.	<b>Study aims focus on:</b> primary prevention, screening and/or other public health issues; education research; adherence behaviour; medicines use or dispensing; acute conditions or settings; inter- professional barriers; quality of life; and self-care or self-management support not specific to community pharmacy.
Language: English	
Country: UK	
Year limits: 2007-2017	
Type of Publication: Peer reviewed	Non-peer reviewed or grey literature
<b>Study type</b> : Qualitative methods including interviews, focus groups or consensus methods or mixed methods paper with a distinct qualitative component	Open-ended questionnaire data or quantitative methods

#### Table 1 – Inclusion and exclusion criteria

# Revised Jan 18 RSAP\_2017\_285 - ACCEPTED MANUSCRIPT Table 2 – Summary of papers including health professional perspectives in relation to the role of CP in facilitating care for long-term

#### conditions in the UK.

Author	Lucas and Blenkinsopp (2015)	Latif et al. (2016)	Waring et al. (2016)	Wells et al. (2014)	Ogunbayo et al. (2015)	Morton et al. (2015)
LTC or Community Pharmacy Service	NMS	NMS	NMS	NMS (pre-implementation)	General views on providing self- care support for patients with LTCs	Lifestyle advice in CVD
Participants	CPs	CPs and GPs	CPs and patients	CPs and Superintendent Pharmacists	CPs	CPs
Year data collected	2012	2012-2013	2012-2013	2011	2013	unknown
Methods	Telephone interviews	Observation and interviews	Ethnographic observation and interviews	Focus groups and interviews	Interviews	Interviews (face to face and telephone)
Study Aims	To explore CP experiences and perceptions of NMS within one area of the UK.	To investigate the NMS implementation process how the NMS is being translated into the CP practice setting and if and how the NMS service and pharmacy practice are transformed.	To develop a Foucauldian analysis of the changing forms of power brought about by extended CP roles with reference to the introduction of the NMS.	To explore the views of pharms and superintendent pharms before implementation of NMS to identify facilitators or barriers to NMS implementation.	To explore CPs contribution to self- care support in the management of LTCs.	To explore CPs experiences and perceptions of providing lifestyle advice for patients with CVD.
Sampling and recruitment	Purposive sampling (deprivation, pharmacy types) used to identify 14 interviews.	Ethnographic observation; workplace interviews with 47 CPs and 11 GPs. Pharmacies purposively sampled from those included within larger RCT/evaluation of the service. CPs purposively sampled by pharmacy type, geographical area and area of social deprivation.	Purposive sampling of patients accounting for age gender ethnicity and health condition for ethnographic observation and interviews with 27 CPs.	15 pharmacists over 4 focus groups and 5 superintendent pharmacist interviews. Purposively sampled by employee and locum pharmacist roles and by pharmacy type.	Purposive maximal variation sampling (pharmacy types, location, pharmacist demographics) and snowballing. 12 CPs from England and 12 from Scotland recruited via LPCs, random direct contact.	15 CP interviews recruited from advertising at a meeting for local pharmacists and contacting a randomly selected list of CPs and snowballing. Purposively sampled various pharmacy types and pharmacist experiences.
Analytic approach	Thematic analysis	Thematic analysis informed by Damschroders' consolidated framework for implementation research	Interpretative grounded approach	Thematic analysis	Interpretative Phenomenological Analysis	Framework Approach
Location	England (West Yorkshire)	England (London, Midlands, South Yorkshire)	England (London, Midlands, South Yorkshire)	England (Nottingham)	England (Manchester) and Scotland (Tayside, Glasgow and Clyde)	England (East and West midlands)
Key Findings	Pharmacists gave mixed responses to operationalisation ranging from positive opportunities for improving adherence and enhances of practice to difficulties in its administration. Pharmacists generally welcomed opportunities to utilise their professional expertise to achieve better patient engagement and for the development of pharmacy practice. Different levels of collaborative working with GPs and nurses were reported. NMS was an opportunity for collaboration however others reported a lack of feedback and recognition of their role. Perceived need for better publicity.	NMS workload implemented and absorbed into daily routines alongside existing responsibilities with no extra resources. Pharmacists adapted NMS to facilitate delivery according to their understanding of what they believe should be achieved. Despite pharmacists holding positive views about the value of the NMS, not all were convinced of its perceived benefits and necessity. GPs were generally supportive of NMS, but were unaware of the service or potential benefits. Poorly developed GP-CP relationships impeded implementation. Community pharmacy workflow, infrastructure and public and professional relationships all affect NMS implementation.	Patient and pharmacists subjectivities are transformed as pharmacists seek to survey medicine use diagnose non- adherence to prescribed medicines and provide education to promote behaviour change. Extended roles in medicines management and patient education expand the pharmacist gaze to further aspects of patient health and lifestyle and more significantly establish a form of pastoral power as pharmacists become responsible for shaping patients self-regulating subjectivities. Pharmacists are themselves enrolled within a new governing regime where their identities are conditioned by corporate and policy rationalities for the modernisation of primary care.	Pharmacists and SPs were positive about NMS and identified potential benefits for patients and pharmacy profession. Awareness of service was high, however there was confusion over aims and overlap with MURs. Pharmacists' positive attitudes, similarity to current practice and the self-accreditation procedure as potential facilitators to service implementation. Barriers include a perceived lack of interest and awareness by GPs of the service and the payment structure.	Pharmacists' views of self-care support did not reflect their conceptual understanding of self- care and was described as providing information and advice rather than active support. Operationalization was found to be medicines focused opportunistic and dependent on the services they provided rather than being patient- centred and proactive. Barriers were described as priority of dispensing, structure of pharmacy contract, lack of incentives and patient expectations and lack of awareness of community pharmacy's role.	Pharmacists categorise patients according to their perceptions of the patients' ability to benefit from advice. Many barriers to providing lifestyle advice identified mainly underpinned by professional identity and role conflict. Confidence to provide lifestyle advice varied with pharmacists more comfortable when this was in conjunction with conversations about medicines. Some felt this was an integral part of their role whilst others questioned whether pharmacists should do this at all, particularly if not remunerated.

# Revised Jan 18 RSAP\_2017\_285 - ACCEPTED MANUSCRIPT Table 2 (cont'd) – Summary of papers including health professional perspectives in relation to the role of CP in facilitating care for long-term

#### conditions in the UK.

Author	Lowrie et al. (2014)	Maidment et al. (2016)	Maidment et al. (2017)	Gray et al. (2016)	Bradley et al. (2008)	Macdonald et al. (2010)
LTC or Community Pharmacy Service	HF service based on a theoretical model of behaviour change.	General views on role of CP in limiting antipsychotic use in dementia.	Dementia (views on potential role of community pharmacists in self- care support)	Perceived and actual roles of pharmacists in care of young people with chronic illness (juvenile arthritis)	MUR	MUR
Participants	CPs and patients	CPs	CPs, patients GPs, nurses, social care health professionals	CPS, but also hospital pharmacists, rheumatology team	Mixed CPs and PCOs	CPs
Year data collected	2006	2013	Not stated	2012-2013	2006	2007-2008
Methods	Focus groups and telephone interviews	Focus groups	Face to face interviews	Mixed methods incorporating pharmacist focus groups and stakeholder telephone interviews	Mixed-methods, incorporating case study interviews (face to face and telephone)	Interviews (mainly telephone, some face to face)
Study Aims	To explore patient and CP views of a CP based HF service as part of an evaluation of the service.	To examine the current role of CPs with respect to the use of antipsychotics in behavioural and psychological symptoms of dementia (BPSD).	To describe key challenges in relation to medication issues experienced by people with dementia and their informal carers and the potential role of CP.	To explore the perceived and potential roles of pharmacists in the care of young people with chronic illness though the exemplar of juvenile arthritis from the perspectives of UK community and hospital pharmacists rheumatology, health professionals, and health service commissioners.	Aims of interviews: to explore and elucidate stakeholders' views on the approach to and experience of the commissioning and provision of CP services, with a particular focus on MURs.	To use MURs to explore changes in professional status in English community pharmacy.
Sampling and recruitment	2 Focus groups with 10 CPs; Telephone interviews with 65 service users sampled from the first 200 service users to receive the service. Respondents were 63% male; 40% from deprived areas.	Purposive and snowball sampling recruited via local pharmaceutical networks resulted in 22 CPs attending 3 focus groups.	11 carers, 4 people with dementia, 4 GPs, 5 nurses, 3 social care Professionals, 4 CPs) recruited from Alzheimer's Society, Dementia UK, GP surgeries, professional networks and local dementia support groups.	Purposive maximum diversity sampling recruiting from professional bodies, educational organisations and advertising. 4 Focus groups and 15 telephone interviews.	Purposive sample of stakeholders involved in commissioning and providing CP services, including:1 commissioner,1 local pharmaceutical committee representative and 3 CPs for each of 10 case study sites.	Opportunistic snowballing sampling 49 CPs.
Analytic approach	Framework Analysis - Normalisation process theory used to conceptualise and interpret responses	Thematic analysis	Framework Analysis	Directed content analysis (middle order thematic approach)	Thematic Analysis	Open coding and constant comparison
Location	Scotland	England	England (West Midlands, South, Yorkshire and North East)	England, Scotland and Wales	England (various locations)	England (North West/Yorkshire and Humber)
Key Findings	Pharmacists were confident in delivering service and highlighted valued aspects including the structured consultation and repeated contacts with patients enabling the opportunity to improve self- care and medicines adherence. Discussing co-morbidities other than HF and persuading patients to modify behaviour was challenging.	Politics and medical hierarchy creates communication barriers. An improvement in communication between CPs and HPs especially GPs must occur in order for CPs to assist in limiting the use of antipsychotics in people with dementia. Extra training is required for CPs to work with patients with dementia. Community pharmacists question the extent to which they can contribute in this area. Resources and remit impact effectiveness of CP.	The process of medication management could be improved by coordinated and ongoing support from health and social care professionals focused on the informal carer. Medication reviews conducted in the home environment could be helpful. Community pharmacists could have an enhanced role but would need to work within a more multidisciplinary environment outside the pharmacy.	High priority roles for pharmacists were developing generic health care skills among young people. Transferring information effectively across care interfaces, building trusting relationships with young people, helping young people to find credible online information, and the need to develop specialist expertise. Challenges included parent collecting prescription refills, and reduced opportunities to engage, and pharmacist isolation from the wider heath care team.	Organisational pressure within multiple pharmacies is driving forward MUR activity in some primary care organisations. There is a lack of communication between CPs and GPs.	Responses to reforms are not necessarily in accordance with either national policy goals or enhancement of professional status. Debates about professional status and role extension have often focused on health professions' subordination to medicine. This paper highlights the importance and interplay of other factors which help explain the inability to capitalise fully on the potential contribution to professional status, which reforms to extend professional roles afford.

#### Revised Jan 18 RSAP\_2017\_285 - ACCEPTED MANUSCRIPT Table 3 - Summary of papers including lay perspectives in relation to the role of CP in facilitating care for long-term conditions in the UK

Author	Lowrie et al. (2014)	Twigg et al. (2013)	Bissell et al. (2008)	Maidment et al. (2017)	Ogunbayo et al. (2017)	Latif et al. (2013)	van den Berg and Donyai (2014)	Waring et al. (2016)
				(2017)	(2017)		Dollyal (2014)	
LTC or service	Heart Failure	Diabetes	CHD/MUR	Dementia	Multiple LTCS (Asthma, COPD, CVD and diabetes)	MUR	MUR	NMS
Participants	Patients and CPs	Patients	Patients	Patients, Carers, CPs GPs, Nurses, Social care health Professionals	Patients	Patients	Patients	Patients and CPs
Year data collected	2006	2011	2002-2004	Not stated	2013-2014	2008-2009	2009-2010	2012-2013
Methods	Focus groups and telephone interviews	Focus groups	Interviews	Face to face interviews	Face to face interviews	Ethnographic observation and interviews	Observations and interviews	Ethnographic observations and interviews
Aims of Study	To explore patient and CP views of a CP based HF service as part of an evaluation of the service.	To understand the norms Type 2 diabetes patients when visiting pharmacy support staff and the pharmacist.	To describe patients' experiences of a medicines management service provided by CPs for people with coronary heart disease.	To describe key challenges in relation to medication issues experienced by people with dementia and their informal carers and the potential role of CP.	To gain deeper insight into patients' self-care behaviours in relation to their use of community pharmacy for self-care support.	To describe patients' perspectives of the MUR service and their understanding of the value that they derive from it.	To determine how patients perceive and evaluate the MUR service in order to identify satisfaction criteria.	To develop a Foucauldian analysis of the changing forms of power brought about by extended CP roles with reference to the introduction of the NMS in the English NHS.
Service details	Heart Failure service based on a theoretical model of behaviour change involving repeated consultations. Referral pathways integrated into health care system.	Not service specific but focus groups asking re: expectations.	CP-led medicines management service for CHD patients (MUR).	Not service specific but views on potential role of community pharmacists in self-care support.	Not service specific but general views on use of Community Pharmacy for self-care support in LTCs.	MUR - no information about the LTCs of interviewees.	MUR – no information about the LTCs of interviewees.	Part of national evaluation of NMS - range of LTCs.
Sampling and recruitment	2 Focus groups with 10 CPs; Telephone interviews with 65 service users sampled from the first 200 service users to receive the service. Respondents were 63% male; 40% from deprived areas. Referred by GP, specialist or specialist pharmacist, many of whom had agreed to be referred.	44 patients presenting at a pharmacy for T2D medication (age range 41- 80 although most more elderly) purposively sampled based on gender, age, number of medications prescribed, length of time since diagnosis.	49 patients recruited to RCT/service via GPs. A purposive maximal variation sampling approach was used.	11 carers, 4 people with dementia, 4 GPs, 5 nurses, 3 social care Professionals and 4 CPs recruited from Alzheimer's Society, Dementia UK, GP surgeries, professional networks and local dementia support groups.	Convenience sampling of 15 patients in England and 9 in Scotland. Recruited to study by GPs and pharmacies.	Unstructured ethnographic observation of 54 patient- pharmacist MUR consultations. Convenience sample of 34 patient interviews. Identified and invited by CPs as per usual practice.	7 MUR observations and interviews with patients. 15 face to face interviews with patients who had received a MUR within last 6 months. All recruited via large multiple pharmacy in specific area.	19 patients purposively sampled (age gender, ethnicity and health condition) and 27 CPs.
Analytic approach	Framework Analysis - Normalisation process theory used to conceptualise and interpret responses	Thematic analysis	Interpretative analysis	Framework Analysis	Descriptive phenomenology	Thematic analysis	Thematic analysis using framework approach using Donabedian's structure-process- outcome approach	Interpretative grounded approach
Location	Scotland	England (Norfolk)	England	England (West Midlands, South, Yorkshire and North East)	England and Scotland	England (Midlands)	England (Surrey)	England (London, Midlands and South Yorkshire)
Key Findings	Patients were comfortable discussing symptoms and medicines with pharmacists. They identified pharmacists as fulfilling roles that were needed but not currently addressed. They reported the service helped them to enact HF medicines and HF self-care management strategies.	Two themes: place of the pharmacy in the wider primary care team and pharmacy as a health care destination. Participants with T2 diabetes identified a role for pharmacists in their care linked to their perceived expertise on medicines. The extent to which they would engage with the pharmacists depends on the quality of the relationship with their GP or practice nurse.	Findings suggest that although patients cautiously welcomed the opportunity to consult with a pharmacist about their medicines, they had reservations about them making recommendations about treatment, and many still regarded the doctor as the health professional 'in charge' of their medicines.	The process of medication management could be improved by coordinated and ongoing support from health and social care professionals focused on the informal carer and medication reviews conducted in the home environment. Community pharmacists could have an enhanced role but would need to work within a more multidisciplinary environment outside the pharmacy.	Participants' use of and identified need for CP as a resource for self-care support of LTCs was limited and primarily focussed on medicine supply. Low awareness and visibility of CP potential roles and capability. CP needs to rethink how interventions are designed and marketed; incorporation of patients' perspectives and collaboration with others, particularly GPs could prove beneficial.	All patients reported feeling comfortable speaking with the pharmacists who they saw as a knowledgeable expert on medicines. They appreciated time spent with them during consultations. MURs provide patients with reassurance that they are doing the right thing. Patients provided mainly positive but ambivalent accounts of the purpose of the MUR. Evidence that MURs are fulfilling their formal policy aims and intentions was limited. The patient perspective needs to be more fully considered.	5 themes linked to patient satisfaction were identified: relationships with HPs; attitudes towards HPs; Experience of health, healthCare and medicines; views of the service; logistics of the services.	Patient and pharmacists subjectivities are transformed as pharmacists seek to survey medicine use, diagnose non- adherence to prescribed medicines and provide education to promote behaviour change. Extended roles in medicines management and patient education expand the pharmacist gaze to further aspects of patient health and lifestyle and more significantly establish a form of pastoral power as pharmacists become responsible for shaping patients self-regulating subjectivities.

### Table 4 – Development of final key constructs from primary data and secondary concepts

# EXAMPLE 1 - Key Construct 3: Socio-cultural, political and commercial drivers and restraints

Examples of Primary data	Examples of Secondary concepts	Examples of
		Tertiary concepts
"[multiples] have got head offices telling them off, ringing them up, shouting at them to do MURs and come hell and high water they're doing MURs Independents on the other hand are opting out, burying their head in the sand, not doing it, seeing it as not part of their priority." (PCO representative, Site	The interview findings suggest an emerging split in the way multiple and independent pharmacies operationalised MURs. Strong concerns were expressed by interviewees at five of the case study sites that multiple pharmacies were pressurizing employee pharmacists to maximise MUR activity Some interviewees stated that MURs were time consuming, particularly independent pharmacists, several of whom had undertaken the accreditation but found it difficult to fit MURs into their daily activity. (Bradley and al, 2008) Our data suggest that the formalisation and incentivisation of MURs is leading to a	Commercial and organisational pressures influence engagement and interaction with patients
E) HP, MUR (Bradley and al, 2008) I have to deliver 400 MURs. No doubt about it. If I'm short by a hundred, then I'll be in trouble. (ID 23, salaried, multiple) HP, MUR (McDonald et al., 2010)	distortion in the provision of advice to patients, with pharmacists under pressure to offer MURs to patients, based on the commercial needs of the pharmacy rather than the patient. Furthermore, the clear link between the MUR and financial rewards makes some pharmacists uncomfortable, and may detract from the potential of MURs to raise professional status, by highlighting commercial, as opposed to patient, interests. (McDonald et al., 2010)	
"if you are stopping a heart attack then they're not going to be taking any medicines and that's ultimately putting yourself out of business so it's not in your interests to keep people healthy as a pharmacist at the moment . what other profession does something to stop their future	Many pharmacists described balancing multiple roles in a time limited environment which placed them under pressure to meet targets and provide a quick service. This appeared to leave some pharmacists resigned to not being able to offer patients advice. (Morton et al., 2015)	
payments?" IndepCP1(23yrs). HP, CVD (Morton et al., 2015)		
". you're providing the [lifestyle] advice. erm and you're getting no monetary reward for it. so most pharmacists will think oh I can't be bothered to be giving that advice, when there's no value to it for me". MultiCP6(1yr) HP, CVD (Morton et al., 2015)	A final more implicit rationality sees the NMS as a politically-driven strategy for managing demand for GP services, and in concert, an opportunity for professional and business development for pharmacists, e.g. where NMS patients attract additional funding. This rationality addresses wider socio-economic priorities, and sees a convergence of policymakers' and the corporate interests creating a coercive influence not only on patients', but also on pharmacists' practices. (Waring et al., 2016) UK pharmacists' payment structure, that remunerates pharmacists directly per	Changes in the role of the pharmacist and service implementation are mainly driven by policy and contract changes
"If you were reimbursed more appropriately for patients who take a lot more time to be dealt with. (NE4)" HP, Dementia (Maidment et al., 2016)	prescription item dispensed but provides no remuneration for lifestyle advice may reinforce beliefs that providing lifestyle advice is not an important or valued part of the pharmacists' professional role The pharmacist describes an inherent conflict between their role as a health professional with a responsibility to promote health through giving patients lifestyle advice, and their business employee role which focuses on financial return, which giving lifestyle advice does not currently provide. (Morton et al., 2015)	
	The idea of introducing another responsibility into this role raises challenges, not least with respect to community pharmacists' professional identity, competency and stretched resources. Furthermore, in the absence of an incentive for community pharmacists to take on additional work, it is unlikely that this role will develop". (Maidment et al., 2016)	
'This is building on the MUR's service that already exists, so.the expectation will be that this is the sort of thing you do.' P9 (Female, large multiple, age 41–50 yrs) HP, MUR (Wells et al., 2014)	This cultural change within the profession [introduction of MURs] was cited as the main reason for the slow uptake of MURs with the attitudes of individual pharmacists determining the speed of service implementation. Participants thought that the [resulting] change in how pharmacists perceived their job role would enable quicker uptake of any new service introduced. (Wells et al., 2014)	Wider socio-cultural influences include the acceptance of change within the pharmacy profession as well as public perceptions and awareness
	Viewing all of these features of both the pharmacy and pharmacist, together, highlights many changes the community pharmacist and the wider healthcare team will need to make if patients with diabetes, or others with chronic conditions, are going to confidently engage effectively with new pharmacy services and see the pharmacist as a credible healthcare professional. This may involve changing the perception of the pharmacist by patients but also, and possibly more importantly, changing the way pharmacists work and are paid by the NHS. (Twigg et al., 2013)	

	Health Professional Perspectives	Lay Perspectives
Individual level	<ul> <li>Experience, knowledge, skills and training</li> <li>Self-efficacy and uncertainty</li> <li>Perceived understanding and value of CP service to patients with LTCs</li> <li>Conceptualisation of the wider role of CP</li> </ul>	<ul> <li>Illness perceptions, treatment beliefs and preferences</li> <li>Disease factors, existing knowledge and experience of self-care ("expert patient") and CP services</li> <li>Existing support and perceived need</li> <li>Expectations, acceptance and awareness of services and the role of the pharmacist</li> </ul>
Community Pharmacy Setting	<ul> <li>Organisational cultures, resources, structures and management and commercial pressures</li> <li>Physical locations and spaces</li> <li>Role of organisational processes and operationalization of services</li> </ul>	<ul> <li>Physical locations, time and spaces</li> <li>Perceived visibility and approachability of the pharmacist</li> <li>Existing relationships and familiarity with the pharmacist</li> <li>Knowledge and trust in skills and competence of pharmacists</li> </ul>
Local relationships and health care economies	<ul> <li>Integration and collaboration with GPs and other HPs</li> <li>Perceptions of role within wider health care team</li> </ul>	<ul> <li>Use of CP services validated by usual or trusted health provider</li> <li>Satisfaction with existing relationships with GP or other health providers and accessibility of support and services</li> <li>Perceptions and experience of "joined up" care and other local LTC services</li> <li>Perceived need for pharmacist to "validate/sanction" use of GP time</li> </ul>
Wider health Care Context	<ul> <li>Policy and political context, including contractual and financial incentives</li> <li>Public and patient awareness and perceptions of the role of CP within the wider health care system</li> </ul>	<ul> <li>Awareness, perceptions and expectations of the role of CP in relation to traditional care roles and other health care providers</li> <li>Awareness, expectations and experience of other sources of self- care information and support</li> </ul>
Socio-cultural Context	<ul> <li>Perceptions of medical hierarchies, power dynamics, labour divisions and boundaries of responsibility</li> </ul>	<ul> <li>Perceptions of medical hierarchies, power dynamics, labour divisions and boundaries of responsibilities</li> <li>Community Support structures for LTCs; lay referral and support networks</li> </ul>

## Table 5– Influences on health professional and lay perspectives



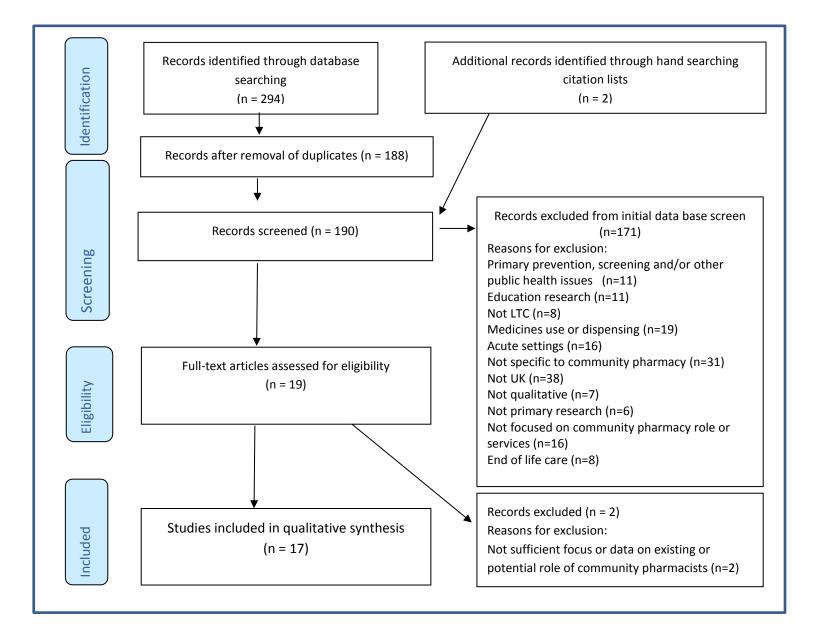


Figure 2 - Understanding perceptions of the role of community pharmacy in facilitating care for people with LTCs: relationships between constructs and dynamic nature of process.

