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Citation: Breen L, Garvey O, Mosan G, Matthias O and Sowter J (2017) Do we need to be Sustainable? An examination of purpose and intention behind Sustainability practice in Community Pharmacies in the National Health Service (UK). British Academy of Management Conference, Warwick, UK, September 2017.

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Do we need to be Sustainable? An examination of purpose and intention behind Sustainability practice in Community Pharmacies in the National Health Service (UK).

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Abstract

The National Health Service (NHS) Five Year Forward View in 2014 issued a grave warning that if healthcare demand in the UK continued to grow as its current rate, and efficiency or funding changes were not instigated there could be a mismatch between the service (in terms of resource provision) and patients of up to £30 billion a year by 2020/21. The report asserted that in order to “*sustain a comprehensive high-quality NHS; action will be needed on all three fronts – demand, efficiency and funding*” (2014:5). Based on this escalating issue, and with a focus on the expanded and value-added role of Community Pharmacists, this study chooses to focus on this service operation in light of the pressures as highlighted above by examining what Sustainability means and how it is applied in Community Pharmacy as a service provider in the NHS (UK).

Track: 16 OLSCM

Word count: 5968

Keywords: Sustainability, Purpose, Intention, Community Pharmacy, National Health Service

Introduction

The NHS as a large service provider has a long and well-published history of improvement and efficiency initiatives in order to be sustainable, respond to changes in demand and environmental influences. NHS Pharmacy has been impacted by all of these initiatives, examples of which include: Clinical Governance (1999); Quality Innovation Productivity and Performance (2010); NHS Five Year Forward View (2014) and more recently the Lord Carter Review focusing on service variations (2016) and Community Pharmacy funding cuts (2016). There has been a wealth of study conducted on improvement in healthcare operations over the past decades (Johnson, 2008; Antony, 2007; Edmondson, 2004) and this is still the case today (Zoutman and Ford, 2017; Matthias and Brown, 2016; Mura et al, 2016; Abdallah, 2014). As a publicly funded body the NHS (UK) is monitored and accountable for all activity (Appleby, 2016; NHS Confederation, 2016; Parliament UK, 2010), and much research has been undertaken reviewing its ability to manage its operations and its competency in doing so (Gov.Uk, 2016).

It is clear from the above that there is an urgent pressure on the NHS to strategically manage its service and resource allocation to continue to offer the quality of service that it was designed to, since its inception in 1948. That said, there is a constant focus on how to do this and how to offer a sustainable service that will last the test of time. Community Pharmacy as a service provider within the NHS is the face of pharmacy with direct patient contact. In recent years there has been increased recognition of the economic contribution, value-add and expertise of the staff in community pharmacy. As reported by Price Waterhouse Coopers (2016) *“community pharmacies contributed a net value of £3 billion to the NHS, public sector, patients and wider society in England in 2015 through just 12 services, with a further £1.9 billion expected to accrue over the next 20 years”*. However changes to the funding allocation have taken place since the delivery of this output (September 2016) so can this contribution be sustained in light of this? The aim of this study is to examine what Sustainability means and how it is applied in Community Pharmacy as a service provider in the NHS (UK).

Community Pharmacy in the NHS UK

Community Pharmacy (UK) like many facets of the NHS (UK) has been directly and indirectly influenced by current governmental agendas as reflected in key documentation such as A) Community Pharmacy funding cuts (direct); B) Sustainability and Transformation Plans (direct), C) Lord Carter Review (indirect) and D) Other issues within the pharmaceutical supply chain e.g. medicines availability and integrity (direct). These have all shaped the service provision that we have today and aim to deliver in the future.

A) On 20th October 2016 the Government imposed a two-year funding package on community pharmacy, with a £113 million reduction in funding in 2016/17. According to the Pharmaceutical Services Negotiating Committee (2017) this will take total funding to £2.687 billion for 2016/17. This is a reduction of 4% compared with 2015/16, but it will mean that contractors will see their funding for December 2016 to March 2017 fall by an average of 12% compared with 2015/16 levels. This will be followed by a reduction in 2017/18 to £2.592 billion for the financial year, which will see funding levels from April 2017 drop by around 7.5% compared with 2015/16 levels (Pharmaceutical Services Negotiating Committee, 2017).

B) The Sustainability and Transformation Plans (STPs) were initially set out in the NHS Shared Planning Guidance (2016) and the support implementation of the Five Year Forward View (NHS England, 2014). The aim of the STPs is to focus on service integration across primary and secondary healthcare boundaries to achieve key improvement targets (Department of Health, 2015). Community Pharmacy and Pharmacists based within General Practice can contribute directly to patient care in the community and buffer demand on secondary care/hospital service provision (which is bowing under ever increasing demand).

C) The Lord Carter Review (2016) was published in February 2016 as an independent review for the Department of Health (Gov.uk, 2016). The review was entitled “Operational productivity and performance in English NHS acute hospitals: Unwarranted variations”. According to Carter “*the biggest challenge for the NHS in 2016 is to deliver the changes needed to achieve the efficiency and productivity improvements required by 2020*” (Gov.uk, 4:2016). Efficiencies in service provision within secondary care/hospital can push service provision into the primary care/community sector which can work as long as resources follow this. Hospital pharmacy will be under the same scrutiny in their delivery to Hospital Pharmacy Transformation Plans (HPTPs) as any other hospital unit (to be deployed in April 2017 and completed 2020). Close dialogue between hospital and community/GP Pharmacists can determine the best course of action in light of developments with both A), B) and C).

D) Ongoing challenges to the integrity of products and their safe management within the sector have also promoted this e.g. a recent study (February 2017) undertaken by Imperial College London found that antibiotics are illegally available without a prescription on 45 per cent of the 20 online pharmacy websites surveyed (www.pharm, 2017). Critical shortages of medicines available within the UK has also been caused by the export sales of UK products abroad (Hough, 2010) and by the lack of integrated data across Europe for strategic stock management and capacity planning (Waldron, 2013).

In response to the growing austerity measures within this part of the NHS, the role of community pharmacy and indeed the professionals within keeps progressing, fulfilling a need within society to offer extended service provision within primary care. The aim theoretically is to reduce the volume of patients entering hospital care through the provision of services closer to home for patient ease and convenience. This is also because trained pharmacy staff are more than capable of delivering more within their specialist role.

The pharmacist as defined by their professional body, the Royal Pharmaceutical Society is “*Pharmacists are key players in the future of healthcare across the UK..... they have greater expertise in medicines than any other health professional*” (Royal Pharmaceutical Society, 2013). This view has been reinforced in other studies highlighting the transferrable skill set held by pharmacists (Yusuf and Sadar, 2011; NSCNI, 2015) and their value in new and challenging roles (Richardson and Pollock, 2010). The role of community pharmacy has become more active and the need to more effectively utilise this service has become heavily advertised and reinforced by legislation such as the NHS Five Year Forward View (NHS England, 2014).

Community Pharmacy in the NHS (UK) works at the frontline of healthcare in cities, towns and villages across Great Britain. Community Pharmacists work from their own pharmacies or out of local healthcare centres and doctor's surgeries; assessing patient conditions, making decisions about appropriate medicines regimes, dispensing medicines and offering healthcare advice (Royal Pharmaceutical Society, 2017). Community Pharmacies offer complementary and supplementary services to hospital pharmacies and General Practitioner surgeries. The role of the pharmacist has significantly changed over recent years to allow them to use their expert knowledge of medicines to support patient's health and focus on key areas such as long term conditions (Pharmacists with a Special Interest (PhwSI). This has allowed for the development of new roles such as pharmacists in Accident and Emergency (Royal Pharmaceutical Society, 2014) and in General Practice. Community Pharmacy staff are also been called upon to provide intelligence to design professional education programmes, IT developments, Continuing Professional Development (CPD), and service developments such as pharmacist prescribing (Pharmaceutical Services Negotiating Committee, 2017).

Exploring the concept that is Sustainability

As a result of the expansion in the role of Community Pharmacists and the continued emphasis on the delivery of a sustainable service in the face of straitened funding allocation, attention has moved towards new avenues for exploration in an attempt to reconcile the operational tensions.

The concept of Sustainability was defined by the United Nations (UN) as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland Report, World Commission on Environment and Development (WECD) 1987). Since then much work and research has changed practices in many areas in order to try to achieve if not full sustainability, then at least more sustainable practice, for an array of benefits. In the world of operations management, an integrated and efficient supply chain was seen as a way of potentially minimising monetary risks and increasing profits, thereby creating the conditions for a sustainable business (Chopra and Meindl 2007). This view of sustainability is valid for Community Pharmacies too and does feature in the changing nature of service delivery. However, in addition, changes in the business environment generally have made environmental and corporate social responsibility factors more prominent, and a more integrative approach to operations management has been developed (Angell and Klassen 1999). As such, environmental management principles have increasingly been integrated with the decision-making process for the conversion of resources into usable products. Initially, such work tended towards proactive pollution prevention, which could give competitive advantage, or reactive pollution control, which had little economic benefit.

As environmental awareness became a corporate requirement and technological advancement enabled long-term improvement in environmental performance, organisations found that sustainable practice was becoming embedded. The outcome of designing products, services

and delivery systems that limit or reduce negative impacts on the natural environment, using technologies that can also drive down operating costs, is that competitive advantages with unique environmental strategies reduce long-term risks and enhance financial performance.

Sustainable decision making and network design

Such thinking impacted operating decisions, including suppliers, and the ensuing workforce and planning and control systems decisions (Kleindorfer et al. 2005). Supply chain professionals are in a prime position to impact sustainability practice through the sourcing, manufacturing, packaging and transportation decisions they make. Carter and Rogers (2008:363) labelled this as sustainable supply chain management (SSCM). They defined SSCM as ‘the strategic, transparent integration and achievement of an organisation’s social, environmental and economic goals in the systemic coordination of key interorganisational business processes for improving the long-term economic performance of the individual company and its supply chains’. This puts purchasing and relationships at the heart of making the firm thrive, thereby building on the resource-based view and the dynamic capabilities view (Prahalad and Ramaswamy 2004; Teece 2007). Both views refer to a buying firm’s ability to integrate, build and reconfigure internal and external resources using organizational processes and practices to increase economic as well as social and environmental responsibility along the supply chain. From these emerged the term ‘triple bottom line’ (3BL), referring to people, planet and profit, and which is used to demonstrate the creation of greater business value (Sarkis and Dhavale 2015; Beh et al. 2016; Sarkis et al. 2016). However, some have posited that value cannot be delivered simply by changing purchasing practices and relationships with suppliers.

Sustainable network design

Bhattacharya et al. (2015) and Dabhilkar et al. (2016) have noted that co-operation with suppliers and customers is critical for organisations to close the supply chain loop. The latter particularly have discussed how trade-offs and synergistic effects between the 3BL objectives require a contextual response, one which aligns as much as possible functional competitive priorities with overall organisational competitive strategies. The underlying rationale for alignment is that the capabilities of the supplier are viewed as resources for the buyer. No one firm is more sustainable than its supply chain and therefore has to exploit its full buying and bargaining power to promote and ensure sustainable development along its supply chain. In this way, each is dependent on the other, varying from some dependence to total interdependence. Building on this is research adopting a natural resource-based view (NRBV). Miemczyk et al. (2016) for instance explain the importance of new resources in technology, knowledge and relationships and stress the role of dynamic capabilities to constantly address changes in the business environment to renew those strategic resources. They coin the term "dynamic supply chain execution", which underlines the importance of co-development and forging new relationships through commitment to supply chain redesign,

co-evolution with customers and suppliers and control of supply chain activities, especially for closed loop supply chains.

A missing link in much of the SSCM literature, in particular with regard to the NHS, is a reference to Lean. In their recent work, Piercy and Rich (2015) state the lean mantra of waste reduction and "doing more with less" is immediately apparent as delivering environmental benefits, as well as cost benefits. The logic of lean, well understood throughout all parts of NHS service provision, brings together the rhetoric of SSCM, NRBV and the challenge to achieve efficiency and productivity improvements.

Why do we need to be Sustainable in Community Pharmacy?

The concept of Sustainability in Pharmacy (NHS UK) has received minimal exploration in professional and academic journals. Whilst aspects of sustainability have been considered in Pharmacy in general e.g. recycling behaviours (Breen et al., 2015; Breen et al.2010); green design of the community pharmacy supply chain (Xie and Breen, 2014; Kümmerer, 2010; Xie and Breen, 2012); and Medicines Optimisation (Breen, 2016), the concept of Sustainability as a whole has not been addressed. The most pertinent examination undertaken in Pharmacy (NHS UK) was by Alexander (2012) who when examining environmental sustainability asserted that Pharmacists have a key role to play to help mitigate the effects of climate change. Sustainability, as analysed in relation to sustainable practice, systems, network design, network (industrial) ecology has not been adequately considered in relation to Community Pharmacy (NHS UK).

All pharmacies are an integral part of their community and contribute to the overall economic viability, environmental sustainability and wellbeing of a community hence why it is important that they adopt sustainable practices (Root, 2008). Pharmacies within a community setting have substantially developed their service provision from prescription fulfilment through to health promotion services and support e.g. Medicines Use Reviews consultations. When considering sustainability as pre the Triple Bottom Line (Social, Environmental and Economic) financial sustainability is incredibly important in community pharmacies for all the reasons as listed in this article to date.

Financially sustainable practices are especially important for pharmacies to minimise costs, through better practice, sustainable decision-making, and reduced expenditure to allow for funds to be effectively allocated within the NHS. One aspect of practice that is constantly challenged and hence under scrutiny is medicines prescribing in the community. It is estimated that £8.2 billion is spent each year on prescription drugs in the NHS of which at least £100 million is unused or waste medication (Breen, et al., 2010). Health expenditure per capita in England (medical services, health research, central and other health services) increased from £1,841 in 2009/10 to £1,994 in 2013/14 (NHS Confederation, 2016) which means that the potential for greater medicines waste loss is inevitable.

There is evidence of sustainable practice in community pharmacy. Examples of which include waste recycling, e.g. Wallgreens Boots Alliance as a healthcare service provider aims to reduce the waste they create and to contribute to support the concept of circular economies through increased re-use and recycling and respond to United Nations Sustainable Development Goals (Wallgreens Boots Alliance, 2016). Other examples of sustainable practice are demonstrated by the reduction of medicines waste by increasing Medicines Use Reviews (MURs) and raising awareness of hazards associated with medicines stockpiling and inappropriate disposal (Breen, 2016; Breen and Xie, 2009). What there less evidence of is the infrastructure and support that exists in community pharmacy to support sustainability initiatives. This is an essential enabling/facilitating factor for business success especially in the face of ongoing pressure to perform and grow, whilst continuously striving for efficiencies as per the agendas outlined above.

Methodology

The aim of this study was to examine what Sustainability means and how it was applied in Community Pharmacy as a service provider in the NHS (UK). The key objectives set are outlined below:

- a) Conduct a detailed analysis of the extant literature to determine the breadth of sustainability application in community pharmacy (academic and professional literature scrutiny)
- b) Understand community pharmacy staff views on the need for sustainability in everyday practice (data collated from 2 questions on survey tool)
- c) Identify any supporting infrastructure in place which nurtures and facilitates sustainable practice (data collated from 4 questions on survey tool)
- d) Collate views in relation to external influences or pressures which encourage sustainable behaviours (data collated from 2 questions on survey tool)

To do this, an exploratory study was launched with Community Pharmacies in the UK. Geographically, the targeted area was the North of England but as the survey was launched via an online tool it is difficult to determine exactly the geographical spread of this study of the actual number of potential respondents. The location (North of England) was chosen based purely on the proximity of the researcher to this area. Participants were purposively selected by the researcher to contribute to this study as those individuals who could contribute the most intelligence on the subject matter. The purposive targeting of individuals (Hair *et al.*, 2007) was a critical ingredient for this study as the participants needed to be experts in the phenomenon under examination (Creswell and Plano Clark, 2011). The respondents all worked within a community pharmacy and had an opinion which could vary based on their length of service/experience in their role, their grade/banding (based on the premise that higher grades/bandings would have more exposure to strategic deliberations regarding sustainability measures and performance) and their general interest in this topic plus their level of eco-conscious and social consciousness.

Guided by the extant literature relating to sustainability generally and developments within the healthcare sector and in particular community pharmacy, an electronic questionnaire was created. In total, there were 9 questions, which included a blend of multiple-choice questions, Likert scale and open questions. A pilot study of this questionnaire was conducted with 3 practising pharmacists. In order to enrich data collection and for additional benefits (e.g. having control of answer order, low administration costs, controlled sampling, ease of data entry and analysis) it was decided that an online survey would yield the highest response rate (Joel and Anil, 2005).

The questionnaire was deployed in November 2016 to pharmacy staff in community pharmacies. Due to time constraints a concerted effort was made to gain maximum questionnaire response in a two week window of time (and online research can be unpopular with some potential participants) and thus the questionnaire deployment was multi-channel (Lefever et al., 2007) including, Community Pharmacy West Yorkshire, and dedicated School of Pharmacy Facebook sites, plus directly approaching community pharmacy managers in person and by telephone to determine their willingness to participate in this study. The response rate achieved was a result of direct targeting and snowballing/referral (Browne, 2005; Topp et al., 2004). The questionnaire was completed by 44 pharmacy staff post-circulation using Google Drive.

Results

Based on the review of the extant literature it was apparent that there were limited studies which focused on the concept of sustainability within community pharmacy in relation to sustainable systems, networks and decision-making. The main focus appeared to lie with environmental, financial or service viability (continued performance and service delivery so innately tied into the economic indicator of the triple bottom line).

The online survey was fielded out to community pharmacy sites as detailed in the methodology section above. The respondents were asked to identify their pharmacy type using the classification as presented below. This was to reflect the different types of pharmacies that exist within the community sector. The profile of respondents is as shown in Table 1.

Table 1 Respondent profile – company type and quantity of respondents.

Company type	Number of Respondents	% of sample
High Street Pharmacy	6	13.6
Independent Pharmacy	7	15.9
Pharmacy chain with +5 sites	4	9.1
Pharmacy chain with less than 5 sites	5	11.4
Pharmacy co-located next to GP surgery	8	18.2
Supermarket pharmacy sites	6	13.6
Company Type not defined	8	18.2

Total	44	100.0
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The questionnaire was completed by different bands of pharmacy staff as shown in the table below. The findings indicate that the majority of responses were produced by Pharmacists and Pharmacy Managers (64%) which are the most senior of all bandings represented and would have access (in theory) to the strategic overview of the operation and would be most informed as to the need to be sustainable in practice.

Table 2 Respondent profile – banding/grade

Staff role	Quantity
Dispenser	2
Healthcare assistant	1
Pre-registration pharmacist	12
Pharmacy technician	1
Pharmacist	19
Pharmacy manager	9
Total	44

The study aimed to collate data to address the key study objectives as outlined above. The results of which will be presented in the section below.

Sustainability in Practice

The respondents were presented with this well-known quote to contextualise the study in the theoretical origins of Sustainability and Sustainable Development.

“Sustainability within a business can be perceived as being environmentally friendly (recycling paper and ink cartridges, preventing excess resource depletion e.g. not printing all documentation), being socially responsible (supporting the community by local employment, contributing to local causes, treating staff and other stakeholders in a responsible manner) and economically savvy (making good business decisions which impact positively on the company’s profits and expenditure). Sustainable development has been defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland Report, World Commission on Environment and Development (WECD) 1987)”.

Respondents were then asked if they felt that they operated in a sustainable manner in their role in community pharmacy, and if so, how and if not, why. 16% of the respondents did not complete this field which reduced the total number of respondents who provided a response to 38. From this group, 60% said yes they operated sustainably, with 2 respondents elaborating stating that “we recycle paper and cardboard and have medicine recycling programme” and “try to be sustainable in the sense of saving money, turning off lights and recycling”. 16% said No to this question and a further 24% said that they acted in a sustainable manner sometimes or most of the time.

This was followed by enquiring as to why pharmacies need to act in a sustainable manner. Respondents were presented with a predetermined list of drivers which underpin sustainability behaviours and intention (adapted from Breen et al, 2015) and asked to choose and prioritise their top 5 reasons for doing so using a Likert scale (1 being most important and 5 being least important). The responses provided are presented in Table 3 below.

Table 3 Drivers to promote sustainability behavior/intention – respondents’ views

Driver to promote behavior/intention	1 (Most important)	2	3	4	5 (Least important)
To save money for us	32	8	2	Nil return	2
Reduce waste	32	8	2	1	1
Be more efficient	33	8	2		1
Better for environment	33	6	3	1	1
Because it is company policy	8	20	10	3	3
Reduces potential hazards	6	17	13	8	Nil return
Because it is the right thing to do	16	17	9	1	1

The respondents identified key factors that they believed to be important in promoting and engaging with sustainability within the workplace. The most popular factors were to be efficient and environmentally responsible, closely followed by saving money and reducing waste within the company. However there were 2 respondents who stated that saving money was of least importance when acting sustainably. Both respondents were pharmacists, one from a high street branch and the other an independent pharmacy (owned by Pharmacist/Pharmacy Manager). Of lesser importance, but still a positive response was the social/eco-consciousness; that being sustainable is the right thing to do. The fact that the company could have a sustainability policy that should be delivered to registered less importance as did the potential reduction of hazards within the workplace.

Having considered sustainability intentions respondents were asked if they could act in a more sustainable manner and were prompted with the following outputs:

- There’s no time to [act more sustainably]
- I’ve no desire to [act more sustainably]
- It’s a demanding job and the patients are my priority
- There’s no need to act differently just to be more sustainable.
- I really don’t understand it all so how could I act differently?

The responses provided by the community pharmacy staff are presented below in Table 4.

Table 4. Table outlining the reason to change sustainability behaviours.

Reason to change behaviours	Responses	%
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		Response
A There's no time to [act more sustainably]	11	26
B I've no desire to [act more sustainably]	4	9
C It's a demanding job and the patients are my priority	16	37
D There's no need to act differently just to be more sustainable.	10	23
E I really don't understand it all so how could I act differently?	2	5

The strongest response to this question was that the community pharmacy as a service provider was a demanding job for those involved and whilst sustainability was a consideration, the patient was the priority and hence the focus. This was quickly followed by there is no time to change, to become more sustainable. One pharmacist (from unknown pharmacy type) did however stipulate that the simple answer to this question was 'Yes', community pharmacy can act more sustainably.

Infrastructure to support Sustainability

In order to examine the infrastructure in place to support sustainable practice engagement the following questions were asked:

Do you currently have a sustainability policy for your pharmacy? Yes/ No

If yes, how long have you had it in place? a. 0-1 year; b. 1-3 years; c. 3-5 years; d. 5 + years

If no, is this for any of the following reasons?

a. No drive to do so

b. No need for it

c. No resources to do so

d. It's something that we will be doing in the near future

e. Other (please elaborate further on this point)

In response, 77.5% of the participants stated that they do not have a sustainable policy implemented and that the main reason for this is that they don't have the resources to do so (50%). For those who do have a sustainability policy in place (22.5%) and the majority have had it in place for 3-5 years.

To further investigate the composition of this infrastructure respondents were asked to comment on any sources of support that were available to them to help them be more sustainable. 30 out of the 41 responses replied said either No, Don't Know or Unsure to this question which is 73% of this cohort. For those who responded positively, they believed that sources of support would be; the Centre for Postgraduate Pharmacy Education (CPPE), Carter Review, "local initiatives such as the reduce waste campaign", NHS sustainable unit, General Pharmaceutical Council, whilst there was also reference to the NHS centrally and online tools. There was 1 response which stated that the key source of support would be the resident Chief Pharmacist.

External influences or pressures on Sustainable behaviours

In order to gauge the impact of external influences or pressures on Sustainability respondents were asked if there were any such factors. 37% of respondents said 'Yes' that there were influences and some went further and identified key sources such as Head Office, environmental organisations, company owners and local council. One pharmacist quoted the following "*Yes and the economically savvy bit seems to take precedence over the other factors sometimes*". However 54% of respondents said that there were no such influences and pressures (responding No or Not really). The remaining respondents highlighted key sources of influence/pressure such as spending cuts, supermarket head office, the NHS and Chief Pharmacist (pre-registration pharmacist).

Adding to this discussion, respondents were then asked if they were aware of any sustainability directives, standards of guidance which have been adopted within community. 9 out of the 41 responses were positive and stated that sources of guidance would be the Carter Review, White Paper (unspecified which one), Head Office and Clinical Programme groups. Overwhelmingly the response was No as reported by 78% of the respondents.

Discussion

It is clear from the discussion above that Community Pharmacy as a key service provider within the NHS is facing critical challenges to its operational sustainability, not least because of the recent Community Pharmacy cuts in October 2016 (Pharmaceutical Services Negotiating Committee, 2017). Conversely there is a growing recognition and awareness of the economic and value-add delivered by Community Pharmacy as a service (Price Waterhouse Coopers, 2016) and Pharmacists as medicines experts (Royal Pharmaceutical Society, 2013 and 2017; Yusuf and Sadar, 2011).

However despite facing economic and efficiency pressures plus responding to new and exciting opportunities as highlighted in the Five Year Forward View (2014), Community Pharmacy as a business needs to be sustainable and determine how best to be so. Sustainability, as discussed in the literature review, is a broad term and thus has a wide and varied interpretation. This ranges from the standard Triple Bottom Line application in that Sustainability and its derivatives aim to deliver to the economic, social and environmental agenda (Sarkis et al. 2016). It is clear from the findings in this study that there is a strong sustainability consciousness among this group of respondents. This is evidenced by the importance placed on the key sustainability attributes (economic, social and environmental) in reducing waste, being efficient, saving money and being responsible (doing the right thing). Whilst this is in place and staff do appear to feel that they operate in a sustainable manner, the infrastructure which embeds and sustains such practice is not optimally formulated within this operation. From a business perspective this needs to be extended further to create the conditions for business stability and sustainability as well as the TBL attributes which requires a more integrative approach to operations management (Angell and Klassen, 1999; Chopra and Meindl, 2007).

The design and adoption of Sustainability Policies which govern all sustainability related practice within a Community Pharmacy should be commonplace and this is not the case. To add to this, there appears to be little evidence of support to sustain this (limited guidance, directives or standards) as reported in this study. This is surprising as there is a monumental amount of improvement/efficiency activity underway in the NHS which directly impacts on Community Pharmacy, so one would assume that in order to pave the way for a successful implementation of actions relating to Carter Review, STPS etc more groundwork would be completed within the NHS by service improvement leads or other experts in this area.

The concept of industrial ecology/development as purported by Angell and Klassen (1999) and nurtured by key operations/supply chain theories such as the Resource Based View, Natural Resourced Based View (Hart, 1995; Miemczyk et al., 2016) and Dependency Theory (Teece, 2007; Prahalad and Ramaswamy 2004, Dabhilkar et al. 2016), all hold key learning for Community Pharmacy strategists/management in designing more sustainable enterprises, partnerships, networks etc to ensure that Community Pharmacy does not work alone in striving to become a more sustainable entity providing an economical viable business for the future. This is particularly important in Community Pharmacy delivering to the aims of the Five Year Forward View (2014) and STPs (NHS England, 2015).

The staunchly held view as exhibited in this study is that the patient is the priority in Community Pharmacy above the sustainability agenda. Coupled with funding cuts and efficiency pressures, it is little wonder that sustainability may have taken a back seat in this operation and the more perfunctory elements of sustainability are practiced (paper, waste recycling, reducing utility consumption). Whilst the study did not question this, it would be interesting to examine the presence of more strategic aspects of sustainability (e.g. green suppliers/vendor appraisal, strategic partnerships/alliances, sustainable decision making processes and supply chain streamlining/waste identification).

Conclusions

The aim of this study was to examine what Sustainability means and how it is applied in Community Pharmacy as a service provider in the NHS (UK). In doing so the following objectives were realised: a) conduct a detailed analysis of the extant literature to determine the breadth of sustainability application in community pharmacy (academic and professional literature scrutiny); b) understand community pharmacy staff views on the need for sustainability in everyday practice; c) identify any supporting infrastructure in place which nurtures and facilitates sustainable practice and d) collate views in relation to external influences or pressures which encourage sustainable behaviours.

From the responses received (44 in total) which mainly consisted of pharmacists and pharmacy managers, the operational response in relation to the concept and practice of Sustainability was very positive; it was being done in various ways within community pharmacy, the aim of doing it was very much economically focused to save money, reduce waste and be more efficient, but there was also an element of social consciousness as well.

What was being done as sustainable practice appeared to be sufficient to their needs as a company and service provider and there did not seem to be a major driver/intention to change this.

That said, there seemed to be a limited purpose-built support network/infrastructure for moving the sustainability agenda forward as evidenced in the study. There were no obvious sources of guidance, no apparent common influences or pressures that community pharmacies would respond to, that would impact on their business/economic sustainability (as opposed to environmental). According to the report produced by PWC (2016) the enhanced role for CP highlights potential areas for increased provision and, therefore, greater value, including more cost savings for the NHS, are: widespread public health services; A nationwide minor ailments service; and the expansion of the scope of New Medicines Services (NMS) and Medicines User Reviews (MUR), for example the drugs/illnesses covered. These changes would benefit the NHS through reducing the burden on other more expensive points of delivery in the health system and preventing the need for costlier future treatment but would also apply pressure to a service, the operational sustainability of which appears to be based on an infrastructure which may not fit for purpose.

The overarching objective of this study was to explore the concept of Sustainability as practiced in Community Pharmacy. It did not aim to confirm financial or economic stability or future Sustainability Agendas and has not done so. The logic and the purpose of why sustainability is adopted in this service operation is clear by the discussion presented and the intentions which support the current sustainability measures and the pressure to change practice and behaviour are also discussed. Community Pharmacy as a profession will need to determine if they can respond to initiatives as discussed in this paper and pressures (internally and externally) whilst still delivering a sustainable service. They and only they will know the tipping point when the pressure becomes too much and the service sustainability is threatened.

A limitation of this study was the timeframe which was adopted to deploy the online questionnaires and pull back responses. This would have benefitted from being extended further. The study offers some insights into practice could be bolstered by site observational analysis and more in-depth interviews. Question 9 on the survey tool produced somewhat skewed answers (negatively) which was not identified in the pilot study. This would be amended should there be a further iteration of this study.

Future research within this area would advocate the exploration of the adoption of key tools such as Lean in Community Pharmacy (a very current concept still within healthcare (Matthias and Brown, 2016) and the review of the operation that is Community Pharmacy as an integrative connector between the patient and primary care services (Social care, GP etc) and secondary care services (hospital pharmacy etc) using theory such as dependency theory, industrial ecology etc.

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