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The value of community pharmacy – summary report
PSNC

September 2016

Contents

Key findings

The Department of Health (DH) and NHS England (NHSE) have proposed a 6% reduction in the funding they pay to community pharmacy in 2016/17 and they have suggested that the services provided can simultaneously be enhanced. In its response, the Pharmaceutical Services Negotiating Committee (PSNC) has questioned whether there is evidence to justify the proposed changes.[1]

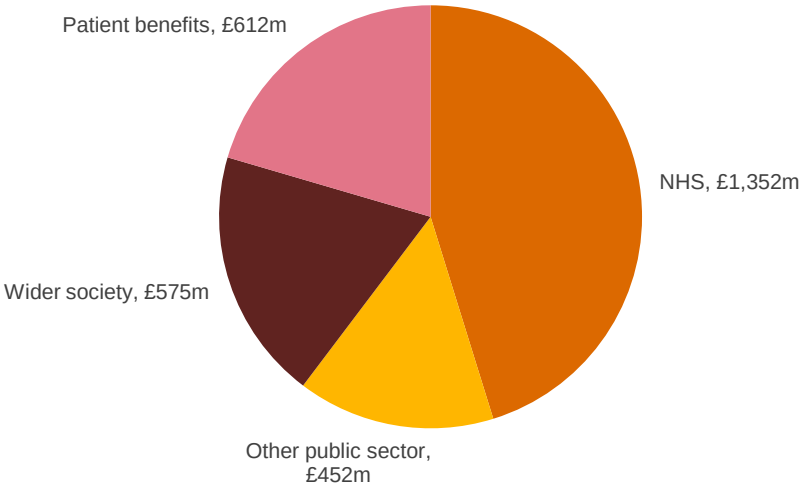
In order to help boost the evidence base, PricewaterhouseCoopers LLP (PwC) was commissioned by the PSNC to examine the contribution of community pharmacy in England in 2015. Our report analyses the value (net benefits) to the NHS, to patients and to wider society of 12 specific services provided by community pharmacy.[2] We do not assess the value of the £2.8 billion that DH pays community pharmacy for Essential and Advanced services.

Overall, the key findings from our analysis are:

- Through the services considered in this report, in 2015 community pharmacy in England contributed a net increase of £3.0 billion in value in that year, with a further £1.9 billion expected to accrue over the next 20 years.
- The in-year benefit in 2015 of £3.0 billion is net of the £247 million in compensation which pharmacy received through funding from national and local sources for the 12 services evaluated. Even considering just this limited list of 12 services, and applying conservative assumptions, the single year net benefit identified exceeds the total £2.8 billion community pharmacy was paid by NHSE in 2015.
- On top of this, we estimate that indirect health system cost savings could be worth up to a further £2.5 billion in 2015 from the knock-on effects of self-care and medicines support.
- Apportioning the single year net benefit evenly across all the 11,815 pharmacies which operated in England at the end of 2015 leads to a benefit of more than £250,000 per pharmacy in 2015 alone. This rises to more than £410,000 when considering the long term effects as well, and up to £625,000 per pharmacy when potential knock-on health impacts are included.
- Figure 1 below summarises how this value is distributed between different beneficiaries of community pharmacy activity. The NHS itself is the biggest beneficiary: community pharmacies contributed a net value of £1,352 million in the short run; this is net of the funding received by community pharmacies for the 12 services, both directly from the NHS and from local commissioners (which was £247 million – hence the gross value was £1,599 million). Of this net value to the NHS, the majority was direct NHS cash savings as a result of cost efficiencies, worth £1,111 million in 2015. In addition, the NHS saved an extra £242 million as a result of avoided treatment, and a further £172 million in avoided long term treatment costs.
- Further, 55% of in-year benefits and 91% of long run benefits (69% of total benefits) accrued outside the NHS. Other public sector bodies (e.g. local authorities) and wider society together received over £1 billion of benefits in 2015 as a result of the community pharmacy services covered. A further £1.7 billion is expected to accrue over the next 20 years.
- In addition, patients experienced around £600 million of benefits, mainly in the form of reduced travel time to alternative NHS settings to seek a similar type of services as the ones provided by community pharmacy.

[1] PSNC, Response to Department of Health letter on 'Community pharmacy in 2016/2017 and beyond', 15 January 2016.
[2] We estimate the value of 12 services which include two services related to managing prescriptions: managing prescribing errors and clarifying prescriptions.

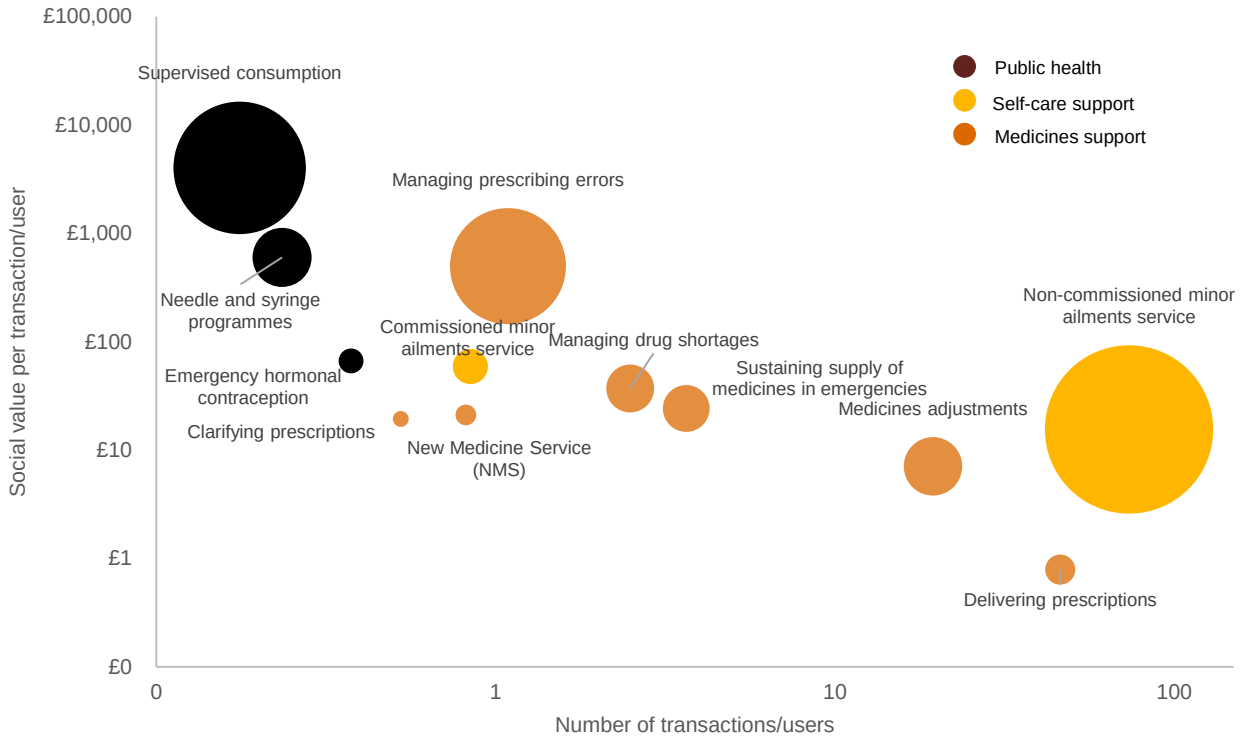
Figure 1: Estimated distribution of the value of community pharmacy (England, 2015)



Source: PwC analysis

- Through the services covered in our analysis, community pharmacy made more than 150 million interventions in 2015 – including nearly 75 million minor ailment consultations and 74 million medicine support interventions – and supported 800,000 public health users.
- For many of these interventions the scale of value created is substantial and greatly exceeds the cost to the NHS of delivering them. Each patient treated with supervised consumption, for example, generated in excess of £4,000 in value in 2015 alone, and a further £7,500 in the long term. Figure 2 shows for each service the number of transactions/users and the value generated (the size of each circle shows the relative size of the total value generated in 2015).

Figure 2: Value of community pharmacy services in the short term (England, 2015)



Source: PwC analysis

- Finally, based just on the 12 services considered in our analysis, community pharmacy was self-funding in 2015. More specifically, as illustrated in Table 1, we estimate that the activities of community pharmacy will avoid costs for the public sector, including the NHS and other public sector bodies, in both the short- and long-term, totalling an estimated £3,017.5 million – £1,771.4 million to the NHS and £1,246.5 million to other parts of the public sector. This compares with total funding for community pharmacy in England provided by DH in 2015 of £2.8 billion, and estimated additional funding from local sources for the 12 services analysed of £135 million. So, the expected amount of public sector spending saved directly as a result of the 12 services analysed is enough, by itself, to offset the entire amount of public funding provided for community pharmacy in 2015. Effectively this means that all the other benefits of community pharmacy – including the patient, society and knock-on health benefits of the 12 services we analyse, and, more importantly, the benefits of the core NHS prescription service itself – can be seen as additional net benefits of community pharmacy that are provided at no cost to the Exchequer.

Table 1: Estimated impact on the public finances of the 12 services in the short and long term (England, 2015)

Theme	Avoided costs for the NHS (gross, £m)	Avoided costs for other parts of the public sector (gross, £m)	Funding by local commissioners (£m)
Public health	£467.8m	£1,122.3m	£64.6m
Self-care support	£615.2m	n/r	£3.8m
Medicines support	£688.5m	£124.3	£66.6m
Total (£m)	**£1,771.1m**	**£1,246.5m**	**£135.0m**

Key:
n/r = Impact not materially relevant, and hence not included within impact pathway
Source: PwC analysis

Introduction and purpose

Context

On 17th December 2015 the Department of Health (DH) and NHS England (NHSE) published an open letter which, amongst other things, set out:

- Proposals for a funding cut for community pharmacy of 6% in cash terms in 2016/17 compared with 2015/16;
- Suggestions as to how this might be achieved without detriment to services or access to them (e.g. through pharmacy closures and adoption of internet enabled supply); and
- Other proposals for ways in which community pharmacy services might be improved.[3]

The Pharmaceutical Services Negotiating Committee (PSNC) published its initial response on 15th January 2016 and criticised the proposals, pointing out the lack of an appropriate evidence base to support them.[4]

On 14th April 2016, the PSNC commissioned PricewaterhouseCoopers LLP (PwC) to help it assess the value of community pharmacy in England to the NHS, to patients and to the wider community. This work is intended to provide an evidence base to assess the value that community pharmacy provides.

Report structure

This summary report is structured in three further sections:

- Section 2 describes the services that community pharmacy provides for which we assess the value and outlines our approach to assessing their value;
- Section 3 presents the key results of our assessment of the contribution of community pharmacy across the services in scope; and
- Section 4 draws together the key conclusions and analyses their implications.

A separate, more detailed report:

- Provides details of our assessment of the value of each of the services that we consider in this report; and
- Explains elements of our methodology and the associated data sources we use to estimate the value of the different services of community pharmacy.

[3] Department of Health, Community pharmacy in 2016/17 and beyond, 15 December 2015.
[4] PSNC, Response to Department of Health letter on 'Community pharmacy in 2016/2017 and beyond', 15 January 2016.

Our approach to assessing value

This section describes the services provided by community pharmacy for which we have assessed the value and provides an overview of our approach to assessing this value.

Services provided by community pharmacy

Community pharmacy is an important part of the system for the delivery of healthcare in England:

- There were 11,815 community pharmacies in England in 2015[5];
- Together, these pharmacies dispensed 1.0 billion prescription items in 2015[6]; and
- The value of the ingredients in these prescription items was £9.3 billion in 2015.[7]

Community pharmacy is funded by central and local government to provide three main groups of commissioned services:

- Essential Services which all pharmacy contractors provide under the NHS Community Pharmacy Contractual Framework (CPCF);
- Advanced Services which consist of five services within the CPCF that community pharmacies can opt to provide if they meet the requirements set out by the Secretary of State for Health; and
- Locally commissioned services which are contracted via different routes and different commissioners, including local authorities, Clinical Commissioning Groups (CCGs) and local NHS teams.

In addition, private sector community pharmacies provide other services at their own discretion as part of their business models.

Community pharmacy is reimbursed in different ways for these services:

- Essential Services are funded through the main CPCF funding system;
- Advanced Services are often funded each time the service is delivered through the CPCF funding system; and
- Locally commissioned services are funded by local commissioners typically each time a service is delivered.

In 2015/16, community pharmacy in England was paid £2.8 billion by NHSE for providing Essential and Advanced Services.[8]

Our assessment of the value of community pharmacy focuses on three broad groups of services:

- Public health services;
- Support for self-care; and
- Medicine support services, which include enhancing access to medicines and delivering patient management services.

[5] NHS Business Services Authority (http://www.nhsbsa.nhs.uk/PrescriptionServices/5045.aspx)
[6] NHS Pharmacy and Appliance Contractor Data report, 2015.
[7] HSCIC, Prescription Cost Analysis, England, 2015.
[8] Department of Health, PSNC letter: Community pharmacy in 2016/17 and beyond, December 2015.

Table 2 summarises the services that we cover in our assessment, describing the nature of the activities and the basis on which they are commissioned. These are the services which we believe are both material in terms of their value and most likely to have a robust evidence base with which to assess their value.

Table 2: Services provided by community pharmacy included in our analysis

Theme	Service	Description	Essential service	Advanced service	Locally commissioned	Other service
Public health	Emergency hormonal contraception	• Locally commissioned service designed to improve access to emergency contraception			✓	
	Needle and syringe programmes	• Locally commissioned service intended to support delivery of the national Drug Strategy • Provides injecting drug users with access to clean injecting equipment and effective disposal of used equipment			✓	
	Supervised consumption	• Locally commissioned service intended to support delivery of the national Drug Strategy • Provides drug users with controlled access to substitutes (e.g. methadone)			✓	
Self-care support	Minor ailments advice	• Provides advice to patients on minor ailments, sometimes as part of a locally commissioned service which covers specified conditions	✓		✓	
Medicines support	Managing prescribing errors/clarifying prescriptions	• Identifies and resolves actual and potential errors with prescriptions, including clarifications (e.g. where the prescription is unclear or unsigned)	✓			
	Medicines adjustments	• Makes adjustments when dispensing prescriptions to enable patients to adhere better to their medication regimen where they have a condition which affects their ability to do so	✓			✓
	Delivering prescriptions	• Makes or facilitates home delivery of prescriptions to patients	✓			✓
	Managing drug shortages	• Helps patients to resolve drug shortages	✓			✓
	Sustaining supply of medicines in emergencies	• Provides non-commissioned emergency supplies of medicines to patients				✓
	Medicines Use Reviews (MUR)	• Provides a structured, adherence-based review to help patients use their medicines more effectively		✓		
	New Medicine Service (NMS)	• Provides guidance and support to patients when first taking new medicine for a long-term condition		✓		

Source: PwC analysis

Value added by community pharmacy

Our analysis examines the value added by community pharmacy's delivery of each service in 2015 in England by comparing the estimated value of the activities undertaken in 2015 with the funding received in order to estimate the net value that it provides. Our aim is to identify the benefits associated with these services as a result of the value achieved by the services exceeding the payments made by NHSE and local funders to support provision of the services (whether these payments are hypothecated or are just part of overall funding). This value may be "hidden" or otherwise not fully appreciated by stakeholders, and so might not be taken into account in decisions about the funding and organisation of community pharmacy.

We estimate the value that would be lost if community pharmacy no longer provided the services (even if in some cases we hypothesise that, because the services are so inherently valuable to patients, exactly the same services would instead be supplied by another part of the NHS if they were not supplied by community pharmacy). We consider four aspects of the value provided by community pharmacy:

- The potential cost savings to the healthcare system, especially the NHS, as a result of the cost-effective provision of these services by community pharmacy relative to alternative NHS providers;
- The potential cost savings to other parts of the public sector;
- The value of improved patient outcomes, expressed in terms of time saved and enhanced wellbeing; and
- The value to wider society, for instance due to avoidance of a loss of output (if people are unable to work) and the reduced risk of loss of life.

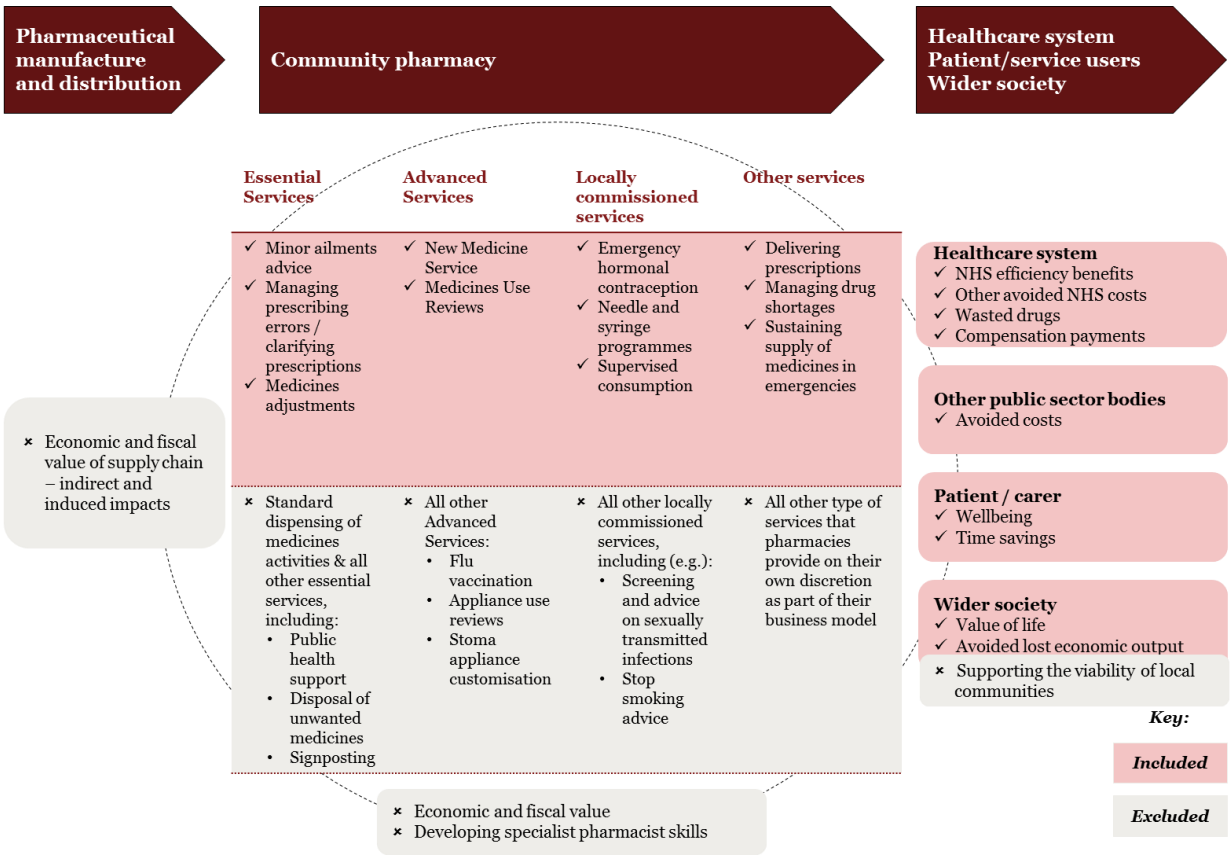
We distinguish two broad categories of service:

- Those which are specifically commissioned and/or assumed to be inherent in why the NHS funds community pharmacy, but which deliver benefits in excess of their costs. These services are so inherently valuable that if they were not supplied by community pharmacy the most reasonable counterfactual assumption is that they would be provided by another part of the NHS, but at a higher cost than community pharmacy provides – so, in this case, the value added is a cost efficiency.
- Those which are neither commissioned nor inherent but nevertheless deliver wider benefits. These are services which community pharmacy is uniquely well placed to provide, mainly because of the accessibility of community pharmacies (not just geographically, but in terms of opening hours, lack of bookings needed, informality and anonymity). If community pharmacy did not provide these services, they would be less well provided (at higher cost and with less beneficial outcomes) – so the value added of these services is partly a cost efficiency and partly a benefit to patients and wider society.

Importantly, our assessment does not provide a comprehensive view of the value of community pharmacy in England for several reasons (see Figure 3):

- It does not value all the impacts of the 12 services of community pharmacy which have been assessed;
- It does not consider all the services provided by community pharmacy – that would involve looking at more than the 12 considered;
- It excludes the economic value generated by community pharmacy through its central role, alongside pharmaceutical manufacturers and wholesalers/distributors, in the drug delivery system: specifically, it omits the value added that results from treating NHS patients using prescription drugs. Arguably, non-hypothecated funding of community pharmacy is primarily provided to pay for this role, but our value estimates do not include the value added by this core activity; and
- It ignores other elements of potential value, for example as a result of the important catalytic role that community pharmacies play in local communities, providing a valuable focal point for communities, especially as a point of contact for isolated people, and anchoring a parade of shops.

Figure 3: The value of community pharmacy assessed in this study



Source: PwC analysis

Framework for assessing the value of community pharmacy services

Our analysis assesses the value provided by community pharmacy and compares it to the cost to the public sector (especially NHSE) of providing the services. We focus on the estimated value attributable to the services delivered in England in 2015 (which includes the present value of potential future benefits, for example by avoiding the need for costly future treatment). Our focus is on the net value (i.e. the gross value less the financial cost to the public sector) since this represents the economic benefit. In doing this, we follow the principles set out in HM Treasury's 'Green Book'.[9]

For each of the different commissioning models included in Table 2, our approach to estimating how much financial cost should be "netted off" from the gross value differs. Across each service, we aim to identify how much, if at all, public expenditure would be reduced if the service was no longer provided by community pharmacy (i.e. whilst the value generated by the service would be lost, the need to fund it could also disappear, so the net value lost would be less than the gross value lost). Our approach is as follows:

- **Essential Services** are funded through the CPCF and we estimate the share of funding attributable to delivery of each service using either the estimated cost of delivery by pharmacists (e.g. the cost of pharmacist time) as a proxy for the amount of funding received or a top-down approach based on an allocation of CPCF funding[10];

[9] HM Treasury (2011). The Green Book: Appraisal and Evaluation in Central Government.

[10] We effectively use average costs as the basis for valuing the impacts as this represents where costs (and benefits) would eventually settle if community pharmacy's role was removed. In the short run, in economic theory, marginal cost savings should be less as some costs will be fixed and not saveable. By the same token, in the receiving NHS channels (e.g. GPs), marginal costs should be higher (particularly given congestion). So, using average cost is, if anything, a conservative assumption (unless there was slack in the system in alternatives or congestion in pharmacy), but appropriate for what we are trying to achieve.

- **Advanced Services** are generally funded on a "per unit" or "per service" basis so that we can readily identify the funding associated with each service and deduct it from the gross value;
- **Locally-commissioned services** are contracted via different routes and commissioners but they typically involve a fee from the local funder each time a service is delivered: for each of these we estimate the average fee per service delivered, and deduct it from the gross benefit;
- **Other services** which are either purely discretionary (i.e. provided for business reasons) or partly linked to an obligation under the CPCF:
  - Where some or all of a service is discretionary, we assume that the decision of the pharmacy with regard to the discretionary service has no bearing on the public funding it receives and so we do not net off any public sector financial cost. This occurs, for example, where a community pharmacy delivers prescriptions to patients' homes (except for the delivery of certain prescribed appliances); and
  - Where a service is implicitly partly an obligation of the CPCF, such as medication adjustments and managing drug shortages, we follow the approach we use for Essential Services to estimate and net off the funding involved.

More information on our approach to each service is included within the relevant section of the detailed report.[11]

A key element of our approach is consideration of whether and how each service would be provided without community pharmacy (i.e. what would happen in the 'counterfactual' scenario where community pharmacy did not provide the service). For each service, we develop a consistent counterfactual which describes the likely, next best alternative for the health system in the absence of community pharmacy. We then estimate the value by assessing the difference between the impacts under this scenario and those under the current provision by community pharmacy.

A feature of some of our counterfactuals is that they assume that the same level of health services is available to patients as at present, albeit they may be delivered by other parts of the healthcare system in a manner which may be less cost-efficient. In some cases, this loss of efficiency may also change the way in which patients choose to engage with the health system (e.g. reduced accessibility may drive reduced use of health services). Where this occurs, we attempt to identify and value the impact on patients' health that would result.

We do not attempt to value a counterfactual scenario in which the core role of community pharmacy is not performed anywhere in the health system (i.e. a scenario where patients are simply assumed to be unable to access the existing service that community pharmacy provides). Given the intrinsic value to patients of the services provided by community pharmacy, we consider that this would be an unrealistic and extreme counterfactual. However, we recognise that community pharmacies provide a highly accessible health service, and that there is evidence that in their absence there would be a reduced take-up of certain health services by patients. Whilst reduced take-up would have the benefit for the NHS of reducing cost, this would be more than outweighed by the loss of the benefits of the services themselves.

As noted, we consider four aspects of the value of community pharmacy:

- The potential cost savings to the healthcare system;
- The potential avoided costs for other parts of the public sector;
- The value of improved patient outcomes; and
- The value to wider society.

Table 3 summarises the types of impacts we assess for each of the 12 services we consider. For each community pharmacy service we define:

- Impact areas where we estimate the value of the service (denoted by ✓) as they are relevant and material and we have a reliable supporting evidence base. For example, for minor ailment services, we estimate the direct savings to the NHS from providing the service through community pharmacy as opposed to alternative NHS providers.

[11] PricewaterhouseCoopers LLP, 'The value of community pharmacy – detailed report', PSNC, August 2016.

- Impact areas where we only describe the potential scale of the value of the service (denoted by ?); these are also relevant and material, but we have insufficient data and/or face methodological challenges that mean we cannot currently provide reliable estimates of the value. Instead, we present analysis to illustrate the likely scale of the impact. For example, in the case of medicines adjustments, we are aware that for some patients the availability of this service could mean that they avoid the need for residential care and the number of patients affected may be large enough for the value to be material.
- Impact areas that are relevant to the service, but where we do not estimate their value due either to a lack of available data, methodological challenges and/or immateriality (denoted by ×). In contrast to the category of impacts outlined above (denoted by ?), for these impact areas, the challenges we face prevent us from estimating the likely scale of the impact and/or the likely impact is immaterial. Again, using medicines adjustments as an example, it is possible that a number of drugs would go unused without the service provided by community pharmacy. The scale of this impact is, however, highly uncertain and is likely to vary greatly across different medicines, patients and conditions. As a result, we have no robust basis for estimating the cost of that proportion of drugs that would not be taken in the counterfactual scenario.
- The impact areas that are not materially relevant to the service provided (denoted by n/r). For example, given the nature of minor ailments, we assume there is no risk of loss of life if community pharmacy does not intervene.

Table 3: Impacts assessed for each community pharmacy service covered

Stakeholder	NHS				Other public sector	Patient/carer		Wider society	
Service	**Cost efficiencies**	**Avoided treatment costs**	**Wasted drugs**	**Compen-sation payments**	**Avoided costs**	**Wellbeing costs**	**Time saving**	**Value of life**	**Lost output**
Public health									
Emergency hormonal contraception	✓	✓	n/r	n/r	✓[12]	×	✓	×	×
Needle and syringe programmes	✓	✓	n/r	n/r	×	×	×	✓	×
Supervised consumption	✓	✓	n/r	n/r	✓[13]	×	×	✓	✓
Self-care support									
Minor ailments	✓	?	n/r	n/r	n/r	✓	✓	n/r	✓
Medicines support									
Managing prescribing errors/ clarifying prescriptions	✓	✓	✓	✓	n/r	✓	✓	✓	✓
Medicines adjustments	✓[14]	?	×	n/r	✓[15]	×	n/r	n/r	n/r
Delivering prescriptions	n/r	?	n/r	n/r	✓[16]	×	✓	n/r	n/r
Managing drug shortages	✓	?	n/r	n/r	n/r	✓	✓	n/r	✓
Sustaining supply of medicines in emergencies	✓	?	×	n/r	n/r	×	✓	×	n/r
Medicines Use Reviews (MUR)	?	?	?	n/r	?	?	n/r	n/r	n/r

[12] UK Government: transfer payments and resource costs
[13] Criminal Justice sector, Victims services
[14] Covered as part of the sensitivity analysis
[15] Local authority: social care
[16] Local authority: social care, as a sensitivity

Stakeholder	NHS				Other public sector	Patient/carer		Wider society	
Service	Cost efficiencies	Avoided treatment costs	Wasted drugs	Compen-sation payments	Avoided costs	Wellbeing costs	Time saving	Value of life	Lost output
New Medicine Service (NMS)	✓	✓	×	n/r	×	×	n/r	✓[17]	n/r

Key:
✓ = Impact assessed
? = Impact included within impact pathway, and potential scale of impact outlined
× = Impact included within impact pathway but not assessed (due to lack of data, methodological challenge or immateriality)
n/r = Impact not materially relevant, and hence not included within impact pathway
Source: PwC analysis

As shown in Table 3, we do not consider the impact of each service on every stakeholder for data/ methodological reasons or lack of materiality. Below, we consider each stakeholder in turn, highlighting the services for which we do assess the impacts.

NHS

Our counterfactual scenarios typically assume that the service provided by community pharmacy would be provided elsewhere in the health system in the absence of provision by community pharmacy, at least for a subset of patients. Where relevant we estimate the impact of a change in the point of delivery on the cost to the NHS; the only exception is MUR where insufficient evidence exists to estimate the scale of the potential cost efficiencies provided by community pharmacy.

Additionally, the services of community pharmacy may mean avoided treatment costs as a result of improved health outcomes for patients. While we estimate this in some instances, often we lack sufficient evidence to produce a reliable estimate of this impact in the counterfactual scenario. Hence, we do not estimate its scale. This is an issue for medicine support services (e.g. home delivery of prescriptions) where the volume of activity is high, but the impact on health outcomes per patient is relatively small.

The cost of wasted drugs and compensation payments are only relevant for certain services. With the exception of managing prescribing errors, we have insufficient evidence to estimate the proportion of drugs that would be wasted in the absence of community pharmacy, hence we do not quantify this impact.

Other parts of the public sector

Community pharmacy typically reduces public sector costs in one of two ways:

- Directly, by reducing the need for health and care services to be provided by other government departments (e.g. social care provision by local authorities); and
- Indirectly, through the impact on non-health services (e.g. supervised consumption eases the burden on the justice system by reducing drug-related crime).

In some instances, we estimate the avoided costs resulting from the services provided by community pharmacy, for example where cost estimates are available for avoided criminal justice and social care costs. For some services, due to uncertainty about the value per case and the volume to which this applies in the counterfactual scenario, we cannot provide reliable estimates. For example, we do not have good evidence with which to estimate the impact of needle and syringe programmes on the incidence of drug-related crime, although better evidence exists for supervised consumption.

Patients and/or their carers

Where material and relevant, we estimate the time saving to patients from attending community pharmacy as opposed to more distant and/or slower points of delivery in the healthcare system.

We also estimate the wellbeing benefits from pharmacists' actions for services where we have a basis for estimating the additional time that patients would be unwell without the service of community pharmacy, for

[17] Through QALYs

example as a result of having to wait to see a GP. For some services, including many public health and medicine support services, the community pharmacy service may reduce the time over which a patient is ill, but the magnitude of this effect is uncertain. Hence, we do not include this impact in many cases.

Wider society

With the exception of some public health services where there is a lack of supporting evidence, we estimate the cost to society in terms of potential lost economic output. This is especially relevant where the accessibility of community pharmacy services means that less working time is lost than in the next best counterfactual scenario.

The risk to the value of life is only relevant for a few of the services provided by community pharmacy. Where there is sufficient supporting evidence about the scale of this risk without the services of community pharmacy, we estimate this avoided cost.

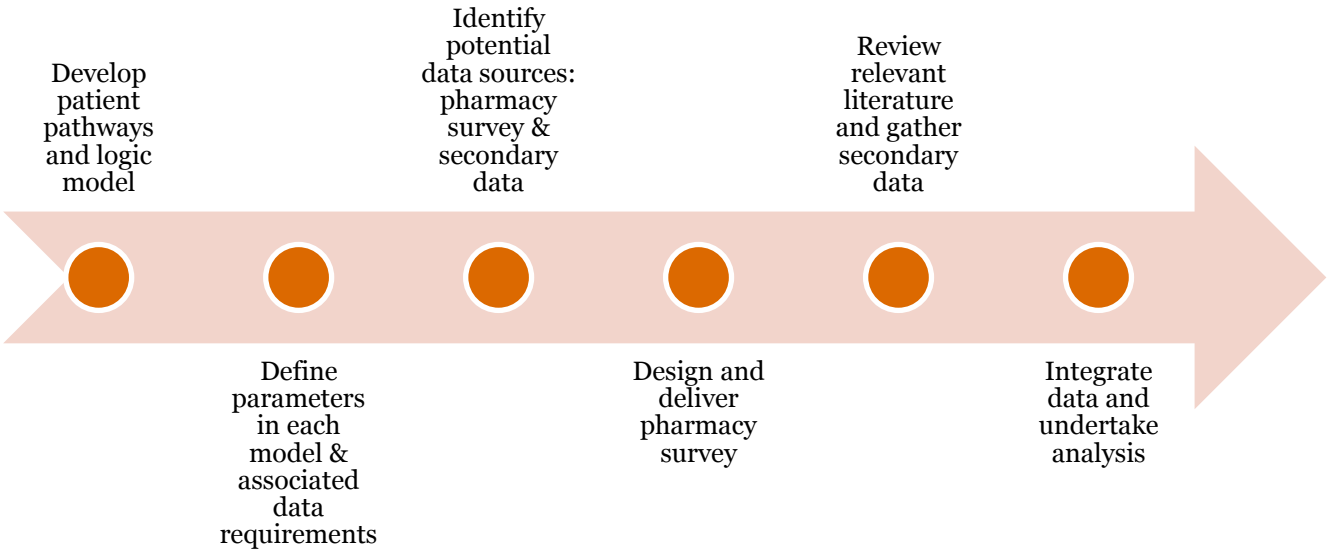
Approach to assessing the value of community pharmacy

In order to assess the value of community pharmacy within the framework outlined above, we need to estimate:

- How many times does the contribution arise?
- When it does arise, what value should be placed on it?

Our analysis of the value of each of the community pharmacy services involves six steps (see Figure 4).

Figure 4: Overview of steps in assessing the value of community pharmacy



Source: PwC analysis

We start by developing patient pathways and a logic model as the core of the approach. These describe how the activities undertaken by community pharmacy lead to outcomes which affect the NHS, other parts of the public sector, the patient and/or wider society. This enables us to define the parameters and, hence, the data needed to assess the value. We then identify and collect the key data that we need to estimate the value of the service using five main sources:

- Existing studies (e.g. appraisals and evaluations) which investigate at least parts of the impact pathway;
- Official statistics, which have been helpful in understanding the frequency of certain events and costs (to the NHS) of dealing with them;
- Pre-existing data collected by PSNC and related organisations;

- Tailored data collection by community pharmacy; and
- A bespoke survey of community pharmacies.

We describe each of the sources we use in more detail in the accompanying detailed report.[18]

Finally, we analyse the results, including undertaking sensitivity analysis. The latter is significant given the important limitations of some parts of the evidence base (which have had to be supplemented with assumptions) and the inherent uncertainties that exist around some of the parameters which drive the value of community pharmacy services.

[18] PricewaterhouseCoopers LLP, 'The value of community pharmacy – detailed report', PSNC, August 2016.

Our key results

Introduction

This section summarises our estimates of the contribution of the different services of community pharmacy. We consider each of the three groups separately: public health, self-care support and medicines support. This is because they share some common features in terms of the basis on which they are commissioned, what (we assume) would be the next best alternative if community pharmacy did not provide them, and the nature of their expected impacts.

In interpreting the results, we note that:

- The value is estimated compared to the next best counterfactual scenario (i.e. the incremental benefit generated from providing the service in community pharmacy as opposed to the next best alternative). The significance of the difference between the current service provided by community pharmacy and that assumed in the counterfactual varies by service – this needs to be considered when making direct comparisons between the value of different services. For example, for the public health services, alternative delivery channels exist which mean that the efficiency benefits for the NHS of community pharmacy provision are comparatively modest.
- The cost of providing the service in community pharmacy, as reflected in the price paid by the NHS or local commissioners, is subtracted in order to derive the value of the service (i.e. we calculate the net benefit, not the gross value).
- The impact estimates are based on a conservative approach:
  - Where we rely on assumptions, we take a prudent view so that our results can be seen as towards the lower bound of the value of community pharmacy; and
  - We only include those impacts for which sufficient evidence is available to produce a reliable estimate: where there is a lack of evidence or general uncertainty, we exclude these impacts in our main estimates.
- In some cases lack of evidence means that some of the more indirect impacts of a service cannot be estimated reliably. Where these omitted impacts have the potential to be material in terms of patient health outcomes and pressure to the health system, we have developed indicative estimates of the potential scale of the impacts. In doing this, we recognise that it is difficult to generate robust assumptions on which to base these calculations.
- We only estimate the value of a subset of 12 services provided by community pharmacy: as explained in the previous section, this means that the total impact estimate in this report does not represent the overall value of community pharmacy.

Public health

Table 4 summarises the key results from our analysis of the value of community pharmacy's public health services. It shows that:

- The overall net value of the services delivered is estimated to be £2,740 million: a short term benefit of £874 million and a long term benefit of £1,866 million.
- The largest share of the benefits (almost half) comes from supervised consumption services (SC), in particular from the long term avoided costs for the public sector. This is driven by the high avoided costs of premature deaths, criminal activity and lost economic output. The short term avoided costs from overdose incidents and poisoning of non-users are also material.
- The short-term value of needle and syringe programmes (NSP) is over £141 million, driven by the avoided costs to the NHS from treatment costs. This assessment of avoided costs is based on our assumption of how patients would interact with alternative delivery channels in the counterfactual scenario.

- The volume of community pharmacy service users and the efficiency benefits for the NHS are comparatively modest for emergency hormonal contraception (EHC).
- For some services, the short run NHS efficiency benefits are negative. This occurs where the alternative treatment pathway (including patients no longer receiving treatment) is cheaper than the fee currently paid to pharmacies. However, any apparent savings this drives are substantially more than offset by the impact on other avoided NHS costs.
- The public health services are not available from pharmacies in all parts of England: EHC covers an estimated 86% of the population, NSP is available for 73% and SC covers 86%. Hence, were these services to be expanded further, additional savings would likely accrue to the NHS and further value would be created.[19]

Table 4: Estimated value of public health services by stakeholder (England, 2015)

Service	Number of users	NHS efficiency benefits (£ m)	Other avoided NHS costs (£m)	Other avoided public sector costs (£m)	Wider society benefits (£m)	Patient benefits (£m)	Total net value (£m)
Emergency hormonal contraception	375,060	£7.7m – short term	£8.7m – short term	£6.3m – short term	£0.5m – short term	£1.6m – short term	£24.9m – short term £140.8m – short term
Needle and syringe programmes	234,820	-£4.9m – short term	£145.7m – short term	×	£514.3m – long term	×	£514.3m (*£25.7m annually over 20 years*) – long run
Supervised consumption	176,110	-£13.8m – short term	£87.3m – short term £172.4m – long term	£321.0m – short-term £794.9m – long term	£313.1m – short-term £384.6m – long term	×	£707.6m – short term £1,352.0m (*£67.6m annually over 20* years) – long term
Total							**£873.5m – short term** **£1,866.3m – long term** ***(£93.3m annually over 20 years)***

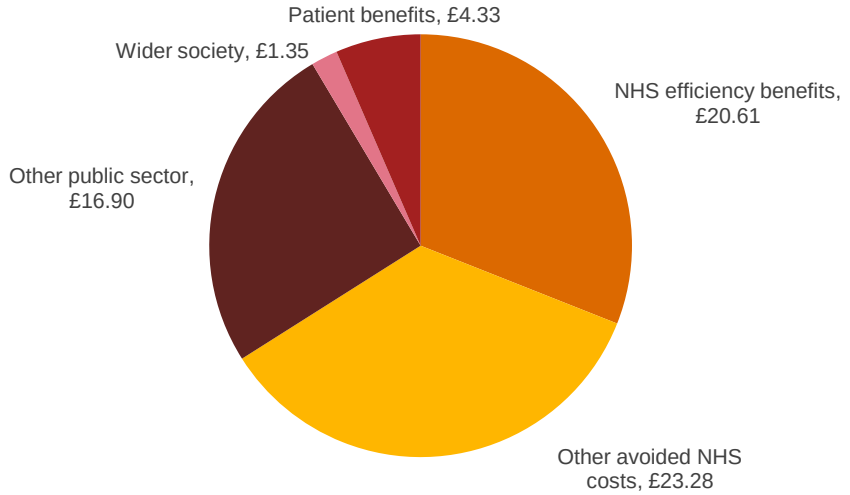
Key:
× = *Impact included within impact pathway but not assessed (due to lack of data, methodological challenge or immateriality)*
Short term = *Impact that occurs in 2015 (i.e. the year the pharmacy services were provided)*
Long term = *Impact that occurs from 2016 onwards (i.e. the period over which the benefits are expected to accrue is assumed to be 20 years)*
Source: PwC analysis

Our analysis of the value per user of community pharmacy's public health services shows that:

- The average value per user of EHC is £66.5 and the majority (66%) of the value accrues to the NHS (see Figure 5).
- The average value per user of NSP and SC services is much larger (see Figure 6).
- The NSP and SC services deliver an estimated long term **net** value per user of £2,800 and £11,700 respectively over a period of 20 year: a benefit of £600 and £4,000 in the short run and a further benefit of £2,200 and £7,700 in the long run.
- This demonstrates the potential value of increasing the coverage of these services across England.

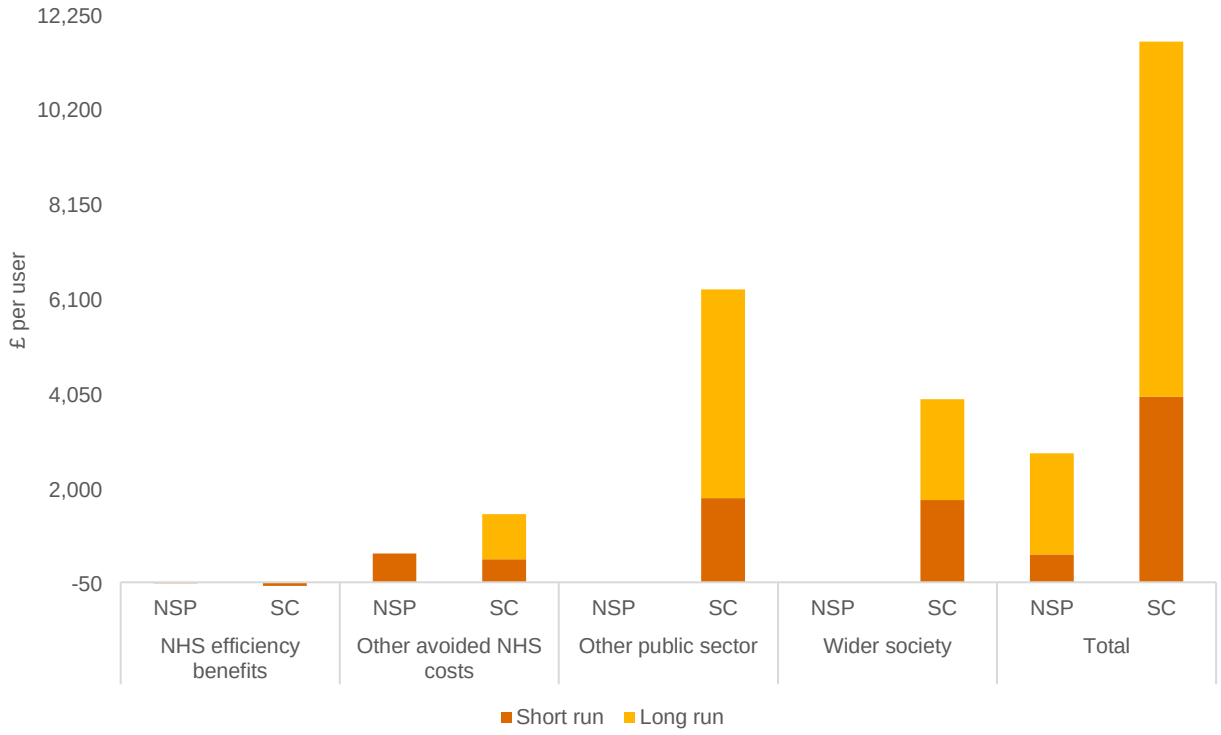
[19] From 1st of April 2013, the 152 'top tier' local authorities took on responsibility for commissioning the majority of public health services.

Figure 5: Estimated value of EHC services by stakeholder (£ per user, England, 2015)



Source: PwC analysis

Figure 6: Estimated value of NSP and SC services by stakeholder (£ per user, England, 2015)



Source: PwC analysis

Self-care support

Main analysis

Table 5 summarises the key results from our analysis of the value of community pharmacy's self-care support through its minor ailments service. It shows that:

- The value of the minor ailments services is estimated to be £1,193 million which is based on a gross benefit of £1,219 million offset by a cost of provision of £26 million.

- The main driver of the impact is non-commissioned minor ailments consultations which contribute £1,143 million as a result of the volume of consultations being significantly greater than for commissioned minor ailments services.
- The main benefits are the costs avoided elsewhere in the NHS system, in particular avoided GP appointments.
- There are also avoided costs to patients which result from delay in their recoveries and lost time through having to attend less accessible points of delivery in the health system. Both of these also result in costs to society through lost output as a result of increased sickness absence and time off work to attend the GP respectively.

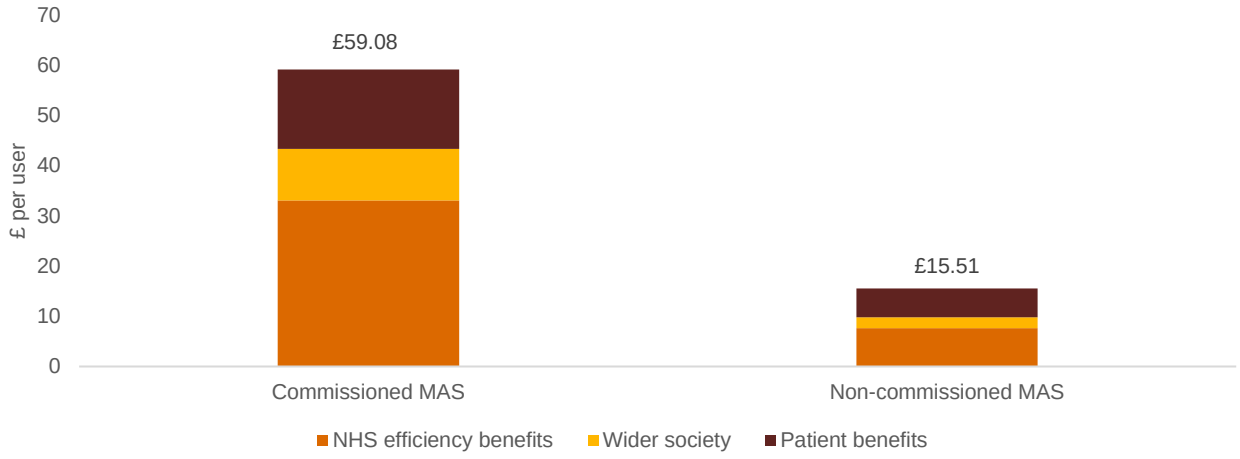
Table 5: Estimated value of self-care support by stakeholder (England, 2015)

Service	Number of interventions (m)	NHS efficiency benefits (£m)	Other avoided NHS costs (£ m)	Other avoided public sector costs (£m)	Wider society benefits (£m)	Patient benefits (£m)	Total net value (£m)
Commissioned minor ailments service	0.8m	£27.8m	?	n/r	£8.7m	£13.3m	£49.8m
Non-commissioned minor ailments service	73.7m	£561.6m	?	n/r	£158.5m	£423.4m	£1,143.5m
Total	**74.6m**	**£589.5m**	**?**	**n/r**	**£167.1m**	**£436.7m**	**£1,193.3m**

Key:
? = Impact included within impact pathway, and potential scale of impact outlined
n/r = Impact not materially relevant, and hence not included within impact pathway
Source: PwC analysis

- Figure 7 summarises the value per intervention of community pharmacy's self-care support through its minor ailments service. It shows that the commissioned and non-commissioned minor ailments services deliver an estimated **net** value per intervention of £59.08 and £15.51 respectively.

Figure 7: Estimated value of minor ailments services by stakeholder (£ per intervention, England, 2015)



Source: PwC analysis

Potential knock-on health impacts

Our main analysis assumes that the estimated 37.4 million service users who we expect would have done nothing if community pharmacy did not provide advice on minor ailments would recover after one day on the basis that they did not view their ailment as severe enough to attend a GP (or another NHS delivery point). In practice, it is possible that some of these would not recover this quickly without intervention. If their symptoms persisted, or even deteriorated, some could eventually visit a GP or an alternative NHS provider to seek support. This would give rise to additional costs for the NHS which are not captured in our main analysis.

To illustrate, if 15% of this cohort would have needed a subsequent GP appointment (in the absence of the community pharmacy service), this would imply an additional cost to the NHS of £253 million. Similarly, if we assume that 0.5% would have gone on to develop serious symptoms which would have required a stay in hospital, this would imply an additional cost to the NHS of £293 million. Table 6 summarises the potential knock-on health system savings that we have estimated which could be as much as £546 million.

Table 6: Summary of potential knock-on health impacts from self-care (England, 2015)

Treatment pathway	Cost per case (£)	% of patients affected	Health system saving range (£m)
GP appointments	£45	0-15%	£0-253m
Non-elective inpatient stay in hospital	£1,565	0-0.5%	£0-293m
Total			**£0-546m**

Source: PwC analysis

Medicines support

Main analysis

Table 7 summarises the key results from our analysis of the value of community pharmacy's various medicines support services. It shows that:

- The value of the services delivered is estimated to be £925 million: a gross benefit of £1,081 million offset by an estimated cost of provision of £156 million.
- The main driver of this is the avoided costs which result from community pharmacy identifying and resolving prescribing errors: this creates value of £542 million which largely accrues to the NHS as a result of avoided treatment costs and compensation payments. Administrative prescription clarifications are comparatively modest, contributing £10 million in value.
- Also, contributing significant value is community pharmacy's work to resolve drug shortages, principally by avoiding the need for additional GP appointments to prescribe an alternative drug and from time savings to patients.
- Additional value arises from the Advanced Services commissioned and funded by NHS England. The volume of transactions is generally much smaller than most other types of medicine support. Whilst a thorough evaluation of NMS exists, similar evidence is not available for MUR which means that we have not assessed the value of MUR on a comparable basis.

Figure 8 summarises the value per intervention of community pharmacy's various medicines support services. It shows that:

- The biggest benefit per transaction arises as a result of community pharmacy's role in managing prescribing errors (£498), largely through avoided GP appointments and reduced pressure on the health system.
- A number of areas of medicines support are associated with large volumes of activity, particularly medicines adjustments and delivering prescriptions. For these areas the benefit per patient is relatively modest, but the volume of activity indicates the scale and scope of the impact of community pharmacy in reaching a large share of the population.

Table 7: Estimated value of medicines support services by stakeholder (England, 2015)

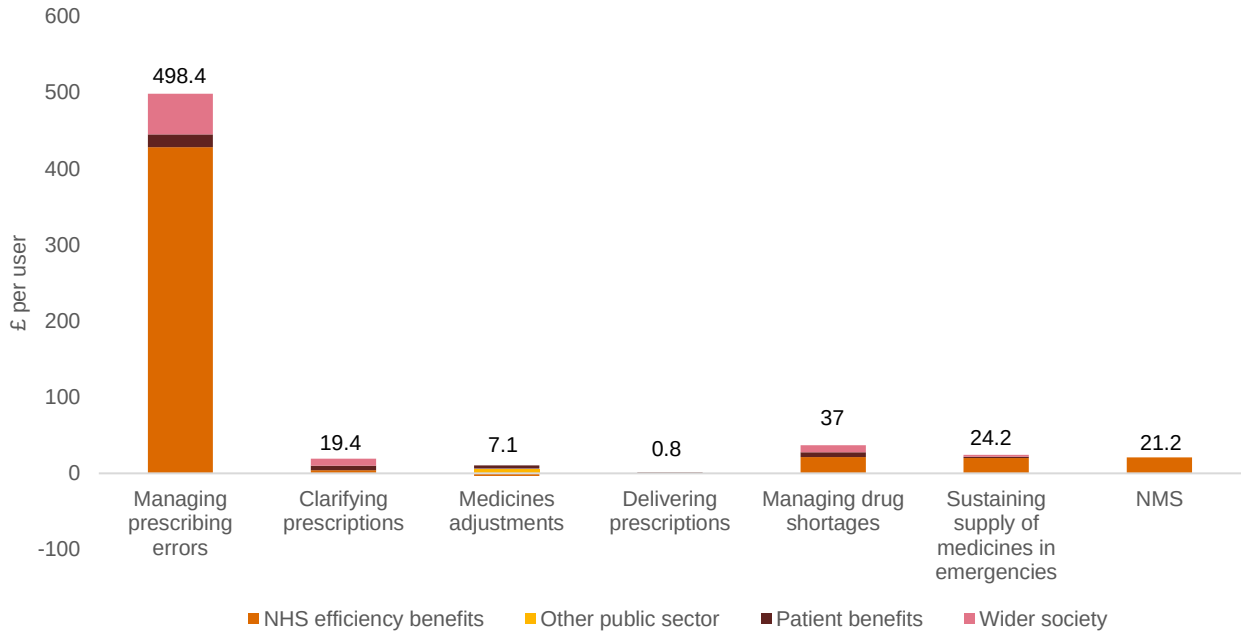
Service	Number of transactions (million)	NHS efficiency benefits (£m)	Other avoided NHS costs (£m)	Other avoided public sector costs (£m)	Wider society benefits (£m)	Patients (£m)	Total net value (£m)
Managing prescribing errors	1.1m	£466m (sum of efficiency benefits and other avoided costs[20])		×	£57.8m	£18.4m	**£542.4m**
Clarifying prescriptions	0.5m	£2.1m	×	×	£4.8m	£3.3m	**£10.2m**

[20] Due to the way we calculate the contribution of community pharmacy services related to prescribing errors, it is difficult to split the value between efficiency benefits and other avoided costs to the NHS.

Service	Number of transactions (million)	NHS efficiency benefits (£m)	Other avoided NHS costs (£m)	Other avoided public sector costs (£m)	Wider society benefits (£m)	Patients (£m)	Total net value (£m)
Medicines adjustments	19.5m	-£66.6m	?	£124.3m	×	£80.3m	**£138.0m**
Delivering prescriptions	46.2m	-£13.9m	?	?	×	£50.4m	**£36.5m**
Managing drug shortages	2.5m	£53.2m	?	×	£23.8m	£15.5m	**£92.4m**
Sustaining supply of medicines in emergencies	3.7m	£74m	?	×	£8.3m	£6.1m	**£88.4m**
New Medicine Service (NMS)	0.8m	£17.3m	?	×	×	×	**£17.3m**
Total	**74.3m**	**£532.2m**	**?**	**£124.3m**	**£94.7**	**£174.0m**	**£925.2m**

Key:
? = Impact included within impact pathway, and potential scale of impact outlined
× = Impact included within impact pathway but not assessed (due to lack of data, methodological challenge or immateriality)
Source: PwC analysis

Figure 8: Estimated value of various medicines support services by stakeholder (£ per transaction, England, 2015)



Source: PwC analysis

Potential knock-on health impacts

For some medicine support services, notably home deliveries, medicines adjustments, drug shortages and emergency supply of medicines, our assessment of them assumes that community pharmacy's service would otherwise be provided elsewhere in the health system, albeit less efficiently. We also assume that the change in the treatment pathway would have no impact on patients' health outcomes. If this is not the case, the reduced efficiency of the treatment pathway (e.g. requiring patients to collect their own medication or requiring care workers to supervise medicine consumption multiple times a day) could reduce patient engagement with the health system and/or reduce adherence. In these circumstances, a small proportion of patients could experience a negative health outcome and require additional treatment. Given the number of interventions made by community pharmacy in this area (e.g. 46 million home deliveries, 19 million medicines adjustments), only a small proportion of patients would need to be negatively affected for this to have a material impact.

Table 8 illustrates the potential scale of these impacts for home deliveries, medicines adjustments, drug shortages and emergency supply of medicines. Existing literature and data do not provide an evidence base for the likelihood of each knock-on health impact. As a result, we have illustrated the magnitude of the potential impact through applying a range of indicative assumptions. For example, we show that if just 1 in every 2,000 medicines adjustments has sufficient impact on a patient's medication regimen that they avoid the need to spend a year in residential social care, this would add an extra £557 million to the estimate of value for this service. The illustrative assumptions below suggest that the most substantial health system impacts could be in home deliveries and medicines adjustments, each of which could reach over £900 million at the top end of the range we illustrate. In total, across all four areas of medicines support, total health system cost savings could exceed £2 billion, were the upper bound of these assumptions to best reflect the reality for patients.

Table 8: Summary of potential knock-on health impacts from various medicines support services (England, 2015)

Service	Treatment pathway	Cost per case (£)	% of patients affected	Health system saving range (£m)
Delivering prescriptions	GP appointments	£45	0.5-2%	£0-42m
	Non-elective inpatient stay in hospital	£1,565	0-0.5%	£0-362m
	One year of residential social care	£57,200	0-0.02%	£0-529m
	Total			**£0-932m**
Medicines adjustments	GP appointments	£45	0-5%	£0-44m
	Non-elective inpatient stay in hospital	£1,565	0-1%	£0-305m
	One year of residential social care	£57,200	0-0.05%	£0-557m
	Total			**£0-906m**
Managing drug shortages	Non-elective inpatient stay in hospital	£1,565	0-0.5%	£0-9.6m
	Total			**£0-9.6m**
Sustaining supply of medicines in emergencies	GP appointments	£45	0-75%	£0-6.5m
	A&E attendances	£68	0-75%	£0-9.8m
	Non-elective inpatient stay in hospital	£1,565	0-75%	£0-225m
	Total			**£0-242m**
Total				**£0-2,089m**

Source: PwC analysis

Conclusions

Introduction

This section draws together the key conclusions of our assessment and comments on the areas where further evidence would be useful so that the implications can be properly understood.

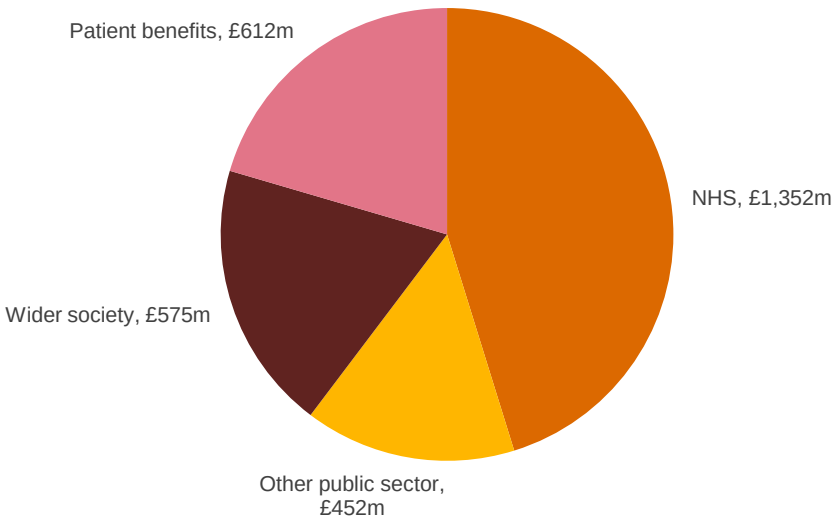
Conclusions

Our study estimates the value delivered by community pharmacy in 2015 as a result of the 12 services that we have assessed. We show that community pharmacy contributed £3.0 billion in (net) value in 2015, and its activities in that year are expected to deliver a further £1.9 billion over the next 20 years. This value is net of the £247 million in funding which we estimate that pharmacy received from central and local government in 2015 for providing the 12 services.

As explained earlier, this value does not cover all of the services provided by community pharmacy, just the 12 services which we have analysed. It is also based on conservative assumptions of how patients would respond without the service. We have also excluded any benefits where the data are unreliable. Furthermore, our main estimate excludes the potential knock-on health impacts of services where we have not been able to find good evidence.

Our analysis of how this value accrues to different stakeholders shows that the NHS itself is the biggest beneficiary (see Figure 9). We estimate that it received 45% of the short term value in 2015 - 37% through direct cash savings and 8% indirectly as a result of avoided NHS treatment costs. Patients receive around 20% of the benefit, mainly driven by avoiding additional travel time to alternative NHS settings to seek a similar service to the one provided more accessibly by community pharmacy. 19% of the benefit accrues to wider society, through increased output and avoided deaths as a result of community pharmacy interventions. Finally, other public sector bodies (e.g. local authorities) save over £450 million in the short-term (15% of total benefits) as a result of avoided pressure on other services, such as social care and justice.

Figure 9: Estimated distribution of the value of community pharmacy (England, 2015)



Source: PwC analysis

Overall, we estimate that the potential savings for the NHS resulting from the 12 community pharmacy services that we have considered were £1,352 million in 2015: community pharmacies contributed a gross value of

£1,599 million to the NHS, including cost efficiencies and other avoided costs, and received funding, which we deduct to estimate the net value, directly from the NHS and from local commissioners (£247 million). Of these, the majority was direct NHS cash savings as a result of cost efficiencies (£1,111 million), with an additional £242 million the result of avoided NHS treatment costs. In addition, a further £172 million of savings to the NHS are expected to occur in the long term as a result of these services having been supplied in 2015. The scale of these savings demonstrates the role that community pharmacy plays in providing effective, accessible and cost-efficient delivery of care.

Based on our analysis, which uses conservative assumptions and covers only 12 services, community pharmacy was supplied at no net cost to the public finances in 2015. More specifically, excluding benefits to patients and wider society, as well as knock-on effects on health, the gross value to the public sector, including both the NHS and other public sector bodies, of the 12 services we analysed was £3.0 billion of avoided costs, of which 68% accrued in 2015 (see Table 9).

This compares with estimated funding for community pharmacy in England by the NHS for these 12 services of £111.5 million, and estimated additional funding from local commissioners of £135 million. As shown in Table 9, this meant that the net impact on the public finances of these services was nearly £2.8 billion.

Further, total funding for community pharmacy in England provided by DH in 2015 was £2.8 billion. So, the expected amount of public sector spending saved directly as a result of the 12 services analysed, £3.0 billion, is enough, by itself, to offset the entire amount of public funding provided for community pharmacy in 2015. Effectively this means that all the other benefits of community pharmacy – including the patient, society and knock-on health benefits of the 12 services we analyse, and, more importantly, the benefits of the core NHS prescription service itself – can be seen as additional net benefits of community pharmacy that are provided at no cost to the Exchequer.

Table 9: Estimated impact on the public finances of the 12 services (England, 2015)

Service	Avoided costs for the NHS (gross, £m)		Avoided costs for other parts of the public sector (gross, £m)		Funding by NHS (£m)	Funding by local commissioners (£m)	Net impact on the public finances (£m)
	Short term	*Long term*	*Short term*	*Long term*			
Public health							
Emergency hormonal contraception	£24.3m	×	£6.3m	×	n/r	£7.8m	*£22.8m*
Needle and syringe programmes	£153.8m	×	×	×	n/r	£13.0m	*£140.8m*
Supervised consumption	£117.3m	£172.4m	£321.0m	£794.9m	n/r	£43.8m	*£1,361m*
Self-care support							
Commissioned minor ailments service	£31.7m	×	n/r	n/r	n/r	£3.8m	*£27.8m*
Non-commissioned minor ailments advice	£583.4m	×	n/r	n/r	£21.8m	n/r	*£561.6m*
Medicines support							
Managing prescribing errors	£472.2m	×	n/r	n/r	£6.1m	n/r	*£466.1m*
Clarifying prescriptions	£5.0m	×	n/r	n/r	£2.9m	n/r	*£2.1m*
Medicines adjustments	£0.0m	×	£124.3m	×	n/r	£66.6m	*£57.7m*
Delivering prescriptions	£0.0m	×	?	×	£13.9m	n/r	*-£13.9m*

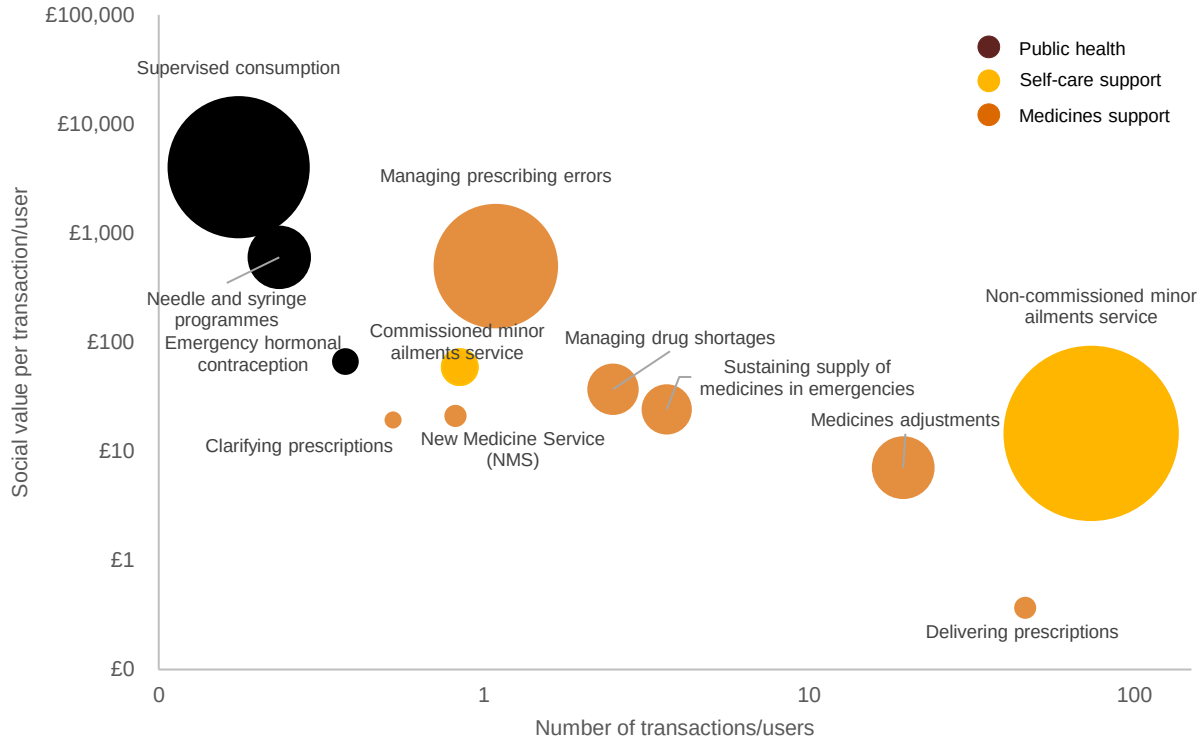
Service	Avoided costs for the NHS (gross, £m)		Avoided costs for other parts of the public sector (gross, £m)		Funding by NHS (£m)	Funding by local commissioners (£m)	Net impact on the public finances (£m)
Managing drug shortages	£59.2m	×	n/r	n/r	£6.0m	n/r	*£53.2m*
Sustaining supply of medicines in emergencies	£114.7m	×	n/r	n/r	£40.7m	n/r	*£74.0m*
New Medicine Service (NMS)	£37.4m	×	×	×	£20.1m	n/r	*£17.3m*
Total (£m)	**£1,599.0m**	**£172.4m**	**£451.6m**	**£794.9m**	**£111.5m**	**£135.0m**	***£2,771.4***

Key:
? = Impact included within impact pathway, and potential scale of impact outlined
× = Impact included within impact pathway but not assessed (due to lack of data, methodological challenge or immateriality)
n/r = Impact not materially relevant and hence not included within impact pathway
Short term = Impact that occurs in 2015 (i.e. the year the pharmacy services were provided)
Long term = Impact that occurs from 2016 onwards (i.e. the period over which the benefits are expected to accrue is assumed to be 20 years)

Source: PwC analysis

The value generated by each service that we have assessed varies significantly reflecting differences in the number of transactions/users and the value each time the service is delivered (see Figure 10). Focussing on the value added in the short term (2015), activities related to self-care support contributed the largest share (40%), followed by medicines support (31%) and public health (29%). However, this hides substantial differences in the manner in which this value is created. In terms of volume, the public health services under consideration affect around 0.8 million users. In contrast, in 2015, we estimate that around 74.5 million minor ailments service consultations and an additional 74.3 million interventions related to medicines support were undertaken by community pharmacies.

Figure 10: Value of community pharmacy services (England, 2015)



Source: PwC analysis

On the other hand, the value per transaction or service user is substantially larger for each of the three public health services. This reflects the nature of public health. It is also relatively large for managing drug shortages and prescribing errors because of the value of the risks that are protected. The value per transaction is much smaller for medicines support services such as medicines adjustments and delivering prescriptions. For these areas the magnitude of their contribution is driven by the large volume of activity rather than the value of each intervention.

On average, we estimate that the net value added by each of the 11,815 pharmacies in England in 2015 was more than £250,000 based on the in-year direct benefit. This rises to more than £410,000 if long term impacts are included as well and, as discussed above, the potential knock-on health impacts could be as large again as the short-run benefits. These values demonstrate the importance of community pharmacies to their local health systems, and the patients they serve, even when considering just a limited number of services.

Alternatively, these short-term benefits are on average nearly £3.00 per prescription in 2015 (rising to £4.86 if the long-term effects are included). Finally, the £3.0 billion of short-run net value generated by the services considered are equivalent to £54.61 for every resident of England. This increases to £88.67 when long-term effects are considered and again does not include the knock-on health impacts of self-care and medicines support.

We also estimate the additional benefit that could arise from indirect impacts on health outcomes as a result of community pharmacy services. Although there is limited evidence as to the scale of this impact, we believe it has the potential to be material. As an illustration, if we apply a conservative range of assumptions, this suggests that the indirect health system cost savings could be as large as the short-run value. Applying the illustrative assumptions outlined in Table 6 and Table 8 above, for example, implies an estimated value of £0.5 billion in 2015 for self-care support and £2.0 billion for medicines support on top of the value previously estimated.

Areas for further research

Our analysis has been undertaken using the best available data and literature. As has been demonstrated, these services have the potential to generate substantial value for the NHS, patients and wider society. As a result, it is important that a strong evidence base is in place to support any decisions relating to their future provision. However, for some services, there is an opportunity to improve understanding of the impact of pharmacist-led interventions, and to inform future policymaking. Without this research, there is a risk that resources are misallocated based on poor evidence.

Some key areas for additional research which we have encountered include:

- Research into the impact on health outcomes of medicine support, such as medication adjustments: these activities affected 74.3 million medicine support interventions, but their impact is in many cases poorly evidenced in the available literature;
- The health impact of prescribing errors is similarly poorly evidenced given the scale of both the volume (1.1 million errors in 2015) and the potential value, which we estimate could exceed £0.5 billion per annum; and
- Evidence around the cost-effectiveness of Medicines Use Reviews is similarly inconsistent, with much local evidence of positive effect but no conclusive evidence of impact on health outcomes. By contrast, the study by the University of Nottingham into the New Medicine Service provides the type of rigorous and robust evidence base which we believe would aid decision making.

Implications

The implications of our conclusions need to be considered in the light of the changes proposed by the DH and NHSE and the potential to develop the role of community pharmacy. As described above, even with limited scope and having applied conservative assumptions, we have identified more than £3.0 billion in net value generated by community pharmacy in 2015 alone. Some of this value, and the value generated by other activities undertaken by community pharmacy, could be at risk if it is not properly accounted for in decision making. Similarly there may be an opportunity for targeted interventions to materially increase this value by

expanding the scope of community pharmacy's role. As a result, it is important to assess robustly the significance of any proposed changes to the support and delivery of these services.

Specifically, it is important to consider how the current value of community pharmacy would potentially be:

- Affected by the changes proposed by the DH and NHS England; and
- Enhanced in the future by improving and extending the services provided by community pharmacy, for example by implementing the PSNC's service development proposals.[21]

Assessing the effects of the DH/NHSE proposals

The first issue requires an assessment of four key issues:

- The likely impact on value if funding is cut; in particular the effects of changes in accessibility, either as a result of fewer community pharmacies or reduced opening hours;
- Which services are likely to be most affected;
- Where the impacts are most likely to fall, especially within the NHS and other parts of the health system; and
- How the DH and NHSE could take steps to understand the implications so that they can make the decisions which will maximise future value.

Assessing the implications of an enhanced role for community pharmacy

Understanding the potential for generating additional value by improving and extending the services provided would require an assessment of the likely implications of the PSNC's proposals, specifically the extent to which they might build on the value identified. Similarly, it must be understood which stakeholders – especially the NHS – would be likely to benefit and what DH and NHS England could do to maximise the benefits.

Potential areas for increased provision and, therefore, greater value, including more cost savings for the NHS, are:

- More widespread public health services;
- A nationwide minor ailments service; and
- Expansion of the scope of NMS and 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.

In thinking about these questions, it is important to note that our analysis only considers some services of community pharmacy, and it does not examine what the effects of the DH/NHSE changes might be. We can therefore only offer a view on how our evidence might be used in a thorough review of the implications of changes to the financing and organisation of community pharmacy. It is not clear whether some or all of the benefits we have identified would be lost, but it is clear that there is a possibility that reduced funding might result in a reduced volume of some of the services we have analysed.

[21] PSNC (2016). PSNC Update: Service development proposals published, February. Available at: http://psnc.org.uk/our-news/psnc-update-service-development-proposals-published/