ABSTRACT

Background

Pharmacy has experienced both incomplete professionalization and deprofessionalization. Since the late 1970s, a concerted attempt has been made to re-professionalize pharmacy in the UK through role extension – a key feature of which has been a drive for greater pharmacy involvement in public health. However, the continual corporatization of the UK community pharmacy sector may reduce the professional autonomy of pharmacists and may threaten to constrain attempts at reprofessionalization.

Objectives

The objectives of the research: to examine the public health activities of community pharmacists in the UK; to explore the attitudes of community pharmacists towards recent relevant UK policy and barriers to the development of their public health function; and, to investigate associations between activity, attitudes and the type of community pharmacy worked in (e.g. supermarket, chain, independent).

Methods

A self-completion postal questionnaire was sent to a random sample of practicing community pharmacists, stratified for country and sex, within Great Britain (n=1998), with a follow-up to non-responders 4 weeks later. Data were analyzed using SPSS (v12.0). A final response rate of 51% (n=1023/1998) was achieved.

Results

The level of provision of emergency hormonal contraception on a patient group direction (PGD), supervised administration of medicines and needle exchange schemes was lower in supermarket pharmacies than in the other types of pharmacy. Respondents believed that supermarkets and the major multiple pharmacy chains held an advantageous position in terms of attracting financing for service development despite suggesting that the premises of such pharmacies may not be the most suitable for the provision of such services.

Conclusions

A mixed market in community pharmacy may be required to maintain a comprehensive range of pharmacy-based public health services and provide maximum benefit to all patients. Longitudinal monitoring is recommended to ensure that service provision is adequate across the pharmacy network.

FOOTNOTES

[a] Several letters and emails were sent to the PSNI asking for the required registration information. However, no response was forthcoming therefore Northern Irish pharmacists were removed from the sample.

[b] The services listed are commonly perceived, as was identified in pilot studies, to be the “public health services” that pharmacy provides. The authors in no way claim that all the listed services are “public health services” in the widest sense of the new public health agenda.

BACKGROUND

In the United Kingdom (UK), community pharmacists have often been described as the most accessible of health professionals.[1-3] This accessibility can, at least in part, be attributed to the operation of community pharmacies in a retail environment. Pharmacies can only continue to function while they are profitable. This context has fostered a tension between the desire of pharmacists to provide a health service and the necessity to operate a profitable business.

The corporatization of community pharmacy

Historically, most community pharmacies in the UK were owned by self-employed community pharmacists. However, this pattern of ownership has been altered markedly by the takeover of independent pharmacies by larger pharmacy chains and, most recently, by supermarkets (at the time of writing less than 42% of pharmacies in England and Wales are now part of chains of 5 or fewer outlets compared to 66% in 1994 – see Figure 1).[4 5] This growing 'corporatization' of the community pharmacy sector has seen multiple pharmacy chains, and now supermarkets, assume a position of predominance in terms of the provision of pharmaceutical services.

Figure 1 shows an uncharacteristic increase in the number of pharmacy outlets between the years 2004-2005 and 2006-2007 (an increase of 398 outlets for the two years compared to a net decrease of 68 pharmacies for the

previous 10 years). While the number of independents fell by 321, the number of chains increased by 719. In 2003, the Office of Fair Trading (OFT) – a Government department which is ostensibly responsible for making markets work well for consumers – published its report "*The control of entry regulations and retail pharmacy services in the UK*".[6] The OFT recommended the abolition of regulations governing the awarding of National Health Service (NHS) dispensing contracts which enable a retail pharmacy outlet to dispense NHS prescriptions (approximately 80% of the average community pharmacy's turnover is generated by NHS prescription business).[7] The regulations had been in place since 1987 and had ensured the maintenance of outlets at a relatively steady level ever since (see Figure 1), thus ensuring a fairly uniform community pharmacy network throughout the UK.

Of 542 applications awarded contracts from 2005-06 to 2006-07 under the exemptions introduced in response to the OFT report, 15% (n=84) were awarded to pharmacies meeting the criteria for out of town, large shopping developments (that is developments over 15,000 square meters – which applies to many supermarkets) and 77% (n=415) were awarded to pharmacies proposing to open for 100 or more hours a week (again, applicable, but not exclusive to, supermarkets).[5 8] These data suggest that the relaxations to the Control of Entry Regulations have further facilitated the development of the corporate pharmacy sector.

Corporatization and professionalism

As an organization, such as a pharmacy chain, grows in complexity, it is forced to adopt distinct working practices in order to operate economically, effectively and competitively. Profits are maximized by the rationalization of products and services. Ritzer (2000) has coined the term “McDonaldization” to illustrate that the policies and practices adopted for efficient, routinized production of fast food pervade into other organizations, including those in the healthcare sector.[9] Harding and Taylor (2000) have underlined how the four dimensions of rationality highlighted by Ritzer (2000), namely Efficiency, Predictability, Calculability and Control, are evident in corporate pharmacies in the UK.[9 10]

Efficiency is achieved through standardisation and rationalisation of products and services. For example, there is a production line approach to dispensing with technicians each completing a small part of the process, a process set to become further rationalised by new technologies such as electronic transfer of prescriptions and robotic dispensing systems. *Predictability* is achieved by standardising services, products and pack sizes, so that all outlets – all of a uniform design – offer identical “experiences”. Employees follow written protocols to ensure uniformity of service – routinizing even interactions between pharmacists and clients.[11] *Calculability* comes from the commodification of medicines (i.e. medicines are sold as commodities on the basis of cost rather than on quality and efficacy). *Control* is exerted by minimising the skilled activities of the workforce. Employees undertake simple, clearly defined tasks in accordance with written procedures whilst technology is used whenever possible.[10]

The changing patterns of pharmacy ownership have implications for pharmacy's claim to professional status. The predominance of the multiple pharmacy chains and supermarkets has led to a proportionate increase in employee pharmacists at the expense of independent pharmacist-proprietors. With an increasing number of pharmacists being recruited as employees of major corporations, it is argued that the professional autonomy of these pharmacists is challenged. As Harding and Taylor (1997) state:

> "*Successful large bureaucratic organizations require rational and routinized procedures for maximizing efficiency, and this is reflected in their delivery of rationalized, standardized pharmaceutical services dictated by company policies. Thus the autonomy of pharmacists employed in such organizations to practice discretion in their occupation is precluded*" (p556).[12]

The rationalization imposed by corporate pharmacy has been such that some pharmacists have non-pharmacist line managers and may be required to undertake 'general shop duties'.[13] It is argued that a future breed of "*McPharmacists*" may be subjected to de-skilling and ultimately perform solely routinized activities for comparatively little remuneration.[10 14]

However, corporatization was just one of a series of developments that threatened the professionalism of community pharmacists. Throughout the twentieth century community pharmacy was subjected to widespread erosion

of its traditional functions. Massive increases in prescription volumes and the transference of the responsibility for drug manufacture from pharmacists to the pharmaceutical industry – allied to technological advances such as the introduction of pharmacy computer systems and the repackaging of drugs from loose pots of one thousand or more into standardized original packs (of 28 days duration for example) – have led to the automation of tasks within pharmacy which has, in turn, undermined the traditional basis for its claim to professional status.[15 16] Additionally, the trend of making drugs increasingly available for purchase from non-pharmacy outlets (such as petrol filling stations and grocers), reduces the drugs to a commodity, with the connotation that no associated 'expert' supervision and advice is required.[17] By the late 1970s there was recognition that community pharmacy in the UK was in trouble. Community pharmacists found themselves over-trained for what they did and under-utilized in relation to what they knew.[18]

Reprofessionalization

The profession's response to the loss of function and the resultant stress and role ambiguity was 'role extension' as part of a movement toward 'reprofessionalization'.[15 19] The process of reprofessionalization manifested itself primarily in a gradual shift away from the technical paradigm (i.e. drug procurement, storage and compounding) toward an entirely different paradigm: one that emphasizes a disease and patient-orientated approach to pharmaceutical decisions.[19 20]

Anderson (2002) argues that, in the UK, a significant part of the reprofessionalization of pharmacy took the form of a reclaiming of the pharmacists' traditional role in health promotion.[21] Indeed, the gamut of pharmacy policy documents published in the UK since the mid-1980s would appear to support this thesis.[22-27] In addition to the pharmacists' role in health promotion, a number of health improving or harm reducing services have been categorized, certainly within the profession, as constituting pharmacy's public health function (see Table 1). Recent developments have seen an expansion in the provision of diagnostic testing (e.g. blood pressure, diabetes etc.) through pharmacies, a function set to be reinforced by the provision of a nationwide (England) programme of 'vascular health checks'.[27] Furthermore, changes in policy, law and contractual frameworks have led to the reclassification of a growing number of prescription-only medicines (POMs – preparations that are available only on a prescription issued by an appropriate practitioner) as pharmacy medicines ("P" medicines – preparations which are available in a pharmacy without a prescription, under the supervision of a pharmacist), the introduction of patient group directions (PGDs) to allow pharmacy supply of POMs to specific patient groups without the requirement of a physician's prescription and the introduction of a limited number of pharmacist-prescribers – first on a supplementary basis to physicians, but now also as independent prescribers.

In 1994, health promotion became a contractual obligation for community pharmacy with remuneration being received for the display of health promotion materials (posters and leaflets). The obligation for pharmacists to

be involved in health promotion was consolidated in the 'new' (2005) contractual framework for England and Wales with 'public health' (in terms of healthy lifestyle promotion) designated as an 'essential' service obliging each pharmacy to take part in six public health campaigns (again, principally health promotion), coordinated by the local Primary Care Organization (PCO – local NHS organization), each year. Furthermore, many services that contemporary debate designates as contributing towards pharmacy's public health function (i.e. services for drug misusers), are included in the 'enhanced' services category introduced under the new contract and therefore provision of these services by pharmacy is dependent upon the commissioning decisions of local PCOs.[28]

Enhanced service provision under the new pharmacy contract. The development of the public health function of community pharmacists, as part of the extended role, has been focused on individual-level intervention and service provision. Pharmacy has been criticized for this focus and for a reluctance to engage with the arguments surrounding the structural and political causes of ill health within communities.[29] However, no practical suggestions of how pharmacy can contribute at a more macroscopic level are suggested and it is difficult to envisage how pharmacy's public health function could develop any differently.

As stated previously, since 2005, many of the services that contemporary debate in the UK deems as pharmacy's 'public health services' have been located in the 'enhanced' services category of the pharmacy contract (i.e.

services which have to be commissioned by local PCOs on the basis of need). While little data are currently available on enhanced service provision, the data that are in the public realm suggest that the commissioning of enhanced pharmaceutical services has been modest.[30 31] No data are available to indicate variations in service provision under the new contract between the different types of pharmacy (e.g. supermarket, multiple, independent) although one study suggests that pharmacists working in large, national companies were most enthusiastic about the new contract.[32]

Limits to reprofessionalization presented by corporatization

As community pharmacists have sought to develop an extended role through the provision of health improvement/harm reduction services, there has been some opposition from General Practitioners (GPs – 'community physicians') who have countered what they perceive to be encroachment from pharmacists onto both their economic and professional turf, viewing this as a threat to their status as the predominant profession in the medical division of labour.[18 33] However, Edmunds and Calnan (2001) believe that the role extension of community pharmacists is more accurately interpreted as a bid for survival rather than any threat to the dominance of GPs.[34]

However, opposition to the extended role as a reprofessionalization strategy is in some part fuelled by the corporatization of the community pharmacy sector. Denzin and Mettlin (1968) argue that the commercial interests of pharmacy owners are inconsistent with the altruistic attitude of the service ideal of

professions.[35] It has to be acknowledged however, that all professions are paid – some, such as lawyers and physicians, are generally paid handsomely. What distinguishes these professions from pharmacy is that a pharmacist-proprietors' remuneration is based on trading as opposed to the levy of a fee. Community pharmacists operate in a commercial environment and, as traders, their *raison d'être* is to sell – not whether the customer requires or is in anyway poorly served by the sale. Physicians are likely to be unwilling to work in partnership with individuals who they believe have a focus on profit-generation: a focus which may possibly be detrimental to 'their' patients.[36-39] To compound this, pharmacy has a uniprofessional culture which reinforces the professional isolation of pharmacists by understating the value of partnerships.[40]

Jesson and Bissell state that attempting to "graft" a public health mindset onto pharmacists, as required amid the current direction of role extension, operating within a commercial environment is, in their opinion, contradictory.[29] Indeed, the commercial nature of the sector may impact negatively on pharmacy's reputation. Companies are sensitive to public opinion and may react to please shareholders rather than patients.[41 42]

The corporatization of the community pharmacy sector also impacts on the functions of the pharmacist. The Royal Pharmaceutical Society of Great Britain (RPSGB – the professional and regulatory body for pharmacists in England, Scotland and Wales) has developed a number of initiatives (e.g. *Pharmacy in a New Age* – PIANA) aimed at developing the pharmacist's

professional function.[23] However, the rise of corporate pharmacies has made it increasingly difficult for the RPSGB to exert influence across the community pharmacy sector. For example, despite concerns from within the profession that pharmacists are not being given adequate breaks during working hours, potentially leading to an increased number of dispensing errors, the RPSGB has proved ineffectual in ensuring its members have the working conditions and support necessary to promote and develop professional practice (although its ability to do so was seriously curtailed by defeat in the Jenkins Case of 1920 which, to a significant extent, prohibited it from representing the interests of its members).[43-45] Taylor and Harding (2003) argue that the community pharmacy sector is characterized by a dualistic approach to service delivery: "*corporate pharmacies maximize profit through economies of scale and rationalization, independents pursue profit maximization primarily by service delivery*" (p143).[14]

OBJECTIVES

The aim of the research presented in this paper was to explore how the type of pharmacy in which pharmacists were employed (supermarket, multiple, large chain, small chain, independent) influenced the data collected under the following objectives:

1. To describe the public health activities of UK community pharmacists in 2006;

2. To explore the attitudes of community pharmacists towards pharmacy's ability to compete effectively for funding to provide services that meet public health needs identified by local PCOs; and,
3. To explore the attitudes of community pharmacists on the potential of various factors to act as barriers to the development of community pharmacy's public health function.

METHODS

A survey design was considered a suitable strategy to explore various issues surrounding the development of the public health function of community pharmacists. Initial interviews were conducted with six pharmacy and public health 'key players' identified during a comprehensive literature review. Based on the findings of the literature review and the initial interviews, a self-completion postal questionnaire was developed. This was piloted and administered to Directors of Public Health and Chief Pharmacists in all the PCOs of the UK (the results of this phase of the study are not discussed here but are available elsewhere).[46]

This first questionnaire was then amended to reflect a community pharmacist population and piloted on a convenience sample of nine community pharmacists which reflected the breadth of community pharmacy practice (i.e. employed and self-employed pharmacists, pharmacists working in supermarket pharmacies, multiple pharmacies and independent pharmacies).

The questionnaire comprised four sections and contained a total of 17 questions. The first section concerned occupational details. Respondents were asked to indicate which of the following titles most closely corresponded to the job they held during data capture:

- Proprietor/owner
- Manager
- Relief pharmacist
- Second pharmacist
- Locum
- Non-store based pharmacist
- Other (respondents selecting this option were asked to specify their job title).

This question was used to filter respondents to the appropriate part(s) of the questionnaire.

In this section, respondents were also asked to indicate which type of pharmacy they had most regularly worked in during six months preceding data capture:

- Supermarket
- Multiple (200 outlets or more)
- Large chain (more than 20 outlets but less than 200)
- Small chain (20 outlets or less but more than 5)

- Independent (5 outlets or less).

The second section of the questionnaire focussed on “pharmacy public health activity” – i.e. health improving measures/schemes provided through community pharmacies. A list of 18 different services (see Table 2)[b], derived from the literature – most noticeably the two PharmacyHealthLink (a charity which advocates a greater role for pharmacy in public health) Evidence Bases[47 48] – the preliminary exploratory interviews, and the pilot work was utilised. Respondents were asked to select one of four possible options:

- Yes (i.e. the service is being provided)
- No (i.e. the service is not being provided)
- Planned for the future (i.e. the pharmacy is planning to provide the service in the future)
- I do not think that this is a public health role.

Section three examined attitudes towards pharmacy’s involvement in public health, including opinions on recent pharmaceutical and NHS policy developments, and beliefs on advantages and disadvantages in the development of the public health function of community pharmacists. In this section, community pharmacists were asked to indicate on a three-point scale (“pharmacy will”, “pharmacy may” and “pharmacy will not” – plus an “unsure” option) if they believed that community pharmacy would be able to compete effectively with other healthcare providers for access to funding to develop services that met public health needs identified by local PCOs.

A number of potential barriers to the development of the public health function associated with community pharmacy practice were identified from the literature and preliminary interviews, and further refined after the pilot study. In addition, respondents were given the opportunity to add “other” barriers as they saw fit. The factors listed were:

- Time constraints
- Lack of available funding
- Unsuitable premises
- Lack of knowledge
- Lack of training opportunities
- Lack of understanding of public health
- Lack of awareness of the social model of health
- Unwillingness of pharmacists to leave the ‘comfort zone’ of dispensary
- Conflicts arising from commercial interests
- Pharmacy’s position on the fringes of the NHS
- Lack of communication between pharmacy and other health professionals/PCOs
- Ignorance of community pharmacy’s potential public health contribution at PCO level
- Pharmacy’s inexperience of the commissioning process
- Lack of a local, unified pharmacy organisation to bargain collectively for funding

- Inability of the Local Pharmaceutical Committee (LPC) to represent pharmacy effectively
- The removal of the obligation of PCOs to consult LPCs
- Lack of incentive for employee pharmacists.

Respondents were asked to indicate whether they thought the various factors constituted a “major” barrier, a “minor” barrier, or if the factor was “not a barrier” (they were also provided with the option of selecting an “unsure” option). The internal consistency, measured using Cronbach’s alpha, of the scales used in this section was 0.81. The exclusion of any of the items would not increase the alpha value (see Table 4).

The final section of the questionnaire recorded demographic information about respondents. Data collected were sex and age (respondents were provided with a “do not want to say” option for any details which they did not wish to impart). Such background information helped to build a demographic profile of the respondents (to assess how representative of the study population the sample was) as well as allowing analysis of the effects of these variables on attitudes towards pharmacist involvement in public health.

At the time of the study (August-October 2006) there were over 46,000 pharmacists registered with the regulatory body for pharmacy and pharmacists in England, Scotland and Wales, the RPSGB.[49] All pharmacists who wish to practice in the UK have to be on the RPSGB’s Register of Pharmaceutical Chemists, with the exception of pharmacists in Northern

Ireland (n≈1,800) who are registered with the Pharmaceutical Society of Northern Ireland (PSNI).[50] It was decided to survey a proportionate stratified sample of 2000 practicing community pharmacists.

The community pharmacist population was divided into strata – country of the UK and sex – and sampling from the strata was carried out using simple random sampling. This guarded against obtaining an unrepresentative sample. At this point the proposed sample still included pharmacists from Northern Ireland, however, these were later removed.[a] The final sampling frame was designed to ensure proportionate representation of all the strata in the final sample with 84.17% (n=1683/2000) of the sample resident in England, 10.38% (n=208/2000) resident in Scotland and 5.45% (n=109/2000) resident in Wales, 47.1% (n=942/2000) being male and 52.9% (1058/2000) being female.

Contact details for the 2000 practicing community pharmacists of the sample were sought from the RPSGB. However, only 1998 labels (per set) were received. The self-completion postal questionnaire was then administered to the sample (n=1998) with a follow-up to non-responders 4 weeks later. Returned questionnaires were checked for completeness. Although some item non-response was apparent, the levels were insignificant and it did not appear that respondents had experienced any real difficulty in answering any of the questions. Responses to closed questions were inputted into a bespoke database and analyzed in SPSS (version 12.0 for Windows). The

final data set was screened for errors by frequency checks which revealed all coded values fell within the expected ranges.

RESULTS

A total of 1023 community pharmacists returned their questionnaire – an overall response rate of 51%. Response was higher amongst the female subset of the sample (57%; n=597 returns/1056 possible returns) than the male subset (45%; n=426/942). Respondents approximated to the proportions intended in the original sample with 85% (n=869/1023) of respondents being registered in England, 10 % (n=98/1023) in Scotland and 5% (n=56/1023) in Wales.

Women accounted for 58% (n=590/1023) of all survey respondents. This figure is similar to the proportion of women (54%) on the Register of Pharmaceutical Chemists held by the RPSGB (figures obtained from [49]). However, the most recent Pharmacy Workforce Census[49] reported that 51% of the community pharmacy workforce (as opposed to the overall pharmacy workforce) were women.

Nine percent (n=88/1014) of respondents were under the age of 29. However, around a fifth of all pharmacists (20%), and more specifically community pharmacists (19%), were under 29 in 2005.[49] This suggests that pharmacists below the age of 29 were less likely to respond to the questionnaire. Conversely, a quarter (25%, n=258/1014) of all respondents

were aged 50-59 compared to just 15% and 19% of all pharmacists and community pharmacists respectively. Nine respondents chose not to indicate their age.

The following section details selected results from the study. A comprehensive report of all the findings of the wider research project is available elsewhere.[46]

Service provision

Community pharmacists were asked which 'public health services' were provided in the pharmacy in which they worked most regularly during the six months preceding the study.

Analysis showed relationships (Chi square test (χ^2) with $P \leq 0.05$, "this is not a public health role" category excluded – owing to small number of respondents selecting this option – to ensure conditions of the test statistic were met) between the provision of 14 different services and the type of community pharmacy most regularly worked in (independent: number of outlets (n) ≤5, small chain: $5 < n \leq 20$, large chain: $20 < n \leq 200$, multiple: $n \geq 200$, and supermarket). There was no relationship between the type of pharmacy worked in and the two essential services assessed namely health promotion on the premises and the collection of waste medicines. Furthermore, there was no association between the provision of the sale of emergency hormonal contraception (a retail transaction) over the counter and the type of pharmacy

worked in. Of the enhanced and 'unspecified' services assessed only the provision of minor ailments schemes showed no association with the type of pharmacy. Where an association between provision and type of pharmacy was observed, the percentage of pharmacists reporting the provision of services, sub-divided by type of pharmacy is shown in Table 3.

The ability of pharmacy to compete in a commissioning-led NHS

Amid the climate of NHS reform pursued by New Labour, most pertinently the gradual transition of the NHS from a provider to a commissioner of healthcare with increasing scope for private sector provision, community pharmacists were asked if they believed that community pharmacy would be able to compete effectively with other healthcare providers for access to funding to develop services that met public health needs identified by local PCOs. The type of pharmacy worked in most regularly during the six months preceding administration of the questionnaire influenced the attitudes of community pharmacists towards pharmacy's ability to compete effectively for funding (χ^2, P=0.001). Over a third of survey pharmacists working in small chains and independents (37% (n=21/57) and 33% (n=113/341) respectively) believed that pharmacy would not be able to compete effectively for funding. This figure falls to below 25% (23% (n=15/65) supermarkets, 22% (n=21/97) large chains) for the corporate pharmacy chains (i.e. those in chains of 20 or more) and to 18% (n=62/353) for pharmacists employed most regularly in multiples (chains with 200 or more outlets).

Barriers to the development of the public health function of community pharmacists

Respondents were asked their opinions on the potential of a variety of factors to act as barriers to the development of the public health function of community pharmacists. Associations were observed between the type of pharmacy worked in and the reporting of the potential of three out of the seventeen listed factors to act as barriers to development.

Pharmacists working most regularly in supermarkets (34%, n=22/64) and multiple pharmacy chains (41%, n=147/355) considered conflicts with commercial interests to be a more significant barrier than their colleagues working within small chains (23%, n=13/56) and independents (26%, n=89/336) (χ^2, P=0.000).

Conversely, for factors relating to representation (weak Local Pharmaceutical Committee (LPC) – LPCs represent all NHS pharmacy contractors within a defined locality (χ^2, P=0.003) – and the removal of the obligation of the PCO to consult the LPC when developing new, potentially pharmacy-based, services (χ^2, P=0.035)), the opposite was observed. Survey pharmacists who had worked in independents (53%, n=178/339 and 52%, n=170/330) most regularly in the six months preceding the study were more inclined to class these factors as major barriers than their counterparts in supermarkets (47%, n=30/64 and 39%, n=24/61) and multiples (49%, n=174/358 and 44%, n=154/350).

DISCUSSION

Based on the reporting of respondents, supermarket pharmacies appeared to be less likely than small chains and independent pharmacies to provide a home delivery service and domiciliary visits. Supermarkets also appeared to be less likely to provide emergency hormonal contraception (EHC) on a patient group direction (PGD), needle exchange schemes and the supervised administration of medicines (the most common medicines for which supervised administration is requested are used in the withdrawal treatment of drug addiction).

It is of note that the delivery of medicines to patients' homes offers no direct, short-term financial return and is operated primarily to both benefit patients and, hopefully, retain business in the long-term. The provision of EHC and services for drug misusers are controversial to certain subsections of the UK population (not to mention pressure groups and the print media) which may deter commercial bodies, reliant as they are on the patronage of the general public, from offering such services. This provides an example of the potential conflicts that can arise between operation in a commercial environment and the provision of professional services and adds weight to Denzin and Mettlin's criticism that the commercial interests of pharmacists are inconsistent with the altruistic attitude of the service ideal of professions.[35] One notable illustration of the commercial focus overriding the interests of patients was the decision of Tesco (the UK's largest supermarket group) to stop supplying EHC to persons

under 16 years of age without a prescription in response to concerns expressed by some of their customers, thus highlighting the fact that companies have a significant responsibility to their shareholders – a responsibility that might not exist with individual professionals.[42 51]

Another area where there appeared to be a particularly marked difference in levels of provision between the different types of pharmacy outlets were the screening services – cholesterol, diabetes and sexually transmitted infection (STI) testing. Corporate pharmacies possess the financial power, by virtue of their large turnovers, to be able to subsidize provision of these services – which are unlikely to generate significant profits – than small chain and independent pharmacies which appeared less likely to engage in the provision of screening services.

A larger proportion of supermarket and multiple pharmacies provided the only advanced service – Medicines Use Reviews (MURs) – than independents or small chains. It is important to acknowledge that these were introduced as part of the new contract for England and Wales in April 2005, only shortly before the commencement of the research and as commercial organizations, pharmacies have to adapt to the market, and the greater capacity of multiples allows them to adapt to the contractual changes much more rapidly than independent pharmacies. However in a further example of the low levels of professional autonomy afforded employee pharmacists, evidence is emerging of pharmacy companies pressuring pharmacists into conducting significant

numbers of MURs, even threatening disciplinary action if employee pharmacists fail to achieve the targeted number of MURs.[52]

While it appears that service provision varies based on ownership, these variations have a number of possible explanations. The variation could be dependent on the willingness of the contractors to offer the service, the ability – particularly in terms of capacity – of contractors to offer the service, or the appropriateness of the service for the location served by the pharmacy (i.e. there may be little call for a needle exchange scheme at an out-of-town supermarket pharmacy). Regardless of the explanation(s), it does mean that changes in the balance and composition of the pharmacy market could impact upon service provision. The exemptions to the Control of Entry Regulations introduced as a result of the OFT inquiry are beginning to have an impact (as can be seen in Figure 1). The exemptions effectively allow any number of supermarkets, provided they meet the exemption for floor space, extended opening hours or both, to automatically obtain a contract to provide NHS pharmaceutical services without the requirement to prove that the pharmacy is either necessary or desirable for a given community. The most conspicuous implication of this, as was recently highlighted by the Pharmaceutical Services Negotiating Committee (PSNC – the representative organization of community pharmacy on NHS matters) Chairman, is that less money is available for each contractor.[53]

Under the contractual framework, local enhanced services, commissioned by PCOs, will inevitably lead to variations in service provision between localities

631 due to the differing health needs of local populations. However, the results
632 from this study suggest that variation in service provision through community
633 pharmacy will also be observed between pharmacy outlets based on their
634 ownership (i.e. supermarkets, multiples, independents etc.).
635
636 Attitudinal elements of the survey suggested that community pharmacists
637 believed that the larger pharmacy chains and supermarkets, in effect
638 corporations with significant turnovers, would occupy a propitious position in
639 terms of attracting finance to develop services.
640
641 New Labour, consistent with its third way approach of avoiding socialist-style
642 state intervention while ostensibly ameliorating the worst excesses of
643 capitalism, has openly invited the private sector into the provision of NHS
644 primary care services by virtue of the commissioning process.[54] Pharmacy,
645 as a private provider of NHS services operating on the interface between
646 commerce and healthcare, would seem to be ideally placed to exploit these
647 reforms. Indeed, the seemingly unprecedented attention given to pharmacy in
648 Department of Health (DoH) policy documents would suggest that the
649 Government has identified pharmacy as a suitable partner.[24-27] Furthermore,
650 the multiples – with their capacity and responsiveness, allied to their
651 widespread geographical coverage – are attractive to partners (e.g. the
652 government) because of their national scope (organizing the provision of a
653 service through a single partner provider with 1000 outlets across the country
654 is considerably less complex than organizing provision of the service through
655 1000 independent pharmacies). For example, Boots, the UK's second largest

pharmacy chain, was selected as the DoH's preferred partner for Chlamydia screening through pharmacy which was piloted at all its London stores (over 200) from November 2005.[55]

Paradoxically, the results suggest that community pharmacists consider multiple pharmacy chains and supermarkets to have proportionally more outlets unsuitable for the provision of services specified by the new contract and that conflicts between patient care and commercial interests may be heightened within these pharmacies.

Furthermore, the results suggest that community pharmacists feel that factors relating to representation and financing will disproportionately affect smaller chains (i.e. smaller chains will find it more difficult to access funding, perhaps in part because of the inability to bargain collectively brought about by removing the obligation of PCOs to consult LPCs). Should the views of pharmacy owners and those working most regularly in small chain and independent pharmacy prove to be correct, the most salient implication of this is that, as highlighted previously, independent pharmacies will not be able to provide as comprehensive a range of services (including those services currently classified by the profession as 'pharmacy-based public health services') as the multiple chains and supermarket pharmacies.

Logic suggests that large corporations, with their financial muscle, widespread geographical coverage and efficient marketing and public relations departments, may attract a disproportionate amount of income through

commissioning processes. As chains of five pharmacies or less made up 41% of the retail pharmacy sector in 2006/2007 this could have severe implications for service provision across the sector.[5] If corporate pharmacy chains were to monopolize commissioning monies then the proportion of the global sum (total NHS funding for pharmacy) available to independents will be diminished; arguably hastening their demise. Additionally, an inability to attract funding has the potential to stifle the professional development of community pharmacists employed within independent pharmacies who may find themselves providing only a limited range of routine services in comparison to their corporate colleagues.

It is also worthy of note that independent pharmacies tend to be located in the heart of communities whereas supermarkets are more often found in out-of-town retail developments which are difficult to access without a car. Independent pharmacies are more accessible to those without private transport, disproportionately those with lower incomes.[7] Commissioning therefore has the potential to reinforce inequities in access to pharmacy-based services with those without access to a car, predominantly the socioeconomically disadvantaged, unable to visit supermarket pharmacies without considerable difficulty and/or expense. Furthermore, the corporatization of pharmacy may further reinforce these inequities by decreasing the numbers of independent pharmacies. With the current economic climate favoring the larger pharmacy chains and the concentration of pharmacies in affluent areas at the expense of areas of economic deprivation, variability in service provision between pharmacy outlets may

further increase the inequalities in access identified by the Inverse Care Law, which, in its simplest form, prognosticates that those most in need of health care (disproportionately the socioeconomically disadvantaged) are those who are least likely to be able to access it (the role of the market in reinforcing this should also be highlighted). This is an area which demands further research.[56-58]

While the data collected on service provision are robust, further research is recommended, in particular:

- The longitudinal monitoring of service provision through community pharmacy to assess:
    - The effects of increased levels of primary care commissioning on service provision (particularly amongst the independent pharmacy sector); and,
    - Variations in service provision between the different types of pharmacy to ensure that service provision is adequate across the pharmacy network so as to avoid any inequities in access for the general public.

The results of the study suggested several areas where further qualitative research is justified in order to provide a more nuanced understanding of the phenomena observed. With commissioning being forced to the forefront of NHS reforms, in-depth study of the attitudes of stakeholders to pharmacy's ability to compete for funding is merited. The reasons why community

pharmacists displayed a lack of confidence in the ability of community pharmacy to compete effectively for funding were not examined. Identification of such concerns may enable commissioning bodies to address these and promote greater engagement in the commissioning process by pharmacists, to the benefit of pharmacy itself, the NHS and the general public.

LIMITATIONS

Survey methodology, and the data collection instruments associated with them, possess inherent disadvantages and these are to be considered as limitations in this research. Structured questionnaires largely contain pre-coded response choices that may not be sufficiently comprehensive.[59] More specifically, self-completion postal surveys do not allow for detection of ambiguities in, and misunderstanding of, the survey questions (although pilot studies aimed to negate these possibilities).[60] There is no guarantee that the questions have been completed honestly and there is also likely to be a social desirability response bias – people responding in a way that shows them in a good light.[60 61]

Postal questionnaires tend to yield low response rates but the response rate to the questionnaire was satisfactory. This may be explained by the subject matter being of interest to respondents and the relatively high profile of public health at the time of the study. A further limitation of this research is the limited evidence-base available for consultation when designing the questionnaire. However, the preliminary interviews and the available literature

were used to inform the design of the questionnaire which was further refined as the research progressed.

A final point concerns questionnaire non-response. Ideally non-responders would have been contacted to ascertain reasons for non-response. Such data would have been useful to assess potential bias introduced into results as a result of certain characteristics of the respondents (i.e. did some members of the sample fail to return questionnaires because they were offended by a certain question/the questionnaire?). However, owing to time constraints, ethical approval limitations and data protection restrictions this was not possible.

CONCLUSIONS

The results of this study indicate that the provision of pharmacy-based public health services varies based on pharmacy ownership. The decreased levels of provision of certain services in certain types of pharmacy highlights potential conflicts between patient care and commercial interests. Furthermore, attitudes towards pharmacy's ability to compete effectively for funding to develop services, and the barriers to the development of the public health function, suggest that community pharmacists believe that corporate pharmacy chains may attract a disproportionate amount of financing from NHS commissioning processes.

A mixed market in community pharmacy may be required to maintain a comprehensive range of pharmacy-based public health services and, in turn, provide maximum benefit to all patients. The increased commissioning activity of NHS PCOs, allied to the increasing corporatization of community pharmacy may promote the maldistribution of health improvement/harm reduction services through community pharmacy in the UK. Longitudinal monitoring of service provision is recommended to ensure that service provision is adequate across the pharmacy network.

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TABLES

Table 1 Examples of public health roles for pharmacists (after Walker[40])

• Provide advice on self-care	• Provide unplanned teenage pregnancy support
• Provide advice to young mothers	• Support patients with chronic illness
• Provide support to develop effective parenting skills	• Provide advice on how medicines work
• Participate in health promotion campaigns	• Maintain patient medication records
• Promote drug misuse awareness	• Promote patient medication awareness
• Participate in needle exchange schemes	• Provide out-of-hours services
• Promote healthy schools	• Provide collection and delivery services
• Improve AIDS awareness	• Undertake domiciliary visits
• Provide sexual health support	• Facilitate disposal of waste medicines

946
947 **Table 2** Services included in the study
948

Service	Classification under 2005 Pharmacy Contract
Collection of waste medicines	Essential
Health promotion (HP) on premises	
Medicines Use Reviews (MURs)	Advanced
Supervised administration of medicines	Enhanced
Smoking cessation	
The supply of EHC on a patient group direction (PGD)	
Minor ailments scheme	
Needle exchange	
Palliative care services	
Out of hours services	
The supply of emergency hormonal contraception (EHC) over the counter (OTC)	*Retail transaction*[a]
Diabetes testing	Services not specified in the terms of the contract but provided through certain pharmacies
Cholesterol testing	
Blood Pressure (BP) testing	
Sexually transmitted infection (STI) testing[b]	
Domiciliary visits	
Home delivery of medicines	
HP off premises	

[a] The retail supply of EHC was included for assessment owing to the additional level of pharmacist involvement in these supplies (the pharmacist must assess the suitability of the supply to the patient and provide an additional level of counseling in comparison to the vast majority of 'P' medicine sales) and the focus given to pharmacy's role in reducing teenage pregnancy in policy documents.

[b] It should be noted that the multiple pharmacy chain Boots was selected as the Department of Health's preferred partner for Chlamydia screening through pharmacy which was piloted at all its London stores (over 200) from November 2005.

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952 **Table 3** Reporting of the provision of public health services through the different types of
953 community pharmacy by survey pharmacists
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	Percentage of respondents working most regularly in each type of pharmacy who reported provision of the service					Total (%)	P
	Supermarket (max n=65)	Multiple (max n=360)	Large chain (max n=97)	Small chain (max n=59)	Independent (max n=346)		
Home delivery	28.8	75.4	93.6	92.9	88.4	80.7	0.000
Supervised administration of medicines (i.e. methadone)	54.4	78.1	76.1	77.2	61.4	70.3	0.000
Smoking cessation	60.7	66.2	64.9	64.9	75.3	69.1	0.035
Medicines use reviews	75.0	78.1	68.1	50.0	55.7	66.9	0.000
The supply of emergency hormonal contraception on a patient group direction	36.4	50.0	43.8	52.7	50.8	48.8	0.050
Blood pressure testing	64.4	44.3	39.1	26.4	42.9	43.5	0.000
Needle exchange	5.7	30.4	33.3	38.5	32.4	30.9	0.021
Palliative care	19.2	21.0	32.9	30.4	33.6	27.7	0.000
Out of hours	28.3	22.1	17.9	20.8	30.0	25.6	0.000
Domiciliary visits	5.9	19.1	19.5	33.3	37.4	25.0	0.032
Diabetes testing	23.1	31.0	19.8	13.7	20.3	24.0	0.000
Cholesterol testing	3.8	36.5	13.8	15.1	15.6	23.5	0.000
Health promotion off of the pharmacy premises	7.8	9.0	8.6	6.4	14.5	10.9	0.016
Sexually transmitted infection testing	2.0	11.0	1.3	6.1	3.1	6.3	0.001

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957 **Table 4** Results of the internal consistency analysis between items
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Barrier	Cronbach's alpha value if the item is excluded
Time constraints	0.81
Lack of available funding	0.81
Unsuitable premises	0.81
Lack of knowledge	0.80
Lack of training opportunities	0.80
Lack of understanding of public health	0.80
Lack of awareness of the social model of health	0.80
Unwillingness of pharmacists to leave the 'comfort zone' of dispensary	0.80
Conflicts arising from commercial interests	0.80
Pharmacy's position on the fringes of the NHS	0.80
Lack of communication between pharmacy and other health professionals/PCOs	0.80
Ignorance of community pharmacy's potential public health contribution at PCO level	0.80
Pharmacy's inexperience of the commissioning process	0.79
Lack of a local, unified pharmacy organisation to bargain collectively for funding	0.79
Inability of the Local Pharmaceutical Committee (LPC) to represent pharmacy effectively	0.79
The removal of the obligation of PCOs to consult LPCs	0.80
Lack of incentive for employee pharmacists	0.80

Cronbach's alpha = 0.81

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961 **FIGURE LEGENDS**
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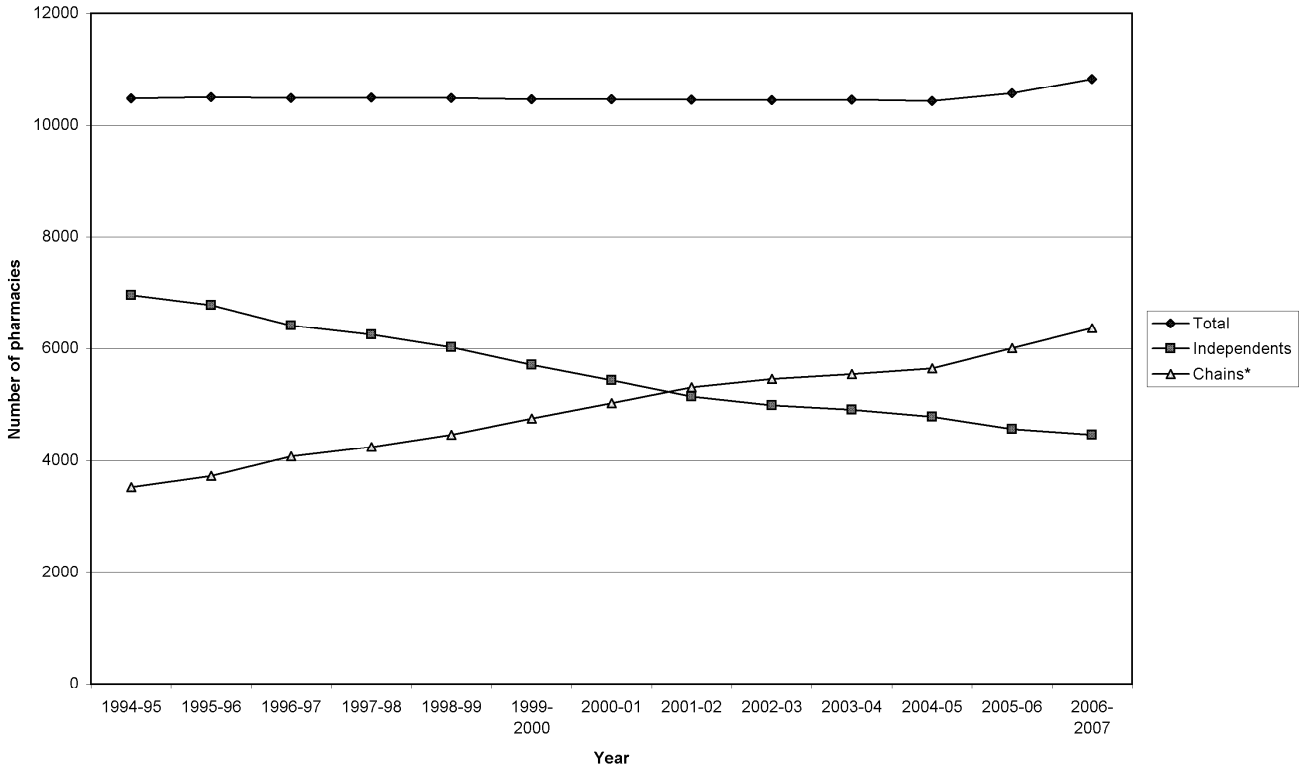
963 **Figure 1** Number of community pharmacies in England and Wales from 1994-95 to 2006-07


12000
10000
8000
6000
4000
2000
0
Number of pharmacies
1994-95
1995-96
1996-97
1997-98
1998-99
1999-2000
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-2007
Year
Total
Independents
Chains*

964