Professor David Wright

Having graduated and registered concurrently as a Bradford Sandwich Student, I experienced six months' community pharmacy training with Boots the Chemist, Metro Centre Newcastle and six months' hospital training within Hinchingbrooke Hospital in Huntingdon. Whilst the latter experience made me realise the potential of pharmacists in the provision of pharmaceutical care, the former provided my future career aspiration, enjoying the regular patient contact, the work life balance and salary that it offered. With a desire to experience different employment experiences on registration, I chose to work for Allen Lloyd's company which was in its expansion phase. This resulted in managing their pharmacy in York which at the time was their most northern branch.

After securing competitive PhD funding from the then Royal Pharmaceutical Society of Great Britain, I left Lloyds to work as a locum covering branches from Newcastle down to Barnsley and Grimsby to Rotherham. This was at a time when dispensing volumes were low, staffing levels were relatively high and locum rates were very attractive. It is probably viewed now as a halcyon period for community pharmacy. I loved my job and was excited by every new experience it gave me.

My PhD was to evaluate the potential role of the pharmacist in residential and nursing homes from the perspective of a community pharmacist. Having received no clinical training post-registration, I embarked on providing and evaluating a 'clinical' pharmacy service to 300 residents in 20 care homes over 2 years. This involved monthly medication review, biochemical and therapeutic drug monitoring and providing medicines advice and guidance on medicines storage and handling. I trained to take the blood samples and eventually worked closely with 20 care home managers and 5 GPs.

One overriding lesson from that time was that the quality of pharmaceutical care provided to patients in primary care was almost entirely dependent on the patient once a new medicine had been initiated. I noted that if a patient newly prescribed a medicine did not return for review or question their therapy then it was likely to remain the same. In care homes this frequently resulted in problematic polypharmacy, over prescribing and ultimately patient harm.

This was not due to negligence by prescribers but the fact that finding time to follow patients up was not a priority unless an obvious problem arose and with many competing demands for their time, GPs have to respond to the more immediate acute problems in preference to managing problems which have been seemingly resolved.

Many of my interventions undertaken within care homes were to question sub-therapeutic doses, question why treatments were continued when they had had no obvious effect, identification of the prescription of new medicines in response to side effects of other medicines and to provide simple advice on alternative therapies and formulations. On a number of occasions overdoses and medication errors were identified which were being treated with other therapies without resolving the underpinning problem. Most interventions did not require a detailed clinical knowledge but a keen interest and focus on medicines and their purpose.

I therefore, strongly believe that all patients receiving new therapy and polypharmacy need a pharmaceutical care advocate and that this role should be that of the community pharmacist. They are the only healthcare professional who interacts regularly with their patient and their representatives over the longer term and therefore are uniquely located within the natural patient pathway to intervene and provide pharmaceutical support. I strongly believe that with an appropriate funding model them community pharmacist should be the patient advocate focussed on optimising therapy at all stages. The New Medicines Service is a great initial step to supporting patients at the point of initiating as at it provides an early check for effectiveness, adverse drug events and adherence.

I believe however that the pharmacist's role should continue beyond this as patients frequently don't persist with their medicines, adverse events can occur at a later point and conditions deteriorate, consequently we should be assuming pharmaceutical care for chronic disease management.

Although seemingly endless studies are available, there is no strong evidence for clinical patient benefit being derived from one-off medication review in either primary care(1-3) or care home settings.(4, 5) Services which promote medication review in isolation continue to be commissioned because they do reduce medicine costs and the work associated with the repeating numerous medicines. Patient benefit has however been demonstrated when medicines review is delivered with support which is ongoing and sustained.(6)

Consequently, for the new Primary Care Networks (PCNs) to be effective then they need to work closely with community pharmacists who are able to provide ongoing care and support to patients as part of the structured medication review. PCN pharmacists also provide an opportunity for community pharmacists, as they should facilitate direct contact with their medical practice(s)

PCNs however cannot work effectively with community pharmacists who are overworked, stressed, focussed on medicines supply and resolving medicines shortages. They need community pharmacists who are in a position to focus on the patient and delivering the NHS agenda. Consequently, community pharmacists need to be working within a contract which enables this.

The government agenda for community pharmacy is currently focussed on public health interventions, efficient medicines supply and minor ailments management. The former can be delivered largely through healthy living champions and efficient medicines supply through better use of technology with greater autonomy given to pharmacy technicians.

The avenue to providing pharmaceutical care, other than for the support of the urgent care agenda, has been temporarily removed from community pharmacists in England although this is where I believe that greatest value can be provided by the network to both the NHS and patients. Whilst patients see community pharmacists primarily as their medicines suppliers, advisers on lifestyle and minor ailments, they are never however going to value or realise to potential that community pharmacists have to offer or fully respect the expertise which we hold.

I am a strong advocate of patient and public involvement in all activities, research, education and professional practice and believe that if the community pharmacy voice really wants to be heard we need to mobilise patients within everything we do and use their voice positively to support our case. They will only shout on our behalf if they believe that community pharmacy has something unique to offer to their healthcare.

I therefore undertook this review as an opportunity to strengthen the community pharmacy network and its voice nationally. My desire ultimately for community pharmacy to be that respected and sought after career path which I pursued in the 1990s.

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Dr Michael Twigg

I was in the first cohort of students to graduate from the MPharm at the University of East Anglia in 2007. My course was the first new pharmacy degree in almost 30 years. The teaching was innovative, exciting and engaging and right from day one. I qualified in 2008 after a pre-registration year working for Lincolnshire Co-operative Chemists in Lincoln. I worked for this company for most of my time at university and over the five years of my training managed to experience working in almost all their pharmacies. This gave me a solid grounding in community pharmacy practise that would prove invaluable when I was released onto the general public as a newly qualified pharmacist.

My community pharmacy practise led me back to Norfolk, where I joined the National Co-op Chemists as a relief manager in a variety of branches across the county. In these early months of practise, I could already see that the potential for community pharmacy was not being realised. I was dispensing high volumes, had little time to discuss important issues with patients and other healthcare professionals and frequently found it frustrating that I had lots of "knowledge" but that I wasn't able to apply this in a manner that I wanted. I also found the pressure to conduct MURs (in many companies and independents) at odds with my knowledge of the emerging literature at that time and what I was seeing in practice.

It was at this point that an accidental meeting between myself and David at UEA resulted in him offering me a PhD position examining the future role of community pharmacy in the management of long-term conditions. I jumped at the chance, viewing this as the opportunity to contribute to the changing role of the profession. As part of my PhD, I tested a diabetes drop in clinic for patients who were poorly controlled. From the preliminary work it was really clear from patients that two things influenced their ability and desire to engage with community pharmacy services. First, the degree to which the pharmacy appeared joined up to the GP. This was seen as important if they were to engage with the pharmacy and pharmacist as they wanted to be confident their care was being co-ordinated. Second, patients viewed the pharmacist as 'busy' and felt bad for taking them away from their 'day job' of dispensing. Both of these issues we now see time and again in the literature.

After completing my PhD in 2013, I was appointed a Lecturer in Primary Care Pharmacy and continued to focus my research on the role of the community pharmacy in identifying and managing long-term conditions. I have a particular passion for the community pharmacy as a whole and not just the pharmacist. Different services and roles can be undertaken by different members of the team and it is fundamental to the future of pharmacy that we get this balance and skill mix right. I have applied for many grants with the aim of securing funding to investigate different novel pharmacy services, which I have designed with colleagues from around the country. I have had a PhD student examining the role of community pharmacies in diabetes prevention and another PhD student is starting to examine how structured medication reviews can be designed and implemented effectively. This work excites me as an opportunity to change the landscape of community pharmacy to make it more patient focussed and integrated within the wider NHS.

I have received funding from the Community Pharmacy Futures group to evaluate their first four services: Four or medicines service, COPD screening service, COPD management service and the Pharmacy Care Plan service. I have also received part funding from Boots UK for one of my PhD students.

Over the last 12 years as a pharmacist I have continued to locum, only stopping my practise in mid-2019 to focus on my academic career. During this time, I have worked for Boots, Day Lewis, Tesco, various independent pharmacies, a small internet pharmacy and a hybrid pharmacy either as an employed member of staff or a locum. I also set up, and was the first Chair for, the Local

Practice Forum in East Anglia, covering Norfolk, Suffolk and Cambridgeshire so I am acutely aware of the geographical barriers that exist in rural locations.

I was excited and puzzled by the opportunity to work with David on this review. I was puzzled as my initial thought was that I knew relatively little about the work of the PSNC and LPCs. I have used PSNC resources and attended LPC events over the years but until starting this work had no concept of how fundamental these organisations are to the sector at both a national and local level. Being part of the review team has resulted in a new understanding of the nature of these organisations and the importance of enhancing the system, structures and processes to ensure community pharmacy is a sustainable and world-leading sector for many years to come.

Dr Hannah Family

I am currently a Chartered Psychologist, and a part-time Research Fellow at the University of Bristol, I also undertake research and teaching consultancy work. I am a psychologist but around 80% of my teaching and research is in pharmacy settings.

There aren't a lot of psychologists who work in pharmacy settings, and I am very proud to count myself amongst those who have worked in the field. I am as passionate about pharmacy as I am about psychology. I see enormous potential in community pharmacy for health promotion and supporting people with their medicines and to live well with long-term conditions, but I also see the strain that community pharmacy teams are under. For this reason my research and teaching in pharmacy focuses on two areas, (1) using the behaviour change and implementation science literature to inform novel, or adapted interventions in pharmacy and (2) using human factors and cognitive psychology to improve patient safety and/or support pharmacy teams with their day to day work.

My research has not been limited to community pharmacy, in fact my introduction to pharmacy research came before my PhD. I had just completed an MSc in Neuropsychology at the University of Bristol and I applied for a research assistant role, to complete an evaluation of non-medical prescribing in clozapine clinics in secondary care, this was in 2008 and the numbers of pharmacists independent prescribers were small. Looking back it was great to study their prescribing practice so early on. But in truth the reason I had applied for the role was that I wanted to learn more about schizophrenia and conducting qualitative research as till then I had solely conducted experimental studies in psychology labs. After this project, I went on to work on a couple of brief mixed methods evaluations of independent prescribing and shared care in local drug and alcohol services with Dr Jenny Scott, and I was then offered funded PhD studentship in the department.

At the end of my work with Jenny, I was offered a PhD studentship with Dr Jane Sutton and Prof Marjorie Weiss. Jane and I worked brilliantly together ever since the clozapine study which she had led jointly with Dr Denise Taylor. Jane is also a psychologist and we had a real meeting of minds with our research. I planned my PhD to explore the impact of mental workload on the safety of pharmacy tasks (with a focus on final accuracy checking). At the time (2010) there were reports of high levels of workload and stress in pharmacy (a picture that has got much worse over the decade). Having trained in neuropsychology, I wanted to understand what impact that had on pharmacists cognition and ability to carry out their work accurately. I was particularly struck by the complexity of many routine tasks in pharmacy, and high levels of interruptions in community pharmacy, both of which could in theory present opportunities for error. I designed a lab based simulation study, to look at the impact of different workload stressors (distraction, time pressure, task design, working memory load) on their ability to detect errors in dispensed items (accuracy check). Originally I had planned just to work with a sample of final year MPharm students. However, I applied for and was awarded additional funding from Pharmacy Research UK through their project grants to extend my study sample to qualified pharmacists and through this funding involved 120 community pharmacists.

Amongst a range of findings, I was able to demonstrate that qualified pharmacists (irrespective of amount of experience) were susceptible to making errors on a simple accuracy check, and this was more likely to happen if they were distracted during the task. We made a number of recommendations about distractions in the dispensary, and opportunities to improve the design of the task.

During my PhD I worked alongside Jane and other colleagues who offered me opportunities to develop my teaching skills. I also became Chair Elect, and later Chair, of the South West Branch of the

British Psychological Society, which was my first experience of a leadership role – and also remotely managing a team of volunteers.

I completed my PhD in 2013, and became Lecturer in Health Psychology for Pharmacy Practice at the University of Bath. I spent 3 years in this role, providing a specialist health psychology module for 4th Year MPharm students, and introductory training to Motivational Interviewing, and research methods for qualified pharmacists on the post-graduate pharmacy programmes. In the 3rd year of this role, the re-designed MPharm began, and I had written the plan to integrate health psychology throughout the MPharm programme.

In 2016, I left my lectureship, and moved to France for 3 years to support my husband's career as he'd been seconded to the South of France. Although I lived in France, the University of Bath were immensely supportive and I continued to work for them, remotely managing my funded research, working with my PhD students and travelling to collect data around the UK. I also returned to my lecturer role briefly in 2018-19 to provide maternity cover. Apart from a love of cheese and red wine, this time away gave me an experience of a completely different health service, and this perspective, has helped me understand and at times question how pharmacy in the UK is set up.

On returning to the UK, I secured a new Research Fellow role at Bristol Medical School, University of Bristol, where I am part of an Integrated Health Improvement team which brings together clinicians and academics across Bristol. I am currently working in mental health research, but have had many opportunities to continue my pharmacy research including a recent systematic review of the behavioural determinants of antibiotic prescribing by non-medical prescribers (currently under review).

It was in the early days of my research career in pharmacy that I was introduced to Prof Wright and Dr Bhattacharya at a seminar series we had all attended. I still remember how interested they were to meet a psychologist working in pharmacy research. This was such a contrast to the reception I had had from other academics I'd met previously, who were all confused as to why a psychologist would want to work in pharmacy practice! So it is with great pleasure that I joined this review team. I suspect that this may prove to be one of, if not the most important pieces of work I do in pharmacy research. I hope this work will ensure that the structures and organisations that work with contractors to commission national and local pharmacy services are set up to deliver the best possible outcome for community pharmacy in the future.

Dr Linda Birt

I am a social science researcher who specialises in qualitative methodologies. After my PhD I started my academic career in 2010 at University of East Anglia and I have also worked at Cambridge University. Prior to my move into university life I worked as a lecturer in Further Education delivering courses to health and social care workers.

My research largely focuses on how social structures (governments, health systems, families) shape how people respond to signs of illness and the ways in which they manage lifelong conditions. During this research, I have heard accounts from people on how their local pharmacist helps them understand medication regimes, and importantly where they have advised people on help-seeking for symptoms suggestive of cancer. However, I came to this review with no previous knowledge of the structural process or detailed work roles that are inherent within community pharmacy.

The other strand of my research more closely aligns to this review as I have a particular interest in the societal discourses and social relationships that shape how people gain meaning from, and can be constrained by the expectations of 'work'. The concept of work applies to both paid and unpaid labour and my PhD explored the experience of working-age male family caregivers as they tried to balance dual responsibilities of paid and unpaid work. Understanding how work shapes all our lives in some way and knowing that the satisfaction one derives from work lies not only with the individual worker but also within the social structures that support, or control, such work I was excited to be part of the team reviewing the organisational structures that support contractors within their pharmacy practice.

As a novice to community pharmacy practices, I have been able to provide an etic lens: questioning assumed understanding and practices within this work environment. Personally, I see the community pharmacist as a lynchpin within the health system so I hope that the outcomes from this review support community pharmacy to have clear organisational structures that enable all to work effectively in ways that are meaningful to the individual.