

Institution: University of Southampton
Unit of Assessment: 03 Allied health professions, dentistry, nursing and midwifery, and pharmacy
Title of case study: 03-01 Influencing policy and practice in non-medical prescribing (NMP)
<p>1. Summary of the impact</p> <p>Our ground-breaking research has driven major changes in non-medical prescribing (NMP) legislation. As a result of our research, over 19,000 nurses and 2,000 pharmacists now independently prescribe medicines directly to patients across the most comprehensive range of medicines in the world. This amounts to four million prescriptions per year in England. NMP has improved the quality and efficiency of health care: patients can now access prescribed medicines faster and NMP has reduced the number of professionals required. Study results have also contributed significantly to a recent extension of independent prescribing powers to physiotherapists and podiatrists. Our research is widely cited in international NMP policy development, and our survey methods and evaluation measures are used to assess NMP quality and safety internationally.</p>
<p>2. Underpinning research</p> <p>The prescription of medicines is probably the most common intervention patients receive for the management of medical conditions. In 2011, 961 million items were prescribed in England - on average 17.8 items per head of the population. The UK is a world leader in progressive policy and practice for non-medical prescribing; this is underpinned by our research which has shifted prescription from a doctor-only model to one that now allows a range of healthcare professionals including nurses, pharmacists and optometrists to independently prescribe a wide range of medicines. This new policy and practice has been a key part of NHS modernisation since 2008. Pioneering research by Professor Sue Latter at the Faculty of Health Sciences, University of Southampton (since 2008), has helped drive the direction of this revolution in prescribing. Our research included the first Government-funded national evaluations of NMP in the world, providing large-scale independent evidence on the quality, safety and acceptability of NMP.</p> <p>The first multi-disciplinary study [Research grant 1; 2003-2005] was led at Southampton by Latter with Dr Jill Maben, Senior Research Fellow (left 2004); Dr Michele Myall, Research Fellow (left 2005); Dr Molly Courtenay, Lecturer (left 2004); Amanda Young, Research Fellow (left 2005) and Dr Nick Dunn, Senior Lecturer, Faculty of Medicine. The study evaluated the extension of prescription powers, first to community nurses and later, in progressive stages, to other appropriately qualified nurses and pharmacists who were allowed, initially, to prescribe a limited number of medicines or with limited independence. We conducted a national survey of nurse prescribers and investigated case studies of different practice settings [3.1, 3.4] and this directly informed UK Government prescribing policy. This research was the first large scale international study to move beyond self-report data to provide direct, objective evidence of the quality and safety of NMP, by including observation of nurse prescribing consultations [3.2, 3.3] and an independent analysis of patient records and nurse prescriptions. Data collection with key stakeholders – prescribing nurses, other healthcare professionals and patients - was conducted to assess on a national scale the benefits of independent prescribing by nurses, and demonstrated the limitations of restricted prescribing which failed to make effective use of health professionals’ skills and did not deliver efficient NHS practice. The results of the research paved the way for a significant Government consultation on extending NMP later in 2005, culminating in legislation in 2006 which resulted in a radical extension of NMP over following years.</p> <p>Building on our reputation, we conducted further Southampton-led multi-centre (Southampton, Keele, London School of Economics) multi-disciplinary (nursing, pharmacy, medicine, health economics and statistics) research to evaluate nurse and pharmacist independent prescribing [Research grant 2; 2008-2010], once NMP was extended to allow nurses and pharmacists to prescribe any licensed medicine for any medical condition - except controlled drugs. The research was with Southampton staff: Dr Karen Gerard, Reader; Dr Peter Nicholls, Senior Research Fellow (left 2012); Dr Alesha Smith, Senior Research Fellow (left 2009) and Professor Paul Little, Faculty of Medicine. Building on and extending the methodology of the first study, including the first ever direct observational data internationally of pharmacist prescribing [3.5], we concluded that prescribing by nurses and pharmacists was generally safe, clinically appropriate [3.5] and</p>

acceptable to patients [3.6] and other healthcare professionals. Findings highlighted that training for NMP roles was satisfactory overall, but also found there were some indications that assessment and diagnostic skills associated with prescribing could be improved [3.5].

3. References to the research

Research grant 1: An Evaluation of Extended Formulary Independent Nurse Prescribing

- 3.1 **Latter S**, Maben J, Myall M, Young A. (2007a) Perceptions and practice of concordance in nurses' prescribing consultations: findings from a national questionnaire survey and case studies of practice. *International Journal of Nursing Studies* 44 (1): 9-18
www.sciencedirect.com/science/article/pii/S0020748905002099
- 3.2 **Latter S**, Maben J, Myall M, Young A. (2007b) Evaluating the clinical appropriateness of nurses' prescribing practice: method development and findings from an expert panel analysis. *Quality and Safety in Health Care* 16: 415-421
www.ncbi.nlm.nih.gov/pmc/articles/PMC2653174/
- 3.3 **Latter S**, Maben J, Myall M, Young A. (2007c) Evaluating nurse independent prescribers' prescribing consultations: an observation study of practice in England. *Journal of Research in Nursing* 12 (1): 7-26 <http://jrn.sagepub.com/content/12/1/7.abstract>
- 3.4 **Latter S**, Maben J, Myall M, Young A. (2007d) Evaluating nurse prescribers' education and continuing professional development for independent prescribing practice: findings from a national survey in England. *Nurse Education Today* 27: 685-696
www.sciencedirect.com/science/article/pii/S0260691706001687

Research grant 2: Evaluation of nurse and pharmacist independent prescribing

- 3.5 **Latter S**, Smith A, Blenkinsopp A, Nicholls P, Little P, Chapman S. (2012) Are nurses and pharmacists making clinically appropriate prescribing decisions? An analysis of consultations using the Medication Appropriateness Index. *Journal of Health Services Research and Policy* 17: 149-156 www.ncbi.nlm.nih.gov/pubmed/22734082
- 3.6 Gerard K, Tinelli M, **Latter S**, Blenkinsopp A, Smith A. (2012) Valuing the extended role of prescribing pharmacist in general practice: Results from a discrete choice experiment. *Value in Health* 15 (5): 699-707

Research Grants:

Research grant 1 - Latter S (Chief Investigator), Courtenay M, Dunn N. An Evaluation of Extended Formulary Independent Nurse Prescribing. Commissioned and funded by the Policy Research Programme at the Department of Health 2003-2005, £200,000.

Research grant 2 - Latter S (Chief Investigator), Blenkinsopp A, Gerard K, Chapman S, Little P, Nicholls P, Dorer G. An evaluation of nurse and pharmacist independent prescribing. Commissioned and funded by the Policy Research Programme at the Department of Health 2008-2010, £338,000.

4. Details of the impact

Reach and significance of impact: number of Non-Medical Prescribers and patients

Our research reports were published by the Department of Health (DH) [5.11] and made available on their website [5.1 and 5.2]. The Executive Summaries of our research reports have been downloaded 1698 times [Research grant 1] and 6495 times [Research grant 2] from the University website. Working closely with the DH Policy Lead for NMP, our research findings on the positive contribution of NMP to health care made a direct impact on NMP legislation and NHS modernisation in England, providing key evidential support for Government policy change [5.11]. As a result, the number and range of health care professionals able to train as prescribers has significantly increased, as well as the number of medicines that they can prescribe. Our research has helped extend the role and accountability of the largest sector of the health care workforce such that by 2012, 19,000 nurses across England had qualified as Nurse Independent Prescribers - up from only 6,600 in 2006. Nurse prescribers are now employed across approximately 93% of the 376 NHS Trusts in England, with the majority prescribing for more than 11 patients per week, and a significant minority (15%) prescribing for more than 50 patients per week [5.2]. In 2013, the number of pharmacist prescribers had grown to 2000, and the total number of items prescribed by

Impact case study (REF3b)

Non-Medical Prescribers in England had risen from 2.4 million (January - March 2008) to 4 million (July - September 2011).

As a direct result of her research, Latter was invited to join a Government Project Board, chaired by the Chief Health Professions Officer, on allied health professions prescribing in 2009. The Board's report [5.3] cited her research as evidence that NMP training adequately prepared nurses for practice and thus could be adapted for new prescriber categories (e.g. allied health professionals). Our findings on the safety and acceptability to patients of nurse and pharmacist prescribing were the sole research evidence cited in DH consultation documents on extending physiotherapist and podiatrist prescribing [5.4 and 5.5]. These national consultations resulted in widespread support for extending prescribing by physiotherapists and podiatrists and in July 2012, new prescribing powers, enabling these groups to independently prescribe medicines, were announced. Our research was also the sole evidence cited in the Government's consultation document on proposals to introduce prescribing rights for paramedics [5.6]. Building on the research findings, the DH announced in April 2012 that the list of medicines nurse and pharmacist prescribers can prescribe will be expanded to include controlled drugs.

Impact on prescribing quality and efficiency

To ensure effective transfer into health care professional practice, Latter et al presented preliminary findings at a workshop of key stakeholders comprising 43 senior healthcare policy makers, managers and commissioners influential in NMP policy and practice nationally [5.2]. Stakeholders corroborated the value of the study findings and identified priorities for action; these included the development of a cross-profession common competency framework for all prescribers [5.2]. This action has since been taken forward by the National Prescribing Centre, culminating in the 2012 publication of a single competency framework for all prescribers which is the national standard to underpinning quality and safety in prescribing. Following completion of the 2010 study, Latter was invited by DH to present the results and recommendations to the DH Non-Medical Prescribing Programme Board, chaired by the Chief Nursing Officer, and including the Chief Pharmaceutical Officer for England and the DH NMP Policy Lead [5.11]. Latter was also invited to present findings to the Nurse Prescribing Advisory Group of the British National Formulary in 2011 [5.11].

As a direct result of the insights gained from her research, Latter was invited to join the NICE Concordance Guideline Development Group as an expert peer reviewer. The group's recommendations were the foundation for NICE's clinical guideline 76 on *Involving patients in decisions about prescribed medicines and supporting adherence*, published in 2009, setting a clear template for how patient discussions about medicine are conducted and assessed professionally.

A 2011 Nursing Times review provides evidence of the significance of extending prescribing rights for nurses: NMP has benefited both the nursing profession (through greater autonomy and job satisfaction) and patients, for whom it means timely access to medicines and treatment and reduced waiting times [5.7]. NMP has reduced the number of health professionals that need to be involved in an episode of care, and economic analysis of NMP [5.2] highlights the potential cost savings made by shifting prescribing workload from doctors to nurses. For example, the cost of one hour of patient contact for a GP is £127, compared to £43 for a practice nurse (PSSRU 2011). These data highlight the efficiency and cost savings achieved through expanding NMP and the resulting improvements in patient care.

The key changes in UK prescribing policy resulting from our research have been widely reported across the national news media and more extensively still in professional journals such as the Nursing Times, whose 300,000 monthly readers include nurses in the UK and abroad.

International Impact

Our research findings have been utilised internationally for policy and practice. Study results were cited as key international evidence in a series of Australian Government Consultation Papers [5.8] recommending a new national prescribing pathway to extend prescribing rights to the 268,000 registered nurses in Australia. This represents a radical increase from the current position in which nurse prescribing is limited to around 400 nurse practitioners. With the UK now a global leader in NMP, our study methods and evaluation criteria have been adopted internationally for studies including: a national evaluation by the Netherlands Institute for Health Services Research of nurse prescribing in the Netherlands (Kroezen 2013); an evaluation of diabetes nurse specialist prescribing for the New Zealand Society for the Study of Diabetes in New Zealand [5.9]; a survey

Impact case study (REF3b)

of pharmacist prescribing in Canada (Guirguis et al 2012); and Drennan et al's (2009) Health Services Executive funded national evaluation of nurse and midwife prescribing in Ireland [5.10]. Studies' results have led to further impact: for example, the study of nurse prescribing in New Zealand has stimulated national legislation to enable further roll-out of nurse prescribing to other nurses; in Ireland, the number of registered nurse prescribers in 2009 in Drennan's et al's national evaluation was 57; this had risen to 453 in June 2012. Our research findings are also cited in influential international reviews of NMP policy and practice (International Council of Nurses 2009; Kroezen et al 2011).

Southampton-led research on NMP has provided unique evidence to the Government that has significantly influenced national policy on expanding NMP, resulting in higher quality patient care and improved health service efficiency. Our research has informed international policy on NMP and studies drawing on our methods and results have contributed to the expansion of prescribing authority to a greater number of nurses and pharmacists around the world, with an ability to prescribe a greater range of medicines for patients.

5. Sources to corroborate the impact

- 5.1 **Latter S**, Courtenay M, Dunn N. (2005) An Evaluation of Extended Formulary Independent Nurse Prescribing. Final Report.
- 5.2 **Latter S**, Blenkinsopp A, Smith A, Chapman S, Tinelli M, Gerard K, Little P, Celino N, Granby T, Nicholls P, Dorer G. (2011) An evaluation of nurse and pharmacist independent prescribing. Final Report www.gov.uk/government/publications/evaluation-of-nurse-and-pharmacist-independent-prescribing-in-england-key-findings-and-executive-summary
- 5.3 Department of Health. (2009) Allied health professions prescribing and medicines supply mechanisms scoping project report (page 23)
http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/Publicationsandstatistics/Publications/DH_103948
- 5.4 Department of Health. (2011a) Consultation on proposals to introduce independent prescribing by physiotherapists (pages 18, 22 and 23)
http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/Consultations/Liveconsultations/DH_129983
- 5.5 Department of Health. (2011b) Consultation on proposals to introduce independent prescribing by podiatrists (pages 18, 22 and 23)
http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/Consultations/Liveconsultations/DH_129981
- 5.6 Department of Health. (2010) Proposals to introduce prescribing responsibilities for paramedics. London: Department of Health (page 6)
- 5.7 Carey K, Stenner N. (2011) Does non-medical prescribing make a difference to patients? Nursing Times (July 4) www.nursingtimes.net/nursing-practice/clinical-zones/prescribing/does-non-medical-prescribing-make-a-difference-to-patients/5032082.article
- 5.8 Health Workforce Australia. (2012) Health Professionals Prescribing Pathway Project www.hwa.gov.au/sites/uploads/Final_HPPP_Phase_One_Interim_Report.pdf (page 5)
- 5.9 Wilkinson J, et al (2011) Evaluation of the diabetes nurse specialist prescribing project www.healthworkforce.govt.nz/sites/all/files/DNS%20Final%20evaluation%20report.pdf (page 8)
- 5.10 Drennan J, et al (2009) National independent evaluation of the nurse and midwifery prescribing initiative. Health Services Executive Ireland
www.hse.ie/eng/services/Publications/services/Hospitals/prescribing_initiative.pdf (page ix)
- 5.11 Corroborator: John Wright, Policy Lead, Non-Medical Prescribing. Reports were made available on DH website and provided key evidential support for Government policy change expanding NMP, resulting in higher quality patient care and improved health service efficiency. Latter presented results to the DH Non Medical Prescribing Programme Board and the Nurse Prescribing Advisory Group of the British National Formulary.