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| Institution: University of Surrey | | |
| Unit of Assessment: 3 Allied Health Professions, Dentistry, Nursing and Pharmacy | | |
| Title of case study: Improving access to medicines via Non-Doctor Prescribing | | |
| Period when the underpinning research was undertaken: 2010-2020 | | |
| Details of staff conducting the underpinning research from the submitting unit: | | |
| Name(s): | Role(s) (e.g. job title): | Period(s) employed by submitting HEI: |
| Dr Nicola Carey | Reader in Long-Term Conditions | October 2009 – present |
| Dr Karen Stenner | Lecturer in Health Services Research | October 2009 – present |
| Professor Molly Courtenay | Professor of Nursing | August 2009 – November 2014 |
| Professor Heather Gage | Professor of Health Economics | September 1990 – present |
| Period when the claimed impact occurred: August 2013 – December 2020 | | |
| Is this case study continued from a case study submitted in 2014? N | | |
| 1. Summary of the impact (indicative maximum 100 words) <p>Research undertaken at the University of Surrey has been pivotal in improving access to medicines via Non-Doctor Prescribing (NDP). Legislative changes, driven by our research, have extended prescribing rights in the UK to podiatrists, physiotherapists, therapeutic radiographers, dieticians and paramedics. Increasing numbers of qualified prescribers amongst these groups and thereby increasing access to medicines whilst reducing NHS costs by £176M annually. Our research has underpinned recommendations for service changes to improve efficiency in nurse prescriber roles; been instrumental in driving forward adoption of NDP internationally; and through the wide dissemination and use of our 'Preparing to Prescribe' Toolkit has facilitated successful implementation of NDP.</p> | | |
| 2. Underpinning research (indicative maximum 500 words) <p>There is a chronic shortage of healthcare workers worldwide (18M deficit). In the UK, The King's Fund foresees a shortfall of 350,000 by 2030. Meanwhile, the worldwide population over 80 years old is predicted to reach 400M by 2050, many will require multiple medicines. With a shortage of doctors to prescribe medicines, continued upskilling of the Non-Doctor Prescribing (NDP) workforce is needed both in the UK and globally to deliver medications to patients.</p> <p>University of Surrey researchers (Courtenay, Carey, Stenner) have undertaken robust, comprehensive and large-scale studies demonstrating the benefits of NDP and, crucially, identifying barriers and facilitators to its uptake and use in different areas of practice [R1-6]. Informed by these findings, Carey and Stenner developed the Surrey Toolkit 'Preparing to Prescribe' to enhance the implementation of NDP.</p> <p>A national study of dermatology nurse prescribing [R1] led by Courtenay (in collaboration with the University of Reading), explored the impact of NDP on service configuration and patient access to medication. This demonstrated clear service benefits: improved efficiency and patient access to medicines; reduced waiting times; more efficient teamworking; and better use of clinical skills.</p> <p>These findings were reinforced and extended by a series of studies conducted by the Surrey research team in the East of England between 2009 and 2011 [R2-R4]. This included the UK's</p> | | |

first large-scale regional survey (n=883) of NDP's practices and the clinical governance systems they operate within [R3]. The team found prescribing rates varied significantly ($p<0.001$) between settings (general practice highest; mental health trusts lowest) and between disciplines undertaking NDP (nurses higher than pharmacists); and were highest in those with 5+ years experience prior to becoming an NDP. They also highlighted the variable use of safety and clinical governance systems and infrequent use of supplementary prescribing (SP) (*prescribing of medicines within the parameters of an agreed treatment plan*); identifying the need to extend independent prescribing (IP) (*practitioners with responsibility for assessing/diagnosing and deciding the clinical management required, including prescribing*) to maximise efficiency and uptake.

Interviews conducted with NDP leads (who have responsibility for NDP implementation) in the region were the first to explore the role of these professionals and barriers to implementation of NDP across a range of settings [R2]. The Surrey research team established that greater standardisation and consistency were needed for clinical governance systems and processes to ensure effective implementation of NDP.

The Surrey research team undertook the first study exploring nurse prescribing for patients with respiratory conditions within the region [R4]. This in-depth qualitative study identified benefits of NDP to the care of patients, including: improved care for vulnerable patients; increased provision of single appointment clinics for patients with multiple complex conditions; and, improved access to medication by increasing the range of settings where a full package of care could be received. Barriers identified included poor strategic planning for NDP and difficulties with prescribing in community settings.

Carey and Stenner (in collaboration with Cardiff University) undertook the first longitudinal study comparing care provided by nurse prescribers to that of non-prescribers for patients with diabetes using a mixed methods case study approach in 12 sites across 6 regions [R5]. Patient outcome data demonstrated equivalence in clinical outcomes, while practices with prescribers reported better continuity of care, patient satisfaction, and less frequent need for support from other health professionals in the practice.

Informed by their research, the University of Surrey then led the first study of physiotherapy and podiatry independent NDP [R6]. This Department of Health funded project comprised a longitudinal national survey of physiotherapists and podiatrists undertaking independent prescribing training, followed by comparison of 14 case study sites with prescribers and non-prescribers. Medicines management activity was greater in prescribers (compared to non-prescribers) and related to improved patient satisfaction and receipt of more detailed medicines information [R6]. Further, previously identified [R2-4] barriers/facilitators continued to influence NDP implementation, creating impetus for the development of the Surrey Toolkit 'Preparing to Prescribe' to facilitate NDP uptake and performance (Section 4).

3. References to the research (indicative maximum of six references)

[R1] Carey, N., Stenner, K., & Courtenay, M. (2010). Stakeholder views on the impact of nurse prescribing on dermatology services. *Journal of Clinical Nursing*, 19(3-4), 498-506. DOI: [10.1111/j.1365-2702.2009.02874.x](https://doi.org/10.1111/j.1365-2702.2009.02874.x)

[R2] Courtenay, M., Carey, N., & Stenner, K. (2011). Non medical prescribing leads views on their role and the implementation of non medical prescribing from a multi-organisational perspective. *BMC Health Services Research*, 11(1), 142. DOI: [10.1186/1472-6963-11-142](https://doi.org/10.1186/1472-6963-11-142)

[R3] Courtenay, M., Carey, N., & Stenner, K. (2012). An overview of non-medical prescribing across one strategic health authority: a questionnaire survey. *BMC Health Services Research*, 12(1), 138. DOI: [10.1186/1472-6963-12-138](https://doi.org/10.1186/1472-6963-12-138)

[R4] Carey, N., Stenner, N., and Courtenay, M. (2014). An exploration of how nurse prescribing is being used for patients for respiratory conditions across the east of England. *BMC Health Services Research*. 14(27): 1-23. DOI: [10.1186/1472-6963-14-27](https://doi.org/10.1186/1472-6963-14-27)

[R5] Courtenay, M., Carey, N., Gage, H., Stenner, K., & Williams, P. (2015). A comparison of prescribing and non-prescribing nurses in the management of people with diabetes. *Journal of advanced nursing*, 71(12), 2950-2964. DOI: [10.1111/jan.12757](https://doi.org/10.1111/jan.12757)

[R6] Carey, N, Stenner, K, Edwards, J, Moore, A, Otter, S, Gage, H, Courtenay, M, Brown, J (2017): Evaluation of Physiotherapist and Podiatrist Independent Prescribing, Mixing of Medicines, and Prescribing of Controlled Drugs Policy Research Programme, Final Report: Department of Health. Available at: <https://www.surrey.ac.uk/sites/default/files/final-report.pdf>

4. Details of the impact (indicative maximum 750 words)

Impact on Legislation

Research undertaken by the University of Surrey clearly articulated the benefits of nurse prescribing for service efficiency and both patient self-management and convenience **[R1-5]**. This research has been instrumental in influencing and informing changes to legislation that have extended prescribing rights to the following Allied Health Professionals: podiatrists and physiotherapists in 2013 **[S1]**; therapeutic radiographers and dietitians in 2016 **[S1]**; and paramedics in 2018. Paramedics were the first profession awarded independent prescribing (IP) rights without a preliminary supplementary prescribing (SP) lead-in phase: *“it is less likely that the application of IP for paramedics would have been either successful or achieved so quickly without Carey and Stenner’s body of work in this area of practice”* **[S2]**. Research undertaken by the University of Surrey *“improved our understanding of the benefits of prescribing (in terms of service efficiency and patient experience) and its contribution to addressing workforce deficits and ensuring patients have access to medicines through innovative services led by allied health professionals”* **[S1]**. Consequently, numbers of qualified prescribers amongst these health professional groups have increased considerably and informed a shift from SP to IP. Shifts from 2012 to 2020 include Physiotherapy: from 222 SPs to 1,403 SPs and 1,295 IPs; Podiatry: from 152 SPs to 509 SPs and 442 IPs **[S1]**. Furthermore, legislative changes that awarded paramedics prescribing rights in 2018 have resulted in 715 IP and 711 SPs to date (as at 1/10/2020): *“this expansion to their role has been a key driver supporting the expansion of advanced paramedic roles into primary and secondary care settings, which has improved access to care for patients in these overstretched services and eased pressure on GP practices”* **[S2]**.

Impact on access to medicines

The changes in legislation informed by University of Surrey research **[R1-6]** directly increased numbers of NDP and facilitated patients’ access to medicines in a timely manner **[S1, S2]**. Approximately 11,000 medicines are now issued via non-doctor prescribing per day: 4,015,000 per year with a predicted cost saving of £176M/year (based on 4 consultations per hour, NHS costs – Doctor/AHP hourly rates £45/25 per hour) **[S3]**. This is pertinent for many areas of healthcare, especially chronic disease management, particularly dermatology. Skin-related conditions are one of the most frequently presenting problems in general practice and immediate access settings (e.g. walk in centres and out-of-hours facilities). Doctors report being increasingly unable to meet service requirements. Our research findings **[R1]** are cited in The King’s Fund *Source Report* on planning dermatology services to meet current and future patient needs **[S4]**. The cited research **[R1]** is used to support the viability of nurse-led treatment clinics for patients with common skin problems that can be managed through medicines prescribed by nurses; and this subsequently underpinned recommendations in The King’s Fund *Key Findings Report* **[S5]** for extending nursing roles to improve flow of patients and create new and effective service models. Surrey’s research **[R1]** has *“led to increased numbers of nurse prescribers in dermatology clinics; increased throughput of patients within dermatology clinics; enhanced patient satisfaction”*, and informed recent published guidance by the British Dermatology Nursing Group on the scope of practice of non-medical prescribing in dermatology **[S6]**.

Impact on adoption of NDP internationally

Surrey's research has provided an evidence-base for extending NDP roles beyond the UK to both Canada and Australia. In 2015, the Minister of Health and Long-Term Care, Ontario, Canada, directed the Health Professions Regulatory Advisory Council (HPRAC) to undertake an evidence-based consultation to assess three potential models for Registered Nurse (RN) prescribing: IP, SP, and Use of Protocols. Surrey's research [R1, R2] directly influenced the ambition to introduce NDP and the resulting recommendation for IP as the best model [S7, S8]. Surrey's research on the value of introducing NDP and factors influencing implementation [R1; R3] has additionally driven forward recent developments to introduce nurse prescribing for registered nurses in South Australia, and to introduce prescribing to the undergraduate midwifery curriculum: *"The work of Dr Carey and co-authors formed a crucial evidence base to support these recommendations and advocate for change"* [S9].

Impact on successful implementation of NDP

Findings from Surrey's research identifying barriers and facilitators to implementing NDP [R2-3] was shared and discussed at 4 regional NDP meetings and training events between January and September 2017, aided by Carey's position as Chair of the Association for Prescribers. These meetings/events resulted in consensus that improved guidance should be provided by prospective NDPs to overcome some of the identified barriers (e.g., selection of appropriate candidates for NDP courses; consistency in information about the IP/SP role). Through co-production with nurses and allied health professionals, the Surrey Toolkit 'Preparing to Prescribe' was developed (available at <https://www.surreytoolkit.uk/>). This widely accessible and free-to-use Toolkit consists of trigger questions, signposting and links to current guidance. It is designed to support those who wish to become an NDP. Launched in 2017, it has been used by 995 people (as at 4/12/2020) including 746 new potential prescribers, 67 Non-medical prescribing Educators, and 65 NDP leads (85 'other'). The Toolkit is providing clear benefit for Higher Education Institutes (HEIs) with one course leader stating that the toolkit *"enables potential applicants to consider whether a prescribing role is suitable for them... and whether the time is right for them to study for this qualification"* and states that the toolkit *"has reduced the number of inappropriate applications and/or attrition rates"* [S10]. They report that *"students have commented on how it helps them to be better prepared for the application process and to deal with the entry requirements such as finding an educational mentor in a timelier manner"*. Completion of the toolkit is either a recommended or mandatory part of the application process in a number of HEIs: Kings College London; Sheffield Hallam; Keele; Swansea; and Surrey Universities [S11]. Use of the Toolkit also aids course providers' submissions to their Regulatory body, the General Pharmaceutical Council, in support to their meeting standard 1.3 i.e., *"Course providers must provide clear guidance on the types of experience a pharmacist should have before applying to the course"* [S10].

5. Sources to corroborate the impact (indicative maximum of 10 references)

[S1] **Testimonial from Sam Sherrington, Chair of Association for Prescribers** (and Head of Community Nursing, NHS England and NHS Improvement); supporting the influence of Surrey's research on establishing need for Non-Medical Prescribing (NMP) and informing practice reforms to extend NMP to dieticians, therapeutic radiographers, paramedics, podiatrists and physiotherapists. (PDF)

[S2] **Testimonial from Andy Collen, Medicines and Prescribing Lead, College of Paramedics** and Consultant Paramedic; supporting the influence of Surrey's research on extending NMP to paramedics and to them being the first profession to implement joint independent/supplementary prescribing without a preliminary supplementary lead-in period. (PDF)

[S3] i5 Health (2015). [Non-Medical prescribing \(NMP\): An Economic Evaluation](#)

[S4] King's Fund 'How can dermatology services meet current and future patient needs while ensuring that quality of care is not compromised and that access is equitable across the UK?

Source Report 7 March 2014, p 46. Available at <http://www.bad.org.uk/shared/get-file.ashx?id=2347&itemtype=document>

[S5] King's Fund 'How can dermatology services meet current and future patient needs while ensuring that quality of care is not compromised and that access is equitable across the UK? Key Findings Report March 2014, p 15. Available at <https://www.bad.org.uk/shared/get-file.ashx?id=2348&itemtype=document>

[S6] Testimonial from Sandra Lawton, Past chair of British Dermatological Nursing Group, supporting the influence of Surrey's research on the increased number of NMP in dermatology. (PDF)

[S7] Canadian Nurses Association; Framework for Registered Nurse Prescribing in Canada. April 2015. *This contains numerous references to Surrey's research including R1 and R2.* Available at https://www.cna-aiic.ca/~media/cna/page-content/pdf-en/cna-rn-prescribing-framework_e.pdf?la=en

[S8] Registered Nurses Association of Ontario (RNAO): RNAO Submission on RN Prescribing – proposed regulation changes. Submission to the College of Nurses of Ontario. 28 Jan 2019 (*R1 and R2 used to support recommendation to implement nurse independent prescribing*). Available at https://rnao.ca/sites/rnao-ca/files/RNAO_Submission_RN_prescribing_Jan_28_2019.pdf

[S9] Testimonial from Jennifer Hurley, Chief Nurse and Midwifery Officer, Government of South Australia supporting the influence of Carey and Stenner's research on the planned implementation of nurse prescribing in South Australia, and on the planned adaptation and use of the toolkit. (PDF)

[S10] Testimonial from Jacqui Kinsey, Reader in Prescribing Education, Keele University supporting the benefits of the toolkit to uptake and retention on their NMP course.

[S11] Independent/Supplementary Prescribing applicant webpages and resources.

- Keele University (<https://www.keele.ac.uk/study/postgraduatestudy/postgraduatecourses/independentprescribing/>)
- Kings College London (<https://www.kcl.ac.uk/short-courses/prescribing-for-nurses-and-midwives-7knip016>)
- Sheffield Hallam University (<https://www.shu.ac.uk/study-here/options/health-and-social-care/short-courses-and-modules/nonmedical-prescribing-v300--level-7>)
- Swansea University (<https://www.swansea.ac.uk/postgraduate/taught/humanandhealthsciences/pgcertnon-medicalprescribing/#additional-information=is-expanded&entry-requirements=is-expanded>)
- University of Surrey (Independent/Supplementary Prescribing Pre-Course Workbook) (PDF) (<https://www.surrey.ac.uk/cpd-and-short-courses/independentsupplementary-prescribing-v300-level-7>)