OP85 Persistence Leads To Ongoing Decreases In Primary Care Antibiotic Use

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Introduction. Australia has had high rates of antibiotic use in primary care. Consumer and health professional knowledge and practices in the community vary. In 2012, NPS MedicineWise implemented a five-year national educational program for consumers, general practitioners (GPs) and pharmacies to reduce antibiotic use in Australia.

Methods. For consumers, a social marketing approach was used focusing on the winter months. Strategies leveraged collectivism, nudge theory, celebrity endorsement and co-creation and used multiple communication channels. For health professionals, interventions were most intense in 2012 with additional activities implemented each year including face-to-face educational visiting, audits, comparative prescribing feedback, case studies and point-of-care materials. Surveys were conducted periodically to evaluate changes in knowledge and awareness. Pharmaceutical Benefits Scheme (PBS) claims data were analyzed. Organization for Economic Co-operation and Development data was used to compare Australian antibiotic per capita consumption to other countries. Time series analyses were used to estimate the cumulative program effect comparing observed and expected monthly dispensing volumes of antibiotics commonly prescribed for upper respiratory tract infections (URTIs), had interventions not occurred.

Results. Between 2012 and 2017, GP antibiotic PBS prescriptions reduced by 18.4 percent. Antibiotic defined daily doses per 1000 inhabitants reduced from 23.7 in 2012 to 18.4 in 2016, similar to Norway (18.6 in 2016) and the UK (18.7). Time series modelling estimated 24.8 percent fewer GP antibiotic URTI prescriptions by 2017 versus no program. Consumer survey results indicated increased awareness of antibiotic resistance (50 percent in 2011, 74 percent in 2017) and the minority expect/request antibiotics for URTIs (22 percent in 2017).

Conclusions. A five-year national educational program with multiple and repeated interventions for health professionals and consumers has resulted in ongoing reductions in antibiotic use in primary care.

OP86 Exploring Public Utilization Data For Primary Care Education Programs

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Introduction. NPS MedicineWise delivers nationwide educational programs to improve quality use of medicines and medical tests in Australia. Targeted horizon scanning approaches are required to detect and address emerging challenges in the healthcare landscape such as overutilization and unexpectedly high expenditure on medicines and medical tests. Publicly available utilization and expenditure data from the Australian Pharmaceutical Benefits Scheme (PBS) and Medicare Benefits Schedule (MBS) may provide insights into identifying potential areas for intervention.

Methods. Five financial years (2013-18) of publicly available PBS/MBS data was extracted from Australian Government websites and clustered according to medicine class, disease groups or anatomical therapeutic chemical classification (ATC). Usage and expenditure trends were explored with signals of potential inappropriate use identified as unusual spikes or changes.

Results. PBS data showed two fixed dose combination inhalers for respiratory conditions, three direct oral anticoagulants, four analgesics (including opioids) and two blood glucose lowering agents had high volume and expenditure growths in the 2016-17 financial year. Cholesterol-reducing medicines and anti-hypertensives also commonly had high utilisation growth. The highest growth classified by ATC level two codes were for urologicals. These signals were collated into themes of stroke prevention, cardiovascular, respiratory, pain management and type two diabetes. MBS data on pathology tests showed viral and bacterial testing had the highest growth, followed by vitamin B12 testing and vitamin D testing. Magnetic resonance imaging had the highest growth in expenditure and volume of services of the various imaging modalities and X-ray of the lower leg had the highest volume of services.

Conclusions. Several medicines and medical tests were detected as possible targets for interventions based on high volume or expenditure growth. Themes identified from the data can then be further investigated and contextualized to inform topic areas for primary care education to support quality use of medicines and medical tests.

OP88 Digital Approaches For Randomized Controlled Trial Recruitment Or Retention: A Systematic Map

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Introduction. Recruitment and retention of participants in randomized controlled trials (RCTs) is challenging, and is why many RCTs fail or are not completed on time. Digital approaches such as social media, data mining, email or text messaging could improve recruitment and/or retention, but how well they match these purposes is unclear. We used systematic methods to map the digital approaches that have been investigated during the past 10 years.

Methods. We searched Medline, Embase, other databases and relevant web sites in July 2018 to identify comparative studies of digital approaches for recruiting and/or retaining participants in clinical or health RCTs. Two reviewers screened references against protocol-specified eligibility criteria. Studies included were coded by one reviewer (with 20 percent checked by a second reviewer) using pre-defined keywords to describe characteristics of the studies, populations and digital approaches evaluated.

Results. We identified 9,133 potentially relevant references, of which 100, reporting 101 unique studies, met the criteria for inclusion in the map. Among these, 95 percent of studies investigated recruitment but only 11 percent investigated retention. Study areas included health promotion and public health (36

percent), cancer (17 percent), circulatory system disorders (13 percent) and mental health (10 percent). Most study designs were observational (89 percent). The most frequent digital approaches for recruitment were internet sites (53 percent of recruitment studies), social media (42 percent), television or radio (31 percent) and/or email (31 percent). For retention these were email (63 percent of retention studies) or text messaging (38 percent). Time and costs of recruitment were reported in 17 percent and 30 percent of recruitment studies respectively, whilst costs were reported in 19 percent of retention studies.

Conclusions. A wide range of digital approaches has been studied, in many combinations. Evidence gaps include lack of experimental studies; studies on retention; and studies for specific populations (e.g. children or older people) and outcomes (e.g. user satisfaction). More robust experimental studies, perhaps conducted as studies-within-a-trial (SWAT), are needed to address knowledge gaps and ensure that estimates of digital tool effectiveness and efficiency are reliable.

OP89 Conference Abstract Searching In National Institute For Health And Care Excellence Health Technology Appraisals

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Introduction. The National Institute for Health and Care Excellence (NICE) guidelines manual recommend that MEDLINE, Embase and Cochrane Central Register of Controlled Trials should be prioritized for searching for reviews of the effectiveness of pharmacological interventions. Additionally, searching trial registries and conference abstracts are recommended to identify ongoing or unpublished research. However, the approaches to searching conference abstracts have not been previously studied. The aim is to analyze searches of conference abstracts reported in NICE Technology Appraisal (TA) company submissions for cancer interventions from 2013 until September 2018.

Methods. The company submissions were searched and obtained via the NICE technology appraisal guidance website. The sources used to find conference abstracts were identified from the company clinical effectiveness review search methods and appendices. Conference abstract searching in both database and website sources were compared.

Results. Of all 394 TAs, 124 (31 percent) were cancer TAs. Between 2013 and 2018, 91 TAs were completed or updated, which covered 18 cancer categories and 52 different named technologies. Technologies to treat non-small-cell lung cancer was the most frequently appraised in the last five years. Nivolumab was the most frequently appraised technology. Searches for conference abstracts were reported in 70 (77 percent) out of 91 company submissions. Supplementary searching was reported in 59 (84 percent), compared with 11 (16 percent) searching either/both Embase and the Web of Science Conference Proceeding Index (WoS-CPCI). A total of 54 supplementary website sources were searched which ranged from one to 11 per TA (average four sources). The American Society of Clinical Oncology (ASCO) and the European Society of Medical Oncology were the most frequently searched sources.

Conclusions. Whilst the WoS-CPCI has better coverage of cancer conference abstracts than Embase, searching databases alone are inadequate. Supplementary conference websites should be searched for reasons such as access to the most recent abstracts and incomplete indexing of titles within databases. A wide range of cancer specific sites exists although the impact of broad (e.g. ASCO) versus condition specific sites is unclear.

OP91 Developing A Celtic Connections Regional Health Technology Assessment Alliance

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Introduction. The Irish, Scottish and Welsh national Health Technology Assessment (HTA) bodies (Health Information and Quality Authority, Health Technology Assessment Group, Scottish Health Technologies Group, Health Technology Wales) have recently (2018) established a 'Celtic connections' regional HTA alliance on non-medicine technologies. The primary purpose is to add value by realizing potential economies of scale and scope in non-medicine HTA efforts.

Methods. A Memorandum of Understanding (MoU) was agreed to: formalize collaboration and partnership working; improve shared understanding of work programs and processes; collaborate on and co-produce evidence reviews of mutual interest; increase both the volume and range of technology topics for which advice is developed in each nation; promote knowledge exchange; and enhance professional and personal development for each agency's staff.

Results. Early benefits include: collaboration on one technology topic resulting in the production of bespoke guidance in three countries; an update of a partner's rapid review; identification of a further potential topic collaboration (sacral nerve stimulation); a six month senior staff secondment; and reciprocal observer membership on each country's national committees. Other general benefits have included: reduced duplication of effort; improved quality assurance through 'critical friend' peer review; enhanced access to methodological advice and a broader range of stakeholders; and development of a forum for discussion and peer support.

Conclusions. The alliance offers real potential to optimize use of the scarce resources for non-medicine technologies across the three countries and increase evidence review and guidance volume through adapting or co-producing outputs. Longer term benefits are anticipated to include: improved knowledge exchange; advancing skills of staff; building and broadening capacity through shared learning and access to a wider professional peer group; improved staff recruitment and retention; production of joint publications and other modes of dissemination; and increased profile for each country's work.

OP93 Collaboration Between Health Technology Assessment And Procurement: A Rapid Mixed-Methods Study

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