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

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