problems and associated risk factors. The observations available in Italy on PPP-related poisonings and injuries suggest that greater efforts are needed to prevent these types of incidents.

376 BE GAS SAFE PROGRAMME – REDUCING CARBON MONOXIDE POISONING

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Background The Chief Medical Officer of England has highlighted the need to tackle carbon monoxide (CO) poisoning with over 40 deaths and 4000 hospital attendances a year. The Be Gas Safe Programme, the first national programme to distribute CO alarms, was delivered by the Royal Society for the Prevention of Accidents (RoSPA) for the Gas Safe Charity between 2012 and 2014. The programme aimed to equip consumers to deal with dangers that lead to carbon monoxide poisoning.
Description The programme was delivered through Over 70 local partnerships across the UK who included local authorities, the NHS, fire services, housing agencies, children's and older people's charities and the police. They identified vulnerable households in their communities to receive CO alarms and safety information. Each partnership also received a briefing pack. A website was developed providing resources, links and useful information.
Results 13,000 CO alarms were distributed giving families protection for up to 7 years. At least 130,000 people benefitted from local education activities and media coverage reached over 3 million people. Evaluation included a survey and case studies of families whose lives have been saved either by being prompted to have their appliances serviced or because the CO alarm providing early warning. It showed a significant increase in awareness of the dangers and prevention measures.
Conclusions Carbon monoxide alarms are a last line of defence and are no substitute for regular servicing and good ventilation. However, research shows that combining provision of equipment with safety education is more effective than adopting one of these approaches alone. Providing practical protection for a limited number of families most at risk helped to maximise opportunities to educate a wider audience

377 THE PRESCRIPTION DRUG EPIDEMIC IN THE UNITED STATES – EFFORTS TO IMPROVE PRESCRIBING

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10.1136/injuryprev-2016-042156.377

Background More than 145,000 people have died from overdoses involving prescription opioid pain relievers in the United States in the last decade and deaths have quadrupled since 1999. The quantity of opioids sold in the United States in 2011 was four times that sold in 1999. Providers wrote more than a quarter of a billion opioid prescriptions for Americans in 2012.
Description of the Problem While opioid pain relievers can and do play an important role in the management of some types of pain, the overprescribing of these powerful drugs for chronic, non-cancer pain outside of end-of- life care created and continues to fuel the epidemic. The U.S. Centres for Disease Control and Prevention (CDC) implemented a comprehensive suite of interventions to: (1) strengthen state efforts by scaling up effective, data-driven public health interventions; and (2) enhance patient safety by supplying health care providers with information, tools, and guidance for evidence-based decision making.
Results Beginning in September 2015, the CDC launched the *Prevention for States* program. A total of 16 states were funded to enhance and maximise state-based prescription drug monitoring programs, advance effective prevention efforts in hard hit communities, and improve health system and insurer practices to improve opioid prescribing. Early progress highlights the necessity of collaboration and that significant strides can be made when the barriers and silos within a state are eliminated. CDC also released guidelines to primary care providers for opioid prescribing for chronic pain outside of end-of-life care in January 2016. Broad dissemination is underway.
Conclusion With opioids among the most prescribed drugs in the United States, a substantial investment is needed to shift opioid prescribing to make it safer and to improve patient care. CDC's multifaceted and evidence-based interventions are making a difference. Highlights and lessons learned from CDC activities will be shared.

378 INTERNATIONAL COMPARISONS OF DRUG-RELATED DEATHS

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Background In the past decade, many countries have seen a significant increase in their drug-related mortality rates. In the United States (US), drug-related deaths now outnumber deaths from any other injury cause. To better understand international differences, this study compared drug-related deaths in the US, England/Wales, Scotland and Australia, examining trends, demographic characteristics and differences in the drugs involved.
Methods Drug-related deaths were identified using public access data and reports from each country's statistical office. Cases were selected based on ICD–10 underlying cause codes of F11–16, F18–F19 (Drug abuse), X40–X44 (Accidental poisoning), X60–X64 (Intentional self-poisoning), X85 (Assault by drugs) and Y10–14 (Drug poisoning of undetermined intent).
Results In 2013, the rate of drug-related deaths in the US (146 per million population) was 1.5 times the rate in Scotland, twice the rate in Australia and more than 3 times the rate in England/Wales. In all countries, rates were higher for males than for females, with the greatest gender difference seen in Scotland. For underlying cause, in all countries, the majority of the deaths were accidental, however in England/Wales a higher percent were intentional (33%), in Australia a higher percent had a mental/behavioural cause (15%) and in Scotland a higher percent were categorised as undetermined intent (17%). In all countries, opioids including morphine, heroin and methadone were implicated in a high percent of the deaths, although drug-specific comparisons were limited due to variation by country in the completeness of the information on specific drugs.
Conclusions While similar patterns in drug-related deaths were identified, differences were also seen. The extent to which these differences are true or due to variation in death investigation, reporting and coding is unclear. Further work is needed to enhance the international comparability of mortality data on drug-related deaths.

379 PRESCRIPTION DRUG OVERDOSE: ENVIRONMENTAL AND BEHAVIOURAL RISKS IN HOMES WITH AND WITHOUT CHILDREN

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Background According to a UN panel, prescription drug abuse will soon exceed illicit drug use worldwide. In the US, opioid pain relievers (OPRs) are widely available, and overdose deaths have increased. Children are vulnerable to either or both unintentional and intentional exposure to OPRs. Little is known about the environmental and behavioural risks associated with storage and disposal of these drugs in homes with children.
Methods We addressed this gap by completing an on-line survey of a nationally representative sample of 1,032 adults who had taken an OPR within the year preceding the survey. Environmental and behavioural risks examined by the presence and ages of children in the home were characteristics of the product, storage location, disposal plans and practices, and beliefs about safe storage.
Results One-third of the sample had children younger than 18 living in the home; 47% were still using the OPR at the time of the survey. Homes with children compared to those without were significantly more likely to have a child resistant cap on the medication (91% vs 78%) and to store the OPR most often in a place that was locked or latched, although the rates were low in both groups (27% vs 17%). Almost 40% of those who were no longer using the medication reported keeping it for future use, and only 5% reported turning the pills in to a take-back program. When asked about storage behaviours, adults with young children compared to those with older children/teens were significantly more likely to have positive beliefs about the benefits and higher perceived threats, and to report fewer barriers to safe storage.
Conclusions The high rates of unsafe storage and disposal of OPRs in homes with children is alarming because of the associated risks of unintentional or intentional exposure of children to these dangerous medications. Campaigns that focus on the risks to older children/teens and increasing the availability of take-back programs in communities are urgently needed.

380 BUILDING EPIDEMIOLOGICAL CAPACITY FOR DRUG OVERDOSE SURVEILLANCE IN THE U.S. HEALTH DEPARTMENTS

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Background In response to the growing prescription drug overdose (DO) epidemic in the U.S., an Injury Surveillance Workgroup on Poisoning (ISWP) released Consensus Recommendations for National and State Poisoning Surveillance in April 2012. The ISWP proposed standardised tools to conduct and improve DO surveillance.
Methods The Council of State and Territorial Epidemiologists (CSTE) formed an Overdose Subcommittee (OS) to raise CSTE membership awareness of DO deaths and to test the proposed DO indicators before they were widely adopted as surveillance tools.
Results The CSTE OS aims and results have been discussed during monthly calls opened to all CSTE members. Several major projects were completed with voluntary participation from CSTE OS members. Analysis of death certificate (DC) data in 11 jurisdictions revealed variations in completeness and specificity of the drug-related information (e.g., DO death rates not contributed to any drug varied from 0/100,000 in New York City to 7.4/100,000 in Kentucky). A study using toxicology and DC data found that drug-specific sensitivity on DCs in three jurisdictions varied widely (23%–92% benzodiazepines, 61%–92% heroin, 91%–100% opioid analgesics). New epidemiological tools for DC data analysis were developed. Several jurisdictions worked successfully with medical examiners/coroners to improve completeness and specificity of drugs listed on DCs. The CSTE findings were presented at national conferences, published in papers, and informed the development of national guidelines for state special emphasis reports on DO death data.
Conclusions The CSTE OS work is an ongoing learning process that already improved the DO mortality surveillance methodology and standardisation, increased the epidemiological capacity for DO reporting and data quality improvement at state and local levels, and strengthened the collaborations among epidemiologists from different jurisdictions.

Occupational Safety

Parallel Wed 1.4

381 AN INVESTIGATION OF THE STATE OF OCCUPATIONAL SAFETY AND HEALTH IN THE PHILIPPINES

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Background This study looked into the state of occupational health and safety in the country. Specifically, the objectives were 1) to show the current condition of workers, both local and migrant, in terms of their workplace condition and hazard exposures; and 2) to present occupational diseases and illnesses in various industries and occupational groupings in the Philippines.
Methods The methodology consisted of comprehensive analysis of records and statistics on occupational safety and health, and related variables from various institutions. Data were gathered from reviews of literatures, related research studies, and documentary research at the Occupational Safety and Health Centre. Analysis of data was done through a critical appraisal of the current status of occupational and health safety in the Philippines in terms of occupational diseases, injuries, and accidents, and existing occupational health and safety policies.
Results The study showed occupational hazards and health and safety conditions in various industries, occupational settings, and job groupings such as in the industrial sector, manufacturing, mining, agriculture, fishing, and cement manufacturing. In the industrial sector, particularly, in nine cement plants in the Philippines, workers were noted to be exposed to hazards such as heat, noise and dust. In the electronics sector, about 57 Filipino women were afflicted by Stevens–Johnson Syndrome (SJS) in two electronic factories in Taiwan. Another study of 399 female