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Study/Objective: The purpose of this study is to describe all potential roles pharmacists can undertake during disasters, across the four stages of disaster health management – Prevention, Preparedness, Response, and Recovery (PPRR), and identify the barriers to implementing these roles.

Background: The collapse of basic health care services following a disaster is the highest cause of mortalities, with the inability to access medications being the main reason. Pharmacists are reported to be the most easily accessible health care professional and are the third largest health care provider after doctors and nurses. In disasters, many affected people seek the assistance of pharmacists first before potentially being referred on to a doctor or hospital. Pharmacists are on the frontline of continuity of care. The traditional role pharmacists play in times of crisis is a logistical role, maintaining the medicines' supply chain from manufacturer to patient. Although this is an essential role during disasters, it is not utilising pharmacists' entire skill set and knowledge. Disaster research is beginning to identify potential roles pharmacists can fulfil during natural and manmade disasters.

Methods: Semi-structured interviews will be conducted with stakeholders and pharmacists across the disaster health management spectrum. Interviews will be recorded. Data will be analyzed by two methods - manual open and axial coding using the software NVivo, and then using the text analytics tool Leximancer. This will provide triangulation of methods. The data will be used to develop a conceptual framework model outlining the potential roles pharmacists can fulfil during disasters and highlighting the barriers to implementing them.

Results: The results will identify the roles and responsibilities pharmacists can undertake during disasters, expanding from the traditional logistical role to a patient-centered role taking care of the non-emergent health concerns. It will recognize and address the barriers and limitations to implementing these new potential roles.

Conclusion: These results will form the basis for a conceptual framework model identifying the roles pharmacists can undertake in disasters and the economic impact on the health care system on implementing them.

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Impact of Cyclone Yasi on Antidepressant and Anxiolytic Medication Use in Affected Areas of North Queensland

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Study/Objective: The objective of this study was to determine whether there were significant changes in prescription rates of antidepressant and anxiolytic drugs following Cyclone Yasi, and if this was affected by the extent of damage sustained by the area.

Background: The global change currently occurring in climate is expected to increase the incidence of extreme weather events, such as cyclones and flooding in Australia, which are particularly prevalent in north Queensland. In monetary terms, the average annual cost of tropical cyclones in Australia is \$266 million, equating to approximately 26% of total disaster spending each year. Natural disasters often elicit different responses, with the degree of exposure often influencing the presentation and severity of psychological events. Although the supply chain during natural disasters has been investigated, there has been little research into the effect on medication usage after natural disasters.

Methods: A quantitative determination of new prescriptions of antidepressants and anxiolytics was conducted. Using data collected from regulatory authorities for the affected region, the total number of new prescriptions for these drugs was calculated for the period six months after the cyclone, and compared with the same six month period in the preceding year. Two control drugs were also included to eliminate any changes in general rate of drug prescription in the affected communities.

Results: Prescriptions of all antidepressant and anxiolytic drugs increased in the periods following Cyclone Yasi. There was a greater increase in prescription rates in the 14 to 54, and 55-95 year old categories in those areas that were directly hit by Cyclone Yasi (6.4%:5.2%), compared to those not directly hit areas (2.7%:3.3%).

Conclusion: Although the increase was less than expected, it was concluded that there is a direct correlation between the extent of exposure to the event, the degree of damage, and increased rates of antidepressant and anxiolytic prescriptions.

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A New Recipe for Disaster Training in Australia

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Study/Objective: To develop core competencies and training recommendations for Australian Pharmacists to prepare them for responding to disasters.

Background: Health professionals contribute during disasters in an array of settings and roles. Pharmaceutical associations encourage pharmacists to be prepared and participate in disasters within 'traditional' and 'extended scope' roles. A plethora of training and competencies exist globally for health professionals in disasters. However, for one of the most accessible health professionals, pharmacists, training and competencies are lacking. Within Australia, there are currently no competencies or comprehensive training exclusively for pharmacists within a disaster context.

Methods: Four key investigative methods will be used to contribute to final recommendations for competence and training. 1. A comprehensive review of disaster training and competencies available for pharmacists and other health professionals nationally and internationally. 2. Distribution and completion of a validated survey targeted at organizations known to utilize health professionals during disasters. 3. Semi-structured interviews to

be conducted with pharmacists and other health professionals who have participated in previous disasters. 4. Attendance to, and auditing of disaster training for health professionals, as well as interviews with participants.

Results: Data from pharmacists and other health professionals will be collated separately and then compared to identify common trends, gaps, and 'lessons learned'. This comparison will allow a set of core competencies to be formulated and presented to relevant stakeholders and organizations for comment. Once finalized, the core competencies will be used to formulate recommendations for the training of Australian pharmacists to participate in disasters.

Conclusion: In Australia, disaster competencies and training for pharmacists is currently lacking. The ultimate aim of this research is to enhance preparedness for pharmacists, and improve local professional resilience during times of disaster with education and training.

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Does Australian Continuing Professional Development Activities Prepare Pharmacists to Play a Role in Disasters?

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Study/Objective: To determine if Australian Continuing Professional Development (CPD) activities, available from Pharmaceutical Associations (PAs) prepare pharmacists for disasters.

Background: PAs are key stakeholders for the pharmacy profession. In everyday practice, they advocate for progress, provide CPD resources, and distribute relevant professional information. During disasters, PAs are expected to fill these roles, as well as provide disaster specific advice, support pharmacists, and discuss with government bodies the appropriateness of expanded pharmacy practice legislation to assist pharmacists in disaster response. In Australia, it is unknown how well PAs prepare members for disasters before a disaster strikes.

Methods: CPD activities from four accredited PAs were examined for disaster content, as well as the presence six skill sets which may be useful in disasters. These included wound care, mass dispensing, first aid, mental health first aid, vaccination administration, and triage. The PAs websites were also searched for content that provided advice or procedures for disasters.

Results: Two organizations provided disaster planning information, one during a weekend emergency medicine seminar conducted once a year, and the other on its website, for anytime access. Two (50%) of the organizations taught four of the six (67%) skills which may be relevant during disasters. These include vaccination, first aid/life support, mental health first aid, and wound care. No mass dispensing or triaging skills were taught in CPD programs.

Conclusion: In general, PAs in Australia do not provide pharmacists with foundation disaster training. PAs train pharmacists in skills which are useful in everyday pharmacy practice.

However, they failed to teach these skills within a disaster context. With appropriate training, pharmacists could be taught to develop and specialize their everyday skills to be useful during disasters, allowing them to respond to disasters with confidence and efficiency.

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Does Australian Pharmacy Curricula Prepare Students to Play a Role in Disasters?

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Study/Objective: To determine if Australian pharmacy curriculum prepares Bachelor of Pharmacy (B.Pharm) students to play a role in disasters.

Background: While health students are unlikely to perform clinical tasks during a disaster, with appropriate training they may provide support in non-clinical roles. Globally, several universities have begun to incorporate disaster education and training for various health professionals into curricula.

Methods: B.Pharm curriculum was accessed and downloaded from university websites across Australia. These files were then examined for disaster content as well as the presence of skill sets with potential use during disasters. These included wound care, mass dispensing, first aid, mental health first aid, vaccine administration, and triage. For degrees that contained electives, university websites were searched for subjects which may relate to disasters.

Results: Curricula from twenty-one B.Pharm and B.Pharm (honors) degrees from sixteen universities across Australia were analyzed. None of the degrees offered disaster or emergency training as part of their core subjects. No electives relevant to disasters could be undertaken by pharmacy undergraduates. From the six skills of interest, only three were taught across eight degrees. Wound care and vaccine administration were included in the curriculum of seven degrees (33.3%), and mental health first aid in three (15%). While first aid was only actively taught in one degree, all universities required students to be trained in first aid for placements and internship. No degrees covered activities such as triage or mass dispensing.

Conclusion: Overall certain skills which may be valuable during disasters or pandemics are not included in the majority of Australian B.Pharm curricula. While B.Pharm degrees may prepare students by focusing on safe dispensing and pharmaceutical knowledge, which may assist in areas such as triage and dispensing, they fail to put these skills into a formalized context of disaster or emergencies.

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Pattern of Acute Poisoning in a Large Tertiary Care Settings in Ghana

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