The Toowoomba flood disaster: maintaining renal dialysis services

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Abstract

The Toowoomba floods in January 2011 caused the loss of 30 lives in the area. Maintaining renal dialysis services was a major challenge. Transport, treatment and access for patients and staff were logistically complex. Continual communication, twice-daily ‘team scrums’, advising home dialysis patients to dialyse daily, water supply monitoring, stopping haemodiafiltration treatments and timely medication and nutrition advice were required. In this event many people went above and beyond to provide patients with the best care possible during an extraordinary time in our regional town.

Keywords

Renal, dialysis, nursing, flood, disaster.

In 2006 Toowoomba held a referendum on whether the city should draw 25% of the city’s water from recycled effluent as the drought situation was so dire. The initiative was denied by the community. From a water supply point of view the city was in crisis 12 months earlier, with the city’s dams at 7% capacity. However, the 2010 rainfall totalled 1100 mm for the year, the highest rainfall since 1996. The December rainfall of 338 mm was the greatest December rainfall for 68 years. So when on 10 January 90 mm of rain fell between 9 am and 5 pm but in particular 73 mm fell between 1 pm and 4 pm, the ground was so saturated the water ran into what normally are inconsequential creeks within the city, which soon broke their banks and became a torrent or ‘inland tsunami’ in the CBD of Toowoomba.

With a population of approximately 90,000 people, Toowoomba is Australia’s largest inland city, located 127 kilometres west of Brisbane, clinging to the edge of the Great Dividing Range escarpment at an altitude of 700 meters above sea level. I personally have lived in Toowoomba only 12 years but the thought of Toowoomba flooding seemed an improbability if not impossibility as it is at the top of a range. Many may recall us having referred to ourselves as ‘mountain women and men’. The Toowoomba Hospital services a population of approximately 250,000 people who extend west to Charleville and Cunnamulla, north to the South Burnett/Kingaroy area. From a renal services perspective we have a number of our haemodialysis patients receiving their treatments at Kingaroy but others that continue to travel into Toowoomba three times a week, a five-hour round trip.

So when on that Monday afternoon a team member advised me that flood water was rushing down James Street and Warrego Highway on which the Toowoomba Hospital is located, I must admit to thinking to myself, yeah, right, and returning to my list of jobs as acting nurse unit manager of the renal unit. Then the phone calls started: “the Cherbourg patients can’t get through for dialysis”, “there has been a landslide at Mount Kynoch, the road is closed – we can’t get patients home”, and then the topper from our building, maintenance and engineering director, “the city’s water treatment plant has gone down – please conserve water”. Right, I thought, forget about the other list of jobs to do, there is going to be a new, much more important one.

The immediate issue for us was that patients were asking why they couldn’t get home and why they were trapped in Toowoomba, so we consulted with line managers and social workers. The response from social work was that there were people whose lives were at risk and properties destroyed and finding accommodation for a dialysis patient wasn’t on their list of priorities as their resources were stretched to the maximum. That is when it clicked for me that this natural disaster was far worse than any of us could have ever imagined.

By Monday afternoon we had to communicate to the multidisciplinary team the current situation. Doctors needed to be aware of the location of each patient who had missed dialysis due to flood waters spread over the catchment area. Staff also needed to get home where possible to check on loved ones and property. Roads were being cut by flood water in all directions: between Toowoomba and the Highfields/Crows Nest area; Warwick and Toowoomba; between Dalby and Toowoomba; between Kingaroy and Cherbourg; and, of course, between Toowoomba and the Gatton/Lockyer Valley area with

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the torrential rainfall running off the saturated range down through Withcott, Murphy’s Creek, Helidon and Grantham. The private dialysis unit in Toowoomba was at risk of not being operational so potentially we may have to dialyse additional patients, as long of course as the city’s water supply was back online (which fortunately it was).

With patients accommodated in Toowoomba as required, others located in outlying areas, others dialysed in Kingaroy, staff accounted for and line managers reported to, it was time to go home and get ready for what tomorrow may bring. It was an eerie drive home after dark with the roads clear of water and very little traffic. Once home it was straight to the television to see what precisely has happened. And I couldn’t believe what I was seeing in the continual broadcast of walls of rapidly flowing water throwing cars around like rag dolls, people stranded up trees and light poles, learning of people swept away in the water. It was hard to walk away from it as well.

Back to work on Tuesday and the phone was running hot. Twice-daily disaster meetings with line managers and members of the hospital executives were called to update us on the current disaster status and for us to update them on the clinical status of patients: where they were located, when they last dialysed, how they were being medically managed. The rain was forecast to continue for another three days. The city’s water supply was re-established after pipes burst but we were advised it did not meet drinking standards. All elective clinics and surgeries were cancelled. The emergency team was established with a hotline. Crisis accommodation options were arranged. Dialysis patients remained stranded from dialysis by flood waters in all directions. These eight patients were clinically assessed over the telephone: what was their weight and did they have resorum? Cherbourg patients were evacuated by Tuesday to Kingaroy where they were dialysed so dialysis prescriptions as well as other medical information was electronically forwarded. Emergency services managed to locate one patient from the Goondiwindi area and he managed to get to Moree for dialysis until he was able to return to Toowoomba when the flood waters subsided. Patients went through to Toowoomba or Kingaroy for dialysis by vehicle, boat and/or helicopter, all within 24 hours of their scheduled dialysis; however, there was one home haemodialysis patient in the Lockyer Valley area that no one could contact. It was a relief to eventually hear that he was OK.

Clinical supplies were not able to get through. Brisbane was on the brink of flooding and clinical consumables suppliers were themselves under risk of flooding. Several boxes of dialyser lines were contaminated by water in the Monday deluge so couldn’t be used or replaced at this stage. To conserve clinical consumables, all patients who normally received haemodialfiltration treatments were changed to conventional haemodialysis temporarily. Home haemodialysis patients were advised to dialyse daily in preparation for potential interruptions to water or electricity supplies and they were unable to dialyse. Peritoneal dialysis patients were asked to undertake a stocktake/projected usage of their supplies to facilitate forecasting, if sharing of supplies between patients in the same district became necessary.

By the Wednesday some roads were starting to reopen; however, the highway up the range which takes you through to Brisbane was only open to emergency vehicles under police escort. General supplies (such as food, milk and fuel) had not been able to get through and the city’s water supply still wasn’t suitable for drinking. As you can image, the rumour mill was running overtime. The death toll from the Monday flood was rising. A refrigerator truck had been brought to the hospital grounds to act as a temporary morgue. To date I understand that 27 people lost their lives that terrible day, three are still missing and presumably will never be found. The township of Grantham continues to rebuild and recover.

The only positive that came out of the experience for me is the knowledge that I work with an absolutely great team. At the end of the day everyone just got stuck in and did what they had to do to both take care of the patients as well as their colleagues. We had a number of staff who couldn’t get to work due to flood waters and road closures but no shortage of staff that were willing to work additional shifts and hours. All members of the multidisciplinary team did their bit – from a nursing perspective we had the best medical support anyone could ask for. Communication was paramount and, as a team, we scrummed at least twice a day to update everyone on what was going on, not only within the unit and individual patients, but also the status from a hospital perspective and the community as a whole. From an executive level we were advised to prioritise personal responsibilities for our family and property over work commitments but still we had people go above and beyond to provide patients with the best care possible at the time. We thank them all.