

Gastrointestinal diseases are a major problem in young children in Indigenous communities. In Western Australia, hospitalisation for gastroenteritis was 7 times higher in Aboriginal children than Non-Aboriginal children (Gracey and Cullinane 2003). Diarrhea was associated with potential zoonotic pathogens: including bacteria such as *Salmonella* spp., and *Campylobacter* spp., and protozoa such as *Cryptosporidium* spp. and *Giardia* spp. (Gunzburg et al 1992, Meloni et al 1993).

These germs have all been found in dogs in Indigenous communities. However, it's unclear what the exact role of the dog is in the spread of disease. Dogs might be one of the sources of the germs. Dogs might also play a part in transferring germs from other sources, such as baby's nappies (kimbes), or from food, to people.

### Cycle of disease

Bacteria and Protozoa that cause gastrointestinal diseases live in the gut. They are passed out into the environment with the faeces. They will live for days to months in a wet environment. If they are swallowed by a person or animal, they get into the gut again and can breed up, sometimes causing gut pain, vomiting and diarrhoea. These germs mostly cause problems when a dog's or person's immune system is already weak.

#### Dogs can get these germs by:

- Drinking water lying on the ground that has the germs in it
- Eating food that has the germs in it
- Eating or chewing on rubbish that has the germs in it
- Licking their feet or coat after having lain in area with the germs.

#### People can get these germs by:

- Drinking water that has the germs in it
- Eating food that has the germs in it
- Getting the germs on their hands after going to the toilet or changing a nappy, then eating without washing hands.
- Getting the germs on their hands by touching a dog, then eating without washing hands.
- Swimming in water that has the germs in it



### General control measures



- Attend to poor health infrastructure (dripping taps, boggy areas in yards, water supply, washing machines)
- Raise awareness of the risks of inadequate hygiene (understanding importance of germs, hand washing, food preparation, house cleaning, removal of dog faeces from living areas.)
- Provide and fill drinking containers for dogs so they have a constant clean water source
- Improve general dog health: sick and skinny animals have more germs in their faeces
- Reduce dog breeding: younger dogs produce more germs in their faeces

<b>Salmonella</b>	Research has found 80% of Salmonella in dogs in an Indigenous community were the same as those causing disease in people in that community (Brown 2006).
<b>Campylobacter</b>	Research is being done to see if the Campylobacter in people and dogs is the same type.
<b>Giardia</b>	80% of dogs in Perth carried <i>Giardia duodenalis</i> (McGlade et al. 2003). Further research is looking at Indigenous communities.
<b>Cryptosporidium</b>	Research is being done to see if the Cryptosporidium in people and dogs is the same type.

Source; Dr Samantha Phelan, *Environmental Health Practitioner Manual, AMRRIC, 2008*