Prescriptions of a powerful prescription painkiller, fentanyl, which is 100 times the strength of morphine, have increased more than fivefold in Australia over the five years to 2011 and have been linked to a rise in overdose deaths among middle aged Australians, according to a new report from the National Drug and Alcohol Research Centre.

Rates of prescribing in the over 80s, who accounted for a quarter of total prescriptions, increased fivefold from less than 50 per 1000 population to more than 250 per 1000 population from 2005/06 to 2010/11. Rates for 40 – 49 year olds increased sixfold over the period, but from a much lower base of around 2.5 per 1000 to around 16 per 1000. Just under a half of all deaths involved fentanyl toxicity as the underlying cause of death and just over half involved additional drugs.

People aged over 80 accounted for the majority of the prescriptions. However Australians aged under 47 years accounted for the majority (75%) of the overdoses. Only a third (36%) of the deaths involved people who had been prescribed fentanyl. More than half (54%) of the deaths involved people who inject drugs, (95 per cent of whom had injected fentanyl prior to death).

Fentanyl transdermal patches were first listed on the Pharmaceutical Benefits Advisory Scheme in 1999 for use in the management of chronic cancer pain. The rapid increase in prescribing rates post 2006 appear to be driven by the extension of its listing to include use in management of non-cancer pain, say the authors. The discrepancy between the age group of those receiving most prescriptions for fentanyl and those dying of fentanyl related overdose suggest that these deaths are occurring among people who are misusing it and for whom it was not originally prescribed (64% of deaths had no record of fentanyl being prescribed).

Lead author of the study Amanda Roxburgh said: “Our study, the first to track fentanyl related deaths in Australia in detail, indicates the need for considered measures around prescribing to reduce the ability of people to stockpile these drugs and obtain them through “doctor shopping” (visiting several doctors to obtain more prescriptions). Real time monitoring,
which allows health professionals to monitor prescribing history, makes it harder for individuals to “doctor shop”, and may assist in reducing rates of diverted fentanyl, she said.

The majority (95%) of fentanyl prescriptions over the study period were for patches and to inject it users need to extract the drug and dissolve it. “Our results and anecdotal reports from drug and alcohol workers suggest that it’s very difficult for people to know just how much they are extracting from the patch and injecting. It is already a very powerful opioid and people are injecting it without being able to control how much” said Ms Roxburgh.

Ms Roxburgh added that while rates of deaths from fentanyl had increased over time relative to prescription rates, fentanyl related deaths were still significantly lower than oxycodone related deaths (another prescription opioid) which accounted for 465 deaths over the period and which were between two and five times more common than fentanyl related deaths relative to the number of prescriptions issued.

Amanda Roxburgh, Lucy Burns, Olaf H. Drummer, Jennifer Pilgrim, Michael Farrell & Louisa Degenhardt Trends in fentanyl prescriptions and fentanyl-related mortality in Australia. Drug and Alcohol Review (2013). Early online publication