

ADVERSE DRUG REACTIONS: A \$280 MILLION BILL FOR TAXPAYERS

As part of our investigation into health productivity and efficiency, we requested information from each District Health Board ('DHB') on the total cost of admissions related to Adverse Drug Reactions ('ADRs'). An ADR event is a medical event related to the use of prescription drugs. More formally, we clarified an ADR in our Official Information Act requests to DHBs as an "unwanted or harmful reaction experienced following the administration of a drug or combination of drugs under normal conditions of use and is suspected to be related to the drug."

Recent research from Canterbury-based researchers indicate ADR admissions put significant pressure on DHBs. The authors come to the conclusion that 28.6 percent of admissions to Christchurch Hospital are associated with an adverse drug event, although this includes recreational drug use.

The ADR rates reported by DHBs are significantly lower than the percentage indicated in McLachlan et al. (2014), which is potentially a reflection on the intentionally constrained nature of the information request.

For context, our researcher sent the following clarification to DHBs:

Good afternoon,

For the avoidance of doubt and for consistency of responses, I am happy to provide clarification for some of the questions in my earlier request for information.

- *Please interpret any mention of "drugs" in this request to be solely related to prescription drugs.*
- *Please interpret "adverse drug reactions" to be defined as an "unwanted or harmful reaction experienced following the administration of a drug or combination of drugs under normal conditions of use and is suspected to be related to the drug."*
- *Please interpret "preventable ADR admission" to be defined as an "ADRs caused by medication errors, whether they be acts of omission or commission, incorrect medication/dose/timing, administration of a medication to a patient with a known allergy, inadequate monitoring, or other errors."*

Adverse Drug Reaction Admission Rates

Figure 1 illustrates the ADR admission rates as a proportion of total admissions, sorted by DHB. Bay of Plenty District Health Board split their data out for Tauranga and Whakatane, so ADR admission rates are presented for each location. The rates in Figure 1 are the mean ADR admission rates for the 2015/16, 2016/17, and 2017/18 financial years.

The average ADR admission rate across the country is approximately 1.61 percent, exceeded by a majority of DHBs. The national average is pulled down slightly by Counties-Manukau District Health Board, which has an extremely low rate of ADR admissions – approximately one percent of the rates experienced in Canterbury and Whakatane. It could be the case that Counties-Manukau is significantly more efficient than every other DHBs, their reported figure is unbelievably low: Counties-Manukau DHB should revisit their methods for reporting ADR admissions.

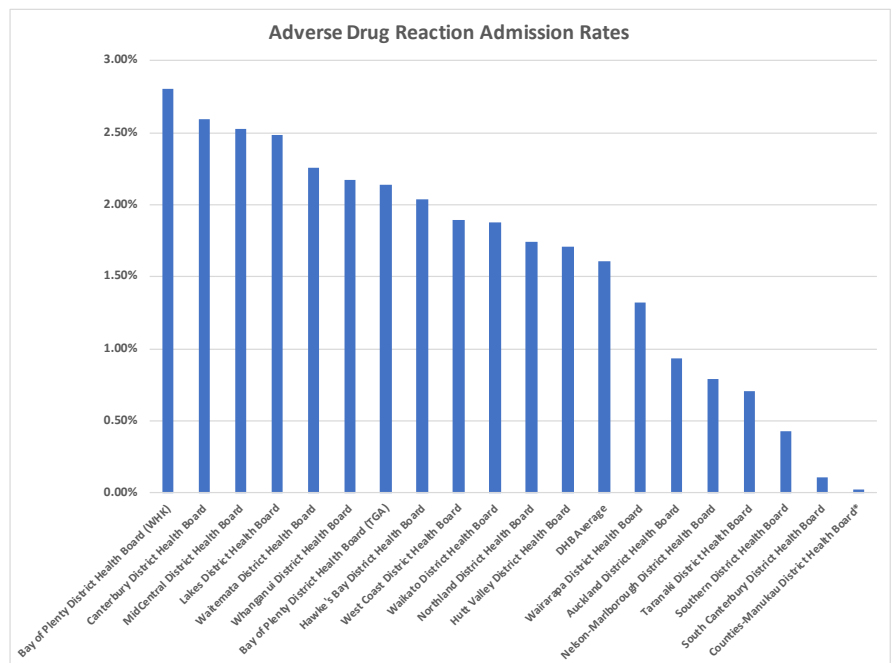


Figure 1: Adverse Drug Reaction Admissions as a Percentage of Total Admissions by DHB

Adverse Drug Reaction Admission Costs

Figure 2 illustrates the total reported costs of ADR admissions by DHB.

The total cost of ADR admissions across the country is \$280,102,298.57. The reported cost of Counties-Manukau, like their reported rate of ADR admissions, is much lower than you would expect for a DHB of that size.

This is a significant amount of spending, especially for what amounts to an ambulance at the bottom of the cliff. Eliminating all ADR admissions would pay for an increase in the threshold for the top tax rate from \$70,000 to \$84,000, or a 1.5 percentage point cut in the third personal tax rate band from 30 percent to 28.5 percent. Clearly eliminating all ADR admissions would be extremely difficult, but the amount spent in total is significant enough to review practices regarding ADR.

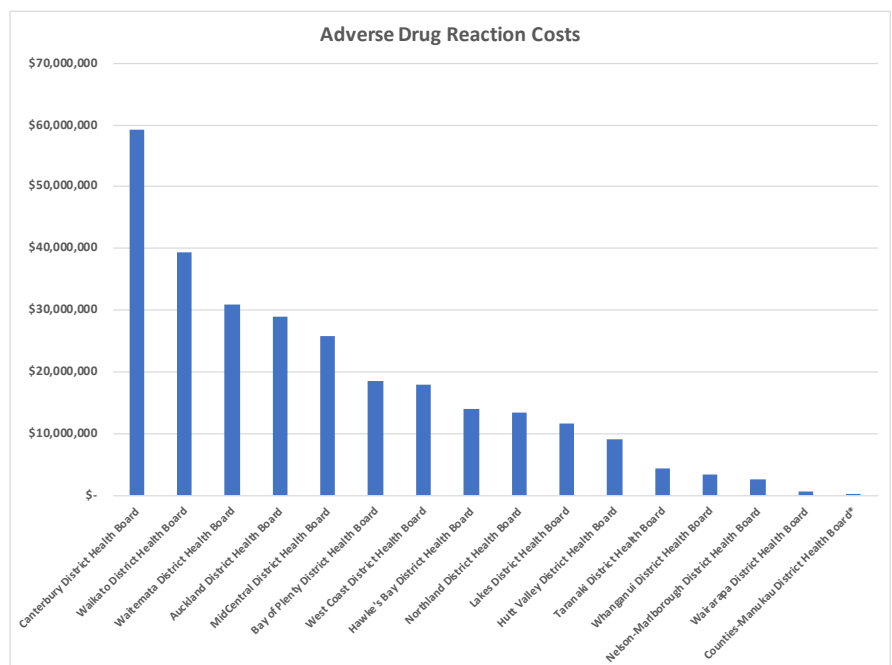


Figure 2: Adverse Drug Reaction Costs by DHB