## Reducing health inequities for justice-involved children and adolescents

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**Background:** Children and adolescents who experience youth detention have poor health profiles including high rates of mental illness, substance dependence, and neurodevelopmental disability. However, remarkably little is known about their health outcomes after contact with the youth justice system.

**Methods:** We undertook two data linkage studies. First, we linked youth justice records in Queensland (1994-2017) with adult correctional records, the National Death Index (NDI), and the National Coronial Information System, up to 2017. Second, we linked national youth justice records (2000-2019) with national emergency department, hospital, Medicare, Pharmaceutical Benefits Scheme (PBS), and NDI records.

**Results:** In the Queensland cohort (N=48,670), over a median 13.5 years of follow-up, 1,431 deaths were observed. The rate of death in the cohort was 4.2 times that of the age- and sex-standardised general population. Most deaths were due to suicide (n=495; 35%), transport accidents (n=244; 17%), or accidental drug poisoning (n=209; 15%). The risk of death was higher for males (adjusted hazard ratio [aHR]=1.5, 95%CI 1.3-1.7), those who spent time in detention (aHR=2.1, 95%CI 1.8-2.4), and those subjected to community corrections supervision as an adult (aHR=1.9, 95%CI 1.5-2.4). National linkage of youth justice and health records has recently been completed and will, for the first time, shed light on the health trajectories of justice-involved young people. The unprecedented depth and breadth of these data (e.g., almost 4.5 million PBS scripts) will permit targeted analyses to directly inform clinical and policy responses.

**Conclusions:** Children and adolescents exposed to the youth justice system face an unacceptably high risk of death due to preventable causes. Engaging and retaining these young people in longitudinal research is challenging; cross-sectoral data linkage provides new opportunities to understand their health trajectories, providing an evidence base to drive and inform long overdue investments in their health and wellbeing.

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