Consultative Council on Obstetric and Paediatric Mortality and Morbidity

Safer Care Victoria

Victoria's mothers, babies and children 2019

Child and adolescent mortality

About CCOPMM

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The Consultative Council on Obstetric and Paediatric Mortality and Morbidity (CCOPMM) is a statutory authority appointed by the Minister for Health

Chair: Adjunct Professor Tanya Farrell

Operates under the *Public Health and Wellbeing Act 2008*

About CCOPMM

Legislative responsibility for data collection

- Victorian Perinatal Data Collection (VPDC)
- Victorian Congenital anomalies register (VCAR)

Legislative responsibility for health surveillance

- Mortality collections and review of perinatal, child and adolescent, and maternal mortality
- Morbidity collections: severe acute maternal morbidity (SAMM)

Undertaking case reviews

Four subcommittees report to CCOPMM:

- **Stillbirth** – Chair: Professor Susan McDonald
- **Neonatal Mortality and Morbidity** (0-27 days) – Chair: Professor Rod Hunt
- **Maternal Mortality and Morbidity** – Chair: Professor Mark Umstad
- **Child and Adolescent Mortality and Morbidity** (28 days-17 years) – Chair: Professor Paul Monagle

Undertaking research

CCOPMM conducts research itself and also provides data for research purposes

CCOPMM identifies research priorities by:

- analysis of our reports, data and through case reviews
- collaborating with external research projects

Why do we do what we do?

Independent oversight of all deaths and severe maternal morbidity

Highlight areas that require improvement – hospital and community

Highlight areas for further research

Inform the development of policies and guidelines

Provide advice on areas for prioritisation and investment

Trends and comparisons

Child and adolescent mortality

Includes deaths for post-neonatal infants, children and adolescents.

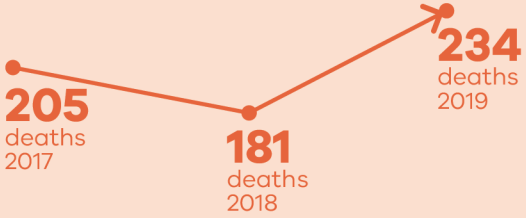
Post-neonatal infants are aged between 28 and 364 days.

Children and adolescents are aged between one year and up to, but not including, the 18th birthday (one to 17 years).

Child and adolescent deaths 2019

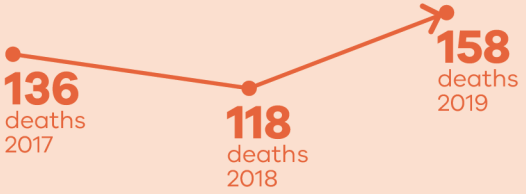
234
post neonatal infant, child and adolescent deaths reported to CCOPMM in 2019

highest number of deaths reported since 2012
a substantial increase across all ages compared with recent years



76
post neonatal infant deaths
aged 28–364 days in 2019

158
deaths in children
aged 1–17 years in 2019



Infant and under 5 definitions

Neonatal includes all live born babies from birth to 27 days

Post-neonatal infant includes all live born babies from 28 days to 364 days

Infant includes all live born babies from birth to 364 days

Under 5 includes all babies from birth up to but not including the 5th birthday

Infant and under 5 mortality

infant mortality rate
age 0 – 364 days

2.8 deaths
per 1,000 live births
for infants in Victoria

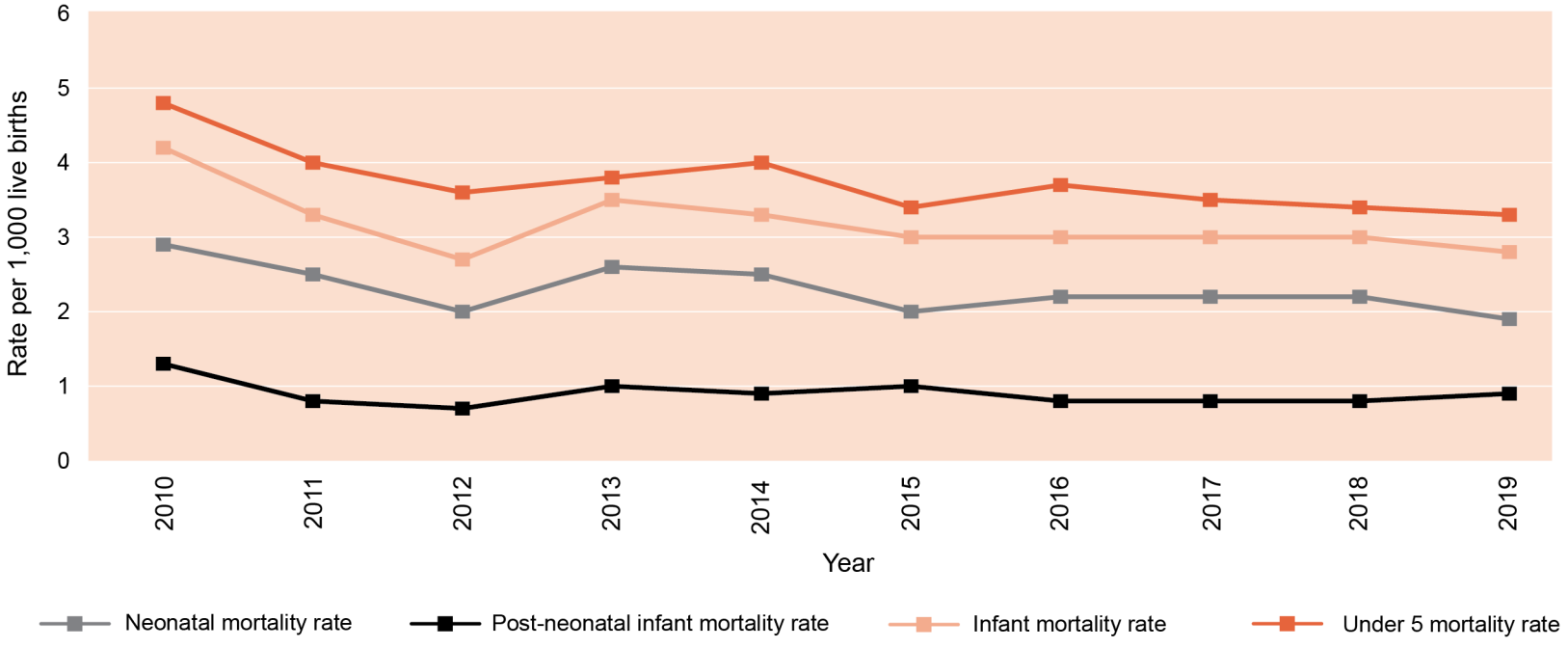
3.1 deaths
per 1,000 live births
for infants in Australia

under-5 mortality rate

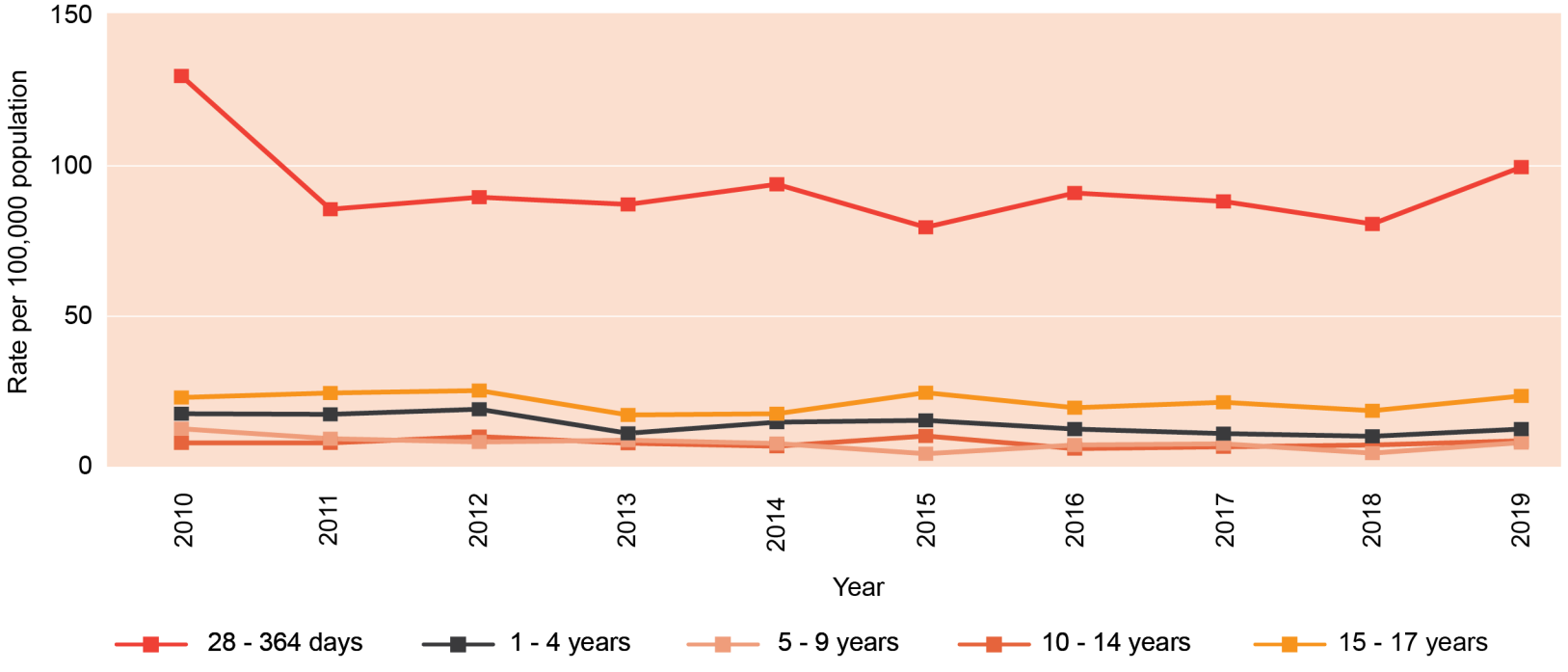
3.3 deaths
per 1,000 live births
for under-5 in Victoria

3.6 deaths
per 1,000 live births
for under-5 in Australia

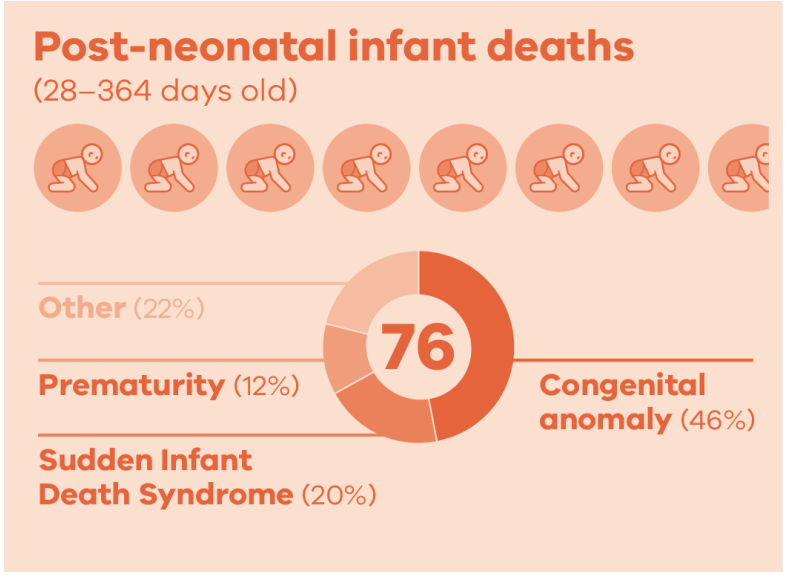
Mortality rates: 0 to 4 years

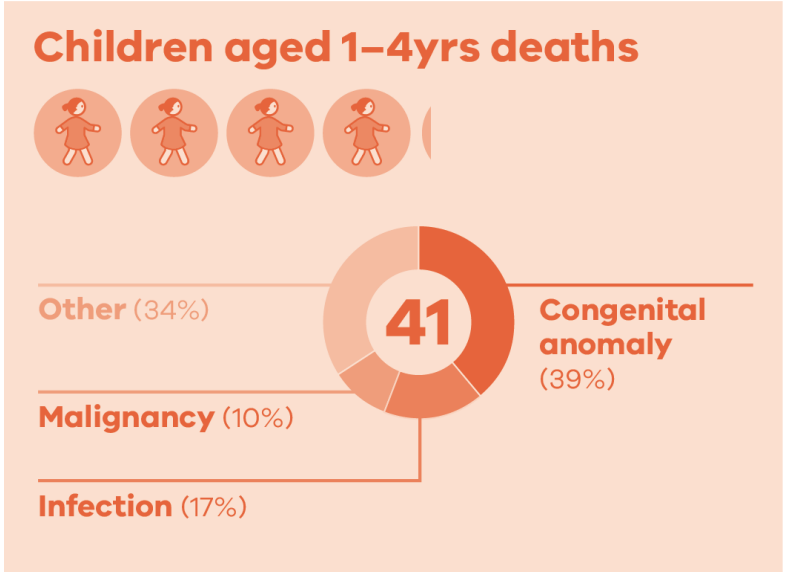


Rates of death by age group

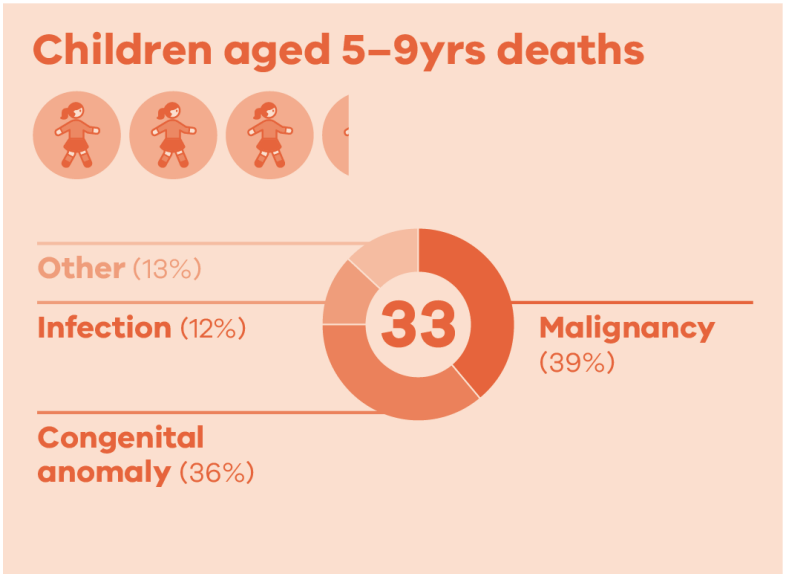


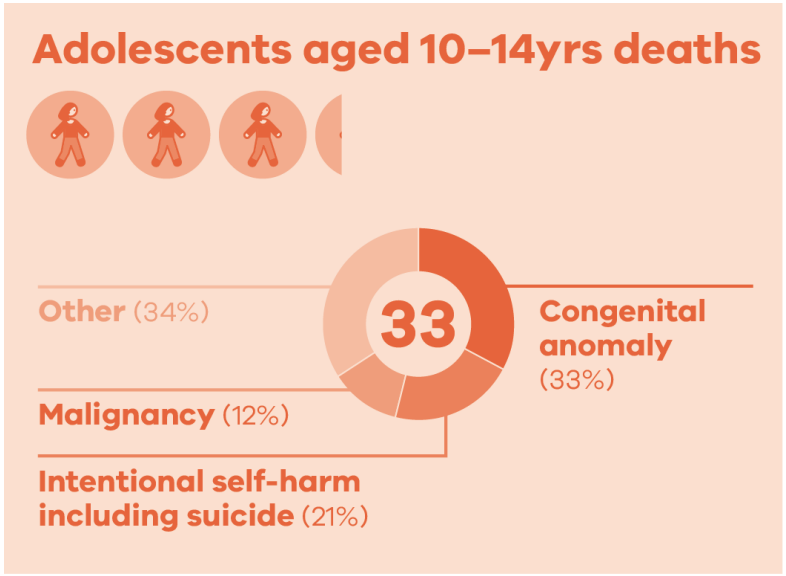
Causes of death in 2019





Causes of death in 2019





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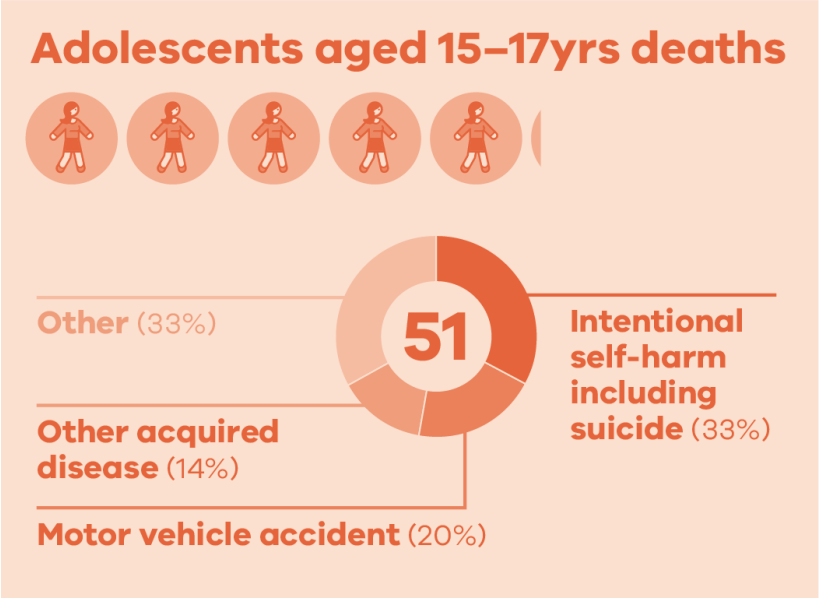
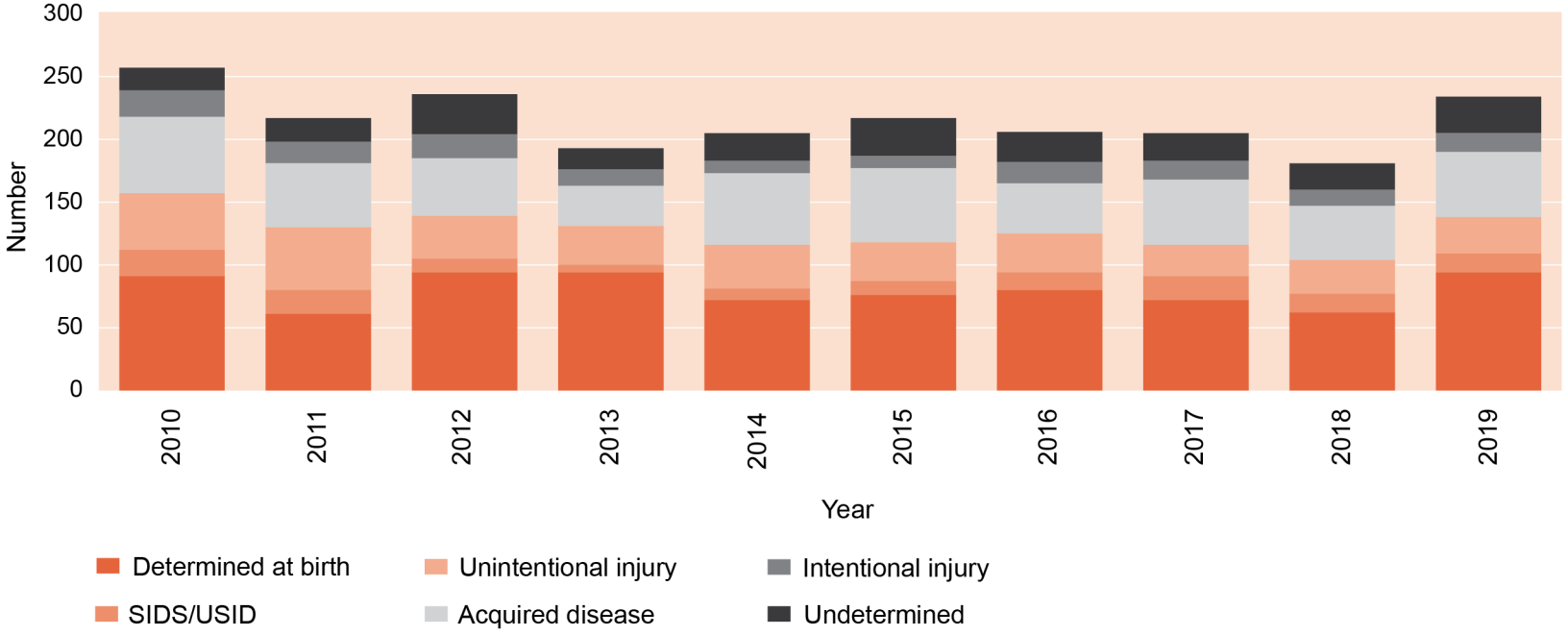
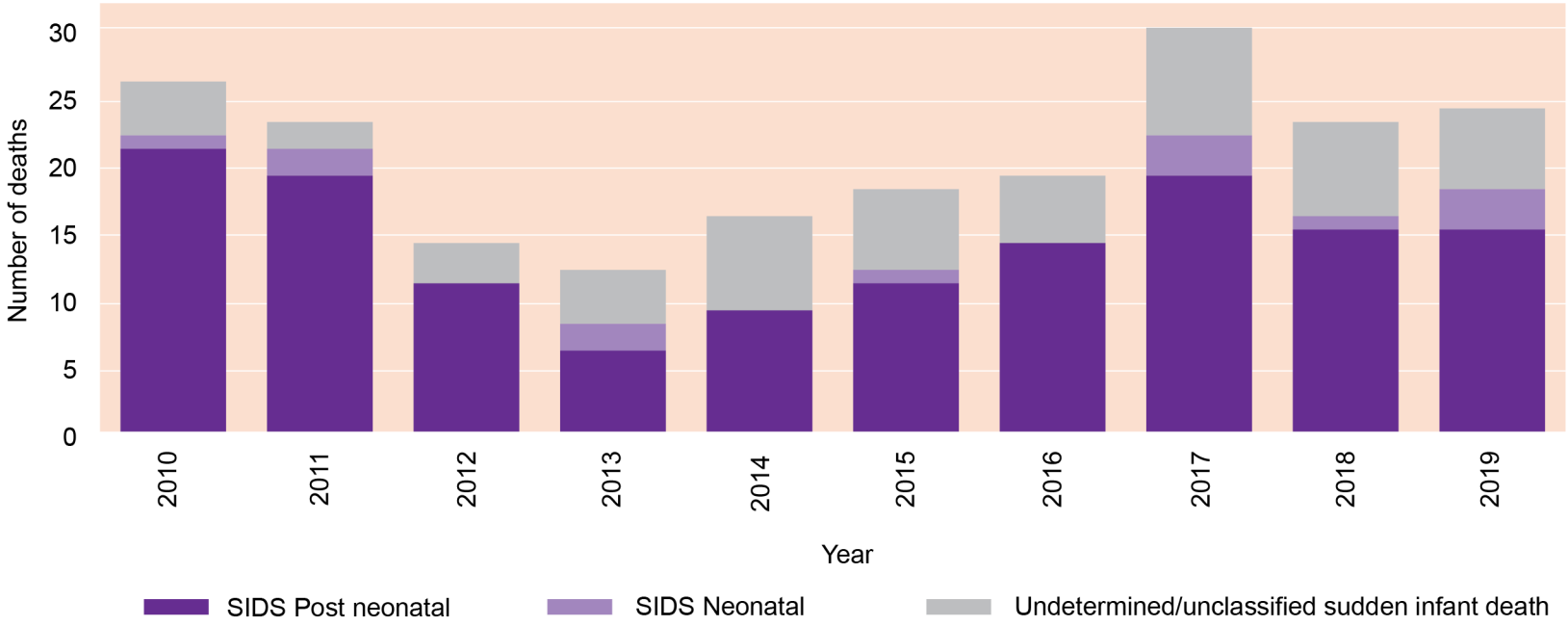


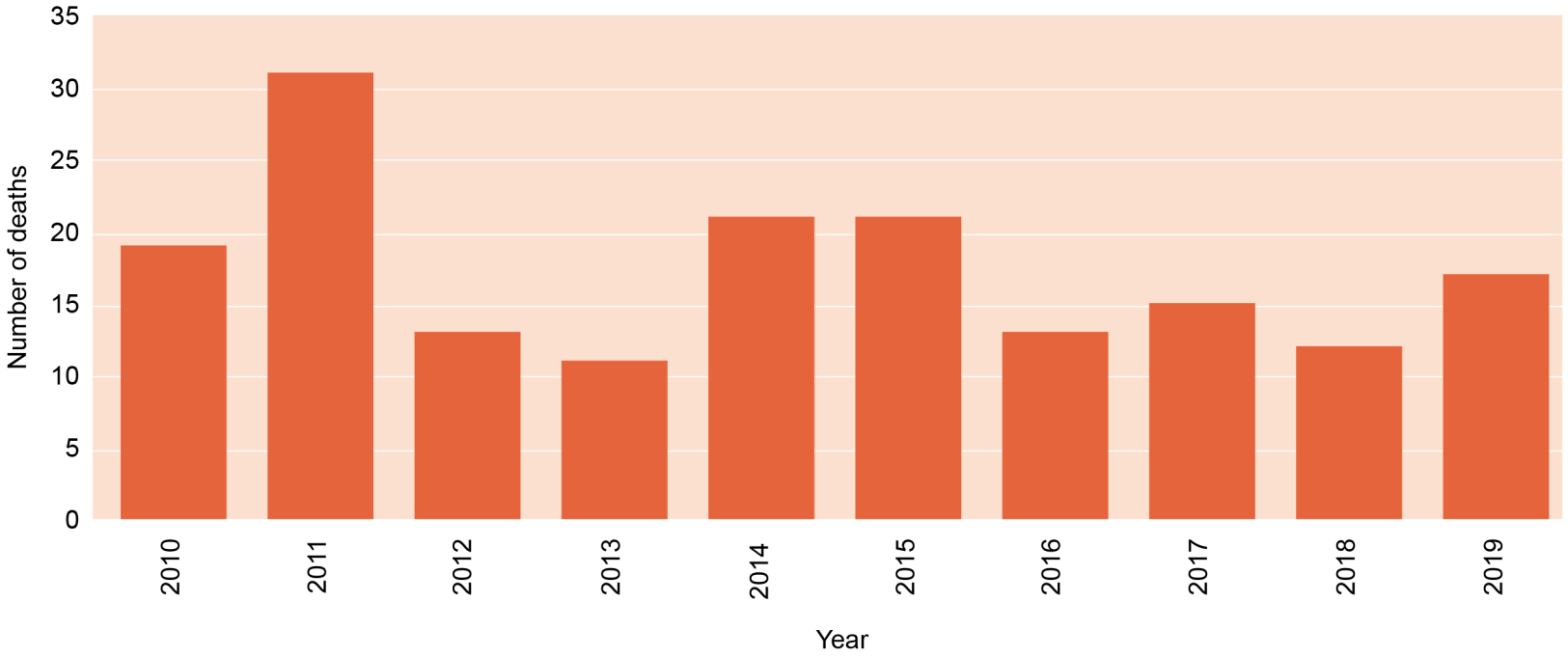
Deaths by major cause: 28 days to 17 years



Unexplained sudden unexpected deaths in infants



Motor vehicle accident deaths: 28 days to 17 years



CCOPMM recommendations: Child and adolescent

Recommendations

Evaluate the effectiveness of current services in meeting the specific needs of women during pregnancy and in the year following birth. If gaps are identified, implement strategies to improve the health and wellbeing of women and families. The areas of mental health and family violence require specific focused attention

Reform of statewide services is needed to ensure there is a coordinated and timely system response that supports the health and wellbeing of Victorian children in vulnerable situations

Recommendations

Develop and roll out an **annual public health campaign on the importance of influenza vaccination for children** using co-design principles with families and their communities

Ensure all children have easy access to **free influenza vaccination** annually

Recommendations

Develop and implement a **public information campaign regarding the dangers for children on farms**, using co-design principles with families and their communities, in conjunction with organisations such as WorkSafe Victoria and the Victorian Farmers Federation

Good practice points

Good practice points reflect the findings of CCOPMM's review of all cases of maternal, perinatal and paediatric mortality, and severe acute maternal morbidity in a reporting year

They are designed to guide local improvements in clinical performance and can relate to our **clinical care and/or the system or service we work in**

Good practice points: systems and/or processes

- Follow up of test results
- Discharging babies under 2.5kg
- Influenza vaccine
- Farm safety

Follow up test results – every time, every test

Clinicians who order pathology tests must have **clear mechanisms for timely review and follow up**

For teams or part-time clinicians: ensure **effective plans** are in place that outline responsibility **for review, follow up and documentation** of actions

Discharging babies under 2.5 kilograms

Babies under 2.5kg at discharge should have a **comprehensive action plan** and follow-up

This plan needs to **include a risk assessment** of their discharge circumstances

Vaccine-preventable illnesses

Annual influenza immunisation remains important for all children over six months of age

- Appropriate vaccines are included in the Australian immunisation schedule for all children and adolescents

Immunisation status should always be assessed and advice provided and documented on appropriate vaccines regardless of external circumstances

Immunisation **should not be deferred** or withheld because of apparent risk of infection with other agents

Safe farms

Parental supervision and awareness of potential hazards are essential to minimise the deaths from unintentional injury

Parents should **not allow** the unlicensed or inappropriate use of motorised vehicles by children or adolescents. They do not have the strength, coordination or maturity to use safely

Fence off the area where children play

Supervise young children at all times

Assess competency of older children before they work on the family farm

Good practice points: Clinical

Stridor

Constipation

Growth

- Follow up of poor growth
- Severe growth failure

Cardiac

- Myocarditis
- Severe pallor and low cardiac output

Immunosuppression

- Lymphopenia
- Immunosuppression and infection
- High dose long term steroids and risk of infection

Chronic illness in children and adolescents on organised trips

Prescribing SSRIs

Presentations of children with stridor

Not all cases of stridor are **caused by viral croup** and other causes must be considered

A presentation with stridor **must be** considered a diagnostic problem until a positive diagnosis is made

Constipation

Organic causes of constipation should be excluded with a **thorough history and examination**

If constipation persists despite these modifications and laxative therapy, consider investigating for less common organic conditions

Red flag symptoms and signs that require immediate referral for assessment or investigation include any of the following:

- Weight loss/poor growth
- Abdominal distension with vomiting and constipation
- Rectal blood loss
- Abdominal mass
- Abnormally positioned anus
- Infants presenting with constipation under the age of 6 weeks, or
- Delayed passage of meconium

Follow up for poor growth

Failure to gain weight – expected for age – occurs for many reasons. E.g. inadequate calorie intake, high-risk social circumstances, and underlying illness

Ongoing assessments are required for decreasing weight

Urgent assessment required if their weight-for-age is less than the 10th percentile and decreasing

Errors are often made when plotting weights on a growth chart. These can be reduced by using the calculator at www.infantchart.com

Severe growth failure and sepsis

Severe growth failure often presents with **sepsis *without* fever**

Children with severe growth failure who present acutely unwell should be **given antibiotics immediately**, by intramuscular injection if they do not have an intravenous cannula

Note: Blood and urine cultures should be taken before giving antibiotics if they can be obtained quickly

Recognising myocarditis

Myocarditis can present with nonspecific symptoms that leads to initial misdiagnoses

Investigate for potential myocarditis at presentation of viral prodrome and cardiac symptoms such as:

Features of heart failure:

- Chest pain
- Arrhythmias

Seek **early consultation** with a paediatric cardiologist and/or PIPER

Suspected myocarditis is a **‘Go Now’ criterion for PIPER**

Severe pallor and low cardiac output

Extreme pallor ***but*** a normal or near normal haemoglobin *means* low cardiac output until proven otherwise

Urgent treatment is required in cases of extreme pallor, tachycardia and high blood lactate as this indicates low cardiac output

Lymphopenia

Lymphopenia (low blood lymphocytes) is **common in children**, often secondary to acute infections

Infants or older children presenting with lymphopenia during an acute infection should have a **full blood count repeated** once they have recovered to ensure the lymphocyte count has normalised

Persistent lymphopenia should **trigger further investigation** to rule out severe combined immune deficiency (SCID) or other immune deficiency

Lymphopenia: Other good practice points

Investigate further: infant (6 weeks to 6 months) with first lymphocyte count <2.5

Investigate further: child with lymphopenia and signs suspicious of immune deficiency

To exclude SCID include a specific measurement of naïve T cells within the testing of lymphocyte subsets

Lymphocyte subsets without specific measurement of naïve T cells are an inadequate test as may be falsely reassuring

Lymphopenia: Other good practice points

Laboratories reporting FBE should add a comment where lymphocyte count is low

> For example, ‘Lymphopenia in children needs follow-up to monitor resolution to exclude potential immunodeficiency. Please refer to immunologist for further investigation if lymphopenia persists or if clinically indicated. In infants below 6 months this maybe a matter of urgency’.

Immunosuppression and infection

Children with immunosuppression may not show the typical features of severe infection or other inflammatory conditions such as appendicitis

For example, they may not develop:

- High fever
- Localising signs
- Elevated white cell count

High-dose long-term steroids and risk of infection

Prednisolone 1mg/kg/day or more for a month or longer, or equivalent steroid

These children should be on **cotrimoxazole prophylaxis** (three times weekly or single daily dose) to prevent Pneumocystis jirovecii (previously Pneumocystis carinii) pneumonia (PjP)

Cotrimoxazole preventative therapy will also prevent serious infection from Streptococcus pneumoniae, which is a risk with long-term high dose steroid treatment

Other immune suppressive therapies that require PjP prevention with cotrimoxazole include: alemtuzumab and fludarabine, and all children with persistent lymphopenia, SCID and ALL

Prescribing Selective Serotonin Reuptake Inhibitors

SSRIs prescribed for depression **can increase suicidal thoughts** – particularly on initiation or after dose increases

Advise on common and **serious adverse effects** and have a clear **plan for review** as required

Monitor initiation or change of treatment – for adverse effects and assessment of improvement

If there is **further deterioration in symptoms** (for example, insomnia, agitation or suicidal ideation) or a **lack of improvement** after four weeks **review plans** and consider specialist consultation or referral considered

SSRIs: Other good practice points

Evidence-based **psychological therapies** such as cognitive behavioural therapy (CBT) are **recommended** for depression in young people

Participation in **psychological therapies is vital**. It is common that those with suicidal ideation and behaviours do not engage in therapies and follow up

All clinicians have a vital role in ensuring attendance and participation in interventions and can improve outcomes including reducing suicidal ideation and improving school attendance

Be aware: Chronic illnesses on school trips

Prior to travel students with chronic illness should attend their specialist or general practitioner to:

- ensure their condition is well managed
- decide if any changes in the management are required during the trip
- develop an **individual healthcare plan** which states what care and monitoring they need and which members of staff will help them

All members of staff on the trip should be aware and monitor:

- the student's condition
- signs of the student becoming more unwell
- what to do in case of an emergency

For more information

www.bettersafercare.vic.gov.au/publications/victorias-mothers-babies-and-children-2019

Refer to CCOPMM's other slide packs on:

- Mothers and babies
- Maternal mortality and morbidity
- Perinatal mortality
- 2019 recommendations

Connect with us


www.bettersafercare.vic.gov.au


tanya.farrell@safercare.vic.gov.au


@safercarevic @TanyaFarrell13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