Managing children with COVID-19 in a primary care setting

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COVID-19: Australian Children

Australia (all settings) :

- 23,500 children < 19 years
- 22% of all COVID-19 in Australia

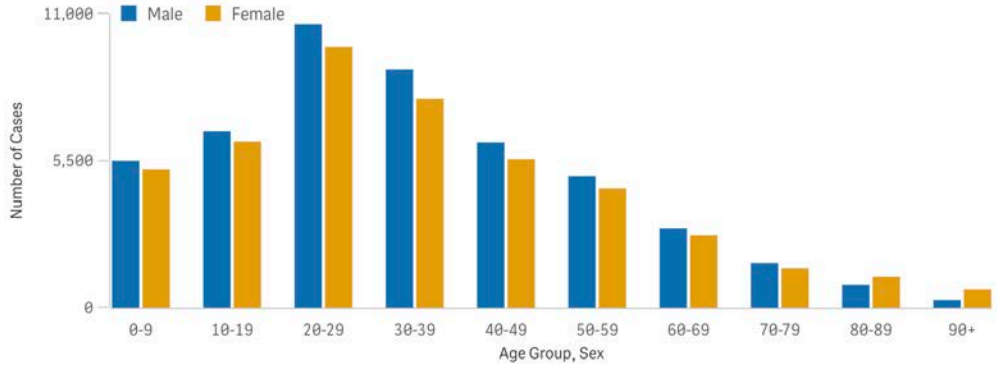
Victoria :

- 8000 cases to date, 2981 active

2020 Victorian Experience:

- 3,261 cases (16% of all Victorian cases)
- 131 presented to ED: 115 (88%) required no medical intervention
- 51 admitted: most brief/precautionary
- 3 PICU (2 PIMS-TS, 1 CHD + severe COVID-19)

Source: NINDSS data 24/9/2021



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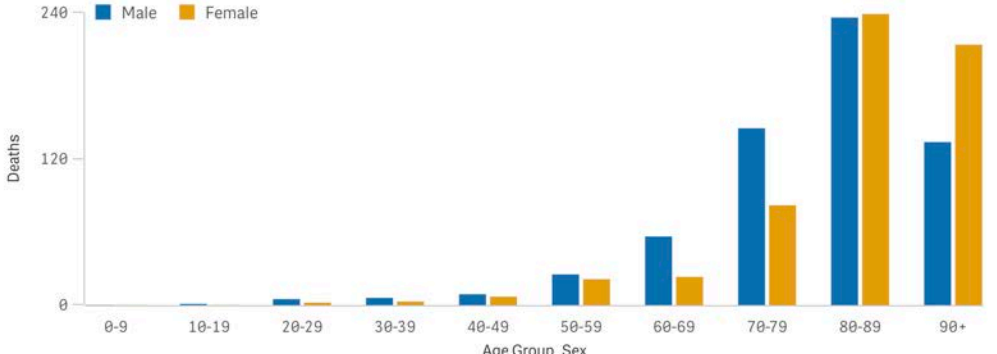


Ibrahim et al (2021) https://www.mja.com.au/journal/2021/215/5/characteristics-sars-cov-2-positive-children-who-presented-australian-hospitals
National COVID Data: www.Health.gov.au

COVID-19 in Children

Delta strain

- ≠ more severe disease
- Higher transmissibility
- Numbers of cases overall and proportionate severe disease will be greater.

- Hospitalization rates 0.1 – 2%
- Death <0.03%

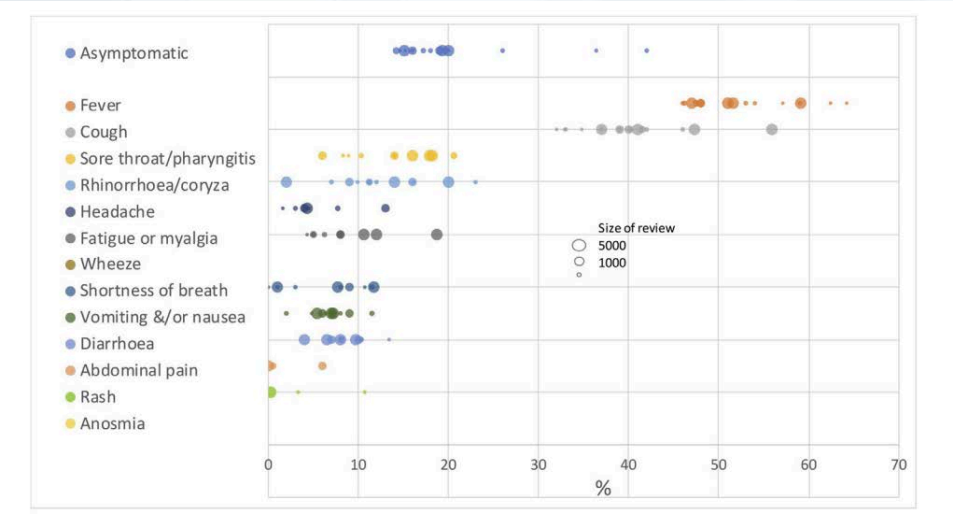
- USA
  - 5.5m cases among 75 million children, with 480 deaths
  - Mortality rate of Covid-19 in children has decreased from 0.06% in 2020, to 0.01% 2021

- UK
  - 470,000 infections (Feb 2020 - March 2021 pre-Delta), 25 deaths
  - Mar ‘21 - Sept ‘21, 52 deaths, no increase in the death rate overall

- MCRI Research Brief, https://www.mcri.edu.au/sites/default/files/media/documents/covid-19-and-child-and-adolescent-health-140921.pdf

COVID-19 Symptoms in Children

- Fever, cough, sore throat, rhinorrhea are most common symptoms
- Asymptomatic range from 14.6% to 42%
- Median illness duration - older children (7 days, IQR 3–12), younger children (5 days, 2–9)



- Viner R (2021) https://adc.bmj.com/content/106/8/802

Spectrum of Disease

- Acute Respiratory Tract Infection
  - Respiratory distress
  - Bronchiolitis, croup, pneumonia

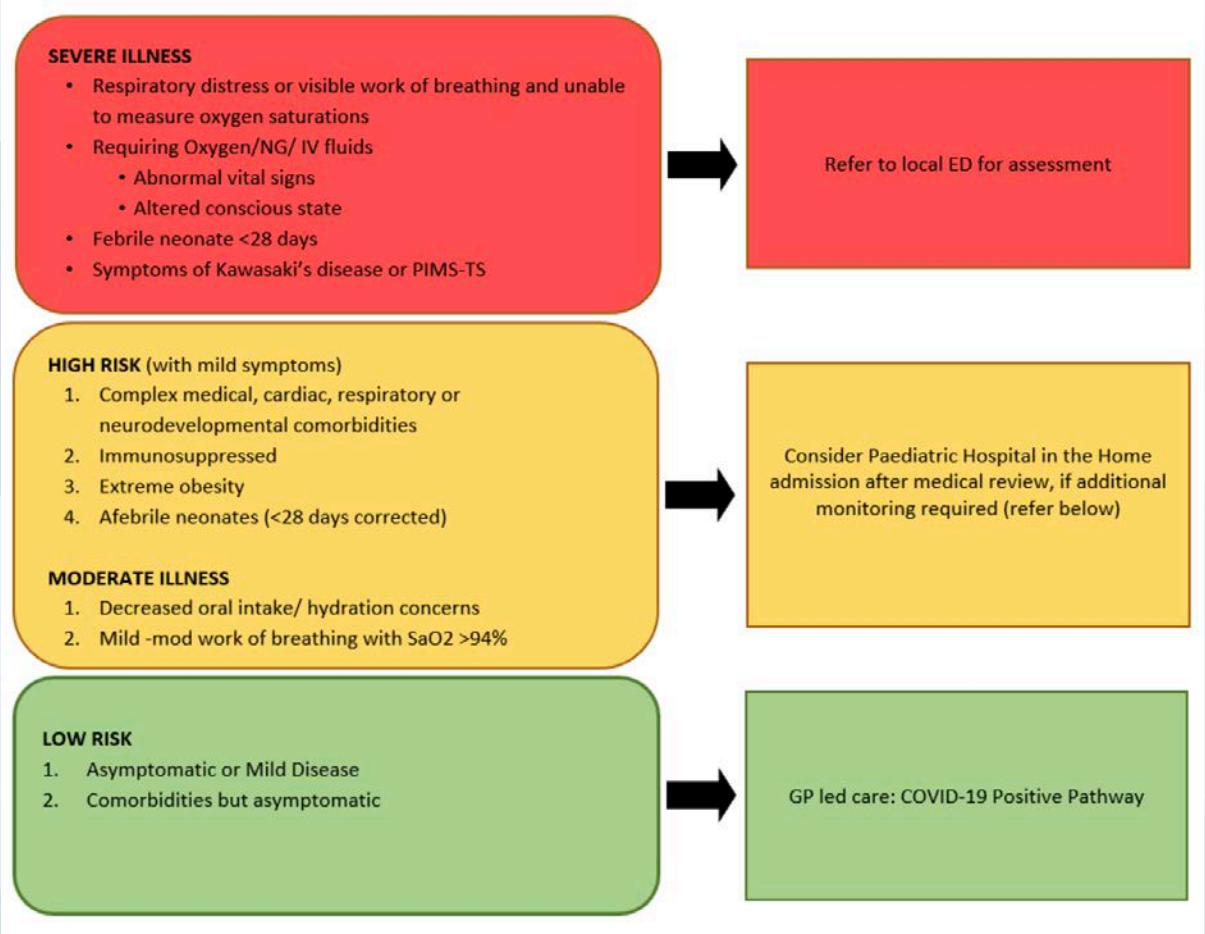
- Medical complications
  - MIS-C/PIMS-TS (<0.1%)
    - Fever (≥3 days), signs of shock, rash and abdominal pain 2-6 weeks post COVID-19
  - Long COVID (4 - 66% *limitations)
    - Prolonged symptoms > 3 months rare
  - PE/DVT

- Zimmerman et al (2021), https://journals.lww.com/pidj/Abstract/9000/How_Common_Is_Long_COVID_in_Children_and.

Risk Factors for Severe Disease

- Older children > 12 years of age
- Unvaccinated
- Pre-existing comorbidities:
  - cancer, obesity, chronic respiratory/kidney/cardiovascular/neurological disorders, immune disorders/ metabolic/hematologic disorders
  - Severe COVID-19: 5.1% of those with comorbidities, and in 0.2% without
  - *Risk of severe disease/death is still low in children with comorbidities*
- Children living with disadvantage, low socioeconomic or “minority” ethnic status

- Tsankov et al (2020) https://pubmed.ncbi.nlm.nih.gov/33227520/
- Ward et al (2021) https://www.medrxiv.org/content/10.1101/2021.07.01.21259785v1



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COVID-19 Positive Pathway

- https://www.rch.org.au/clinicalguide/guideline_index/Victorian_pathways_for_COVID-19_positive_children/

Primary Care Management

- **Treat the clinical syndrome**
  - Most will be mild viral respiratory infections
  - Escalate if moderate/severe respiratory disease or symptomatic with significant comorbidities
- **Red flags**
  - Fever/rash/abdominal pain/shock (PIMS-TS)
  - Signs of thromboembolism

- **Consider alternate/co-existing diagnosis in child who has positive test for SARS-CoV-2 (e.g. sepsis)**

Hospital Treatment:

- Respiratory support
- Corticosteroids, if ongoing supplemental oxygen
- Corticosteroids/IVIG – PIMS-TS
- Venous thromboembolism prophylaxis

- https://www.rch.org.au/clinicalguide/guideline_index/COVID-19/

COVID-19 Indirect Impact

- **Indirect impact**
  - Wellbeing, anxiety
  - Education gap – disproportionate impact on disadvantaged, disengagement from education
  - Disruption of support for students with disabilities, mental health issues
  - Adverse impact on vulnerable children eg. free meal services, child protection
  - Social impact
- **Social risk factors**
  - Social isolation
  - Risk of violence, abuse and neglect
  - Other child in home with significant disability, dev, behavioural or mental health problem

- **Parents may be admitted leaving children without alternative carers**
  - Parent / carer at high risk or in hospital
  - Children with complex medical needs (Tracheostomy/home ventilation, TPN etc.) likely to need hospital care if carers unwell

- **Identify during intake whether there are care arrangements available if parents hospitalised**

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References

- RCH CPGs
  - COVID-19:

    https://www.rch.org.au/clinicalguide/guideline_index/COVID-19/
  - COVID-19 Positive Pathways:

    https://www.rch.org.au/clinicalguide/guideline_index/Victorian_pathways_for_COVID-19_positive_children/

- Research Summary:
  - https://www.mcri.edu.au/covid-19/research-briefs