Changes in antibiotic prescribing following COVID-19 restrictions: Lessons for post-pandemic antibiotic stewardship

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Disclosures, ethics and funding

In 2020, the Centre for Big Data Research in Health, UNSW Sydney received funding from AbbVie Australia to conduct post-market surveillance research. AbbVie did not have any knowledge of, or involvement in, the current study.

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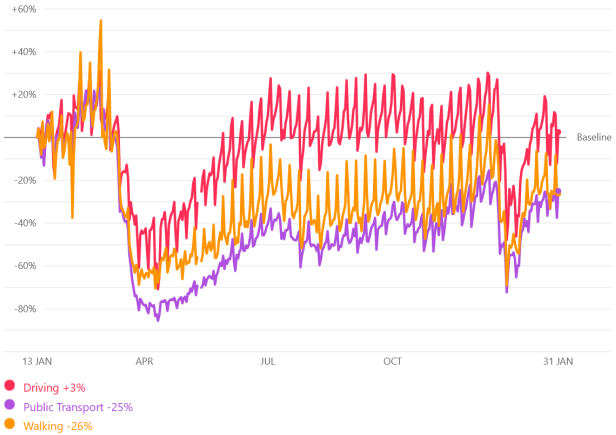
Background: Human behaviour c. March 2020

9 March 2020

Background: Google mobility data, Sydney, 2020



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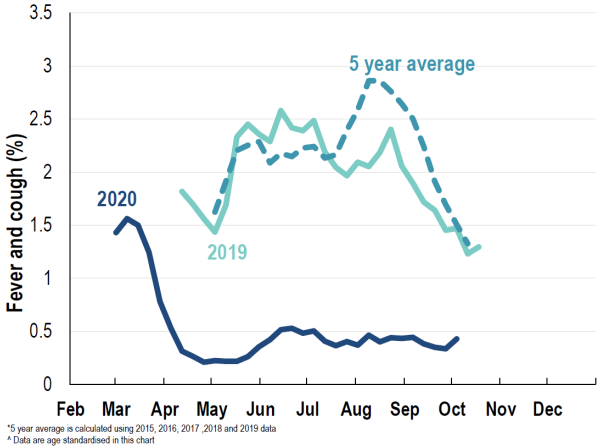
Background: flutracking.net, community influenza-like illness



*5 year average is calculated using 2015, 2016, 2017 ,2018 and 2019 data
^ Data are age standardised in this chart

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Methods

- Aggregate medical claims data (MBS), Nov 2016 to Oct 2020
- Aggregate dispensing claims data (PBS S85), Nov 2016 to Oct 2020
- 10% sample person-level dispensing claims data, Nov 2016 to Aug 2020
- ATC J01 antibacterials for systemic use
- Autoregressive Moving Average (ARMA) model, automatic selection
- Intercept, trend, month dummies for seasonality
- Pulse term for Mar 2020, Level shift term for Apr 2020 to Oct 2020

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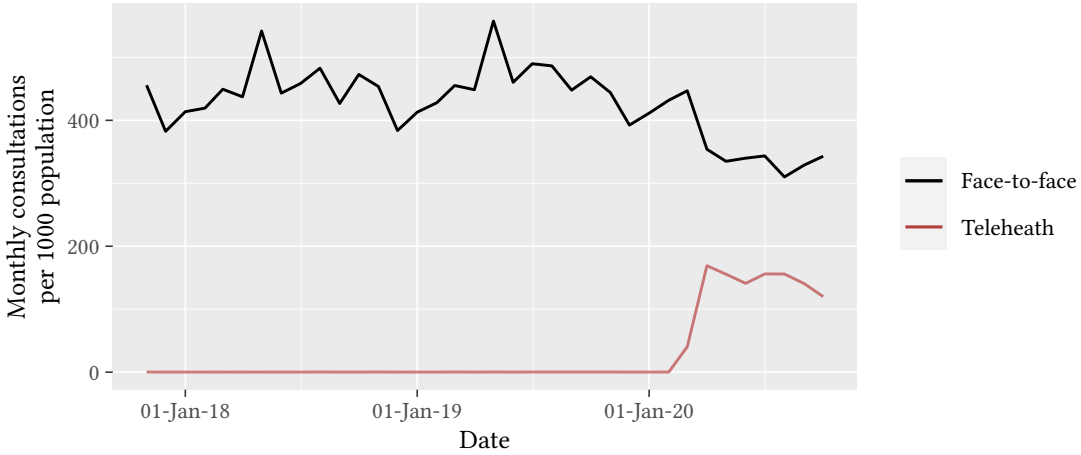
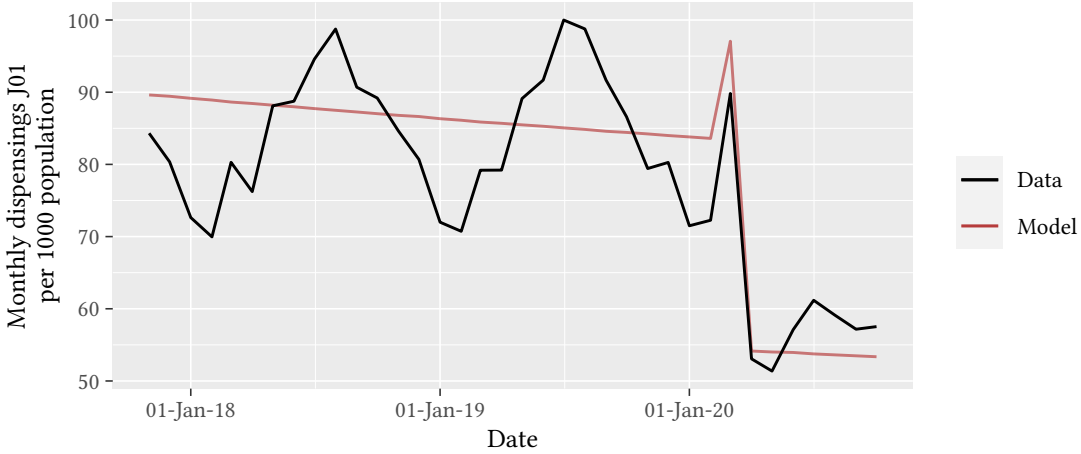
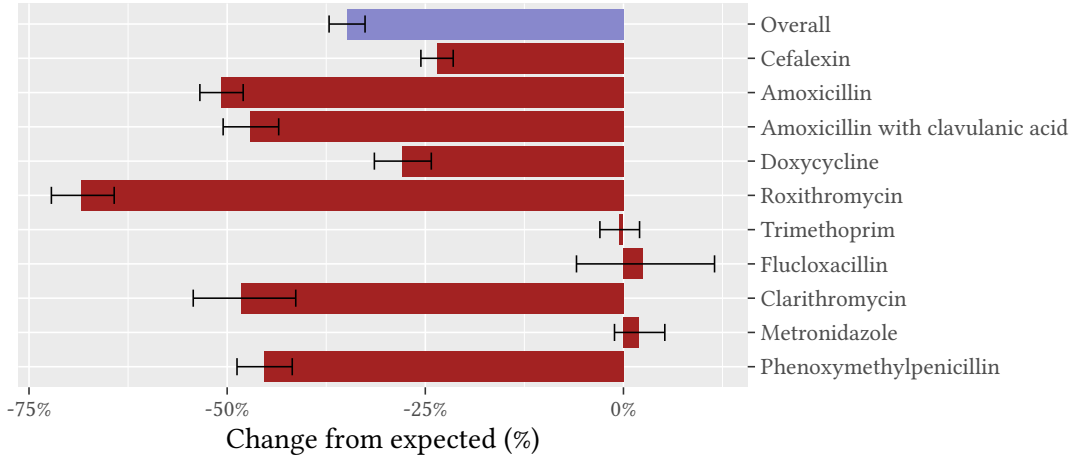
Results: Changes in primary care consultation rates



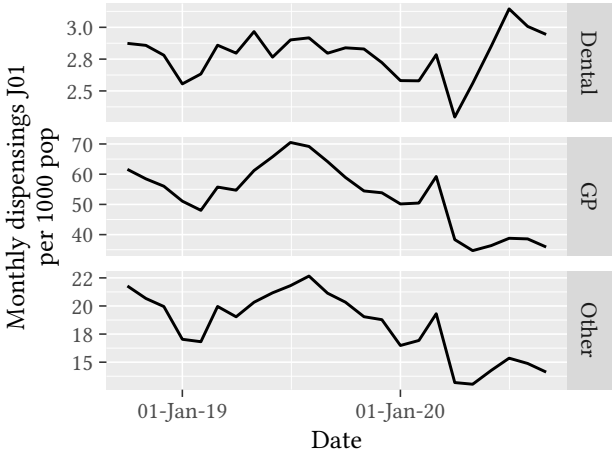
Results: Changes in antibiotic dispensing



Results: Top 10 antibiotics step changes



Results: Antibiotic changes by prescriber specialty



Discussion: Guideline concordance in Australian primary care

Condition	Prescribed antibiotics (%)	
	Guideline	Observed
Acute bronchitis	0	92
Acute tonsillitis	<40	94
Influenza	0	52
Sinusitis	<8	91

Data from NPS MedicineInsight practices, 2017 (AURA 2019: Third Australian report on antimicrobial use and resistance)

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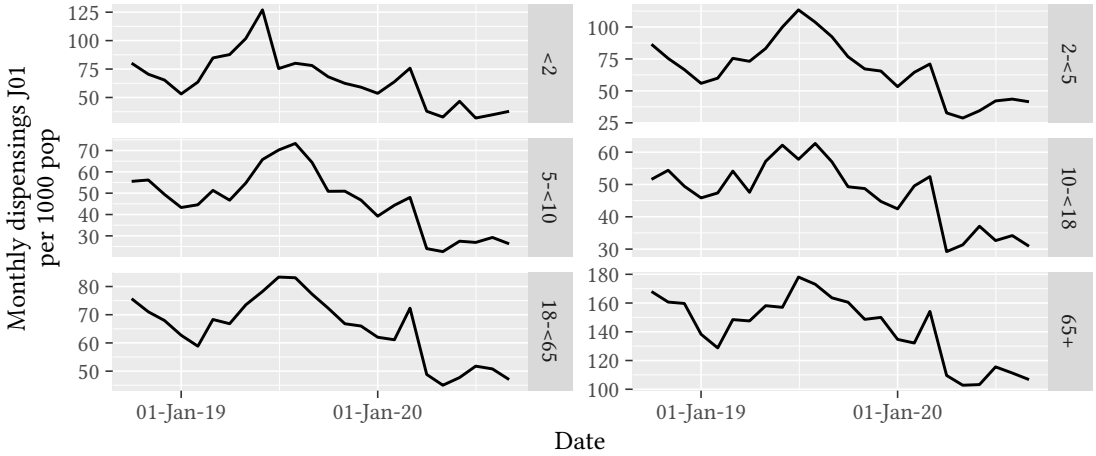
Additional results: Antibiotics changes by age



Additional results: Antibiotics changes by State