

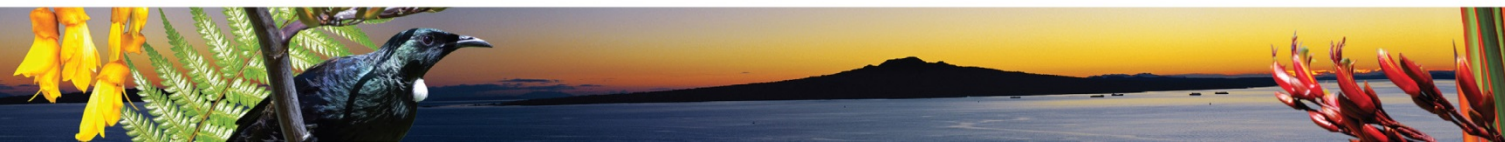
Why messages don't make it

- a NIR & practice data comparison

Presented by Georgina Tucker
Immunisation Programme Manager – Auckland DHB & Waitematā DHB

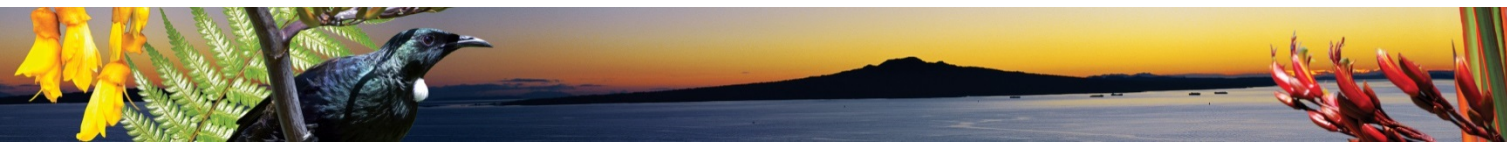
On behalf of:

Auckland DHB & Waitematā DHB: Georgina Tucker, Natalie Desmond, Samuel Wojcik
& PHO Immunisation Coordinators: Sian Gilhooley (Comprehensive Care PHO), Louise Goodall (Auckland PHO), Beth Harvey (ProCare Networks), Kate Moodabe (Total Healthcare PHO), Denise Naera (National Hauora Coalition), Catherine Roscoe (ProCare Networks), Kristin Shepherd-Bell (ProCare Networks), Tiffany Soloai (National Hauora Coalition) and Anju Verma (Alliance Health Plus)



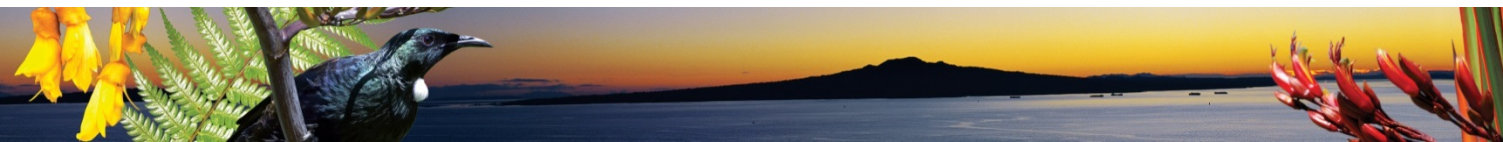
The National Immunisation Register

- Created in 2004 alongside the Meningococcal vaccination programme
- Has captured immunisations for all children born after 2005
- School based immunisations
- Tdap in Pregnancy since 2014
- Influenza in primary care since 2014 & pharmacies since 2016
- Essential tool for supporting an effective immunisation programme
- Legacy system affected by messaging errors



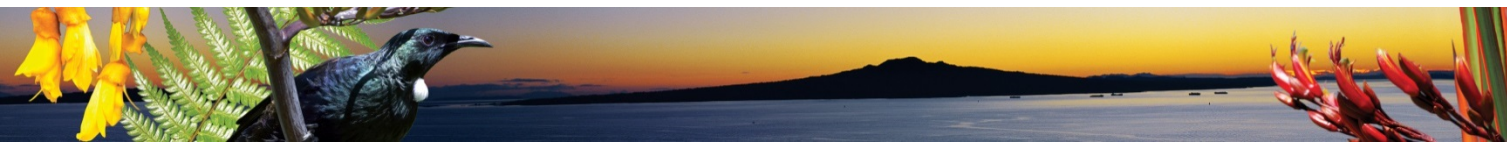
Impact of NIR data inaccuracy

- Increased workload for NIR admin & practice staff
 - Resending immunisation event records and following up on overdue reports
 - Following up on children that are already immunised
 - Time that could be better spent on following up unimmunised children
- Lack of confidence in the accuracy of the NIR
- Lack of confidence of the public in the health system
- Inaccurate immunisation coverage reports



Small data accuracy audit - 2018

- Growing data quality issues in mid-2018
- PHO Immunisation Coordinators and the NIR team in Auckland and Waitematā DHBs collaborated on a small quality audit
- 35 practices in Auckland DHB & Waitematā DHB identified
 - Known messaging issues
 - And/or high automatic referral to the Outreach Immunisation Service (OIS)



Small data accuracy audit - 2018



35 clinics



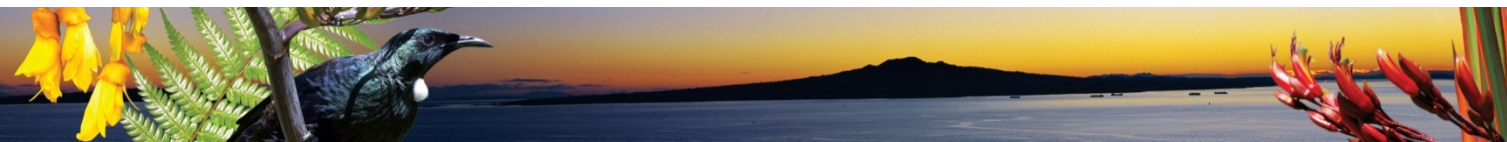
30,000 immunisation
events



- 9,000 had not messaged = 30%
- Many were adults
- >165 were children <2 years old

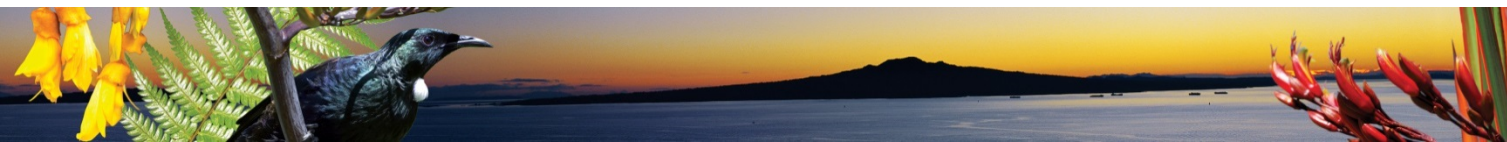
Escalated to the Ministry of Health and to MedTech

- MedTech with the support of ADHB/WDHB Imms Coordinators identified an issue with the message utility function
- Dated back to July 2017 schedule changes
- MedTech released a software update in mid-August 2018, including resending of historical messages



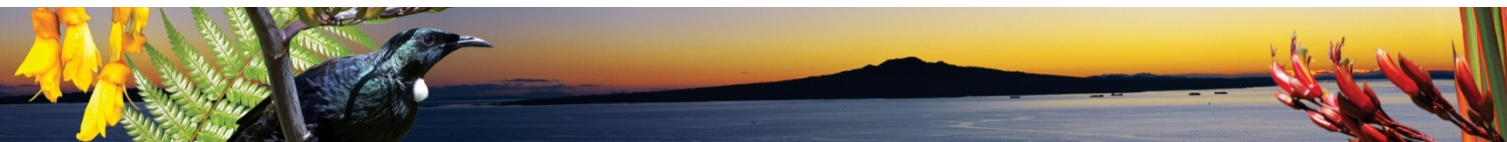
Systematic data audit

- Endorsement of all PHO leads
- Parameters agreed by Immunisation Coordinators
 - Immunisation events 1 July 2017 to 30 January 2019
 - Initially for MedTech 32 and MedTech Evolution, other PMS requested later
 - All immunisations (not limited to children)
 - Capture data such as Next of Kin fields
- Provided to DHB data analyst
- Vaccine lists from NIR for each practice



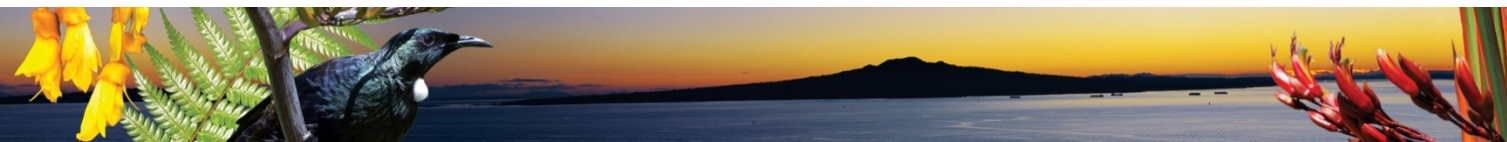
Systematic data audit - methodology

- Unique identifiers for each immunisation event to match the two data sets
 - NHI + Date of immunisation + batch number
 - NHI + Date of immunisation + vaccine expiry (month and year)
- Immunisation events filtered for further analysis:
 - Childhood immunisations (including influenza) – given or decline
 - Antenatal immunisations – given
 - >65 influenza – given
- Iterative process
- Time consuming



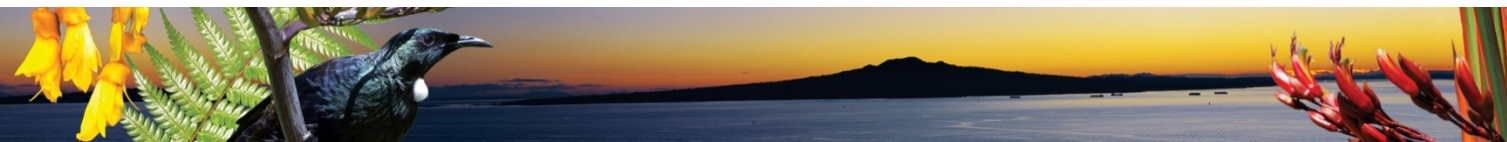
Reason for mismatch – imms given

- Opt off
- Not opted on
- Patient not on NIR
- Date variation
- Task variation
- Varicella variation
- Batch number different
- 3rd rotavirus vaccine
- Alternative NHI (Master vs Secondary)
- Other
- Unknown



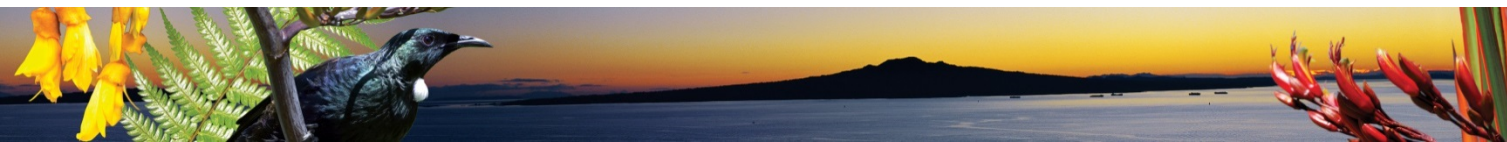
Reason for mismatch – imms declined

- Opt off
- Not opted on
- Patient not on NIR
- External provider
- Immunisation given subsequently



Antenatal immunisation matching

- Filtered if task contained “Pregnancy”
- OR one of the multiple variations of Boostrix
 - if not obviously a male
 - Women aged 15 to 45
- = time consuming!
 - Limited to “Pregnancy Influenza” or “Dtap pregnancy”



Data provided



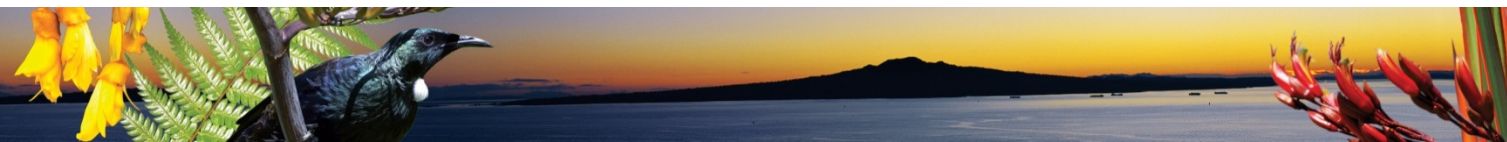
161 clinics



864,126
immunisation
events



- 522,881 events were given or declined
- 459,546 events analysed

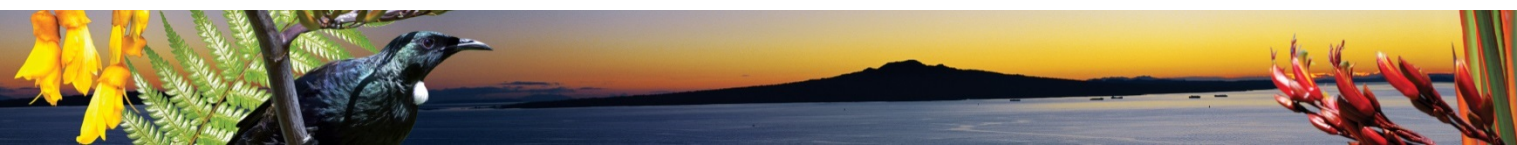
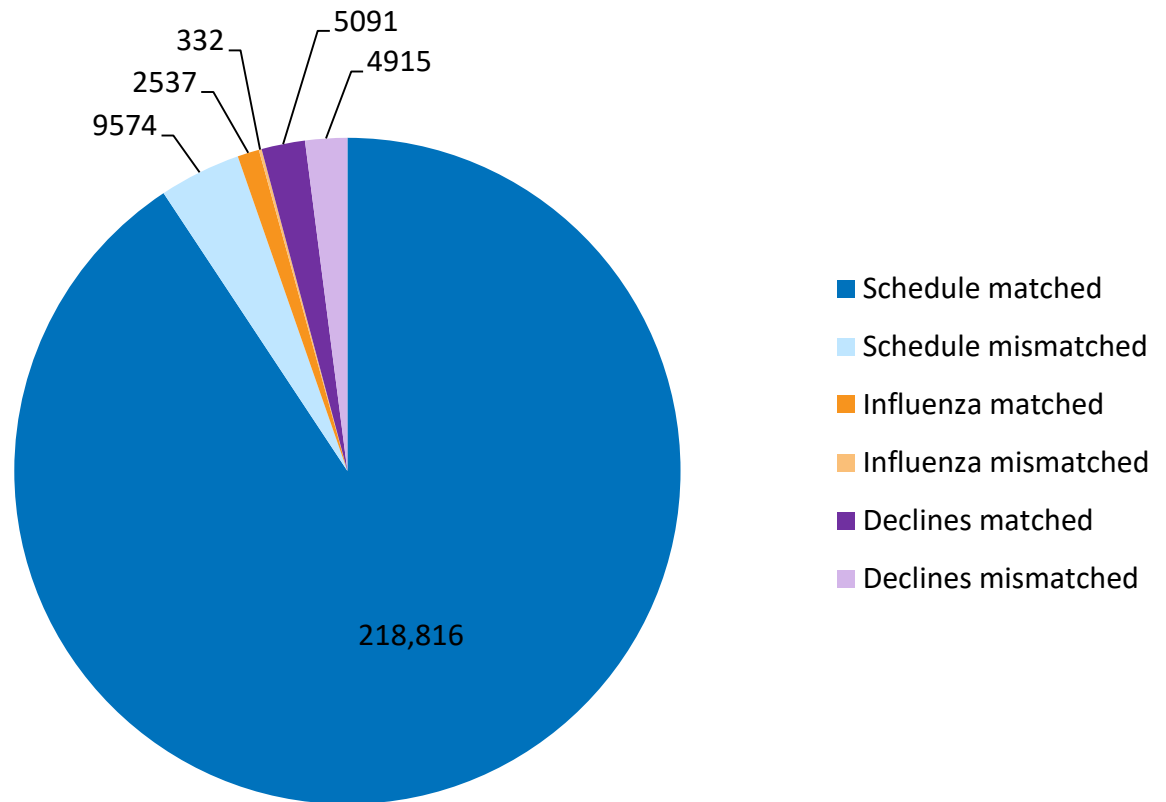


Childhood Immunisations



161 clinics

n=241,265

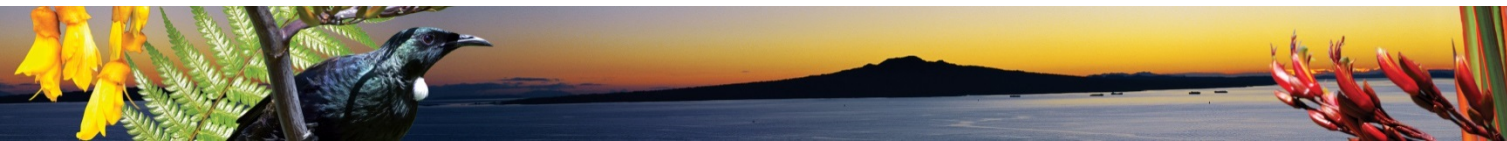
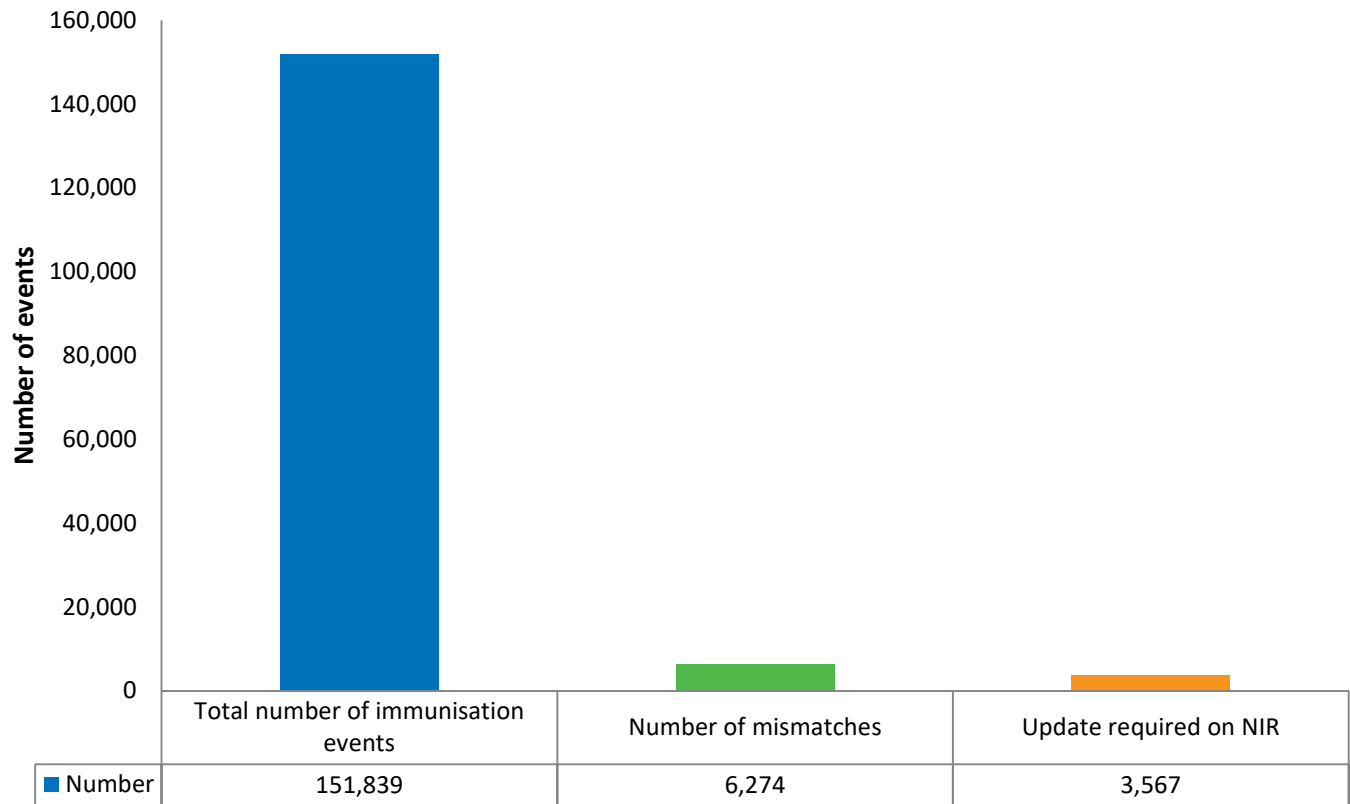


Childhood Immunisations - scheduled

Mismatch deep-dive

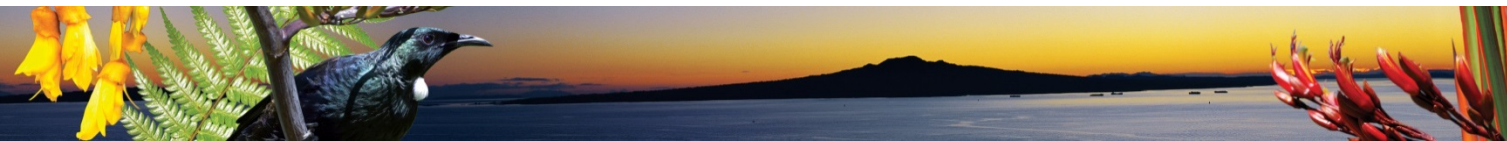
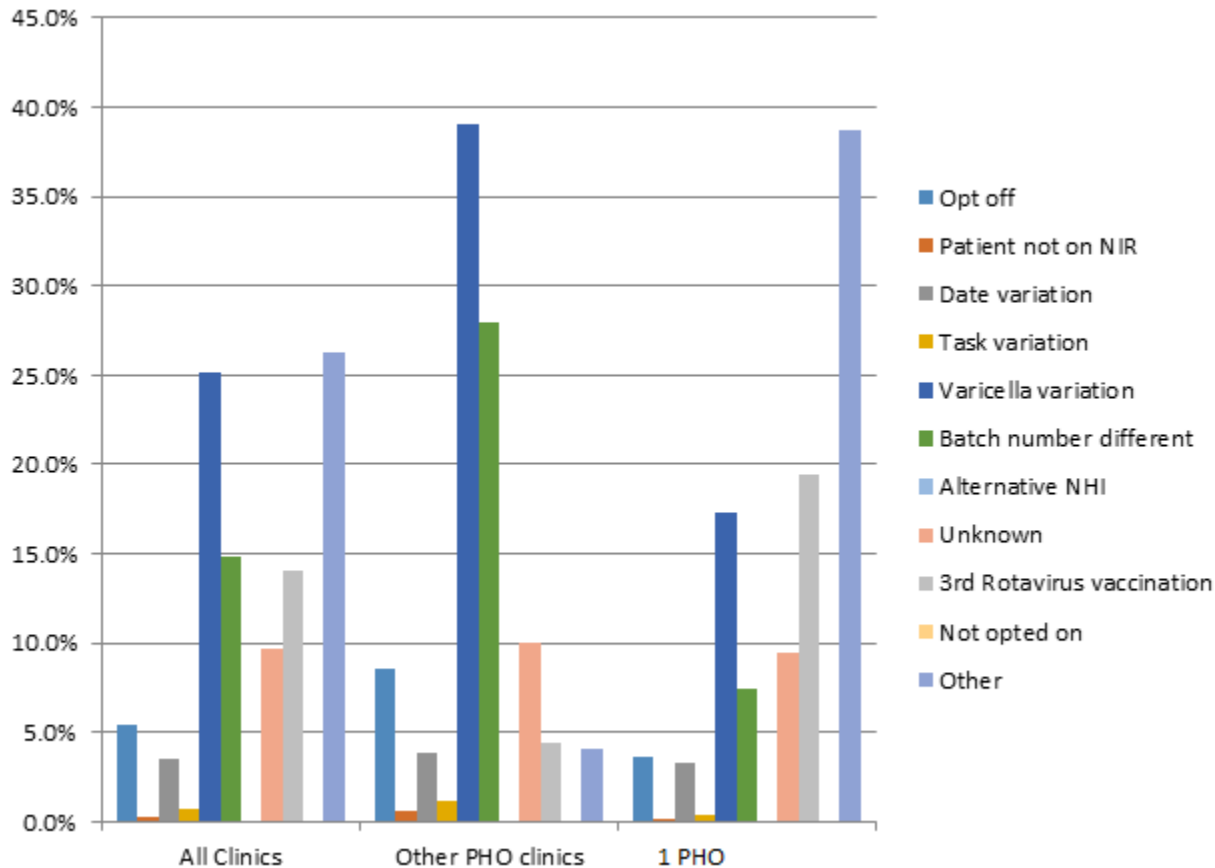


113 clinics

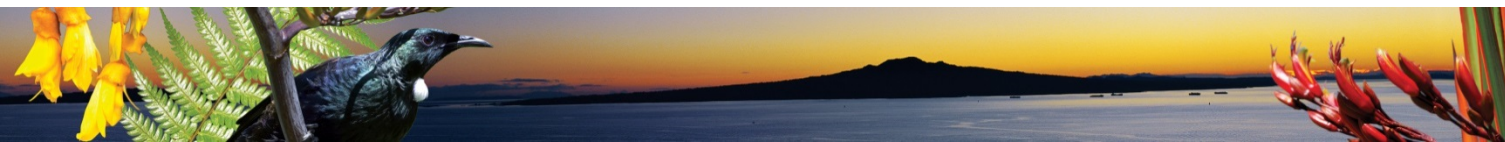
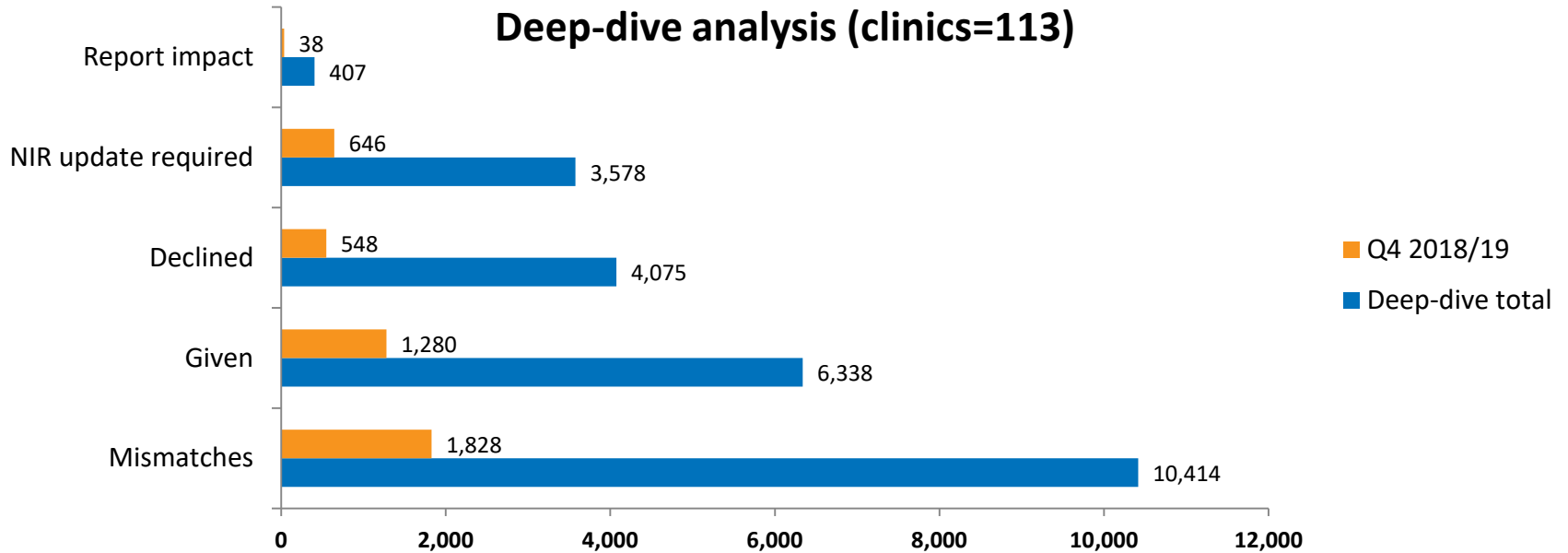


Reason for childhood immms mismatch

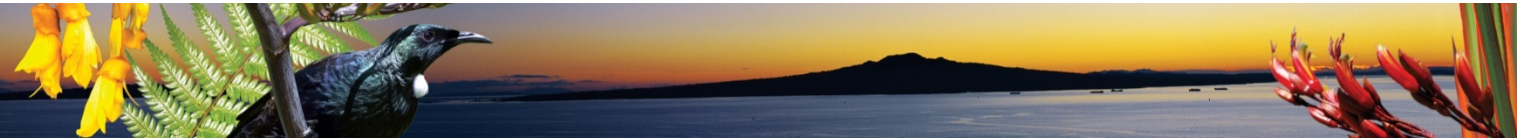
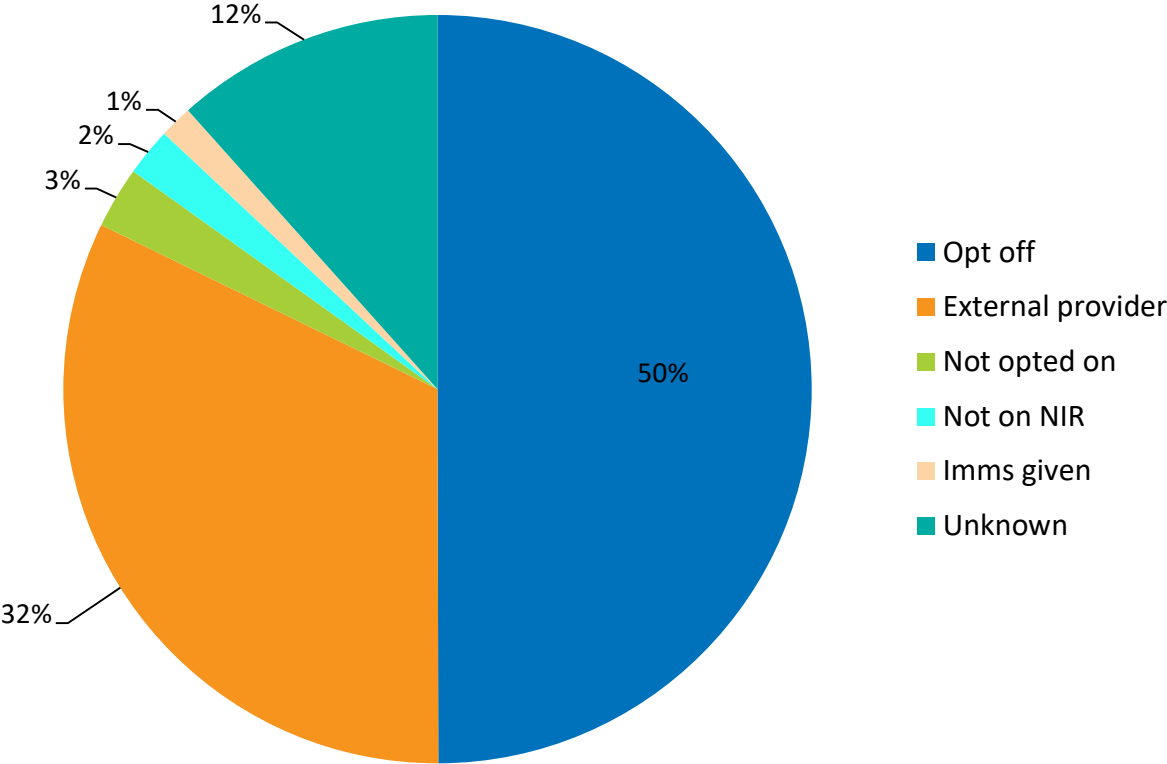
55 clinic deep dive



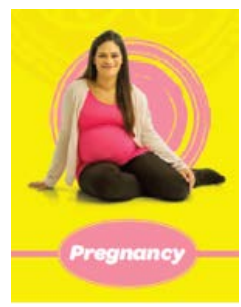
Childhood Immunisations - scheduled



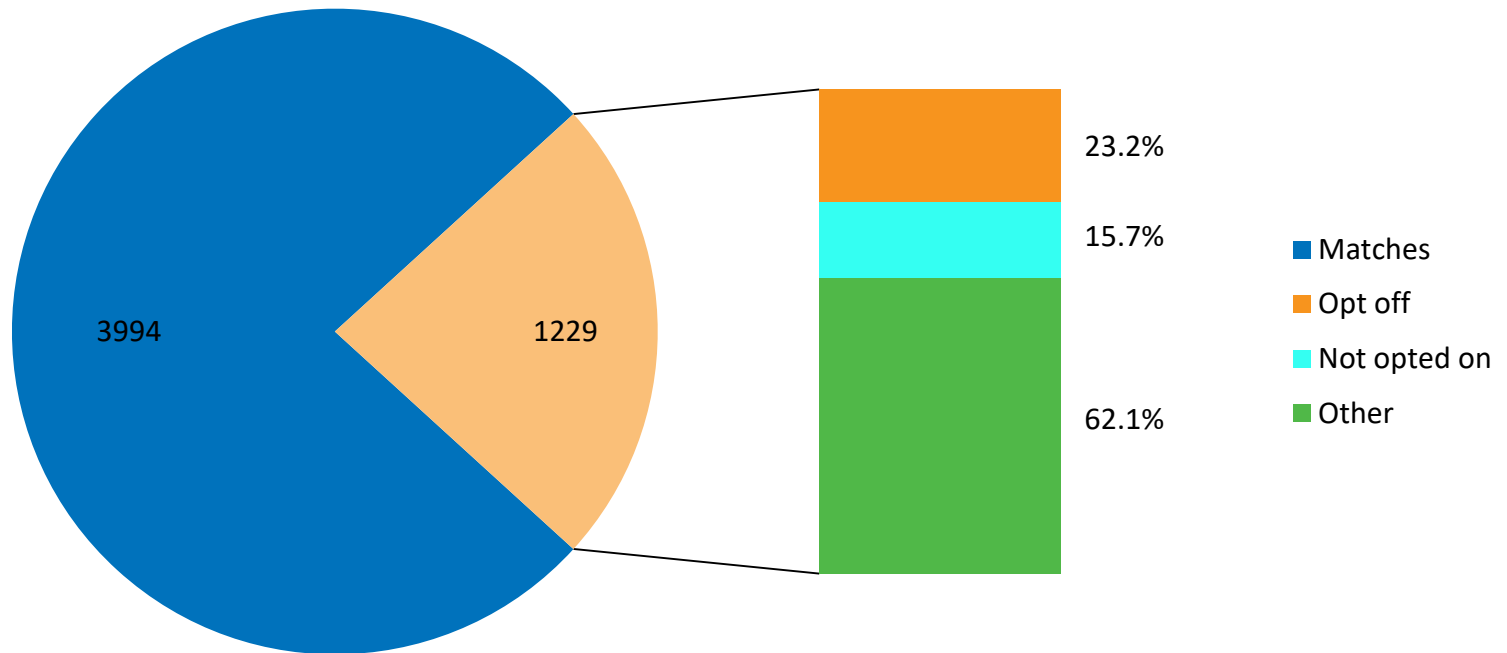
Childhood Immunisations – declined - mismatch



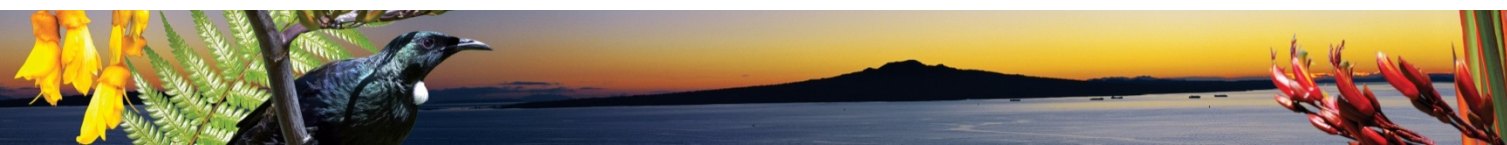
Antenatal immunisation mismatch



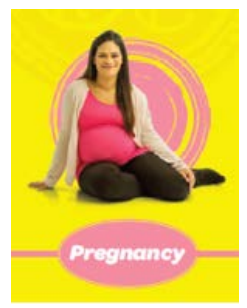
Clinics = 84



Total number events analysed = 5223

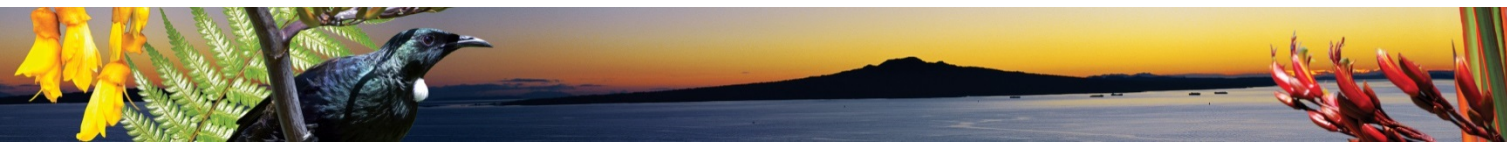


Antenatal immunisation mismatch



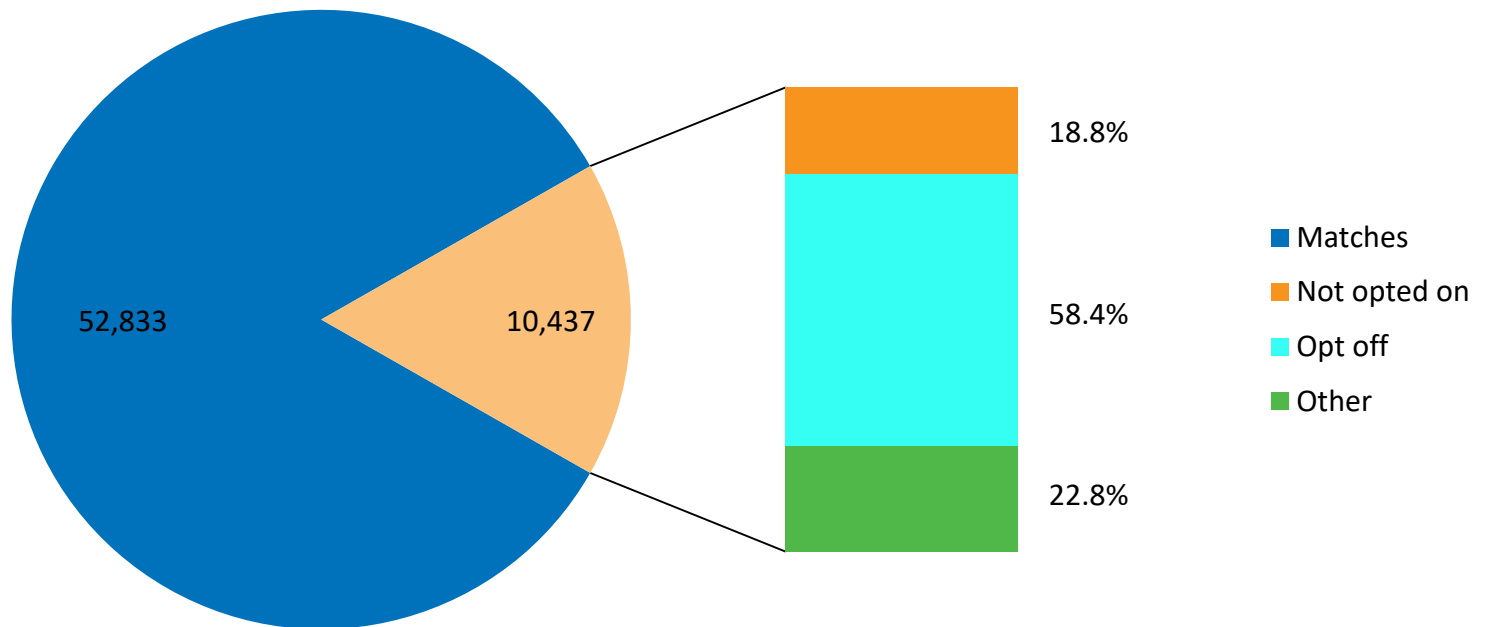
1 possible factor identified from Immunisation Coordinator support of practices resubmitting their records.....

- Many of the non-messaged pregnancy immunisations for MedTech PMS users were for a 2nd or subsequent pregnancy – MedTech have been made aware
- Some entered as non-schedule immunisations
- We may be under reporting antenatal immunisation coverage!

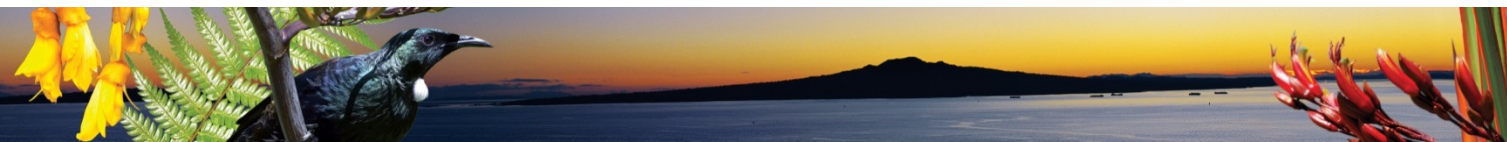


>65 year old influenza

Clinics = 124

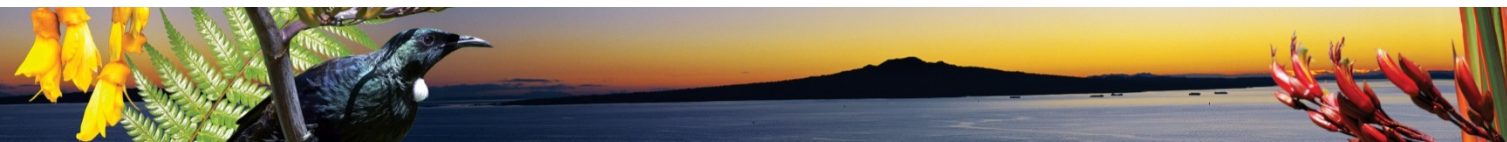


Total number events analysed = 63270



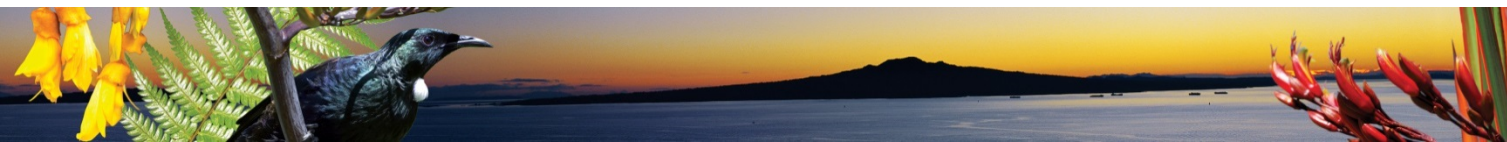
Other factors

- Mandatory patient detail fields (NOK, Address)
 - not all clinics provided these fields for analysis
 - If provided these fields, most data sets contained values for these fields – but may have been collected retrospectively?
- Nurse as provider
 - Clinic data included a provider code rather than provider's name so it was unclear at the time of analysis if the provider recorded was a nurse or doctor



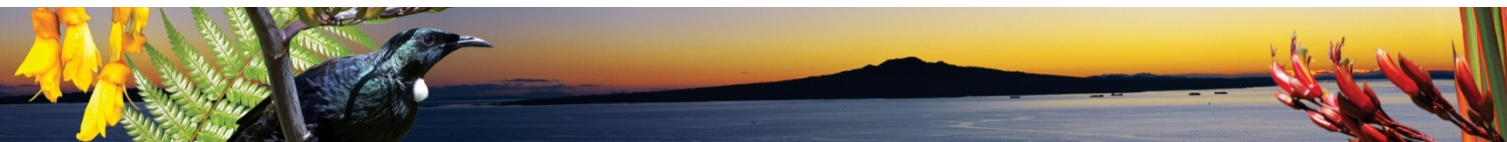
Recommendations – PMS systems

- Opt off system for all funded vaccines
 - Opt on prompt for all patients, not just children <6 years of age
- No “fix later” option for mandatory NIR fields
- More known immunisation tasks for non-standard schedule imms = less free format text
 - Easier overseas immunisation record loading
 - No “fix later” option for mandatory NIR fields
- Batch number accuracy mechanism



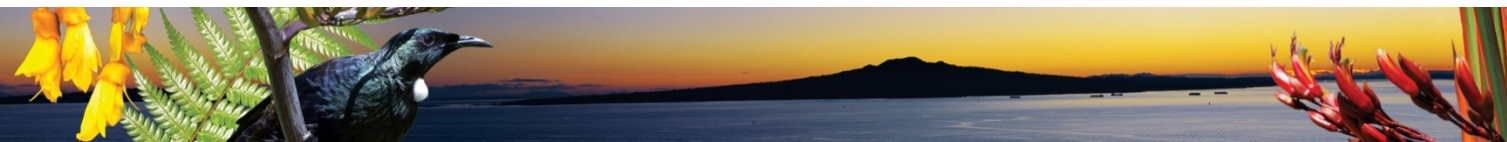
Recommendations – Wider systems

- Mechanism for PMS vendor and immunisation Coordinator meetings so can collaborate better
- Working group for future schedule changes
- Have a process for regular clinic-NIR data matches
- Authorised vaccinators as providers on the NIR, rather than needing a doctor
- Manufacturers – not use 0 or O in batch numbers
- Harder to create NHI numbers





Any questions?



Thank you!



Especially to

- Sam Wojcik – our star data analyst
- Immunisation Coordinators for collecting the data & supporting practices with resending data
- Practices for all their immunisations
- NIR team for following up overdue children and messaging errors

