

# TRAcET

Where are we three years on?

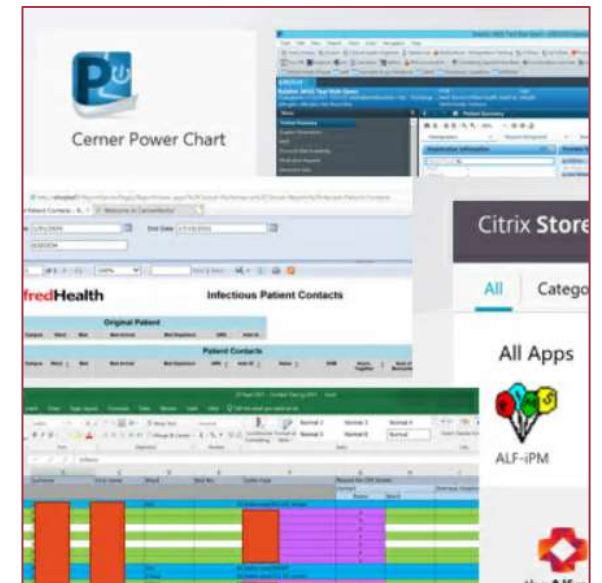
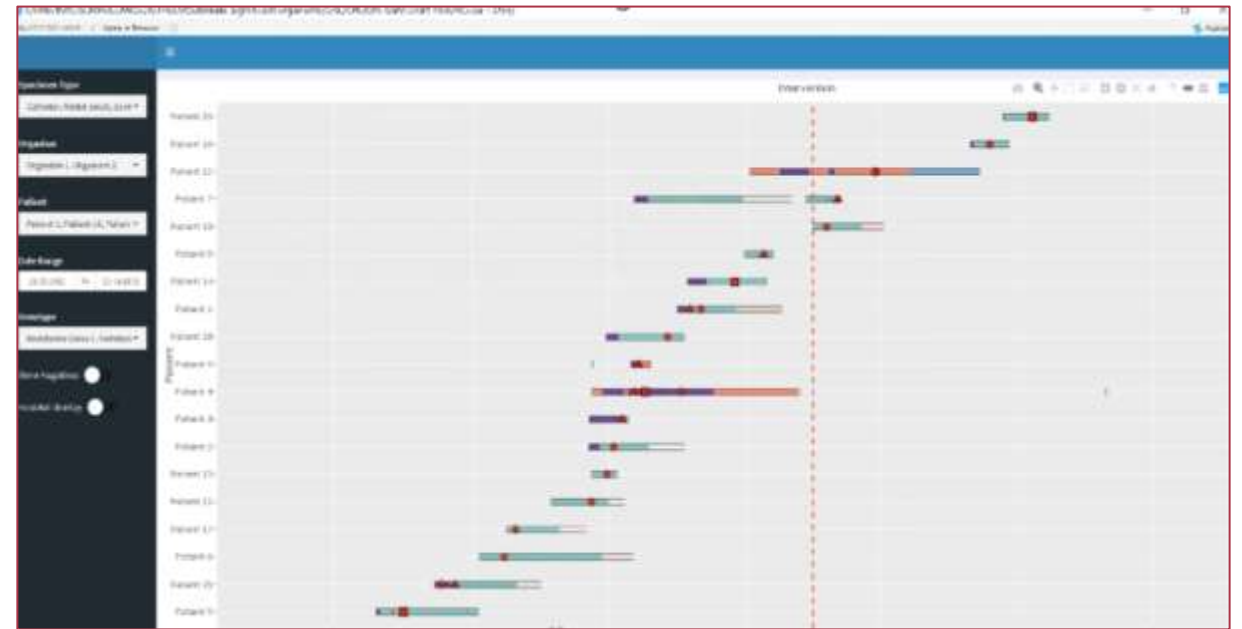
Co-Authors: Denise Delrosario-Kelly, Megan Gritt, Shirley Leong, Jaime Yamada, Pauline Bass, Andrew Stewardson

# Problem



# TRAcET?

- Presented in 2021 at ACIPC
- A Gant chart tool to visualize patient crossovers
- Minimised Infection Prevention workload
- However:
  - Required setup by EDMS
  - Was only available on one machine
  - Worked off excel sheets with no central store

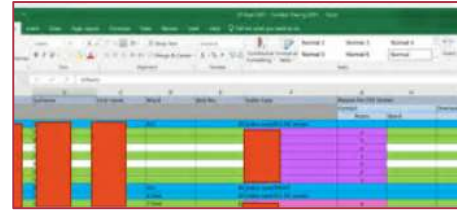


# Approach

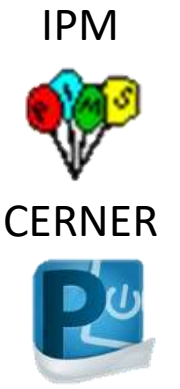


# Disparate Data Sources

- Data warehouse access gained
- Creation of a centralized REDCap database
- This allowed
  - Visualisation of IP work
  - Clean data storage and validation of excel
  - A central store for marrying CERNER, IPM and IP work



```
INFO Source: Accession 000000413400008
Result Status: MultiRes
Misc Reports: Interpretation | Specimen | Admin |
Extended Final Report - 28 June 2016 14:12 -
1- Virus/culture procedures complete
This organism is a Coxsackievirus B2 (CVB2) and is therefore considered sensitive to all parvovirus, rotavirus and adenovirus medications. Please contact Infection Prevention as antibiotic prescriptions are required. Advice on treatment should be sought from the Clinical Infectious Diseases Unit.
Coxsackievirus gene SEQUENCE: EPC-2 Positive
(This PCR detects EPC 1-11, 19-23, 26,28-37,39,41, 43,47,49,51; YIN 1-49;
YIN 1-12; ORF-40-like variants and EPC 2-19).
1- Adenovirus serogroup 40 complete
This organism is a Coxsackievirus B2 (CVB2) and is therefore considered sensitive to all parvovirus, rotavirus and adenovirus medications. Please contact Infection Prevention as antibiotic prescriptions are required. Advice on treatment should be sought from the Clinical Infectious Diseases Unit.
Respiratory genes (all) detected: ORF-24, INF-24, NSM-1
Coxsackievirus molecular typing performed by HST
This result has been notified to the Department of Health, Victoria through Public Health and Wellbeing Legislation.
Notification by the referring medical practitioner may also be required.
Please visit www.health.vic.gov.au/notify for further information, or to notify.
```



Data Warehouse

# Data Infrastructures

- CPO Database with three forms
- Specimen detail but also IP administration and epidemiology work
- Resistance information has been structured
- Contact tracing we hope to automate

**NEW Record ID 600**

Data Collection Instrument	Status
Demographics + Specimen	<input type="radio"/>
Resistance	<input type="radio"/>
Contact Tracing	<input type="radio"/>

Record ID: 600

**Demographics + Specimen**

Patient Details

Surname	First Name
NHS	Date of Birth

Care Facility:  Alfred,  Alfred Health Australia,  Imperial Alfreds.com

Accession number: [text field]

Date Specimen: [date field]

Date Received: [date field]

Type of specimen: [dropdown]

Room contacts identified:  Yes,  No

Risk factors:

- Transmission Source
- Patient Address
- Records
- Burial/cremation
- Contact with person with COVID infection
- ICU admission
- Long-term/care home
- Resuscitation/air transport
- Close contact with person with COVID
- Admission to hospital & Care Australia
- No

VICUS INFORMSIX Passes completing: [text field]

PNT in Compliance:  Yes,  No

Patient notified:  Yes,  No

CPE positive and results sent or given to patient:  Yes,  No

Able to complete both A&H with patient?:  Yes,  No

Comments: [text area]

Record ID: 600

**Resistance**

Organism Type: [dropdown]

Organism: [text field]

Carbohydrase Gene: [dropdown]

Carbohydrase number: [text field]

Sequence type (ST): [dropdown]

Sequence type: [text field]

Cluster: [dropdown]

MCR Gene Detected:  Yes,  No

- gmlB
- gmlB
- CMR-10a
- CTX-M15
- blaOXA
- blaKPC
- blaNDM
- None

Additional Resistance Detected:  Yes,  No

Record ID: 600

**Contact Tracing**

UR: [text field]

Surname: [text field]

First Name: [text field]

Ward: [dropdown]

Bed Number Screen: [text field]

Bed Number Exposed: [text field]

CPE Letter sent:  Yes,  No

Date of last contact: [date field]

Screening allowed from: [text field]

Repeat Flag Reviewed: [dropdown]

Date Screen 1: [date field]

Result 1: [dropdown]

Date Screen 2: [date field]

Result 2: [dropdown]

Flagged:  Yes,  No

Comments: [text area]

## Does Power BI have the functionality?

- Now all data is in a central location we can use power BI
- But does it have the functionality?
- We wanted a repeatable, refreshing and accessible tool for use.
- We can use hover functionality through power shell coding



Pros	Cons
<ul style="list-style-type: none"><li>- Automated refresh</li><li>- Filter support</li><li>- Integrated into intranet</li><li>- Secure and well established</li><li>- Well supported in most hospitals</li><li>- Custom R visuals can be used</li></ul>	<ul style="list-style-type: none"><li>- Visuals supported can be basic</li><li>- Custom R visuals lose</li></ul>

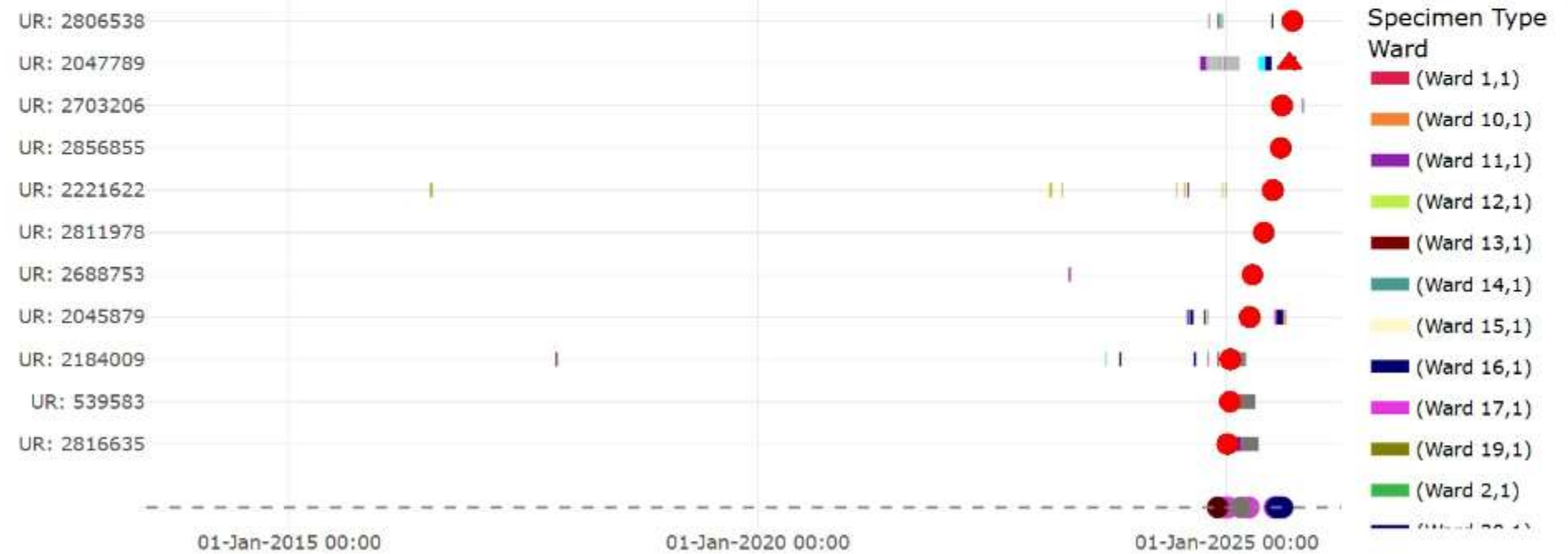


# Results

Pages

- AH CPO
- AH Gene
- TRACET**
- Contacts of MRO

UR: All Specimen: All Organism: All Carbapenemase Gene: NDM Gene number: NDM-1 MLST: All Additional Resistance: IncN



Date / Time

TRACET

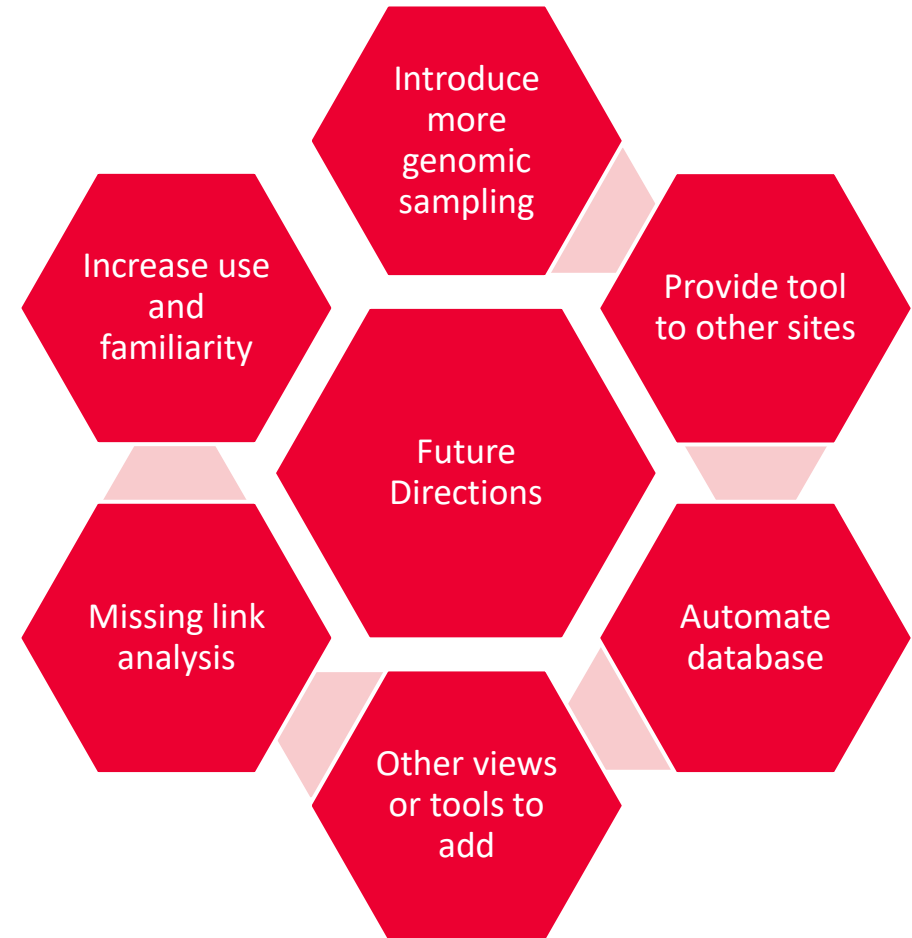
Date Last Refreshed: 11-Nov-25 5:08:36 PM

# Final thoughts



# TRAcET Demo

- Relieved Data Team Reliance
- Auto updated every hour
- Safeguarded and validated nurse database through CPO
- Highlighted Crossovers quickly
- Allows filtering based on anything in the EMR or CPO database including genomic mutations



# Acknowledgements

Infection Prevention:

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