MEDINFO23

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Building a greenfield Pharmacy Information Management System: lessons learned

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Background

National standard
for labelling
dispensed medicines

July 2021

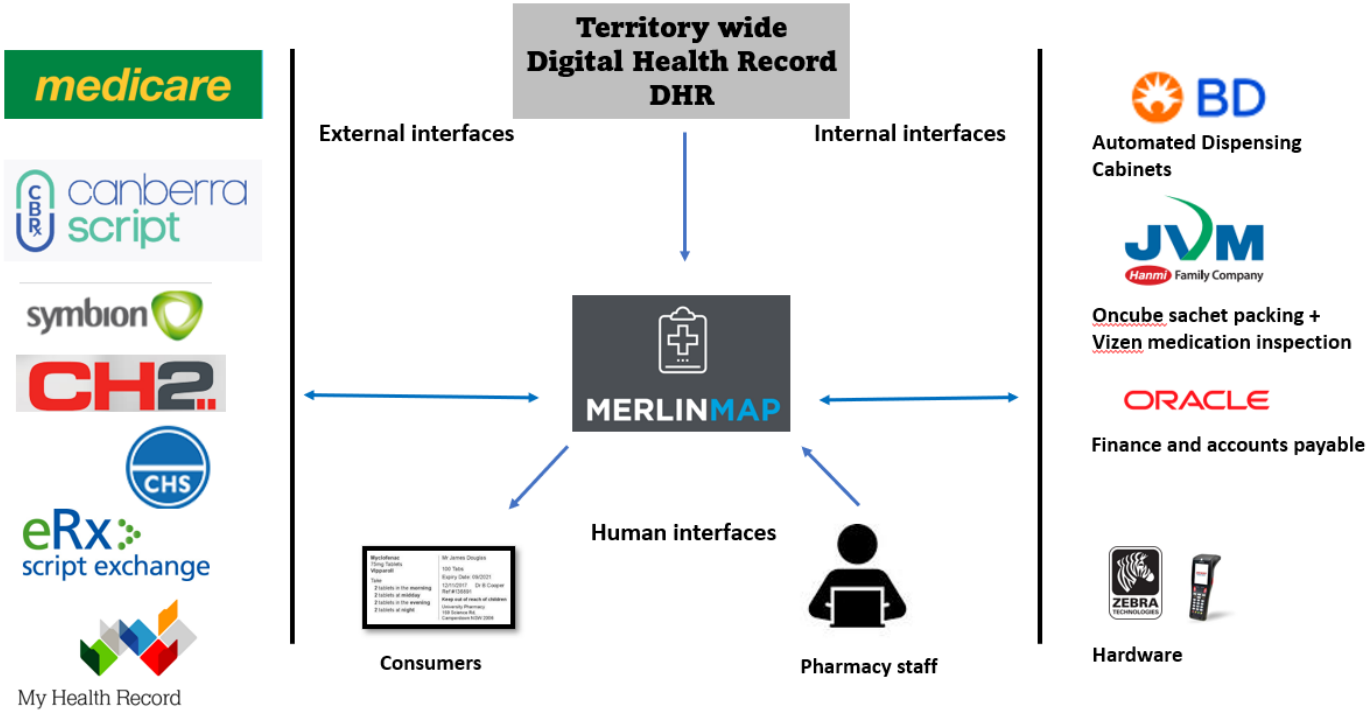
Australian Government
Department of Health
and Aged Care

PBS
The
Pharmaceutical
Benefits Scheme

Background

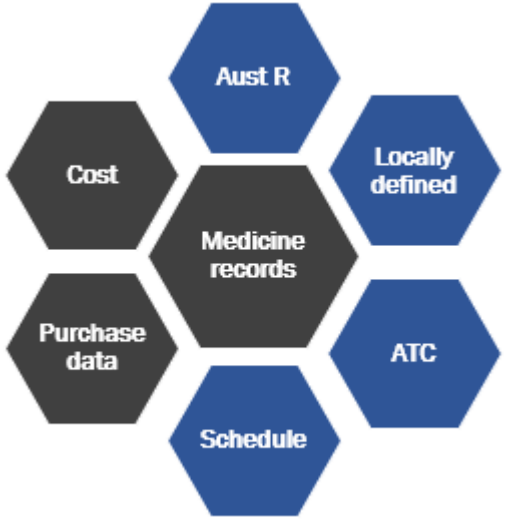
- Solution =

Pharmacy Information Management System (PIMS)

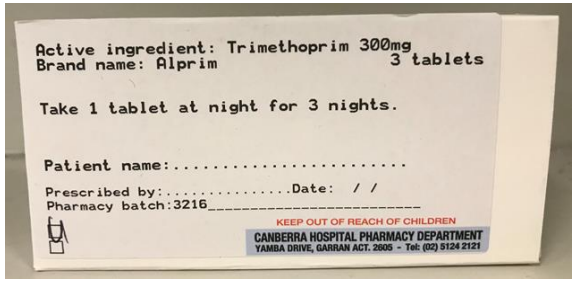

Territory wide Digital Health Record DHR
External interfaces
Internal interfaces
medicare
canberra script
symbion
CH2
CHS
eRx script exchange
My Health Record
MERLINMAP
Human interfaces
Consumers
Pharmacy staff
BD
Automated Dispensing Cabinets
JVM
Hanmi Family Company
Oncube sachet packing +
Vizen medication inspection
ORACLE
Finance and accounts payable
ZEBRA
Hardware

Pharmacy data

- Medicines
  - Australian registered
  - Locally defined concepts
    - Compounded infusions
    - Extemp products
    - Clinical trials
    - Repackaged medicines
    - Special Access Scheme (SAS)
    - Australian listed (e.g. complimentary medicines)



Pharmacy data



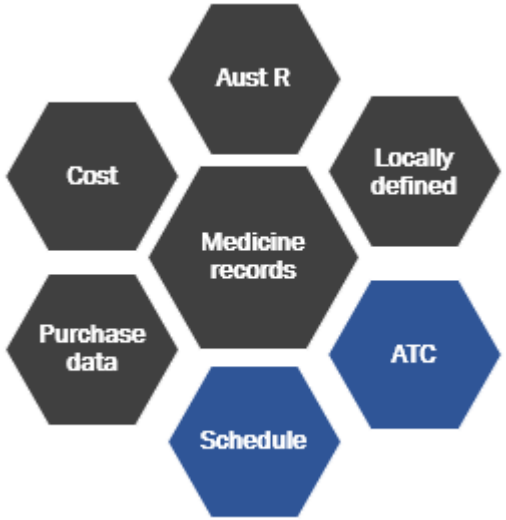
Alprim	(TP)
Alprim 300 mg tablet	(TPUU)
Alprim 300 mg tablet, 7	(TPP)
Alprim 300 mg tablet, 7, bottle	(CTPP)
Alprim 300 mg tablet, 7, blister pack	(CTPP)

5 matches

PROPERTY	VALUE
System	http://snomed.info/sct
Code	19816011000036109
Preferred	Alprim 300 mg tablet, 7, blister pack
Display	Alprim 300 mg tablet, 7, blister pack
Fully specified name	Alprim (trimethoprim 300 mg) tablet, 7 tablets, blister pack (containered trade product pack)
Effective Time	20090630
Primitive	false
Inactive	false
Module ID	900062011000036108
ARTG Id	63518

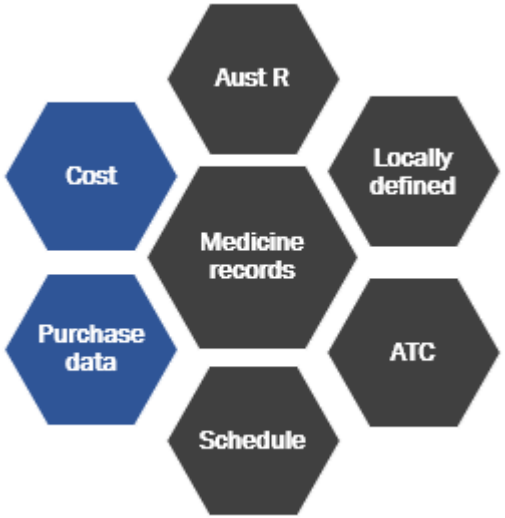
Pharmacy data

- Dispensing records
  - Prescriber records
    - PBS prescriber numbers
  - Patient Medicare entitlements
  - Pharmacy staff records/credentials



Pharmacy data

- Inventory management
  - Inventory costs
  - Purchase data
  - Contract management
  - Usage for reporting



Pharmacy data

7 matches

PROPERTY	VALUE
System	http://snomed.info/sct
Code	840421000168103
Preferred	Keytruda 100 mg/4 mL injection, 4 mL vial
Display	Keytruda 100 mg/4 mL injection, 4 mL vial
Fully specified name	Keytruda (pembrolizumab 100 mg / 4 mL) injection, 1 x 4 mL vial (containered trade product pack)
Effective Time	20161031
Primitive	false
Inactive	false
Module ID	900062011000036108
ARTG Id	263932

Background

A) Integrate with existing PIMS

B) Build a new PIMS

Source: https://www.istockphoto.com/

Greenfield approach

- [Adj ~ building from scratch with no legacy data or code]

Lessons learned

7 take home lessons

Lessons learned #1

- Understand stakeholder requirements
  - Pharmacy stakeholders
    - Operations
    - Researchers
    - Service users
  - External stakeholders
    - Integration requirements

- Share requirements with vendor early.

Lessons learned #2

- Project scope
  - Clearly define scope

  - Pharmacy information management system
  - Other integrating systems

Lessons learned #3

- Resource requirements
  - Pharmacy staff with operations knowledge
  - Pharmacy workflows are specific and complex

  - ~4000 inventory lines in a main pharmacy build
  - 7 mins per medicine record
  - 10-15 mins per locally defined medicine record

Lessons learned # 4

- Work with the vendor to improve accessibility and usability
  - Ergonomics of software design
  - Data extraction

Lessons learned #5

- Data management plan
  - SNOMED CT-AU (AMT subset)
    - AUST Registered products covered
  - AMT namespace
    - Consistent with standards
  - ATC codes
    - Used in most defined daily dose reported → research requirement

Lessons learned #6

- Pharmacy data is dynamic
  - ~**3100** changes to medicine record data fields / 3 months
  - Exacerbated by medicine shortages, contract changes

Lessons learned #7

- Post implementation plan and resourcing

Pharmacy operational requirements

Clean and consistent data

Outcome

Would we do it again?

Outcome

- Minimum viable product implemented

- Ongoing co-design with the vendor
  - Functionality
  - Usability
  - Accessibility

Contact details

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