



The Global Language of Business

Utilising standards to create a safer patient environment in our hospitals

Identification standards driving patient safety through compliance with organisational policies to achieve better healthcare within the Australian Capital Territory

Ryan Mavin, Lead Enterprise Architect, ACT Government
Thursday 19th October 2017

ACT Health



- 400,000 of 24,000,000 Australians live in ACT
 - Aging Population: Heavier demand for services
- Geographically manageable
 - Ideal for whole of jurisdiction innovation and standards implementation
- Investment in Digital Health Infrastructure
- Seeking to leverage this investment



3 steps to solve patient safety issues (Theory)



- 1. Identify incidents** that require corrective actions
- 2. Establish organisational policies** to address the incidents
- 3. Ensure policies are consistently complied with** to the letter.
Problem Solved.

Sounds easy?

Because a watched bee works harder you see



The Busy Bee optimises their work load in ways that sometimes result in errors.



A Bee-Watcher is assigned to ensure compliance with policy. Issues still occur so a Bee-Watcher Watcher is assigned to watch the Watcher ...

3 steps to solve patient safety issues (Reality)



- Near misses go unnoticed and underreported
- Only significant negative patient impact cases result in identification of issues
- Paper-based policy compliance rates are a problem, policing and auditing are resource intensive (*Nurse Watcher Watcher*)
- Introduction of Electronic Medical Records (EMRs) without ID standards only go some of the way to improving this

The Reality



Without robust identification standards embedded within our EMRs, how can we be confident of the information being captured?

What does this mean for care that we deliver based on this information?

ACT Health: Recognising the problem



- Cases of impacted patient outcomes
 - Wrong Patient, Wrong Medication, Wrong ... WBIT
- Procedures delayed by avoidable errors
- Near misses being detected by pathology lab
- Benchmark incident reporting trending above national average
- Paper-based policies not making a big enough difference

Action: Sought industry expertise for guidance and solutions

Engaging GS1



- **2012: Go to market**
 - Expertise in Location Based Services (LBS)
 - Analyse needs and identify industry solutions
- **2013: GS1 Consultancy**
 - Established LBS Steering Committee
 - Review current state, list changes/priorities
- **2014-17: GS1 Guidance**
 - Developed and validated LBS Framework
 - Working through changes/priorities
 - Keeping stakeholders engaged

Creating a Standards Framework



- Collaboration with GS1 to define an Identification Standard implementation guide (LBS Standards Framework)
- Each Identifier is a building block
- Creates a foundation for transformation
- Example content for each of the building block Identifiers
- Guidelines for consumption and validation of the Identifiers

Building Blocks



- **Patient ID** (GSRN + SRIN)
 - Wristband
 - Clinical Notes Labels
 - Specimen labels
- **Staff ID cards** (GSRN)
- **Location ID** (GLN)
- **Product ID** (Serialised GTIN)
- **Asset ID** (GRAI or GIAI)
- **Document Type ID** (GDTI)



Implementing the Standards Framework



- First Step: Implement building blocks
- Proof of concept NICUCAM: scanning **Location ID (GLN)**
- Focus effort for greatest risk/benefit: **Patient ID (GSRN + SRIN)**
- Created middleware solution to generate GS1 Patient Wristbands without PAS upgrade
- Modified security system produces GS1 Staff Cards: **Staff ID (GSRN)**
- Implement new systems that leverage the building blocks
- Upgrade/replace old systems to leverage the building blocks

ACT Health implemented the GS1 identifiers with minimal integration, then built value through integrating systems

Standards Framework Compliance: Mandatory



Products

- Products and consumables not supporting GS1 Standards Framework manually managed or not tracked at all
- Cost, Time, Quality impact of manual tracking expected to exceed unit purchase price savings

Information Systems

- New procurements include mandatory criteria for the GS1 Standards
- Existing systems upgrade where possible, or replaced at end of life with compliant solutions

If a product is not part of the solution, it is part of the problem.

Solving the problem: PPID in focus



Problem: **Wrong Blood in Tube (WBIT)**

Objective:

- Ensure specimen collection and labelling occurs with the patient, after positive identification

Challenge:

- Patient notes labels contained the same local identifier as patient wristband

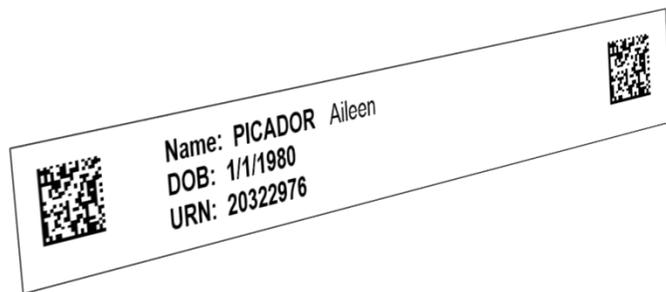
Solution:

- Implement eOrders with GS1 GSRN + SRIN for patient identification defined in **ISO/TS 18530:2014** to distinguish between types of patient id.

Solving the problem: PPID in focus



Patient Wristband



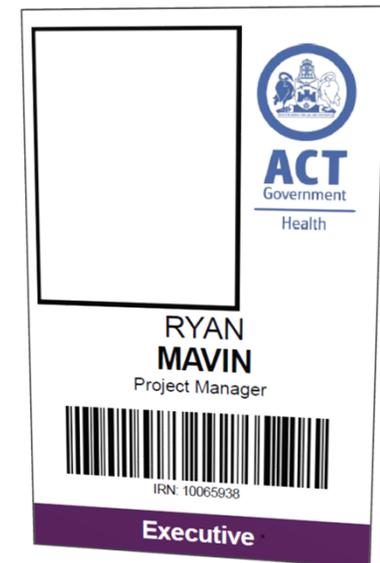
(8018)933772304203229765(8019)0100000305

Patient Clinical Notes Label



(8018)933772304203229765(8019)0200000305

Staff ID Card



(8017)933772305100659389

EMM Nurse21
Logout

Positive Patient Identification

PICADOR, Aileen
BORN 01-Jan-1980 (37y) GENDER Female
MRN 20322976

- 1 Confirm the patient's identity as per organisational policy
- 2 Scan the patient's wristband
- 3 Scan the collector's staff ID badge

Specimen Collection [Cancel all Collections](#)

Phlebotomy

<input type="checkbox"/>	Tube	Tests	Notes	Ordered By
<input type="checkbox"/>	[Pink] EDTA (4 ml)	FBC - Full Blood Count	Add Comment	EMM Nurse21 on 21-Aug-2017

EMM Nurse21
Logout

Positive Patient Identification

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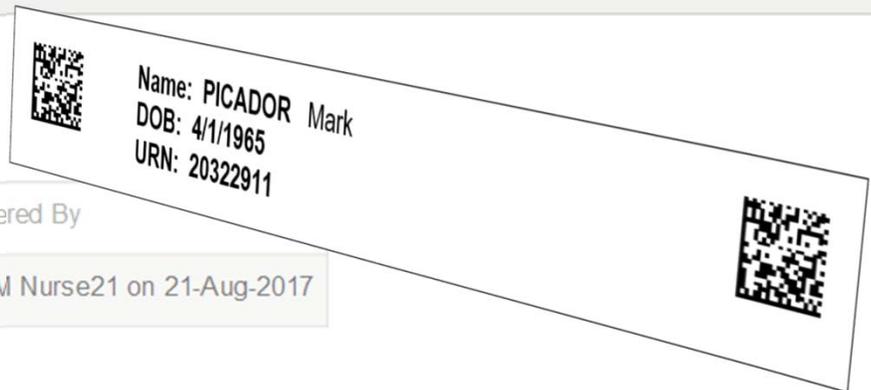
- 1 Confirm the patient's identity as per organisational policy **Confirmed**
- 2 Scan the patient's wristband Scan wristband barcode [Problem Scanning?](#)
- 3 Scan the collector's staff ID badge

Specimen Collection [Cancel all Collections](#)

Phlebotomy

<input type="checkbox"/>	Tube	Tests	Notes	Ordered By
<input type="checkbox"/>	[Pink] EDTA (4 ml)	FBC - Full Blood Count	Add Comment	EMM Nurse21 on 21-Aug-2017

Collect



20322976 PICADOR, Aileen 01/01/1980 (37 years) F

05-Sep, 03:04

Positive Patient Identification

PICADOR, Aileen
BORN 01-Jan-1980 (37y) GENDER Female
MRN 20322976

- 1 Confirm the patient's identity as per organisational policy ✔ Confirmed
- 2 Scan the patient's wristband ⚠ The patient that you scanned does not match the selected patient.
- 3 Scan the collector's staff ID badge

Specimen Collection [Cancel all Collections](#)

Phlebotomy

<input type="checkbox"/>	Tube	Tests	Notes	Ordered By
<input type="checkbox"/>	[Pink] EDTA (4 ml)	FBC - Full Blood Count	Add Comment	EMM Nurse21 on 21-Aug-2017

Collect



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Phlebotomy

<input type="checkbox"/>	Tube	Tests	Notes	Ordered By
<input type="checkbox"/>	[Pink] EDTA (4 ml)	FBC - Full Blood Count	Add Comment	EMM Nurse21

Collect



PICADOR Aileen 1/1/1980 F
123 Test St
Garran ACT 2600
20322976
TCH
Admission date 8/1/2017

EMM Nurse21
Logout

Positive Patient Identification

PICADOR, Aileen
BORN 01-Jan-1980 (37y) GENDER Female
MRN 20322976

- 1 Confirm the patient's identity as per organisational policy ✔ Confirmed
- 2 Scan the patient's wristband Resume Scanning Problem Scanning? The scanned barcode was not recognized. Please try again.
- 3 Scan the collector's staff ID badge

Specimen Collection [Cancel all Collections](#)

Phlebotomy

<input type="checkbox"/>	Tube	Tests	Notes	Ordered By
<input type="checkbox"/>	[Pink] EDTA (4 ml)	FBC - Full Blood Count	Add Comment	EMM Nurse21



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Specimen Collection [Cancel all Collections](#)

Phlebotomy

<input type="checkbox"/>	Tube	Tests	Notes	Ordered By
<input type="checkbox"/>	[Pink] EDTA (4 ml)	FBC - Full Blood Count	Add Comment	EMM Nurse21 or

[Collect](#)



Name: PICADOR Aileen
 DOB: 1/1/1980
 URN: 20322976



- EMM Nurse21
- Logout
- Patients
- Demographic Search
- MedChart
- Electronic Collections
- Worklists
- Links
- Applications Links
- Library
- eOrders Searches

EMM Nurse21
Logout

Positive Patient Identification

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MRN 20322976

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Specimen Collection

Phlebotomy

<input type="checkbox"/>	Tube	Tests	Notes	Ordered By
<input type="checkbox"/>	[Pink] EDTA (4 ml)	FBC - Full Blood Count	Add Comment	EMM Nurse21 or

Name: PICADOR Aileen
DOB: 1/1/1980
URN: 20322976

RYAN MAVIN
Project Manager
IRN: 10065938
Executive

EMM Nurse21
Logout

PICADOR, Aileen
BORN 01-Jan-1980 (37y) GENDER Female
MRN 20322976

✔ Patient Positively Identified

Specimen Collection [Cancel all Collections](#)

Phlebotomy

<input type="checkbox"/>	Tube	Tests	Notes	Ordered By
<input type="checkbox"/>	[Pink] EDTA (4 ml)	FBC - Full Blood Count	Add Comment	EMM Nurse21 on 21-Aug-2017

Collect

Non-Phlebotomy

<input type="checkbox"/>	Specimen Type	Specimen Container	Tests	Notes
<input type="checkbox"/>	Unknown	[FLDP] Generic Specimen	Referral Test	Referral Test Please enter the name of the Referral test: Test Referral Test Collection Instructions: Please contact ACT

ACT Government Health

Project Manager

IRN: 10065938

Executive

EMM Nurse21 on 29-Jun-



EMM Nurse21
Logout

PICADOR, Aileen
BORN 01-Jan-1980 (37y) GENDER Female
MRN 20322976

Patient Positively Identified

Specimen Collection [Cancel all Collections](#)

Phlebotomy

<input type="checkbox"/>	Tube	Tests	Notes	Ordered By
<input checked="" type="checkbox"/>	[Pink] EDTA (4 ml)	FBC - Full Blood Count	Add Comment	EMM Nurse21 on 21-Aug-2017

Collect

Non-Phlebotomy

<input type="checkbox"/>	Specimen Type	Specimen Container	Tests	Notes
<input type="checkbox"/>	Unknown	[FLDP] Generic Specimen	Referral Test	Referral Test Please enter the name of the Referral test: Test Referral Test Collection Instructions: Please contact ACT

Name: PICADOR Aileen
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RYAN MAVIN
Project Manager
IRN: 10065938
Executive

Outcomes and Benefits



- Electronic Ordering and Collection has eliminated paper order readability and transcription incidents, and reduced Lab data entry effort
- GS1 standards applied at point of printing specimen labels ensure the collector performs job steps as per the organisational policy
- 100% compliance to the organisational policy ensures patient safety is preserved
- > 40% reduction in WBIT incidents recorded in initial wards, with remaining incidents only occurring during system maintenance periods, or with orders that remained on paper due to patient transfers
- Once the solution is fully deployed to all services, ACT Health will be leading the nation

The easiest way for staff to do their job is now the correct way

Further Focus Areas



eOrders & PPID being rolled out as a package with:

- Electronic Medication Management (EMM)
- Early Recognition of Deteriorating Patients (ERDP)
- Computers on Wheel (COW) hardware fleet

Where new systems do not natively support the standards, PPID will be integrated to provide this capability over time.

Enterprise wide review of capabilities:

- EMR stacks
- Clinical Support Systems

All require mandatory compliance with the standards.

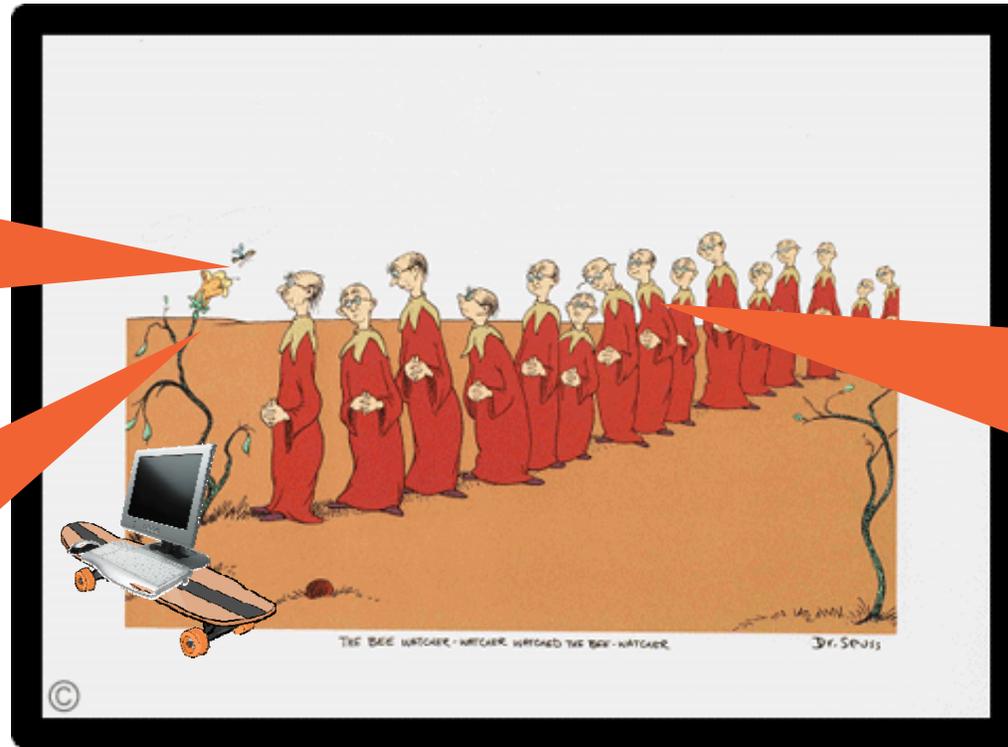


Epilogue



The Busy Bee now has confidence in the solution and has named the COW Clarabelle.

The flower has renewed confidence the care it receives is the right care for its needs.



Many of the Bee-Watcher Watchers are now able to shift their focus onto organisational transformation and preparing to meet the challenge of an aging population.

The GS1 Standards just work.

Take home Message



- Equipping EMRs with identification standards closes the patient safety loop across the continuum of care
- ACT Health has achieved this in the focus area of Pathology ordering and collection

When everything we need to track is uniquely identified, we can deliver care safely, with confidence in the information we use to make clinical decisions and drive improvement.



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