



The Global Language of Business

# Utilising identification standards driving patient safety for better & sustainable healthcare: the Australian Capital Territory

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Ryan Mavin, Lead Enterprise Architect, ACT Government

Wednesday 6<sup>th</sup> December 2017



# Welcome and thank you for attending!



- Welcome to our December 2017 webinar.  
Thank you to our guest speaker mr. Ryan Mavin, Lead Enterprise Architect, ACT Government, Australia
- Some housekeeping for today:
  - All attendees will be on mute
  - If you have questions during the presentation, please type them into the questions area and these will be monitored then answered at the end of the call
- After the webinar:
  - Within a week, the recording will be posted to: [http://www.gs1.org/healthcare/hpac\\_webinars](http://www.gs1.org/healthcare/hpac_webinars)
  - All previous webinars are also posted to this location, so please feel free to use this resource and share the link

# The GS1 Healthcare Provider Advisory Council (HPAC)



**Focus is on thought leaders and adopters of GS1 Healthcare Standards from the global clinical provider environment. Their final goal is to improve patient safety, cost efficiency and staff productivity through implementation of GS1 standards.**

**A forum for sharing and discussion**

**Identification of projects and case studies**

**A source of expertise and advice**

- About the practical realities of implementation of GS1 Standards in the care giving environment in regards to the impact on clinical care and patient interaction
- That support the adoption of GS1 Standards in healthcare providers and retail pharmacies
- For publication, presentation and sharing
- To those involved in GS1 standards development, the wider Healthcare stakeholder community and senior executives/decision-makers to gain their buy-in and support for implementation of GS1 Standards

# HPAC Activities



## Webinars

- Monthly webinars open to all stakeholders interested in learning about GS1 standards implementation in the care giving environment.
- [http://www.gs1.org/healthcare/hpac\\_webinars](http://www.gs1.org/healthcare/hpac_webinars)

## Awards

- Twice per year
- Provider Best Case Study Award
- Provider Recognition Award
- The prize is travel / accommodation to attend the next GS1 Healthcare conference
- <http://www.gs1.org/healthcare/hpac>

**GS1 Healthcare also holds two global conferences per year. The next conference will be in Bogota from April 10-12, 2018, with significant Healthcare Provider participation on the agenda.**



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# 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

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Ryan Mavin, Lead Enterprise Architect, ACT Government  
Wednesday 6<sup>th</sup> December 2017



- 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)



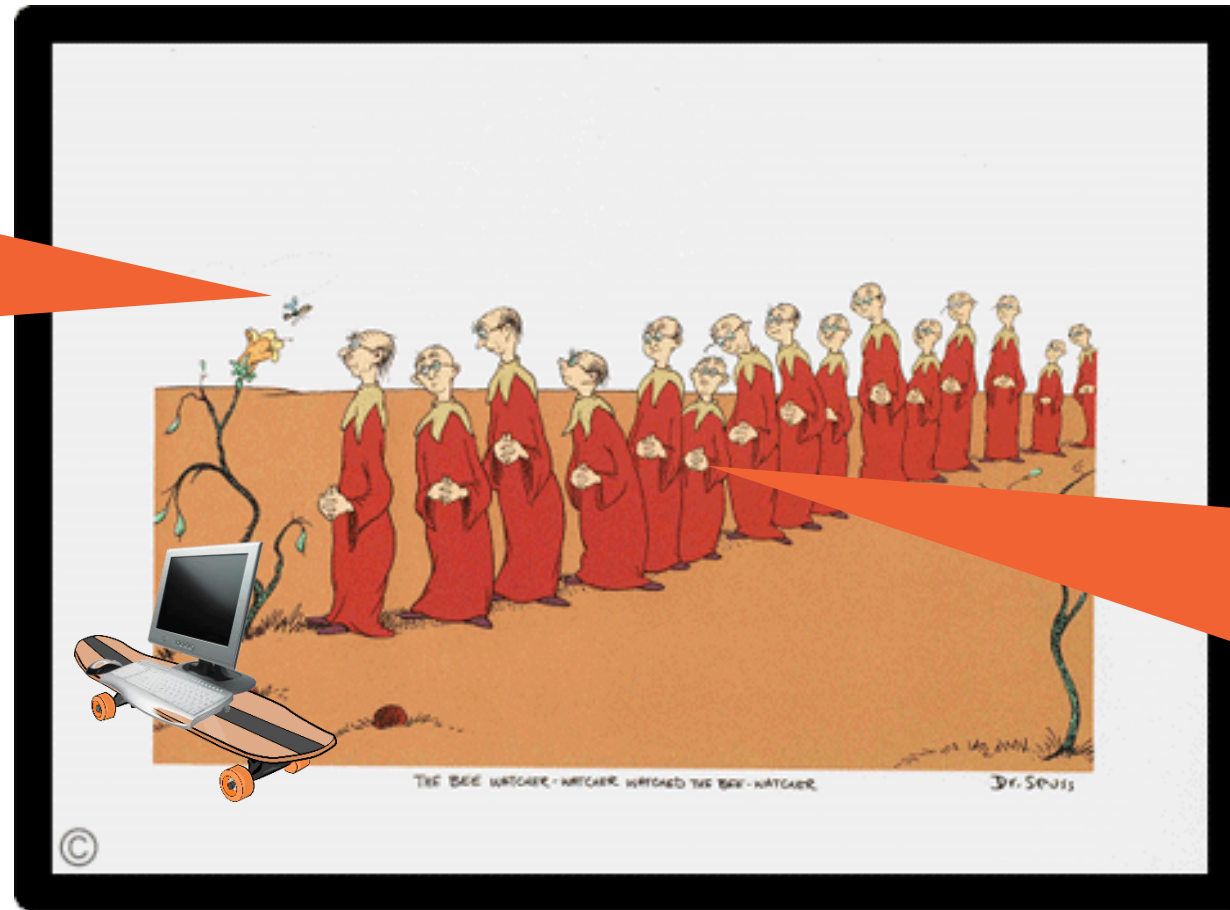
- 1. Identify incidents** that require corrective actions
- 2. Establish organisational policies** to address the incidents
- 3. Ensure policies are consistently complied with** to the letter.  
Problem Solved.

**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



**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**



- **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

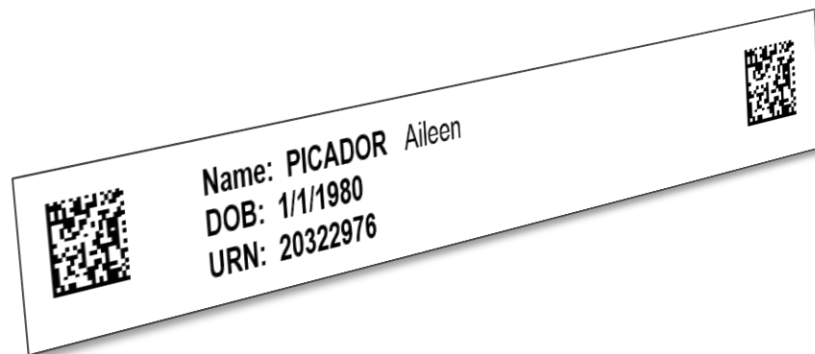
Solution:

- 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



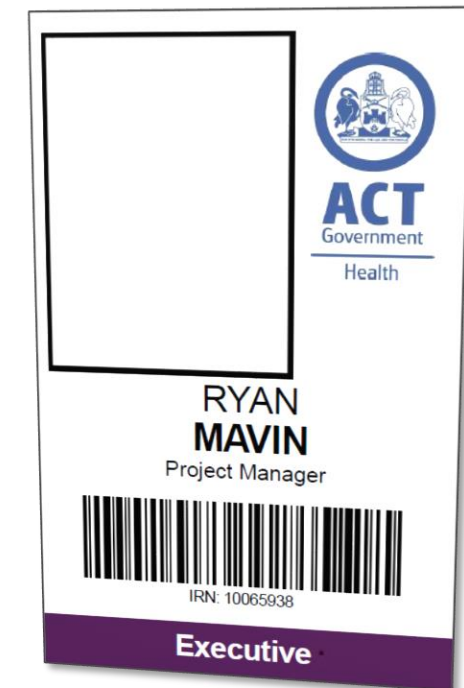
(8018)933772304203229765(8019)0100000305

## Patient Clinical Notes Label

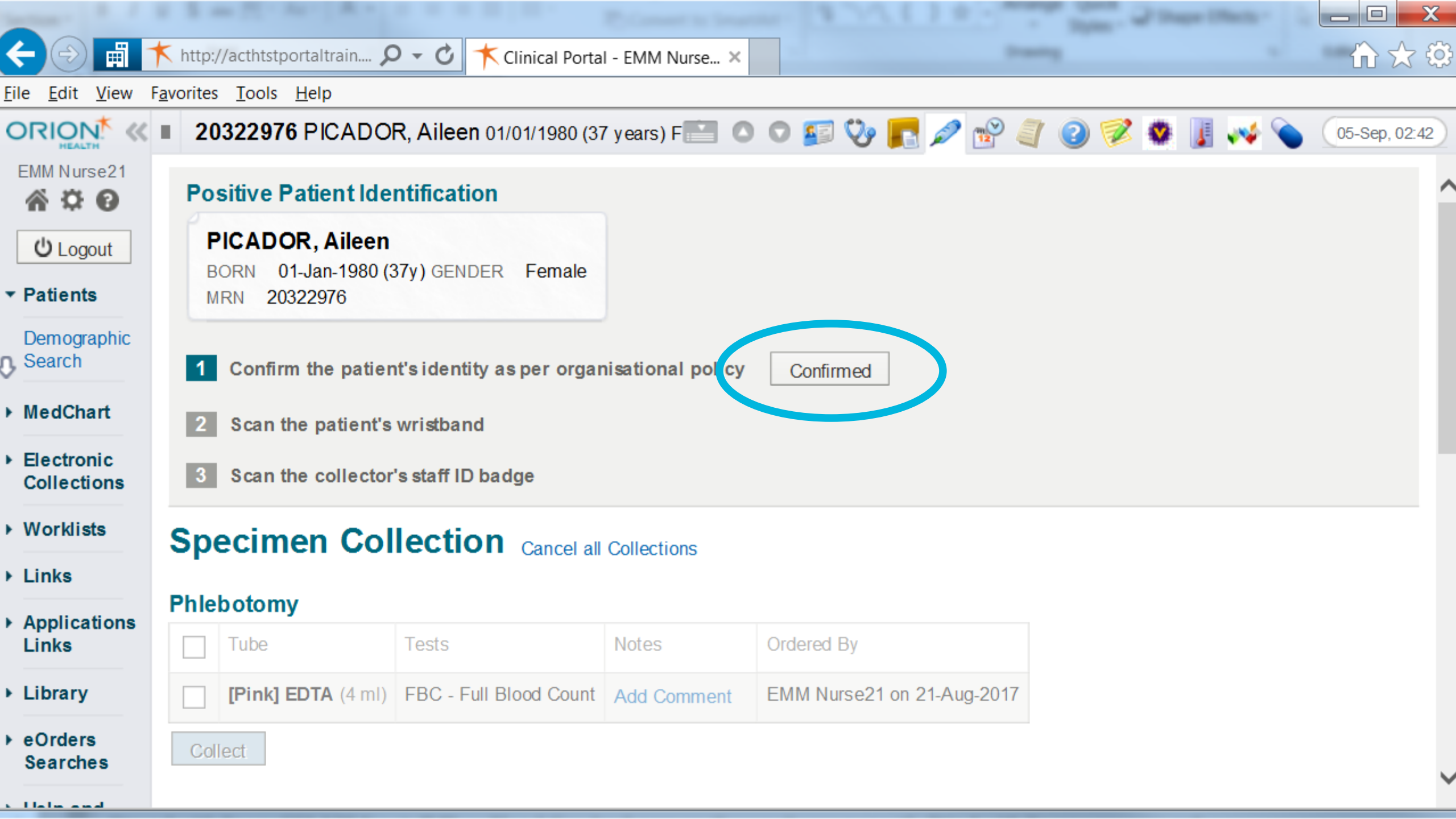


(8018)933772304203229765(8019)2000000305

## Staff ID Card



(8017)933772305100659389



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

### 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

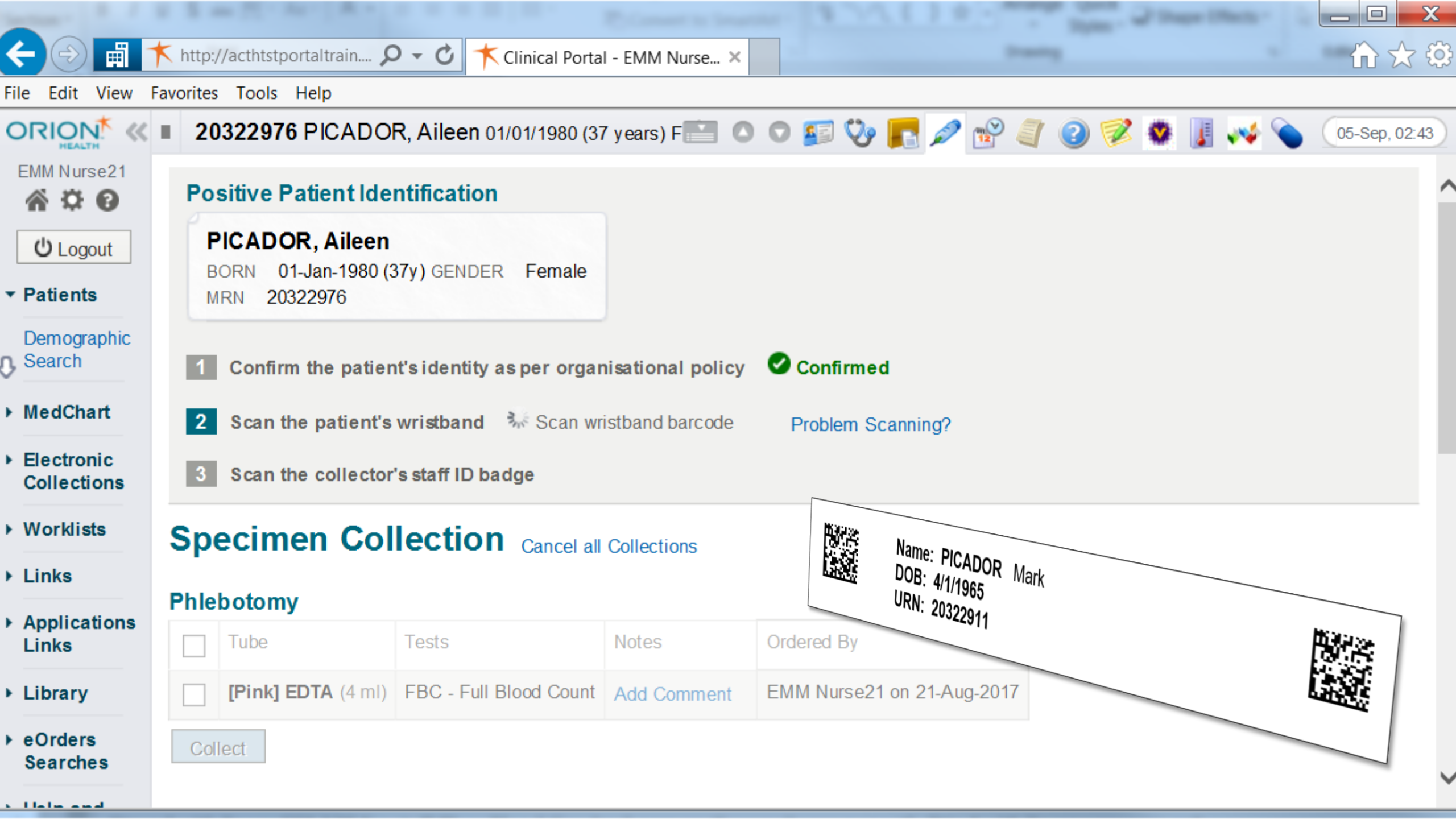
3 Scan the collector's staff ID badge

### 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 | <a href="#">Add Comment</a> | EMM Nurse21 on 21-Aug-2017 |

Collect



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

### Positive Patient Identification

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MRN 20322976

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

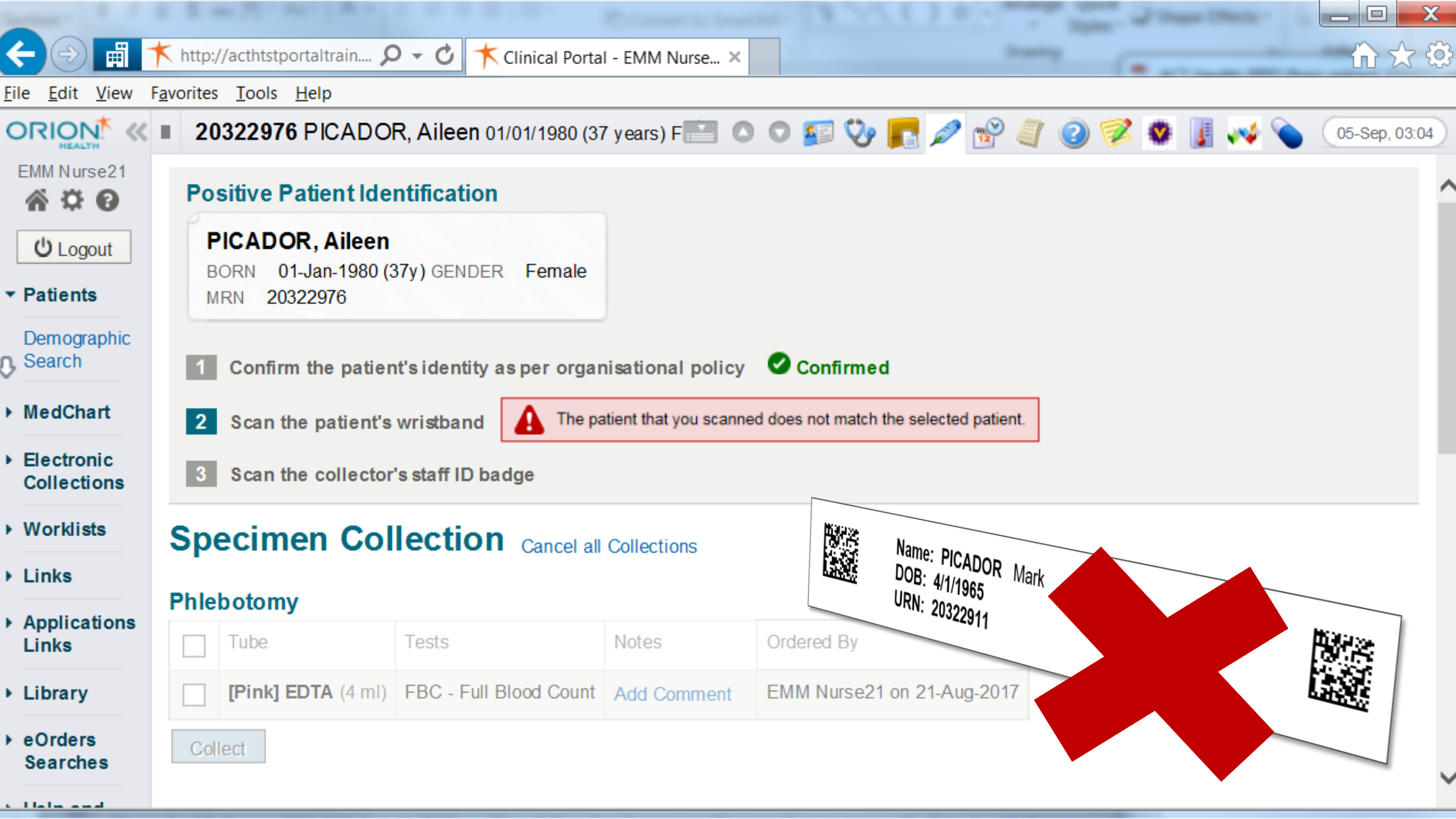
### Specimen Collection [Cancel all Collections](#)

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|--------------------------|--------------------|------------------------|-----------------------------|----------------------------|
| <input type="checkbox"/> | [Pink] EDTA (4 ml) | FBC - Full Blood Count | <a href="#">Add Comment</a> | EMM Nurse21 on 21-Aug-2017 |

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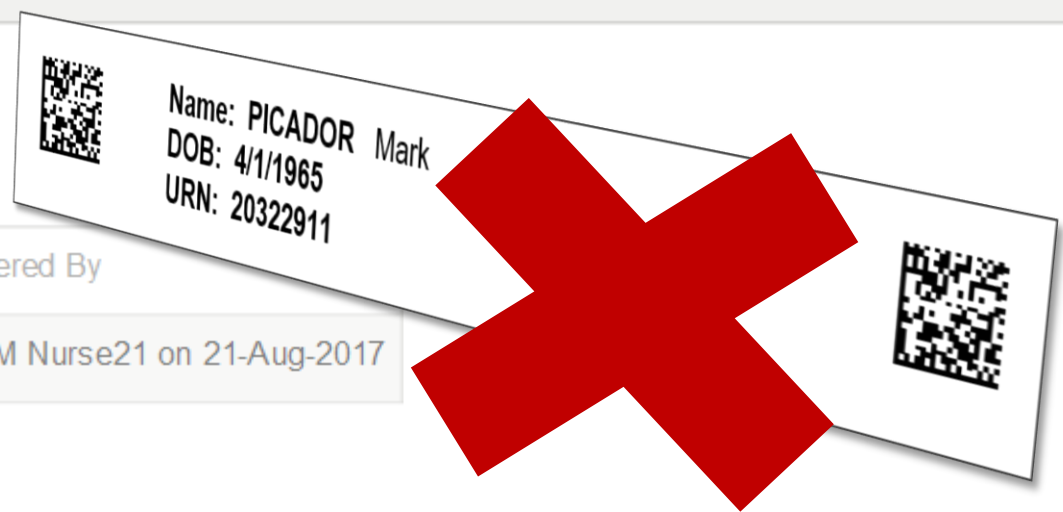
- 1 Confirm the patient's identity as per organisational policy ✔ Confirmed
- 2 Scan the patient's wristband ! The patient that you scanned does not match the selected patient.
- 3 Scan the collector's staff ID badge

### Specimen Collection [Cancel all Collections](#)

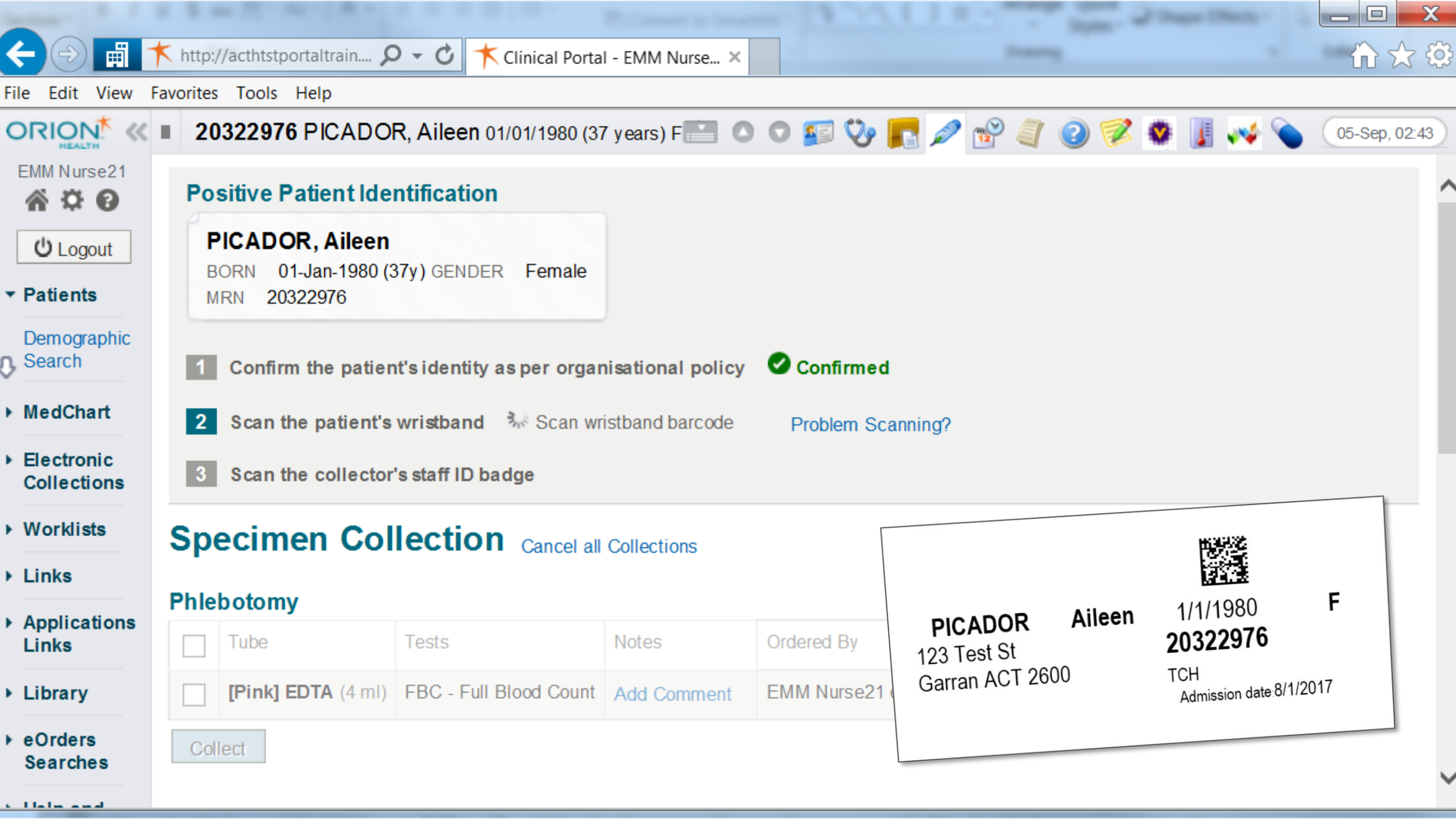
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| <input type="checkbox"/> | Tube               | Tests                  | Notes                       | Ordered By                 |
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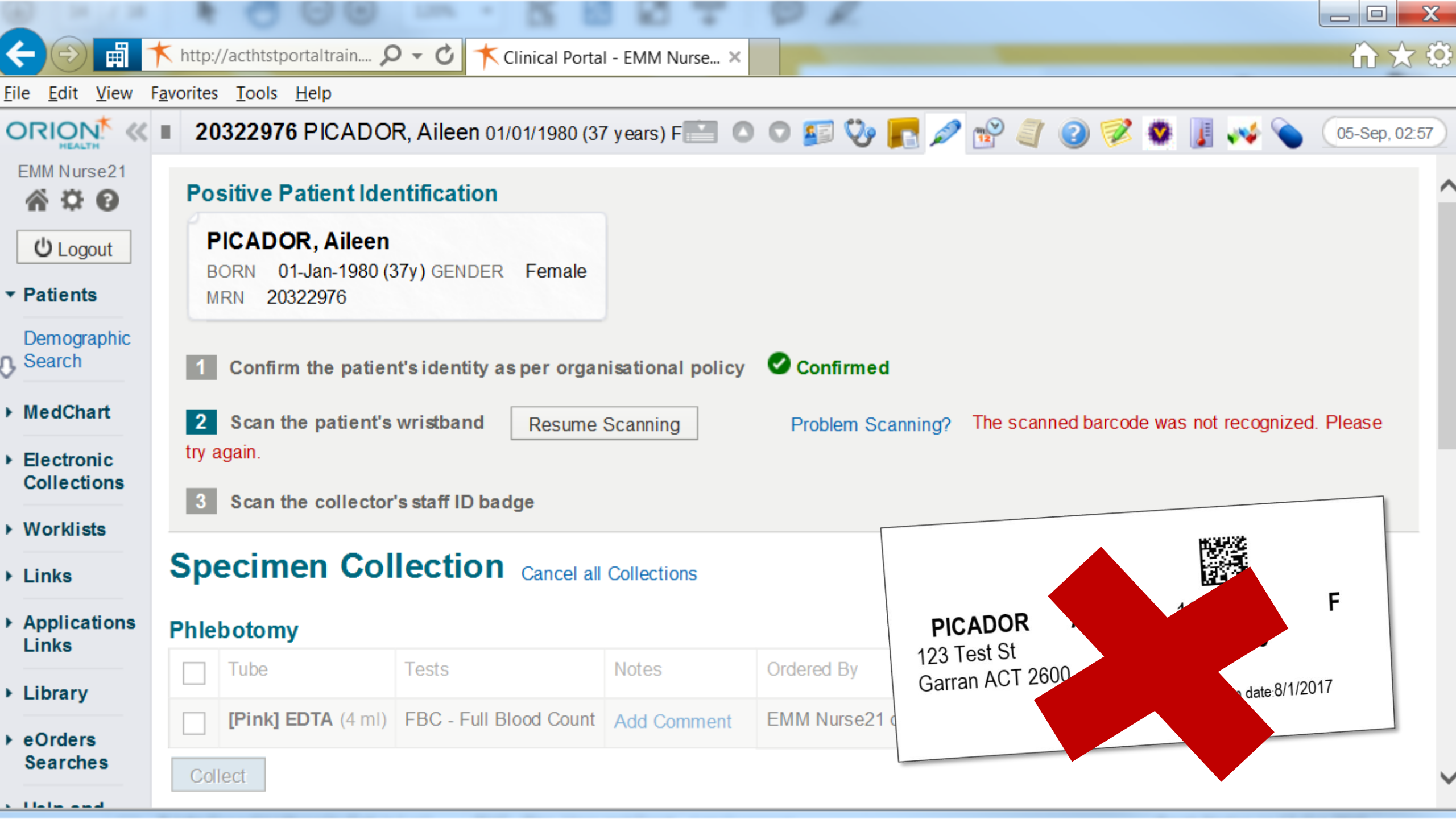
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| <input type="checkbox"/> | Tube               | Tests                  | Notes                       | Ordered By  |
|--------------------------|--------------------|------------------------|-----------------------------|-------------|
| <input type="checkbox"/>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

Collect

**PICADOR Aileen**  
123 Test St  
Garran ACT 2600

  
1/1/1980  
**20322976**  
F  
TCH  
Admission date 8/1/2017



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

### 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

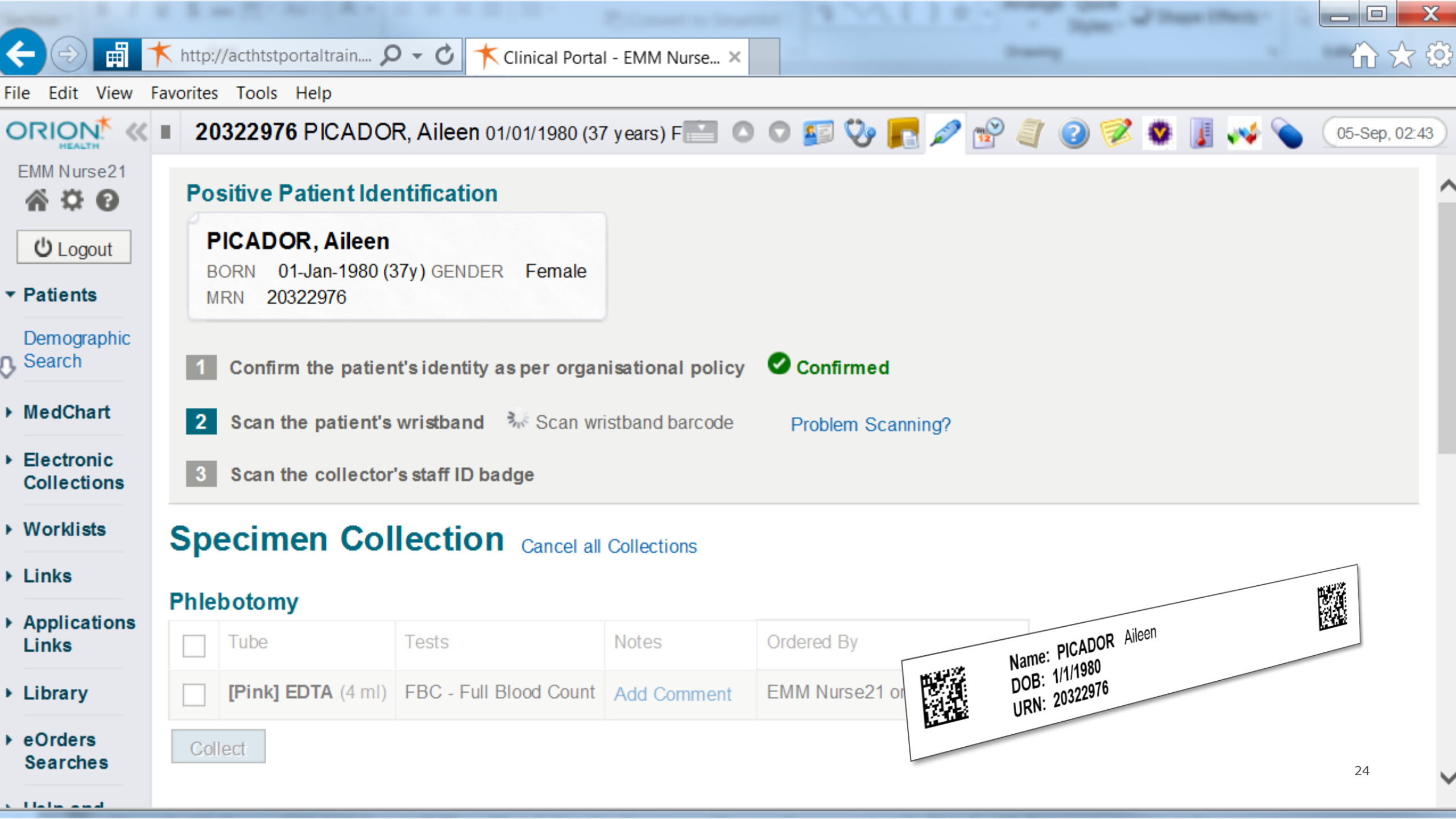
### Specimen Collection [Cancel all Collections](#)

#### Phlebotomy

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

Collect





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MRN 20322976

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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 | <a href="#">Add Comment</a> | EMM Nurse21 or |

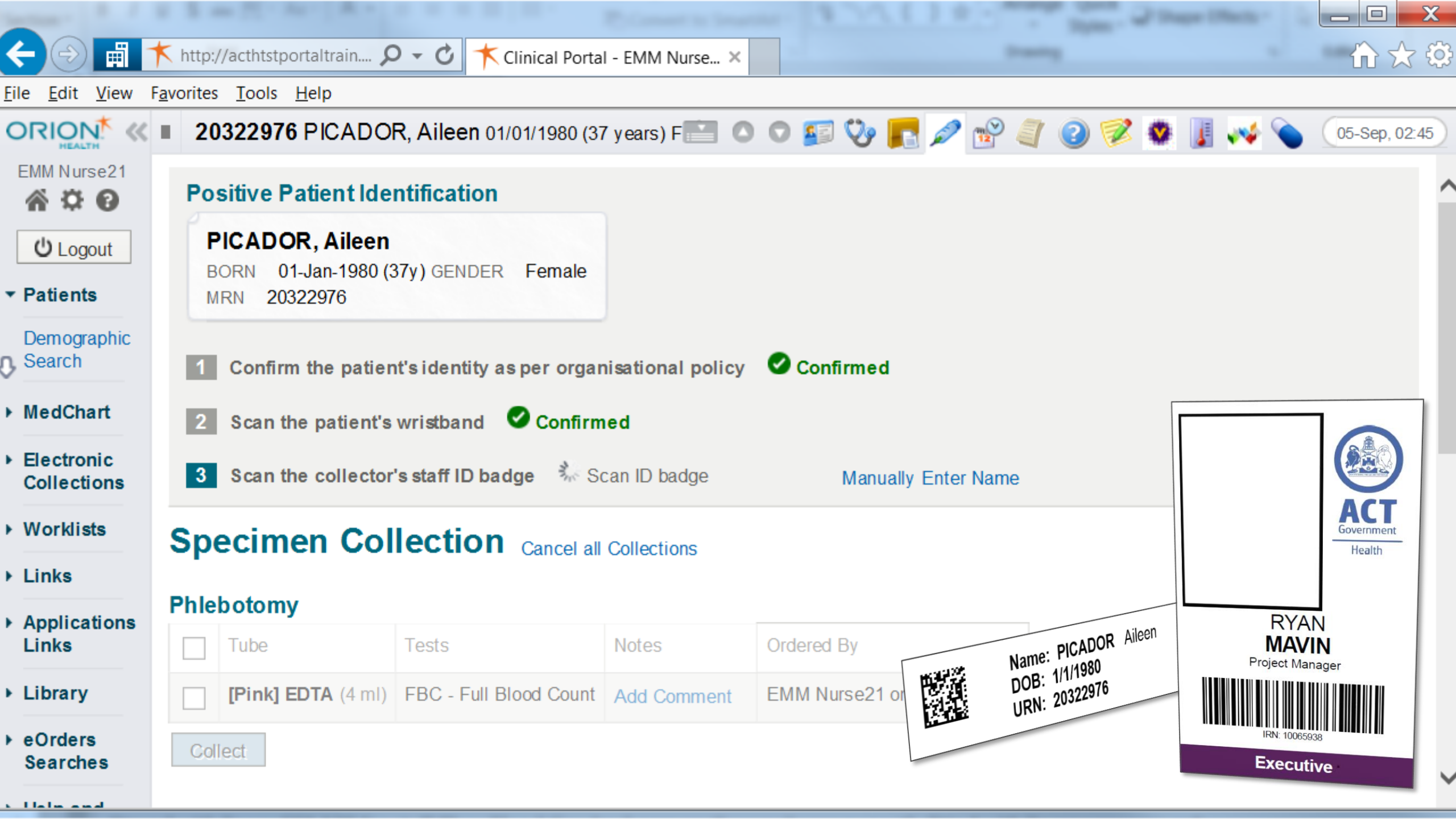
Collect



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







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

### 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 ✔ Confirmed
- 3 Scan the collector's staff ID badge ⌂ Scan ID badge [Manually Enter Name](#)

### 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 | <a href="#">Add Comment</a> | EMM Nurse21 or |

Collect



EMM Nurse21

**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"/> | <b>[Pink] EDTA</b> (4 ml) | FBC - Full Blood Count | <a href="#">Add Comment</a> | EMM Nurse21 on 21-Aug-2017 |

Collect

## Non-Phlebotomy

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



←

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http://acthstportaltrain...

Clinical Portal - EMM Nurse... x

File

Edit

View

Favorites

Tools

Help

ORION

HEALTH

EMM Nurse21

Logout

Patients

Demographic Search

MedChart

Electronic Collections

Worklists

Links

Applications Links

Library

eOrders Searches

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

05-Sep, 03:14

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 | <a href="#">Add Comment</a> | 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<br>Referral Test Collection Instructions: Please contact ACT |

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

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.



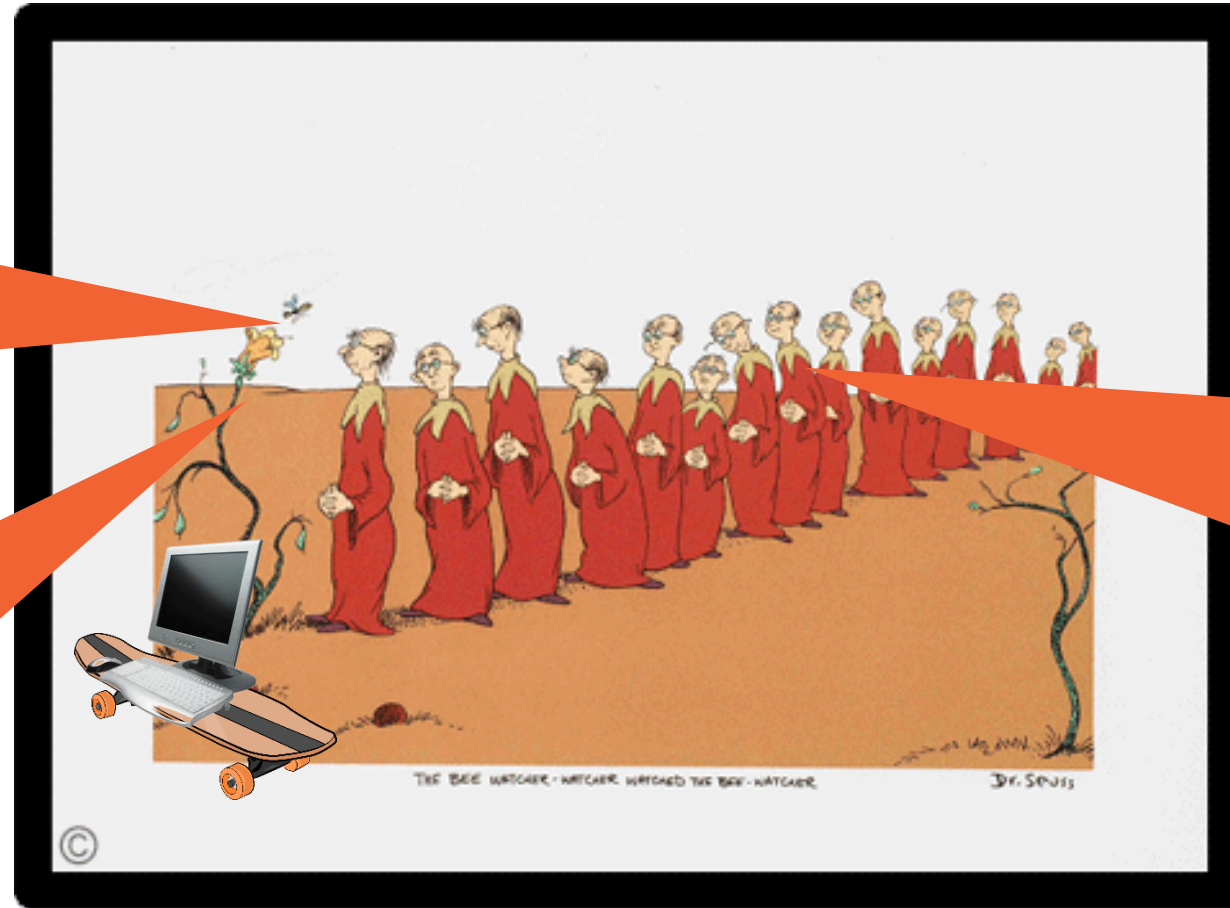


# Epilogue



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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## Ryan Mavin

Lead Enterprise Architect

### ACT Government | Health

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Phillip ACT

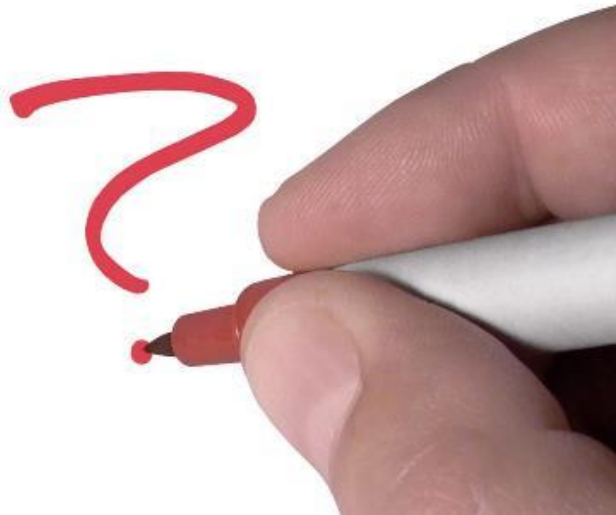
[ryan.mavin@act.gov.au](mailto:ryan.mavin@act.gov.au)





# HPAC Questions and contact details

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