GS1

# Innovative Traceability of infant feeds using serialisation to improve patient safety

## GS1 Healthcare Webinar

Sinead Moran, Special Feeds Unit Manager Temple Street Children's University Hospital, Dublin, Ireland

March 21, 2019

# Welcome and thank you for attending!

- Welcome to our March 2019 webinar.

  Thank you to our guest speaker Sinead Moran, Special Feeds Unit Manager Temple Street Children's University Hospital, Dublin, Ireland

- Some housekeeping for today:

  - All attendees will be in listening-only mode

  - 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

  - All previous webinars are also posted to this location, so please feel free to use this resource and share the link

# GS1 Healthcare Webinars

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

| |
|---|
| **A forum for sharing and discussion** |

- The practical realities of implementation of GS1 Standards in the care giving environment in regards to the impact on clinical care and patient interaction

| |
|---|
| **Identification of projects and case studies** |

- Supporting the adoption of GS1 Standards in healthcare providers and retail pharmacies
- For publication, presentation and sharing

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|---|
| **A source of expertise and advice** |

- 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

# Specific GS1 Healthcare 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

## Awards

- Twice per year
- Provider Implementation Best Case Study Award
- Provider Recognition Award
- The prize: 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 Noordwijk, the Netherlands from March 26–28, 2019, with significant Healthcare Provider participation on the agenda.**

# Presenting today

**Sinead Moran**

*(pronounced Shin-aid)*



Special Feeds Unit Manager
Temple Street Children's University Hospital
Dublin
Ireland

# Improving patient safety and traceability of infant feeds at Temple Street Children's University Hospital (TSCUH)

*Sinead Moran, Special Feeds Unit Manager TSCUH*

# Agenda

- Introduction
- The Challenge – Batch Traceability
- The Special Feeds Unit process
- Batch Traceability using Serialisation
- Short Demos
- Outcomes and Benefits
- Next Steps

# Introduction

- Temple Street Children's Hospital
  - 135 Beds
  - Hospital handles complex patients

- Special Feeds Unit – What we do
  - 10 Staff (3 Full and 7 part time)
  - Up to 400 feeds per day

- Experience in Traceability
  - CSSD and track and trace (GS1)



*Commendation in award category*
*'Best use of Information Technology'*
*at Irish Healthcare Awards*

# Special Feeds Unit – The Feeds



*Ready to pour*



*Prepared feeds - basic to complex feeds*

**Based on prescription from Dietician**

# Example: Metabolic patients

- Metabolic syndrome (detected at heel-prick test), also called insulin resistance syndrome is not a disease but a group of characteristics.  These characteristics include obesity, high blood pressure and elevated blood sugar levels.

- Having a combination of these characteristics increases the risk of developing type 2 diabetes and heart disease.

- Very important that patient's weight, blood sugar, and cholesterol levels are kept under control to ensure patient lives longer and risk of heart attack and stroke is reduced.

*Very important that patient is given the right feed*
*Traceability is key to provide visibility*

# The Challenge
# Batch Traceability

# What happens when product is recalled? – Before Traceability

Hospital receives a letter/email from the Supplier :
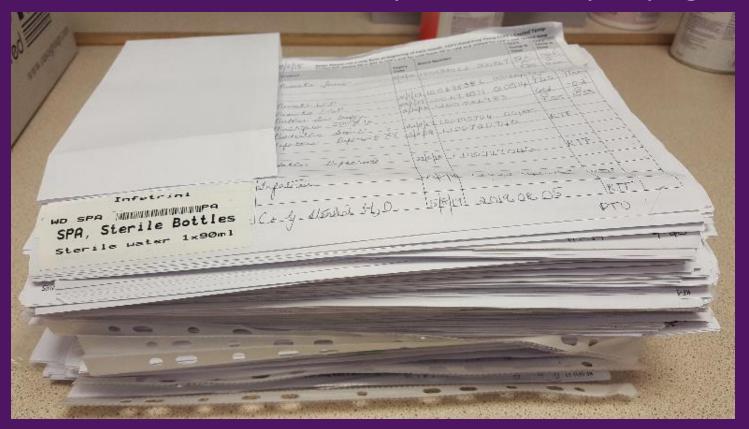
- Product recall of product X

- Batch number #0190006744454

The SFU team need to find all product with that Batch# and remove it from all areas >> **very time consuming**

# Paper based batch traceability
## Step 1 – Check all records
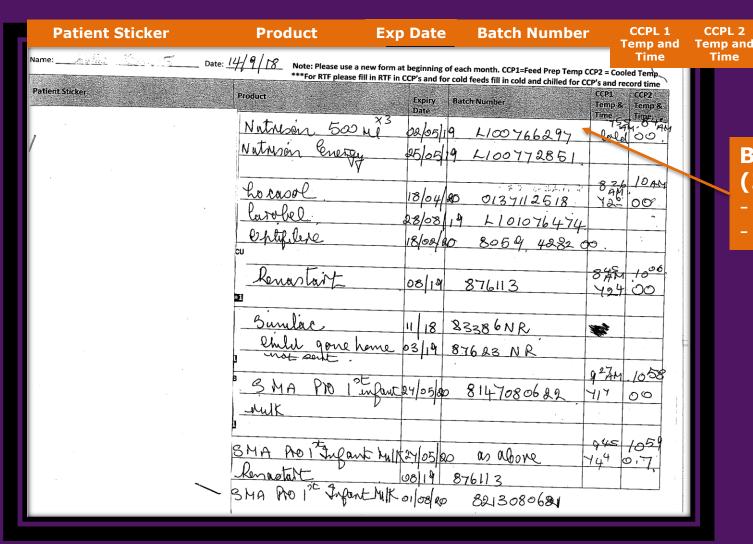
3 months of records – up to 16 lines per page

# Paper based batch traceability
## Example



Batch number recorded by hand (2 different forms)
- Feed preparation form
- Delivery form
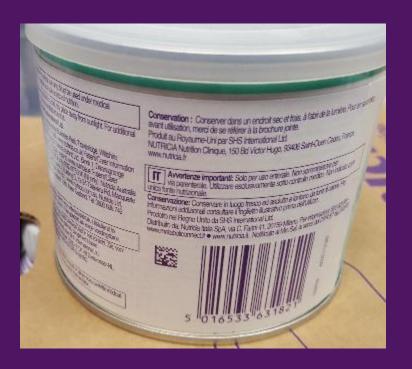
# Paper based batch traceability
## Step 2 – Find the products
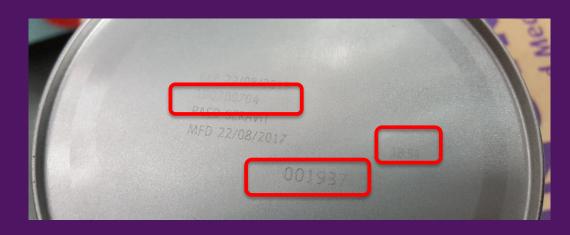




Where is the batch# ??

# Paper based batch traceability
## Step 2 – Find the products



- Staff have to guess the batch number
- No barcode – batch recorded on paper (multiple times)
- Batch recall - Difficult and time consuming

Is it 0137294519 or 01372945190652 ??

# Can you see the Batch number?

# The Special Feeds Unit Process

# SFU Process - Before



Suppliers

Special Feeds Unit

Feed preparation area

Stores

Ward

*Dieticians place special feed order*

*Flow of products in the hospital*
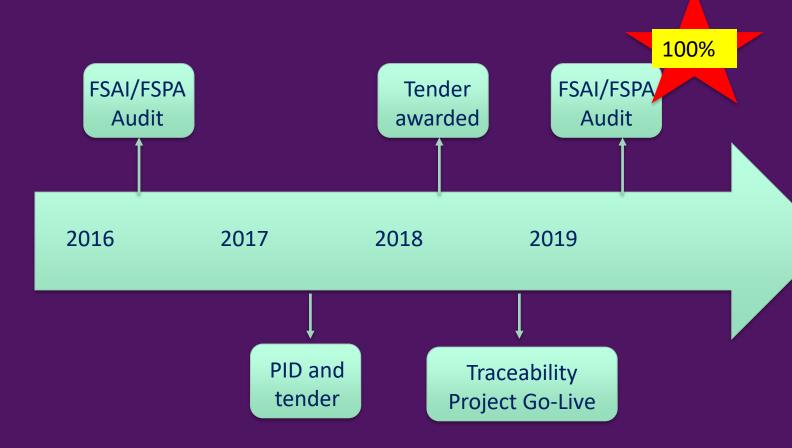
- Very paper based
- Product ID, Batch and expiry had to be recorded by hand multiple times on paper
- **Difficult** to track which batch of product went to which ward/patient
- Time intensive
- Non-compliance in FSAI/FSPA Audit – ability to do electronic batch recall recommended **in 2016**

# Batch Traceability using Serialisation

# Timeline

Temple Street
CHILDREN'S UNIVERSITY HOSPITAL

FSAI/FSPA Audit

Tender awarded

FSAI/FSPA Audit

100%

2016    2017    2018    2019

PID and tender
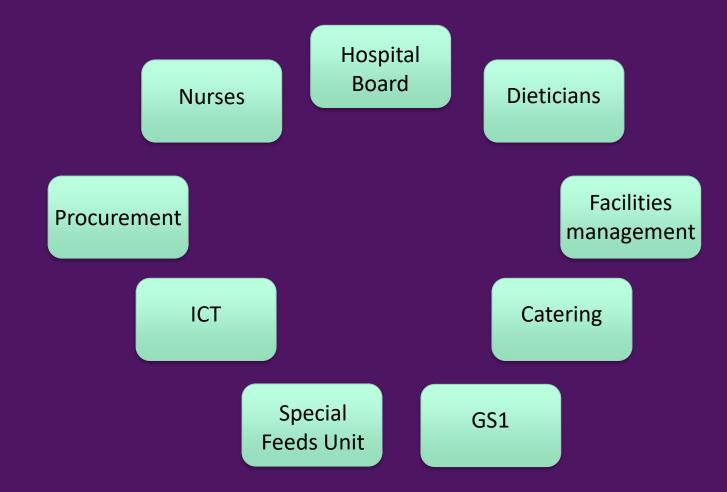
Traceability Project Go-Live

# The key stakeholders
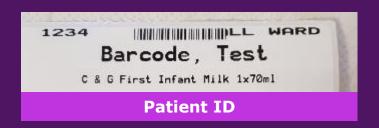
# Barcode identification is key to traceability



Staff ID cards with unique barcode number for recording product movements



The hospital's standards Compliant serialised traceability labels



Patient ID



Standards compliant barcodes for every dispatch location

# Traceability at Temple Street Hospital


Temple Street
CHILDREN'S UNIVERSITY HOSPITAL

**New touch screen PCs and software solution installed in key locations**



**Electronic product catalogue created of all products managed by the SFU**



**Barcoded outer cases with traceability data recorded at Goods Inwards**



NUTRINI

40781

| BEST BEFORE: | ARTICLE: | GROSS WEIGHT: | PROD TIME: |
|---|---|---|---|
| 29-10-2018 | 65713 | 4,7 KG | 22:26 |

(01)08712400657136(15)181029(10)100720800(91)00

**Unique 2D barcode with traceability data and serial number applied to every unit of product**



Aptamil™

For the dietary management of cows' milk protein allergy from 6 months

08712400763271
BB: 30-Sep-2018
BT: 902972

0000005

APTAMIL PEPTI 2
450GR

**Every unit of feed identified, labelled and traceable.**



08716900559266
BB: 17-Nov-2018
BT: L100736933

0004241

C&G INFANT MILK
FOR HUNGRIER B

# All products labelled with Serialised 2D barcode

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CHILDREN'S UNIVERSITY HOSPITAL

Product ID (GTIN)

Best Before/Expiry date

Batch/Lot

Serial number

# SFU Process - After



Flow of products in the hospital

- Paperless
- Products get a 2D serialized barcode at goods receiving in Store room
- Product ID, Batch and expiry captured with one scan every time product moves in the hospital
- Full visibility of where products are at any time
- Full traceability of products to the ward and back (if returned)
- Quick and easy

# Requirements for project



**Overall investment €50k**

**Hardware:**

- 6 Touchscreen Pcs

- 8 Scanners (camera based 2D)

- 3 Wireless printers

- Labels  (suitable for fridge/freezer)

- WIFI router to boost wifi

**Software:**

- GS1 Scanning app

# Short Demos

# 1. Goods Receiving
# Creating the serialised barcode



| Case GTIN | 8716900564925 | = 1 x 24 bottles |
| Bottle GTIN | 8716900564918 | = 1 bottle |

(01)08716900564925(15)191107(10)100815075

NUTRICIA OS303 INFATRINI          69303
GROSS WEIGHT : 3.7 KG   BEST BEFORE : 07/11/2019   69:02   24 x 125ML e

**Product ID (GTIN)**

**Best Before/ Expiry date**

**Batch/ Lot**

Video
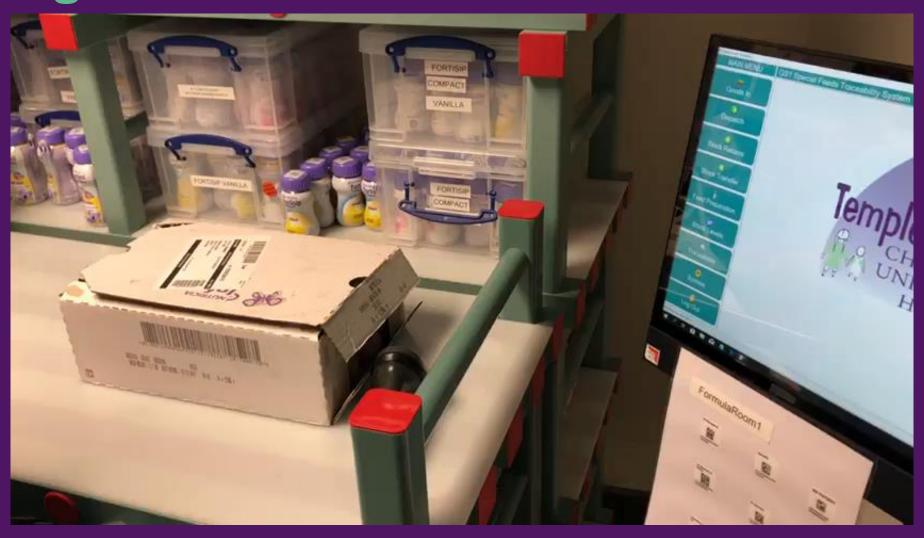
# 1. Goods Receiving
# Creating the serialised barcode

# 2. Dispatch from Stores



Video

# 2. Dispatch from Stores

# 3. Feed Preparation



Goods In . . .

**Feed Preparation . . .**                                    **Sinead Moran**

< Back    Print    Test Item    Help

Date: 30-Jan-2019    Location: St Brigits    Notes:
Dispatch No.: 704146    Patient: 764605    764605
CCP1: 08:09    73.1°    Rx Ref.:
CCP2: 09:37    4.1°

Summary | Details

| GTIN | Code | Description | Qty | UoM Qty |
|------|------|-------------|-----|---------|
| 08712045025581 | FR0116 | PREGESTIMIL LIPIL POWDER | 2 | |

Scan:

Video
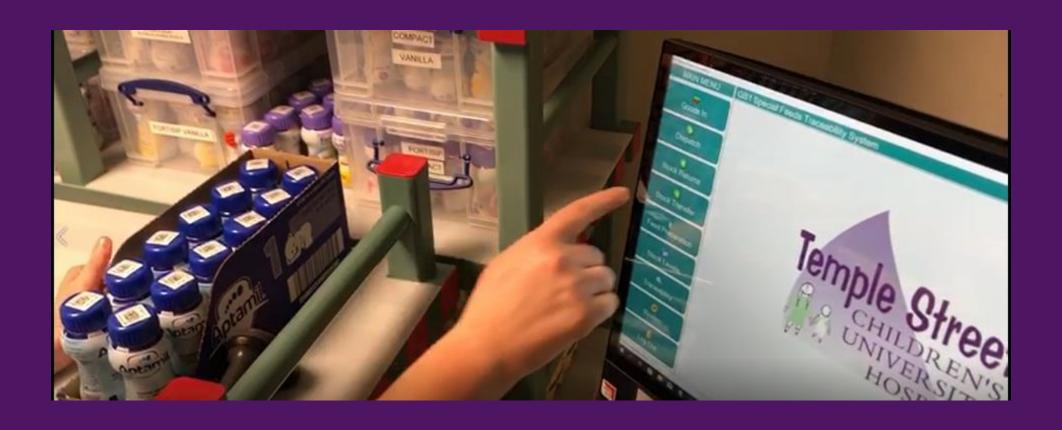
# 3. Feed Preparation

# 4. Return to stock



Video

# 4. Return to stock

# 5. Electronic batch recall



Video

# 5. Electronic batch recall
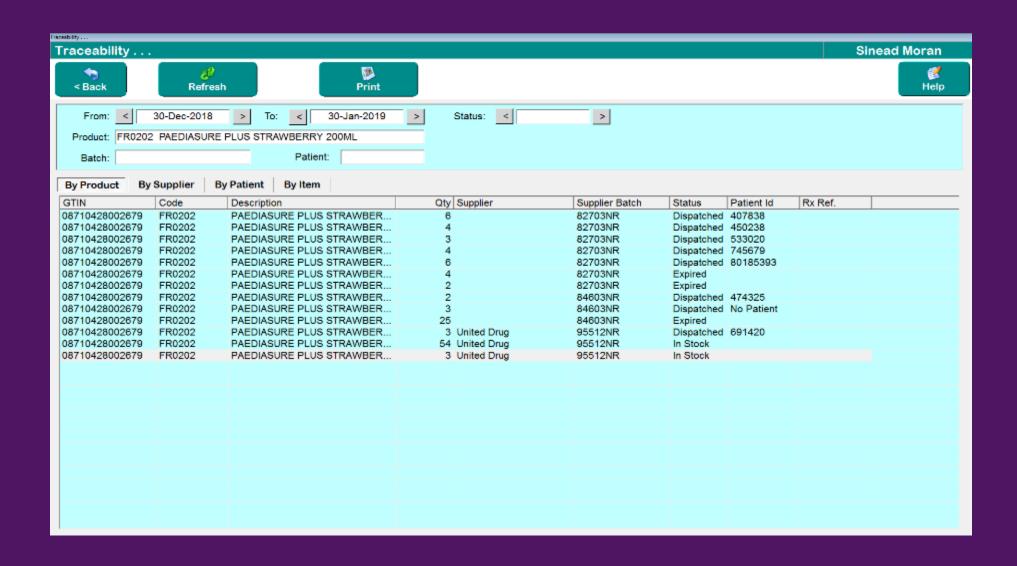
# Reports
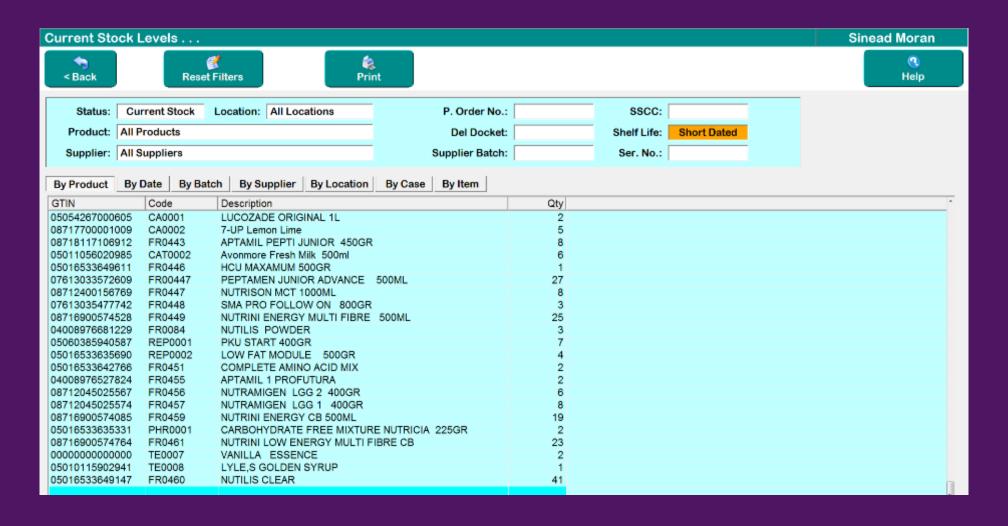
# Reports:  Batch Numbers

# Reports: Short Dated product



**Current Stock Levels . . .**                                               **Sinead Moran**

< Back       Reset Filters       Print                                       Help
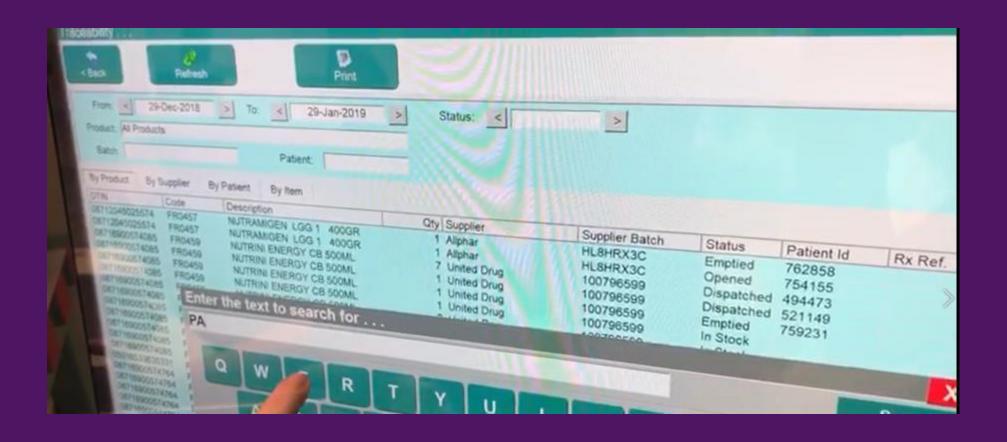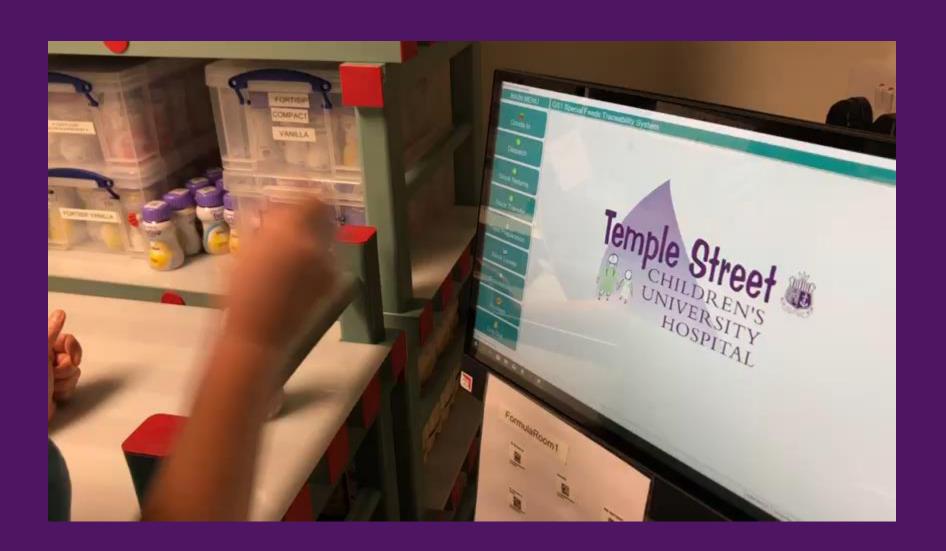
| Status: | Current Stock | Location: | All Locations | P. Order No.: | | SSCC: | |
| Product: | All Products | | | Del Docket: | | Shelf Life: | Short Dated |
| Supplier: | All Suppliers | | | Supplier Batch: | | Ser. No.: | |

By Product | By Date | By Batch | By Supplier | By Location | By Case | By Item

| GTIN | Code | Description | Qty |
|------|------|-------------|-----|
| 05054267000605 | CA0001 | LUCOZADE ORIGINAL 1L | 2 |
| 08717700001009 | CA0002 | 7-UP Lemon Lime | 5 |
| 08718117106912 | FR0443 | APTAMIL PEPTI JUNIOR  450GR | 8 |
| 05011056020985 | CAT0002 | Avonmore Fresh Milk  500ml | 6 |
| 05016533649611 | FR0446 | HCU MAXAMUM 500GR | 1 |
| 07613033572609 | FR00447 | PEPTAMEN JUNIOR ADVANCE   500ML | 27 |
| 08712400156769 | FR0447 | NUTRISON MCT 1000ML | 8 |
| 07613035477742 | FR0448 | SMA PRO FOLLOW ON  800GR | 3 |
| 08716900574528 | FR0449 | NUTRINI ENERGY MULTI FIBRE   500ML | 25 |
| 04008976681229 | FR0084 | NUTILIS  POWDER | 3 |
| 05060385940587 | REP0001 | PKU START 400GR | 7 |
| 05016533635690 | REP0002 | LOW FAT MODULE    500GR | 4 |
| 05016533642766 | FR0451 | COMPLETE AMINO ACID MIX | 2 |
| 04008976527824 | FR0455 | APTAMIL 1 PROFUTURA | 2 |
| 08712045025567 | FR0456 | NUTRAMIGEN  LGG 2  400GR | 6 |
| 08712045025574 | FR0457 | NUTRAMIGEN  LGG 1  400GR | 8 |
| 08716900574085 | FR0459 | NUTRINI ENERGY CB 500ML | 19 |
| 05016533635331 | PHR0001 | CARBOHYDRATE FREE MIXTURE NUTRICIA  225GR | 2 |
| 08716900574764 | FR0461 | NUTRINI LOW ENERGY MULTI FIBRE CB | 23 |
| 00000000000000 | TE0007 | VANILLA   ESSENCE | 2 |
| 05010115902941 | TE0008 | LYLE,S GOLDEN SYRUP | 1 |
| 05016533649147 | FR0460 | NUTILIS CLEAR | 41 |

# Reports: Out of Date product



**Current Stock Levels . . .**    Sinead Moran

< Back     Reset Filters     Print     Help

| | | | | |
|---|---|---|---|---|
| **Status:** Current Stock | **Location:** All Locations | **P. Order No.:** | **SSCC:** | |
| **Product:** All Products | | **Del Docket:** | **Shelf Life:** Out Of Date | |
| **Supplier:** All Suppliers | | **Supplier Batch:** | **Ser. No.:** | |

By Product | By Date | By Batch | By Supplier | By Location | By Case | By Item

| GTIN | Code | Description | Qty |
|---|---|---|---|
| 08712400682664 | FR0016 | C&G NUTRIPREM 2  200ML | 3 |
| 08712400157513 | FR0135 | TENTRINI ENERGY PACK  500ML | 1 |
| 00000000000000 | PH0003 | STERILE WATER 1L | 2 |
| | | Total: | 6 |

Scan:

# Audit report – product tracking



Temple Street
CHILDREN'S UNIVERSITY HOSPITAL

**Item Audit Trail . . .**                                                                 **Sinead Moran**

< Back          Refresh          Print                                                      Help

Serial No.: 00076365

Product: FR0062          Locasol  400GR

| Date | Time | Operator | Trans | Trans No. | Status | Description |
|------|------|----------|-------|-----------|--------|-------------|
| 14-Jan-2019 | 15:21 | Vilma Slavinskiene | GI | 100615 | In Stock | Supplier: United Drug, P.Order: 4031180, Del Dkt: , Batch: 0137294519, Expiry Date: 19-Nov-2020 |
| 27-Jan-2019 | 12:12 | Cherrylyn Panganiban | TX | 902194 | | Transferred To: Feed Preparation Area |
| 28-Jan-2019 | 09:11 | Deirdre Kane | FP | 704124 | Opened | Location: St Gabriels, Patient: 723657, Rx Ref: |
| | | Total: | 3 | | | |

# Outcomes and Benefits

- Electronic batch recall now possible
- The estimated time savings are 0.5FTE
- Huge paper savings
- Staff engagement
- Patient safety benefits
- Reports/Audits at the touch of a button
- Additional unexpected benefits (HACCP forms and process improvements)
- Widespread interest both internally and from other hospitals

# Outcomes and Benefits



**Staff members have embraced the new work practices**

*"The new system has proven its efficiency credentials. It now takes us less time to prepare feeds as the date & batch data does not need to be handwritten. There's less chance of making a mistake and it cuts down on our paper work,"*

***Cherrylyn Panganiban, Healthcare Assistant***

Temple Street
CHILDREN'S UNIVERSITY HOSPITAL

# Outcomes and Benefits



**Widespread interest in this new initiative from near and far**

*"The new system provides us with full visibility of all product in stores, on the ward and dispensed to infants. In the event of a recall it is now possible for us, within a matter of minutes, to locate or account for each unit of the affected product."*

***Bernadette O'Conner, Staff Nurse.***

# Recommendations

- Establish a list of key stakeholders
- Get buy-in early (communicate, communicate, communicate)
- Map the process 'as-is' vs 'to-be'
- Have your research and facts and figures ready
- Ensure there is a good understanding of traceability using GS1 standards
- Manage scope (don't try to do too much)
- Get started!

# Thoughts on Traceability

- Technology and barcodes are there to support traceability for any hospital process
- People within hospitals and industry are not always aware of the opportunity
- Drivers can come from different areas (patient safety)
  - Instrument > Surgical Site Infection
  - Special feeds > requirement to do electronic batch traceability to the patient in the ward

# Next Steps

**Additional modules:**

- Emergency feeds
- Stock taking
- Add incubator module to track temperature
- Scan the feed to Patient at ward level

**Traceability opportunities in other areas of the hospital:**

- Move to New Childrens Hospital
- Catering
- Procurement
- Breast milk
- Assets

# Thank you to my team!



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# GS1 Healthcare webinar:
## Questions and contact details

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