



The Global Language of Business

GS1 Healthcare Provider Advisory Council Webinar

Patient safety gains in a Brazilian hospital
thanks to the implementation of GS1
identifiers

Nilson Gonçalves Malta, Pharmacist, Hospital Automation
Manager at Hospital Israelita Albert Einstein, Brazil

February 8th, 2018



Welcome and thank you for attending!



- Welcome to our February 2018 webinar.
Thank you to our guest speaker – Mr. Nilson Gonçalves Malta, Pharmacist and Hospital Automation Manager from Hospital Israelita Albert Einstein, Brazil
- 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
 - 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

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, Colombia from April 10-12, 2018, with significant Healthcare Provider participation on the agenda.

Presenting today



Nilson Gonçalves Malta

- Pharmacist-Biochemist, graduated at Universidade de São Paulo.
- Specialist in Hospital and Healthcare Systems Administration, Fundação Getulio Vargas.
- Acting at Hospital Israelita Albert Einstein for 18 years, currently occupies the position of Hospital Automation Manager.
- Responsible for several automation projects in Hospital Pharmacy Logistics and Clinical processes.

Patient safety gains in a Brazilian hospital thanks to the implementation of GS1 identifiers



Main topics



- The journey undertaken to create a hospital dispensing system with barcoding in unit dose up to the point of care;
- The effects of this on patient safety and traceability;
- How the hospital found partners in the pharmaceutical industry;
- The extension of the implementation to other areas such as medical devices (disposables) all over the hospital and Nutrition (enteral diets);
- The necessary facilitation of IT;
- Challenges faced and next steps.



Patient Safety

What do we know?



According to IOM report (Institute of Medicine – EUA, 1999), 7.000 Americans die annually due to medication errors.

Annually, medication errors cost 3,5 billion dollars according IOM estimations (2006).

Kohn LT, Corrigan JM, Donaldson MS, eds. To Err is Human: building a safer health system. Washington, DC. National Academy Press; 1999.
Aspden P et al. Preventing Medication Errors: Quality Chasm Series. Washington, DC. National Academy Press; 2007.

Traceability in hospitals



**What shall
I do?**

Certifications



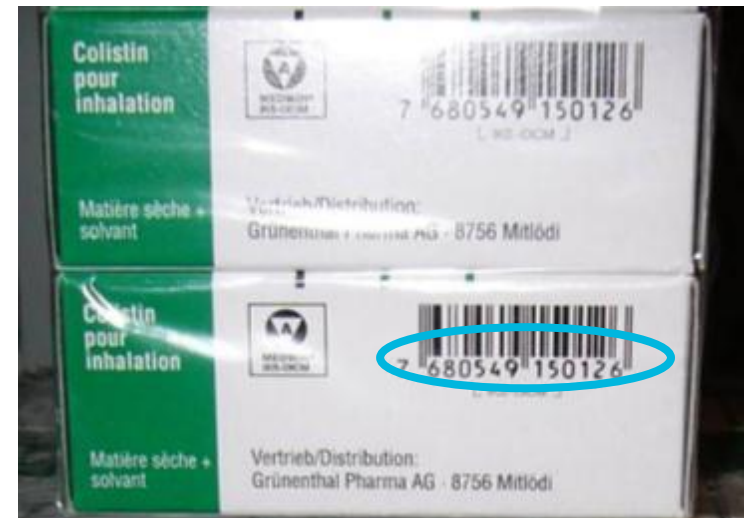
**Wait for or
DO IT
NOW?**



Initial difficulties



- Providers do not identify their product within hospital requirements. In the sector, EAN 13 is not enough.
 - Ordinance 801/98 – EAN13 have to be applied to all medicines secondary packages
- Without lot, hospitals have to relabel all items that need to be tracked and traced.



Once back in 1998



- **Barcodes** applied to all products in the internal supply chain.
- Traceability requires barcode with lot and expiry date encoded.

Unsafe relabeling process



- Misidentification risk
- High expenditures on man power



Oral solids unit doses



- How they are...



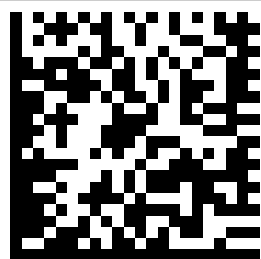
Find your KEY PARTNER!



Seeking a standard



- **Data Matrix** - Symbology developed for being applied where the linear barcode cannot be used due to space restrictions, what in pharmaceutical products is very common. This 2D code may carry lot and expiry date among other possible information. They are based on Application Identifiers (AI).



GS1 DataMatrix

Seeking a standard



(01)10222222333334(17)091231(10)A1345B(21)1234

Product identification

Expiration

Lot

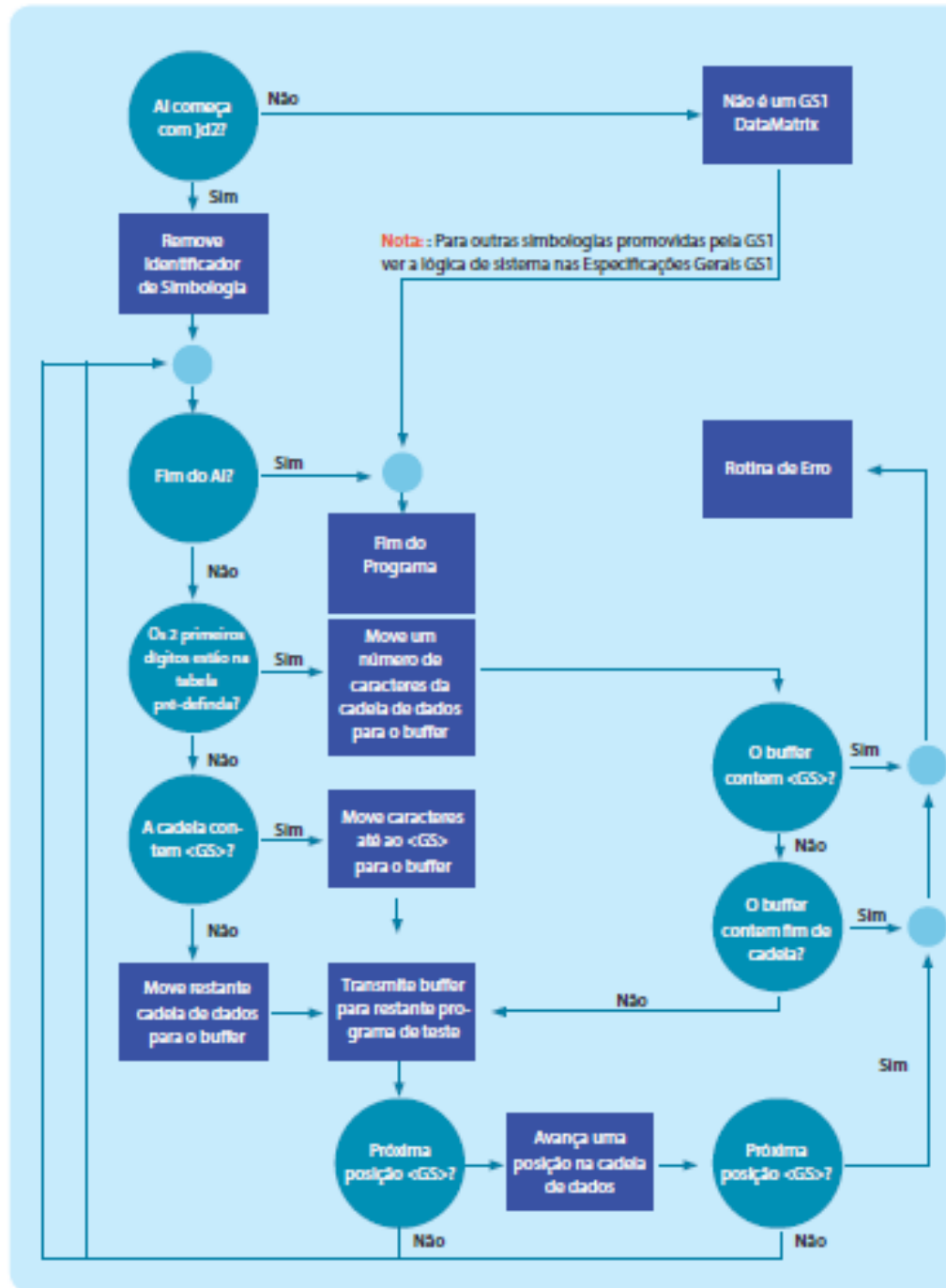
Serial Number



(01)0761234567890(17)100503
(10)AC3453G3(21)123



Software



Industry partnership



- 2005 – Pioneer initiative GS1 RSS
 - HC WG GS1 Brasil / Albert Einstein & Hypofarma
- 2008 – GS1 DataMatrix



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DataMatrix – they started...

Baxter

isofarma
Industrial Farmacêutica Ltda.



Eurofarma
Brasil, sempre.

...others followed

B | BRAUN
SHARING E

AstraZeneca



união química
FARMACÊUTICA NACIONAL S/A



prati-donaduzzi
Medicamentos Genéricos



SANOFI

ABL
Antibióticos do Brasil

CRISTÁLIA
PRODUTOS QUÍMICOS FARMACÊUTICOS LTDA.

New standard – New issues



- Badly printed barcodes by some suppliers.
- Lots of technical issues involving barcodes. Some providers printed different information in human readable form from barcode. Others used the incorrect FNC1. Others used the GS character when not needed. Others did not put the GS when needed.



FNC1 -]d2

GTIN: 03453120000011
VALIDADE: 2009-11-25 (aa-mm-dd)
BATCH/LOTE: ABCD1234

FNC101034531200000111709112510ABCD1234

New standard – New issues



- Correct use of Group Separator GS

FNC101034531200000111709112510ABCD1234 FNC1422250



(01)03453120000011(17)091125(10)ABCD1234(422)250

New standard – New issues



- Different forms of “printing” the code:
 - Thermal transfer
 - Ink jet
 - **Laser**
 - Direct marking



Other challenges



- Barcode scanner selection and configuration, because of the AI structure inside 2D GS1 codes.
- Staff Training.

DataMatrix



- How should it be...



All GS1 DataMatrix

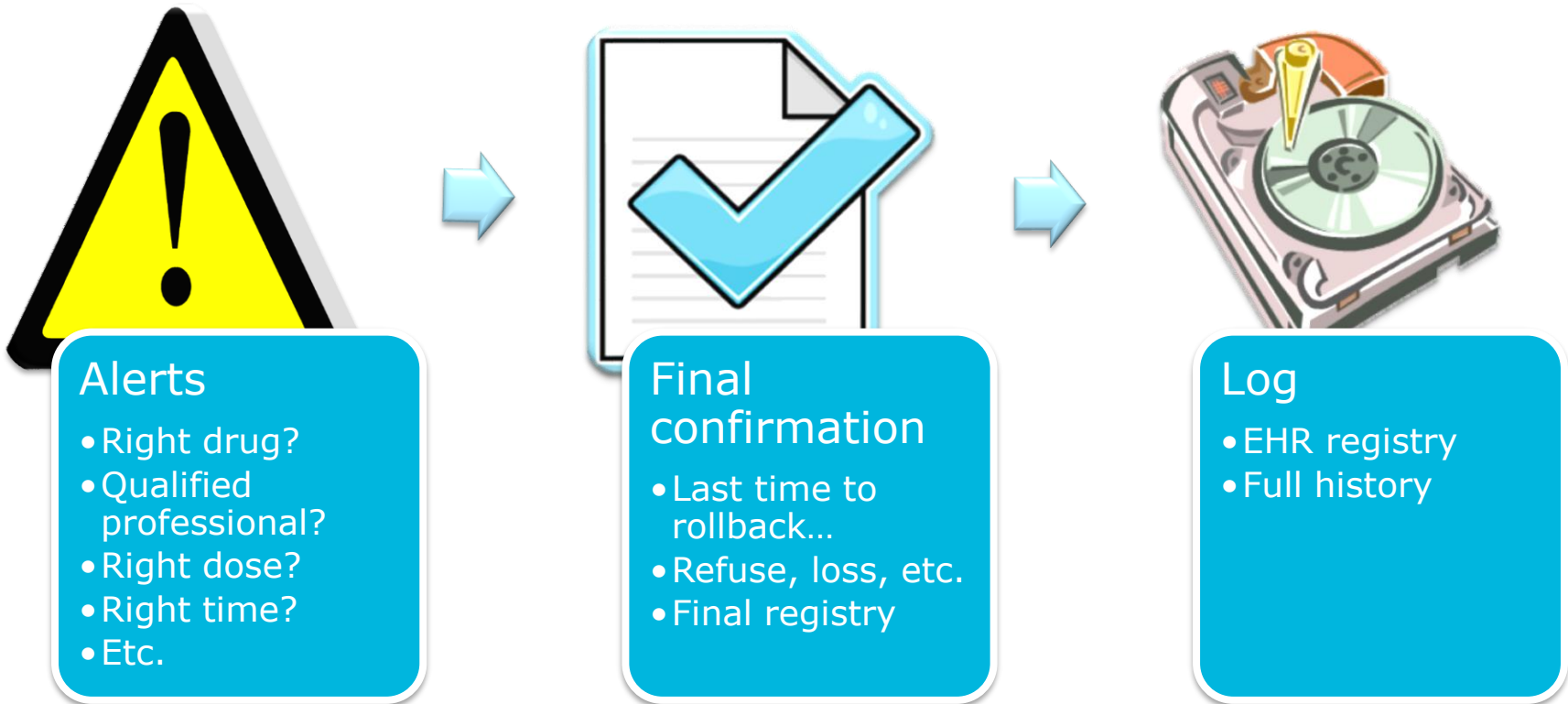
Whole process covered





Bar-code-assisted Medication Administration





ROI



- Results:
- 150 to 170 thousand units/mo. do not have to be relabeled anymore
- 600 hours of manpower saved/mo.
- Consumables use reduction (labels and ribbons) – about US\$ 600/mo.



Qualitative results



- Agility in the dispensing process, with online inventory decrement.
- Verification of the item dispensed as ordered.
- History of the batch of the drug from the receiving to the time it is used by patients (TRACEABILITY inside the hospital).
- Item History, from manufacturer to its use (complete TRACEABILITY outside and inside the hospital).
- Guarantee the dispensing drugs in condition of use, with lots being blocked from dispensing which may have been recalled or are expired.

Qualitative results *continued*



- History of the batch sent to each sector.
- Agility in localizing products banned for recall.
- Electronic bedside check of medication administration, according to the order and ensuring control over 7 of 9 rights proposed.
- Important tool for obtaining quality certifications.
- Patient safety, allowing the register of medication/active ingredient in all logistics steps and at the time of its consumption, allowing the traceability of use until its final step.

Next Challenge – Legal Demand



- Brazilian Traceability law (13.410/16)
- Establishes the National System of Drugs Control and defines mechanisms of tracing through technology of data capture, storage and electronic transmission.





**GS1 DataMatrix:
GTIN + Lot + Expiry date**



Industry



Distributor



Hospital



Patient

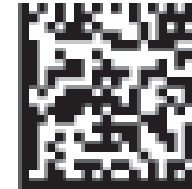
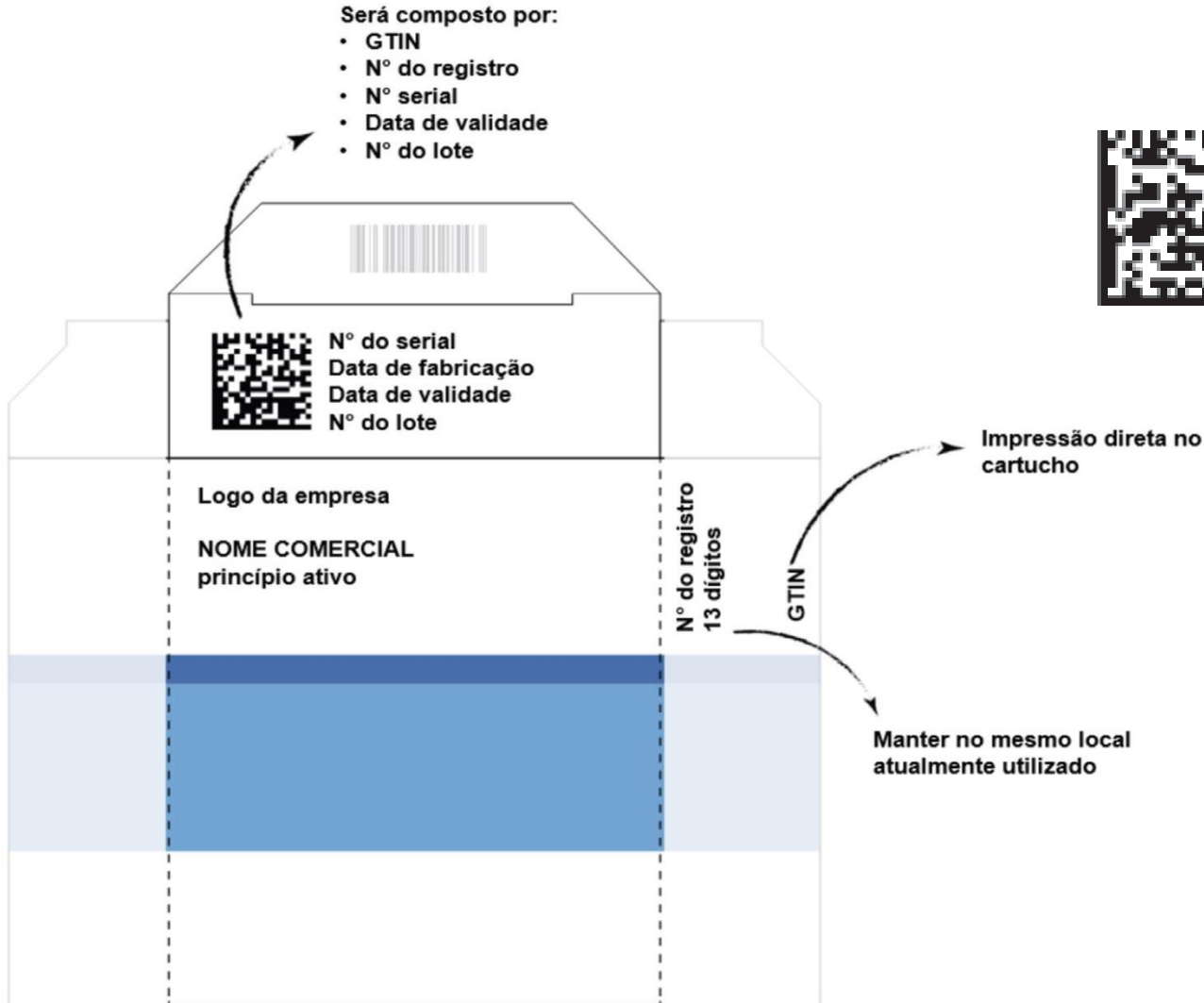


**LAW =
SECONDARY
PACKAGE**

**GS1 DataMatrix:
GTIN + Lot + Expiry date+
ANVISA + serial (IUM)**



**HOSPITAL =
PRIMARY
PACKAGE**



(01)07898357410015
(713)3210987654321
(21)1234567890123
(17)150206
(10)123ABC

IUM



And we did more

- Medical devices identification – OR
 - Several GS1 Standards adopted
 - EAN 8 (GTIN 8)
 - EAN 13 (GTIN 13)
 - UPC A (GTIN 12)
 - GS 128 (GTIN 14)
 - GS1 DataMatrix (GTIN 14)
 - Serial number to be captured
- Nutrition products

Coming soon



-
- RFID tracing of high-cost medical devices in the OR

Thank you!



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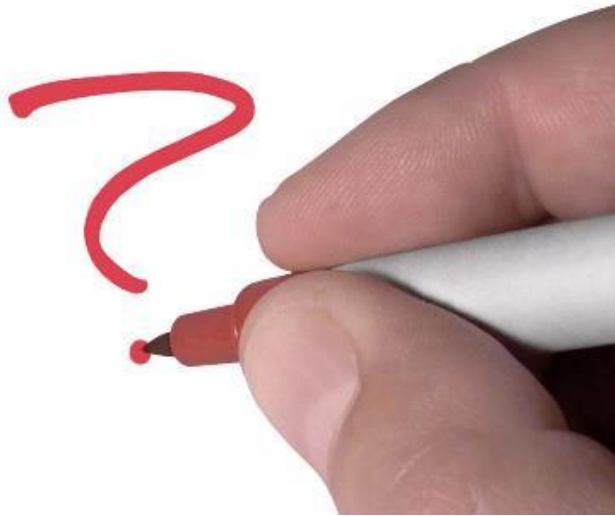
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HPAC Questions and contact details



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