INSTRUMENT TRACKING
IN THE UNIVERSITY HOSPITAL
OF SÃO PAULO

JOÃO FRANCISCO POSSARI
Nurse Director of Internal Patients

Instituto do Câncer do Estado de São Paulo
“Octávio Frias de Oliveira” - ICESP

March 17th, 2010
• OSS – Social Health Organization, created by the State Government in partnership with the FFM;

• Be the largest specialized hospital in the cancer treatment of the Latin America;

• ICESP is the result of R$ 270 million of investments in works and equipment;

• Opened in May 6, 2008;

• Full operation in December 2010
“Provide multidisciplinary assistance with high complexity of excellence to the cancer patients and collaborate for the diffusion and improvement of the medical knowledge on cancer”
Operation Room

- 15 OR – Inpatient surgeries
- 7 OR – Ambulatory surgery

Surgical Instruments – 23,000 pieces
- 388 sets

Surgeries

- 16,000 surgeries/year
- 1,300 surgeries/month

Investments – 17 million R$ (ca. 6.8 Mio. €)
DATA MANAGEMENT & INFORMATION SYSTEM IN THE CSSD

- Identify the sources of quality deviations
- Consumer safety
- Fast and precise information
- Make reports
- Transparency processes
- Control processes in real time
- Work with instrument tracking

Support to the administrative action!!!!
System controls all process steps
System allows expansion (flexibility)
System can get information in any point of the hospital
System emits reports
There is support to the system and training
It is easy to implant
System gives recommendations
Possibility for single instrument tracking
How to choose a Software to support the Data Management and information of the CSSD
Why did ICESP implement the tracking of surgical instruments?

• Inventory management;
• Control the repair of pieces;
• Control the loss of pieces;
• Satisfaction of the users;
• Produce instrument sets correctly;
• Patient safety;
• Provide fast and precise information in real time;
• User demands;
• Legal Impositions.

“they want to know where do their materials come from and how it is reprocessed”

Brazil. RE nº 2606, de 11/08/2006 - reprocessing
Brazil. RDC nº 8, de 27/02/2009 – microbacterial infect.
CHAIN OF TRACEABILITY

2. Preparation and Packing

1. Cleaning

3. Sterilization

4. Stocking

5. Control

CSSD - From origin to the user - OR

OR - From the user to the origin - CSSD

BATCH LOAD AREA

BATCH RELEASE AND STOCK AREA
ASSEMBLING OF INSTRUMENT SETS

1. Open the program
2. Read each instrument with datamatrix;
3. Set with 50 pieces – 20 minutes – the time varies from person to person - the time of contact with the system;
4. Recount the quantity of pieces - activity created at the ICESP;
5. Emit the count sheet;
6. Print the identification label of the production – unique number
Unique instrument identification code (Datamatrix)

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Qtde</th>
<th>Item</th>
<th>Fabricante</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Tesoura Mayo Harrington Crv.230Mm</td>
<td>Aesculap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/S: BC581R-AT0GF</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>Pinça Adson Fina 1X2D.120Mm</td>
<td>Aesculap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/S: BD511R-ATB5Q</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>Pinça Anat.250Mm</td>
<td>Aesculap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/S: BD052R-AT1H8</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>Pinça Debakey .2,0Mm 240Mm</td>
<td>Aesculap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/S: FB404R-AT2HM</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>Pinça Arterial Kelly Crv.140Mm</td>
<td>Aesculap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/S: BH135R-AT7UG</td>
<td></td>
</tr>
</tbody>
</table>

5 Posições  
5 Itens
### Reports – Missing items

**Periodo:** 15/06/2009 - 30/06/2009  
**Ordenado por:** LostDateTime

---

**Rastreabilidade de itens perdidos**

**Unique instrument identification code (Datamatrix)**

<table>
<thead>
<tr>
<th>Nº item</th>
<th>Descr. item</th>
<th>Qtde.</th>
<th>Preço</th>
<th>Caixa</th>
<th>Ausente em</th>
<th>Ponto controle</th>
</tr>
</thead>
<tbody>
<tr>
<td>BJ103R</td>
<td>Pinça Diss.Gemini 200Mm</td>
<td>1</td>
<td>0,00</td>
<td>0,00 CPL FIGADO 2, C-FIGADO, 2</td>
<td>16/06/2009 07:46</td>
<td>Kati</td>
</tr>
<tr>
<td>BJ103R-AT0EY</td>
<td></td>
<td></td>
<td></td>
<td>CME</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BH111R</td>
<td>Pinça Mosquito Halsted Crv.125Mm</td>
<td>1</td>
<td>0,00</td>
<td>0,00 CPL COLON-RETO 2, C-CORETO, 2</td>
<td>24/06/2009 12:05</td>
<td>Roge</td>
</tr>
<tr>
<td>BH111R-ATAHH</td>
<td></td>
<td></td>
<td></td>
<td>CME</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total:** 2 0,00
1. Count the instruments in the OR;
2. During the surgery – instrumentation nurse handles the table;
3. Count the instruments at the end of the surgery;
4. CSSD employee collects and forwards the surgical instruments to CSSD;
5. Cleaning and reaccommodation of the OR (average time 25 min.)

**Important points**

1. Instrumentation nurse - nurse team;
2. Identification of the garbage bag with the OR number – the garbage is retained locally for 180 minutes;
3. Permanent Training of the nurse team.

**Next Step**

1. Point at the OR – instrument tracking (Data Matrix)
Demonstrative

January 2009 to February 2010

1. Surgeries realized – 3,835 surgeries;
2. Surgery time average – 3.3 hours;
3. Set quantity/surgery = 2 sets;
4. Instruments/sets average = 80 pieces;
5. Amount of pieces handled in 14 months = 613,600 pieces;
6. Loss of pieces – reduced to only 26 pieces
7. Stock ~23,000 pieces – 388 sets.
Conclusion

The system and single tracking of instruments permits the fast and regular overview of productivity and quality indicators for the sterilization process, facilitating the management of the CSSD.

Furthermore, it provides more transparent data, ensuring the reliance of the entire process and patient safety.
The success of implementation of a Management System in the CSSD is strongly influenced by the culture of the organization.

Acknowledgements

Diretoria Geral de Assistência
Diretoria de Tecnologia da Informação
Diretor da Engenharia e Infraestrutura
Diretoria Financeira, Planejamento e Controle
Diretoria Administrativa
Diretoria Executiva

Pelo Apoio e Incentivo no ICESP

MUITO OBRIGADO!!!

joao.possari@icesp.org.br
The coding of single instruments by BBraun Aesculap

• 17. March 2010
Referent: Markus Weinert
AESCULAP – A DIVISION OF B.BRAUN

– 1998: Aesculap AG has been integrated as Sparte Aesculap to B. Braun Melsungen AG.

– sales 2008: 1.098,2 Mio € (+ 7,3%)

– Area - Investment 2008: 82,2 Mio € (−10,3%)
**OUR ACTUAL SOLUTION FOR SINGLE TRACKING OF INSTRUMENTS**

<table>
<thead>
<tr>
<th>UNICOS</th>
<th>Data Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC579R-17G9C</td>
<td></td>
</tr>
</tbody>
</table>

**Aesculap Articlenumber**

individueller **Teil**

The UNICOS - Code is readable by Data Matrix.

Example:

<table>
<thead>
<tr>
<th>UNICOS</th>
<th>Data Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.6 millions single Codes per year are possible total 60 millions
AT THE MOMENT

12-13 symbols, alphanumeric

Symbolsize 16 (serial/column)

X-Module 0.15 mm

2.5 mm
### DECISION OF GS1

**sGTIN:**

<table>
<thead>
<tr>
<th>Asset Identifier</th>
<th>Start digit</th>
<th>producer code</th>
<th>Article number</th>
<th>Check digit</th>
<th>Asset identifier</th>
<th>Serial number</th>
</tr>
</thead>
<tbody>
<tr>
<td>(01)</td>
<td>0 4 0 3 8 6 5 3 2 6 8 5 5 9</td>
<td>(21)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

sGTIN with max. 28 symbols on 2,5x2,5mm

Serial number – how much?

At Aesculap:
- 6 symbols alphanumeric
- OR
- 10 symbols numeric
Decision of Aesculap

sGTIN:

(01) 04038653268559 (21)

Asset Identifier  Start digit  producer code  Article number  Check digit  Asset identifier  Serial number

2.5 mm

sGTIN with max. 28 symbols

FIRST TRIAL IN THE FIELD OF OPTICS!!!
Thank you very much for your attention