

GOOD PRACTICE OF TECHNOLOGY FOR THE EFFICIENT MANAGEMENT OF L&D PROCESS



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1. INTRODUCTION

- > Technology plays an essential role in our daily habits. In fact, technology-based applications that support clinical decision-making are emerging frequently (1, 2).
- > Hospital General Universitario de Castellón (HGUC), Spain and R&D department of Dextromedica have designed and validated a dashboard in Qlik sense where all variables innvolved in a delivery room can be visualised.
- > To show how technology has a positive impact on clinical indicators, as cesarean or episiotomy ratio.

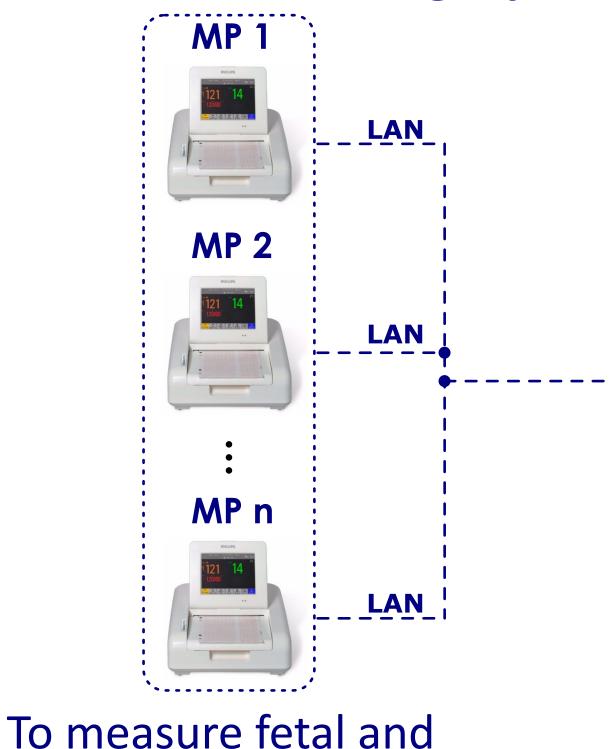
2. OBJECTIVE

> Besides, thanks the Robson report table, dashboard can be used as clinical decision support

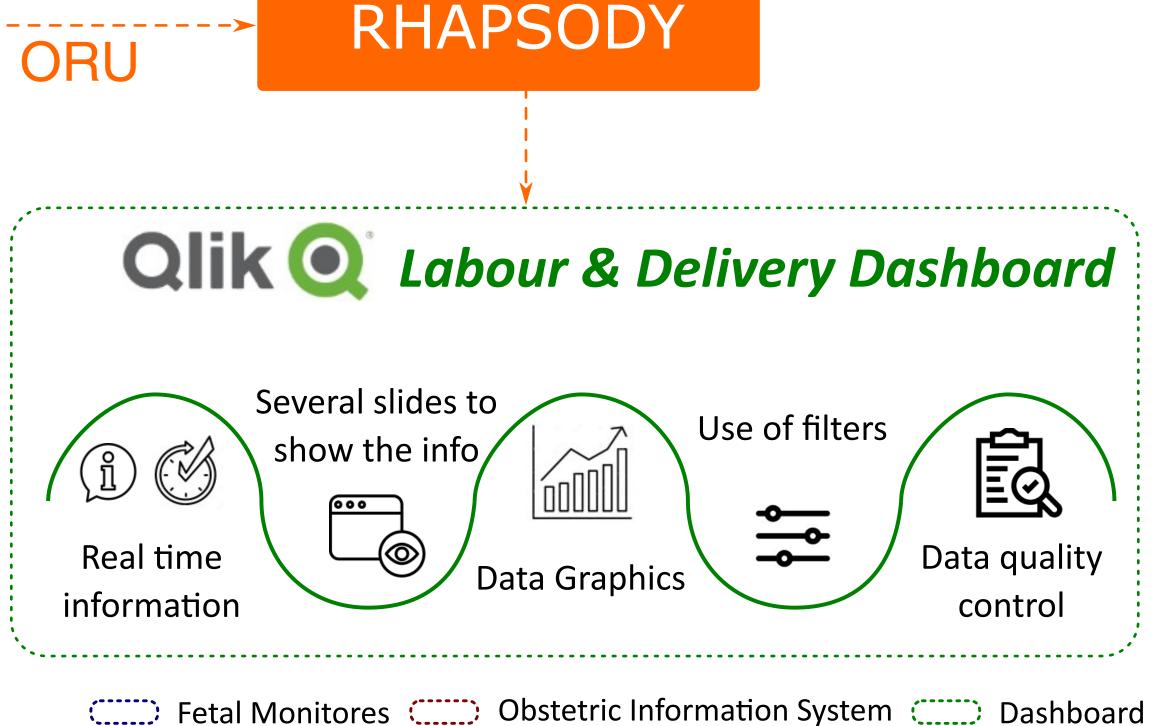
3. METHODS. DATA ACQUISITION

Fetal Cartdiotocographs

Integration engine that creates the structured database for dashboard operation



| | Registro de parto | 8:00 | Fin de parto Puerperio | 8:15 | Laboratorio | Ajustes 8:30 | | |
|---------------------|---|-------------------------------------|--|-------------|-------------|----------------------------|----|--------------------|
| Parto | | | | | | | | |
| Motivo Entrada Dila | | | | | | | | |
| Inicio parto | | | | | | | | |
| Motivo Inducción | | | March | - Indersta | | | | |
| Cesárea Humaniz | | | Motiv | o Inducción | | | | |
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| Índice de Bishop P | | ctores logísti | | | | Acepta | | |
| Factores riesgo | Co | rioamnionitis | | | | Cancela | ar | |
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| | Mu Ma TH Em CIF Do Em | ibarazo poste R ppler patológ | etal ermino gico elar no complicado | | | de visualiz)3/19 9:30: | | (î Rea infor |

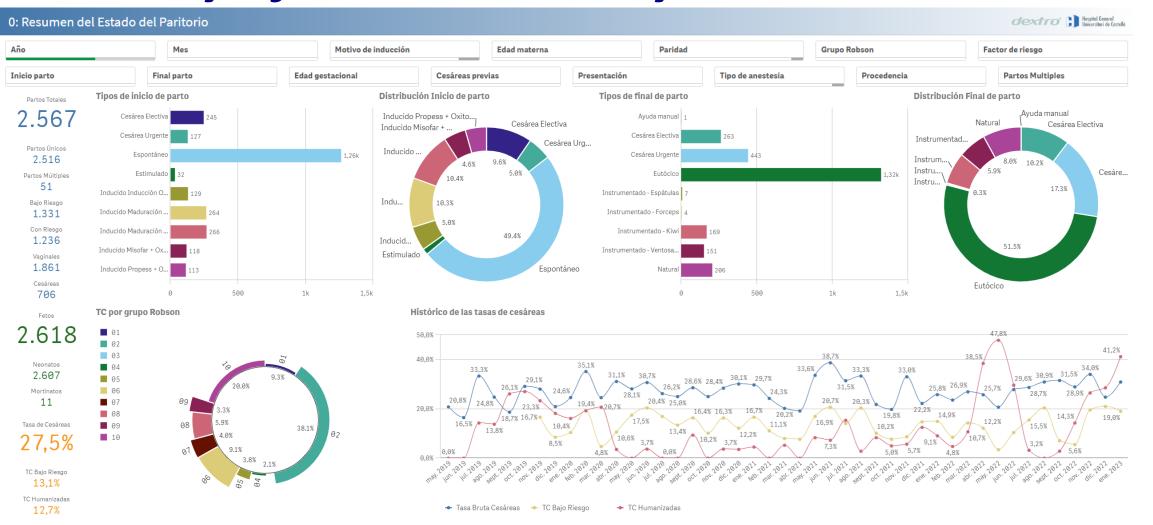


− - >> Data input \prec – – \rightarrow Input and output messages

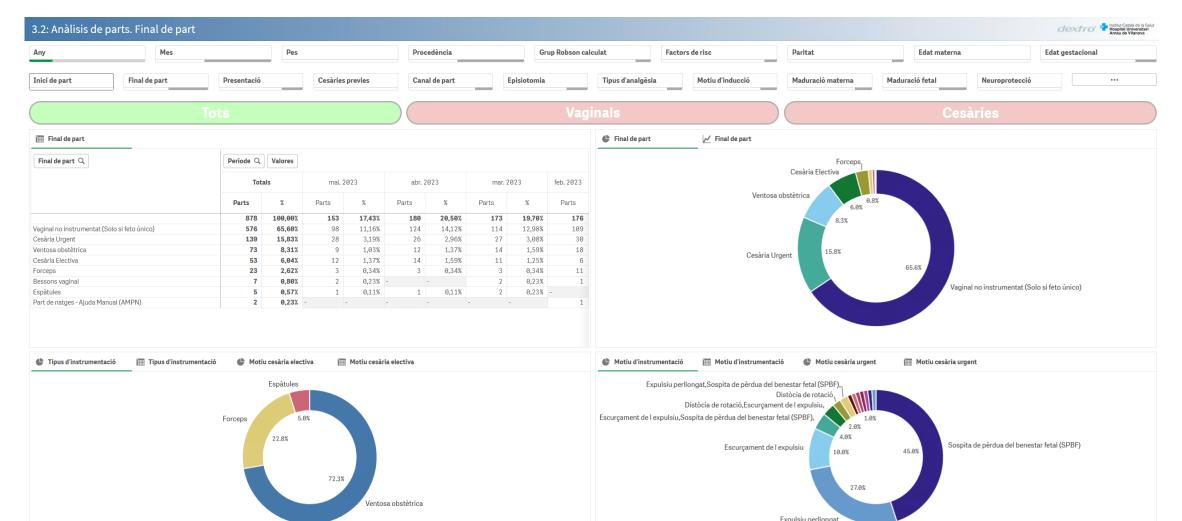


maternal heart rate (CTG)

Summary of overall delivery status

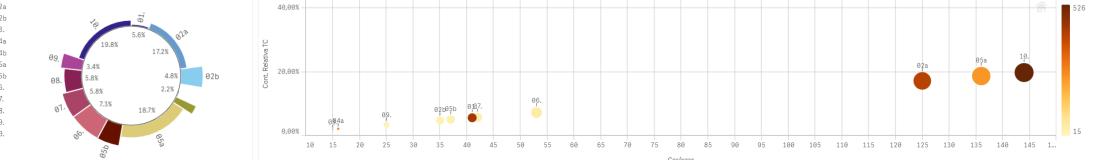


End of delivery



Robson Report table

| Año | Mes | Motivo de inducción | | | | | Paridad Gr | | Robson | Factor de riesgo |
|---|---|---|---|--------|-----------|----------|------------------|------------|-------------------|-------------------|
| inicio parto | Final parto | Edad gestacional | | | | | | | Procedencia | Partos Multiples |
| | Grupo Rol | bson sin subdivisiones | | | | | Grı | ipo Robson | con subdivisiones | |
| Grupo de Robson | | | Q | Partos | Vaginales | Cesáreas | % Tam. del grupo | % Cesáreas | Cont. Absoluta TC | Cont. Relativa TC |
| otales | | | | 2652 | 1926 | 726 | 100,00% | 27,38% | 27,38% | 100,00% |
| 01. Nulíparas con embarazo único y presentación cefálica, de >=37 semanas de gestación y parto espontáneo. | | | | 436 | 395 | 41 | 16,44% | 9,40% | 1,55% | 5,65% |
| 02a. Nulíparas con embarazo único y presentación cefálica, de >=37 semanas de gestación, con parto inducido. | | | | 408 | 283 | 125 | 15,38% | 30,64% | 4,71% | 17,22% |
| 02b. Nulíparas con embarazo único y presentación cefálica, de >=37 semanas de gestación, con cesárea electiva. | | | | 35 | 0 | 35 | 1,32% | 100,00% | 1,32% | 4,82% |
| 03. Multiparas sin cesáreas previas, con embarazo único y presentación cefálica, de >= 37 semanas de gestación y parto espontáneo. | | | | 503 | 488 | 15 | 18,97% | 2,98% | 0,57% | 2,07% |
| 04a. Multíparas sin cesáreas previas, con embarazo único y presentación cefálica, de >=37 semanas de gestación, con parto inducido. | | | | 274 | 258 | 16 | 10,33% | 5,84% | 0,60% | 2,20% |
| 04b. Multíparas sin cesáreas previas, con embarazo único y presentación cefálica, de >=37 semanas de gestación, con cesárea electiva. | | | | 15 | 0 | 15 | 0,57% | 100,00% | 0,57% | 2,07% |
| 5a. Multíparas con una cesárea pre | evia, con embarazo único y presentaciór | n cefálica, de >=37 semanas de gestación. | | 240 | 104 | 136 | 9,05% | 56,67% | 5,13% | 18,73% |
| 05b. Multíparas con al menos dos cesárea previa, con embarazo único y presentación cefálica, de >=37 semanas de gestación. | | | | 38 | 1 | 37 | 1,43% | 97,37% | 1,40% | 5,10% |
| 06. Nulíparas con embarazo único con presentación de nalgas. | | | | 55 | 2 | 53 | 2,07% | 96,36% | 2,00% | 7,30% |
| 07. Multíparas con embarazo único y presentación de nalgas, incluidas cesáreas previas. | | | | 43 | 1 | 42 | 1,62% | 97,67% | 1,58% | 5,79% |
| 08. Embarazo múltiple, incluye cesárea previa. | | | | 53 | 11 | 42 | 2,00% | 79,25% | 1,58% | 5,79% |
| 09. Embarazos únicos con situación transversa u oblicua, incluye cesáreas previas. | | | | 26 | 1 | 25 | 0,98% | 96,15% | 0,94% | 3,44% |
| l0. Embarazos únicos con presentación cefálica, de <37 semanas de gestación, incluye cesáreas previas. | | | | 526 | 382 | 144 | 19,83% | 27,38% | 5,43% | 19,83% |



Perinatological Results



5. CONCLUSIONS & DISCUSSION

- The time to obatin all kPI was reduced in 250%.
- Graphics allowed to obser what variables had more influence in the caesarean and episiotomy ratio. These ratio decreased in a 10% and 15%, respectively.
- Due to human beings recive the most information from the sense of sight, the best way to treat and analyse the data is with a good dashboard.







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- > Avoiding free text input will lead to more reliable and standardised data collection for representation.
- > This dashboard wants to be a start point to build tool more complex which will be able to make predictions and plan better the L&D.

BIBLIOGRAPHY

(1) Flecha-Lescún, J. et al, *Transl. Vis. Sci. Technol.*, Oct. 2020 (2) Quiñones, D.R. et al, *Materials*, Ago. 2018

