

# Effective implementation and high participation of ICHOM's 'Pregnancy and Childbirth' (PCB) set at Hospital Universitario Son Espases

Alegre García, A<sup>1</sup>. Ruiz de Gopegui Valero, RM<sup>1</sup>. Estade Riart, MD<sup>2</sup>. Moreno López, DA<sup>3</sup>. Tous Llull, X<sup>4</sup>. Córdoba Cardona, O<sup>1</sup>. Carreres González, ML<sup>1</sup>. Alegre Latorre, LM<sup>5</sup>.

1 Department Obstetrics and Gynecology. Hospital Universitario Son Espases. 2 International Vaccination Department. IbSalut. 3 IT department. Hospital Universitario Son Espases.

4 Balearic Foundation for Innovation and Technology. FBIT. University of the Balearic Islands. 5 Innovation General Manager. Hospital Universitario Son Espases.

✉ andrea.alegre@ssib.es

## INTRODUCTION

Standardizing health outcomes is a crucial challenge to improve the efficiency of the healthcare system. Pregnancy, childbirth and postpartum are processes with high social and economic impact.

This project introduces the ICHOM standard, "Pregnancy and Childbirth" (PCB), at the Hospital Universitario Son Espases (HUSE, Palma de Mallorca, Spain), as part of the Strategic Plan 2018-2022, which promotes digital transformation, sustainability, innovation and integration of information systems.

The main objective is to use the data obtained to improve care management and value-based quality of care. We will present some preliminary results.

## METHODS

To implement the setting PCB, we collaborated with the Balearic Foundation for Innovation and Technology (FBIT) in the development of a mobile application (HUSE Prom Tracker). (Fig.1) Engineers and physicians worked together through mind maps where the different ICHOM standards were parameterized. (Fig 2) This mobile application allows patients to report their data, which is integrated into the Electronic Health Record (EHR) (Millennium Cerner Oracle), providing clinicians with immediate access to patient information.

In addition, data from the mobile application and EHR are transferred to analysis software (SIHUSE) that anonymously evaluates the parameters, ensuring a comprehensive and confidential assessment.

The integration of the mobile application, EHR and analysis software working together to optimize care, is one of the main points of the project.

We selected a group of 50 patients for the implementation. After solving the initial problems, we proceeded to mass recruitment.

Through the work of an interdisciplinary team consisting of IT specialists, managers, administrative staff, doctors and nurses, we developed strategies to encourage patient participation, such as the development of didactic material to explain the program, a periodic follow-up procedure through telephone calls and graphic material so they can monitor the evolution of their responses through the mobile application.

Patients receive information from a physician and a nurse during first trimester ultrasound and screening and can participate voluntarily. During pregnancy, delivery and postpartum, they complete standardized questionnaires according to the ICHOM schedule. In addition, they receive a birth plan in the third trimester.

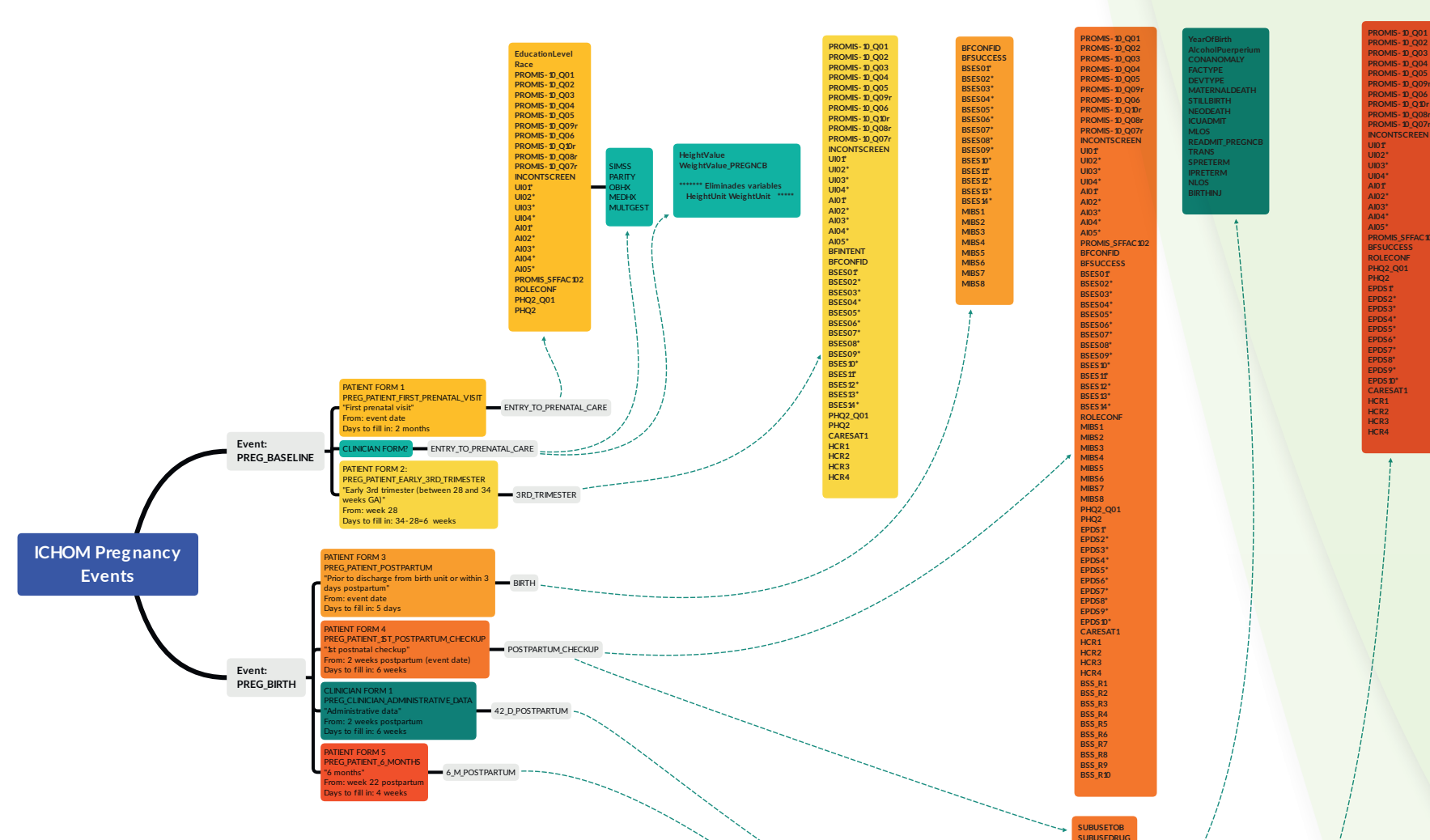


Figure 2. Mind map PCB.

## RESULTS

Since the start in October 2022, the PCB group accounts for almost 38.1% (753 patients) of the total number of patients in HUSE's ICHOM groups. (Fig. 3)

The evolution of the participation rate was as follows: 55.5% (417 patients) in the first trimester, 40.21% (228) in the third trimester, 41.8% (104) at 42 days postpartum and 31.5% (35) at 6 months postpartum.

As the patients progress through pregnancy, delivery and postpartum, the number of participants will increase at final stages.

Another of the most significant aspects observed from the early results is the evolution of mental and physical health. (Fig. 4)

Mental health remains stable (good mental health), except in the second trimester, when it suffers a drop and then recovers six months after postpartum.

Physical health follows a similar progression, with a drop in the third trimester of gestation and a subsequent recovery.

## CONCLUSION

The PCB setting was successfully implemented in HUSE, in a period of nine months. In the initial phases high participation was achieved thanks to fluent communication with the patient and follow-up work carried out. Preliminary analysis allowed the implementation of specific protocols in key areas, such as perinatal mental health. Identifying at-risk patients allowed us to offer them specialized care in a timely manner.

We are committed to continuous improvement and excellence in research to make significant progress in this important area of health.



Figure 1. HUSE PROM Tracker. Mobile application screenshot.

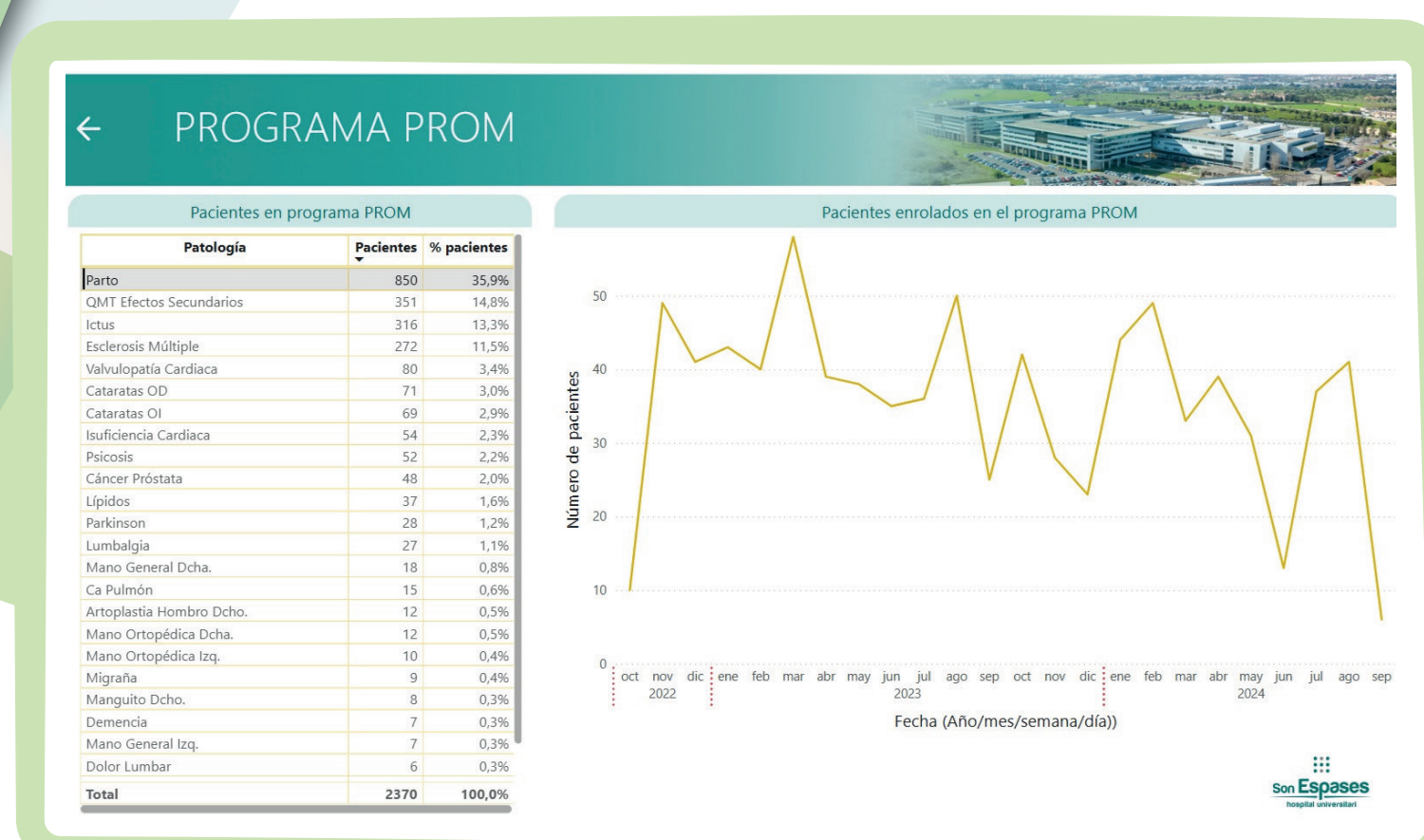


Figure 3. Number of PCB patients evolution.

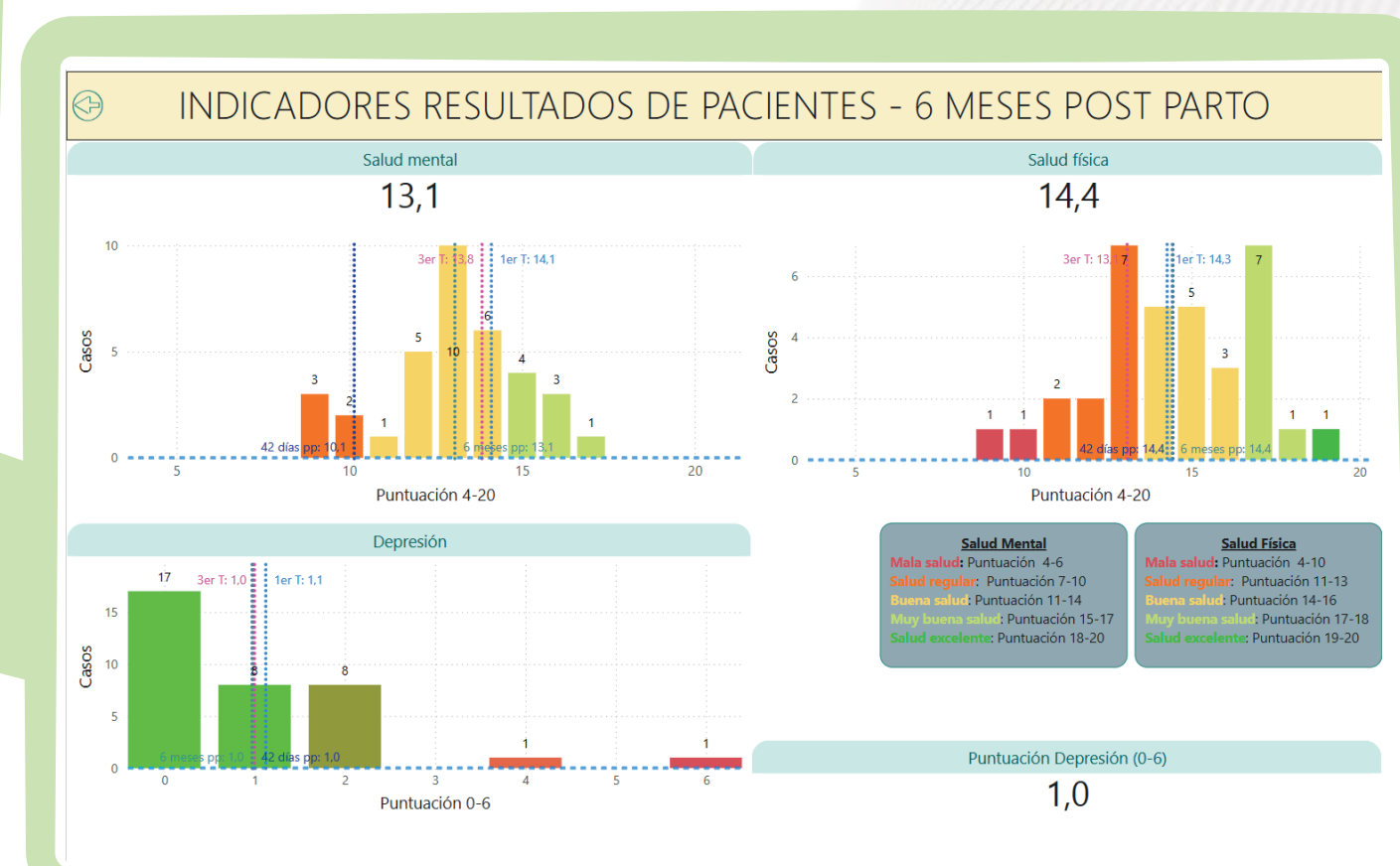


Figure 4. Physical and mental health early results.

